

Analysis the Relation between the Real Interest Rate and its shares of Total Expenditure from (GDP) in the Iraqi economy

Dr. Hasan khalaf Radhi*

Dr. Shakir Hammood sallal**

Dijlah University College

Iraqi University

Abstract

In this paper, the behavior of the real interest and the components of the Total Expenditure Share in Iraq for the period (1990-2014) is present. Based on the descriptive analysis of the variables and explained that the behavior in the real interest rate had not followed by similar behavior in the total expenditure shares according to the logic of economic theory, which indicates the existence of a breakdown in the mechanism of transition from monetary market to the real market. The behavior of data in the real interest rate and private expenditure are note to confirm the complete separation between the variables. This study reached a number of conclusions which include Interest rates are not determined according to the supply and demand forces in the economy, for many reasons, such as the financial system, the inability of the banking system to transmit monetary policy signals, and the imbalance of payments. To make the structural changes and reform of the financial system and banking in Iraq give greater role to the private sector in the overall production and service activity. Tourism in Iraq (religious and archaeological) strengthening the competitiveness of commodities produced, especially cement, phosphate, sulfur and the petroleum industry. The linking of mechanisms imports with an automated system with different banks and the central bank to control the flow of capital abroad compared with the inside of goods and volume of foreign currencies exported against them.

Key Words: *Components of the total Expenditure Share from (GDP), Inflation, Real Interest Rate, Nominal Interest Rate, Behavior.*

I. Introduction

The components of total expenditure (private investment expenditure, private consumption expenditure, government expenditure on both consumption and investment, and net export value) are the main drivers of economic growth, negatively or positively. There are factors that affect these components of the expenditure including the real interest rate, which in turn affects the rate of inflation. Hence the importance of research as the variables are the core of economic problems and that have an economic relationship with the individual and society as they raise the level of economic growth, a reflection on the living standards of both the individual and society.

1. The problem of research: What is the behavior of the real interest and the behavior of expenditure share in the Iraqi economy, and stems from this problem a number of sub-questions:

a. Could the behavior of the nominal interest rate change the behavior of the private consumption and investment- expenditure share of the gross domestic product (GDP) of the Iraqi economy?

* Hassan.kalf@ duc.edu.iq

** sh_hmood@yahoo.com

b. Could the behavior of the real interest rate move the share of consumption and private investment in the Iraqi economy as the dynamic engine of economic growth and economic theory?

2. The hypothesis of research: The behavior of the real interest rate and components of expenditure shares in the Iraqi economy for the period (1990 - 2014).

3. Research Objectives: The research aims at the following:

a. Analysis of the behavior development of expenditure shares in the Iraqi economy (the share of private consumption and investment expenditure, the share of government expenditure in both consumption and investment and share of net export value).

b. Analysis of the evolution of nominal and real interest rate behavior in the Iraqi economy.

c. Analysis of the evolution of inflation rate behavior in the Iraqi economy.

4. **The structure of the research:** To verify the hypothesis and reach the objectives of the research, it was divided into five sections. The first section discussed the theoretical framework of the real interest rate. The second section concerned on the theoretical framework components of the total expenditure in Iraq. The third Section focused on the concept of behavior expenditure Shares and behavior of the interest rate. The fourth Section discussed the analysis of the behavior for real interest rates in the Iraqi economy for the period (1990-2014). The fifth section concerned the components of expenditure Shares in the Iraqi economy for the period (1990-2014). Hence, the research concluded a set of conclusions and recommendations

II. Previous studies

a. A study by (Christensen,2012: 3-25) to determine the optimal interest rates that can maximize consumption and savings. The study attempts to determine whether low interest rates affect consumption. Does the US need to raise the interest rate to stimulate its financial institutions to lend money. Thereby increasing household consumption. The Federal Reserve has maintained an optimal interest rate on funds between 0 and 0.25, hoping to increase and stimulate consumption. This paper uses 50-year interest rate data to increase consumption levels. Taking into account several market factors, the empirical data indicate that the Federal Reserve's work has kept interest rates low and is a good thing when it tries to increase consumption according to the study's view. The study reached a number of conclusions, including the control of consumption by the Federal Reserve. Their reduction leads to higher consumption levels, and the study suggested that the open market should keep the interest rate low to maintain public interest until 2014, which is consistent with the results of this study.

b. Another study by Li Suyuan and Khurshid in 2015 to test the effect of the investment interest rate in Jiangsu Province has invested more than other provinces in the long-term for China. The Johansen relationship has been used to test the combined integration of study variables for the period 2003-2012. The results indicate that there is a long-term and negative relationship between variables, but positive in the short term. The study found a

number of conclusions, including that the relationship between the interest rate and investment was positive, which reduced the volume of investment in this province in the short term. Although, the interest rate has had an impact on investment, but this effect is weak, and other factors affect the investment Such as market size, level of economic development, investment and preferential environmental policies. According to empirical analysis, the study suggested, that the effect of investment interest rates in the province varies by industry level. Institutional investors must make sound and informed decisions in accordance with changing interest rates, work to liberalize interest rates and improve investment channels. Their environment increase investment sensitivity to interest rates (Suyuan, 2015: 81-90).

III. The first section: the conceptual framework of the real interest rate

1.1. Nominal interest rate:

It is the amount expressed by the interest rate imposed by the surplus units on the deficit units against the use of the assets. This will be recorded in the normal state on an annual basis and known as the annual interest rate . Assets borrowed may be in the form of cash, consumer goods or large assets such as vehicles or buildings.

From the perspective of the consumer, the interest rate could be expressed in the annual rate of return when this percentage obtained from a savings account, deposits or investment certificates, and is expressed at the annual interest rate.

a. Calculate Interest Rate:

Creditors impose interest rates as compensation for losses resulting from the use of assets by the borrower, in the case of money lending, in which the creditor could have invested money instead of lending. When lending a large asset, it is assume that the creditor would have been able to earn income through that asset if the Investor had decided to invest it himself. The interest rates are often change because of inflation and approved economic policies.

b. Interest Rate Determination:

Some countries adopt the central bank model, where interest rates set by the central bank. In the first step of setting interest rates, the country's economic observers establish a policy that helps ensure the stability of prices and liquidity of the state. This policy could verified to ensure that Money in the state is not very large (which causes price increases) (Khalil, 1994: 530). As Deposits banks are usually the first financial institutions to provide money to the economy, they are Basic element used by the central bank to control the supply of money. By adjusting interest rates on funds that lend or borrow from Deposits banks. also able to supply money to the end-user (individuals and companies) (Khalil, 1994: 530).

When financial policymakers decide to reduce the supply of money, this decision will affect the interest rate that automatically affects the movement of currencies. Hence, they will increase interest rates and making the deposit more attractive which reduce the procedure of borrowing from the central bank. In other words, if managers want to

increase the supply of money, they will lower interest rates, making borrowing and expenditure more attractive.

1.2. Inflation

Economic thought attaches great importance to the phenomenon of inflation. However, there is no consensus on the part of economists on a specific definition of inflation, because this phenomenon is multi-dimensional and multifaceted. Therefore, this raises many theoretical and applied issues make the definition of inflation a difficult task (Khalil, 1994, p. 55). Critics have defined it as "the increase in the amount of cash in circulation that leads to an increase in the overall level of prices. Much money chasing a few commodities in circulation and Inflation is the excessive increase in the means of payment, which leads to higher prices and depreciation of the currency resulting in a purely monetary phenomenon (Kanwar, 2014: 28)

These definitions, proponents of monetary theory consider inflation purely monetary. This means that the increase for cash in circulation is the main cause of inflationary pressures (Kanwar, 2014: 29).

1.2.1. Inflation Measurement

There are several indicators that can be used to measure inflation including

a. Consumer Price Index:

The consumer price index based on the amount of change in the price of goods and services package that consumers could purchase. This index is the most widely used to measure of the price level (Majid, 2001, p. 145). There are several ways to calculate the consumer price index such as Simple Index. The index is calculate by dividing the total prices of consumer goods and services in a given year by the total prices of goods and services in the base year as indicated in the relationship by (Majid, 2001, p.145)

$$CPI_s = \frac{\sum_{i=1}^n P_{i,1}}{\sum_{i=1}^n P_{i,0}} \cdot 100 \dots\dots\dots (1)$$

Where Pi1 is a Current year prices and Pi0 is base year prices.

1.2.2 Effect of inflation on interest rates

Some measures are taken to encourage debtors (lenders) affected by the provision of their money to financial institutions. Among these procedures is the mechanism for determining the interest rate, including the expected rate of inflation, where the inflation rate added to compensate the loss. Between the nominal interest and the real interest rate where the latter can be calculated according to Fisher's equation as follows: (Khalil, 1994, p. 84)

$$R = i - f \dots\dots\dots (2)$$

Where (R) represents the real interest rate, (I) is the Nominal interest rate and F Expected inflation rate.

Fischer assumes that real interest rates do not change much or there will be a large demand or offer for loans. Hence, the high inflation rate will accompanied by a relatively high nominal interest until the equilibrium level of the real interest could be maintained.

IV. The Second section: Conceptual framework for the components of the total expenditure.

Total expenditure is the sum of expenditure on final goods and services in the economy. Total expenditure is measure by the total expenditure by the community on goods and services, which defined as "the total amount spent by all sectors (households, companies and government) in the economy and willingness to purchase goods and services"(Khalil, 1994 :84) . Thus, aggregate demand is synonymous with total expenditure in the economy if the total expenditure (Actual) on the purchase of goods and services is greater than (planned) which indicates a rise in aggregate demand.

In contrast, if society decides to spend less on available production, this implies a reduction in total demand. Simply aggregate demand is the sum of expenditure on consumption and investment, and the determination of production with employment within the framework of the Kenyan theory depends mainly on the aggregate short-term demand level.

The concept of aggregate demand is an indicator of economic analysis, and total demand components are the expenditure component of its consumer and investment branches. The government expenditure component of its consumer and investment branches, and the net export value (Astrup, Regard, 1988, p. 236). Total expenditure could be divided into the following:

2.1. Private expenditure:

The component of private expenditure is one of the main components of the total expenditure. Any change that occurs in it leads to significant effects on the level of economic activity, and includes the following:

2.1.1. Private consumption expenditure

Consumption is one of the main implications of private expenditure, and a lack of reliable estimation of expenditure leads to serious errors in the economic outlook at the demand level.

Income is a determinant of total consumption in any society, which means that any increase in total income will increase depending on total consumption and vice versa (Ibdjman, 1990, p. 80). Many other factors affect private consumption as well as income. The general level of prices, interest rates, family size, age structure, wealth, and tastes play a role in consumer expenditure which affect it negatively or positively.

Taxation plays an influential role in consumer expenditure through its impact on disposable income. The increase in tax rates reduces disposable income to consumers, making them less able to consume and vice versa.

Expectations play an important role in influencing the actions of individuals, in terms of both prices and the availability of goods (Mawarouf, Hoshyar, 2005, p. 84).

2.1.2. Private Investment expenditure:

Investment is the dynamic engine in determining the level of macroeconomic activity. The change in investment leads to multiple changes in national income and employment. Investment determines and accelerates economic growth. Economic growth is a closely related to capital formation. Therefore, investment is the decisive factor in total expenditure components. There are determinants of investment including the interest rate, which have a negative relationship with the size of the investment. Meaning that increasing the interest rate on the borrowed capital leads to investors' reluctance to invest and vice versa. Thus, the interest rate has a strong impact on the volume of investment (Ibdijman, 1990, p. 80). The other limiting factor is the marginal adequacy of investment, defined as the marginal efficiency of investment or the marginal efficiency of capital (MEC). It is the expected net rate of return from the addition of a new investment unit. Meaning that the percentage that expresses the relationship between the capital interest earned by the capital because of the project and the size of the costs borne by that project of the interest rate. The decision to set up a particular investment project is not enough to have a low interest rate to accept the project, but rather that the marginal efficiency of the investment should be higher or equal to the lower interest rate, which represents the cost of the borrowed money. Thus, the relationship between the interest rate and the marginal adequacy of investment is counterproductive.

Technical development reduces the cost of investment, the cost of production that leads to the marginalization of investment and increases investment. Resulting in the shifting investment-expenditure curve to the right. Other determinants such as expectations demand and income levels (which have an indirect relationship with investment) exist. One could say that investment and consumption are an important part of total expenditure. The household sector spends on consumption. It can decide how much of its income can be spent on consumption or the part it saves. The business sector decides how much it invests; Consensus between the desire of the family sector (saving it) and the desire of the business sector (as it invests) may be a reason for not achieving economic stability of output and income. In addition, each of them may have a different impact on the ability of the economy to produce in the future, less consumption of income leaves a large part of savings and investment, in other words capital formation and expansion of production projects, which reflected the increase in production in the short term.

2.2. Government expenditure:

The government expenditure in its consumer and investment sectors is one of the components of total expenditure and its importance in the formulation of economic and financial policies of the countries including

2.2.1. Government Consumption Expenditure:

Government consumption expenditure on goods and services is the main component of total expenditure, which means government expenditure on the goods and services. The public sector of a country's economy produces large quantities of goods and services (Such as public roads, airports) is a long-term investment. This will create a stream of benefits over time such as the purchase of goods. The government sector affects economic activity

through expenditure and general taxes. The sector can increase total expenditure through purchased goods and services stimulate private expenditure by reducing taxes on its activities. Similarly reduce total expenditure by reducing its expenditure or increasing taxes on private sector activities, or by using both the two methods. We can study government expenditure in the same way as the total investment study, which is an addition to the circular flow of income, and taxes represent a leak from this flow. Government expenditure on purchases is bilateral in that it involves a cash flow from the government sector to other sectors of society, offset by a flow of goods from other sectors of society to the government sector (Ashkar, 2002, p. 180). Government investment and consumption expenditure needs to operate and use scarce resources thus increasing total expenditure. Government expenditure provides transfer payments as well as government purchases such as social security, welfare payments, support programs and subsidies. These payments do not directly contribute to increased government expenditure but redistribute demand from taxpayers to recipients of transfer payments. During which direct production (Khalil, 1994, p. 126). Therefore, they are a single nature, which are monetary transfers by the government to individuals. Additionally, it is not offset by commodity flows in the transfer payments that affect the income available to individuals and thus to aggregate demand (Dabbagh, al-Jumar, 2002, p. 41). Government expenditure includes the government purchases of all final goods and services. This expenditure does not include transfer payments, such as pensions, social security, and interest paid on government loans, since they are not expenditure on current goods and services. On this basis, the accounts of government expenditure are concerned with the costs of goods and services paid by the public budget without taking into account taxes or other resources to finance such expenditure. Production varies in the public sector and the private sector, since the production of the public sector consists of indivisible collective goods, services, and benefits to the community, the private sector and so on. On the other hand, government expenditure plays a role in countering economic fluctuations and addressing the problem of falling actual demand, as government expenditure in the macro-economy is an external variable that drives consumer expenditure through the multiplier that stimulates expenditure (Maarouf, 2002, p. 94).

2.2.2. Government investment expenditure

Government investment expenditure takes two forms. The first is expenditure on basic infrastructure projects such as roads, bridges and dams, which are important projects for the economy and the private sector in the development process. Investment in the labor force may include expenditure on educational and health projects. Moreover, the second is expenditure on the productive projects of the state petrochemical enterprises and this type is of great importance for the economy and society. The greater the investment expenditure compared to consumer expenditure, the higher the economic growth.

2.3. Exports and demand for imports (net exports):

Net exports are a source of total expenditure, and their source is the outside world. The open economy to the outside world exposed to external flows, and these flows affect income and domestic production. The net value of exports is the difference between the value of exports and the value of imports. In addition, it is determined by inter alia, trade policies such as tariffs, prices, Shares, incomes, external financing policies, and economic activities. The difference between export and import values may be positive, negative or zero. When the net exports are negative, the state imports more goods and services than

goods and services. When the net exports are positive, the state imports less goods and services than the goods and services. This means that net positive exports was added to the total expenditure. The negative export means a net reduction of exports of total expenditure. When the value of net exports is zero, in this case it will have no effect on total expenditure (Idrisi, 1986, pp. 340-349).

IV. The third Section

The concept of the behavior of expenditure Shares and the behavior of interest rate according to the logic of economic theory are:

3.1. Total share of non-government expenditure from GDP

This share represents the horizontal aggregation of the consumption, investment shares and the net export value of output at different levels of real interest rates (Weerapana, 2005: 89):

$$\frac{NG}{Y^*} = \frac{C}{Y^*} + \frac{I}{Y^*} + \frac{\bar{X}}{Y^*} = 1 - \frac{G}{Y^*} \dots \dots \dots (3)$$

Where

NG / Y*: represents non-government expenditure of GDP.

C / Y*: represents the share of consumer expenditure of GDP.

I / Y*: represents the share of investment expenditure from GDP.

\bar{X} / Y*: represents the share of net export value of GDP.

G / Y*: represents the government- expenditure share of GDP.

On this basis, one could conclude that the nature of the negative relationship between the share of non-governmental expenditure (NG / Y*) and the real interest rate is that the increase in the real interest rate reduces total non-government expenditure Shares.

3.2. Government expenditure share of GDP

The share of government expenditure does not depend on the real interest rate, but linked to public power trends, which means that government expenditure, are not affected by interest rate changes. The share is graphically represent on a horizontal axis against the real interest rate.

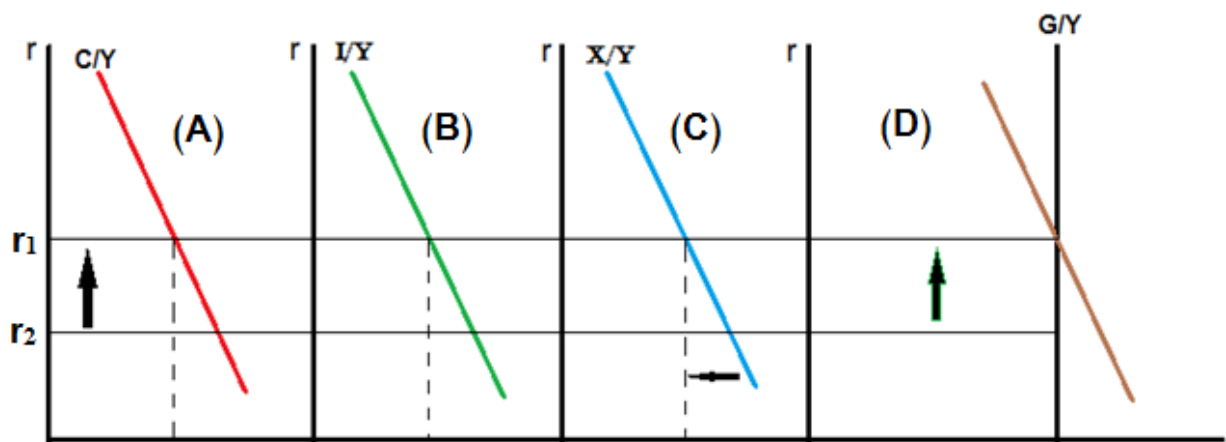
3.3. Finding a balanced interest rate

At the total balance, the non-government expenditure share of the GDP equals the total share minus the government expenditure share of income $NG / Y^* = 1 - G / Y^*$

The real interest rate is the key in the tunnel-share model and Figure 3.1 shows the role of the interest in equalizing the equilibrium. Part D of Figure 3.1 reflects this balance and the share of non-government expenditure is determined based on interest rate changes. In contrast, the share of government expenditure has responded to factors other than interest. Thus, the intersection of curves (the share of non-government expenditure of GDP and the government expenditure share of GDP sets the level of the real and balanced interest rate). One or more components after the Government expenditure hypocrisy. The curve of the

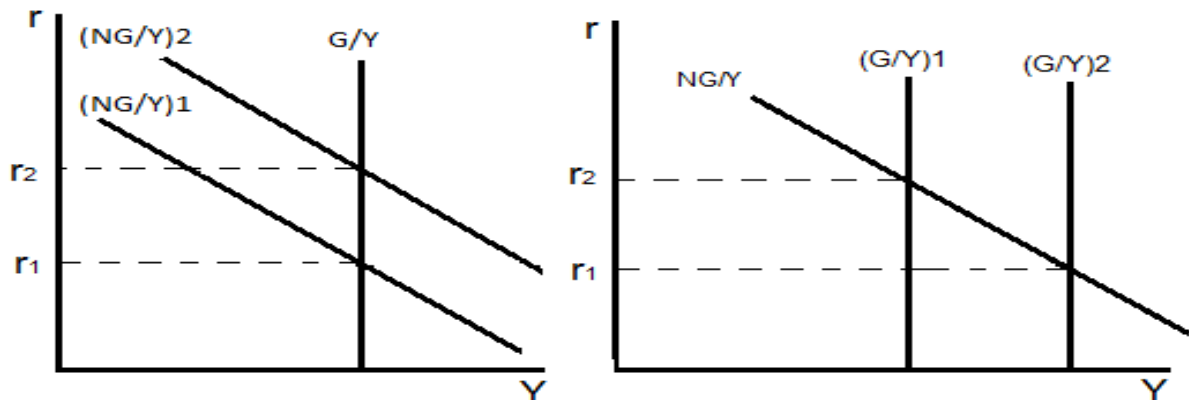
non-government GDP share of the negative inclination propels the right-hand shift from the balanced interest rate, and vice versa. When one or more non-government expenditure falls after government expenditure reaches its level reducing (Weerapana, 2005: 89). The question is what happens when the share of government expenditure rises after the share of non-government expenditure reaches its level. This will lead to a reduction in the share of non-government expenditure, leading to a shift in the government expenditure share to the left, causing a real interest rate rise and crowding out, and vice versa when the government's share of government expenditure decreases, as explain in Figure 3.2.

Figure (3.1): Components of government and non-government expenditure



Source: *Macroeconomic, 6Th, Edition, Copyright @ 2005W.W, Norton, p5.*

Figure (3.2) Components of non-government expenditure of GDP



Source: *Macroeconomic (n, d), 6Th, Edition, Copyright @ 2005W.W, Norton, p6 ..*

It is clear from the above that the real interest rate plays an important role and is almost a controlling factor in the proportions of non-government expenditure components. This may be true, especially in advanced economies. Nevertheless, does this role remain the same in economies that are The real sector and the monetary sector (Weerapana, 2005: 89).

4. The Fourth section: Analysis of the evolution of the behavior of the real interest in the Iraqi economy for the period (1990-2014)

4.1. Analysis of nominal interest rate behavior in the Iraqi economy for the period (1990-2014):

Table 4.1 shows the evolution of the nominal interest rate, which determined by the Central Bank as a representative of the monetary authority. Noted that the interest rate took relative stability because inflation rates were low for the period 1990-1994. That the state was proceeding according to the totalitarian system and the mechanisms of demand supply were absent from the monetary policy measures. The following table shows the stability of the annual growth rates of the interest rate during that period. The monetary authority took steps to raise interest rates to address part of the losses incurred by the local currency due to these high rates of inflation. The period from (2003-2014) despite the state curriculum is assumed to be free because of the transformation of the socialist or planned economic system into a free economic system or one that depends on market mechanisms. However, interest rates were characterize by fluctuation and interest rates were still not affect by the monetary market. To the real market according to the mechanisms adopted. Consequently kept interest rates fluctuating up and down and therefore did not match the investment movement with a reverse relationship (the relationship was distorted and inconsistent with the logic of economic theory). Formerly increase production and thus increase in economic growth.

It is clear from the behavior of the nominal interest that it did not have a Strong effect on the behavior of macroeconomic variables in the Iraqi economy by attracting depositors. Nevertheless, on the contrary, saving money does not retain its purchasing power, but decreasing its purchasing value and observations proved this conclusion at the same time did not stimulate investors to invest. Due to the absence of the appropriate environment for investment and weak financial and banking system in Iraq. Additionally, the case when analyzing their behavior on net exports and indirectly through the channel exchange rate. where the full duration of study on imports from abroad to the weakness of the Iraqi production apparatus and thus lack of impact Of the components of economic activity.

Table (4.1) Evolution of nominal interest growth rate in the Iraqi economy for the period (1990-2014)

Nominal interest rate growth%	Nominal interest rate	Years	Nominal interest rate growth%	Nominal interest rate	Years
0	6.4	2003	-	6.5	1990
-5.5	6	2004	0	6.5	1991
16.7	7	2005	0	6.5	1992
128.6	16	2006	0	6.5	1993
25	20	2007	0	6.5	1994
-25	15	2008	11.5	7.25	1995
-53.3	7	2009	0	7.25	1996
-14.3	6	2010	0	7.25	1997
0	6	2011	0	7.25	1998

0	6	2012	1.4	7.35	1999
0	6	2013	-13.6	6.35	2000
0	6	2014	0	6.35	2001
			0	6.35	2002

The source of the work of the researchers and based on the data of the Central Bank for different years.

4.2. Analysis of the behavior of inflation rates in the Iraqi economy

Table 4.2 shows the annual growth rates in the Iraqi economy for the period 1990-2014. It is note that inflation rates started to rise from the beginning of the ninth decade of the last century due to many reasons including increased expenditure. Especially government expenditure due to increased military expenditure and stopping the export of Iraqi oil because of the comprehensive economic siege. Iraq's entry into Kuwait and the outcome of the Second Gulf War, the high levels of inflation led to the devaluation of the local currency. Hence, reflects the level of living of the individual and society alike, on the one hand, and on the other hand a reflection on the interest rate especially the public depositors in commercial banks. Therefore, the reflect amount of money saved, which will be determined by the volume of investments and thus the volume of productive capacities and then economic growth. Table (4.2) shows annual growth rates and volatility, which negatively affects the economic stability and then on Economic balance and thus economic growth.

Table 4.2 Inflation rate and annual growth rates of inflation in the Iraqi economy for the period 1990-2014

Growth Rate Inflation %	Annual Inflation Rate	Years	Growth Rate Inflation %	Annual Inflation Rate	Years
74.1	33.6	2003	-	51.6	1990
-19.6	27	2004	262.4	187	1991
37.0	37	2005	-55.2	83.8	1992
43.8	53.2	2006	147.6	207.5	1993
-42.1	30.8	2007	137.2	492.2	1994
-91.2	2.7	2008	-28.6	351.4	1995
-203.7	-2.8	2009	-104.4	-15.4	1996
-185.7	2.4	2010	-249.4	23	1997
133.3	5.6	2011	-35.7	14.8	1998
8.9	6.1	2012	-14.9	12.6	1999
-68.9	1.9	2013	-60.3	5.0	2000
-15.8	1.6	2014	228	16.4	2001
			17.7	19.3	2002

The table is prepared by researchers and based on the data of the Ministry of Planning in Iraq for different years

4.3. Analysis of the real interest rate in the Iraqi economy

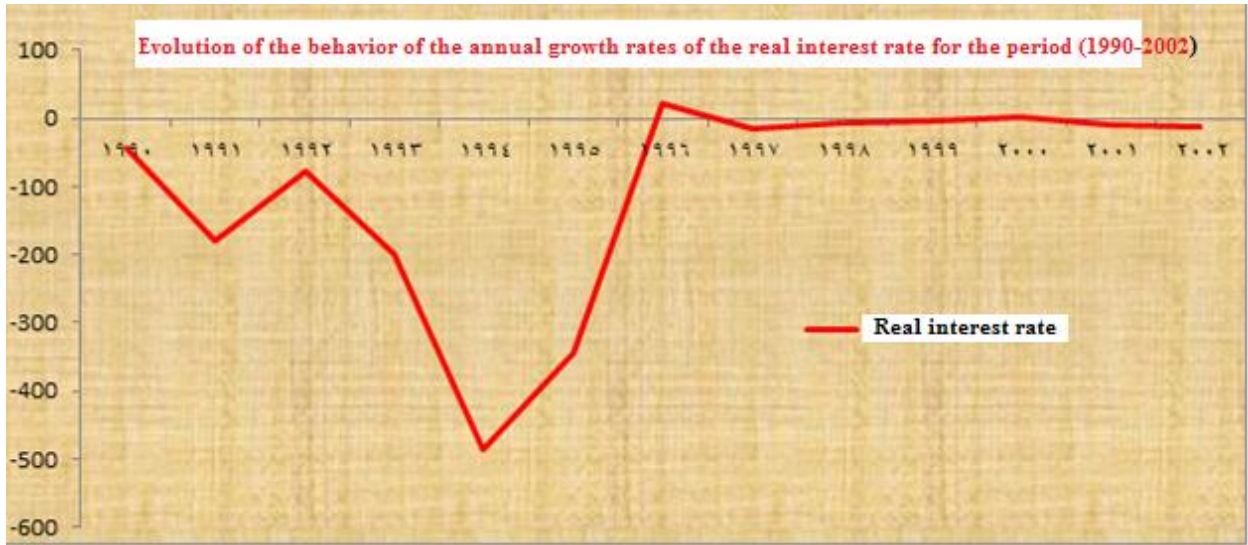
It is clear from the data in Table 4.3, Figures 4.1 and 4.2 that real interest rates during the period of study (1990-2014) are mostly negative due to high inflation, nominal interest rates and our application of the Fisher equation (real interest rate = interest rate). Nominal inflation rate which affects the decline in the value of savings and thus discourages savings incentives and the decrease of funds for lending. Therefore, on the movement of investment and the decline in the volume of production capacity and the decline in economic growth rates. Since economic growth is expressed in GDP and since GDP is a function of Oil revenues, depend on the Iraqi economy for a single source of Iraqi oil as the demand for oil depends on external variables such as global demand. Therefore, the gross domestic product is unstable, and as long as stability is required to achieve long-term economic balance, which is a necessary condition for long-term economic growth. Not all of these conditions help to achieve the desired economic growth, and the annual rate of growth of real interest rates in the following table shows us what happened to the Iraqi economy. Where the real interest is negative and when the subject of impact on the expenditure Shares taken the various expenditure. However, the overall economic activity to adopt the Iraqi economy on a single source is oil and the weakness of the banking system and the weakness of the productive system. All these factors have made the interest rate has no impact in the overall economic activity of Iraq.

Table (4.3) Evolution of real interest rates in the Iraqi economy for the period (1990-2014)

Annual growth rate of real interest rate%	Real interest rate	Annual inflation rate	Nominal interest rate	Years	Annual growth rate of real interest %	Real interest rate	Annual inflation rate	Nominal interest rate	Years
110.4	-27.25	33.6	6.35	2003	-	-45.1	51.6	6.5	1990
-22.9	-21	27	6	2004	300.2	-180.5	187	6.5	1991
42.9	-30	37	7	2005	-57.1	-77.3	83.8	6.5	1992
24	-37.2	53.2	16	2006	160.0	-201	207.5	6.5	1993
-70.9	-10.8	30.8	20	2007	141.6	-485.7	492.2	6.5	1994
-213.9	12.3	2.7	15	2008	-29.1	-344.15	351.4	7.25	1995
-20.3	9.8	-2.8	7	2009	-106.6	22.65	-15.4	7.25	1996
-63.2	3.6	2.4	6	2010	-169.5	-15.75	23	7.25	1997
-88.8	0.4	5.6	6	2011	-52.1	-7.55	14.8	7.25	1998
-125	-0.1	6.1	6	2012	-30.5	-5.25	12.6	7.35	1999
-4200	4.1	1.9	6	2013	-125.7	1.35	5.0	6.35	2000
7.3	4.4	1.6	6	2014	-844.4	-10.05	16.4	6.35	2001
					28.9	-12.95	19.3	6.35	2002

Source: Prepared by researchers and based on Central Bank data and years (1990-2014).

Figure 4.1 Evolution of the behavior of the annual growth rates of the real interest for the period (1990-2002)



1. Source: The work of researchers based on table data (4.3).

2. The Red Line represent behavior of the annual growth rates of the real interest %, for the period (1990-2002).

Figure 4.2 Evolution of the behavior of the annual growth rates of the real interest rate for the period (2003-2014)



1. Source: The work of the researchers based on the data of the table (4.3)

2. The Red Line represent behavior of the annual growth rates of the real interest %, for the period (2003-2014).

V. The Fifth section: Analysis of the behavior of expenditure shares in the Iraqi economy for the period (1990-2014)

5.1. Non-governmental expenditure shares of output at current prices for the period (1990-2014):

In this context, we will try to determine the Shares of the real output, as follows:

5.1.1. Share of Private Consumption Expenditure (GDP):

Table 5.1 and Figure 5.1 show the consumption share of the household sector of C / Y^A and the duration of the study (1990-2014), ranging from 17% in 2000 to 97% in 1991. The remainder of the study years varied from one year to the other inferred from the different circumstances and depth of the effects that the Iraqi economy has to reflect on the level of consumer expenditure for the family sector on these shares negatively and positively during the period of study (1990-2014). It should be noted that consumption tends to be stable in the short term because the factors influencing it tend to be fixed, and the stability of production capacity in the short term as a treasure. Because the factors that determine them tend to fixed in the short term is skill, number of workers, Types, technology, degree of competition and consumer habits. The employment and income are proportionately proportional to consumer demand and marginal revenue rate (marginal adequacy of capital) and vice versa with the interest rate. The more consumer demand increases and the marginal rate of revenue increases, the higher the production and the higher the levels of income and employment. The opposite occurs when the interest rate increases, which causes the weakening of incentives for investors, and the government has to intervene to take appropriate policies to compensate for the shortage of aggregate demand. However, the Iraqi economy increased marginal revenues because of the increase in consumer demand, and got an increase in output and increase levels of employment? The answer is that historical facts indicate that this positive and sound situation has not achieved by the lack of accessibility of the ground.

5.1.2. Share of private investment expenditure of GDP:

Table 5.1 and Figure 5.1 show the share of investment expenditure for the household sector and the period of study (1990-2014), which reached (1%) in 1991 and increased to (21%) in 1993. Noting that the share of consumer expenditure in the private sector is negatively reflected in the share of private investment expenditure, which indicates that in the case of increased consumption, the share of savings decreases and therefore the investment decreases. Although investment is the vital factor and dynamic engine of economic growth.

5.1.3. Share of net exports of output:

Table 5.1 and Figure 5.1 show that the share of net export value of GDP is negative for the years 1991, 1992, 1993, 1994, 1995, 1996, 2004 and 2005, indicating that these years have increased for the benefit of the outside world and deficit In the Iraqi trade balance. The decrease in output due to the decrease in oil exports due to the restricted conditions of these exports. Which confirms that the state has resorted to the policy of relying on non-resident goods to compensate for the shortage of domestic production because it is inflexible and because of the decline in oil exports covering its local currency from foreign assets for countering the currency Pulp for the private sector.

5.1.4. Government expenditure Shares of GDP:

Table 5.1 and Figure 5.1 show that the share of government consumption and investment expenditure accounts for a share of the highest percentage in 2005 (52%) and the lowest in 1991 (20%), which is less than non-governmental expenditure. The differences between these two ratios were different because of the effects of the

comprehensive economic embargo imposed on Iraq at the beginning of the ninth decade of the last century until the occupation of Iraq in 2003. which exhausted the Iraqi economy and was a reason to distort its structure coupled with poor economic policies. In the analysis from the point of view of the canonical logic, aggregate demand becomes the main determinant of income and employment in the short term, and changes in aggregate demand explain changes in the utilization of the productive potential of the economy as a whole.

It is clear that government sector expenditure can be significant in aggregate demand components. This means that the government sector has an interest in exploiting the available productive capacities and in determining income and employment levels, and that individuals' expectations of recession have a role in influencing employment-investment levels. Therefore, it becomes part of the duties of the state to find the appropriate policies to compensate for the lack of employment in a way that contributes to the desired levels of overall activity. This analysis does not mean that it is an ideal analysis that works in all economies at all times. Therefore, the state should create the appropriate policies to create the ground appropriate to give a role to the private sector. By creating the right environment for his projects to absorb the labor force and the unemployed to be an alternative to government employment. It is one of the sins of the government apparatus, which it practiced by increasing employment in the government sector, thus increasing its financial burden without increasing its real production. Payments resulting in the creation and increase of the deficit due to distorting the economic structure .

It is clear from the above that the expenditure share of the output is not led to a little efficiency or to increase and stimulate the growth of output commensurate with the stimulation and increase the components of total demand

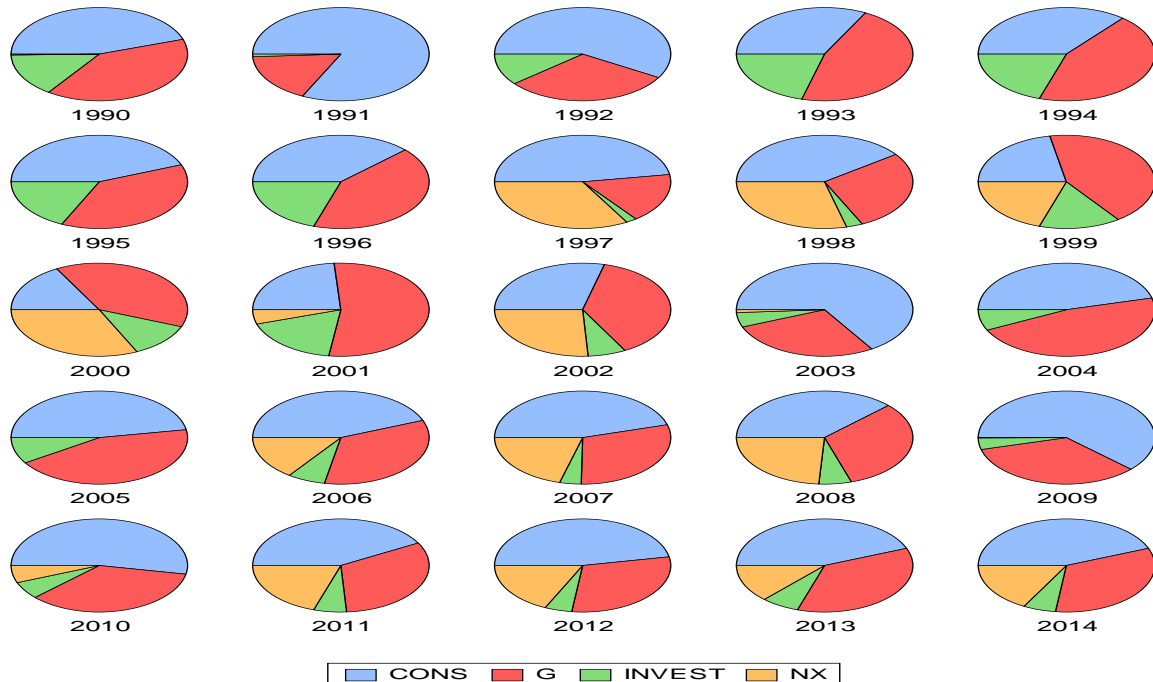
Table (5.1) Government and non-government expenditure shares of GDP at current prices in Iraq for the period (1990-2014)

the Real interest rate (7)	inflation rate (6)	Interest rate% (5)	Net exports of GDP (4)	government expenditure of GDP (3)	Household investment expenditure of GDP (2)	Household expenditure of GDP (1)	years
-0.451	0.516	0.065	0.003	0.40	0.15	0.45	1990
-1.805	1.87	0.065	-0.01	0.20	0.01	0.97	1991
-0.773	0.838	0.065	-0.01	0.31	0.11	0.59	1992
-2.01	2.075	0.065	-0.004	0.47	0.21	0.33	1993
-4.857	4.922	0.065	-0.0003	0.44	0.20	0.36	1994
-3.449	3.514	0.065	-0.0001	0.38	0.18	0.44	1995
0.219	-0.154	0.065	-0.08	0.52	0.18	0.38	1996
-0.165	0.23	0.065	0.33	0.17	0.02	0.47	1997
-0.083	0.148	0.065	0.29	0.28	0.03	0.40	1998
-0.061	0.126	0.065	0.20	0.43	0.15	0.22	1999
0.015	0.05	0.065	0.32	0.39	0.12	0.17	2000
-0.099	0.164	0.065	0.05	0.54	0.18	0.24	2001

-0.128	0.193	0.065	0.26	0.38	0.07	0.29	2002
-0.271	0.336	0.065	0.01	0.28	0.05	0.66	2003
-0.205	0.27	0.065	-0.11	0.52	0.08	0.51	2004
-0.305	0.37	0.065	-0.20	0.48	0.20	0.52	2005
-0.467	0.532	0.065	0.15	0.34	0.07	0.44	2006
-0.243	0.308	0.065	0.21	0.30	0.04	0.46	2007
0.038	0.027	0.065	0.24	0.323	0.06	0.38	2008
0.093	-0.028	0.065	0.001	0.34	0.04	0.62	2009
0.041	0.024	0.065	0.06	0.35	0.06	0.53	2010
0.009	0.056	0.065	0.20	0.32	0.06	0.42	2011
0.004	0.061	0.065	0.18	0.30	0.05	0.47	2012
0.046	0.019	0.065	0.13	0.36	0.07	0.44	2013
0.049	0.016	0.065	0.17	0.33	0.06	0.44	2014

Source: Prepared by researchers and based on data from the Iraqi Ministry of Planning and the Central Statistical Organization for different years (1990-2014).

Figure 5.1 The direction of non-government and government expenditure rations in Iraq for the period 1990-2014



1. Source: Prepared by researchers and derived from the data of the Iraqi Ministry of Planning and the Central Statistical Organization for different years for the period (1990-2014)

2. CONS: Represent The private Consumption from GDP , INVEST: The private Investment from GDP. NX: Represent Net value of export from GDP.

5.2. Analysis of the evolution of the behavior of the real interest rate and non-governmental expenditure in the Iraqi economy for the period (1990-2014).

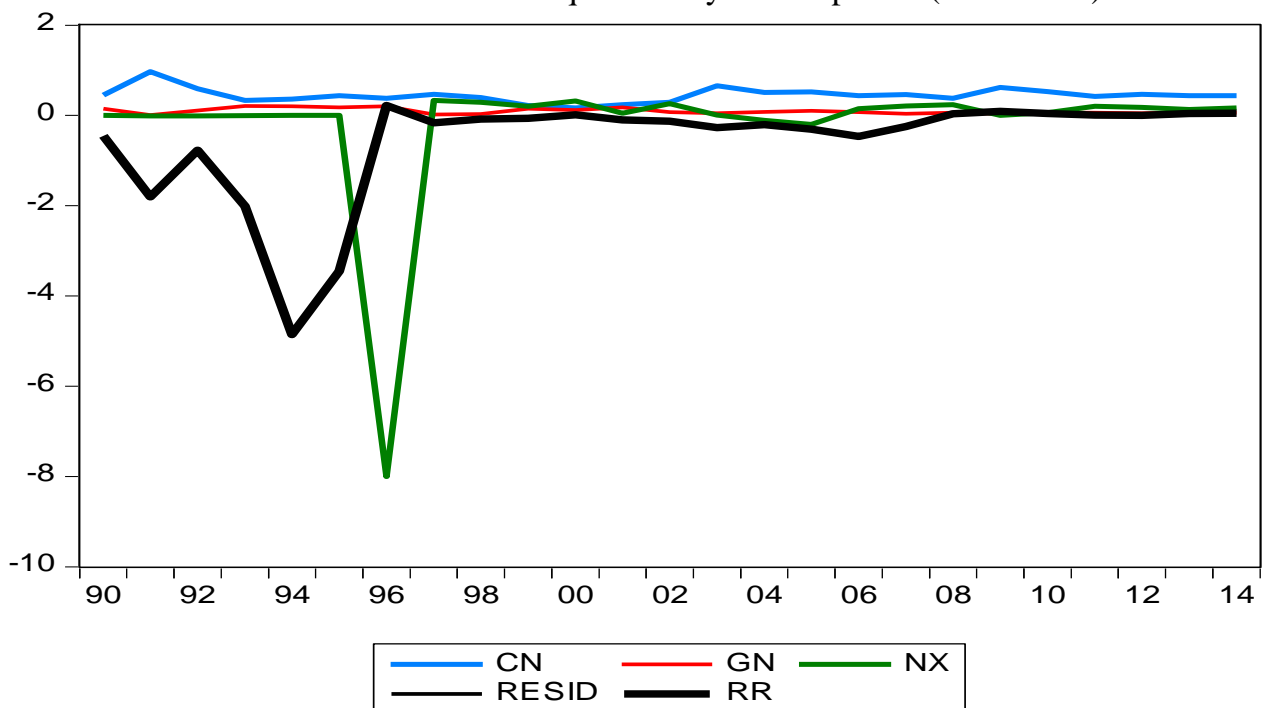
5.2.1. Behavior analysis between non-government expenditure and real interest rates

According to the logic of economic theory, there is an inverse relationship between private consumption expenditure, private investment expenditure and real interest rate, as well as an inverse relationship between the real interest rate and net exports, but indirectly through the exchange rate. It appears that the effect of the real interest rate does not move from the monetary market to the goods market, especially if we follow the direction of these expenditure tracks. Because of its failure to respond to changes in real interest rates, especially when the values become positive in the years 2009 to 2014. Assuming that when increasing the real interest rate It may be appropriate to say that there is no relationship between investment and private investment expenditure shares. The real interest almost complete schism between the monetary market and the real market in the Iraqi economy, as well as the lack of Dependence between the government sector and the private sector for several reasons.

a. Consumers do not care about the high real interest, Because to low awareness of individuals in Iraq , so the impact of the real interest does not shift from Which field of activity to the money and banking market.

b. The low level of income received by individuals and as a result does not care about mobilizing their savings towards investments. Which means weak individual savings and then low level of investment.

Figure (5.2) shows the relationship between the non-government expenditure Shares and the real interest rate in the Iraqi economy for the period (1990-2014)



1. Source: Based on the data of the table (5-1).

2. CONS: Represent The private Consumption from GDP ,INVEST: The private Investment from GDP. NX: Represent Net value of export from GDP, G : Government Expenditure from GDP, RR: Real Interest Rate.

CONCLUSIONS

1. The continued rise in prices (inflation) leads to the loss of money for part of purchasing power. Hence, reflected in the weakness of the confidence of individuals in the national currency and then the deterioration of their value and thus the decline in savings. The increase in consumption contrast this decline in the value of the currency leads to the appreciation of other foreign currencies. Which leads to the use of foreign currency as a store of value rather than the local currency and reduces the volume of investments.

2. Through the behavior of the real interest rate and the variables of total (private) expenditure, both consumption and investment, we can say that the macroeconomic variables of private expenditure are not affected by the change in the real interest rate (increase)

a. The Weakness of the financial system and its inability to Sustainability , Hard to transfer monetary policy effectiveness on Real Market.

b. A deterioration in the components of the money supply due to the predominance of the nature of the currency in circulation and exceeding 70% of the currency. Meaning that, Weak effect The Real interest rate on macroeconomic variables , and weak the ability of the banking system In Transfer effectiveness of monetary policy to real market.

c. During the period of research in Iraq, The imbalance of payments caused by the deterioration of net exports due to the decline in the volume of exports with the increase in the volume of imports, and therefore the impact on the ineffectiveness of the real interest rate on the total expenditure, especially investment expenditure. The opposite occurs when real interest rates fall.

4. By means of the behavior of the real interest rate and the variables of total expenditure (general) in both consumption and investment, we can say that the macroeconomic variables represented by government expenditure are not affect by the change in the real interest rate (rise), vice versa , because the Public sector is not affect by the high interest rate, Because the private sector is affected by higher borrowing costs, and therefore will affect the investment private sector and consequently the decline in investment and then Growth of economic.

Recommendations:

1. To determine an interest rate that operates according to the supply-demand mechanism and in ideal conditions, the following actions shall be required:

a. To make a quantum leap in the development of the financial and banking system in terms of creating the appropriate environment and structural changes in their structure.

b. Giving a greater role to the private sector in the overall economic activity, productivity and service.

c. Diversifying sources of income by activating the role of productive sectors in the public and private sector.

2. Enhancing the competitiveness of some commodities produced in Iraq, especially cement, phosphate, sulfur industries and oil industry, and working harmoniously between strengthening this capacity and combating the dumping policy witnessed by the Iraqi

market through controlling the government outlets and enhancing the role of qualitative control in those ports and with the concerned parties.

References

- [1] Guartini, James and Strobe, Regard, 1988, Macroeconomics Public and Private Choice, Riyadh: Dar Al-Marikh for Publishing and Distribution.
- [2] Khalil, Sami, 1994, Macroeconomics Theory, Basic Concepts and Theory, Kuwait, d. T.
- [3] Al-Dabbagh, Osama Basheer and Abdul-Jabbar, Athil, 2003, Introduction to Macroeconomics, Amman, Dar Al-Maagheh for Publishing and Distribution, Translation and Distribution, Kuwait, 1, 1982.
- [4] Al-Idrisi, Abdul Salam Yassin, 1984, Macroeconomic Analysis, Deposit Number at the National Library of Baghdad, 703, 1986, Basra University Press.
- [5] Ashkar, Ahmad, 2002, Macroeconomics, First Edition, Amman, Dar Al-Sallamia for Publishing and Distribution.
- [6] Ibdjman , Michal , (1999), Micro Economic , Ploice & theory, Dar ALMarek.
- [7] Maarouf, Hoshyar, 2002, Macroeconomic Analysis, First Edition, Amman, Dar Safa for Publishing and Distribution.
- [8] Diao, Majid, 2001, Economics of Money and Banks, University Youth Foundation, Alexandria.
- [9] Ministry of Planning, Central Bureau of Statistics, Iraq.
- [10] Christensen, Lacy, 2012, "How Are Interest Rates Affecting Household Consumption and Savings?".
- [11] kanwar, Naresh, 2014, Inflation and the Indian Economy, IOSR Journal of Business and Management (IOSR-JBM), Barkutallah University ,Bhopal, Volume 16, Issue 1. Ver. I
- [12] Li Suyuan, Wuhan & Khurshid, Adnan, 2015, "The effect of interest rate on investment; Empirical evidence of Jiangsu Province, China", Journal of International Studies, Vol. 8, No 1, DOI: 10.14254/2071-8330.2015/8-1/7. (Weerapana, 2005: 89)
- [13] Weerapana, Taylor, 2005, Principle of Macroeconomics, 6Th edition.