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The Impact of Fiscal Policies of Government Budget Deficit on the Optimal Size of the Government at the Time of Central Bank Independence

El impacto de las políticas fiscales del déficit presupuestario del gobierno en el tamaño óptimo del gobierno en el momento de la independencia del Banco Central

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Resumen

Considerando el tamaño óptimo del gobierno en la economía como uno de los factores importantes en la estabilidad económica de un país, las políticas financieras del gobierno tendrán un impacto directo en el tamaño óptimo del gobierno. Este estudio evalúa el impacto de las políticas fiscales del gobierno sobre el tamaño óptimo del gobierno cuando se produce un déficit presupuestario, y se está examinando en el momento de la independencia del banco central. En este estudio, se utilizan los índices Cukierman y Army Curve para evaluar la Independencia del Banco Central y el Tamaño Óptimo del Gobierno, respectivamente. El método utilizado en este estudio es utilizar la teoría fundamentada, que se considera como un método descriptivo en esta investigación. Además, el impacto de las políticas fiscales del gobierno sobre el tamaño óptimo del gobierno durante el déficit presupuestario se analiza utilizando el modelo final de esta teoría y la codificación de datos. Tener un banco central independiente es un puente de conexión entre la implementación de las políticas financieras del gobierno y el tamaño óptimo del gobierno. En este estudio, se muestra que las políticas financieras para los déficits mejoran el camino para alcanzar el tamaño óptimo del gobierno, con la falta de préstamos del banco central y la venta de bonos corporativos con el objetivo de evitar la creación de dinero.

Palabras clave: Teoría fundamentada, índice de independencia del banco central, índice de tamaño óptimo del gobierno, tasa de reserva legal.

Abstract

Considering the Optimal Government Size in economy as one of the important factors in economic stability in a country, government financial policies will have a direct impact on the Optimal Size of Government. This study evaluates the impact of government fiscal policies on government's optimal size when a budget deficit occurs, and it is being examined at the time of central bank independence. In this study, Cukierman and Army Curve indexes are used in order to test the Central Bank Independence and Optimum Government Size, respectively. The method used in this study is to use Grounded Theory, which is considered as a descriptive method in this research. Also, the impact of government fiscal policies on the optimal government size during the budget deficit is analyzed using the final model of this theory and data coding. Having an independent central bank is a linking bridge between the implementation of government financial policies and the optimal size of the government. In this study, it is shown that the path to reaching the optimal government size is improved by the financial policies for deficits, with the lack of borrowing from the central bank and sales of corporate bonds with the aim of preventing money creation.

Keywords: Grounded Theory, Central Bank Independence Index, Optimal Size of Government Index, Legal Reserve Rate.

Introduction

An examination of the history of the economy shows that before the creation of an institution called the Central Bank, governments were responsible for issuing money. Governments used the money supply privilege to fuel inflation by sharply increasing the amount of money in circulation whenever they faced declining revenues or a lack of liquidity in the treasury (Banaian et al., 1983). Governments, which tend to spend more resources than revenues due to their executive power and budget expenditures, always put pressure on central banks to borrow and do not pay much attention to the inflationary effects of this (Glaser Barney, 1978). Indeed, although monetary policy, including liquidity, should be tailored to objectives such as economic growth and general price stability based on empirical and theoretical macroeconomic considerations, government financial problems have overcome these considerations. As a result, the functioning of monetary policy has been seriously jeopardized. For this reason, the historical experience of the relationship between the government and the central bank has led to the formation of the theory of government deficit financing by the central bank (Alesina & Summers, 1993).

State the problem: In this study, the effect of fiscal policies of government budget deficit on the optimal size of government during the independence of the central bank was discussed as the main issue. Before addressing this issue, the position of central bank independence and the optimal size of government in the economy were examined. The independence of the central bank plays a very important role in the efficiency of economic policies and can improve the achievement of price stability and financial stability to an appropriate extent (Kormendi & Meguire, 1985).

It should be noted that without a doubt, achieving any model or pattern of modern banking and central banking requires the independence of the central bank, and without achieving this, one can not expect price stability and financial stability in the long run. Accordingly, strengthening the independence of the monetary authority through legal means is an undeniable necessity in the efficiency of monetary and fiscal policies (Landau, 1986).
After the importance of central bank independence and its impact on the country's economy, a review of the size of government in the economy was conducted:

- The size of government in the economy is generally measured by calculating the ratio of total government expenditure to gross domestic product (expenditure), both of which are variable in current prices.
- The size of government is a kind of objective, real, and practical crystallization of the role and function of government in the economy.

It is important to study the effect of government size on the overall performance of the economy and growth, and there are various theories in this regard. One point is that the size of the larger government is detrimental to production efficiency and economic growth; First, government functions are often inefficiently administered; Secondly, the adjustment of various government systems puts a lot of burden and cost on the country's economy; And thirdly, most government fiscal and monetary policies tend to divert economic incentives and lower efficiency. Contrary to this view, some argue that government plays a critical role in the stages of economic development, arguing that the size of a larger government is similar to the powerful engine of an economic development system;

Because, first, government leadership is needed to coordinate conflicts between the private sector; Secondly, preventing the use of drawers by foreigners is a vital matter that is not possible without the existence of the government; And thirdly, it is only in the hands of the government to preserve the increase in profitable investment and to provide effective social leadership for growth and development. The size of government in the Iranian economy varies greatly by different definitions. The central government, the public government, and the public sector provide three different definitions and dimensions of the role and position of the government in the Iranian economy.

The main research questions

1. Does the Central Bank of Iran have independence?
2. Is the optimal size of the government smaller than the actual size of the government?
3. What is the effect of the fiscal policy of financing the government budget deficit on the optimal size of the government during the independence of the central bank?

Research hypotheses: According to new calculations, the Central Bank of Iran's independence index has a low rank among the countries of the world.
The actual size of the government in the Iranian economy is larger than its optimal size.
If the central bank is independent, the government's fiscal policies to cover the budget deficit will have a positive effect on the optimal size of the government.

Research innovation: Using Grounded Theory, which is a descriptive method, this research identifies categories, themes, and establishes a relationship between them and offers a theory to explain a process using regular methods of data collection and data coding (open-axis-selective coding).

Therefore, in this study, using Grounded Theory and presenting the final model, the effect of fiscal policies on government budget deficit on the optimal size of government in both independence and non-independence of the central bank was tested.

The need for research: Since borrowing from the central bank is the first way for governments to cover the budget deficit in times of budget deficit, imposing mandatory policies on the central bank creates money creation. Therefore, whenever the central bank acts independently, the government will never choose the policy of issuing banknotes and selling participation bonds to commercial banks to cover the budget deficit. Therefore, the government, by supervising the central bank and selling participation bonds to the people, while preventing the creation of money, prevents inflation and liquidity in the society, because inflation and liquidity virtually paralyze economic growth and hamper government fiscal policies on the optimal size of government. Therefore, the central bank chooses to sell its participation bonds to the people to control the money supply and, consequently, inflation and liquidity, and to pave the way to reach the optimal size of the government.

A review of the research literature

Concerning the main subject of the research, the effect of the fiscal policy of financing the government budget deficit on the optimal size of the government at the time of the independence of the Central Bank, no studies have been conducted in general on this topic. Therefore, studies have been conducted separately inside and outside the country on the issues of government size and money supply control in the economy and the independence of the central bank. Much researches have been done in the field of analysis of the effects of government intervention in the economy, some of the most important of which are mentioned below. The traditional Keynesian model attributes the spread of government intervention to the recession. Lando concluded a negative relationship between government size and economic growth. They believe that the expansion of government size has the effects of the law of declining returns and the effects of replacing the private sector. Besides, government spending is increasingly spent inefficiently due to the misallocation of resources. When government spending expands, the government needs more taxes to provide resources, while tax expansion hurts the economy (Lando, 1986). In contrast, other theories show that the growth and expansion of government size promote economic growth. (Ebrahimi & Vaez Barzani, 2014), for example, used real GDP growth rates as indicators of economic growth and found that government size expansion played an insurance role for private sector assets and that public spending encouraged private sector investment. Ultimately, it leads to economic growth. These researchers particularly emphasize that the government improves the investment climate by investing in public goods and services (Ebrahimi & Vaez Barzani, 2014).

Much research has been done on money creation by the banking network.

As a proponent of the 100% reserve mechanism, Fischer believes that in all the sudden leaps in economic prosperity, as well as past recessions, over-indebtedness and recession have been influential (Mansoorian, 2007).

He believes that after creating the right proportion to the 100% reserve ratio, monetary policy based on future goals should be such that the total nominal money supply remains stable and the nominal money supply per capita is kept constant. In this context, as money has been backed in the past, the existence of assets as monetary backing is essential. Ensuring that the money issued has reserves and backing and that this backing should guarantee all monetary value through a "100% reserve" is a novel point that Fisher has made (Fisher, 1935).

Simmons sees the lending mechanism and the creation of commitments during periods of severe economic growth as a factor in desperate efforts during the recession to convert bank credit into cash. Simmons emphasizes that a capitalist system based on partial reserve banking has the potential to stagnate (Simmons, 1948).

Allais also proposed a scheme based on (Fisher, 1935) (10035) 100% reserve model and believes that the expansion of the credit method by repaying loans from individuals' deposits with commercial banks will cause the collapse of the banking system. He believes that the miracle created by credit is comparable to the wonder that can be expected from the work of forgers. The only difference is in the interest generated by lending banknotes or counterfeit credit for monetary return or interest. Both have the same range of motivations but only their benefits are different (Mansoorian, 2007).

Regarding internal research, Samti has used the Armey model to compare the optimal size of government economic activities in the two periods of 1979 to 1988 and 1989 to 1998. His results showed that in these two periods, the volume of economic activities of the government is more than desirable (Samti, 2003).

Bakhshi Dastjari & Sheikh Ansari, in an article entitled "The Impact of Commercial Banks and Population Growth on Optimal Inflation in the Sidraski Model for the Iranian Economy", analyzed the impact of commercial banks and population growth on optimal inflation. The results indicate that reducing the money-creating power of commercial banks by increasing the legal reserve rate and increasing the population growth rate reduces the optimal inflation rate (Bakhshi Dastjari & Sheikh Ansari, 2015).

Mousavian & Nazari discussed the optimal model of legal reserve rates influenced by extremist and deviant views in the field of Islamic banking. They offered the middle view by expressing the views and arguments of extremist and deviant theories in the maximum use and non-use of the legal reserve rate, so that in sight deposits, the maximum rate in Qarz al-Hasna deposits is the minimum rate, and in investment deposits, the rate is set between the maximum and minimum. Accordingly, changes in the legal reserve rate in policy-making are mostly limited to investment deposits (Mousavian & Nazari, 2013).

Bakhshi & Dalali Esfahani state that developing countries do not have developed financial markets, so it is impossible for central bank independence in these countries to reduce inflation. As a result, the move towards central bank independence in these countries should be considered according to the characteristics of these countries (Bakhshi & Dalali Esfahani, 2012).

Debelle & Fischer provide evidence that the central bank's political independence does not play a significant role in reducing inflation. Also, in developing countries, the relationship between inflation and the legal index of central bank independence is weak. But in some studies, the inflation rate has a significant relationship with the central bank governor exchange rate index (Debelle & Fischer, 1994).

Jakobe & Kooi, show that there is a significant relationship between the legal index of central bank independence and inflation in OECD countries, but in the case of developing countries, this relationship is not clear (Jakobe & Kooi, 1998).

Materials and Methods

In this section, the theoretical foundations of the research are examined.

First, the theoretical foundations of the optimal size of the government are examined using the Armey curve. In the next section, the Central Bank Independence Index and (Cockerman) are analyzed. In the next step, the relationship between the government budget deficit by the central bank and its impact on inflation and liquidity is discussed and its impact on the country's economy continues (Mansoorian, 2007).
In the last stage, while introducing the theorized method of the foundation, the final research model is examined.

Optimal government size index
One of the objectives of the present study is the optimal size of the government, so the Armey curve is used to obtain the optimal size of the government. Analyzing this issue, Armey says that in a world without a state where there is no law and no protection of private rights, domestic oppressors and even nations confiscate the property of weaker individuals and countries. In this situation, there is no incentive to save and invest. With the formation of the government, security will be provided and trade costs will be lower. But if government growth is not commensurate with economic growth, the law of return returns will work, and increasing government spending will impose an additional burden on the government. But if the tax rate is lower, it will increase incomes more than before and will lead to fewer consumption costs, which will have the opposite effect on people's economic behavior and will lead to economic growth.

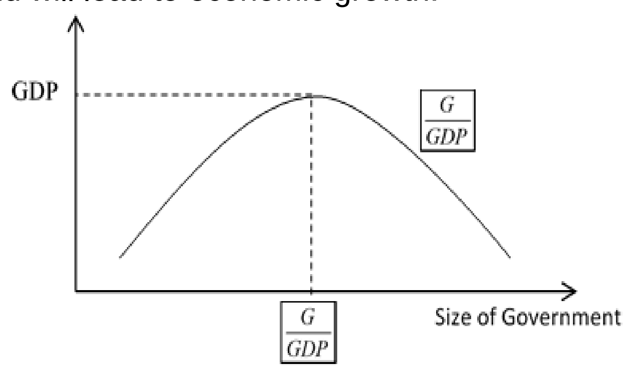

Figure 1. Armey curve

When the government is small, the implementation of tax policies and payments along with economic growth increases the size of the government. The deterrent effect of this increase will have an adverse effect on production. The Armey curve does not detract from the government, but its job is to produce public goods and services. But like most things, it's too big for it. Excess in anything, even drinking water that is necessary for people's health is certainly bad and harmful. So a balanced government is good for the economy, but too big is bad. The initial part of the Armey curve indicates the positive relationship between government size and economic growth. This issue can be seen until we reach point A in the diagram above. From point A onwards, the inverse relationship between government size and economic growth is clear. Therefore, at point A, the optimal

size of government and optimal economic growth can be observed. The mathematical proof of the above relation is as follows:
T
he Armey curve is shown in (Figure 1) as shown in the simple quadratic figure as follows:
Equation 1:

$$Q=a+bG-cG2$$

Q is the total output and G is the size of the state. The G symbol in the above linear relationship is designed to indicate the positive effects of government spending on production and the negative sign for the relationship and quadratic power is a criterion for the adverse effects of increasing government spending.

Central Bank Independence Index

Independence of the central bank means independence in targeting, which means that the central bank decides on monetary policy objectives, which can be aimed at controlling inflation, controlling the money supply, or stabilizing the exchange rate, without government intervention and according to economic conditions. Take it slow.

Central Bank Independence in Iran

A feature called central bank independence is not possible within the framework of existing laws in Iran. Independence or non-independence can only be defined in the context of personal communication between the Governor of the Central Bank and the President himself. In periods when the governor of the central bank allows it, we see an increase in the degree of independence of the central bank and the separation of monetary and fiscal policies. At other times, however, the president, as the signatory of the central bank governor's decree, in practice guides the country's monetary policy.

Cockerman Index of Independence: In this index, the central bank is examined in both legal and real components. The independence of the central bank from a legal point of view refers to the freedom, flexibility, and practical authority that the law has given to the central bank. This index is divided into four main components: (1) dismissal and a half and the term of office of the Governor of the Central Bank, (2) formulation of monetary policy, (3) goals, (4) restrictions on lending to the government. These four components are based on 16 different legal variables, each of which is ranked between zero (lowest degree of independence) and one (highest degree of independence). Finally, the average of these 16 variables is calculated as the index of the legal component.

Grilli Independence Index

In this index, central bank independence is divided into components of political independence and economic independence. Political independence is determined by factors such as the process of appointing the central bank chairman and board members, the tenure of the appointees, and the extent of the central bank's responsibilities to achieve its goals. Economic independence depends on factors such as central bank credit to the government, the central bank's freedom to set interest rates on loans and discount rates, and the central bank's ability to control monetary policy instruments (Table 1).

Table 1. Cockerman Index

Index	Different scenarios	Score
Appointment of the Board of Directors of the Bank		
Who appoints the CEO?	By the board of directors of the bank	1
	A council consisting of the legislature, the executive and the judiciary with a board of directors	0.75
	Legislative power	0.5
	Cabinet	0.25
	Economy Minister	0
Duration of tenure as CEO	Over 8 years	1
	Between 6 and 8 years	0.75
	5 years	0.5
	4 years	0.25
	Under 4 years	0
Conditions for dismissal of the General Director	Only because of disability or illegal performance	1
	Depending on the management of the bank	0.75
	By Parliament for political reasons	0.5
	By the government for political reasons	0.25
	By the Minister of Economy for political reasons	0
Possibility of having an institution for the head of the central bank in the government	Prohibition of having an institution in the government	1
	Prohibition unless owned by the government	0.5
	No prohibition	0
Policy formulation		
Who sets the monetary policy?	The central bank alone	1
	The central bank and the government together	0.66
	The central bank acts as an advisor	0.33
	The government alone sets the policies	0
Government orders and interventionist measures	The final decision with the central bank	1
	The final decision with a council composed of the Central Bank of the Legislature and the Executive	0.6
	Legislative power	0.4
	The executive branch in terms of the opinion of the central bank	0.2
	Government of unconditional power	0
	The bank has an active role	1

The role of the central bank in determining government budget policies	The bank has no active role	0
Central Bank Objectives		
Central Bank Objectives	Price stability is the only goal or goal with the priority	1
	Price stability with goals that do not conflict with it	0.6
	Price stability with the goals they conflict with	0.4
	Aimless	0.2
	Goals other than price stability	0
Government borrowing restrictions		
Government borrowing restrictions	Borrowing is prohibited	1
	Being allowed but with many restrictions	0.66
	Permission with low restrictions	0.33
	Unlimited	0

The relationship between the central bank and the government regarding the financing of the government budget deficit

}The cause of inflation in today's world is the chronic and continuous issuance of new money by the central bank. The central bank provides the reserves for the partial reserve banking system, and the banks set up several times that amount of money in the form of checks on it. But in the meantime, where is the government deficit? Is the budget deficit inflationary and if so, how much is inflation? What is the relationship between the government as the central bank and the government in terms of taxation or budgeting?

On the other hand, it is theoretically quite possible that the government has a deficit (an increase in expenditures to revenues) and this deficit does not increase the money supply and therefore is not inflationary. For example, suppose the government has a budget deficit. If this deficit is fully offset by the sale of new participation bonds to the public (individuals, companies, insurance companies, etc.), there will be no increase in the money supply and consequently no inflation. People's savings are transferred from the buyers' bank accounts to the treasury bank accounts, and they spend them quickly. As a result, deposits are returned to the private sector. Within the existing money supply, there is a shift, but there is no increase in the money supply.

Another method used to cover the conventional budget deficit is now obsolete. This method was simply printing money (treasury money) and spending it and was only available to the central government. Obviously, this method was highly inflationary.

The third method is the same as the first method, which is compatible with new banking methods but combines the worst features of the previous two methods. This method occurs when the government sells new bonds to commercial banks under the supervision of the central bank. This is called "debt consolidation" (or creating new money to pay off new debt); That is, private banks create new money and give it to the government by buying bonds issued by the central bank. Thus, in the third method, which is a new method for providing a deficit, the bad features of both previous methods are combined; That is, it is both inflationary and imposes a heavy tax burden on taxpayers.

Grounded theorizing

The translation of Grounded Theory has been used in different meanings: Contextual theory; Fundamental theory; Data processing theory; Data-based theory; and data theory.

Grounded Theory

It is a kind of qualitative research method that uses regular data collection methods to identify categories, themes, and establish a relationship between them and offers a theory to explain a process (Danaifard, 2005).

The central question: What is a theory?
Theories are logical expressions that summarize the knowledge in a particular field and prepare it for testing so that they can be put to experience. Theories are ready to be modified, changed, and modified.

Theoretical sampling
Theoretical sampling is the process of collecting data to generate a theory, by which the analyst simultaneously collects, encodes, and analyzes his data.

Open coding
Open coding is an analytical process through which concepts are identified and their properties and dimensions are discovered in data.

Axial coding
Axial coding is the process of converting concepts into categories. This coding is considered central because the coding takes place around the axis of a category.
At this point, the foundation data theorist selects an open coding stage concept, places it in the process he or she is examining, and then relates the other concepts to it.

Selective coding
Selective coding is the process of integrating and improving categories to get theory (Figure 2).
At this stage, the grounded theorist writes a theory of the relationships between the categories in the central coding (Dastjerdi & Dalali, 2013).

Theoretical comparison
Comparison is essential for identifying and cultivating concepts and categories.
The theoretical comparison involves comparing abstract categories and concepts with similar or different concepts and categories.

From data to theory

Figure 2. From data to theory

Data
Actual data, events, or activities as observed or reported.

Concepts
Concepts are defined as conceptual labels that are placed on separate events, happenings, and other phenomena.

Categories
Categories are more abstract than concepts and show a higher level.
Categories are the foundation of theory.
Grouping concepts make up categories.

Saturation of theories
A point in the formation of categories where further analysis does not lead to new features, new dimensions, or new relationships.

Refinement and validation of a theory
Once the theoretical blueprint (Figure 3) is formed, the analyst is ready to refine the theory, prune its additions, and fill in the immature categories.
Finally, the validation of the theory is done by comparing it with the raw data or by presenting it to the respondents and receiving their opinion.
The data-driven theory must be validated by the participants.

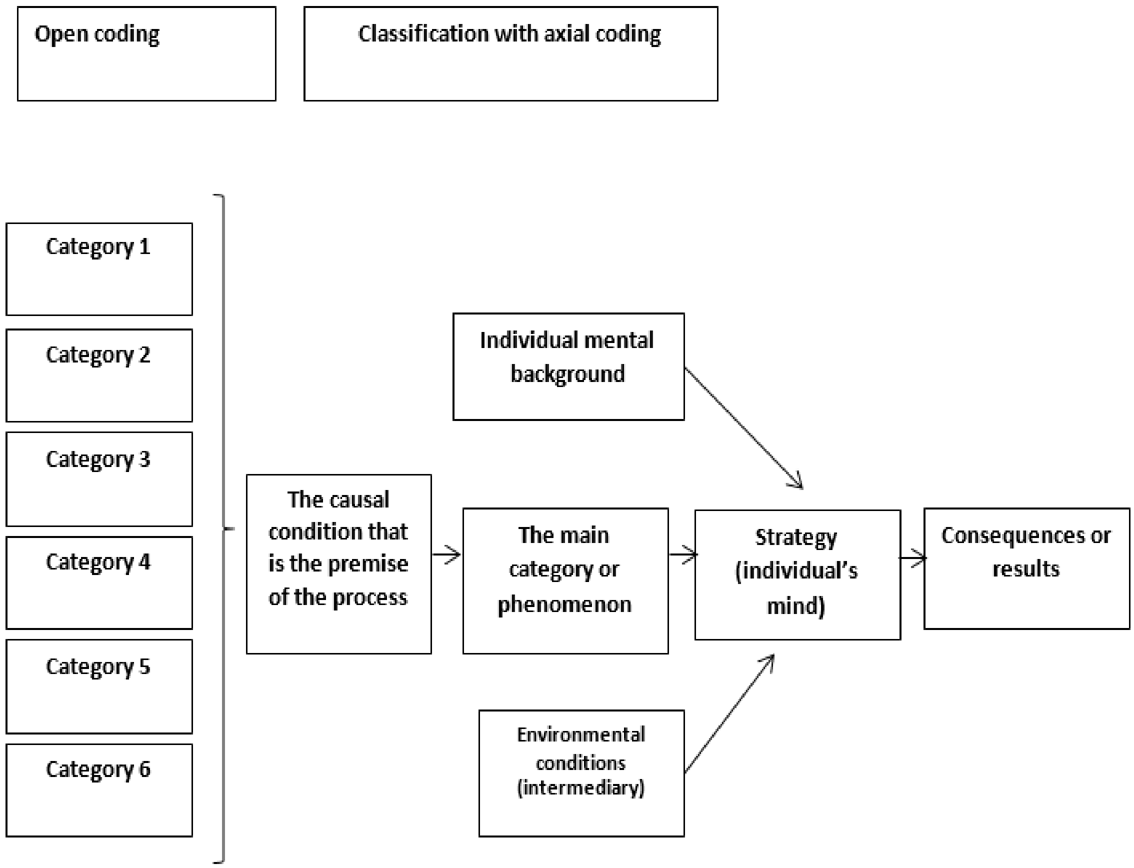

Figure 3. Systematic approach

Result and discussion

1. Estimate the size of government in the years of the development program

First, in this section, we estimate the size of government over the years of development programs (Table 2):

Table 2. The average size of government in years of development programs (percentage)

Periods	Government size (share of government expenditures in GDP)
Before the Revolution (1973-1978)	36.2
Imposed War (1979-1988)	28.0
The first development plan (1988-1993)	17.8
Second Development Plan (1995-1999)	22.0
Third Development Plan (2000-2004)	20.5
Fourth Development Plan (2005-2009)	23.0
Fifth Development Plan (2014-2010)	25.0

The results of the present report provide a worrying picture of budgetary, non-budgetary dominance (policies and regulations) and government ownership of the Iranian economy in recent years. Also, these results indicate the lack of effective monitoring of the implementation of the rules of the five-year plan and the country's development vision document, efficient management, and the necessary transparency in the country's budgeting system.

The optimal size of government in the country's economy is given based on current prices (Table 3).

Table 3. The total size of government economic activities, including nominal prices in the years 1979 to 2014.

Description	Size
The optimal size of government	22.05
Average government size	24.37

Source (Malik, 1394)

As can be seen, between 1978 and 2014, the total size of government economic activities was 24.37, which is higher than the desired limit based on the Armey curve and indicates the extent of government activities in the country's economy (Table 4).

Independence of the Central Bank

Table 4. Central Bank Independence Index (Cockerman)

Row	Central Bank Independence Index (Cockerman)			
	1960s and 1970s	1980s	1990s	2000s and 2010s
The term of office of the Governor of the Central Bank	0	0	0	0
The role of the central bank in monetary policy	0.33	0.33	0.33	0.33
The role of the central bank in fiscal policy	0.5	0.5	0.5	0.5
Central Bank Objectives	0.6	0.6	0.6	0.6
Government's borrowing from the central bank	0.33	0.33	0.33	0.33
Election of the Governor of the Central Bank	0	0	0	0
Dismissal of the Governor of the Central Bank	0.25	0.25	0.25	0.25
The role of the executive in monetary policy	1	1	1	1
Average Central Bank Independence Index	0.376	0.189	0.313	0.313

Source: Parliamentary Economic Research Journal, 2016.

A look at the central bank independence index shows that in the 1990s, 2000s, and 2010s, the central bank independence index improved compared to the war situation in the 1980s. However, in recent decades, the index has stalled and not improved.

Degree of central bank independence using the Kokerman index during development programs: Between 1989 and 2014, the average annual growth of inflation is more than the annual growth of 26.4% of total liquidity. This has been influenced by budget deficit policies through borrowing from the central bank and monetary expansion (Table 5).

Table 5. Development programs implementation period

During the implementation of the first low-level development program	0.325
During the implementation of the second development plan	0.38
During the implementation of the Third Development Plan	0.52
During the implementation of the Fourth Development Plan	0.54
During the implementation of the Fifth Development Plan	0.55

Source: Parliamentary Economic Research Journal, 2016.

The average independence of the Central Bank in the period 1989 to 2014 was about 0.46. According to new calculations for oil countries, the Cockerman index for Iran is 0.25

and Saudi Arabia is 0.18. Iran has a low ranking of central bank independence among oil countries.

The performance of the country's banking network

A review of banking experience in Iran
Iran's banking experience can be considered as evidence for the theoretical position presented in the previous sections. However, in this study, there is not enough time to carefully examine the experimental data and only two cases are mentioned:

Evidence 1: The ratio of banking network claims from the government and non-government sector to the real national income of the country according to the latest statistics published in 2014 has been three times the national income of the country. This ratio has an increasing trend compared to previous years (Izadkhasti et al., 2015).
Evidence 2: The ratio of total banking network claims to liquidity in recent years has been greater than one. For example, according to the latest published statistics, this ratio in 2014 was equal to 1.08; That is, all the country's liquidity will not be enough to settle the debt to the country's banking network (Piraei & Norouzi, 2012).

Presenting the final model of the effective financial policies of financing the government budget deficit on the optimal size of the government despite the independence of the central bank using Grounded theory: In this part of the research, using grounded theory, a model is presented on what economic policy tools should be used to achieve the optimal size of government (Table 6).

Open coding

Table 6. Open coding

ID (Code)	Data	Code concept
R1	Long term as Governor of the Central Bank	Political independence
R2	Having more legal power in implementing the country's monetary policy	Political independence
R3	Price control as the main goal of the central bank	Economical Independence
R4	The role of the central bank in fiscal policy	Economical Independence
R5	The role of the executive in monetary policy	Economical Independence
R6	Reduce and move away from grammatical policies	Political independence
R7	Restrictions on lending to the government	Political independence
R8	Non-financing of government deficit (monetizing budget deficit)	Government budget deficit financing policy

Axial coding

The results of axial coding are shown in (Table 7):

Table 7. Axial coding

Article	Concepts	Components
R7 + R6 + R2 + R1	Long term as Governor of the Central Bank Having more legal power in implementing the country's monetary policy Reduce and move away from grammatical policies Restrictions on lending to the government	Political independence
R5 + R4 + R3	Price control as the main goal of the central bank The role of the central bank in fiscal policy The role of the executive in monetary policy	Economical Independence
R8	Non-financing of government deficit (monetizing budget deficit)	Central Bank Performance (Government Budget Deficit Policy)

Selective coding

The results of the selected coding are shown in (Table 8):

Table 8. Selective coding

Components	Strategy	Dependent variable (subject)
Political independence	Sale of participation bonds to the people by the Central Bank	Performance The impact of fiscal policies on government budget deficit on the optimal size of government
Economical Independence		
Central Bank Performance (Government Budget Deficit Policy)		

The results of coding (open-axial-selective) are given in (Table 9):

Table 9. Categories and concepts resulting from coding

Categories	Concepts	
Central Bank Independence Index	Grilli Index	Political independence
		Economical Independence
	Cockerman Index	Dismissal and installation and tenure of the Governor of the Central Bank
		Develop monetary policy
		Financing the government budget deficit
		Price stability
Underlying variables of the Central Bank	Long term as Governor and Governor of the Central Bank	
	Having more legal power in implementing the country's monetary policy	
	Price control as the main goal of the central bank	

Independence Index	The role of the central bank in fiscal policy
	The role of the executive in monetary policy
	Failure to finance the government budget deficit through borrowing from the central bank
	Reduce and move away from the set and mandated credit policies
Inhibitory variables of the Central Bank Independence Index	political pressure
	economical pressure
	The short tenure of the Central Bank
	Decreased investment due to uncertainty over central bank policies
	Increase speculation exchanges
	Financing the government budget deficit through borrowing from the central bank
Central Bank Performance (Government Budget Deficit Policy)	Sale of government bonds to the public under the supervision of the Central Bank

Modeling: In modeling is a stage that requires thinking and creativity in the form of variables, effective, contextual variables, inhibitory variables, returns, and results, are shown in (Figure 4):

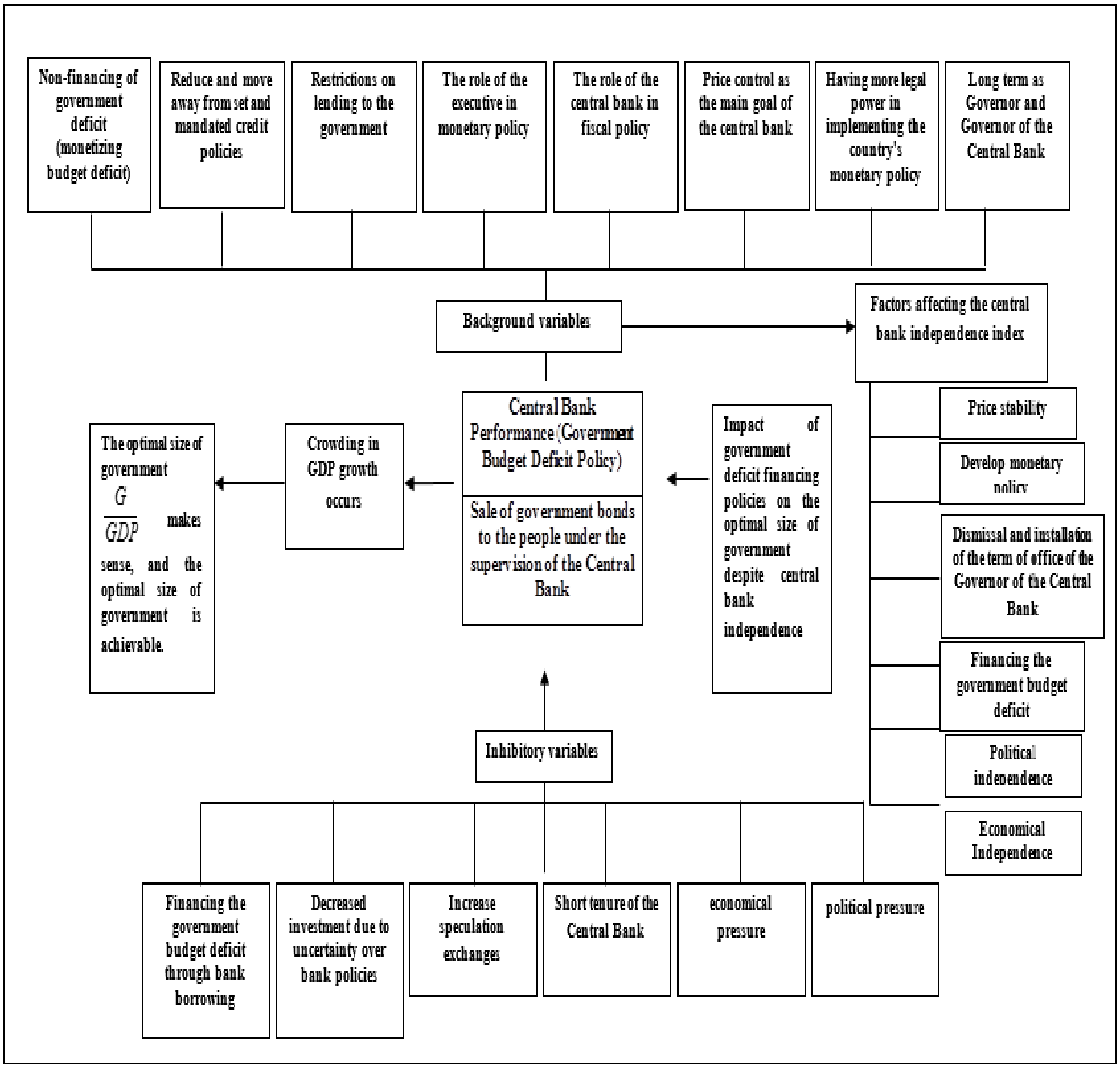

Figure 4. The final model of the Grounded theory.

As can be seen in the final model, to reach the optimal size of government and the impact of fiscal policies, the independence and non-independence of the central bank must be tested in times of government budget deficit (Dastjerdi, 2013). Therefore, in cases A and B, the independence of the central bank and the lack of independence of the central bank to achieve the optimal size of the government are evaluated:

Theory test

By applying fiscal policies, for example in times of budget deficit, increasing government spending can lead to the optimal size of government. Therefore, regarding the final model theory test, the issue is first examined in two situations: lack of central bank independence and central bank independence:

A: When the central bank does not have independence (borrowing from the central bank): In this case, the government sells participation bonds to commercial banks under the supervision of the central bank to cover the government budget deficit. This method, commonly called debt monetization, also called creating new money for new debt, is the worst way to cover a government budget deficit because it has both effects and imposes a heavy tax burden on taxpayers. In other words, the private sector is ousted due to the busy presence of the government or the forced replacement of the government (Komijani & Nazari, 2009). This will cripple productivity and economic growth and raise interest rates significantly, reducing GDP. Therefore, G and GDP will not move in the same direction, because increasing G has reduced GDP. Therefore, according to the Armey curve, the path to reach the optimal size of the government will not be possible, which is shown in (Figure 5) below:

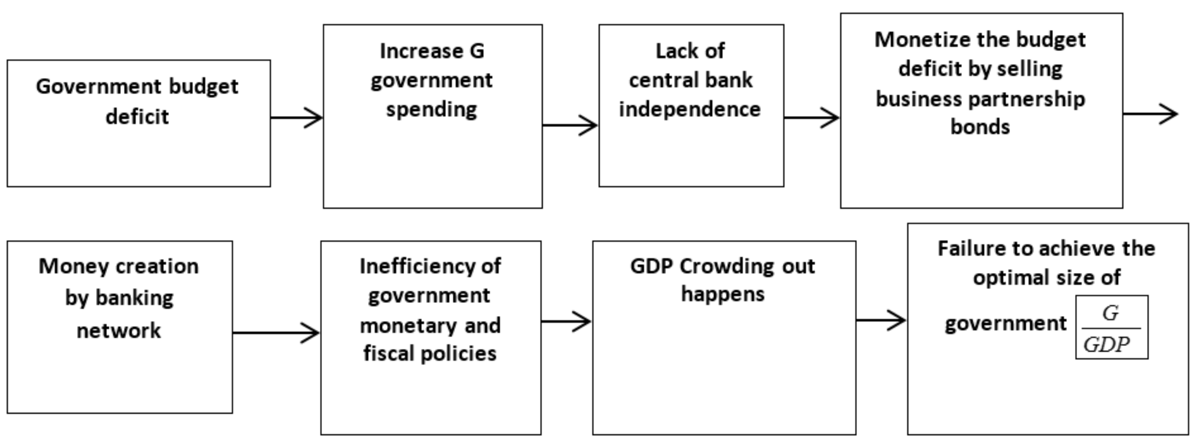

Figure 5. The effect of government budget deficit financing policy (borrowing from the central bank) on the optimal size of government.

B: When the central bank has independence (borrowing from the people):
In this case, the government, under the supervision of the central bank, sells participation bonds to the people instead of commercial banks to cover the government budget deficit. In this method, there is no increase in the money supply (Figure 6):

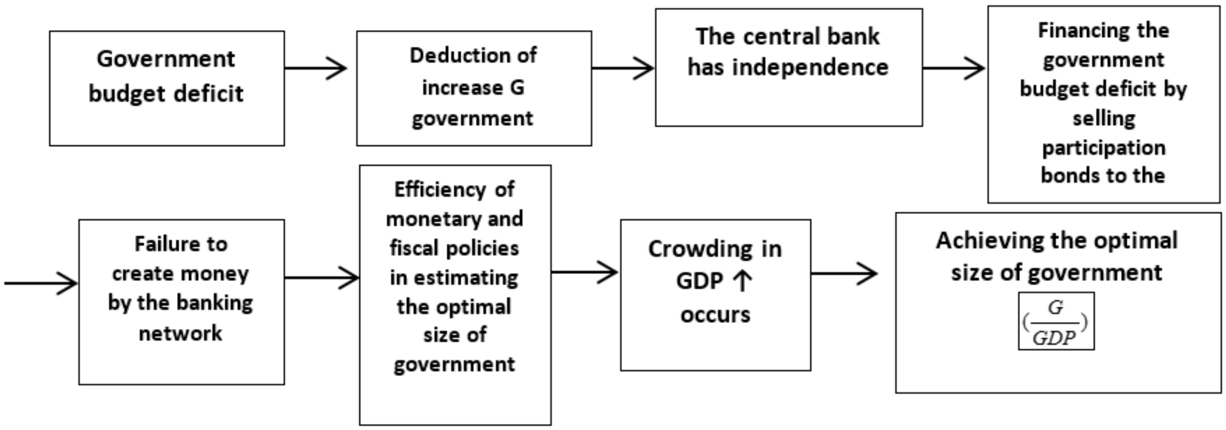

Figure 6. The effect of government budget deficit policy (borrowing from the people) on the optimal size of government

Therefore, it increases wealth, which can be studied in the following two separate ways:
1- Increase consumption → transfer of the IS curve to the right
2- Increasing the demand for money → moving the LM curve to the left
By examining paths 1 and 2, it will be realized that if "algebraic substitution" occurs in the economy, crowding in, and the result of the two paths, GDP growth will lead to GDP.

Therefore, as it is clear in the above steps, the increase in government G spending at this stage has led to an increase in GDP, so the optimal size of government G will be achieved in line with the increase in G and GDP.

The proof of the above can be justified by the following diagram (Figure 7):

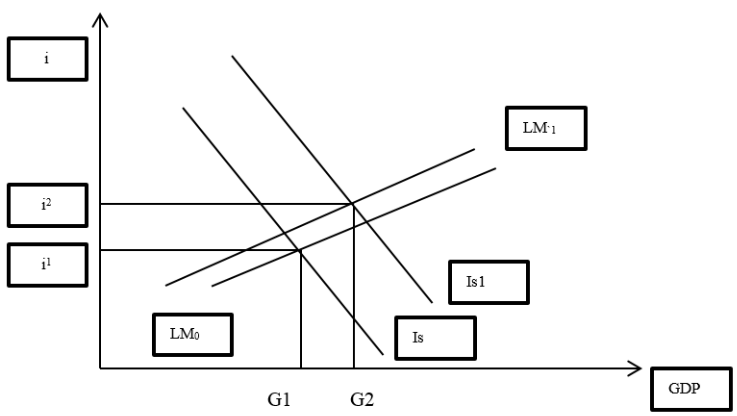

Figure 7. Impact of government budget deficit policy on economic growth

The LM curve is shown through the transfer. The result of these two transitions is the increase in GDP, which is essentially the Crowding in algebraic substitution. This indicates an increase in government spending and GDP in one direction.

Therefore, as seen in the chart above, the increase in government spending (G) has led to an increase in GDP. This can be justified to reach the optimal size of the government according to the yes curve.

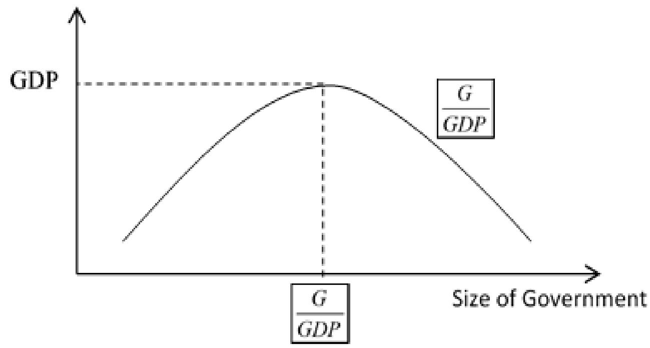

Figure 8. Armey curve

(Figure 8), which shows the U-shaped curve of the Armey, suggests that point A represents the optimal size of government because, by point A, government size and economic growth have grown in parallel. After point A, the law of descending returns begins. Therefore, point A indicates the optimal size of government and optimal economic growth. This is also consistent with proving the increase in GDP and government spending at the time of borrowing from the people by issuing bonds by the central bank to finance the government's budget deficit because when there were central bank independence and the government realized its budget deficit by borrowing from the people instead of borrowing from the central bank to cover the government's budget deficit, the optimal size of the government moved along the Armey curve to point A (Allais, 1987).

Conclusion

Experimental results obtained from the performance of the country's banking system showed that the ratio of total claims of the banking network to the country's liquidity during recent years (2014) has been greater than one (1.08); This means that all the country's liquidity will not be enough to settle the debt to the country's banking network. Another result obtained is the ratio of bank claims from the governmental and non-governmental sector to the national income of the country is equal to the number 3, which is an increase compared to previous years. The results and findings of the research in the years 1978 to 2014 show that the actual size of the government is equal to 24.37 which is larger than the optimal size of the government 22.5 that the government should take steps to achieve the size of the government by reducing its spending. According to the calculations obtained using the Cockerman index, the independence index of the Central Bank of Iran in recent years is 0.25 in total, which indicates a low ranking in the world. In this regard, the freedom of initiative and the power of central bank policies in line with the policies of the central bank should be strengthened. Based on the results obtained from the final model, the data theory of the foundation regarding the impact of fiscal policies on the government budget deficit on the optimal size of government was determined. If the central bank is independent, in the event of a budget deficit without imposing government-mandated policies with the policy of selling participation bonds to the people, while preventing money creation, it will help government fiscal policies to achieve optimal size.

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