

# Effect of Central Bank Autonomy on Macroeconomic Indicators: The Case of Turkey (1990-2018)

## Merkez Bankası Bağımsızlığının Makroekonomik Göstergeler Üzerine Etkisi: Türkiye Örneği (1990-2018)

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*Abstract: Central banks are the most important institutions that enable countries to implement monetary policy. Central bank autonomy is defined as keeping away from the pressures of the government while making and performing decisions on monetary policy. Existence of developed financial markets and being focused on price stability by monetary policy are among the essential conditions in terms of central bank autonomy. Monetary and fiscal policies should be determined and implemented so as to provide economic stability. Accordingly, it was aimed in this study to scrutinize the effects of autonomy of Central Bank of Turkey (CBT) on macroeconomic variables (inflation, money supply, growth and budget deficit) for the period of 1990-2018. It is concluded when the obtained data are analyzed that there occurs a positive impact by the guarantee of both legal and actual autonomy of CBT.*

*Keywords: Central Bank Autonomy, Inflation, CBT, Monetary Policy  
JEL Classification: E31, E52, E58*

*Öz: Merkez bankaları, ülkelerin para politikası uygulanmasını sağlayan en önemli kurumlardır. Merkez bankasının para politikası ile ilgili kararları alırken ve uygularken hükümetin baskılarından uzak kalması merkez bankası bağımsızlığı olarak tanımlanmaktadır. Para politikasının fiyat istikrarı hedefine odaklanması ve gelişmiş mali piyasaların varlığı merkez bankasının bağımsız olması açısından önemli koşullar arasında yer almaktadır. Fiyat istikrarının sağlanabilmesi için merkez bankasının hükümetin baskısı altında kalmamasının yanı sıra para ve maliye politikalarının ekonomik istikrarın sağlanmasına yönelik belirlenmesi ve uygulanması gerekli olmaktadır. Buna göre bu çalışmada, Türkiye Cumhuriyet Merkez Bankası (TCMB) bağımsızlığının bazı makroekonomik değişkenler (enflasyon, para arzı, büyüme ve bütçe açığı) üzerindeki etkileri, 1990-2018 dönemleri açısından değerlendirilmesi amaçlanmaktadır. Elde edilen veriler incelendiğinde, TCMB bağımsızlığının hem yasal hem de fiili bağımsızlığının garanti altına alınması ile birlikte pozitif bir etkinin olduğu sonucuna ulaşılmaktadır.*

*Anahtar Kelimeler: Merkez Bankası Bağımsızlığı, Enflasyon, TCMB, Para Politikası  
JEL Sınıflandırması: E31, E52, E58*

### 1. Introduction

Birth of central banking emerged by the philosophy of “laissez-faire, laissez-passer” in the nineteenth century. Central banks that were not sufficiently independent in the beginning have been generally regarded as institutions that finance the public expenditures. Independence of the central bank was first scrutinized by David Ricardo’s study called “Plan for the Establishment of a National Bank” in 1824. Keynes emphasized while bearing witness to an Indian bank in Royal Commission that unauthorized authority of banks needs to be protected and autonomy of banks should also be considered in terms of non-commercial policies. Studies that are about determining the ultimate aim of monetary policy and being provided central banks to gain independence have started by the beginning of the struggle of some of the economies in the world with inflation after the 1980s. Assuring stability, in 1990s, in terms of providing economic growth and low inflation was accepted as the prior condition for many of the central banks. Inflation targeting regime that was first applied in New Zealand after 1990 started to be adopted by many of the central banks. Central bank autonomy has come into prominence within the historical process in terms of inflation targeting to be successful.

Independence of the central bank in Turkey was emphasized by the İzmir Economic Congress in 1923. The establishment of the central bank was enacted by considering the principle of independence under the name of Central Bank of Turkey (CBT) by publishing in the official gazette in 1930. However, the issue of autonomy has started to gain currency after the 1980s; it has been endeavored to strengthen the central bank autonomy by the 2001 crisis. Central bank autonomy, in the studies till today, has been analyzed within the frame of the election of a central bank president and members; their duty term; determining and applying process of the monetary policy; specifying the ends and means of the central banks; finally, the credits that are issued for the governments.

This study aimed to endeavor to analyze the effect of the central bank autonomy in Turkey on some of the macroeconomic indicators. Accordingly, the conceptual framework and the historical process of the central bank autonomy were scrutinized in the first chapter of this research. Secondly, approaches toward central bank autonomy were discussed; the effects of related autonomy on macroeconomic indicators were statistically reviewed.

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## 2. Technical Frame of Central Bank Autonomy and Development in Historical Process

The governments during the historical process have desired to be the grant holder on the money within changes to control changes in the economy. Institutions that are most affected by this approach are the central banks (Gediz & Sağın, 2015:99). Central bank autonomy is not only a concept but also an indicator that varies by the national characteristics. Many authors such as Rogoff (1985), Wagner (1998), Kydland and Prescott (1977), Bade Parkin (1988), Grilli et al., (1991), Cukierman et al., (1992), Barro and Gordon (1993), Meade and Crowe (2007), Arnone et al., (2009) have focused on the issue of the central bank autonomy. Macroeconomic instabilities like increasing the budget deficits and closing those deficits by emission; domestic and external borrowing at bottleneck; inflation that has gained continuity in the world economies as from the 1980s revived the central bank autonomy. Central bank policies in which the economic facts are distant from the political effects and views; this circumstance has brought central bank autonomy into the forefront (Aydın & Eren, 2013: 93-94).

Making decisions and applying them without any political and bureaucratic influence can be defined as autonomy for the central banks (Aydın & Eren, 2013: 95). Thus, it is possible to characterize the central bank autonomy as overcoming the arbitrary treatments and short-term interests of the government via the value of the money (Orhan & Yıldırım, 2009). Three main features of the central bank autonomy are highlighted; i) explicitly defining and aligning the goals of the monetary policy ii) transparency of the monetary policy iii) ultimate responsibility on the monetary policy. The central banks, based on these factors, have become the significant institutions in economic policymaking process (Akıncı, Akıncı & Yılmaz, 2015:1).

Central banks have the authority to intervene in decisions and change the stream of decisions under the favor of autonomy. A central bank needs to have legal autonomy without political pressures. Again, a central bank is accepted as independent or autonomous when it is free to apply a monetary policy instrument at will (Aguir, 2017). The domestic currency of the country can effectively be protected against foreign currencies by being central bank autonomous. Chronic inflation that was seen in economies in the 1980s avoided internal and external borrowing to be sustainable by emerging the thoughts toward central bank autonomy. So, the budget deficits have gathered steam; this has been endeavored to compensate with issuing money. The thought of central bank autonomy was born in parallel with the monetary policy free from the influence of the politics to avoid governments which trigger macroeconomic instabilities to approach problems by populist policies (Bakkal, 2018:183).

Priority target in establishing central banks that have subsisted as from the XVII century is to provide liquidity for the market besides issuing money as a bank of the state. The central banks which were not sufficiently autonomous in the beginning were seen as institutions that generally finance the public expenditures. Central bank autonomy was first discussed by David Ricardo's study called "Plan for the Establishment of a National Bank" in 1824. For Ricardo, a central bank should be regarded as an institution that operates in two different areas which are both completely independent from each other and financier of expenses (Doğan & Akbakay, 2016:115). The government is the whole of a public policy that needs to approach the goal of economic and financially sustainable development. Hereunder, the government needs to have the power to provide expenses; the central bank needs to have the power to issue coins (Badea, 2018). Keynes emphasized while bearing witness to an Indian bank in Royal Commission in 1913 that unauthorized authority of banks need to be protected and autonomy of banks should also be considered in terms of non-commercial policies (Obben, 2006).

It is generally expressed that banks are remarkable institutional tools for aiming the price stability and providing the stability to affect the improvement of the central bank autonomy. Therefore, the autonomy of central banks has been developed to provide price stability. Regional and global factors which affect the improvement of central bank autonomy are as follow (Cukierman, 1994:1446; 2006: 9; De Haan & Eijffinger, 1996:1);

- Alternative institution seeking started by collapsing the mechanisms such as Bretton Woods System and European Monetary System which provide nominal stability and were organized to keep the price stability.
- Relative and nominal autonomy of Deutsche Bundesbank and the Swiss National Bank are accepted as important evidence in providing price stability in terms of the central bank autonomy.
- Central bank autonomy of all the member states of the European Central Bank and European Central Banks System becomes a prior condition for being a member of the Economic and Monetary Union concerning the Maastricht Agreement
- Policymakers in the general run of South American Nations have accepted to improve the autonomy of central banks as a tool to avoid inflation again at high levels and provide price stability.
- It was found necessary to improve the autonomy of central banks and establish western type central bank in the commonwealth of independent states for swiftly passing to the market economy and creating an organized market economy at the same time.
- There have been observed efforts to provide price stability around the world, notably the countries with high inflation by the experiences of the 1970s when high inflation rates were seen.
- International capital movements have been expanded by gradually decreasing the control on the capital movements.

The central banks largely lost their reliability and autonomy by the 1929 crisis called the "Great Depression". Monetary policies, in that related period, were conducted by treasury departments of the countries. The international economic system was started to be restructured by the Bretton Woods system in 1946. Exchange rates were fixed by the

governments. Moreover, the central banks became the institutions that provide services for financial issues and manage the liquidity in the market when the central banks are evaluated in terms of the governments. Central banks worked for restructuring to get rid of the negative impacts of the war by the ending of the Second World War (1939-1945) (CBT, 2012 4-5). Hyperinflation, especially after the war, caused Bundesbank to rise as a central bank independent of the government. The essential issue here is that Bundesbank could transform legal autonomy into the actual autonomy through its successful policies and belief and support of people. Anglo-Saxon countries also struggled for the autonomy of central banks where several arrangements have been made in. For example, there was entered into an agreement between the central bank in New Zealand and the government; related agreement gives a restricted autonomy to the central bank; the government declared that autonomy of the central bank is respected (Orhan & Yıldırım, 2009).

There have been carried out works in cardinal economies of the world to determine the ultimate goal of the monetary policy and provide central banks to gain autonomy after the struggle with inflation after the 1980s. Giving commitments toward struggle with inflation; increasing the prestige of the central banks and managing the expectations can be shown as examples of related works. The thought that related applications can also be conducted by the central banks started to be popular in that period. In the 1990s, it was accepted that providing price stability is the biggest contribution of a central bank towards ensuring employment and economic growth. Besides, the price stability was accepted as the main objective of many of the central banks. Again, many of the central banks gained legal autonomy in the same years. The general run of the central banks has adopted an inflation-targeting regime that was first constituted by the Central Bank of New Zealand. Central banks target inflation within the regime and use the required monetary policy instruments to ensure the level declared. Central bank autonomy rises into prominence as a significant condition in terms of the success of the inflation-targeting regime at the same time when the historical process is analyzed. It is understood by the 2008 crisis that monetary and fiscal policies need to harmonizingly work with central bank autonomy (CBT,2012: 7).

It is also thought that dependence of the central bank to the government in terms of order and instructions can contribute to the institution in terms of management technique and effectiveness; this situation also creates a more powerful effect in being applied the decisions of the bank related to the money and credit policy. This point of view was already discussed by G.L.Bach during the process of analyzing the issue in the United States of America. However, the most important side that can be accepted as positive independence of the central bank to the orders of government is that the harmony of this system can completely be provided in terms of monetary policy and the general economic policy. On the other side, there also are disadvantages of related dependence (Dilik, 2005:3-5):

- For findings, nations generally used the function of issuing money in bad faith to meet the funding needs and caused inflation and instabilities.
- It is seen that governments were inclined to continuously follow a ‘cheap monetary policy’ to satisfy the public by thinking the next elections when the multi-party system was valid.
- Special interest groups who organized well can affect the decisions of the government or the parliament; they also can use the general economy and monetary policy to manipulate.
- Since the issue of monetary policy is a domain that requires comprehensive knowledge, it cannot be expected from the politicians to have adequate information. Accordingly, the government makes the benefit of the experts in the management process of the bank. However, since the central bank is not autonomous, related experts do not consider the views which are not in accordance with the demands of the government.
- The direction of the monetary policy changes based on the point of view of the politicians if the government changes frequently and the attitudes of parties and groups in the monetary policy field is different.
- The dependence of the central bank to the orders of the parliament has disadvantages above. The positivities such as convenience and effectiveness in management due to the dependence are not lasting. The conflicts may turn into chaos.

The fiscal policy will be more effective rather than the monetary policy in ensuring price stability when the central bank is not sufficiently autonomous. Being applied and controlled the monetary policy by the government can damage the reliability of the monetary policy. Indeed, the primary duty of the government as a representer is to implement a fiscal policy towards financing public expenditures. Although there is a relationship between the monetary and fiscal policy, the first step for providing price stability should be seen in the monetary policy. This circumstance can also be possible by the presence of an autonomous central bank. Otherwise, it is difficult for the central bank to reassure in its commitments (Doğan & Akbakay, 2016:119).

If we look from the viewpoint of the Turkish economy, it was tried to decrease the share of CBT in the financial system by arrangements such as leaving the fixed exchange rate regime and deciding to determine the deposit and interest rates in the free market conditions by January 24 Decisions in the 1980s when the structural changes happened. CBT was endeavored to be reached the level of modern central banks in the world by institutional aspect; CBT, in the same period, got remarkable achievements in terms of reaching a legally autonomous structure. One of the key indicators of this situation was declaring the money program of CBT to the public by considering the principles of accountability and transparency in 1990. The important structural changes in the Turkish economy arising from the 2001 economic crisis caused vital developments in areas such as institutionalizing the communication policies and legal autonomy of the CBT. In this direction, for the amendments in 2001 dated Law, the chief goal of the CBT was specified as providing and sustaining the price stability; it was also adjudicated that CBT can determine monetary policy in itself to implement to achieve the goal. Thus, the autonomy process of CBT that made progress as from 1970 reached a peak in 2001; moreover,

the bank was reached purpose and instrument autonomy in legal. Again, in the related law, it is forbidden for CBT advance, issue credit to Undersecretariat for the Treasury and all other institutions; buying the debt instruments which those institutions export is also forbidden. It is designed for executives to work in accord and as independent from the political pressures by making reformatory arrangements toward duty terms, assignment and resignation conditions of chairman and deputy managing directors (Yalçinkaya, 2017:180-181).

On the other hand, it is aimed at the decision-making process of monetary policy to institutionalize by relevant legal regulation by considering the importance institutionalization on the central bank autonomy; Monetary Policy Committee (MPC) that is responsible for constituting monetary policy strategy and targets was established within CBT. Autonomy has brought along accountability and transparency; so, an efficient communication policy can be followed. Implicit inflation targeting regime that was carried into effect in 2002 was transformed into open economy inflation targeting in 2006. Monetary Policy Committee has become a decision-maker in generating monetary policy strategies to increase the transparency and predictability of monetary policy decisions. MPC meetings have been performed in predetermined dates that are released to the public as from 2006; informative reports related to views of MPC and interest rates have also been published. Thus, CBT has been brought to the level of the modern applications of the central banks of developed countries in terms of corporate infrastructure and transparency which provide predictability of monetary policies to be affected positively (CBT,2012:19).

### 3. Central Bank Autonomy Approaches

It is seen when the definitions in the literature about central bank autonomy is analyzed that there is a similarity on the issue of restricting or removing the effect of governments on central banking. Accordingly, central bank autonomy means the capability to make decisions toward financial, managerial, institutional and monetary policy without any element of oppression.

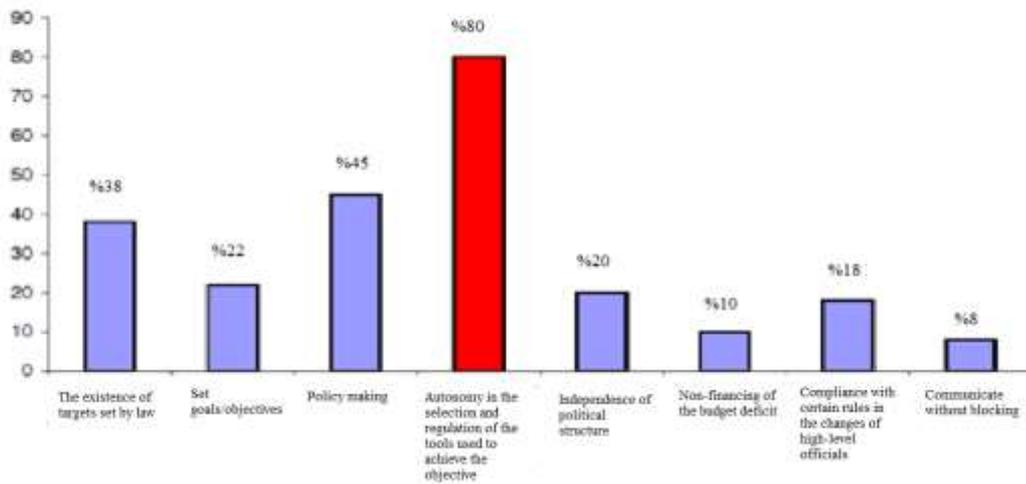


Figure 1. Distribution of Autonomy Definitions of the Central Banks

Source: CBT, Central Bank Autonomy, (online), <http://www.tcmb.gov.tr>, Date Accessed:10.03.2019

For the findings of central bankers, the most important indicator of autonomy is the instrument autonomy of the central bank. As is observed in Figure “being autonomous in selecting and arranging the instruments to reach the goal” is accepted as the vital criteria of autonomy by 80% of the central banks. We also see that economic conditions are effective on the facts that are emphasized on the autonomy concept of the central banks (<http://www.tcmb.gov.tr>).

Several authors have reviewed central bank autonomy in two different aspects and defined it within the frame of different concepts as well. It is possible to categorize central bank autonomy as “target autonomy” and “instrument autonomy”. Target autonomy can be explained by “political autonomy”; instrument autonomy can be defined as “economic autonomy”.

#### 3.1. Purpose Autonomy

Purpose autonomy means being autonomous in choosing the fundamental purpose or targets in policies implemented via the central bank. However, modern central banks today are charged to provide price stability via law. Thus, since the purposes of central banks are defined by legislation, there is no purpose autonomy (CBT, 2012:2). In other words, if the central bank can set its objective by itself, there can be talked about the purpose autonomy. There are two situations if the central bank cannot apply purpose autonomy; either government sets a common object and demands the central bank to actualize this. In democratic societies, central banks are given purpose autonomy by legislation or it is explained how the

object is set. Namely, setting an object with the government had better to be regarded as democratic. We can observe when the application in Turkey is reviewed that the purpose autonomy is implemented by setting an inflation rate by the central bank and government together. Much as the central banks in the general run of developed countries have a high level of autonomy via legislation, those related rates are actualized at lower levels in practice (Doğru, 2013:28).

### **3.2. Instrument Autonomy**

Instrument autonomy that is also characterized as functional autonomy means a central bank to choose and use the tools and methods of monetary policy to reach legal ultimate aim without any need to the government or any other authority. Autonomy is generally expressed as the instrument autonomy for the central banks (TCMB, 2012:2). In other words, the central bank has the power to set the policy support instrument in itself. Besides, it is not in need of checking with the government. Instrument autonomy is a factor causes an increase in the credibility of monetary policies. Moreover, related autonomy services as a safety valve which guarantees for the markets that monetary policy is not applied in terms of the short-term political interests. Since the monetary policies fall behind the fiscal policies in some developing countries such as Turkey, there occurs an exchange between central bank autonomy and the growth target of the government in time (Doğru, 2013:28).

### **3.3. Institutional Autonomy**

Institutional autonomy means that the duty term, assignment, and reasons for resignation senior staff of the central bank are specified via legislation without any political pressure. Again, the institutional autonomy can also be defined as being the mission and autonomy of members in decision-making units free from the political pressure (CBT, 2012:3). It was emphasized in the National Program in 2001 that none of the organization or organ can comment or act so as to affect the decisions of CBT. In this direction, there was made an amendment in Former 1211 numbered CBT act; institutional autonomy is provided by the new 25/4/2001 dated and 4651 numbered CBT act which expresses that “The bank independently uses the duties and authorities under its own responsibility” (Altuntaş, 2012: 83).

### **3.4. Financial Autonomy**

Financial autonomy means that the central bank performs the activities as independent from the government; direct credit opportunities are forbidden to the public sector at the same time (Anastasiou, 2009). Being free from interventions out of the institution during the process of approving the budget of the central bank is in the financial autonomy concept besides the factors such as freely choosing the functional expenditures (CBT, 2012:3). Financial autonomy has seven basic indicators. It is assumed that autonomy of the bank against the government will be at a high level if the central bank has various tools of monetary policy in the light of indicators below (Bakır, 2006:5):

1. Whether the goal of the central bank is reached;
2. Whether there is a control on the monetary policy;
3. Whether the bank issues a credit to the public;
4. Whether the bank can set the interest rates without prejudice of the government;
5. Whether the bank can set the exchange rate;
6. Whether the bank liberally sets the budget;
7. Whether the bank organizes the banking field.

We can say that central bank autonomy and financial autonomy are positive in terms of economic development for several reasons. Firstly, an autonomous central bank which is purified from political pressures can display a more predictable behavior by encouraging the economic stability and minimizing risk-return in real interest rates. Secondly, the autonomous central banks are in a tendency to adopt proper policies by considering economic and financial trends to avoid financial trouble, interest and currency impacts and encourage the economic growth in the long run. Finally, the possibility to expose to an inflationary bias is lower for an autonomous central bank; it also is aware of the inflation costs of expansionary monetary policy (Akıncı, Akıncı & Yılmaz, 2015).

### **3.5. Legal and Actual Autonomy**

It can be observed when looking at applications around the world that there are many arrangements toward the autonomy of the central banks in developed and developing countries; legal autonomies can considerably be provided in this way. Although legal autonomy is important for the central banks, it is not a satisfactory indicator for central bank autonomy in real terms. One of the things that should be considered in central bank autonomy is whether the laws are enforced how the legal holes are filled. Applications in this direction reflect the actual autonomy of the central bank (Doğan & Akbakay, 2016:125-126). Actual autonomy, in this sense, can be defined as the outlook of legal duties and authorities of central banks because of stationary structural characteristics in economy, level of institutionalization, personal skills, and reactions of the chairmen and deputy managing directors to economic and political conjuncture in practice (Orhan & Erdoğan, 2018: 51).

There happened some negative developments toward the actual autonomy while there were no problems in actual autonomy indicators of the central banks before 2006. Related developments can be summarized as follows (Eroğlu & Eroğlu, 2010:140);

- Discussions about the appointment of Governor and Vice-President of the Central Bank,
- Fecklessly criticizing the interest and exchange rate policy of the bank by the public,
- Authority and responsibility discussion that is generated by the government,
- Discussion about being received public sector bonds and bills by the central bank in open market operations and also provided them as a guarantee.

Legal autonomy can be characterized as performing the required legislative regulations to keep each kind of action of the central bank on management and enforcement out of the political pressures (Orhan & Erdoğan, 2018: 51). It has been endeavored to keep the central bank out of the political pressures for increasing the chance of governments to requalify. Monetary policy practices have been made independent of the government for this issue. Thus, governments cannot follow their political process by using this tool if they cannot determine the monetary policy (Hayo & Hefeker, 2001; Hayo & Hefeker 2002). Providing only legal autonomy can be insignificant and ineffective if the legal autonomy of the central banks is not supported or this autonomy is not successfully reflected the market economies. Just because declaring the inflation target policy cannot be as good as gold and will lose its effect (Wagner, 1999).

Table 1. Key Facts of the Legal Autonomy

<i>LEGAL PROVISIONS in CBT ACT</i>	<i>HIGH AUTONOMY</i>	<i>LOW AUTONOMY</i>
<i>Duty Term of Governor</i>	Long	Short
<i>Role of Executive Organ in Appointment Process of Governor</i>	Limited	Much
<i>Policy Process</i>	The Last Word in Conflict with the Executive Organ belongs to the Bank. The Bank Prepares Monetary Policy in itself and Plays Active Role in the Budget Process.	The last word belongs to the Executive Organ. The Bank has no duties in the budgetary phase.
<i>Goals of the Central Bank</i>	Price Stability is the priority target.	There is conflict among targets.
<i>Being provided fund to the government by the central bank</i>	Limited. It is provoked to issue credit as cash.	High, the loan amount is determined as the percentage of public expenditures.

Source: Maxfield, S. 1994. *Financial Incentives and Central Bank Authority in Industrializing Nations. World Politics, July, Vol: 46, No: 4, p. 556-588.*

The central bank can have the power to come up against the pressure of the political authority by using the factors specified in juridical status. However, there are seen discrepancies between items in law and practices. For example, although sometimes many developing countries transfer the factors of the provisions of the central banks of developed countries as are and sometimes by developing, they could not be successful at practice. It is possible to express the main factors which ensure the legal autonomy of the central bank by the classification in Table 1. Thus, the central banks ought to organize their own legislation so as to have good results by evaluating the socio-economic conditions of the countries (Aydın & Eren, 2013:97).

Central banks that have the highest level of autonomy are in the tendency to have a narrow-scoped legal macroeconomic autonomy and provide consistency in the internal and external value of money. For example, this tendency that was seen in Chile and New Zealand with Germany and the Netherlands cannot be utilized to increase the credibility of monetary policy. The source of the credibility problem is the demand of decision-makers to change place among the different objectives; however, it is impossible for legal objectives which are both multi-purpose and unspecified to be in accord with this demand. Accordingly, decision-makers will be in a tendency to decrease the transparency of the monetary policy. In this way, the responsibility of the central bank and political leaders will weaken. All these points show the importance of the legal purpose of clearly defining price stability to provide the monetary policy of an autonomous central bank. There is a stance against a circumstance in which the central bank is good to decrease the money supply in terms of a country that wants to finish with previous monetary policy and encourage higher monetary policy credibility towards the future. Especially this situation causes an openness degree in the legal representation of the central bank to gain importance (Şen, 1999: 61).

#### **4. Macroeconomic Indicators in Turkey and the Relationship with Central Bank Autonomy**

Economy policies, indeed, which are utilized for country economies to reach the macroeconomic goals consist of the total of monetary and fiscal policies. Governments determine the methods of income generation and spending to actualize specific macroeconomic goals like providing economic growth and increasing employment; this is fiscal policy. Regarding monetary policy, it is the decisions of central banks to reach fundamental macroeconomic goals that consider

internal and external equity as price and financial stability by using different tools of the monetary policy (Yalçınkaya, 2017: 176). Studies which ignore the relationship between central bank autonomy and microeconomic performances show that monetary policy that is connected with central bank autonomy decreases inflation level and variability; however, the same policy has no impact on the macroeconomic performance (Cornel & Sorina, 2011). The relationship of the central bank autonomy with inflation, money supply, growth and budget deficits in Turkey was scrutinized under this title.

#### ***4.1. The Relationship Between Central Bank Autonomy and Inflation with Money Supply***

Central bank autonomy, in 1824, gained currency first by David Ricardo who expressed that the central bank needs to be an institution that is different from the government spends. Central banks used this autonomy to control the money supply a good while. Restrictions were applied to the money supply; it was also tried to narrow the money supply to keep inflation at low levels. Possibility of the central bank to control the money supply decreased after the capital movements to be released (Eğilmez, 2019).

The chief goal of the central banks is to provide price stability. If these related banks have a purpose except price stability, they meet with obstacles in reaching the chief goal. It is possible to say in the light of theoretical and empirical studies which have analyzed the reversed relationship between inflation and central bank autonomy that bringing down the rate of inflation can be succeeded by providing higher autonomy to the central bank synchronously. Autonomy, for the literature of central bank autonomy, is an institutional characteristic that can help to bring down the rate of inflation to provide price stability. Accordingly, empirical studies reveal a reversed relationship between central bank autonomy and inflation. Parkin [1986], Grilli, Masciandro and Tebellini (1991), Alesina and Summers (1991), Cukierman, Webb, and Neyaptı (1992, CWN) can be shown as the pioneer examples. These studies evaluated the relationship between inflation and measurements based on different sides of monetary policy generation to measure the central bank autonomy (Berument & Neyaptı, 1999).

The interest in central bank autonomy increased due to the thought that political pressures toward central banks will decrease and at the same time, a lower and more stable inflation will be seen. Bade and Parkin (1985) conducted one of the first empirical studies of this related relationship. Accordingly, they used data for 12 OECD countries after Bretton Woods and measured the degree of central bank autonomy based on the degree of the effect of government of the finance and policies of the central banks. The degree of the financial effect on the central bank was analyzed in terms of the power to reserve the profit; setting a salary system for central bank board members and finally, controlling the central bank budget. In conclusion, there can be seen a ranking of one to four in each category; the country fourthly has the highest central bank autonomy (Obben, 2006).

For Alesina (1988), there is a negative relationship between central bank autonomy and both inflation variability and level with reference to his researched called "Macroeconomy and Policy". Bade and Parkin also concluded that the level of financial autonomy has not been a significant indicator of inflation for the period after Bretton Woods. Besides, the policy is accepted as a significant indicator of autonomy; just because two countries (Germany and Switzerland) which have the highest degree of policy autonomy has an inflation rate that is pretty lower than the rates of all other countries (Patrica & Pollard, 1993).

Cukierman's (1994) study is based on the negative relationship between inflation and central bank autonomy. With reference to observations, an increase in central bank autonomy causes a decrease in the inflation rate. In addition to all these, the nonexistent relationship between growth and autonomy bears the consequence that central bank autonomy presents a free lunch. On the other hand, for another finding, central bank autonomy can cause low inflation without creating a negative impact on growth.

Both the studies of Schaling (1998) & Berger et al., (2001) determined that as the central bank autonomy increases, there will be seen lower inflation rate in the long run. The general run of the empirical studies toward analyzing the relationship between central bank autonomy and inflation corroborated the presence of a negative relationship. Differences in applications toward central bank autonomy underlie these results (Kibmer & Wagner, 1998).

Beşkaya & Güdenoğlu (2014) reviewed the relationship between central bank autonomy in Turkey and the inflation for the period between 1970 and 2012 by using the variable of legal autonomy index of the central bank and the converted inflation rate. Under the circumstances, there is obtained a negative and significant result between inflation and the central bank autonomy in the long run as well as there also is a causality relation from central bank autonomy to inflation.

Yurtkur & Arpağ (2018) conducted a study and analyzed the relationship between central bank autonomy and inflation by the annual date within the scope of 15 countries follow inflation targeting. They found a negative directed relation between central bank autonomy and inflation. Obtained coefficients are the coefficients that have the highest level of explanatory power reveals the connection between central bank autonomy and inflation. For the model results, growth has a negative directed impact on inflation.

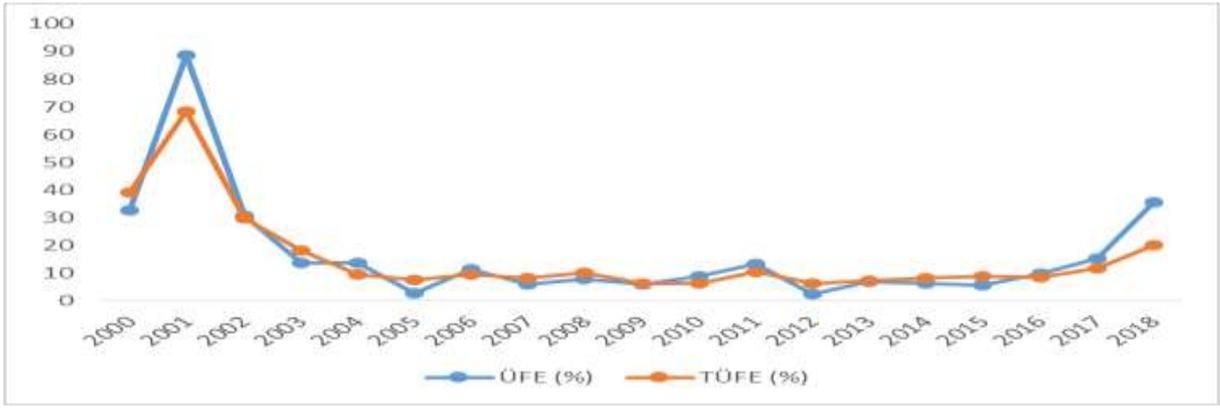


Figure 2. CPI and D-PPI in Turkey (%)

Source: BUMKO, <http://www.bumko.gov.tr/Eklenti/12423.2019ocakaylikbutce>, Accessed: 11.03.2019.

Figure 2 shows the CPI and PPI rates in Turkey from 2000 to 2018. 2001 was a year in which remarkable developments were seen in terms of CBT by many areas such as institutional order of autonomy and communication policies because of the crisis. The autonomy of CBT gained strength by the legislative regulations in 2001. CPI and PPI rates reached a peak and respectively were 68,5% and 88,6% in 2001. It is possible to observe a decline by the arrangement at the same time. About 2018, CPI and PPI rates respectively were 20,3% and 35,6%.

It can be proved that the efforts toward increasing the autonomy of CBT have caused a decrease in inflation and there is a reversed relationship between autonomy and inflation. As is accepted in economic literature, as the corporate structure of central banks becomes autonomous, the inflation rate occurs at low levels without any loss in production. Inflation decreased a single-digit level by being forbidden for CBT to issue a credit to the public. All in all, we can throw out that making autonomy applicable is to the point in terms of CBT to reveal its corporate identity.

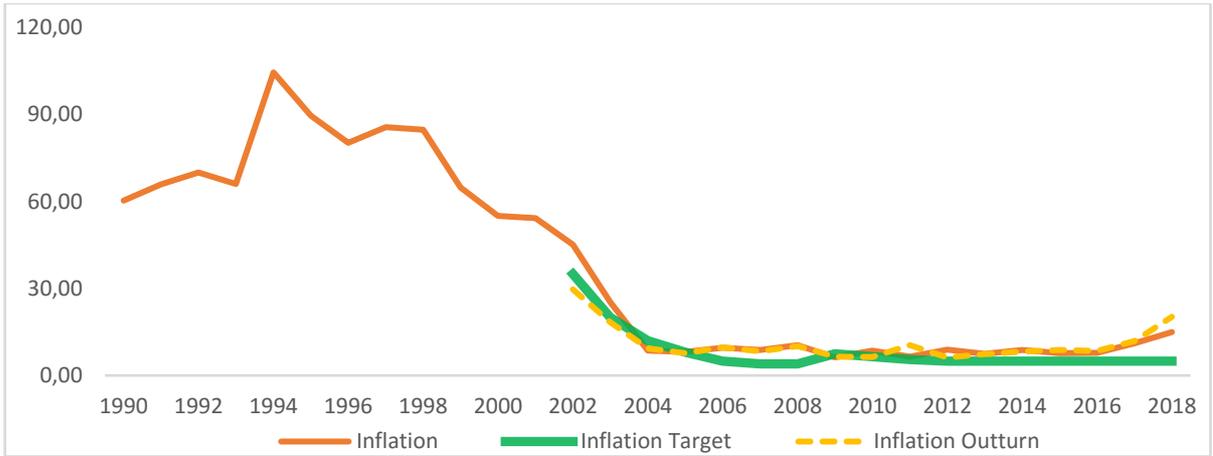


Figure 3. Targeted Inflation Rates, Inflation Outturn and Inflation Rates in Turkey

Source: <http://www.bumko.gov.tr/Eklenti/12423.2019ocakaylikbutce>, Accessed: 11.03.2019.

World Bank, <https://data.worldbank.org/country/turkey?locale=tr>, Accessed: 19.03.2019

Figure 3 shows the targeted inflation rates, inflation outturn, and inflation ratios in terms of consumer prices. Regulations toward the central bank in Turkey autonomy caused crucial developments from the point of the fiscal discipline and price stability. CBT conducted implicit inflation targeting in 2002 and passed to open economy inflation targeting in 2006. Considerable steps in conducting central bank autonomy in Turkey were taken within that period. Central banks in many countries should remain loyal to price stability goals and be both autonomous, accountable and reliable for the inflation-targeting regime to be successful. Thus, having instrument autonomy and keeping away from the duties which are contrary to price stability such as financing the public deficits are the most important factors in the success of the regime. Therefore, being a central bank autonomous has a key role in conducting the inflation-targeting regime.

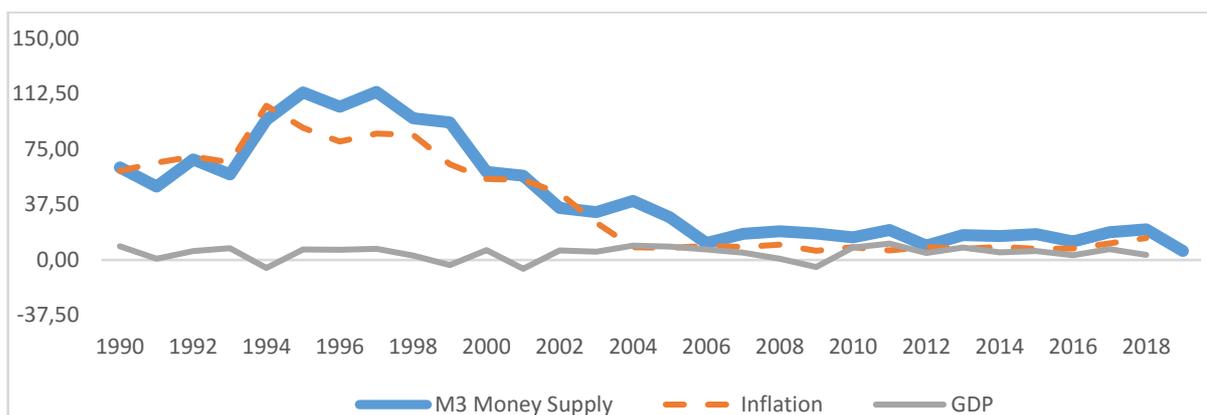


Figure 4. Inflation, Money Supply and Growth Rates in Turkey (%)

Source: TCMB, <https://evds2.tcmb.gov.tr/index.php?/evds/serieMarket>, Accessed: 19.03.2019

World Bank, <https://data.worldbank.org/country/turkey?locale=tr>, Accessed: 19.03.2019

Figure 4 reviews the inflation rates, money supply rates, and growth rates in terms of consumer prices in Turkey from 1990 to 2018. The root cause of the increase in the money supply is being financed the budget deficits. Namely, increases in the money supply are at the forefront in the emergence of inflation as well. Being central bank non-autonomous before 2001 caused a high level of inflation and an increase in the money supply to close the budget deficits. The central bank started to benefit from inflation targeting as a monetary policy strategy by the 2001 crisis. The goal of the central bank via the law has been provided the price stability. So, it is observed that both inflation and money supply at low levels by being central bank autonomous in the period after the 2001 crisis. There was a 22,2% increase in money supply; inflation was observed at 19,7% level and growth was at 2,6%. Indeed, the money supply increased as much as the nominal GDP. We can say within this context that central bank autonomy can create a positive impact on growth because of low inflation externality in the long run; in the meantime, an autonomous central bank can negatively affect the growth in case of being a negative externality.

#### 4.2. The Relationship Between Central Bank Autonomy and Growth

It is accepted that the effect of central bank autonomy on both inflation and real growth of the economy benefited the central bank to gain autonomy. On the other hand, there are ones who argue that there is a relationship between central bank autonomy and steady growth while there are also ones who disapprove of the existence of such a relation. For the ones who defend the autonomy of the central bank, both the possible influence and intensities of fluctuations in production can be minimized by keeping central banks out of the state interventions and also keeping the monetary policy from the political conjuncture. Moreover, high growth increases will become reality by removing losses and uncertainties arising from inflation at high and changeable levels (Yenipazarlı, 2014: 11).

The primary aim of economic policies is to increase social wealth. Increasing social wealth is based on providing sustainable growth in principle. It is a common view that the biggest contribution of central banks to increase the growth and wealth is to provide and maintain price stability. High inflation negatively affects the social wealth; price stability is accepted as a prior condition of economic stabilization, namely the sustainable growth and employment increase (CBT, 2012:8).

Alesina & Summers (1993) reviewed whether there is a correlation between central bank autonomy and the level and variability of real economic variables such as growth, unemployment and real interest rates. For findings, central bank autonomy has no measurable effect on real economic performance while an autonomous central bank increases price stability.

Cukierman (1994) concluded that there is no relationship between central bank autonomy and growth in developed countries. Also, the central bank autonomy has a positive effect by aiming at instruments except monetary policy in developing countries to the growth; for observations, central bank autonomy has a positive impact between investments and growth. In addition to all these, low autonomy in developing countries causes low investments and growth.

In Borrero's (2000) research, the effects of central bank autonomy on growth are based on long-term thoughts. Thus, high autonomy in the central bank causes low inflation because of the externality of inflation against growth in the long term. In the circumstances, the central bank increases autonomy in case of being externality strong enough over the long run. With reference to conclusions, central bank autonomy negatively affects growth if there occurs a negative externality.

Doğru (2013) conducted a study and reviewed the direction and intensity of the relationship by quarterly data for the period of 1997-2015 in Turkey. For results, the legal and actual autonomy of the central bank has a positive and significant effect on the output gap. The positive increase of legal autonomy in Turkey has caused real growth to increase in a positive direction.

Yalçınkaya (2017) reviewed the effects of the legal autonomy level of the central bank in Turkey on the real and potential economic growth with the output gap for the period of 1970-2015. With reference to the results, the legal autonomy level of CBT does not affect the real economic growth performance of the Turkish economy; the related level increases the economic growth performance and decreases the output gap by narrowing the difference between real and potential economic growth. These results reveal that legal autonomy level of CBT has a remarkable impact on increasing the potential and sustainability of economic growth performance of the Turkish economy especially in the long term.

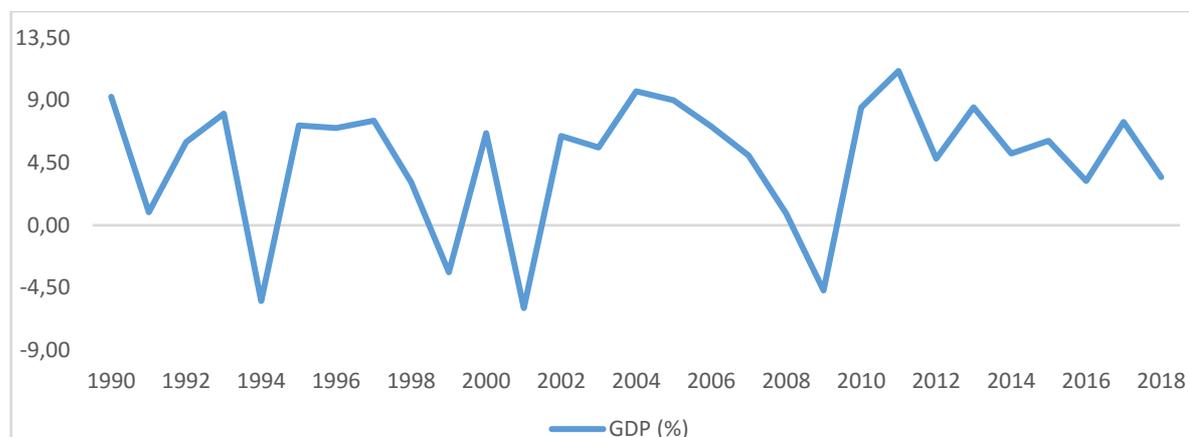


Figure 5. (% GDP Exchange Ratio in Turkey

Source: IMF, (online), <https://www.imf.org/external/pubs/ft/weo/2018/02/weodata>, Accessed: 11,03,2019

Figure 4 shows the GDP exchange ratio for the period of 1990-2018; there are four important crises. We can observe serious declines in growth in related crisis periods; there could be reached a positive growth rate after crises. So, it is difficult to establish a relationship between central bank autonomy and growth. It can be thought that central bank autonomy can provide a positive impact on both investments and growth by using the tools of monetary and fiscal policies with the intent of steady growth. Regarding the legal autonomy level of CBT; it can be evaluated as an essential factor in increasing and sustaining the economic growth performance of the Turkish economy. Policy measures toward improving actual autonomy level should be taken for the Turkish economy to maintain, develop and strengthen the growth.

#### 4.3. The Relationship Between Central Bank Autonomy and Budget Deficit

Desired results could not be obtained by the statistical studies on the central bank autonomy in developing countries. Uncertainty of both the political system and status of the central banks in developing countries is shown as the reason for this circumstance; in any case, the nonadaptation of the central bank to the rapid changes is the other reason. There could not be found evidence towards the positive contributions of central bank autonomy to the budget balance. However, it is also emphasized that it positively contributed to the budgetary equilibrium. Moreover, for expressions, the effect of budget deficits is especially seen in environments free from central bank autonomy and financial development. The share of credits of the central banks for the public is lower in developed countries where the central bank autonomy is high. So, we can conclude that there is no relationship between central bank autonomy and budget deficit level. Accordingly, central banks in West Germany, USA and Canada play an obstructive role in the budget deficits. It is also highlighted that seniorage gain in countries with a high level of central bank autonomy is at low levels (Barışık, 2004: 8).

Author concluded that there is a negative directed relationship between central bank autonomy and GDP in the long term. Budget deficits of Switzerland and Germany which have the highest level of central bank autonomy have long-dated balance values close to zero by a minimum variability. Moreover, there are long term small deficits as GDP percentage in other counties, notably France where the central bank autonomy is poor.

Parkin (1987) conducted a study and analyzed 12 countries between 1955 and 1983. In author's study, author concluded that there is a negative relationship between central bank independence and GDP in the long term. The budget deficits of Switzerland and Germany, which are the countries with the highest central bank independence, have reached the conclusion that they have close to zero long-term equilibrium values with little variability. However, other countries, especially France, where central bank independence is low, have small long-term deficits as a percentage of GDP.

Masciandaro & Tabellini (1988) reviewed the budget deficit in Australia, Canada, Japan, New Zealand, and the United States as the percentage of GDP in the years between 1970 and 1985. They found that New Zealand that has the lowest central bank autonomy among five countries in the related period has the highest budget deficit as the percentage of GDP. Besides, although the USA is the country that has the highest central bank autonomy among those countries, for researches, the highest budget deficit is still seen in the USA.

Grilli, Masciandaro & Tahellini (1991) determined a negative relationship between the level of central bank autonomy and the share of the budget deficit in GDP. They, in the meantime, noticed that the related relationship becomes

insignificant when political factors incorporated in the model. Accordingly, for predictions, an autonomous monetary authority cannot deter governments from having a budget deficit.

Neyaptı (2003) conducted a study and analyzed 54 developed and less developed countries by panel data method for the period of 1970-1989. For his research conclusions, budget deficits cause inflationary effects in economies in which central banks are non-autonomous and financial markets are underdeveloped.

Demirgil (2011) scrutinized the central bank autonomy in terms of macroeconomic performance and inflation rates of Turkey for the years between 1980 and 2009. So, as the legal autonomy level of the central bank moves in a positive direction, both the long term inflation rates and variability of long term inflation rates decrease. And as well, the investigator founded that there is a negative relationship between central bank autonomy and the share of public deficits in GDP in Turkey.

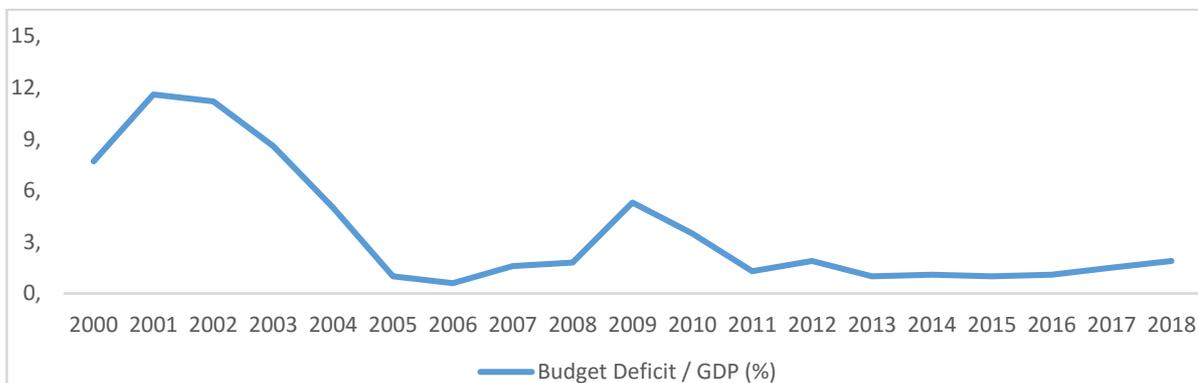


Figure 6. Budget Deficit/GDP (%) in Turkey

Source: BUMKO, (Online), <http://www.bumko.gov.tr/Eklenti/12423.2019ocakaylikbutce>, Accessed:11.03.2019.

Figure 5 shows the statistical presentation of the ratio of the budget deficit of Turkey to GDP for the period of 2000-2018. As is in the figure, the budget deficit hit the top by 11,6% in 2001; a decrease could be provided by central bank autonomy to come into effect. Moreover, rigid fiscal policies helped budget deficits to be kept at targeted levels after the 2001 crisis. One of the most important factors which ensure central banks to act freely is the strong pressure of budget deficits on the economy; financier sources for these deficits are also important. Budget deficits can be financed by implementing expansionary monetary policies. Thus and so, price rises arising from the monetary expansion will emerge; Turkish Lira will lose in value by increasing foreign exchange demand. This depreciated currency will cause the import to decrease and the costs to increase at the same time. In the circumstances, debt burden and interest rates will increase if the budget deficits are financed by domestic borrowing. In conclusion, we can say that central bank autonomy will positively contribute in terms of budget deficits and growth if related autonomy is applied with stabilization programs and a rigid fiscal policy. Avoiding the public to be financed by both state and private banks will create a positive effect in increasing the budget deficits.

## 5. Conclusion

Central bank autonomy is defined as applying decisions on monetary policy without any political pressure. Being autonomous does not mean being completely free from the government; central bank autonomy means deciding freely and represents a compatible and consistent legal status that does not conflict with the general policy of the government. Sustainable growth is required for social welfare; price stability is vital to provide sustainable growth. Inflation rate increases if the price stability cannot be guaranteed; this circumstance causes social wealth to decrease. Central bank autonomy is an important step to avoid financing public deficits via central bank resources. The effect of central bank autonomy of macroeconomic variables is reviewed in this paper. In this direction, relationships between inflation, money supply, growth, and budget deficit were statistically reviewed from 1980 to 2018.

There is seen a negative relationship when a literature review towards the relationship between central bank autonomy and money supply is analyzed. We can say in consideration of theoretical end empirical studies on the reversed relationship between inflation and central bank autonomy that bringing down the rate of inflation in Turkey is possible to provide a higher level of autonomy to the central bank. As is accepted in economic literature, as the corporate structure of central banks becomes autonomous, the inflation rate occurs at low levels without any loss in production. Also, inflation is endeavored to be kept as low by imposing restrictions on the money supply.

Two different opinions emerged when the literature review towards the relationship between central bank autonomy and growth was analyzed. There are ones who argue that there is a relationship between central bank autonomy and high & steady growth while there are also ones who disapprove of the existence of such a relation. For the ones who defend the autonomy of the central bank, both the possible influence and intensities of fluctuations in production can be minimized by keeping central banks out of the state interventions and also keeping the monetary policy from the political conjuncture. For our research, serious declines were seen in crisis periods between the years of 1990 and 2018. Central

bank autonomy becomes an important factor in ensuring and increasing economic growth performance when the legal autonomy level of CBT is analyzed. So, the legal autonomy level needs to be guaranteed for economic growth to be provided in Turkey; policy measures should be taken toward developing actual autonomy level.

Finally, in the literature review, there is seen a positive relationship between central bank autonomy and budget deficit. A rigid fiscal policy has been implemented by proclaiming the autonomy of the central bank. A central bank that is independent of government becomes a remarkable obstruct in benefiting from money supply for financing budget deficits. The money supply was tried to be financed by increases in public deficits in the periods before 2001; it also caused inflation to went double-digit numbers. Public deficits can positively contribute to growth via a rigid fiscal policy after the central bank becomes autonomous. Moreover, there will be a decrease in budget deficits by avoiding being financed public by private banks and public banks.

Once and for all, there occurs a positive effect on some of the macroeconomic variables because of the free acts of the central bank while there can be occurred negative impacts. Using funds from central banks and short-term thoughts of government, especially in electoral periods, caused the public deficit to increase; this situation brings along inflation in the nature of things. In the meantime, growth is negatively affected. So, to guarantee the legal autonomy level by applications contributes to the development of the actual autonomy level. Policy measures toward improving actual autonomy level should be taken for the Turkish economy to maintain, develop and strengthen the growth.

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