

# CENTRAL BANK INDEPENDENCE, INFLATION AND ECONOMIC PERFORMANCE

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## Introduction

Over the previous twenty years, ample institutional reforms have been implemented in the most member countries of OECD, granting their central banks more independence from the government. Since one of the preconditions for monetary integration, according to the Maastricht Treaty, is a considerable level of independence of central bank, the Central and Eastern European countries have made serious efforts to grant more independence to their central banks. Also, many emerging market countries implemented institutional reform that granted a high degree of independence to their central banks.

Central bank independence represents the freedom of monetary policymakers from direct political or governmental influence in the implementation of monetary policy. Central bank independence hinders the influence of political power on the authority in charge of the elaboration and implementation of monetary policy.

Practical experience has confirmed that very often the politicians have abandoned the long-term objective of price stability in order to satisfy their electoral interests. To influence the public's choice and therefore succeed in elections, political power tries to obtain short-term economic growth through an expansionist monetary policy that generated inflation<sup>1</sup>. This means that a government has more motives to stimulate the economy before the elections or reduce real public deficit

(financing the budgetary deficit through money issuing), and, thus, ignoring the price stability goal. An independent central bank does not take such political interests into consideration, being rather preoccupied in protecting price stability.

## 1. Theoretical considerations regarding the central bank independence

### 1.1. Concept of central bank independence

Concerning what is meant by independence, there are many definitions of this concept, each of them focusing on certain feature of this controversial topic.

Grilli, Masciandaro, and Tabellini (1991) have made a fundamental distinction between political and economic independence. While, *political independence* is defined as the ability of the central bank to determine objective of low inflation free of the government's influence, *economic independence* represents the ability of the central bank to determine and implement its policies towards the attainment of its objectives<sup>2</sup>.

The more agreed terminology in terms of central bank independence belongs to DeBelle and Fischer (1994). They emphasize the distinction between goal independence and instrument independence. *Goal independence* represents the freedom of the central bank to set the final goals of monetary policy without the interference of the government. Consequently, a central bank with goal independence might, for example, choose that low inflation is less

<sup>1</sup> Brociner A., Monetary Europe, Ed. Institutul European, Iași, 1999, p. 57

<sup>2</sup> Walsh C. (2005), Central bank independence, University of California, Santa Cruz, , p. 3

significant than output stability and proceed accordingly. The goal independence is closely linked with Grilli, Masciandaro, and Tabellini (1991) notion of political independence. *Instrument independence* represents the freedom of the central bank to choose without restraint the means by which it pursues to accomplish its goals of monetary policy. If the goals of monetary policy are exactly stipulated in a contract with the government, then the central bank has no goal independence, but it has instrument independence since it decides the means by which it attempts to attain the pre-assigned goals<sup>3</sup>.

### 1.2. Arguments in favour and against central bank independence

Many studies reveal that the countries with an independent central bank experience low level of inflation than those in which the government has power over the central bank. Three important arguments sustain this finding<sup>4</sup>. First argument provided by the literature in favour of this conclusion is that the central banks are exposed to strong political pressures to act accordingly with the government's preference. A restrictive monetary policy might amplify the budgetary deficit and the government could therefore desire an expansive monetary inflation, with negative effect on the evolution of inflation. Thus, the more power the government possesses in appointing the board members of central bank the more likely it will be that the central bank supports the policies which are promoted by the government.

A second argument which clarifies why central bank independence may decrease on inflation is based on difference between the fiscal authority and monetary authority (Sargent and

Wallace, 1981). If fiscal policy is dominant, monetary authority will be constrained to finance budgetary deficit by money creation. By contrast, if monetary policy is prevailing, fiscal authority will be constrained to reduce the budgetary deficit. As a result, the more independent the central bank is, the less the fiscal authority will constrain the monetary to finance budgetary deficit by money issuing.

The most important argument for central bank independence is based on time-inconsistency theory elaborated by Kydland and Prescott (1977) and Barro and Gordon (1983). Time-inconsistency arises when the policies considered to be optimal today for future period are no longer optimal when that period in fact begins and, thus, are not implemented. This could lead to the implementation of inflationary policies in their place. Thus, time-inconsistency could cause higher inflation or, in other words, inflationary bias<sup>5</sup>. The more efficient method to solve time-inconsistency problem consists of the introduction of predetermined rules in monetary policy, namely, the central bank's commitment to respect certain monetary policy rules.

Despite of these positive arguments, there are two major objections against central bank independence<sup>6</sup>. First of them is regarding the lack of accountability, being arisen mainly by the Anglo-Saxon countries. Some authors consider that the monetary policy is just similar to other instruments of macroeconomic policy and, therefore, have to be decided completely by the democratically elected representatives. This point of view sustains an implication of politicians in monetary policy. But central bank independence and democratic accountability may be implemented in various modalities, by

<sup>3</sup> Debelle G. and Fischer S. (1994), How independent should a central bank be?, Proceedings of a Conference held at North Falmouth, Massachusetts, p. 197

<sup>4</sup> Eijffinger S. and De Han J. (1996), Special Papers in International Economics no 19, p. 12

<sup>5</sup> Richard D. (2003), Time-inconsistent monetary policies: recent research, FRBSF Economic Letter no. 10, p. 1-3

<sup>6</sup> Eijffinger S. and De Han J. (1996), Special Papers in International Economics no 19, p. 15-20

dividing the responsibilities between government and central bank.

The second objection refers to the possible damages caused to economic policy coordination. Some theoretical studies have focused on the conflict that may arise when the government manages fiscal policy and the central bank manages monetary policy. Both of them decide on own priorities and may and not cooperate in implementing their policies. If they decide to not collaborate it is likely to appear a conflict of interests between fiscal and monetary policy. But these studies are not very concluding. Dealing with the shortcoming of these studies DeBelle (1993) reaches the conclusion that objectives of fiscal policy affect not only the central bank independence, but also the inflation rate.

### *1.3. Measurement of the central bank independence*

Majority of the indices used for the measurement of central bank independence take into account a number of observable factors, but there are also unobservable characteristics with significant influence on central bank independence. These indices are based on diverse criteria that define legal independence. (Alesina, 1988, 1989; Grilli, Masciandaro and Tabellini, 1991; Eijffinger și Scarling, 1992, 1993; Cukierman, Webb and Neyapti, 1992)<sup>7</sup>.

Alesina (1988, 1989) extended the codification realized by Bade and Parkin (1988), creating an index based on the following aspects: whether the central bank has final authority over monetary policy, whether government officials sit on the governing board of the bank, and whether more than half of the board members are appointed by the government.

Grilli, Masciandaro and Tabellini (1991) construct two indices:

➤ the political independence indicator based on the appointment procedures for board members, the length of members' terms in office, and the existence of the statutory prerequisite to pursue price stability;

➤ the economic independence indicator focused on the extent to which central bank implements freely monetary policy without the influence of government.

An indicator for legal independence was employed by Grilli, Masciandaro and Tabellini (1991), corresponding to the total score of both political and economic independence.

Eijffinger and Scarling, (1992, 1993) realized an index taking in consideration the position of final responsibility for monetary policy, the absence or presence of a government official in the board of central bank, and the percentages of board appointees made by the government.

One of the most widely employed indices was conceived by Cukierman, Webb and Neyapti in 1992<sup>8</sup>, which measures the legal central bank independence. It takes into account various stipulations in the law regarding the organisation and functioning of central banks. This index was based on a codification of sixteen various legal characteristics of central banks as stated in their charters. These are grouped into four clusters of issues: procedures for the appointment and dismissal of the governor of the central bank, independence for policy formulation, objectives of monetary policy and establishment of limits on lending by the central bank to the public sector.

They obtain an index that measured the legal central bank independence for four decades (1950-1989) in 72 countries (21 industrial countries and 51 developing countries). Their investigation shows that legal

<sup>7</sup> Eijffinger S. and De Han J. (1996), Special Papers in International Economics no 19, p. 22-23

<sup>8</sup> Cuckierman A., Webb S., Neyapti B. (1992.), Measuring the independence of central bank and its effect on policy outcomes, World Bank Economic Review no.6, p.356-359

central bank independence is negatively related to inflation in industrial countries, but not in developing countries. By contrast, in these countries, the governors' turnover rate is robustly and positively associated with inflation.

Since then, the situation has suffered important changes, as reforms of central banks have taken place in many transition economies. A recent paper of Cukierman Geoffrey and Bilin (2000)<sup>9</sup> introduces additional data on the legal independence of the new central bank in 26 former socialist countries. These data are constructed using the same codification system for measuring legal independence that was developed by Cuckierman, Webb and Neyapti (1992). Their finding was that legal central bank independence in former socialist countries during the '90s was higher than that of the central bank in developed countries during the '80s, indicating that the transition economies implemented very ambitious the reforms of central bank.

The major conclusion of Cukierman Geoffrey and Bilin (2000) is that the negative relation between inflation and legal independence appears as well in the transition economies but only at sufficiently high levels of economic liberalization. In transition countries, the legal independence of central bank is unrelated to inflation during the early phases of liberalization because the process of decontrol of domestic prices had a powerful impact on inflation.

In 1992, Cukierman, Webb and Neyapti<sup>10</sup> also developed an indicator of actual central bank independence from the actual frequency of the change of the governor. They calculated the average annual turnover rates of central bank

governors in the industrial and developing countries between 1950 and 1989 and found out that the turnover rates in developing countries were considerably higher than in industrial countries. The turnover rate is not significant in explaining the variation of inflation within industrial countries, but, in developing countries, there is a positive relation between the governors' turnover and inflation.

Even if these four indicators are all based on a similar approach, they sometimes indicate very different results because of the diverse interpretation of central bank law stipulations and of the diverse aspects of central bank independence taking into account in their construction.

## 2. Central bank independence and inflation

Following the revolutionary research by Rogoff (1985), who proved that inflationary bias could be reduced by delegating monetary policy to an independent central bank, a several empirical studies have provided evidence for the negative relationship between central bank independence and inflation for developed economies (Grilli, Masciandaro and Tabellini, 1991; Cukierman, Webb, Neyapti, 1992; Alesina and Summers, 1993; Jonsson, 1995, etc.). Still, empirical evidence from developing countries has been less clear-cut. Moreover, some recent studies have formulated reservations on the strength of the existing findings even for developed countries (Posen, 1993; Campillo and Miron, 1997; Forder, 1998; King and Ma, 2001).

Using data for developing countries Campillo and Miron (1997) argue that central bank independence has no importance in determining inflation outcomes, once other factors are held constant. This finding could be disapproved, as Campillo and Miron (1997) use a legal indicator for central bank independence which most preceding studies have found to be

<sup>9</sup> Cukierman A., Geoffrey M., Bilin N. (2000), Central bank reform, liberalization and inflation in transition economies. An international perspective, Center for Economic Research, No. 106, p. 11

<sup>10</sup> Cuckierman A., Webb S., Neyapti B. (1992.), Measuring the independence of central bank and its effect on policy outcomes, Word Bank Economic Review no.6, p.363-367

unreliable for developing countries. Temple (1998) finds that if high inflation countries are added to his sample of OECD and developing countries, the effect of central bank independence (proxied by legal index of Cukierman, Webb and Neyapti, 1992) on inflation disappears. Moreover, Mangano (1998) consider that central bank independence is rather an issue exposed of subjective interpretations<sup>11</sup>.

By contrast, analysing the situation of central bank independence in transition countries, Maliszewski (2000) proved that there is a robust correlation between central bank independence and inflation but only at a high level of economic liberalization<sup>12</sup>. The same conclusion was reached by Cukierman (2002), which extends the Cukierman (1992) index to 26 transition economies during the nineties, indicating that legal central bank independence is negatively correlated with inflation in Eastern Europe but only at a sufficiently high and sustained level of liberalization. The conclusion was that the legal central bank independence and inflation are negatively related in both developed and developing countries and that, consequently, they are negatively related internationally.

Daunfeldt and Luna (2003) analysed the effects of institutional reforms that granted the central bank more independence from political influence on the efforts to obtain low and stable inflation in 23 OECD countries. 17 of them had implemented institutional reforms that granted their central bank a high independence level.

They investigate the inflation beginning in 1975, being interested in the shift from high inflation to the low inflation

recorded nowadays in most of the OECD countries. Their analysis showed that price stability had been achieved before the implementation date in the majority of the countries that have adopted central bank reforms in 11 out of 17 countries. As a consequence, central bank independence cannot be responsible for the shift from high to low inflation. Price stability had also been achieved in countries that didn't adopt independence reforms, such as Canada, Denmark, Norway, Germany or United States of America. There were countries, namely Greece, New Zealand, Italy, Portugal and Spain, where price stability was reached only after the implementation date, but the moments were very close, indicating that the transition from high to low inflation was almost finished when the central bank reforms were implemented. However, the authors concluded that a more independent central bank might have played an important role in diminishing the inflation rates. They do not reject the idea that low inflation cannot be guaranteed in the long run with independent central banks<sup>13</sup>.

Jacome and Vasquez (2005) assessed the central banks' charters in 24 Latin American countries and Caribbean countries during the nineties. They found out that there are significant regional differences, as central bank reform was widely implemented in Latin American countries but almost inexistent in Caribbean countries. As a result, most central banks in Latin America enjoy higher independence, while Caribbean central banks are still politically dependent on the executive branch. However, inflation evolution in Latin American and Caribbean countries did not vary much during the 1990s. Calculating three alternative indexes of legal central bank independence and after controlling international inflation, the exchange regime, and the banking

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<sup>11</sup> Daunfeldt S., Luna X. (2003), Central Bank Independence and Price Stability: Evidence from 23 OECD-countries, The Swedish research Institute of Trade, Umea University, p. 2-3

<sup>12</sup> Maliszewski W. (2000), Central bank independence in transition economies, Centre for Social and Economic Research, London School of Economics and Political Science, p. 18

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<sup>13</sup> Daunfeldt S., Luna X. (2003), Central Bank Independence and Price Stability: Evidence from 23 OECD-countries, The Swedish research Institute of Trade, Umea University, p. 10-11

crises, they obtained a strong negative correlation between legal central bank independence and inflation<sup>14</sup>.

However, most of theoretical and empirical studies show that countries with an independent central bank will reach a lower level of inflation rate than those where the monetary policy of central bank is influenced by government. Moreover, the improvement of inflation performance as a result of an increased independence of central bank does not been reached with a cost in terms of declined growth (Grilli, Masciandaro and Tabellini, 1991).

### 3. Central bank independence and economic performance

Many empirical studies verified the relationship between central bank independence and real economic variables, such as growth, interest rate and unemployment.

As for the first relationship, Grilli, Masciandaro and Tabellini (1991) argue that real growth and central bank independence are unrelated in the cases of developed economies. Their conclusion was similar to the results of other authors, such as Alesina and Summers (1993) and Cukierman, Kalaitzidakis, Summers, and Web (1993). The latest paper indicates that turnover rate of central bank governors as the proxy for independence is negatively associated with the growth in developing countries<sup>15</sup>.

Concerning the second and third correlations, Alesina and Summers (1993) could not find any correlation between central bank independence and real interest rates or between central bank independence and unemployment.

By contrast, Cukierman, Kalaitzidakis, Summers, and Web (1993) found that the variability of both nominal and real interest rates is negatively associated with the legal central bank independence. Moreover, Cukierman and Lippi (1999) and Velasco and Guzzo (1999) studied the relationship between central bank independence and unemployment. Their conclusion was that employment is decreasing in the countries with an independent central bank<sup>16</sup>.

There are a number of empirical researches on the relationship between the central bank independence and the cost of disinflation measured by sacrifice ratio (Ball, 1994, 1997; Gartner, 1995; Fischer, 1996). The sacrifice ratio represents the cumulative increase in the yearly rate of unemployment that is due to the disinflation effort divided by the total decrease in the rate of inflation. Some of these studies demonstrate that the sacrifice ratio is higher in the case of central bank independence. Consequently, there is a positive and significant relation between central bank independence and the sacrifice ratio.

Posen (1995, 1998) formulated a similar conclusion, as a result of its analysis on the public and private sectors behaviour in a sample of 17 OECD countries in order to evidence disparities in credibility of central banks. His study did not provide evidence that the costs of disinflation are lower in countries with more independent central banks. By contrast, the costs of disinflation are higher and the duration is the same in countries with independent central bank. So, there is a significant and positive correlation between the central bank independence and the costs of disinflation<sup>17</sup>.

<sup>14</sup> Jacome L., Vasquez F. (2005), Any link between legal central bank independence and inflation? Evidence from Latin America and the Caribbean, IMF Working Paper no. 75, p. 24

<sup>15</sup> Cuckierman A., Kalaitzidakis, Summers, Web (1993.), Central bank independence, growth, investment and real rates, Carnegie-Rochester Conference Series on Public Policies no.39, North-Holland, p. 96, 110

<sup>16</sup> Cuckierman A., Lippi F. (1999.), Central bank independence, centralization of wage bargaining, inflation and unemployment: theory and some evidence, European Economic Review no.43, 1428

<sup>17</sup> Posen A. (1995), Central bank independence and disinflationary credibility: a missing link?, Federal Reserve Bank of New York, Staff Reports no.1, p. 27

However, most empirical studies suggest that central bank independence does not improve economic growth and employment. Also, there is no evidence that countries where central bank is more independent have lower cost of disinflation than those where central bank is dependent by the political authorities. In fact, the majority of studies prove that central bank independence is associated with a higher disinflation costs.

### Conclusion

In the recent years, most of member countries of the European Union, majority of the OECD members and, as well as, a growing number of both newly industrializing countries and former socialist economies have granted a high independence to their central bank.

A large literature has demonstrated the existence of a negative correlation between central bank independence and inflation: countries with independent central bank have managed to keep the inflation under control. Moreover, the improvement of inflation performance as a result of an increased independence of central bank does not been achieved with a cost in terms of declined growth.

In spite of the fact that legal independence does not always fully translate into actual independence, it is nonetheless associated with significantly lower inflation. For a given level of independence from the political authorities a more focused legal mandate to pursue price stability is expected to result in a lower rate of inflation. Numerous empirical studies suggest that central bank independence does not improve economic growth and employment. Also, there is no evidence that countries where central bank is more independent have lower cost of disinflation than those where central bank is dependent by the political authorities. In fact, the majority of studies prove that central bank independence is associated with a higher disinflation costs.

Even though an independent central bank is neither an enough nor required condition for maintaining price stability, we consider that countries with an independent central bank experience a lower inflation than those where politicians are allowed to guide the monetary policy of central bank.

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