CENTRAL BANK INDEPENDENCE AND MACROECONOMIC PERFOMANCES – AN EMPIRICAL APPROACH

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The empirical evidence upon the macroeconomic performances of the independent central banks do not always have been successfully. In some cases, the consistency of the indices based on the interpretation of central banks statues used for measuring the degree of central bank independence is controversial, particularly for some of the indices. Moreover, the correlations between central bank independence and macroeconomic performance variables are not always confirmed, the causal relationship between central bank independence and inflation is controversial, and the higher disinflation costs, as a result of a higher sacrifice ratio correlated with the degree of independence is controversial, too. The effects of central bank independence upon macroeconomic performances focalized upon the empirical evidence of inflation, output or economic grouth and the disinflation costs. This is due to the lack of studies vis – á – vis of relationship between central bank independence and macroeconomic performances regarding some variables like interest rates and budgetary deficits. Specialists consider inflation and output as the main determinats of the social welfare. The economic literature regarding this fact suggests that the central bank is seen as a free lunch institution. This hypothesis sustains that independent central banks will have social benefits in terms of lower inflation rates, but without any costs in terms of the real macroeconomic performances as a higher output volatility or a lower economic growth. In this article we provide a qualitative analyses regarding the relationship between central bank independence and macroeconomic performances. For this purpose the authors' used the new index for measuring central bank independence and inflation targeting based on three pillars: political and legal central bank independence, central bank governance and conduct of monetary policy, central bank transparency and accountability. For estimating the connections between the evolution of central bank independence and macroeconomic performances we used five macroeconomic variables: GDP in constant prices, Harmonised Price Consumer Index, unemployment rate, budgetary deficit and current account deficit. Both measuring the degree of central bank independence and evaluating the average levels of the macroeconomic variables were analysed in the period 1990 – 2009, within 20 less developing countries. The final results will help clarify the complex relationship between central bank independence and macroeconomic performances in countries who fostered a large amount of institutional shift in recent years.

Keywords central bank transparency, central bank accountability, inflation targeting, macroeconomic outcomes, free lunch hypothesis

JEL Classification E50, E52, E58

I. Introduction

In the past, most central banks around the world had functioned as departments of the Finance Ministers. These institutions were obliged by law, by custom or by both to dispose of the monetary policy instruments for attaining a large number of objectives, including high levels of economic growth and employment, to finance the public spending of the governments by getting

funds and solving problems related to the payment balance. Today, contrary to what happened twenty five years ago most central banks around the world gain high levels of legal and actual central bank independence. Central bank independence and institutional arrangement like inflation targeting have become largely accepted mechanisms by many specialists. In this sense, the prior responsibility of the central bank is attaining and maintaining price stability and financial stability.

The reasons behind this institutional shift in the structure of the central banks differ from country to country. In the European Union, some amendments brought to the central banks statues imposed in order to accomplish legal convergence imposed by the Maastricht Treaty and the European System of Central Banks Statue. An example in this sense is the amendments brought to law no. 22 of December 1997 of the German central bank who raised the tenure of the Governing Board members from two to five years, abolishing government the veto right. Moreover, price stability has been established as the primary objective of monetary policy. Once European Central Bank was established, the monetary policy in the member countries is delegated to one supranational institution, with a high degree of legal independence from the national governments interests.

In this paper we focused upon the degree of central bank independence of twenty less developing countries and their institutional evolution since 1990 by testing a new index for measuring central bank independence and inflation targeting. Moreover, we analyze the compliance between the degree of central bank independence and five important macroeconomic variables: GDP, inflation, unemployment rate, budgetary deficit and current account deficit in these twenty less developing countries in the period 1990 – 2009.

II. Track recorded of the relationship between central bank independence and macroeconomic performances

One of the most important studies dealling with the relationship between central bank independence and macroeconomic performances suggests that monetary discipline associated with central bank independence reduces the level and variability of inflation but does not have either large benefits or costs in terms of macroeconomic performance. This observation represents at least a fragment of evidence in support of theories emphasizing the neutrality of money (Alesina and Summers 1993: 159).

Some other studies find a negative correlation between central bank independence and long-average inflation. They show a negative correlation between independence and long-run average government deficits as a percent of GDP. In general they find no evidence of a possible correlation between output growth and central bank independence (Pollard 2003: 34).

Better macroeconomic performance and more efficient policy are present in more credible and, to some extent, more transparent central banks. Independence and accountability, to the extent that we are able to measure them, do not seem to explain much of the cross-country variation in macroeconomic outcomes, either individually or in conjunction with other variables (Cecchetti and Krause 2002: 56).

To examine the links between central bank independence and economic performance it is neccesary to devise appropiate criteria for measuring central bank independence. In the industrialized countries, measures of central bank independence are based mainly on the intepretation of central bank laws ad therefore concern legal independence only. The construction of so-called legal indices is done by structuring those criteria regarded as relevant and assigning them a value on the same numerical scale of independence (Healey and Harrison 2004: 109; Touffut 2008: 9; Laurens, Arnone, Segalotto 2009: 24).

The correlation between central bank independence and inflation rate in the developed and emerging countries is a positive one; this fact can be justified by the Philips curve, in which

governments prefer a decrease in the unemployment rate and an increase in wages, and consequently an automatic increase in the inflation rate (Dumiter 2010a: 185).
Summarizing, the most important fact is that the different indices used by one or another author distorsioned the accuracy of the empirical results because of the gap between *de jure* and *de facto* independence. In this study, we want to eliminate those problems by analyzing central bank independence and macroeconomic performances through the new index for central bank independence and inflation targeting.

III. Estimating the connections and correlations between central bank independence and macroeconomic performance in less developing countries

In order to evaluate and assess the impact of central bank independence regarding the macroeconomic performances we have considered approppriate to use a new index. The new index for central bank indendence and inflation targeting (ICBIIT) has three main pillars: political and legal central bank independence (PLBCI), central bank governance and conduct of monetary policy (CBGCMP), central bank transparency and accountability (CBTA) (Dumiter 2009a: 39-42). The new index for central bank independence and inflation targeting is constructed as a sum o thirty eight institutional arrangements both in law and practice of the central banks: nine attributed to political and legal central bank independence, regarding variables like turnover rate of central bank Governor and political vulnerability, tenures of central bank Governor and the members of the Governing Board, the appointment and dissmissal procedures of the Governor and the members of the governing board; fifteen attributed to central bank governance and conduct of monetary policy regarding aspects as: price stability, the central bank prevaillance over government in case of policy conflicts, the authority in managing the exchange and interest rates, granting direct and indirect credit to the government, the degree of central bank independence in setting the monetary policy objectives, targets and instruments; fourtheen attributed to central bank transparency and accountability: disclosing time series for the main economic variables and the macroeconomic models used for policy analyses, communicating with the public and the media, announcing the current and future paths of monetary policy, auditing central bank activities.
The index is better called as a *de facto* or actual index rather than a *de jure* one, because the aggregated value is based on the actual institutional practices or norms of the central banks and not necessarily what is written in the central bank laws (Dumiter 2009b: 87). However, the new index for central bank independence and inflation targeting is an interpretation based on these laws, which are put into actual practice and those practices that are not stipulated by law.
In order to evaluate the soundness of the index for measuring central bank independence and inflation targeting (ICBIIT) it is very important to measure this index in the less developing countries. For this purpose we have considered for our study a less developing group formed by twenty countries: Argentina, Bostwana, Brasil, Chile, Ghana, Jamaica, Jordan, Malaezia, Mexico, Namibia, Nepal, Phillippines, Ruanda, Saudi Arabia, South Africa, Sri Lanka, Tanzania, Thailand, Trinidad Tobago, Zambia, in order to evaluate the degree of central bank independence and its evolution in countries with many institutional shifts. The measure was made by analyzing central banks laws and statues, norms, regulations, publications, studies and other important material regarding institutional matters and actual practices of the central banks according to their websites in the period 1990 – 2009.
Given the lack of studies dealling with the relationship between central bank independence and macroeconomic performances in the less developing countries we have been focusing upon this country group. Measuring central bank independence was made by using the index for central bank independence and inflation targeting (Dumiter 2010b: 102-106). The analyses was made by comparing the levels of central bank independence and the average of five macroeconomic variables in the period 1990 – 2009, as: GDP in constant prices, Harmonized Price Consumer

Index (HPCI), unemployment rate (UR), budgetary deficit as a percent of GDP (BG) and current account deficit as a percent of GDP(CAD); they were extracted of the International Monetary Fund website, *World Economic Outlook Database*.

IV. Results of measuring central bank independence and their correlation with the macroeconomic performances in less developing countries

Measuring central bank independence according to the index of central bank independence and inflation targeting in the less developing country group (Fig. no. 1) has emerged with the following results: regarding the first pillar, central bank political and legal independence only a few countries: Mexico, Phillippines and Tanzania exhibit higher levels, whereas the rest of the countries have lower scores; this is due to the government active participation in the appointment and dissmissal procedures of the Governor and the members of the Board, the political vulnerability and the higher turnover rate of the central bank Governor. Moreover, the tenures of the central bank Governor and the members of the Board are beneath the lenght of the political cycle.

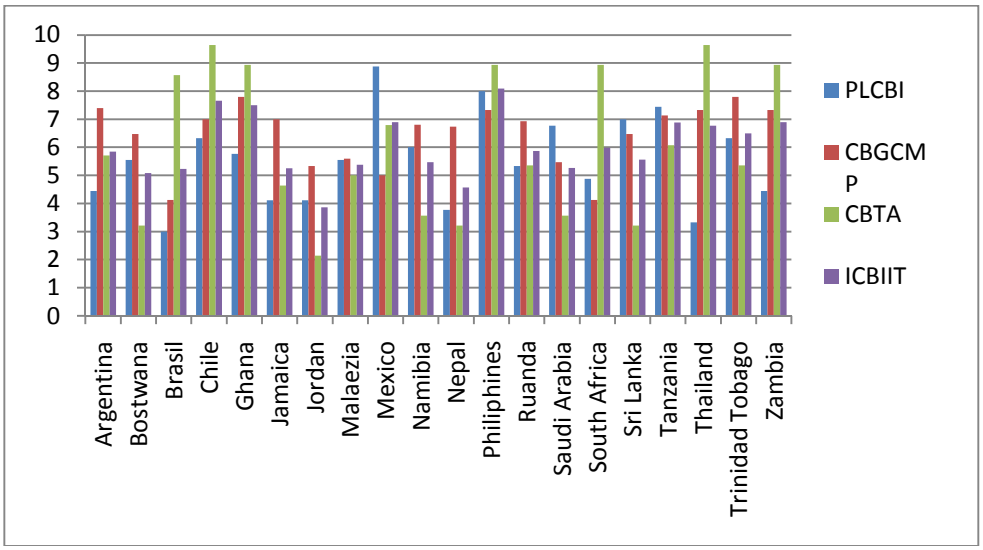

Fig. no. 1 Measuring central bank independence according to the Index for central bank independence and inflation targeting in twenty less developing countries
Source: realized by authors'

The second pillar of the index, central bank governance and conduct of monetary policy, measured in the less developing country group reveals in the majority of the countries medium to low scores due to some factors as: government prevaillace over the central bank in case of policy conflicts, multiple objectives of monetary policy without any prioritisation of one or another, financing government deficits in direct and indirect manners, government interference in establishing and managing the interest rate and exchange rate, government active implication in establishing and applying monetary policy objectives, targets and instruments.

With the exception of Chile, country that has adopted the inflation targeting as monetary policy strategy, countries in the less developing country group attain lower levels of central bank transparency and accountability pillar, due to some factors as: an unclear process of communicating and debating with the public and media regarding the monetary policy stance, lack of time series for the main economic variables and the macroeconomic models used for

policy analyses, lack of forecasts regarding inflation and output paths, lack of transparency in modifying the path and course of present and future monetary policy.
Regarding the correlation between the degree of central bank independence and macroeconomic performaces in the less developing country group, the results are the following (Fig. no. 2): between central bank independence, using the index for central bank independence and inflation targeting and GDP countries as: Chile, Phillippines, Ghana and Zambia foster medium levels of central bank independence associated with good track record in terms of economic growth, while the rest of the countries gathered in this group exhibit lower levels of central bank independence and satisfactory levels of GDP.
Central bank independence and average inflation in the less developing country group are inverse correlated in countries as: Argentina, Brasil and Zambia, countries who foster lower levels of central bank independence and higher average inflation rates. Other countries as: Phillippines, Ghana, Thailand register acceptable levels of central bank independence and lower levels of inflation, while the rest of the countries exhibit lower levels both of central bank independence and inflation rates.

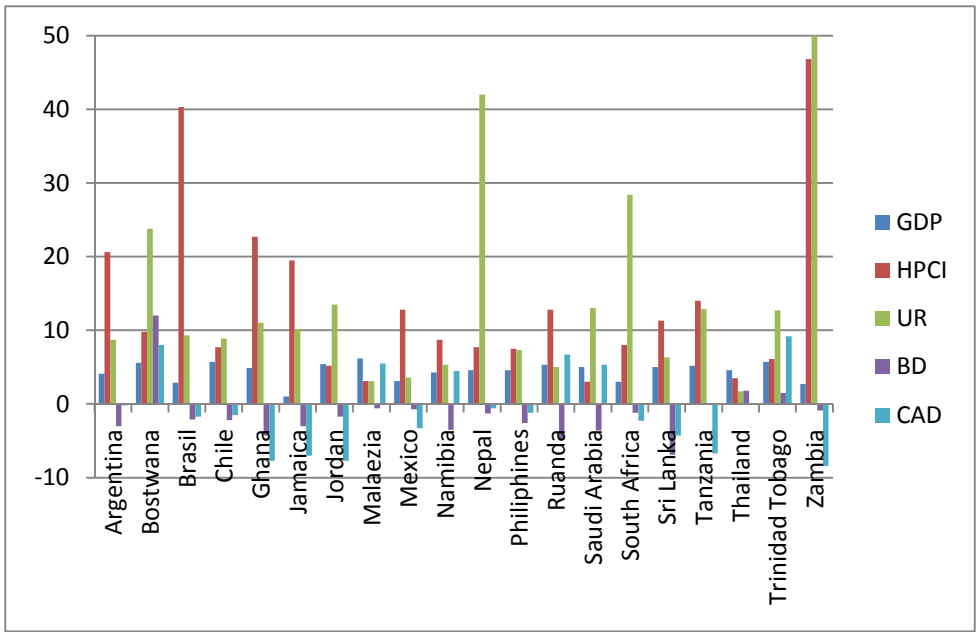

Fig. no. 2 Central banks' macroeconomic performances average in twenty less developing countries between 1990 – 2009
Source: realized by authors'

For the relationship between central bank independence and average unemployment rate in the less developing country group, South Africa, Saudi Arabia, Bostwana, Jordan, Jamaica, Nepal, Tanzania, Trinidad Tobago and Zambia, countries who gain lower levels of central bank independence and higher average levels of the unemployment rate. At the opposite side we can remark Argentina, Brasil, Chile, Malaezia, Mexico, Namibia, Ruanda, Sri Lanka and Thailand, countries characterized by lower levels of central bank independence and of the unemployment rate.
The relationship between central bank independence and bugdetary deficit in less developing countries is split in two parts: in the first one, countries as Trinidad Tobago, Thailand, Bostwana exhibit medium levels of central bank independence and positive budgetary deficits, while for the

rest of the countries we can identify an inverse relationship between central bank independence and budgetary deficits.
Finally, the correlation of central bank independence with the curent account deficit is a positive one in countries as: Saudi Arabia, Bostwana, Malaezia, Namibia, Ruanda and Trinidad Tobago, while for the rest of the countries of the less developing group we can identify an inverse correlation between central bank independence and current account balance.

V. Conclusions

The vast empirical studies dealling with the relationship between central bank independence and macroeconomic performance identify a problem around the construction of the indices regarding measuring central bank independence. This situation lead to an inadequate measure of the degree of central bank independence in developed and developing countries, results which distort the connections with the macroeconomic performances.
In this article we have used the new index for measuring central bank independence and inflation targeting in order to eliminate the differences between *de jure* and *the facto* independence to a more accurate perception of central bank independence. Moreover, we focused upon several macroeconomic indicators as the average over a twenty years time horizon. The sample that we have constructed consists in twenty less developing countries that have envolved in recent years both economic and socially.
The result of our analyses suggests that central bank independence is positively correlated with the economic growth in the vast majority of countries, meaning that an increase in the degree of independence will improve the economic growth. Regarding the inflation and employment performances and the degree of central bank independence the results are very interesting: some countries with relatively independent central bank exhibit higher levels of inflation and employment, meanwhile other countries with politically dependent central banks gather lower levels of inflation and employment. This means that in less developing countries central bank independence is not a important factor to explain the inflationary trends and the unemployment rate movements.
Finally, the relationship between both current account balance and budgetary deficits are emerging: in some countries there is a positive relationship between central bank independence and budgetary deficit and current account balance, meanwhile in other countries we can indentify an inverse relationship between these two variables.

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