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## RESEARCH ARTICLE

# The Effects of Inflation Targeting on Macroeconomics Performance

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## Abstract

Since the 1990s inflation targeting (IT) has been adopted by several central banks as a strategy for monetary policy. It is expected that the adoption of this monetary regime can reduce inflation and inflation volatility. His practice was marked by a large observed at the beginning of the 90s and 2000 stability a debate emerges on efficiency and economic performance of the scheme. Many studies have focused on this question has no authority to reach a final consensus. The objective of this paper is to analysis of two macroeconomic aggregates: inflation and economic growth under different samples. Initially, we assess the evolution of these two quantities, in all countries targeting inflation, from before his adoption and post-adoption. The results of this first comparison show without exception that all inflation targeting countries had a lower and less volatile inflation. From these results we conclude that the efficiency and economic performance of this monetary policy in both the industrialized and emerging countries.

**Keywords:** *Inflation targeting, Performance, Efficiency and stability.*

JEL: C40, E52, E63.

## Introduction

The growing interest of central banks in industrialized and emerging countries for Inflation Targeting goes naturally hand in hand with an intensification of academic research about it. The first parts of the work, essentially descriptive, have endeavored to discuss the various operational aspects of monetary policy, and the terms of its effectiveness and viability.

Consequently, the second generation of work has in turn sought to test empirically the benefits in terms of macroeconomic performance of the adoption of Inflation Targeting. Long focused on industrialized economies because of a lack of a certain hindsight concerning emerging countries, these empirical studies have subsequently concentrated mainly on macroeconomic performance of Inflation Targeting at the heart of emerging economies whose adoption was a debate within the academic community for this category of countries. While these studies find mixed result, even contradictory in the case of industrialized countries, the results seem rather to highlight the positive impact of the adoption of Inflation Targeting on macroeconomic performance of emerging countries. In the sense

that countries which have adopted Inflation Targeting would show macroeconomic performance superior in terms of level and volatility of inflation in particular, to the economies which would pursue another strategy of monetary policy .

Despite the results which appear promising, the adoption of Inflation Targeting in emerging economies still poses a number of issues in the body of research. Indeed, even though the results of the first chapter of this thesis seems to highlight some effort of emerging economies to meet the economic and institutional pre-conditions deemed essential to the adoption of Inflation Targeting, some authors are skeptical about the opportunity for this group of countries to adopt the monetary policy framework , mainly because of institutional weaknesses relatively marked. On the contrary, others rely on the successful experience of Inflation Targeting to promote its application to a large number of emerging economies. However despite this debate in the Literature, very few empirical studies have addressed the question of the role of economic and institutional conditions in the performance of

**Inflation Targeting.** This question is all the more important as many emerging countries have expressed a desire to adopt Inflation Targeting in the short or medium term. Since then, it seems important to determine on the basis of past experience, the economic and institutional conditions that have strengthened the effectiveness of Inflation Targeting in emerging economies and that is for the aim of providing candidate countries with the adoption of instructions about essential reforms to implement before adopting Inflation Targeting.

The objective of this paper is then twofold. We propose initially, to reconsider empirically the impact of the adoption of Inflation Targeting on macroeconomic performance of emerging economies. The obtaining results will show that the adoption of Inflation Targeting has effectively permitted to the emerging countries which have adopted it, to reduce the level and volatility of Inflation, although some central banks have faced difficulties in the achievement of their official Inflation Targets.

### **The Performance of Inflation Targeting Regime: The Case of Emerging Countries**

The comparison of the performance of Inflation in countries adopting Inflation Targeting regime, compared to those practicing other monetary regimes, has recently experienced a particular interest in empirical studies Ball and Sheridan, Ball, Brito and Bysted, Vega and Winkelried [1-6], these types of work were based on individual data. They differ considerably in the choice of control groups of countries not targeting Inflation and in valuation techniques. Therefore their results are different.

The question of the economic performance of the Inflation Targeting policy is at the heart of the economic debate during these last years. The purpose of this section is to evaluate the economic performance of the monetary policy according to the economic literature which an environment of stable monetary policy reflects good macroeconomic. In this section, we will focus on the study of the effect of the adoption of the policy of Inflation Targeting in emerging countries by the comparative performance of some macroeconomic indicators: Inflation, Growth rate interests and Exchange rates. The contribution lies in extending the previous literature, comparing the performance of emerging economies pursuing Inflation Targeting to those of a group of neighboring developing countries with comparable economic and social indicators (same series of countries in this chapter). And

identify the factors influencing the volatility of Inflation in the countries adopting this monetary policy and the following methodology was established: Per Capita Income (PCI) is economically efficient when it generates a higher degree of stability in the macroeconomic environment.

The tables below illustrate the literature review since the eighties on the relationship between the volatility of cycles and economic growth, the main work studying the effect of the stability of macroeconomic policies on growth, and identifying a link between stability of the monetary environment and economic and economic performance via the effect on the determinants of growth.

The relationship between the volatility of cycles and the economic growth has been treated in different ways due to the evolution of Growth Theory in recent years. These recap tables show that an environment with an unstable monetary policy has negative effects on economic growth and generates a poor economic performance. The thesis which has been sustained is that the policy of Inflation Targeting is economically efficient when it generates higher degree of stability in the monetary environment<sup>1</sup>.

The purpose of this work is to establish the methodology which we adopt to assess the economic performance of the inflation targeting policy. We will try in what follows to judge the performance of the policy of Inflation Targeting based on the effect of the stability of the macroeconomic environment and in particular the environment of monetary policy.

### **Inflation Targeting and Macroeconomic Performance**

The results of empirical studies on the effects of Inflation Targeting on Inflation and other macroeconomic variables remains mixed. Johnson [7] conducted a panel study among five countries that target Inflation (Australia, Canada, New Zealand, Sweden and the UK) and six industrialized countries that do not target Inflation. He noted that the announcement of a policy of inflation targeting significantly reduces expected inflation (controlling the effects of the economic cycle, past inflation and fixed effects). Also as part of the panel data recession, Mishkin

<sup>1</sup> Aguir Abdelkader (2014), "Inflation Targeting: An Alternative to Monetary Policy" International Journal of Economics and Finance Vol 6, No 7

and Schmidt-Hebbel [8] as well, concluded that Inflation Targeting has allowed industrialized countries to achieve a lower level of long term inflation and an impactful decline in exchange terms. However, the results inflation targeting in advanced countries are very similar to their control group. Rose [9] argues that Inflation Targeting is a more sustainable system compared to other monetary systems. She argues also that

Inflation Targeting allows both lower volatility of the exchange rate and less frequent “sudden stops” of capital flows. On the other hand, Ball and Sheridan [4] note that there is no statistically significant difference in the long term for the group of industrialized countries whether for those which target inflation (seven countries) or those which do not target it (thirteen countries).

**Table 1: Summary of the literature review since the eighties, on the relationship between volatility of cycles and economic growth**

Sample of Countries N	Period T	Econometric Method	Measure of Volatility	Results
N=47	T=1950-1960	Cross section	Standard deviation of real growth rates	Positive
N=113	T=1951-80	Polled (five years averages)	Standard deviation of GDP growth rates	Positive
UK	T=1948-1991	GARCH-M	GARCH-M	Positive
N1 = 92, N2=24	T1=1960-85 T2=1950-1988	Cross section	Variance of growth (cross section)	Negative for the two samples N1 & N2
i.e.	i.e.	Panel	The squared residuals of the regression of gvt consumption	Negative
N1 =24(OCDE) N2=90 EUC N3=72 DC	T1=1960-88 T2=1979-92 T3=1960-1997	Cross section pooled (10 Years averages)	Standard and Annual Deviation of the growth	Negative and significant for N1 and N2 and not for developing countries
N=24 OCDE		Static Panel, Dynamic Panel	Measure of short term ( five years) standard deviation of the production; annual measure of volatility	Negative according to the two measures of volatility
Modal of general equilibrium			Variation in production	Negative effect

**Table 2: Summary of the main bodies of work studying the effect of the stability of macroeconomic policy on growth**

Studies	Problematic	Methodology	Results
Fisher (1991)	Study the link between the stability of the macroeconomic policy and the growth and the development	The idea is to add in the regression of conventional production indicators of macroeconomic policy to see their significances	Macroeconomic indicators have significant coefficients, Macroeconomic stability conducive for good economic performance

Fisher (1993)	Study the effect of the uncertainty at the heart of a macroeconomic environment and in particular monetary on the growth	Uncertainty is measured by the variance of inflation. The idea is to include this variable in the production function of Fisher (1991)	Significant and negative coefficient. The uncertainty of the environment gives rise to poor economic performance.
Turnovsky (2003)	Measure the link between the accumulation rate of capital and inflation _ Determine the nature of the relationship between macroeconomic policy and the well-being of the economy.	General equilibrium model. The first objective is studied via the effect of monetary growth rate on accumulation rate of capital. The second objective is set via the tax effect of interest rates on: (1)tx capital accumulation, (2) real cash money, and (3) initial welfare.	Macroeconomic stability creates sustainable growth and low inflation. - The effects on economic welfare are mixed.

**Table 3: Summary of the work identifying a link between stability of the monetary environment and economic performance through the effect on the determinants of growth**

Studies	Problematic	Methodology	Results
Ho (1996)	What is the effect of monetary instability on economic growth (via capital accumulation)?	Monetary instability is measured by the instability of monetary growth and the volatility of inflation. It adopts an endogenous growth model where money is introduced.	A high dollar cash yield an increase in the desired level of capital of the firm. High inflation generates a reduction in the desired capital.
Beaudry et al (2001)	What is the effect of monetary instability on economic performance (via the investment rate)?	This effect is studied via the impact of monetary instability (measured by inflation volatility) on the distribution rate of investment. This study is conducted on British firms during the period 1961-1990	The uncertainty of the monetary policy environment negatively affects the distribution rate of investment.
Komendi and Meguire (1985)	Study the effect of monetary instability (via inflation volatility) on economic growth.	average output growth based on the aggregate inflation volatility	The results are in favor of a negative effect.

Despite the experience and the relative success of emerging countries In implementing a policy of Inflation Targeting, few are the empirical studies which have explored this issue. Mishkin and Shmidt- Hebbel [8] find that inflation targeting in emerging countries is less efficient than in industrialized countries, although the decreases in the level of inflation after the adoption of a policy of inflation targeting in emerging countries is considerable. Using the method of Ball and Sheridan [4], the International Monetray Fund published the results of a study that involved thirteen emerging countries adopting a policy of inflation targeting compared to other twenty nine emerging countries. They point out that inflation

targeting is associated with a significant 4.8% reduction in average inflation and a reduction in the standard deviation of 3.6% compared to other monetary strategies. Goncalves and Salles [10] also apply the method of Ball and Sheridan [4] in a population of thirty six emerging countries. As the IMF study, these researchers found that the adoption of a policy of inflation targeting leads to lower average inflation rates and reduced volatility of output growth compared to a control group made up of countries which do not target inflation. A more recent study published by the Organization of Economic Cooperation and Development (OECD) on inflation targeting for emerging countries, focusing mainly on case

studies of individual countries found equally positive results associated with the adoption of the policy of inflation targeting .

The choice of the inflation targeting policy has been the subject of many economic controversies. Indeed, despite the convergence of Literature to a successful policy of Inflation targeting, the fact remains that some economists are particularly reluctant about this finding.

This debate on the effect of the adoption of the policy of inflation targeting which remains open, began with the work of Leiderman and Svensson [11] who sought to study the impact of the adoption of inflation targeting on macroeconomic variables such as the level, persistence and inflation expectations, the cost of deflation and monetary policy management.

Posen and Mishkin [1], Neumann and Von Hagen [12], Landerretche et al [13], Levin et al [14], Bernake et al [15], Johnson [7] associate the adoption of inflation targeting to a decline in the level, to volatility and to the persistence of inflation along with the volatility of output but also to a better anchoring of inflationary anticipations. Roger and Stone [16] are associated with this premise by showing a direct link between inflation targeting and improving economic performance.

Vega & Winkelried [6] and Batini & Laxton [17] focus on their turn, on emerging economies and show that the level, the persistence and volatility of inflation are lower in countries that target inflation compared to countries that do not adopt this monetary framework.<sup>2</sup>

Goncalves and Salles [10] also, found that on average, the emerging countries targeters of inflation have experienced a decline in their inflation rates superior to non targeters of about 2.5 points.

Although these results show a significant and positive effect of the adoption of inflation targeting, these findings have been questioned by many economists.

Neumann & Von Hagen [12], Siklos [18], Cecchetti and Ehrmann [19], Bryto & Bystedt [5] show an ambiguous effect of the adoption of inflation targeting on economic performance of

emerging countries; the economic environment of the nineties was relatively stable and inflation was on a downward movement for countries adopting inflation targeting and those which do not adopt this policy alike.<sup>3</sup>

The purpose is to provide key answers to this question: Does the adoption of inflation targeting allow the improvement of economic performance in terms of the level and volatility of inflation based on CPI (Consumption Price Indices), the rate of economic growth ?

### ***Realisation of Inflation and Economic Growth: Descriptive Statistics***

The implementation of a system of inflation targeting in emerging countries was seen as a major challenge, requiring among other things, an expertise in monetary policy, an efficient and well- functioning financial market and institutional infrastructure which seemed absent in most of these economies. Other monetary regimes like the regime of fixed exchange rates, were considered more appropriate. Over time, however, it appears that emerging economies could implement a regime of inflation targeting, because it would give them a clear nominal anchorage and the credibility which made their defect.

Between 1997 and early 2002, no fewer than thirteen emerging market economies, have adopted explicit inflation targets (Israel, the Czech Republic, Poland, Brazil, Chile, Colombia, South Africa, the Thailande, South Korea, Mexico, Hungary, Peru, the Philippines). Between 2005 and 2007, six other countries (Guatemala, Romania, Slovakia, Indonesia, Turkey, Ghana) have also adopted inflation targeting.

The issue of the performance of the implementation of inflation targeting brings us to talk about the performance of this latter in times of crises by relying primarily on an analysis of the data of inflation and also economic growth. To get some practical answers to our survey, the study focuses on fourteen emerging countries which practice inflation targeting regime by studying inflation and economic growth by using the following equation:

$\pi_t = 100 * \log(\text{ICP}_t / \text{ICP}_{t-1})$  to evaluate the evolution of inflation and  $Y_t = 100 * \log(\text{GDP}_t / \text{GDP}_{t-1})$  to evaluate changes in economic growth.  
ICP: Index of Consumption Prices. GDP: Gross

<sup>2</sup> Aguir Abdelkader (2014), " The effects of inflation targeting strategy on the growing performance of emerging countries"International Journal of Economics, Commerce and Management Vol. II, Issue 8  
Abdelkader Aguir & Mounir Smida| Sept.-Oct. 2014 | Vol.3 | Issue 5|70-80

<sup>3</sup> Aguir Abdelkader (2014), "Inflation Targeting: An Alternative to Monetary Policy" International Journal of Economics and Finance Vol 6, No 7

Domestic Product. Our data on ICP and GDP are extracted from the IMF data.

The calculation is divided into three main periods: The whole period from 1970 to 2013, a second period

from 1970 to the date of the adoption of inflation targeting (the pre period of IT) and finally the period from the date of the adoption of inflation targeting to 2013 ( the post period of IT).

**Table 4: Data of inflation for emerging and targeters of inflation countries**

	Total period		before IT		After-IT	
	Average	Standard deviation	Moyenne	DS	Average	DS
South Africa	8.26	4.39	8.86	4.56	5.93	2.70
Brazil	90.73	108.41	142.23	109.32	6.47	2.78
Chile	28.09	39.85	42.51	46.57	7.18	6.09
Colombia	15.26	7.65	17.89	6.63	6.75	1.98
Hungary	10.13	7.27	11.60	7.76	5.57	1.84
Indonesia	26.06	43.46	28.02	45.46	8.85	2.68
Israel	23.97	34.62	34.65	39.92	5.18	4.32
Mexico	18.21	20.52	21.74	22.05	6.02	3.4
Peru	44.11	83.66	52.23	89.35	2.50	1.62
philippines	0.02	7.24	9.80	7.63	5.07	2.33
Poland	21.62	36.21	29.27	41.40	4.41	3.32
Czech Republic	4.66	3.35	8.72	0.56	3.3	2.67
Romania	39.49	38.95	52.16	39.01	6.55	1.58
Turkey	28.76	21.73	30.55	21.79	8.61	1.86
average	28.30	34.92	37.22	36.77	6.12	2.68
average *	18.36	20.89	22.22	22.62	6.43	2.90

(\* With the exception of Romania, Brazil and Peru)

This table shows us that the level of inflation in emerging countries was very high before the period of Inflation Targeting, such as 46.57% for Brazil and 21.79% for Turkey. During the period of Inflation Targeting, emerging countries have had a stable and low inflation, the highest rate among these fourteen countries was for the Chili with 7.18%. The average inflation in this sample of emerging countries was 37.22% in the pre period and moves to 6.12% during the post period of Inflation Targeting. Excluding the three countries which present too high average inflation compared to the rest of countries in this sample (Brazil, Peru, and Romania), the average inflation rate moves from 22.22% during the pre-period to 6.43% in the post period of IT. This low level of inflation observed among emerging countries under the IT regime, was accompanied by a significant decrease in volatility in all countries of the sample above. The average volatility moves from 37.22 before the IT to 2.68 under the practice of this regime.

Excluding the three countries (Brazil, Peru and Romania) which present a higher volatility than

the rest of the countries of the sample, the average volatility of inflation moves from 22.62 before IT to 2.91 during this regime. So far, the obtained results seems to be encouraging, a significant change in the dynamics of inflation between pre and post periods of IT. We did not find any country which had more weak level of inflation and/or volatility only after the practice of Inflation Targeting.

In a second step, we are going to evaluate the impact of IT policy on economic growth and evaluate the volatility of this latter in countries adopting IT, because one of the criticism against this regime is the fact of its concentration on a single goal, therefore its neglect of other objectives such as economic stability, the fact is for example a central bank under IT regime concentrates heavily on inflation stability and reduces the importance given to economic stability. This criticism assumes that the inflation targeting regime sacrifices the cost due to the fact that policy makers are likely to accept more rising volatility of economic growth in exchange with a low volatility of inflation.

**Table 5: Economic growth for emerging countries :Targeters of inflation**

	Total period		before-IT		after-IT	
	Average	Standard deviation	Moyenne	DS	Average	DS
South Africa	12.52	4.24	12.94	4.48	10.86	2.66
Brazil	72.54	86.25	90.47	90.43	10.62	2.66
Chile	34.47	41.40	49.52	48.16	12.63	7.96
Colombia	20.08	7.95	22.56	6.73	11.90	5.70
Hungary	11.19	6.14	12.28	6.28	8.08	4.70
Indonesia	33.65	42.74	35.44	44.78	17.63	4.17
Israel	29.46	33.82	40.63	37.88	10.06	6.35
Mexico	22.96	18.47	26.63	19.23	10.27	6.33
Peru	12.88	5.72	13.57	5.92	9.38	2.64
philippines	46.32	74.78	53.63	79.83	8.85	3.93
Poland	21.62	36.21	29.27	41.40	4.41	3.32
Czech Republic	8.12	4.47	10.12	4.23	4.69	2.27
Romania	30.99	34.68	34.58	36.96	13.74	10.49
Turkey	43.00	23.50	50.42	18.81	9.61	6.61
Average	30.18	31.84	35.54	33.58	10.66	5.06

From this table, we notice that in all emerging countries, the volatility of economic growth declined. Besides, all emerging countries shown in this table have experienced a decline in volatility between the two periods of after and before the adoption of Inflation Targeting. This leads us to believe that IT is at the origin of this economic performance.

To justify this finding, we will compare neighboring countries by pairs. This observation leads us to believe also that the inflation targeting regime is behind this economic performance. And for the sake of the validity of our judgements, we will compare neighboring countries two by two ; which one country is adopting IT and the other is opting for another monetary policy.

*Performance of IT: A Comparative Analysis between Targeters Versus non Targeters*

**Table 6: Data of Inflation for emerging countries non targeters of Inflation**

	Total period		before-2000		after-2000	
	Moyenne	DS	Moyenne	DS	Moyenne	DS
Argentina	58.81	78.88	80.78	76.93	26.95	72.03
Bolivia	31.21	78.99	47.66	99.95	7.35	4.97
Bulgaria	-	-	-	-	41.72	62.38
Croatia	56.22	91.30	185.00	83.08	35.89	75.87
Georgia	-	-	-	-	14.59	23.98
Paraguay	11.14	7.98	10.94	8.84	11.42	6.78
Uruguay	34.78	22.08	43.11	17.93	22.69	22.31
Average	38.44	55.84	73.49	57.74	22.94	38.22

The fourteen emerging countries adopting IT regime, have an average rate of inflation of 6.43% during the post period (table 4) and an average volatility of 2.90 while for the emerging countries adopting other plans show an average rate of inflation of 22.94% during the post period of 2000 and an average volatility of 38.4. The comparison

Although the establishment of explicit inflation targets by countries with emerging markets is from the nineties, it is possible to assess the repercussion, the number of emerging economies which do not yet apply IT, is large enough to carry out a comparison of neighboring countries by pairs, one adopting IT regime and the other practicing a different monetary policy. The tables below include the same statistics as the previous tables but only for seven emerging countries not practicing IT. Our calculation is divided into three main periods: the whole period from 1970 to 2013, a second period from 1970 to 2000, and finally the period after the 2000's; The 2000 is the year which corresponds to the average period of IT adoption.

of average inflation and average volatility between these two groups of countries shows clearly that there is more economic performance in countries with IT. For reasons of robustness, we will conduct a comparison of some emerging countries of IT with their neighboring ones (comparison between table 4 and table 6). A first



comparison between Brazil and Argentina shows that the country with IT (Brazil) generates more economic performance than its neighbor without this regime. Indeed, Brazil had an average rate of inflation of 142.23% during the pre- period of IT, higher than its neighboring country of Argentina which was about 80.78% in the pre-2000. Following the scheme of IT, the Brazilian inflation rate moves to 6.47% and becomes lower than that of Argentina (26.95%) in the post 2000 period. This performance of countries with IT in terms of inflation level was accompanied by a performance in terms of inflation stability. Indeed, the average volatility of inflation in Brazil (109.32) was higher than that of Argentina (76.93) before the adoption of IT. However, under the practice of IT by the Brazil, this volatility moves to 2.78 while Argentina maintains high volatility (72.03) in the post 2000 period. From this first comparison, we conclude the effectiveness of IT because it leads to a relatively low level of inflation compared to previous experiences and a net stability. All cases come to the same conclusions: Chile vs Uruguay, Peru and Bolivia (this comparison is interesting because it differs from the previous two cases). Indeed, both countries have experienced remarkable economic performances between the two periods under study: one of which under IT regime and the

other under the exchange rate (dollarization). From these observed results, we can say that IT policy is more effective than that of the exchange rate in terms of the provided results; and this is the same for European countries (Poland, Romania, Turkey and Hungary) versus (Georgia and Croatia), there is no case of European emerging countries of IT where the average rate of Inflation and/or its volatility are higher than those of European countries which do not use IT regime.

This comparison shows that all the emerging countries of Europe practicing IT regime have a low and stable inflation rate. However, the emerging countries with non-Inflation targeting have very high rates of inflation during the post 2000 period and a very high level of average volatility which shows us clearly the role of this policy in economic performances achieved during the post inflation targeting period.

In a second step, we are going to evaluate the impact of inflation targeting policy on economic growth. We will conduct a comparison between emerging countries adopting inflation targeting with their neighbors which do not practice this monetary regime.

**Table 7: Economic growth for emerging countries non targeters of inflation**

	Total period		before-2000		after-2000	
	Moyenne	DS	Moyenne	DS	Moyenne	DS
Argentina	61.38	76.70	90.88	84.36	17.81	21.96
Bolivia	35.66	80.15	50.19	99.06	11.44	4.83
Bulgaria	22.51	41.00	6.61	4.39	34.60	52.46
Croatia	-	-	-	-	8.93	8.24
Georgia	-	-	-	-	11.82	6.63
Paraguay	16.41	9.53	17.55	10.31	13.76	7.05
Uruguay	36.29	22.48	45.32	19.74	22.01	19.20
Average	34.45	45.97	42.11	43.57	16.76	17.19

Tables 5 and 7 tell us about economic growth for emerging countries practicing inflation targeting regime and for the countries which do not use it respectively. We notice that the average volatility in countries targeters of inflation is 5.06 during the period (table 5) while that of emerging countries non targeters of inflation is 17.19. In addition, all the emerging countries listed in table 5 have experienced a decline in volatility between the two periods: before and after the practice of Inflation Targeting. This leads us to believe that inflation targeting is at the origin of this economic performance. To justify this conclusion, we will compare neighboring countries by pairs.

A first comparison is possible between Brazil and

Argentina. The first country has economic growth volatility of 90.43 during the pre-period of Inflation Targeting and that of Argentina was about 84.36. During the practice of IT, the volatility of economic growth drops to a very low level (2.66) while that of Argentina declined to 21.96. The absolute change in the volatility of the first case is about 87 points while in Argentina is around 58 points. A volatility of 2.66 implies that economic growth is stable. We conclude from this first comparison that IT policy has a good economic performance.

A second comparison is possible between Chile and Uruguay. The volatility of economic growth in Chile was 48.16 during the pre- period of Inflation

Targeting exceeding that of Uruguay which was 19.74. The adoption of IT by the Chile moves this volatility of economic growth to 7.96, while that of Uruguay remains almost quasi-identical to its value of the pre-2000 period (19.20). According to this case, we find out that IT regime does not slash the volatility of economic growth in favor of that of inflation.

Bolivia and Peru had quite remarkable economic performances between the two study periods. The comparison proved to be interesting between these two countries. Peru had a volatility of inflation of 79.83 during the pre-period of Inflation Targeting and that of Bolivia was 99.06 during the pre-1990 period. Following the adoption of Inflation Targeting, the volatility of economic growth in Peru moves to 3.93 and that of Bolivia goes to 4.83, which tells us that there is a stable and sustainable economic growth and that Inflation Targeting does not sacrifice the volatility of economic growth compared to the volatility of inflation.

All other cases, for Latin America (Chile vs Uruguay), (Bolivia vs Peru), and for European countries (Poland, Romania, Turkey and Hungary vs Georgia and Croatia) come to the same conclusions that there is a stable and sustainable economic growth and that inflation targeting does not slash the volatility of economic growth compared to the volatility of inflation and that both the volatility of inflation and economic growth declined following the adoption of IT and are lower than other volatility rates observed in countries non targeters of Inflation.

Our results show that this monetary regime is favorable to a sustainable economic growth, the policy of Inflation targeting seems once again capable of resisting in face of these crises. The comparison between countries by pairs shows that countries with Inflation targeting recognize more macroeconomic performance than its non-targeting neighbor providing a stable and low level of Inflation with a sustainable and non-volatile economic growth.

The Inflation Targeting is a monetary policy adopted since nineteen ninety (1990). Empirical studies have so far been mainly focused on developed countries, as these countries which for the most part have adopted Inflation Targeting in the early nineties. They suggest that this strategy goes hand in hand with an amelioration of economic results.

In this paper, a preliminary assessment of the impact of this strategy in a sample of emerging countries was made. In countries adopting this strategy, it seems that the rate of inflation has declined, its variability becomes lower and that inflationary expectations were lower. All this explains the attraction exercised by this strategy on emerging countries whose credibility is harder to establish.

In a second step, and following the literature review of the major studies showing a negative effect of the volatility of cycles on economic growth. The study of how macroeconomic variables and especially monetary variables playing a role in growth theory, shows that a stable macroeconomic environment is conducive to a good economic growth. Subsequently, the performance of the inflation targeting policy has been judged on the basis of the effect of a stable macroeconomic environment and especially the environment of the monetary policy.

The inflation rate has decreased, its variability and inflationary expectations were lower; this proves that this strategy is in favor of economic growth. The comparison between countries by pairs shows that the country adopting Inflation Targeting witness more macroeconomic performances [20-44].

## Conclusion

An empirical evaluation of the impact of the adoption of Inflation targeting on nominal and real performances of emerging economies was the subject of numerous empirical studies as we have noticed in the Literature review. The general orientation that emerges from this literature is a beneficial effect of inflation targeting on nominal performances of these economies, compared to other monetary policy regimes, while the link between inflation targeting and actual performances seems meanwhile more ambiguous. The results which we obtained at the end of our calculations are part of this trend. We find that the adoption and the pursuit of a strategy of inflation targeting reduced the level and volatility of inflation in emerging economies. Concerning actual performances, our results are similar to those usually found in the literature, and show a positive impact of Inflation Targeting on the growth rate of Gross Domestic Product (GDP). Moreover, in terms of the level and volatility of inflation, it would be interesting to note that the results we have got, show a positive impact of inflation targeting on these variables. Of course,

this means that inflation targeting has effectively allowed to emerging countries having it, to reduce the level and volatility of inflation, but the central

banks of these countries have certainly benefited from the support of the international macroeconomic environment in completing their mission of price stability.

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