

# Lessons learned from Inflation Targeting

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## **Abstract**

This paper analyzes the policy of targeting inflation in emerging economies. More specifically, the development of this work aims to study the effectiveness and the performance of this strategy of monetary policy in the emerging economies. The analysis of the efficiency and performance of the inflation targeting policy of emerging economies performs well through a stable macroeconomic environment (GDP and inflation rate). The results show a significant difference in inflation performance and macroeconomic performance in an economic environment characterized by high volatility in macroeconomic indicators.

**Keywords:** Inflation Targeting, Emerging Economies, Stability.

## **1. Introduction**

Between 1997 and early 2016, nineteen emerging countries adopted the inflation targeting strategy. The main lessons to be drawn from these experiences are rich and instructive for both the countries that have adopted this regime and for other countries that have not yet fulfilled the prerequisites or are candidates for implementing such a policy.

The experience of countries that have adopted inflation targeting suggests that the key building blocks for an inflation targeting policy are as follows<sup>1</sup> ;

A term is given to the central bank to achieve an inflation rate in the form of a numerical target or in the form of a range;

A floating exchange rate; Aizenman et al. (2018), Ostry et al. (2012), A developed and stable financial system, A high degree of flexibility Macroeconomic stability A good model for forecasting inflation A good understanding of the mechanisms of transmission between monetary policy instruments and inflation Lack of budgetary pressure in the conduct of monetary policy (resort to

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<sup>1</sup>See in particular Masson et al. (1997), Schaechter and al. (2000), Mishkin (2000), Amato and Gerlach (2002), Carare and al. (2002), Siklos (2002), Siklos and Abel (2002), Khan (2003), Truman (2003), Jonas and Mishkin (2005), and Freedman and Laxton (2009b) To the adoption of inflation targeting. These conditions nevertheless appear essential for the conduct of an effective inflation targeting policy, especially for emerging economies.

seigniorage, inflationary tax ...).

Failure to meet these preconditions could pose major challenges for the countries which are targeting the implementation of an inflation targeting regime. Inflation-control targets provide a framework for more judicious economic decisions and longer-term economic performance, and enable central banks with autonomous status to take a more responsible stance.

The legal frameworks of most emerging inflation-targeting countries give the central bank autonomy in the choice of instruments and the possibility of making price stability its primary objective. In most inflation targeting frameworks, the target is announced by the Government or jointly by the Government and the central bank. Thus, while the Government can play an active role in setting monetary policy objectives, the central bank has discretion regarding the monetary actions it deems necessary to achieve the target, and is publicly its actions. In inflation-targeting countries, the adoption of inflation targeting has led to a monetary policy that is characterized by: maintaining price stability, monetary stability Mishkin (2004), explains the vulnerability of Emerging markets, by the relationship to currency substitution and dollarization of debt. The central bank is interested in the particular form of dollarization of the debt and the role played by the inflation targeting policy to limit the risks faced by emerging countries. And financial stability The ECB uses the following definition: "Financial stability is a situation where the financial system - including intermediaries, markets and market infrastructures - is able to withstand shocks, reducing the likelihood of Interruption of the financial intermediation process which would be sufficiently important to disrupt the optimal allocation of resources ".

## **2. Implementation in terms of inflation**

Despite the serious inflation problems experienced by developing countries, it was first believed that the pursuit of inflation targets was not appropriate for emerging market economies. The implementation of an inflation targeting regime in emerging countries was seen as a major challenge, requiring, inter alia, expertise in monetary policy, a well-functioning and well-functioning financial market and institutional infrastructure that seemed Absent in most of these economies. Other monetary regimes, such as the fixed exchange rate regime, were considered more appropriate. Over time, however, it appears that emerging economies could implement an inflation targeting regime because it would provide them with a clear nominal anchor and credibility that they lack.

Although inflation targeting is a relatively new framework and time series for evaluating its implementation are not very long, the available evidence suggests that countries that have adopted explicit inflation targets have been able to bring down inflation rates, Inflation to low levels in comparison with the years of pre-targeting.

The question of the performance of the application of inflation targeting leads us to deal with the performance of inflation targeting, mainly based on an analysis of inflation data. In order to provide answers to our practical study of our problem, the study focuses on fourteen emerging countries that practice the inflation targeting regime by studying inflation and economic growth using the equation:

$\pi_t = \text{GDP Déflateur} = (\text{Real GDP} / \text{Nominal GDP}) \times 100$  to evaluate the evolution of inflation  
 CPI: Consumer Price Index. Our data on the consumer price index based on data from the IMF.  
 The calculation is divided into three periods, a total period from 1990 to 2014, a second period from 1990 to the date of adoption of inflation targeting (inflation targeting pre-period), and finally a period from The date of adoption of inflation targeting to 2015 (the post-inflation targeting period).

**Table 1: Inflation data for emerging inflation-targeting countries**

	Total Period		Before IT		After IT	
	Average	Standard Deviation	Average	Standard Deviation	Average	Standard Deviation
South Africa	7.6	3.33	10.67	3.31	5.91	2.26
Brazil	269,87	621.16	739.42	839.09	5.77	1.55
Chile	6,75	5.87	10.20	7.32	4.03	2.10
Colombia	12.39	9	20.82	7.20	5.77	1.55
South Korea	3.98	2.26	5.47	2.60	2.81	0.94
Hungary	11.76	9.98	21.06	7.69	4.45	2.01
Israel	5.50	5.09	9.82	4.69	2.04	1.60
Mexico	11.11	9.89	19.59	9.61	4.44	0.81
Peru	322.50	1447.08	729.87	2167.89	2.33	1.18
Philippine	6.24	3.44	8.57	3.92	4.41	1.35
Poland	35.51	109.78	77.18	159.73	2.78	1.42
Czech republic	4.58	3.41	7.62	3.33	3.47	2.56
Thailand	4.08	2.03	4.87	2.10	3.46	1.82
Turkey	42.70	33.94	67.11	15.12	7.46	1.49
Average	56.31	168.62	114.18	230.97	4.29	1.62

**Source :** IFS, Author's calculation

This table shows that the level of inflation for emerging countries was very high before the period of inflation targeting (IT), such as 269.87% for Brazil, Turkey 67.11%. During the IT period, the average inflation of the emerging country sample was 114.18% during the pre-period and increased to 4.29% during the post-IT period. This decline in inflation, observed for emerging countries under the IT practice, was accompanied by a significant decline in volatility in all countries in the sample. The average volatility increased from 230.97 before the IT to 1.62 under the practice of the latter. The results seem to be encouraging, a significant change in the inflation dynamics between the two periods the pre-inflation targeting period and the post-inflation targeting period. We did not find any country that had a lower level of inflation and / or volatility than after the practice of inflation

targeting. The emerging countries had stable and weak inflation.

### 3. Achievement in economic growth

The aim is to provide answers to this question: does the adoption of inflation targeting improve economic performance in terms of the level and volatility of the rate of economic growth with a rate Low inflation. In other words, is inflation targeting leading to higher volatility of economic growth and low inflation volatility?

The study focuses on fourteen emerging countries that practice inflation targeting through the study of inflation and economic growth using the equation:

$Y_t = 100 \times (GDP_t / GDP_{t-1})$  to evaluate the evolution of economic growth. GDP: Gross Domestic Product. Our data on the Gross Domestic Product are extracted from IMF data.

**Table 2: Economic Growth for Emerging Inflation Targeting Countries**

	Total Period		Before IT		After IT	
	Average	Standard Deviation	Average	Standard Deviation	Average	Standard Deviation
South Africa	2.86	1.93	1.65	2.14	3.82	1.05
Brazil	3.44	2.56	1.93	7.90	4.62	1.49
Chile	5.14	3.49	4.31	5.60	6.20	1.39
Colombia	3.76	2.38	3.00	2.95	4.36	1.69
South Korea	5.28	3.48	4.04	4.48	6.87	1.77
Hungary	1.06	3.96	0.03	4.81	1.86	3.08
Israel	5.12	4.13	3.36	5.05	7.36	2.07
Mexico	3.23	3.35	2.88	3.54	3.86	3.29
Peru	4.52	3.99	3.23	4.91	5.54	1.09
Philippine	4.13	2.32	2.89	2.31	5.11	1.87
Poland	3.71	2.91	3.61	4.08	3.86	2.20
Czech republic	1.79	4.00	0.64	4.94	2.61	1.86
Thailand	4.46	4.62	3.84	6.22	5.24	1.54
Turkey	4.20	4.72	3.86	4.84	4.24	4.36
Average	3.83	3.36	2.80	4.06	4.37	2.18

**Source :** IFS, Author's calculation

From this table, we note that in all emerging countries, the volatility of economic growth has decreased. In addition, all emerging countries in this table experienced an a higher economic growth between the two periods: before the adoption of inflation targeting and after the adoption

of this regime. This suggests that inflation targeting is at the source of this economic performance. And for valid judgments and justification of this conclusion we make a comparison of the countries of which one adopting the inflation targeting and the other adopting another monetary policy.

**4. Inflation Targeting Performance:**

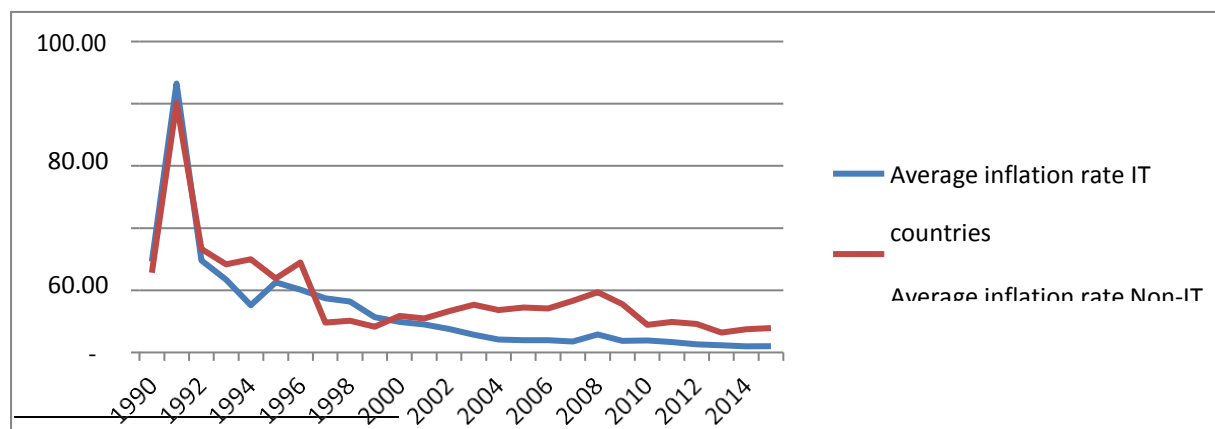
Although the establishment of explicit inflation targets by emerging market countries has been since the 1990s, it is possible to assess their impact, the number of emerging economies that do not yet apply Inflation targeting is large enough to serve as a comparison between countries, one of which adopts the inflation targeting regime and the other uses a different monetary policy.

In order to have two groups of countries that are relatively homogeneous, and for our sample of countries that do not adopt inflation targeting (control group), we rely on the selection criteria defined by Lin and Ye (2012)<sup>2</sup> with the choice of neighboring countries.

We compare some emerging IT countries with their neighboring countries. post-2000 period and very high average volatility, which clearly shows the role of this policy in the economic performance achieved during the post-targeting period.

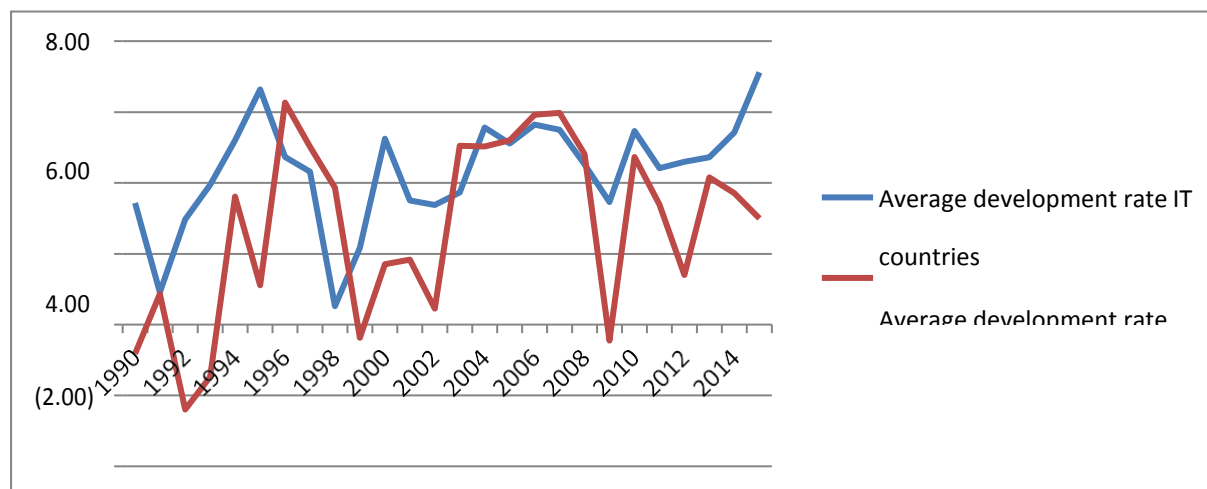
In this case, we see that the inflation targeting regime does not sacrifice the volatility of economic growth in favor of inflation. All the other cases come to the same conclusion that there is economic growth Stable and sustainable, and that inflation targeting does not sacrifice the volatility of economic growth in relation to the volatility of inflation and that both inflation volatility and economic growth have declined as a result of inflation, Adoption of inflation targeting and are lower than other volatilities observed in non-target countries.

Fig 1. Evolution of the average inflation in the IT countries versus non-IT countries period 1990-2015



<sup>2</sup>Lin and Ye (2012) include in the control group that countries with GDP per capita at least as high as the poorest target country and with populations at least as large as the least populous target country

Fig2. Evolution of the average of the economic growth in IT countries versus Non-IT period 1990-2015



Our results show and with the comparison, Ftiti and Goux JF (2011) and Ftiti et al (2016) on a sample of 12 developed and 12 emerging countries from 1960 to 2011 of countries that this monetary regime is favorable to a sustainable and non-volatile economic growth, with a stable and low level of inflation. Our results confirm those found by Ftiti. Similarly, inflation targeting does not lead to volatility in economic growth Higher in return for low inflation volatility.

### 5. Conclusion

Inflation targeting has been a monetary strategy adopted since 1990. Empirical studies have so far focused primarily on industrialized countries, as most countries have adopted inflation targeting at the beginning of the 1990s. They seem to indicate that this strategy has been accompanied by improved economic performance.

In this paper, we conducted an initial analysis of the experiences of a sample of emerging countries in inflation targeting. Through the evaluation, the first lessons were drawn from the implementation of such a monetary policy framework, which will serve as a basis for the case of candidate countries targeting inflation.

In countries that have switched to this strategy, it appears that the inflation rate has declined, that its variability has been lower and that inflation expectations have been lower. All this explains the attractiveness of this strategy on emerging countries whose credibility is more difficult to establish. Subsequently, the performance of the inflation targeting policy was judged on the basis of the stability effect of the macroeconomic environment and in particular the monetary policy environment.

The rate of inflation has decreased, its variability has been lower and inflation expectations have

been lower. This proves that this regime is conducive to economic growth. The comparison between countries in pairs shows that the inflation targeting country recognizes more macroeconomic performance. Our study shows that this monetary regime favors sustainable economic growth and that the inflation targeting country recognizes more macroeconomic performance than its non-targeting neighbor and that these differences are generally due to the choice of this new regime. This result confirms the stylized facts presented and the postulates developed in the literature, by Ftiti & Hichri (2014); Ayras et al (2014); Öztürk et al (2014), Ftiti et al (2016).

## References

- Aizenman, J., Hutchinson, M. and Noy, I. (2008). Inflation targeting and real exchange rates in emerging markets. *World Development* 39(5), 712-724.
- Amato, J.D. and Gerlach, S. (2002). Inflation targeting in emerging market and transition economies. *European Economic Review* 46(4-5), 781-790.
- Ayres, K., Belasen, A.R., Kutun, A.M. (2014). Does inflation targeting lower inflation and spur growth?. *Journal of Policy Modeling*, Volume 36, Issue 2, March–April, Pages 373-388.
- Carare, A. and Tchaidze, R. (2005). The use and abuse of Taylor rules: how precisely can we estimate them? IMF Working Papers 05/148, International Monetary Fund, Washington D.C.
- Ftiti, Z., Goux, J-F., Boukhatem, J. (2016). Ciblage d'inflation et performances macroéconomiques : nouvelle approche, nouvelle réponse. *L'Actualité Economique*, septembre.
- Ftiti Z and Hichri, W. (2014). The price stability under inflation targeting regime: An analysis with a new intermediate approach. *Economic Modelling*, Volume 38, February, Pages 23-32
- Ftiti Z and Goux J.F. (2011). Le ciblage d'inflation : un essai de comparaison internationale. Working paper GATE 2011-07. 2011.
- Freedman, C. and Laxton, D. (2009a). Why inflation targeting ? IMF Working Papers 09/86, International Monetary Fund, Washington D.C.
- Jonas, J. and Mishkin, F.S. (2005). Inflation targeting in transition economies: experiences and prospects, dans Bernanke B.S et M. Woodford (Eds.), *The Inflation Targeting Debate*. University of Chicago Press, Chicago.
- Khan, M. (2003). Current issues in the design and conduct of monetary policy. IMF Working Paper 03/56, International Monetary Fund, Washington D.C.
- Lin, S. et Ye, H. (2012). What to target? Inflation or exchange rate? *Southern Economic Journal* 78(4), 1202-1221.
- Masson, P., Savastano, M.A. and Sharma, S. (1997). The scope for inflation targeting in developing countries. IMF Working Papers 97/130. International Monetary Fund, Washington D.C.
- Mishkin, F.S. (2004a). Can inflation targeting work in emerging market countries? NBER Working Paper 10646, National Bureau of Economic Research, Cambridge.
- Mishkin, F.S. (2004b). Why the Federal Reserve should adopt inflation targeting. *International Finance* 7(1), 117-127.
- Mishkin, F.S. (2000). Inflation targeting in emerging-market countries. *American Economic Review* 90(2), 105-109.
- Ostry, J.D., Ghosh, A. and Chamon, M. (2012). Two targets, two instruments: monetary and

exchange rate policies in emerging market economies. IMF Staff Discussion Note 12/01, International Monetary Fund.

Öztürk,S., Sözdemir,A., Ülger, Ö.(2014). The Effects of Inflation Targeting Strategy on the Growing Performance of Developed and Developing Countries: Evaluation of Pre and Post Stages of Global Financial Crisis. Procedia - Social and Behavioral Sciences, Volume 109, 8 January, Pages 57-64

Schaechter, A., Stone, M. and Zelmer, M. (2000). Adopting inflation targeting: practical issues for emerging market countries. IMF Occasional Paper 202, International Monetary fund, Washington D.C.

Siklos, P.L. (2002). The Changing Face of Central Banking: Evolutionary Trends since World War II. Cambridge University Press.

Siklos, P.L. and Abel, I. (2002). Is Hungary ready for inflation targeting? Economic Systems 26(4), 309-333.

Truman, E.M. (2003). Inflation Targeting in the World Economy. Institute for International Economics. Washington D.