Analysis on Institutional Causes of the "Stabilizing Inflation Expectations" for the Inflation Targeting in Emerging Economies

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Abstract: The stability of inflation expectation is of great importance to the sound development of a country's economy, which has a positive effect on both "anti-inflation" and "anti-deflation". While the policy essence of Inflation targeting is to guide the stability of inflation expectations. However, few systematic analyses have been conducted to study the institutional causes of Inflation targeting. Taking emerging economies as the research object, this paper carry out the multi-dimensional analysis with the methods of comparative analysis. This paper argues that after the adoption of Inflation targeting in emerging economies, the emphasis on the target of "stabilizing prices" has been greatly enhanced, the independence and policy transparency of the Central Bank have been greatly improved, and the accountability mechanism of the Central Bank has been promoted. These factors will promote the credibility and effectiveness of policies, and then have a positive impact on enhancing the stability of inflation expectations.

1. Introduction

Inflation target system is a kind of monetary policy that began to rise in the 1990s, which have been adopted by nearly 40 countries up to now. From the perspective of its membership, emerging economies have become dominant: in terms of numbers, they accounts for more than twothirds; From the perspective of its development and changes, only Japan has been added to the industrial countries adopting the inflation targeting since the late 1990s, while the number of emerging economies has been increasing continuously.

What is worth mentioning is that none of the countries that adopt the inflation targeting has announced to abandon this policy system and seek another path so far, even after the dramatic changes in the world economic system that took place under the impact of the financial crisis in 2008 (of course, the specific strategies and methods of its policy operation have been adjusted). Before the financial crisis in 2008, inflation targeting was widely advocated by economists and policy makers around the world. Almost all relevant studies show that inflation targeting has a positive policy effect on promoting the sound development of a country's economy (e.g., Svenssion, 2010; Lin and Ye, 2009; etc.). According to the performance inflation targeting after the financial crisis, although the relevant research conclusions are different, many studies still claim that it has a positive effect on alleviating the impact of the crisis and promoting economic recovery (e.g., Dramane, 2019; Jose, 2018; Armand, 2013; etc.).

Then, what is the endogenous mechanism of its favorable policy effect? The advocates of inflation targeting believe that the essence of inflation targeting is to guide the stability of inflation expectations, which can provide a stable environment for sound economic development and thus bring great benefits to a country's economy (e.g., Hammon, 2012; Bernarde et al., 1999; etc.). For example, economic entities will make investment and consumption decisions based on a long-term and rational perspective to optimize the allocation of resources; for another example, it is conducive to maintaining the stability of medium and long-term interest rates and promoting the improvement of investment efficiency. Furthermore, in the period of inflation, the stability of inflation expectations makes inflation inertia decline, which is conducive to the control of inflation; on the contrary, in times of deflation and economic weakness, the stability of inflation expectations helps to improve the expectation of economic entities and avoid falling into the "expectation trap", that is, to create moderate inflation expectations to stimulate autonomous consumption and investment so as to promote economic recovery.

However, the "stabilizing inflation expectations" of inflation targeting will not come into effect naturally, which needs to be supported by corresponding institutional arrangements. Taking emerging economies as the research object, this paper analyzes the institutional reasons that lead to the stability of inflation expectations; and the relevant research documents on this issue are rare. The reasons for choosing the above countries as the research objects are as follows: for one thing, the emerging economies are the main members of the countries adopting inflation targeting; for another, they will have more reference value to China, which is also an emerging economy.

2. The Connotation of Inflation Targeting

Achieving the inflation target and stabilizing prices are being considered as the primary and long-term goal of the monetary authorities, therefore, which is actually more appropriate to call it "price targeting" for its "antiinflation" and "anti-deflation". In addition, it is flexible in the short term while pursuing the long-term goals. Focusing on changes in real variables such as output and unemployment, and making corresponding policy adjustments, are essentially a kind of "constrained discretion" paradigm (that is, in the medium and long term, the central bank is constrained by its inflation target, but in the short term, it has flexibility to cope with economic shocks).

It is generally believed that the main features of the inflation target system are as follows:1) Systemically stipulate "stable price" is the primary goal of monetary policy; 2) Publicly announce a clear, quantified inflation target and a timetable for achieving it; 3) Comprehensively considering a wide range of information to conduct "forward-looking" monetary policy operations; 4) Require the central bank to increase communication with the public and improve the transparency of the currency; 5) Form a strong accountability mechanism, that is, the central bank is responsible for achieving the inflation target .

3. The Analysis on Institutional Causes of the "Stabilizing Inflation xpectations" for the Inflation Targeting

This paper conducts a comparative analysis from multiple dimensions, such as "the importance of price stability, the independence of the central bank, the transparency of monetary policy, and the accountability mechanism of the central bank" to explore the institutional reasons for the increase in the stability of inflation expectations after adopting the inflation targeting in emerging economies.

3.1 A Comparative Study on the Importance of "Stabilizing Prices"

Unlike emerging economies, industrial countries generally generally attach greater importance to "stabilizing prices", even in non-inflation targeting countries. Although some countries have not made it clear that "stabilizing prices" is the primary goal of monetary policy or announced the target value of quantitative inflation, actually, in the practice of monetary policy, they still give greater importance to "stabilizing prices". For example, the Federal Reserve Act of the United States amended in November 2002 stipulates that the Federal Reserve authorities should aim at "maximum employment, stable price and moderate long-term interest rates". The legal provision proposes multiple objectives for monetary policy and does not highlight the priority to "stable price" in forms. But in fact, since the mid-1980s, the US Federal Reserve authorities have paid more attention to the "stability of price". The track of its policy practice proves that the Federal Reserve's monetary policy idea of "the pursuit of medium and long-term price stability can achieve the realization of other goals".

However, this situation is totally different in emerging economies. Due to historical inheritance, socio-economic structure and other reasons, emerging economies have always paid less attention to "stabilizing prices". The central banks of many countries have multiple targets for monetary policy goals such as "stabilizing prices", "promoting economic growth", "full employment" and "keeping balance of international payments", or even though some countries have legally stipulated the priority of "stabilizing prices", this is not the case in practice. However, once it announces the formal adoption of the inflation targeting, it means that the country will require the monetary policy objectives to converge from multiple objectives to the single objective of "stabilizing prices" at both the institutional and operational levels, thus the focus on "stabilizing prices" will be greatly increased.

3.2 The Comparison in the Independence of Central Banks

As mentioned above, most inflation targeting countries are emerging economies. Actually, before the beginning of this century, it was not rare to hold the "skepticism" that whether emerging economies were suitable for this monetary policy. For example, Masson et al. (1997) believe that it is impossible to achieve this monetary policy that aims to achieve a clear inflation target and considers "stable objects" as the medium and long-term priority of the central banks in emerging economies, due to the facts: 1) the fiscal deficit is huge, and government finances must rely on seigniorage revenue; 2) the inherent problems of emerging economies such as imperfect financial markets and fragile financial systems. For another example, Eichengreen (2002) pointed out that 1) the central banks of emerging economies have low independence and lack of policy credibility, 2) in order to reduce debt inflation (foreign currency debt) and reduce the impact of exchange rate fluctuations on domestic prices, emerging economies often pay more attention to exchange rate stability than price stability in policy practice; he therefore expressed strong doubts about whether inflation targeting would work in emerging economies.

In this regard, the inflation targeting countries in emerging economies are also fully aware that compared with the industrial countries, the "congenital" conditions of emerging economies adopting inflation targeting are poor and faced with much more difficulties. Therefore, they have made full efforts to promote various institutional and technical reforms and construction to improve the suitability and effectiveness of this monetary policy in emerging economies. Among them, working on improving the independence of the central bank is part of it. And the benefits of improving the independence of the central bank are as follows: it can improve the ability of the central bank to withstand political pressure; independent central banks are more likely to establish higher policy credibility, and alleviate the "policy time inconsistency problem", and thereby reducing inflation bias and stabilizing inflation expectations (e.g., Rogoff, 1985; Cukierman, 2008; etc.).

Table 1. Central Banks' Restrictions on the Government's Provision of Credit in Some Emerging Economies (1980s vs the end of 2006)

	1980s					Score	2006					Score
	1	**2**	**3**	**4**	**5**		**1**	**2**	**3**	**4**	**5**	
Israel	*					**1**	*		*	*	*	**4**
Korea			*			**1**	*	*	*		*	**4**
Thailand			*	*		**2**			*	*		**2**
Brazil						**0**	*	*	*	*	*	**5**
Chile	*					**1**	*	*	*	*	*	**5**
Columbia			*	*		**2**	*	*	*	*	*	**5**
Mexico	*					**1**	*	*	*	*	*	**5**
Peru	*		*	*		**3**	*	*	*	*	*	**5**
Philippine	*		*	*		**3**	*		*	*	*	**4**

a. Note: if it has such kind of restriction, marks with *, otherwise, marks nothing.

b.1, The central bank cannot provide automatic credit to the government;

2, The central bank provides credit to the government at market interest rates;

3, It is temporary for the central bank to provide credit to the government;

4, The central bank provides credit to the government with quantity restriction;

5, The central bank is prohibited participating in the primary market to purchase treasury bonds.

The measures taken by inflation targeting countries in emerging economies to improve the independence of central banks mainly focus on the following two aspects. On the one hand, they amend the Central Bank Law to increase the independence of the central bank from the legal level; on the other hand, they generally strengthen the restrictions on the central bank's credit to the government, which can enable the central bank to get rid of the influence of "fiscal domination", so that the independence of the central bank can be greatly improved in reality. As shown in table 1, compared with the 1980s, the central banks of these inflation targeting countries significantly increased their restrictions on the government's provision of credit in 2006, and their ability to get rid of "fiscal domination" and their independence were greatly improved.

So, how has the independence of central banks changed in these countries? Observation and analysis of the "Central Bank Independence Index" can answer the question. For example, Arnone et al. (2007) have indexed and compared the independence of central banks in nearly 100 economies around the world. This paper extracts and summarizes the central bank independence indexes of inflation targeting countries and some non-targeting countries in emerging economies showing in Table 2. Looking at Table 2, it is not difficult to find that compared with the end of 1980s, the independence index of inflation targeting countries increased significantly in 2003, with the average value rising significantly from 0.26 to 0.64; moreover, the increase rate was much higher than that of non-targeting countries in the same period (non targeting countries rose from 0.30 to 0.54). This suggests that inflation targeting can promote the independence of central banks in emerging economies[1]. As mentioned above, the improvement of central bank independence can enhance the stability of currency expectations.

Table 2. Central Bank Independence Index
(Targeting Countries Vs Non-Targeting Countries in Some Emerging Economies)

Targeting -countries (adoption period)	**The end of the 1980s**	**The end of 2003**	**Non-targeting countries**	**The end of the 1980s**	**The end of 2003**
Chile(1999)	0.18	0.69	**Argentina**	0.45	0.75
Israel(1997)	0.27	0.38	**Malaysia**	0.36	0.50
Peru (2002)	0.55	0.69	**Uruguay**	0.09	0.63
Mexico(2001)	0.36	0.69	**Egypt**	0.55	0.38
Columbia(1999)	0.27	0.50	**Nigeria**	—	0.44
Philippine(2002)	0.45	0.63	**Morocco**	0.18	0.50
South Africa(2000)	0.09	0.25	**Pakistan**	0.18	0.50
Poland(1998)	0.09	0.88	**Venezuela**	0.27	0.69
Brazil(1999)	0.09	0.63	**China**	0.32	0.56
Korea(1998)	0.20	0.56	**Russia**	—	0.44
Czech(1998)	—	0.88			
Hungary (2001)	0.36	0.94			
Average	**0.26**	**0.64**	**Average**	**0.30**	**0.54**

Source: the author edited according to the data of Arnone et al. (2007).

3.3 The Comparative Analysis of Monetary Policy Transparency

Apart from focusing on the improvement of the central bank's independence, emerging economies have devoted much more effort to improving policy transparency after adopting inflation targeting. In practice, central banks publicize a wide range of information including monetary policy decision-making and specific operations through various means and channels (such as the inflation report, official network, newspapers and magazines, special comment articles, speeches, reports, interviews, etc.) and actively engage in dialogue and exchanges with the public to improve policy transparency.

[1] The times when these countries adopted the inflation targeting were different. However, the comparison between 2003 and the late 1980s can still roughly reflect the changes in the ndependence of central banks before and after the adoption of the inflation targeting.

Dincer and Eichengreen (2007) made a comprehensive analysis and quantitative measurement on the changes of monetary policy transparency of about 100 global economies from 1998 to 2005 from four dimensions: political transparency, economic forecasting transparency, policy transparency and operational transparency. This paper extracts and summarizes the central bank independence index of inflation targeting countries and some non-targeting countries in emerging economies, as shown in Table3. Looking at Table 3, we find that: from 1998 to 2005, the transparency of monetary policy in inflation targeting countries increased greatly, but in the same period, the transparency of monetary policy in nontargeting countries increased only a little (China is an exception). This indicates that the monetary policy transparency of emerging economies has improved significantly under inflation targeting.

Theoretical research and practice have proved that the effect of enhancing the transparency of monetary policy lies in: 1) reducing the asymmetry of information and enhancing the public understanding of monetary policy; 2) improving policy credibility, 3) helping the central bank resist the influence of political pressure; 4) forming its own accountability and restraint mechanism and enhancing the sense of responsibility of the central bank. These undoubtedly have an important impact on improving the effectiveness of monetary policy and enhancing the stability of inflation expectations.

Table.3. Monetary Policy Transparency Index
(Targeting Countries Vs Non-Targeting Countries in Some Emerging Economies)

Targeting -countries (adoption period)	**The end of the 1980s**	**The end of 2003**	**Non-targeting countries**	**The end of the 1980s**	**The end of 2003**
Chile(1999)	7	7.5	**Argentina**	3	5.5
Israel(1997)	5.5	8.5	**Malaysia**	4	5
Peru (2002)	4.5	8	**Uruguay**	5	5
Mexico(2001)	4	5.5	**Egypt**	1	2
Columbia(1999)	2.5	6	**Nigeria**	3.5	4
Philippine(2002)	4	9	**Pakistan**	2.5	3.5
South Africa(2000)	3	8	**Tunisia**	2.5	4
Poland(1998)	3.5	9	**El Salvador**	2	3
Brazil(1999)	2	8	**China**	1	4.5
Korea(1998)	9	11.5	**Russia**	1.5	2.5
Czech(1998)	6.5	8.5	**Croatia**	1.5	2.5
Hungary (2001)	3	9.5			

Source: the author edited according to the data of Arnone et al. (2007).

3.4 Analysis of Accountability Mechanism

Compared with other types of monetary policy, inflation targeting reflects a stronger accountability mechanism. For example, when the inflation rate deviates greatly from the inflation target, some countries require the central bank governor to submit an open letter to the Minister of finance or issue a formal report to the public, stating the reasons for the deviation, the central bank's response strategies, and how long it is expected to return to the target value; some other countries require central bank governors to be quest from questioned by members of relevant committees at Parliament to explain in detail the reasons for deviating from the target and the coping strategies.

More importantly, it is the substantial increase in monetary policy transparency under inflation targeting that has actually formed a powerful self-restraint and accountability mechanism for the central bank. The improvement of policy transparency makes the public to fully understand the operation of monetary policy, the central bank's policy intention and efforts to achieve its objectives, and helps the public to conduct external supervision and policy evaluation of the central bank, which will inevitably strengthen the central bank's sense of self responsibility, and then have a positive impact on promoting the credibility and effectiveness of policies and enhancing the stability of inflation expectations.

4. Conclusions

The essence of inflation targeting is to guide the stability of inflation expectations and bring great benefits to the good development of a country's economy. However, this function will not come into being naturally, which needs to be supported by corresponding institutional arrangements. Taking inflation targeting countries in emerging economies as the research object, this paper makes a multidimensional analysis of the institutional reasons for inflation targeting to stabilize inflation expectations with comparative analysis method. In this paper, it is considered that after the adoption of inflation targeting in emerging economies, the monetary policy objectives are required to converge from multiple objectives to the single objective of "stabilizing prices" at both institutional and operational levels, so the importance of "stabilizing prices" is greatly enhanced, and the public setting of quantitative inflation target value, which provides a clear "anchor" to guide the stability of inflation expectations. Meanwhile, the independence and transparency of the central bank under the inflation targeting have been greatly improved, and the accountability mechanism of the central bank has been strengthened, which will have a positive impact on promoting the credibility and effectiveness of policies, and enhancing the stability of inflation expectations.

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