Arestis and Sawyer's criticism on the New Consensus Macroeconomics: Some issues related to emerging countries[+]

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Abstract: The purpose of this chapter is to analyze Arestis and Sawyer' criticism on the New Consensus Macroeconomic (NCM) framework, and its monetary regime proposal, i.e. Inflation Targeting Regime (ITR), and to discuss some special features of the emerging economies that should be considered in any analysis related to economic policy in such economies. In particular we seek to address the following questions: What are the Arestis and Sawyer's criticism (and other Post Keynesian economists) on NCM? What are the specificities of the emerging economies that should be considered in any discussion related to macroeconomic policy? Is NCM style of economic policy suitable to emerging economies? We conclude that we should be careful in the adoption of NCM style of economic policy in emerging economies, as it can inhibit some necessary flexibility in the economic policy and at the same can constraint economic growth. Experiences of the 'big' emerging economies – the so-called BRIC – show that countries with better economic performance have not followed economic policies related to the NCM.

1. Introduction

As is well known, the New Consensus Macroeconomic (NCM) can be characterized as an extension of the New Keynesian Theory. The New Keynesian Theory was developed in the 1980s and aimed at presenting a theoretical framework to explain what the New Keynesians believe to be the essential aspect of the Keynes's *General Theory*: the existence of price and wage rigidities. For instance, according to Mankiw and Romer (1991, p.1), "[b]ecause wage and price rigidities are often viewed as central to Keynesian economics, much effort was aimed at showing how these rigidities arise from the microeconomics of wage and price setting"[1].

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[1] For more information on New Keynesian Theory, see Snowdon and Vane (2005, Chapter 7).

An inflation targeting regime (ITR) has been adopted by a significant number of countries since the beginning of the 1990s. ITR is a framework for monetary policy characterized by the public announcement of target ranges for the inflation rate (Bernanke *et al*, 1999). According to the ITR, central banks and policy makers, based on Taylor's recommendation (1993), have to conduct monetary policy to aim at keeping inflation under control.

The purpose of this chapter is to analyze Arestis and Sawyer' criticism on the NCM framework, and its monetary regime proposal, i.e. ITR, and to discuss some special features of the emerging economies that should be considered in any analysis related to economic policies. In particular we seek to address the following questions: What are the Arestis and Sawyer's criticism (and other Post Keynesian economists) on NCM? What are the specificities of the emerging economies that should be considered in any discussion related to macroeconomic policies alternatives? Is NCM style of economic policy suitable to emerging economies?

The chapter begins by addressing the NCM framework and the theoretical foundations of ITR. In doing so it focuses on the critical view of NCM and ITR in the light of Post Keynesian theory, such as Arestis and Sawyer (1998; 2004; 2005; 2006; 2008) and Davidson (1994; 2002). This is followed by an analysis of some special features of emerging economies that should be considered in the discussion related to adoption of ITR and other economic policy arrangement. A final section presents the main conclusions of the chapter.

2. The NCM and ITR: theoretical foundations and a critical view by Post Keynesians

2.1. The NCM model

The NCM is based on three main equations, namely: (i) IS curve – it represents the demand of the economy, in which the current output is determined by the gap between past and future output and the real interest rate; (ii) Phillips curve – it expresses the relation between current output and inflation rate; and (iii) monetary equation according to Taylor's rule (see

Taylor, 1993). Clarida *et al* (1999, p.1665 and p.1695) describes the NCM model as follows:

$$X_t = - \varphi [i_t - E_t\Pi_{t+1}] + E_tX_{t+1} + g_t \quad (1)$$

$$\Pi_t = \lambda X_t + \beta E_t\Pi_{t+1} + \mu_t \quad (2)$$

$$i^*_t = \alpha + \gamma_\Pi(\Pi_t - \Pi^*) + \gamma_X X_t \quad (3)$$

where X_t is the output gap, i_t is the nominal interest rate, Π_{t+1} is the period t + 1 inflation rate, Π_t is the inflation rate in period t, i^*_t is target interest rate, Π^* is the target inflation rate and g_t and μ_t are disturbances terms.

Equation 1 describes the IS curve (it relates the output gap inversely to the real interest rate), equation 2 is the Phillips curve that relates inflation positively to the output gap, and equation 3 is the interest rate rule for inflation targeting and nominal GDP targeting.

According to Arestis and Sawyer (2008), this model has a number of important characteristics:

(i) Equation (1), in a context of rigorous microeconomic foundations, such as rational expectations hypothesis and inter-temporal optimization, has two implications: first, implicitly, there is a full employment assumption; second, there is no consideration about uncertainty.

(ii) Equation (2) reflects the idea of central bank credibility, i.e. central bank independence. The authors argue that "the notion of the trade-off between inflation and unemployment has been used to argue the case for independence of central banks on the grounds that politicians are tempted to stimulate the economy to reduce unemployment without regard for the long-term inflationary consequences" (Arestis and Sawyer, 2008, p.278).

(iii) Equation (3) "endogenises the setting of interest rate by Central Bank" (Arestis and Sawyer, 2008, p.279). As a result, the interest rate is adjusted with the gap between inflation rate and the target inflation rate and in response to the output gap.

The approach it was briefly described above has a number of assumptions, the most important of which are:

(i) The level of unemployment fluctuates around a supply-side determined equilibrium rate of employment, namely the NAIRU (non-accelerating inflation rate of employment).

(ii) Effective demand does not affect the economic activity. Further, the level of employment and of economic activity is viewed as a supply-side phenomenon.

(iii) Fiscal policy is impotent to stimulate the economic activity, as well as it must be subordinated to monetary policy.

(iv) Monetary policy matters, especially because it controls the inflation rate.

2.2. Main aspects of ITR

After present the NCM model, we can now focus on the main theoretical and operational aspects of ITR. The theoretical aspects can be summarized as follows:

(i) ITR is a monetary policy framework whereby public announcement of inflation targets is undertaken along with explicit acknowledgement that price stability is monetary policy's primary long-term objective. The price stability goal may be accompanied by output stabilization so long as price stability is not violated. Such a monetary policy framework improves communication between the public, business and markets, and provides discipline, accountability, transparency and flexibility in monetary policy. The focus is on price stability, along with three objectives: credibility, flexibility, and legitimacy.

(ii) Monetary policy is taken as the main instrument of macroeconomic policy. Indeed, monetary policy is viewed as the most direct determinant of inflation, such that in the long run the inflation rate is the only macroeconomic variable that monetary policy can affect. Monetary policy cannot affect economic activity in the long run.

(iii) The objectives of the ITR framework are achieved through the principle of "constrained discretion". In other words, policy makers adjust the monetary policy in responding to economic shocks, financial disturbances, and other unforeseen developments. In this way, ITR serves as a nominal anchor for monetary policy.

(iv) Fiscal policy is no longer viewed as a powerful macroeconomic instrument. In addition, "monetary policy moves first and dominates, forcing fiscal policy to align with monetary policy" (Mishkin, 2000, p.4).

(v) Monetary policy cannot be operated by politicians, but by monetary authorities in the form of an independent central bank. In general, politicians have to face a monetary policy trade-off: a counter-cyclical monetary policy can expand the economic activity in the short run at the expense of increasing the inflation rate in the long run. In other words, there is a time-inconsistency problem.

(vi) The central bank must be independent. It implies that the policy objective of central bank is only price stability. In this way, a mechanism for openness, transparency, and accountability should be in place with respect to monetary policy formulation.

(vii) In the case of emerging countries, in which there is a transmission channel from exchange rate to inflation, exchange rate considerations are of crucial importance for ITR[2].

In terms of operational aspects, at least three can be addressed:

[2] An analysis on the transmission channel from exchange rate to inflation in Brazil can be observed in Arestis, Ferrari Filho and Paula (2009).

(i) ITR requires that the point target be specified and the period over which the target is expected should be achieved.

(ii) It is necessary to adopt a methodology that can provide information on future inflation, and to choose an adequate index price that reflects the prices of goods and services for current and future consumption.

(iii) Monetary authorities have to face a trade-off between reducing deviations of inflation from the target and preventing a high degree of output volatility.

To sum, the NCM has become associated with the following main features:

(i) Effective demand does not play an independent role in the long run level of economic activity. Further, Say's Law holds.

(ii) There is a temporary nominal price and wage rigidities. In this way, in the short run money is not neutral (i.e. monetary policy affects the real variables).

(iii) Economic agents are rational. In other words, agents are continuous optimizers subject to their constraints.

(iv) Inflation is a monetary phenomenon. For this reason, monetary policy has a specific goal: to keep inflation under control.

(v) Fiscal policy approximates to so-called "Ricardian equivalence"[3].

(vi) Independence of central bank.

(vii) The monetary policy is guided by ITR.

[3] For more information on "Ricardian equivalence" see, for instance, Barro (1974).

2.3. Arestis and Sawyer and the Post Keynesian criticism on the NCM and an 'alternative' economic policy

This section presents Post Keynesian criticism on the NCM framework presented in the previous section, and an alternative (Post) Keynesian economic policy to NCM[4]. The idea is to discuss some criticism related to the main issues of the NCM, such as: (i) the neutrality of money, at least in the long run; (ii) the use of monetary policy only to target inflation; (iii) rational expectations hypothesis; (iv) unemployment as a result of wage and prices rigidities; and (v) economic activity determined by supply-side. NCM states the ITR is the more appropriate institutional framework to assure price stability and to minimize output fluctuations as it can constrain the inflationary bias of monetary authorities (time-inconsistency problem), reducing the degree of freedom of central bank to produce inflation surprises, and at the same time gives some flexibility so that central bank can minimize output fluctuations around the long-run trend of output (Bernanke *et al*, 1999).

The monetary theory of the NCM is essentially different from Keynes' monetary theory in the sense that, contrarily to the NCM, money *never* is neutral. Why? Based on the axiom of money neutrality NCM assumes the existence of a natural rate of employment determined by real forces and, largely independent of monetary policy. For Keynes and (Post) Keynesians, due to the essential properties of money[5], fluctuations in effective demand occur because, when the future is uncertain, people decide to hold money – money is liquid *par excellence* – as a store of value at the expense of purchasing goods or taking decision of investment. In this way, Keynes' theory is, implicitly, a monetary theory in which money affects the production process of an economy moving through time. So, money is non-neutral in the short- and in the long-run, what means that there is no long-run equilibrium for the economy that is independent of monetary policy (Carvalho, 1992, p.38).

[4] According to Arestis and Sawyer (1998, p.181), Keynesian policies can be defined as follow: "policy implications arise from the perception of the role of aggregate demand in setting the level of economic activity and the lack of automatic forces leading a market economy to full employment". So, a laissez-faire market economy exhibits normally elements of instability and, importantly, does not create a level of aggregate demand consistent with full employment.

[5] For the essential properties of money in Keynes (1964) theory, see Chapter 17 of *The General Theory of Employment, Interest and Money*.

According to the NCM, monetary policy has a specific goal: to keep inflation under control. Inflation is largely the result of excess demand, that is, a situation where aggregate demand is higher than long-run equilibrium output determined by the supply side of the economy. In a (Post) Keynesian perspective, monetary policy cannot be neglected. For instance, as Carvalho (1992, p.212) argues, "[m]onetary policy … [has] … the role of accommodating transactional demands for money and of preventing changes in the state of liquidity preference from having an impact upon the prices of non-liquid assets". Monetary policy, once it can prevent changes in expectations and in the liquidity preference of the economic agents, affects consumption and firms' decision of investment. Monetary policy operated by the management of the interest rates can have significant impact on the level of economic activity. The management of interest rates can be used in order to influence the private agents' portfolio in favor of increases of production (using current productive capacity) and the acquisition of capital goods, as it can provoke a shift in the relative prices of different assets, from the more liquid to the more illiquid assets, that is leading changes in the portfolio decisions that can affect real variables of the economy (output and employment).

Further, for Keynes and Post Keynesians, inflation is not a monetary phenomenon. On the contrary, inflation (or deflation) occurs to due changes in flow-supply prices or forward prices of producible goods. In the Post Keynesian view, there are different causes of inflation, and consequently there as various types of inflation. More specifically, according to Davidson (1994, p.143), "[a]ny rise in the short-run flow-supply price of output is due to three possible causes: (1) diminishing returns, (2) increasing profit margins, and (3) increasing money wages (relative to productivity increments)". Inflation is mostly a symptom of a fight over the distribution of current income, among economic agents (workers and capitalists) of the same region, and/ interregionaly, and/or internationally, and also is the result of cost factors, such as prices of raw materials, specially oil (Arestis and Sawyer, 2005). Thus, price stabilization needs income policies, that require some degree of centralization and coordination.

In the real world, do economic agents form their expectations based on an ergodic stochastic process?[6] Davidson (2002) argues that the rational expectation hypothesis denies the risk-uncertainty developed by Keynes. Thus, the NCM reduces uncertainty to situation of risk, i.e. a certain future is postulated. Contrary to rational expectation hypothesis, Keynes argued that people form their expectation based on an 'uncertain knowledge'. In his words, "human decisions affecting the future, whether personal or political or economic, cannot depend on strict mathematical expectation, since the basis for making such calculations does not exist" (Keynes, 1964, p.162-163).

The NCM argues that due to temporary nominal wage and price rigidities, money is not neutral, and, consequently, unemployment occurs. The NCM model provides only an explanation of the lack of variability in price and wages, but do not explain unemployment equilibrium[7]. On the other hand, despite the fact, in Chapter 3 of *The General Theory of Employment, Interest and Money*, Keynes supposed, *only* to simplify his analysis related to the effective demand, that wages and prices are inflexible in the short run, this is neither a necessary nor a sufficient condition to explain Keynesian involuntary unemployment. The following passage shows that unemployment, in a Keynesian perspective, occurs even when wages and prices are flexible: "There is … no ground for the belief that a flexible wage policy is capable of maintaining a state of continuous full employment … The economic system cannot be made self-adjusting along [this line]" (Keynes, 1964, p.267).

Finally, Keynesian analysis recognizes that effective demand assumes a *central* position in the economic system. Employment levels and the utilization of productive capacity depend crucially on the determinants of aggregate demand, particularly the entrepreneurs' investment decisions. The basic idea of Keynes' principle of effective demand is that unemployment problem is always a liquidity problem. In this way, fiscal policy, for instance, instead of being considered impotent instrument (as in NCM), is indispensable to obtain long term employment stability. It is a powerful tool to stimulate aggregate demand, triggering a multiplier effect on private income. Keynes recommended public expenditure

[6] In an ergodic stochastic process the expected value of a probability distribution can be always estimated from past observation. See, for instance, Davidson (2002, Chapter 3).
[7] For unemployment models in a New Keynesian view, see, for instance, Mankiw and Romer (1991).

or investment rather than increasing consumption, because of its stronger multiplier effect (see also Arestis and Sawyer, 2004, Chapter 8).

Moreover, the NCM supposes that there is no obstacle to prevent the economy from achieving full employment in the long run. Arestis and Sawyer (2008, p.278), after analyzing the NCM model, argue "that at the aggregate level there is the equivalent of Say's Law: potential supply (of labor) leads to actual supply of labor, and the resulting income is fully spent". Alternatively, for Post Keynesians the economy cannot be understood without reference to the level of aggregate demand, that is important not only in the determination of the level of economic activity but also through its influence on the rate of investment (Arestis and Sawyer, 2005, p.956). Changes in the level of investment expenditures affect not only the level of aggregate demand through the investment multiplier, and hence the current level of employment, but also the equilibrium rate of unemployment, that is, the level of unemployment that which inflation is constant over time. Empirical evidences suggest that interest rate variations can have long-lasting effects over investment and the stock of capital, showing the long-run non-neutrality of monetary policy (Arestis and Sawyer, 2006, p.16). So, monetary authorities should be careful in using interest rate policy to face inflation pressures.

3. Some special features of emerging economies

In global financial markets, financial market prices – including exchange rate – have been excessively volatile. Capital markets in emerging countries are thinner and more segmented than in developed countries, subject to shocks unrelated to domestic macroeconomic conditions and contagion. Emerging economies tend to be relatively more vulnerable to the consequences of exchange rate fluctuations than are developed economies. Exchange rate volatility is higher in emerging countries than in developed ones as the former ones have small and less liquid foreign exchange markets that make such economies more vulnerable to one-way expectations and herd behavior. Indeed they face problems related to the 'asymmetric financial integration' as emerging market economies have much larger and

volatile capital flows compared to the size of their capital market and economies more generally (Greenville, 2000; Studart, 2002).

In particular, exchange rates can influence inflation ("exchange rate pass-through") through the prices of traded final goods and imported intermediate goods, and their impact on agent's inflation expectations. Ho and McCauley (2003, p.6) provide evidence that: (i) income is negatively and significantly correlated with pass-through as lower-income economies have a larger portion of traded goods in the consumption basket; (ii) "exchange rate pass-through has tended to be stronger in Latin America than in Asia even though Latin American are not necessarily more open than their Asian counterparts". The explanation for such difference is that countries with histories of high inflation – as it is the case of many Latin American countries - are more sensitive to exchange rate fluctuations, probably due to the existence of an inflationary memory (Eichengreen, 2002).

A lot of emerging economies had experiences with high inflation and consequent price stabilization plans, in general countries that were impacted by 1980s external debt, as it was the case of Latin American economies (Argentina, Brazil, Chile, Colombia, Mexico and Peru), or suffered problems related to transition to a market economy (Poland and Russia), while other economies did not have so intensive inflationary episodes, as typically was the case of the Asian emerging economies (Malaysia, South Korea, Thailand etc.). In both groups, countries that adopted ITR in most cases implemented it after currency crises.

The implications of these findings on emerging countries' ITR are clear and evident because of the risk that exchange rate volatility poses to emerging countries to pursuit their inflation targets. Indeed, Ho and McCauley (2003, p.22) report that of the 22 target misses by emerging countries in 1998-2002, 10 (45%) were associated with exchange rate moves of over 10% in the aggravating direction, i.e. six cases of *overshooting* related to large depreciations and four cases of *undershooting* to large appreciations. Alternatively, developed countries had only two of out of nine target misses related to large exchange rate moves.

After the liberalization of capital accounts, a general trend in the emerging countries since the end of the 1980s, the capacity of monetary policy to influence short term interest rates for domestic purposes and resist exchange rate movements simultaneously was somehow eroded. In this connection, Tobin (1978) stated that the main macroeconomic problem related to integrated financial markets is not the choice of the appropriate exchange rate regime but the excessive short-run capital mobility that reduces the autonomy of national governments to pursue domestic objectives with respect to employment, output and inflation: "the mobility of financial capital limits viable differences among national interest rates and thus severely restricts the ability of central banks and governments to pursue monetary and fiscal policies appropriate to their internal economies" (p.154).

Under these conditions, economic authorities have to face some policy dilemmas. One potential dilemma is that inflation and exchange rate developments can be such that they call for opposite monetary policy action – for instance, using monetary policy to counter adverse exchange rate movements may jeopardize the inflation target, although frequently emerging market inflation target have in practice responded with some flexibility to the various challenges posed by exchange rate fluctuations, using not only monetary policy (Ho and McCauley, 2003). Mohanty and Scatigna (2005) report that a number of emerging countries relied on interest rate interventions to stem exchange rate volatility. The solution of some dilemmas of economic policy in emerging economies could be 'solved' by the use of non-traditional tools of economic policy, such as credit controls and capital controls.

In general, interest rate policy when used for controlling aggregate demand for price stabilization purposes is less effective in emerging countries than in developed countries. There are two reasons for such a difference. Firstly, the credit channel transmission mechanism of monetary policy is less effective in emerging countries than in developed ones. The main reason is that the ratio of credit to private sector over GDP is higher in developed countries, what means that in the latter ones monetary policy is more effective to affect aggregate demand. Indeed, the ratio of credit to private sector over GDP during the nineties (on average) was 84% in developed countries, while it was only 28% in Latin America, 26% in Eastern Europe and Central Asia, 12% in Middle East and North Africa –

the only high standard in emerging countries was in East Asia and the Pacific, 72% (IADB 2005, p.5). Secondly, due to the low development of stock market in most emerging countries, consumption expenditure is not sensitive to the wealth effect, as it is in the US, so that interest rate has also low impact on consumption through this channel[8]. Consequently, monetary policy in some emerging country should be more tightened (interest rate should be higher) than in developed economies in order to affect aggregate demand; as a result, the sacrifice ratio of a deflation policy frequently is higher in emerging economies than in developed countries.

Some empirical studies as, for instance, Sarel (1996), show the existence of a minimum inflation rate below which growth rate is reduced. The reason for that is the nominal wage rigidity that prevails in labor markets. According to Tobin (1972) when there is downward nominal wage rigidity, inflation can help grease the wheels of labor market adjustment by facilitating relative wage and price adjustment in sectors with unemployment of labor force. So, a positive, although not so high rate of inflation, is necessary for robust economic growth. Padilha (2007), using a sample of 55 developed and under-developed countries in the period 1990-2004, replicated the methodology used by Sarel (1996) for a larger time span and showed that for emerging countries the minimum rate of inflation is 5.1% per year and for the developed countries is about 2.1% per year. The difference between the minimum level of inflation in emerging and developed countries is due to the fact that a higher rate of output growth in the former generates a higher rate of increase of prices of non-tradable goods relative to the observed in developed countries. This means that for emerging countries to have the same rate of inflation as developed countries, the rate of increase of prices of tradable goods have to be higher in the latter. This requires a nominal exchange rate appreciation of emerging countries currency relative to developed countries currency, what can be done only by means of a tight monetary policy with harmful effects over investment and growth. Based on this reasoning we can state that the catching-up of

[8] According to IADB (2005, p.5), the ratio "credit and market capitalization over GDP" during the nineties was 149% in developed countries, 48% in Latin America, 38% in Eastern Europe and Central Asia, 80% in Middle East and North Africa – and again the only exception in emerging countries was East Asia and the Pacific, 150%.

emerging countries to developed countries demands, amongst other reasons, different target levels of inflation (Oreiro *et al*, 2009).

Finally, we should note that emerging economies in general are more vulnerable to external shocks than developed economies. The empirical studies show that the impact of external shocks on domestic inflation is more intensive in emerging economies than in developed ones. Mohanty and Klau (2001), analyzing the experience of 14 emerging countries during the 1980s and 1990s, found that external supply shocks, in special food and energy prices, are important determinants of domestic inflation. Primary products have an important participation in the household's consumption in emerging countries due to the patterns of consumption associated with relatively low incomes. Such prices are particularly volatile to climate and eventually geopolitics factors.

We can extract three lessons from our discussion. The first one is related to the fact that emerging countries in general are more vulnerable to external shocks than developed countries. As a result, such economies are more prone to face issues related to cost-push inflation, such as due to exchange rate devaluation. The second lesson is that exchange rate considerations can be expected to play a more prominent role in emerging countries, considering the important influence of the exchange rate on domestic inflation in these countries. Consequently, exchange rate movements pose some essential challenges to emerging economies' monetary authorities. On this regard, Goldstein (2002) suggests the adoption of a mixing of economic policies in what he denominated 'managed floating plus', in which the exchange rate variation would be managed in order to be compatible with the inflation targets. Ferrari-Filho and Paula (2008), on the other hand, suggest that a managed floating exchange rate regime and imperfect capital mobility (capital controls) are more appropriate to emerging countries, because they make possible the adoption of counter-cyclical economic policies, fiscal and monetary, necessary to permit macroeconomic stabilization. Some sort of managed floating exchange rates regime can be useful if the objective of the central bank is to reduce the exchange rate volatility and also influence somehow the real exchange rate for international trade purposes. Central bank intervenes in foreign exchange markets to achieve a variety of macroeconomic objectives, such as

controlling inflation, maintaining external competitiveness and/or maintaining financial stability. Thirdly, as we have seen a positive but somehow low inflation can help economic growth and reduce unemployment as it works as mechanism of accommodation of the real disequilibria in the economy, due to supply shocks, negotiation of labor contracts, etc. This can ask for a more flexible arrangement of macroeconomic policy in case of emerging economies, if the objective is not have low inflation and price stabilization at any cost – that is, at costs of having a lower economic growth. ITR is not the only economic policy framework for price stabilization purposes, as some emerging economies experiences show – for instance, China and India – , in which economic policy have other purposes, such as exchange rate stability.

Paula (2008) comparing economic policies in the BRIC countries (Brazil, Russia, India and China) show that China, India and Russia, managing their exchange rate regimes with a restrictive capital account convertibility and marking using of a more discretionary economic policy, have been, in more or less degree, succeed cases of management of macroeconomic policy – in which the stability of exchange rate has a crucial role – that seek to create a stability environment for economic growth. Economic policies in such countries aims at the preservation of a competitive and stable real exchange rate used as an intermediate target of macroeconomic policies oriented to employment and growth objectives. In particular China and India's cases show how is correct to implement a gradual and careful management of capital account and policies oriented towards the reduction of external vulnerability. Russia is an interesting case, as the economy until 1998 performed very bad, as a result of a chaotic transition process of liberalization to a market economy; after the 1998 crisis the economy has performed very well, due to both the increase in the exports (as a result of the rise of oil prices) and the better management of macroeconomic policy, that has combined more stable exchange rate and decreasing interest rates. However, due to the country's dependence on oil and gas exports, Russia has suffered a lot with the world recession that followed 2008 financial crisis. Brazil, on the other hand, has adopted a more liberal and orthodox economic policy more in accordance to NCM, that includes a less interventionist approach related to exchange rate policy, a very open capital account and since 1999 the operation of an inflation targeting regime, that has

resulted higher exchange rate volatility, higher interest rates, and a more poor economic performance compared to the other BRIC countries, mainly in the case of China and India[9]. Table 1 shows a comparative synthesis of the analysis of the macroeconomic policy of each BRIC country.

Table 1. Exchange rate regime and monetary policy framework of BRICs countries from 1999 to 2008

Country	Exchange rate regime	Monetary policy framework	Indicator of exchange rate	Capital account convertibility	Exchange rate volatility
Brazil	Floating, with dirty floating	Inflation targeting	Nominal bilateral	High	High
China	Semi-fixed	Pegged exchange rate	Real effective	Partial, with many restrictions	Very low
India	Managed floating	Multiple indicators	Nominal bilateral and real effective	Partial, with many restrictions	Very low
Russia	Managed floating	Multiple indicators	Nominal bilateral	Partial, with some restrictions	Low

Source: Authors' elaboration based on Mohanty and Scatigna (2005) and Paula (2008).

4. Conclusion

This chapter presented some critical issues related to NCM and ITR based on the Post Keynesian theory. Further, it compared the experience of emerging countries have adopted this economic policy framework (NCM and ITR) and with other emerging countries have implemented an alternative economic policy. The implications that emerge from this analysis are clear. One should be careful in the adoption of NCM style of economic policy in emerging economies, as it can inhibit some necessary flexibility in the economic policy

[9] Looking at the GDP growth performance of the BRIC countries, since 1990, one can see that GDP growth has differed among the countries: average GDP growth on average in China in 1990-2007 was 10.0%, in India 6.4%, Brazil 2.5% and Russia 2.0%. If we compare the BRIC countries only in the recent period (1999-2007), that is after the Russian crisis and after Brazil's implementation of a ITR, the economic performance changes somehow: 9.7% in China, 7.1% in India, 7.0% in Russia and 3.1% in Brazil. The average inflation (consumption price index) in 1999-2007 was: 7.3% in Brazil, 22.2% in Russia, 4.5% in India, and 1.3% in China (IMF, 2009).

and at the same can constraint economic growth. Experiences of the 'big' emerging economies – the so-called BRIC – show that countries with better economic performance (China and India) have not followed economic policies related to the NCM. Such countries have adopted a gradual path of economic liberalization and have sought to implement a more autonomous economic policy. More importantly, they have defined economic policies as part of their own project of national development.

References

Arestis, P.; Sawyer, M. (1998). "Keynesian economic policies for the new millennium". *The Economic Journal*, 108, pp. 181-195.

_____. (2004). *Re-examining Monetary and Fiscal Policy for the 21st Century*. Cheltenham: Edward Elgar.

_____. (2005). "Aggregate demand, conflict and capacity in the inflationary process". *Cambridge Journal of Economics*, 29: 959-974.

_____. (2006). "Interest rates and the real economy". *In*: C. Gnos, and L.P. Rochon (eds.). *Post Keynesian Principles of Economic Policy*. Aldershot: Edward Elgar.

_____. (2008). "The New Consensus Macroeconomics: an unreliable guide for policy". *Revista Análise Econômica*, 26(50): 275-295.

Arestis, P.; Ferrari Filho, F.; Paula, L.F. (2009). "A nova política monetária: uma análise do regime de metas de inflação no Brasil". *Economia e Sociedade*, 18(1):1-30.

Barro, R. J. (1974). "Are governments' bonds net wealth?". *Journal of Political Economy*, 81: 1095-1117.

Bernenke, B.; Laubach, T.; Mishkin, F.; Posen, A. (1999). *Inflation Targeting: lessons from the international experience*. Princeton: Princeton University Press.

Carvalho, F.C. (1992). *Mr.Keynes and the Post Keynesians: principles of macroeconomics for a monetary production theory*. Aldershot: Edward Elgar.

Clarida, R.; Galí, J.; Gertler, M. (1999). "The science of monetary policy: a new Keynesian perspective". *Journal of economic Literature*, v.XXXVII:1661-1707.

Davidson, P. (1994). *Post Keynesian Macroeconomic Theory: a foundation for successful economic policies for the twenty-first century*. Aldershot: Edward Elgar.

Davidson, P. (2002). *Financial Markets, Money and the Real World*. Cheltenham: Edward Elgar.

Einchengreen, B. (2002). "Can emerging markets float? Should they inflation target?" *Central Bank of Brazil Working Papers Series*, No. 36.

Ferrari-Filho, F.; Paula, L.F. (2008). "Exchange rate regime proposal for emerging countries: a Keynesian perspective". *Journal of Post Keynesian Economics*, 31: 227-248.

Goldstein, M. (2002). "Managed floating plus". *Policy Analysis in International. Economics,* No. 66. Washington: Institute for International Economics.

Grenville, S. (2000). "Exchange rate regime for emerging countries". *Reserve Bank of Australia Bulletin.* Sidney: Reserve Bank of Australia, November.

Ho, C.; McCauley, R. (2003). "Living with flexible exchange rates: issues and recent experience in inflation targeting emerging market economies". *BIS Working Paper*, No. 130.

IADB – Inter-American Development Bank (2005). *Unlocking Credit: The Quest for Deep and Stable Bank Lending*. Washington: Inter-American Development Bank.

IMF – International Monetary Fund (2009). *International Financial Statistics*. Washington: IMF.

Keynes, J.M. (1964). *The General Theory of Employment, Interest and Money*. New York: HBJ Book.

Mankiw, N,G.; Romer, D. (1991) (eds). *New Keynesian Economics*. Cambridge: MIT.

Mishkin, F.S. (2000). "What should central banks do?". *Federal Reserve Bank of St.Louis Review*, 82(6): 1-13.

Mohanty, M.; Klau, M. (2001). "What determines inflation in emerging market economies?" *BIS Papers*, No. 8.

Mohanty, M.; Scatigna, M. (2005). "Has globalization reduced monetary policy independence?" *BIS Papers*, No. 23.

Oreiro, J.L.; Paula, L.F.; Squeff, G. (2009). "Flexibilização do regime de metas de inflação em países emergentes: uma abordagem pós-keynesiana". *In*: J.L. Oreiro, J.L.; L.F. Paula, L.F.; R. Sobreira (ed). *Política Monetária, Bancos Centrais e Metas de Inflação*. Rio de Janeiro: Editora FGV.

Padilha, R. (2007). *Metas de Inflação: experiência e questões para os países em desenvolvimento.* Master Dissertation. Curitiba: Federal University of Paraná.

Paula, L.F. (2008). "Financial liberalization, exchange rate regime and economic performance in the BRICs countries". *In* P. Arestis, and Paula, L.F. (eds.). *Financial Liberalization and Economic Performance in Emerging Countries*. Basingstoke: Palgrave Macmillan.

Sarel, M. (1996). "Nonlinear effects of inflation on economic growth". *IMF Staff Papers* 43: 199–215.

Snowdon, B.; Vane, H.R. (2005). *Modern Macroeconomics: its origins, development and current state*. Cheltenham: Edward Elgar.

Studart, R. (2002). "Financial integration, instability and macroeconomic performance in the 1990s". In R. Fendt, and M.A.T. Lins (ed.). *Uneven Architecture*. Rio de Janeiro: Konrad Adenauer Foundation.

Taylor, J. (1993). “Discretion versus policy rules in practice”. *Carnigie-Rochester Conference Series on Public Policy*, 39:.195-214.

Tobin, J. (1972). “Inflation and unemployment”. *American Economic Review*, 62: 1-18.

_____. (1978). “A proposal for international monetary reform”. *Eastern Economic Journal*, 4: 153-9.