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Inflation Targeting and Growth: The Role of the Tradable Sector

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Abstract
This paper provides an analytical explanation to the empirical association between monetary policy conducted according to the inflation targeting (IT) framework and the appreciation of the exchange rate, relating it to the literature on the effects of the exchange rate on growth. A two sector small open economy model is developed in which the behavior of the non tradable inflation and the nominal exchange rate are analyzed. The results indicate that the response to inflation variance under the IT regime causes the appreciation trend. Since this trend is not reversed immediately, increasing returns in the tradable sector affect capital accumulation.

Keywords
Monetary policy, Inflation Targeting, developing economies, increasing returns, two sector economies

Cover Page Footnote
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I. Introduction

In recent times, an increasing number of developing countries have adopted inflation targeting as their monetary regime with the objective of "locking in" the gains of the disinflation processes that took place in the nineties. Recent empirical studies on the effects of the operation of this monetary regime in several emerging countries have identified that it has been associated with an appreciation tendency of the national currencies (Barbosa-Filho, 2008; Galindo and Ros, 2008; Loría and Ramírez, 2011).

Another topic that has attracted an important amount of interest in the economic literature is the relationship between the level of real exchange rates and economic growth. A large amount of empirical research supports the existence of a positive relationship between the level of the exchange rate (a higher level implies a more depreciated exchange rate) and the rate of growth of an economy, where the causality goes from the exchange rate to the rate of growth (Bhalla, 2008; Eichengreen, 2008; Frenkel and Ros, 2006; Gala, 2008; Levy-Yeyati and Sturzenegger, 2007; and Rodrik, 2008).

The purpose of this paper is to build an analytical model that explains the links between the monetary regime and the real exchange rate appreciation and thus over the economic growth of a developing country. Although there is an increasing number of theoretical models concerned with the effects of the real exchange rate on growth (see for example Rapetti, 2011; Rapetti, Razmi and Skott 2009; Rodrik, 2008; Ros, 2012; and Ros and Skott, 1998), to my knowledge none of them considers the case for a monetary policy conducted according the principles of inflation targeting. At the same time, the literature concerned with the operation of inflation targeting in small open economies is only concerned with the short run effects of this monetary regime (see Leitemo and Roisland, 2002; Oisten and Torvik, 2004; and Svensson, 2000.).

The model developed here seeks to fill this gap. For that reason, a medium run macroeconomic model is developed in which non-tradable inflation and unemployment are determined in the context of a monetary policy conducted under the inflation targeting regime specified as a Taylor rule in a small open economy with two sectors. The key insight is that the design of the inflation targeting regime entails a type of exchange rate dynamics that can hurt growth.

The rest of the paper goes as follows: the next section reviews the theoretical explanations given to the relationship between the real exchange rate level and economic growth, stressing the conduits through which monetary policy

can affect growth. In the third section, the model set up is presented, establishing both the equations for the short and for the medium run. After that, the solution of the model is presented, showing the short run unemployment equilibrium and how this interacts with the inflation targeting operation of the monetary policy to determine the inflation equilibrium, making explicit the effects that it has on the profitability of the tradable sector and thus over capital accumulation. Finally, some conclusions are presented.

II. The exchange rate, growth and monetary policy: the role of increasing returns.

The relationship between economic growth and the real exchange rate (RER) is a topic that has received a great amount of attention in the empirical literature in recent times. The constant result of the papers is to find a positive relationship between the level of the RER and the rate of economic growth, where the causality goes from the depreciated exchange rate to the rate of economic growth (Bhalla, 2008; Eichengreen, 2008; Levy-Yeyati and Sturzenegger, 2007; and Rodrik, 2008).

This empirical regularity has been modeled in different ways. On one hand, there are several models that start from the assumption of a one sector small open economy in which the investment function depends on the expected profits. These are at the same time a function of the real wages in the economy which are affected by the pass through effect of the exchange rate on prices. Thus, depreciation diminishes the real wage and increases the profits, increasing capital accumulation and growth (Cordero, 2008; Gala, 2008; and Ros, 2012 use models of this type).

The other approach to model the effects of the exchange rate level on growth is through a model of a two sector small open economy in which the production in the tradable sector has increasing returns to scale and production in the non-tradable sector has decreasing returns to scale. The profitability of the tradable sector depends on the product wage, which, at the same time, depends on the exchange rate, the nominal wage and the international price of the good it produces. In this case, the allocation of the investment depends on how profitable the tradable sector is compared to the profit rate of investments abroad or to the non-tradable sector (Frenkel and Ros (2006), Rapetti, 2011; Rappeti, Razmi and Skott (2009), Rodrik (2008); and Ros and Skott, (1998) develop models on these lines).

Since in the short and medium term the real exchange rate is deeply influenced by the level of the nominal exchange rate, it becomes relevant to ask if the monetary framework in which the nominal exchange rate is determined affects the rate of growth of the economy. This question takes more relevance in the light of the appreciations that have been observed as a side effect of the instrumentation of inflation targeting (Galindo and Ros, 2008; Loría and Ramírez, 2011: and Barbosa-Filho, 2008).

The existing literature concerned with the operation of inflation targeting in a small open economy of two sectors does not analyze the long run effects of this regime, but it throws some light on the problem (Holden, 2003; Leitemo and Roisland, 2002; Oisten and Torvik 2004). A common result is that an important part of the control of inflation is achieved through the appreciation of the national currency that results from the movements of the interest rate. Also, this type of models identify that an inflation targeting regime can have larger destabilizing effects on the product of the tradable sector than on the non-tradable sector.

These short term results can have an impact over the long run development of the economy if there is some element, such as increasing returns to scale, that produces path dependency on the process of capital accumulation (Arestis and Sawyer, 2009). The empirical evidence provided by Levy-Yeyati and Sturzenegger (2007), which shows that the effect of the depreciated exchange rate on growth takes place through the profit rate of the tradable sector, in conjunction with the one provided by Rodrik (2008), allows to think that increasing returns to scale exist in the tradable sector, making the models with two sectors more compelling to explain the relationship between growth and the exchange rate. Also, it implies that short run effects can become long run effects since there is a mechanism that generates path dependency in developing economies. As Krugman (1987) and Ros and Skott (1998) show, the presence of increasing returns to scale allows the monetary policy to have long run effects due to the movements of the nominal exchange rate that it causes, which translate into real exchange rate movements. In line with this reasoning, the need to provide an analytical model that explains the interactions between the inflation targeting regime and capital accumulation in an economy with increasing returns becomes clearer. To my knowledge this has not been done so far, and that task is taken in the following section.

III. The model

The modeled economy is a two sector small open economy. Although the model recovers some aspects from Ros and Skott (1998), Rapetti, (2011) and Rodseth (2000), it diverges in several key aspects. First, it depicts the operation of an inflation targeting regime in a two sector economy and the effects that it has over real variables such as the real exchange rate. Related to this, the model assumes a floating exchange rate instead of a fixed exchange rate regime as Rapetti (2011), Rodseth (2000) and Ros and Skott (1998) do. Also, since the long run dynamics of prices and wages are derived from the stabilization under a strict version of inflation targeting –and capital accumulation is a function of these variables– the model allows to examine the effects of this monetary regime on capital accumulation and growth.

The model consists of a set of equations that describe the operation of the economy in the short run and another from which the dynamics of the profitability in the tradable sector are explained. The two sectors of the economy are a tradable and a non-tradable sector. Perfect international capital mobility is assumed, implying that the uncovered interest rate parity holds.

As in Ros and Skott (1998) and Rapetti (2011), there are several key assumptions regarding the characteristics of each sector. In the case of the tradable sector, it is assumed that it uses both capital and labor in its production process. Specifically, it is assumed that the production function in this sector exhibits increasing returns to scale due to the incorporation of new technologies to the production process through the incorporation of new capital goods. This can be justified on two grounds. First, since the model is based on a developing economy, it is possible to assume that the technological modernization of the economy is achieved through the incorporation of capital goods in which the new knowledge produced at the technological frontier is already embedded. Second, it is possible to assume that this occurs in the tradable sector because this sector is confronted with international competition, forcing it to adopt the newest technologies. In the case of the non-tradable sector, it is assumed that it only uses labor in the production process, and that it exhibits a constant average productivity in order to capture the informality and low capitalization of the non-tradable sector of most developing countries.

For simplicity, we assume that the labor force is constant and that only capital accumulation (which in this case also accounts for technical progress in the case of the tradable sector) determines economic growth. This implies that the growth of the economy will depend on how much capital is invested in the tradable sector.

These conditions are expressed in the following equations:

$$Y_T = A(K^{\mu})K^{\varepsilon}L_T^{1-\varepsilon} \quad \epsilon + \mu < 1 \quad (1)$$

$$Y_N = QL_N \quad (2)$$

where Y_i is the output in each sector, K^{μ} accounts for the external effects of the average capital stock (accounting for increasing returns to scale K is capital and L_i is the labor force employed in each sector. T accounts for the tradable sector and N for the non-tradable sector. Q is the constant average productivity in the non-tradable sector. The restriction $\alpha + \mu < 1$ implies the existence of decreasing marginal returns to capital in the tradable sector. The tradable sector produces a good that can be used either for consumption or for investment while the non-tradable sector only produces consumption goods. Assuming profit maximization under conditions of perfect competition in the tradable sector, it is possible to obtain its demand for labor:

$$L_T = (1-\varepsilon)^{1/\varepsilon}A^{1/\varepsilon}K^{(\varepsilon+\mu)/\varepsilon}\left(\frac{p_T}{w}\right)^{1/\varepsilon} \quad (3)$$

Since we want to model a small developing economy we assume the existence of open unemployment (U), such that the total labor force is

$$L = L_N + L_T + U \quad (4)$$

Regarding the accumulation of capital we assume, as Ros and Skott (1998) and Rapetti (2011), that it depends on the gap between the internal profitability of investing in the tradable sector and the profitability of investing in a foreign market. Hence:

$$\widehat{K} = G(r - r^*) \quad (5)$$

$$r = \varepsilon(1-\varepsilon)^{(1-\varepsilon)/\varepsilon}A^{1/\varepsilon}K^{\mu/\varepsilon}\left(\frac{p_T}{w}\right)^{(1-\varepsilon)/\varepsilon} \quad (6)$$

Where $\hat{K}$ is the rate of capital accumulation, r is the rate of profit of investing in the tradable sector (derived from 1 and 3) and r^* is the profit rate of investing abroad (which is given). The real exchange rate is defined as:

$$q = \frac{p_T}{p_N} \quad (7)$$

Regarding the price of the tradable goods, it is assumed it depends on the international price of the goods and the exchange rate of the country.

$$p_T = p_i e \quad (8)$$

where p_i is the international price of the good and e is the nominal exchange rate defined as local currency units per foreign currency unit. The international price of the good is given. The exchange rate is determined by the uncovered interest rate parity condition:

$$e = \frac{e^E}{i - i^* + 1} \quad (9)$$

where e^E is the expected value of the exchange rate (and it is assumed to be consistent with the inflation target). i is the internal nominal interest rate and i^* is the foreign interest rate, which is given outside the model.

The interest rate is operated by the central bank following a strict inflation targeting framework. The interest rate (i) is determined through a simple Taylor rule of the type:

$$i_t = i_{t-1} + \beta(\pi - \pi^*) \quad (10)$$

where π^* is the CPI inflation target, i_{t-1} is the level of the interest rate in the past period (which is given), and π is the CPI current inflation rate.

The CPI is the weighted sum of both the price of non-tradable goods and the price of tradable goods. The weight assigned to each kind of goods comes from the utility maximization of a Cobb-Douglas function. Thus:

$$\frac{C_T}{C_N} = \frac{(1-\alpha)p_T}{\alpha p_N} \quad (11)$$

So the CPI price level is given by:

$$p = p_N^{1-\alpha} p_T^{\alpha} \quad (12)$$

thus the CPI inflation can be approximated by

$$\pi = \alpha(\pi_T) + (1 - \alpha)\pi_N \quad (13)$$

where $0<\alpha<1$ and represents the weight assigned by the consumers to each type good. The tradable goods inflation can be approximated by

$$\pi_T = \pi_i + \dot{e} \quad (14)$$

where π_i is the international inflation rate, which is given, and $\dot{e}$ is the variation of the exchange rate.

Since the tradable sector is price taker in the international market, it can sell as much as it wants at the international price. Hence, its production is not restricted by demand even when there are sticky prices in the economy. However, the price stickiness causes the production in the non-tradable sector to be demand determined in the short run.

From which

$$p_N C_N = (1-\alpha)C \quad (15)$$

where C_N is the demand for non-tradable goods and C is total consumption in the economy.

$$C = w(L_T + L_N) + (1-s)P \quad (16)$$

Assuming that there are no savings out of wages. P represents the profits of the tradable sector and are given by:

$$P = \left(\frac{\varepsilon}{1-\varepsilon}\right) wL_T \quad (17)$$

s represents the savings rate out of profits, which is assumed dependent on the interest rate.

$$s = hi \,,\, s' > 0 \quad (18)$$

Following Rodseth (2000), it is assumed that the nominal wage is determined through a bargain process between workers and firms. The workers negotiate a nominal wage that corresponds to a target real wage (W_B), being the later a function of the level of unemployment (U) in the economy.

$$W_B = \frac{1}{zU} \text{ (19)}$$

This allows the nominal wage level to be determined at any point in time while its dynamics are given by:

$$\dot{w} = \pi^E + \sigma(\frac{W_B - W}{W}), 0 < \sigma < 1 \text{ (20)}$$

where π^E is the expected CPI inflation and $(W_B\text{-}W)/W$ is the gap between the target real wage and the current real wage. Since the productivity in the non-tradable sector is constant, then its price will be equal to the average costs:

$$p_N = \frac{w}{Q} \text{ (21)}$$

And thus the non-tradable inflation will be equal to the wage inflation.

$$\pi_N = \dot{w} \text{ (22)}$$

IV. Solution of the model

Since the demand for traded goods is completely elastic, the short term equilibrium will be given by the equilibrium in the non-tradable sector:

$$p_N Y_N = p_N C_N$$

$$p_N Y_N = (1 - \alpha)C \text{ (23)}$$

Using 4, 15-17 and 23 it is possible to obtain the equilibrium unemployment level given by the goods market:

(24)

$$U = L - \frac{1}{\alpha}\left((1-\varepsilon)^{1/\varepsilon} A^{1/\varepsilon} K^{(\mu+\varepsilon)/\varepsilon} w_T^{1/\varepsilon}\right) - (\frac{1-\alpha}{\alpha})(1 - hi)(\frac{\varepsilon}{1-\varepsilon}))((1-\epsilon)^{1/\varepsilon} A^{1/\varepsilon} K^{(\mu+\varepsilon)/\varepsilon} (w_T)^{1/\varepsilon}$$

Where $w_T \equiv \frac{p_T}{w}$ and $\frac{\partial U}{\partial i} > 0 \ \frac{\partial U}{\partial K} < 0, \frac{\partial U}{\partial W_T} < 0$

From 13, 14, and 19 - 22 it is possible to derive a Phillips curve relationship between the size of unemployment (which is demand determined) and the inflation rate on the economy. Since the central bank is credible and we assume that the workers are rational, the expected inflation rate is equal to the inflation target. Thus:

$$\pi = \alpha(\pi_i + \dot{e}) + (1-\alpha)(\pi^* + \sigma\left(\frac{\frac{1}{zU} - W}{W}\right)) \quad (25)$$

Given the relationship between inflation and unemployment established by 24-25, the central bank will adjust its interest rate in order to bring the inflation to the target. However, the central bank only responds to the variations of the long term trends, disregarding the effects of the changes in the exchange rate caused by the movements on the asset market (9). This is expressed in the Taylor Rule as follows.

$$i = i_{t-1} + \beta(\alpha\pi_i + (1-\alpha)\left(\pi^* + \sigma\left(\frac{\frac{1}{zU} - W}{W}\right)\right) - \pi^*) \quad (26)$$

$$\text{where } \frac{\partial i}{\partial U} < 0$$

The inflation equilibrium will be achieved once the inflation rate is equal to the inflation target, that is:

$$\pi^* = \alpha(\pi_i + \dot{e}) + (1-\alpha)(\pi^* + \sigma\left(\frac{\frac{1}{zU} - W}{W}\right))$$

From where we can obtain the unemployment level consistent with the target inflation:

$$U^* = \frac{\sigma W(1-\alpha)}{z(\alpha(\pi^* - \pi_T) + \sigma(1-\alpha))} \quad (27)$$

Which will also make the interest rate constant over time

$$i = i_{t-1} \quad (28)$$

obtained from 24 and 27.

Since the non-tradable inflation is equal to the wage inflation, the latter will depend on the inflation target and on the real wage gap. Since the actual real wage is given by

$$W = \frac{w}{p_N^{(1-\alpha)} p_T^{\alpha}} \quad (29)$$

It is possible to show that the variations in the real wage depend on the variations of the tradable product wage. Dividing by *w* both numerator and denominator in 29 gives:

$$W = \frac{1}{(\frac{p_N}{w})^{(1-\alpha)} (\frac{p_T}{w})^{\alpha}}$$

$$W = \frac{Q^{(1-\alpha)}}{(\frac{p_T}{w})^{\alpha}} \quad (30)$$

and since Q is constant, the changes in the in real wage will depend on the product wage of the tradable sector.

Capital accumulation, as stated in 5, depends on the difference between the internal and the international profit rate. Since the second one is given, the rate of capital accumulation will depend on the variables that determine the evolution of the internal rate of profit, which are *K* and $\frac{p_T}{w}$.

The dynamics of the product wage in the tradable sector are given by the tradable inflation and by the wage inflation. We assume that the international rate of inflation (π_i) is constant, so that changes in the tradable inflation occur due to changes in the exchange rate. The variations of the exchange rate are given by movements on the internal interest rate as stated by 9. This implies:

$$\frac{\partial e}{\partial i} < 0 \, , \frac{\partial w_T}{\partial e} > 0$$

The changes in the interest rate are given by the variations of the inflation long run trends (eq. 26). By assumption, the international inflation rate remains constant, so the interest rate will respond to the changes in the non-tradable inflation. The non-tradable inflation itself depends on the real wage gap. Since the nominal wage is given at any point in time and so are prices, the wage gap will vary only due to changes in the bargained wage, which depends on the unemployment level in the economy. From 19

$$\frac{\partial W_B}{\partial U} < 0 \, . \frac{\partial \pi_N}{\partial W_B} < 0$$

Before proceeding to the analysis of the effects of a change on the inflation target, it is necessary to establish the channels through which monetary policy can affect the economy. The first one is the savings propensity out of profits which impacts directly on the aggregate demand for non-tradables, determining the unemployment level of the economy (equation 24). The other channel is the nominal exchange rate, which responds in an inverse way to the variations of the interest rate. The variations of nominal exchange rate affect the CPI inflation in two ways: the first immediate effect is that the variation of the nominal exchange rate modifies the level of the tradable prices. This means that the variation of the exchange rate makes the tradable component of the CPI inflation diverge from its long run trend. This implies the second effect, which is a change in the real wage received by workers and, as a consequence, a modification in the wage gap (equations 20 and 29).

The effects of a change in the inflation target

With this in mind, it is possible to analyze the effects of a change in the inflation target over the profit rate of the tradable sector. Rearranging terms from 26 it is possible to obtain

$$i = i_{t-1} + \beta(\alpha(\pi_i - \pi^*) + (1-\alpha)\left(\sigma\left(\frac{\frac{1}{zU} - W}{W}\right)\right)) \quad (26')$$

which allows to see the response of the interest rate to a variation of the inflation target more clearly.

Assume that the economy is in the inflationary equilibrium (the one that implies 28 and 29) and that the central bank decides to pursue a further disinflation policy by reducing its inflation target.

From 26' it is possible to see that a lower inflation target implies a higher interest rate. As stated before, this will cause a drop in aggregate demand since the savings out of profits will increase. The fall in the non-tradable aggregate demand in the presence of wage rigidity will make firms lay-off some workers (as implied by eq. 27), increasing unemployment and thus reducing the bargaining power of the workers at the next point of wage settlement (this can be represented as a fall in W_B in 20)

The adjustment of the interest rate also causes an immediate effect on the asset market. From 9 it is possible to see that the rise of the interest rate will lead to an appreciation of the nominal exchange rate until the point that it brings

equilibrium to the asset market. The appreciation raises the real wage of the workers since the tradable component of the CPI has fallen (eq. 8 and 29). Both the effect of the increase in unemployment over the bargained real wage and the effect of the exchange rate appreciation on the effective real wage will turn the wage gap negative. Also, since the workers are assumed rational, the expected inflation will be equal to the new inflation target. The sum of these two facts will cause the workers to bargain for a wage increase below the inflation target as can be seen from equation 20. This is so because the workers are unable to sustain the higher real wage caused by the appreciation. As a result, they negotiate a lower increase in order to attain a real wage in the next period equal to the one they can bargain and sustain. This renders non-tradable inflation consistent with the new inflation target, given that tradable inflation remains constant.

What are the effects of the adjustment on the profitability of the tradable sector? Since in the short run the capital stock remains constant, the first shock on the profitability of the tradable sector comes from $\frac{p_T}{w}$. The adjustment process has two types of effects over this variable. The first one is a level effect, which arises from the nominal exchange rate appreciation that lowers p_T before both local (w) and foreign prices (p_i) adjust. This causes a fall in the level of $\frac{p_T}{w}$ and thus in the level of profitability of the tradable sector.

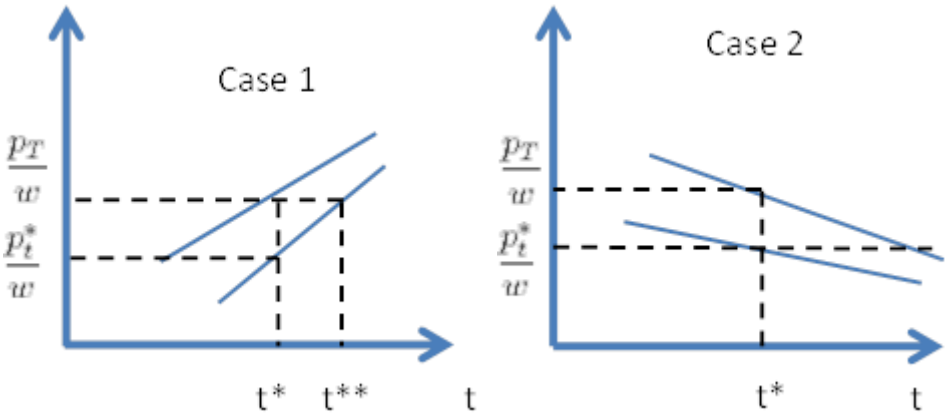
The second type of effect will be over the rate of growth of the variables that compose $\frac{p_T}{w}$. The new inflation target will imply a lower rate of growth of w. Recall that by assumption the international inflation rate is constant, so that after the initial adjustment in the asset market, the tradable inflation will return to be the international inflation (since agents are rational, the expected future value of the nominal exchange rate is the one consistent with the new inflation target). In sum this will lead to a different rate of growth of $\frac{p_T}{w}$, whose direction will depend on the relative value of π_i and of π_N before and after the adjustment in monetary policy.

1) If $\pi_{Nt} < \pi_{it}$ and $\pi_{Nt+1} < \pi_{it+1}$ where $\pi_{Nt+1} < \pi_{Nt}$ (being t the moment of the adjustment) the effect of the adjustment will be a faster pace of real exchange depreciation since the non-tradable inflation rate is lower than before the adjustment and is still lower than the international inflation rate.

2) If $\pi_{Nt} > \pi_{it}$ and $\pi_{Nt+1} > \pi_{it+1}$ where $\pi_{Nt+1} < \pi_{Nt}$ then the result of the adjustment will be a slower pace of exchange rate appreciation, but still an appreciation tendency.

3) If $\pi_{Nt} > \pi_{it}$ and $\pi_{Nt+1} < \pi_{it+1}$ the result will be a change in the dynamic behavior of $\frac{p_T}{w}$ passing from a real appreciation tendency to a real depreciation tendency.

The first two effects can be represented in the following graphs, where the evolution of $\frac{p_T}{w}$ is plotted against time. t* is the moment in which the monetary authority decides to lower the inflation target.



In these graphics both the level and the trajectory effect are represented. In case one, the disinflationary policy moves $\frac{p_T}{w}$ to a lower level but to a trajectory with a faster growth pace. However, $\frac{p_T}{w}$ will be below the level it had before the change in the inflation target all the time between t* and t**, leading to a lower profit rate and to a lower capital accumulation in the economy. It is in this part that the presence of increasing returns becomes fundamental, since they will perpetuate the low profit rate and the lower accumulation rate in the tradable sector. If the period of convergence between t* and t** lasts long enough, the tradable sector will lose enough competitiveness to be surpassed by other countries in a similar fashion as the example proposed by Krugman (1987). This will be very similar to what happens in case three. Case two shows that the appreciation associated with the change in the inflation target, makes $\frac{p_T}{w}$ converge quicker to the lower value that it would reach due to the inflation

dynamics. That would entail an abrupt fall in the profit rate of the tradable sector and thus a drop in the capital accumulation from which the economy could never recover in this scenario.

This framework also allows to analyze what would happen in the case of a rise of international inflation since the monetary authority would respond in the same way. In case one, the rise in the international inflation would make the curve after the shock even steeper since the monetary authority would respond to the larger international inflation with a more contractionary monetary policy in order to reduce the non-tradable inflation enough not to compromise its target. However, it would also entail a larger initial appreciation of the currency, leading to the same result as before. In the second case, it could lead to a change in the sign of the slope of the curve since it would entail a higher international price growth and a lower non-tradable inflation due to the operation of the monetary policy.

V. Conclusions

In general, any positive change in one of the determinants of inflation would lead to the same kind of dynamic since the monetary authority will respond in the same way in order to preserve the inflation target. The response of the monetary authority necessarily implies the appreciation of the currency as a result of the movement of the interest rate, although it is a byproduct which helps the monetary authority to ease the transition to the inflation target. This can lead some monetary authorities to try to exploit this fact in order to gain credibility from the public, but it also implies that the monetary regime will affect the profitability of the tradable sector and through that channel the accumulation rate of the economy. As has been shown, the effect of inflation targeting on the dynamic behavior of the tradable product wage does not reverse the level effect that the adjustment to the target implies.

This fact raises a new tradeoff for monetary authorities that are unwilling to modify the current monetary regime of inflation targeting: one between growth and the search for ever lower inflation rates. Another option is to implement a series of modifications in the lines suggested by Galindo and Ros (2008) to preserve the gains on inflation control and diminish the side effects over growth. However, more research on the compatibility between policies that seek to avoid the appreciation of the exchange rate and the inflation targeting regime is needed.

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