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Avoiding some costs of inflation and crawling toward hyperinflation: The case of the Brazilian domestic currency substitute

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Abstract

The pattern of a classical hyperinflation is an acute acceleration of the inflation level accompanied by rapid substitution away from domestic currency. Until the Real Plan (1 July 1994), however, Brazil experienced inflation levels well above 1000% a year since 1988 without entering the classical hyperinflation path. Two elements played key roles in differentiating the Brazilian case from the classical hyperinflations: indexation and the provision of a reliable *domestic* currency substitute, i.e. the provision of liquidity to interest-bearing assets. This paper claims that the existence of this domestic currency substitute was the main source of both the inability of the Brazilian central bank to fight inflation and of the unwillingness of Brazilians to face the costs of such a fight. The provision of the domestic currency substitute through the banking sector is modeled, and the main macroeconomic consequences of this monetary regime are derived. Those are: the lack of a nominal anchor for the price system due to the passive monetary policy, and the non-controllability of seigniorage unlike traditional models of hyperinflations.

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1. Introduction

The pattern of a classical hyperinflation is an acute acceleration of the inflation rate until it reaches extremely high levels. For example, the maximum *monthly*

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inflation rate was $41.9 \times 10^{15}\%$ during the second Hungarian hyperinflation (August 1945 to July 1946); $85.5 \times 10^{6}\%$ during the Greek hyperinflation (November 1943 to November 1944); and 32400% during the German hyperinflation (August 1922 to November 1923) (Sachs and Larrain, 1993). Such acceleration of the inflation rate has typically been accompanied by rapid substitution away from domestic currency.

Brazil, however, experienced inflation levels well above 1000% a year from 1988 (except in 1990) until the Real Plan (1 July 1994) without entering the classical hyperinflation path. Following Cagan's definition of hyperinflation (it begins in the month the inflation rate exceeds 50%, and it ends in the month before the monthly rise in prices drops below 50% and stays below for at least a year), Brazil experienced a hyperinflation between December 1989 and March 1991 (Sachs and Larrain, 1993). This was a very special period, just before the inauguration of the Collor administration (15 March 1990), when such high rates of inflation were caused by a general fear of a default of the internal government debt. Fig. 1 shows that after this unusual episode, inflation fell for a while due to the freezing of financial assets, resumed again, fell once more due to an ultimately unsuccessful price freezing on February 1991 (Collor II Plan) and then trended upwards until the Real Plan, when it was almost reaching Cagan's 50% per month threshold. The stylized fact shown in Fig. 1 is that until the Real Plan Brazilian inflation had not been killed, nor had it displayed the explosive pattern of the classical hyperinflations. This inflation pattern will be referred to as *megainflation*. [1]

Table 1 displays the gross domestic product (GDP) growth and inflation rates for Brazil. Despite its decade-long crisis, the Brazilian economy has exhibited a surprising resilience to extremely high and persistent inflation rates.

Two elements played key roles in differentiating the Brazilian case from the classical hyperinflationary experiences: indexation and the provision of a reliable *domestic currency substitute*, i.e. an interest-bearing asset with near money liquidity. This paper claims that the existence of this domestic currency substitute was the main source of both the inability of the Brazilian central bank to fight inflation and of the unwillingness of Brazilians to face the costs of such a fight. [2]

Since the mid-sixties Brazil has followed economic policies aimed at coping

[1] Carneiro and Garcia (1993) suggest this term for the Brazilian inflation since it reached the 20% per month level, although we found out later that Cardoso (1991) suggested this name first. Sturzenegger (1991) suggests the name *extreme inflation* to characterize inflationary processes with rates in excess of 15 to 20% per month, sustained for more than a few months. This corresponds to a threshold of 1000% per year. By this criterion the Brazilian case fits in the extreme inflation category. However, there are substantial differences between the Brazilian case and the characterization of extreme inflation, as will be made clear shortly.

[2] Fischer and Summers (1989) show that better inflation protection may end up causing more inflation.