

Discussion of the History of Brazil 1

José A. Scheinkman

Columbia University, Princeton University, and
National Bureau of Economic Research

Ayres et al. provide an excellent summary of Brazil's monetary and fiscal history since the 1960s. The analysis emphasizes the government budget constraint following the framework explicated in "A Framework for Studying the Monetary and Fiscal History of Latin America" in this volume. Rather than commenting on every aspect of the chapter, I will focus on two issues raised by this survey. The first is the high rate of inflation in 1980–94 in the presence of relatively modest *measured* fiscal deficits. The second is the low growth in the post–Real Plan period.

Inflation and the Fiscal Deficit

The Chicago PhD dissertation of Yoshino (1993) documents that, despite the very high inflation rates, regulation allowed private banks to collect an inflation tax on demand deposits that in the years between 1980 and 1988 reached between 61 percent and 110 percent of the inflation tax collected by the central bank. The government also imposed a tax on demand deposits by requiring private banks to make subsidized loans to certain sectors (e.g., agriculture) corresponding to a percentage of demand deposits. In this way, what would have been a fiscal expenditure was directly financed by the inflation tax on M1. The remaining revenue from the inflation tax on demand deposits would have been divided between the cost of services provided to attract depositors and profits. The evidence summarized in Carvalho (2003) that financial institutions achieved twice the return on equity that nonfinancial firms obtained in 1981–91 indicates that service competition did not totally eliminate banks' gains from the inflation tax. There was also a large network of federal and state-owned banks in Brazil during that period. Yoshino estimates that these banks collected during the same years (1980–88) an amount that varied between 50 percent and 58 percent of the inflation tax generated by the central bank.¹ In the case of state-owned banks, a large share of loans made before 1994 went to their own state governments at subsidized rates. For instance, at the start of the Real Plan, Banespa,

the bank controlled by the state of São Paulo and the largest state-owned bank, had 80 percent of its assets in credits to the public sector.²

The obligation to lend a proportion of demand deposits was not the only form of directed credit imposed by the central government. Many other types of deposits and compulsory savings were also affected.³ The World Bank estimated that, in 1986–87, directed credit programs accounted for 80 percent of the average *stock* of credit in Brazil and placed the implicit subsidy on a sample of the largest directed credit programs, including housing finance, at the equivalent of 80 percent of Treasury revenue, or about 7 to 8 percent of GDP.⁴ Since many of the subsidies were in the form of lower nominal interest rates, it is unlikely that the government could have transferred these amounts without a high inflation rate.

Overall, the evidence indicates that the true seigniorage in Brazil in 1981–94 was substantially larger than the 3.2 percent of GDP reported in Table 1 in the appendix of Garcia et al. This observation makes it even harder to explain the nondollarization of the Brazilian economy in the 1980s.

Macroeconomic Stability and Growth

As shown in the appendix of Garcia et al., the Real Plan led to much lower rates of inflation, and, at least during the period 1999–2013, Brazil produced annual primary surpluses. Many observers believed that with the major macroeconomic imbalances eliminated, Brazil could return to the high growth rates it had enjoyed before the first oil shock. Unfortunately, the growth rate, except perhaps in some years of the commodity boom, has been mediocre. According to the World Bank World Development Indicators Series on GDP per person employed (constant 2011 purchasing power parity [PPP]), output per worker employed grew only 18 percent from 1995 to 2017. During this period, Brazil's distance to the frontier increased, and a Brazilian worker went from producing 34 percent of the output of a U.S. worker to 29 percent.⁵

Growth accounting points toward total factor productivity (TFP) as a major contributor to this loss in relative output per worker between Brazil and the United States. TFP calculations are notoriously imprecise, but according to the Total Economy Database, the growth factor in Brazilian TFP in 1995–2017 was only 68 percent of the corresponding U.S. growth factor. In the Penn World Table (PWT) version 9.0, Brazil's TFP at current PPP fell from 61 percent to 48 percent of U.S. TFP between 1995 and 2014. In comparison, the Human Capital Index in Brazil in the PWT increased from 52 percent to 74 percent of the U.S. index.⁶

Possible sources for the continued low performance in productivity include the increase in the tax burden from 25 percent of GDP pre–Real Plan to 33.6 percent in 2017; a complicated tax system that favors specific sectors and even particular firms and also favors smaller firms; an uncertain legal environment that, among other things, discourages private infrastructure investments; and a myriad of policies that make it difficult for new firms to enter certain sectors. However, output per worker

in Brazil behaved very differently across major economic sectors. Between 2000 and 2013, output per worker fell 5.5 percent in manufacturing, rose only 11.7 percent in services, but rose 105.6 percent in agriculture.⁷ TFP in agriculture grew 4.3 percent per year in 1997–2014.⁸ Agriculture seems to have benefited from two factors absent in manufacturing or services. The first is public investments in research through the agricultural research corporation Embrapa that, among other things, developed the new techniques that transformed the Cerrado region into an agricultural powerhouse. Second, since 1990, Brazil has had an open agriculture trade policy that contrasts with the high rates of protection in manufacturing. Gasques et al. (2012) estimate that a 1 percent increase in agribusiness exports raised TFP by 0.35 percent. The performance in agriculture indicates that Brazil may need to solve only a few of the problems that depress productivity to achieve much higher growth rates.

Notes

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1 Cysne and Lisbôa (2007) use a different methodology to calculate the inflation tax and do not distinguish private from federal or state-owned commercial banks but arrive at a similar qualitative picture for 1980–94.

2 Dall’Acqua (1997, 80).

3 A World Bank discussion paper (Morris, Dorfman, Ortiz, and Franco 1990) states that “Brazil is probably the Latin American country which uses directed credit to the largest extent. It is also among the countries in the developing world which make more use of these programs and may even be the largest.”

4 See Morris et al. (1990).

5 The Conference Board’s Total Economy Database (TED), November 2018 version, reports a slightly worse performance, from 33 percent to 26 percent. A third data series, Penn World Table (PWT) version 9.0 (see Feenstra, Inklaar, and Timmer 2015), actually reports an improvement in Brazil’s

output per worker relative to the United States from 1995 until 2014. The data in the PWT imply a growth rate of 22.9 percent for Brazil’s GDP in 1995–96, whereas the other two sources report more reasonable growth rates: 2 percent (World Bank) and 0.02 percent (TED). This single data point explains three-quarters of the difference in output per worker between the PWT and the other sources.

6 The role of TFP in depressing the relative performance of Brazil’s output per worker is not a recent phenomenon. Ferreira and Veloso (2015) estimate that in 1990, TFP differences explained more than half the difference in output per worker between Brazil and United States.

7 Arias et al. (2017, 2), using data from Instituto Brasileiro de Geografia e Estatística, the Brazilian Institute of Geography and Statistics.

8 Arias, Vieira, Contini, Farinelli, and Morris (2017, 7).

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