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Bank privatization and productivity: Evidence for Brazil

Márcio I. Nakane [a,b,*], Daniela B. Weintraub [b]

[a] *Research Department, Central Bank of Brazil, Sao Paulo, Brazil*
[b] *Economics Department, University of Sao Paulo, Sao Paulo, Brazil*

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Abstract

Over the last decade, the Brazilian banking industry has undergone major and deep transformations with several privatizations of state-owned banks, mergers and acquisitions, closing down of troubled banks, entry by foreign banks, etc. The purpose of this paper is to evaluate the impacts of these changes in banking total factor productivity. We first obtain measures of bank-level productivity by employing the techniques due to Levinsohn and Petrin [Levinsohn, J., Petrin, A., 2003. Estimating production functions using inputs to control for unobservables. Review of Economic Studies 70, 317–342]. We then relate such measures to a set of bank characteristics. Our main results indicate that state-owned banks are less productive than their private peers, and that privatization has increased productivity.

JEL classification: G21; L33; O54

Keywords: Bank privatization; Total factor productivity; Brazilian banking

* Corresponding author. Address: Banco Central do Brasil, Av. Paulista 1804, 4th floor, São Paulo, SP, CEP 01310-922, Brazil. Tel.: +55 11 3491 6307; fax: +55 11 3491 6680.
E-mail address: marcio.nakane@bcb.gov.br (M.I. Nakane).

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1. Introduction

The banking system in Brazil is the largest and the most complex one in Latin America. Like in many parts of the world, the banking industry in Brazil is undergoing a process of rapid and radical transformations. The common features of this process, in Brazil and elsewhere, include: an increase in competition from within the industry as well as from the outside; a wave of merger and acquisition (M&A) activities, including several cross-border deals; more globalized capital markets with highly volatile capital flows, which are capable of causing havoc in some national financial sectors; new financial products, with increasing reliance on off-balance sheet activities; new banking practices brought out by the information technology revolution.

The banking sector in Brazil has been strongly influenced by the changing domestic macroeconomic scene of the recent period, especially by the transition from a high to a low inflation environment. After many years of making a living out of inflationary rents, this transition was far from smooth for many banks.

Amongst those most affected by the many changes in the industry were the state-owned banks. Due to their poor performance, many of the state-owned banks in Brazil were either closed down or privatized. Less than half (14) of the 32 state-owned banks operating in the country by 1994 were still active by 2002.

The Brazilian experience represents an interesting case study on bank privatization not only because of its quantitative relevance but also due to the varied options given to the state-owned banks following their restructuring. Thus, some state-owned banks were straight privatized by their controllers (namely, the Brazilian states) whereas some others had their control first transferred from the states to the federal government and then privatized. Some other states also kept the control of their banks after restructuring. There are also some other state-owned banks that were just liquidated.

The purpose of this paper is to study the impact of the privatization of state-owned banks on productivity. Measures of bank-level total factor productivity are first obtained as the residuals from a production function estimate. The production function is estimated following the methodology suggested by Levinsohn and Petrin (2003) to try to control for endogeneity problems arising from the simultaneous choice of inputs and productivity by the bank firm.

In a second stage, bank total factor productivity is related to a set of control variables. In an environment where many different types of corporate control changes are occurring simultaneously, it is important to try to control for as many of them as possible even though the primary interest of the paper lies on the effects of bank privatization. This is certainly the case for Brazil whereby privatization of state-owned banks were taking place alongside other corporate changes in the industry like domestic mergers and acquisitions, foreign acquisition of domestic banks, liquidation of banks, and pure exit from the market. We therefore follow the methodology proposed by Berger et al. (2005) and include variables controlling for static, selection, and dynamic effects. Static variables are dummies for groups of banks that have not had any corporate change over the sample period. Selection variables are dummies for groups of banks that have had some corporate change over the sample period. Such dummy