Economic growth and regional income inequality in Brazil

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Abstract. This paper analyses the evolution of regional inequality in Brazil in the period 1939–1995. Based on a data set organized by the author, indicators of per capita income dispersion among states and regions are presented and their evolution over time is analyzed. The correlation between the regional initial level of per capita income and its growth is considered, testing for Beta convergence. The speed of convergence is calculated in two different forms, the neoclassical model and the coefficient of variation, the later allowing for the analysis of oscillations in inequality over time and its relationship to national economic growth rates. The Kuznetz hypothesis, relating regional income inequality and level of development, is tested. The results indicate the presence of signs of regional income convergence in Brazil, but with important oscillations in the evolution of inequality over time as well as across regions within the country. The association of regional inequality with national income growth produced interesting results, indicating a promising line for future research.

1. Introduction

The subject of regional inequality has gained importance lately with the development of the “convergence controversy”, associated with the debate about the ideas of the New Theory of Growth or Endogenous Growth Theory. The starting point was the pioneering work by Romer (1986) and Lucas (1988), and more recently a very large number of studies by important economists have been developed and published in leading journals\(^1\). These studies are concerned with the issue of long-term growth in countries’ per

\(^1\) Krugman (1991); Grossman and Helpman (1994); Solow (1994); Romer (1994); Barro (1994); Pack (1994); Barro and Sala-i-Martin (1995), and the special issue of Annals of Regional Science, 32 (1998) 1, to mention only a few.
capita income and with comparisons between countries’ growth trajectories but are also interested in comparing the trajectories of regions within countries.

Brazil is an interesting case to examine, for it has impressive personal and regional disparities in income (see Map 1 for location of regions). As Table 1 below shows, the Northeast region hosts 28.5% of Brazil’s population, with a per capita income level of USD 1,836 per year in 1996, while in the Southeast, with 42.7% of the population, per capita income is USD 5,433. The poorest state, Piauí, has a per capita income of USD 1,063 while São Paulo, the richest state, has USD 6,547, or 6.2 times the poorest state per capita income. This situation is the result of a process of economic development that favored the southern states of the country in this century\(^2\). Some authors have identified a tendency towards deconcentration of income in Brazil in recent years\(^3\) but the results presented in this study do not strongly support this tendency. São Paulo state accounts for over 35% of national GDP since 1949, reaching a peak of 40.2% in 1975; from this year on, the state’s share decreased to 35.3% in 1986, having remained around 36% since then, still an impressive proportion considering the state’s 2.9% share of national territory.

The decrease in the state of São Paulo’s share observed after 1975 is often taken as a sign of spatial deconcentration of income in Brazil. As a matter of fact, a deconcentration process in the neighborhood of this state has taken

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