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BORDER EFFECTS OF BRAZILIAN STATES

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NON-TECHNICAL SUMMARY

The question of domestic market integration in Brazil is particularly relevant because of large regional disparities between the North and the South. There is a growing consensus among the Brazilian political parties that addressing regional inequalities and national fragmentation is a major challenge and a priority for Brazil. Brazilian governments have tried to fight these inequalities by promoting economic zones in marginalized regions.

The aim of this paper is to estimate the degree of trade integration among Brazilian states and calculate the magnitude of the Brazilian states' engagement in international trade in the years 1991, 1997, 1998 and 1999 using the methodology of border effects. This literature has shown the negative influence of borders in the international trade. Due to the existence of such borders, the trade flows between countries stay at a lower level than the intra-national trade. A number of recent studies have also found rather large internal fragmentation within countries.

Our database includes 26 Brazilian states and 164 foreign countries and contains, for each year (1991, 1997, 1998 and 1999), 26 intra-state trade flows, 650 inter-state flows, and 4264 international export flows. Trade flows between Brazilian states are calculated from the information on the ICMS (Imposto sobre Circulação de Mercadorias e Serviços) tax that is applied to interstate trade. The international trade flows data are provided by the Foreign Trade Secretariat of the Brazilian Ministry of Development. We estimate a gravity type equation using different econometric specifcations, including the Poisson Maximum Likelihood method in order to include the zero trade flows.

Results show that the Brazilian market is rather highly fragmented but less than the Chinese market. Brazilian sub-national borders reduced interstate trade by a factor of 23 in 1991 and a factor of 13 in 1999, indicating an ongoing process of domestic integration. International trade integration of Brazilian states increased over the period 1991-1999 in conjunction with the strategy of outward orientation. In 1991, a Brazilian state traded 390 times more with itself than with a foreign country and, in 1999, it traded 280 times more with itself than with a foreign country, all things being equal. In other words, Brazilian states traded 27 times more with each other than with foreign countries in 1999.

Border effects differ greatly across Brazilian states: internal and international trade integration is low for North and Amazonian Regions (with the exception of the State Amazonas) and high for Southern regions, the most domestically integrated states being also the most engaged in international trade. The better internal and international trade integration of the State Amazonas is probably due to its capital, Manaus, free zone created in 1967 and based on tax incentives to economic production. Since the 60s, the Brazilian Federal Government has promoted the economic development of this empty state for strategic and political reasons. The relatively good economic insertion of the state of Amazonas indicates that it is possible to reduce regional inequalities and economic marginalization by active government policies.

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