

INSIGHTS

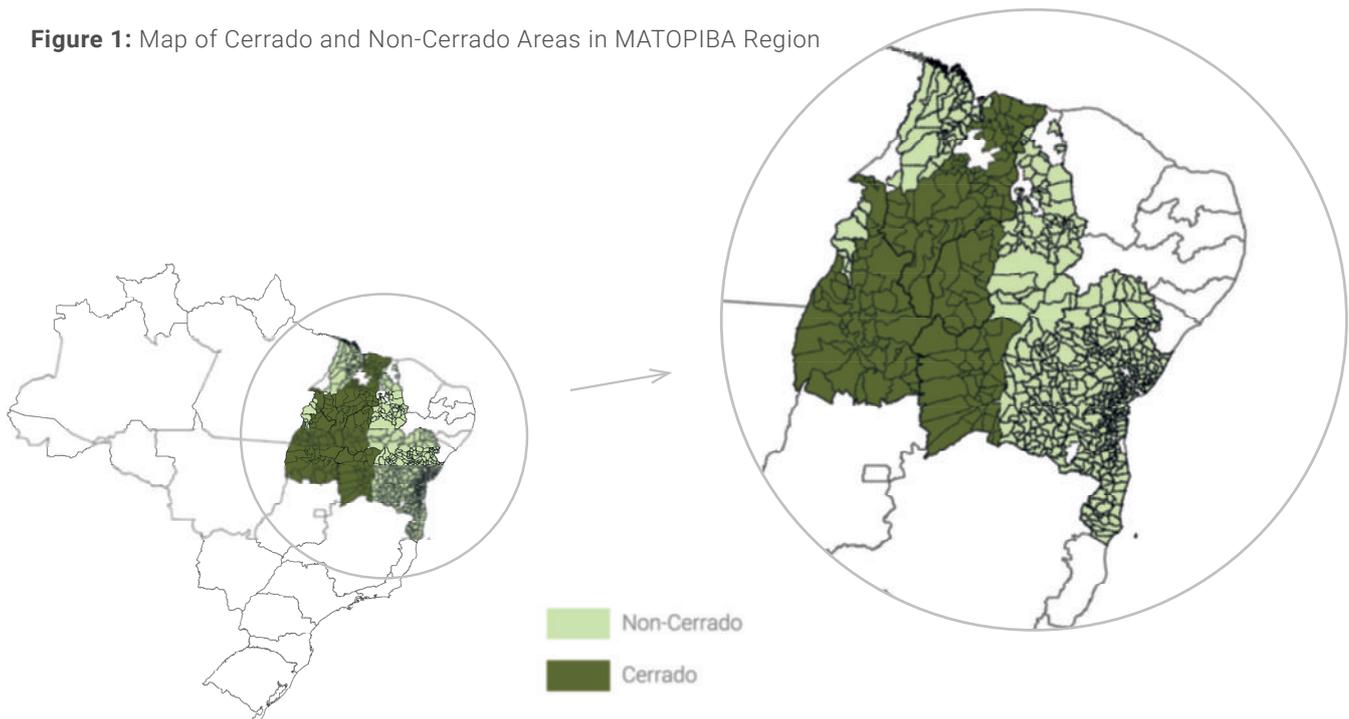
AS AGRICULTURAL PRODUCTION SURGES IN MATOPIBA, WHAT ARE THE CONSEQUENCES FOR THE LOCAL ECONOMY?

1995 2012
Compared to non-Cerrado municipalities, the share of cropland in Cerrado municipalities grew 3.6 percentage points more and the value of the agricultural production grew by 140% more

The states of Maranhão, Tocantins, Piauí and Bahia, known collectively as **MATOPIBA**, have emerged as an important agricultural frontier over the past two decades. The region now produces 10% of the nation's crops and is an important driver of the expansion in soy and maize production. Despite the importance of MATOPIBA to Brazil's economy, the impact and extent of this surge in agricultural output has not been thoroughly studied. In order for policymakers and stakeholders to understand more fully how increased production will affect local municipalities, researchers under INPUT (Land Use Initiative - *Iniciativa para o Uso da Terra*) examine this expansion.¹

The study shows that agricultural expansion in MATOPIBA is heavily concentrated in municipalities located in the Cerrado biome. The estimates indicate that, since the late 1990s, the share of cropland and value of the agricultural production started to increase faster in municipalities located within the biome than in municipalities outside the biome. Cropland in the Cerrado municipalities grew by 3.6 percentage points more than in non-Cerrado municipalities during the period 1995-2012, whereas the value of the agricultural production in the municipalities in this biome grew by 140%

Figure 1: Map of Cerrado and Non-Cerrado Areas in MATOPIBA Region



¹ See the full study (*The Causes and Consequences of Agricultural Expansion in Matopiba*) at <http://www.inputbrasil.org/publicacoes/causas-e-consequencias-da-expansao-agricola-no-matopiba/?lang=en>.

more than in the municipalities outside it during the same period. This increase in productivity was due not only to cropland expansion, but also to a shift in the mix of crops from rice to soy. The analysis also shows that the expansion induced a decrease in cattle ranching as farmers shifted their land from pastures to cropland.

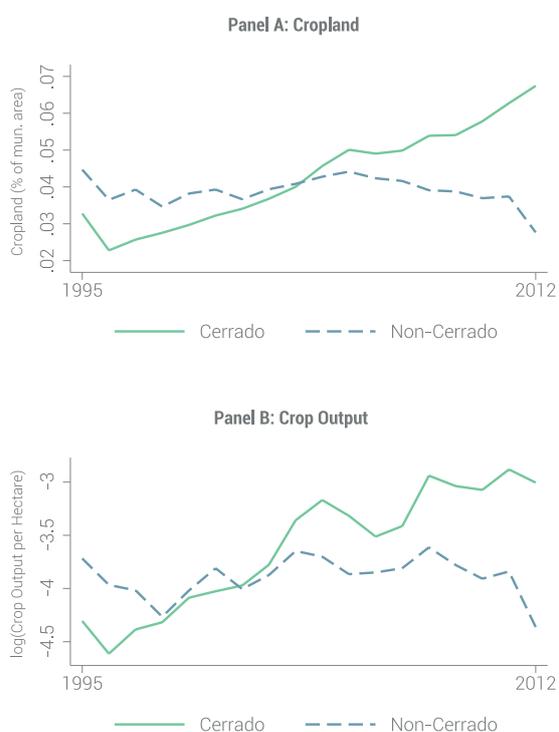
INPUT research also reveals the economic consequences of this jump in production: economic performance has been positively affected in the Cerrado municipalities. The agricultural boom led to a 37% increase in agricultural GDP per capita and a related 10% increase in the services GDP per capita due to increased local demand. As a result, GDP per capita increased 11% more in the Cerrado municipalities than in the non-Cerrado ones during the period 1999–2012. However, results show no such effect on manufacturing GDP.

The agricultural expansion boom led to a 37% increase in GDP per capita and a related 10% increase in the service sector GDP. Between 1999 and 2012, GDP per capita increased 11% more in the Cerrado municipalities than in the non-Cerrado ones

Additionally, the Cerrado municipalities experienced significant gains in access to durable consumer goods, such as TVs and refrigerators, as well as access to electricity. The estimates indicate an increase in close to 10% for all three variables. However, no effects were found on the share of households that have a car or access to water or sewage.

Finally, agricultural expansion did not seem to lead to any notable changes in the size of local population or in migration within the MATOPIBA region, nor did it impact human capital investments, such as schools.

Figure 2: Evolution in Agricultural Outcomes



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The *Land Use Initiative (INPUT – Iniciativa para o Uso da Terra)* is a dedicated team of specialists who work at the forefront of how to increase environmental protection and food production. INPUT engages stakeholders in Brazil’s public and private sectors and maps the challenges for a better management of its natural resources. Research conducted under INPUT is generously supported by the Children’s Investment Fund Foundation (CIFF) through a grant to the Climate Policy Initiative. www.inputbrazil.org