

Methodological Appendix

Selection and definition of metropolitan areas

This report profiles 13 Brazilian metropolitan areas which rank among the 300 largest metropolitan economies in the world for which data are available, according to the size of their economy in 2010, at purchasing power rates (PPP) from McKinsey Global Institute's Cityscope 2.0 database.³ A companion report, the 2012 *Global MetroMonitor*, describes and analyzes recent and longer-term economic performance among these 300 metropolitan areas.⁴ Within Brazil, the 13 metro areas are among the most populous, but two that are not among the 13 profiled—Goiânia and Belém—are more populous than three that are profiled—Manaus, Grande Vitória, and Baixada Santista—which have higher GDPs than Goiânia and Belém.

Each state in Brazil has the authority to define its own metropolitan areas. This report uses the official, current definitions for “regiões metropolitanas” and, in the case of Brasília, “região integrada de desenvolvimento” (RIDE) provided by the Brazilian Institute of Geography and Statistics (IBGE). For previous years, data for component municipalities are aggregated to provide consistent geographical comparisons.

Data

Demographic indicators

This report uses demographic data from both Oxford Economics and IBGE. Population change is calculated from Oxford Economics estimates for 1990, 2000, and 2012 (which are tied to Brazilian census data from 1991, 2000, and 2010), and total population in 2012 is an Oxford Economics estimate. IBGE

data on age, literacy, *favela* (informal settlement) residence, birthplace outside the state, emigration, central city share of metro population, and metro share of state population come from the 2010 Brazilian census summary files (accessed via the web tool, SIDRA). Educational attainment and birthplace for the foreign-born population are compiled from IBGE microdata files for the 2010 Brazilian census.⁵ Population with a college degree is reported for persons age 25 and above, and literacy rates for the population aged 10 and older. Emigration is based on the reporting by resident Brazilians of their household members currently living abroad.

Economic indicators

This report uses data from Oxford Economics for employment change, employment by sector (using sector data from IBGE, state agencies, and some Oxford Economics estimates), GDP, GDP per capita, and state GDP (used to calculate metro share of state GDP). IBGE data are used for total employment in 2010. Exports data come from the Ministry of Development, Industry, and Foreign Trade (MDIC)'s online tool, ALICEWeb, which provides monthly data on exported goods (not services).⁶ Metropolitan exports were created by summing municipal-level exports for all municipalities in the region. Exports accrue to the municipality that serves as the tax domicile of the exporting firm. This report aggregates exports data for the five years from September 2007 through September 2012.

Economic performance is a standardized score based on growth rates between 2011 and 2012 in GDP per capita and employment. This measure is used in the companion report, 2012 *Global MetroMonitor* for the world's 300 largest metropolitan economies.⁷ Industrial specialization is defined

for each metropolitan area as the sector with the highest Gross Value Added (GVA) location quotient, provided that the sector makes up at least five percent of the metro area's GVA.

Maps

Individual metropolitan area maps were created in ArcGIS using shapefiles for states and municipalities downloaded from IBGE. Municipality population data for the maps come from the 2010 census data, also provided by IBGE.

Endnotes

1. Emilia Istrate and Carey Anne Nadeau, “Global Metro Monitor 2012.” (Washington: Brookings Institution, 2012).
2. *Ibid.*
3. Available at http://www.mckinsey.com/insights/mgi/research/urbanization/urban_world_cities_and_the_rise_of_the_consuming_class
4. Istrate and Nadeau, “Global Metro Monitor 2012.”
5. Available at <http://www.sidra.ibge.gov.br/>
6. Available at <http://aliceweb.desenvolvimento.gov.br/>
7. Istrate and Nadeau, “Global Metro Monitor 2012.”