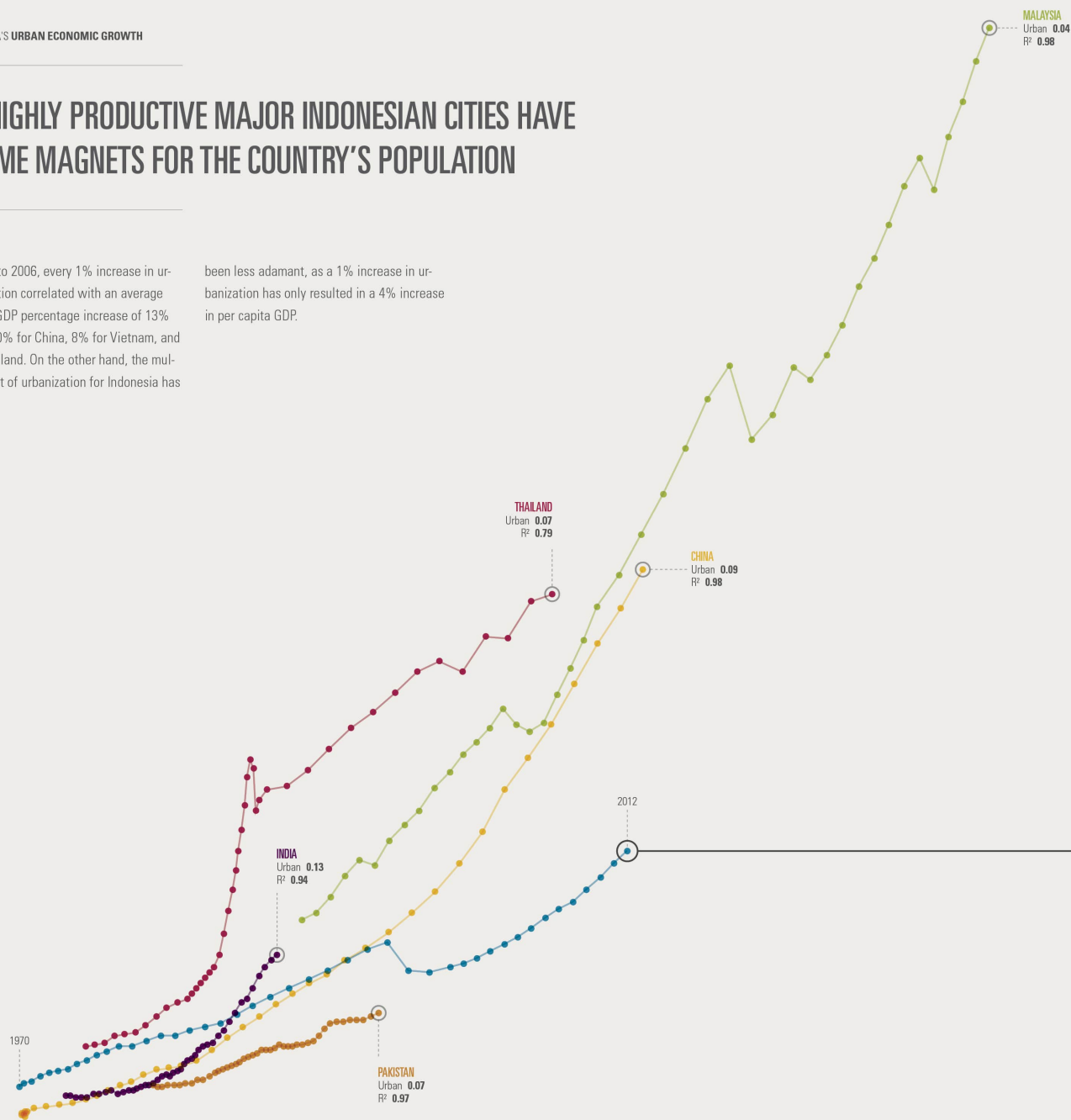


THE HIGHLY PRODUCTIVE MAJOR INDONESIAN CITIES HAVE BECOME MAGNETS FOR THE COUNTRY'S POPULATION

From 1970 to 2006, every 1% increase in urban population correlated with an average per capita GDP percentage increase of 13% for India, 10% for China, 8% for Vietnam, and 7% for Thailand. On the other hand, the multiplier effect of urbanization for Indonesia has

been less adamant, as a 1% increase in urbanization has only resulted in a 4% increase in per capita GDP.

GDP per capita (constant 2005 US\$)



URBANIZATION AND GDP PER CAPITA

By country, 1970 - 2012.

Source

World Development Indicators; The World Bank

INDONESIA

URBAN COEFFICIENT

0.04

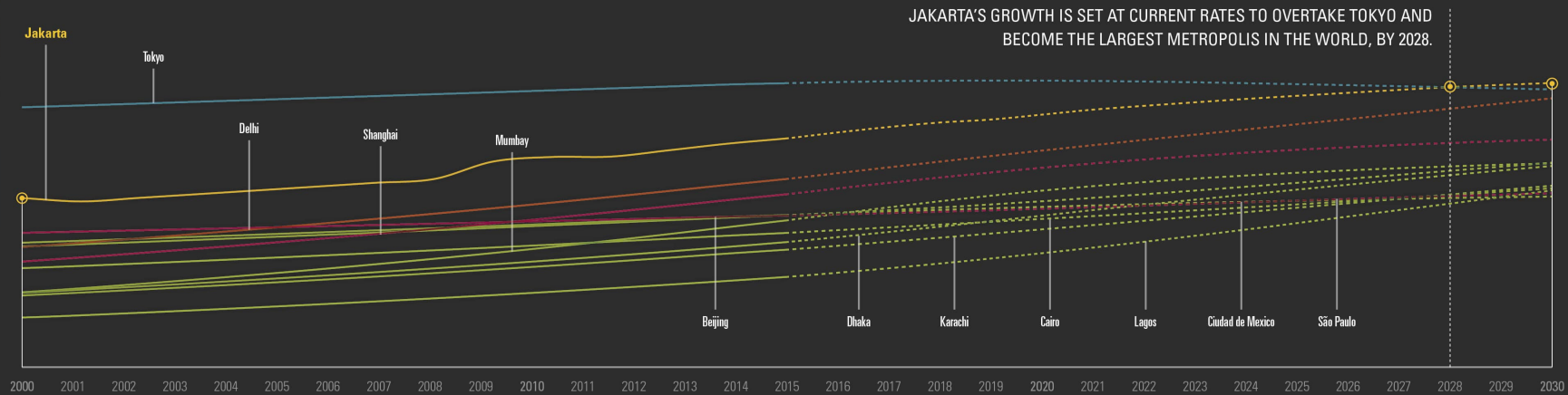
R²

0.95

Urbanization

POPULATION IN LARGEST CITIES
projections, 2000-2030
(in Millions of people)

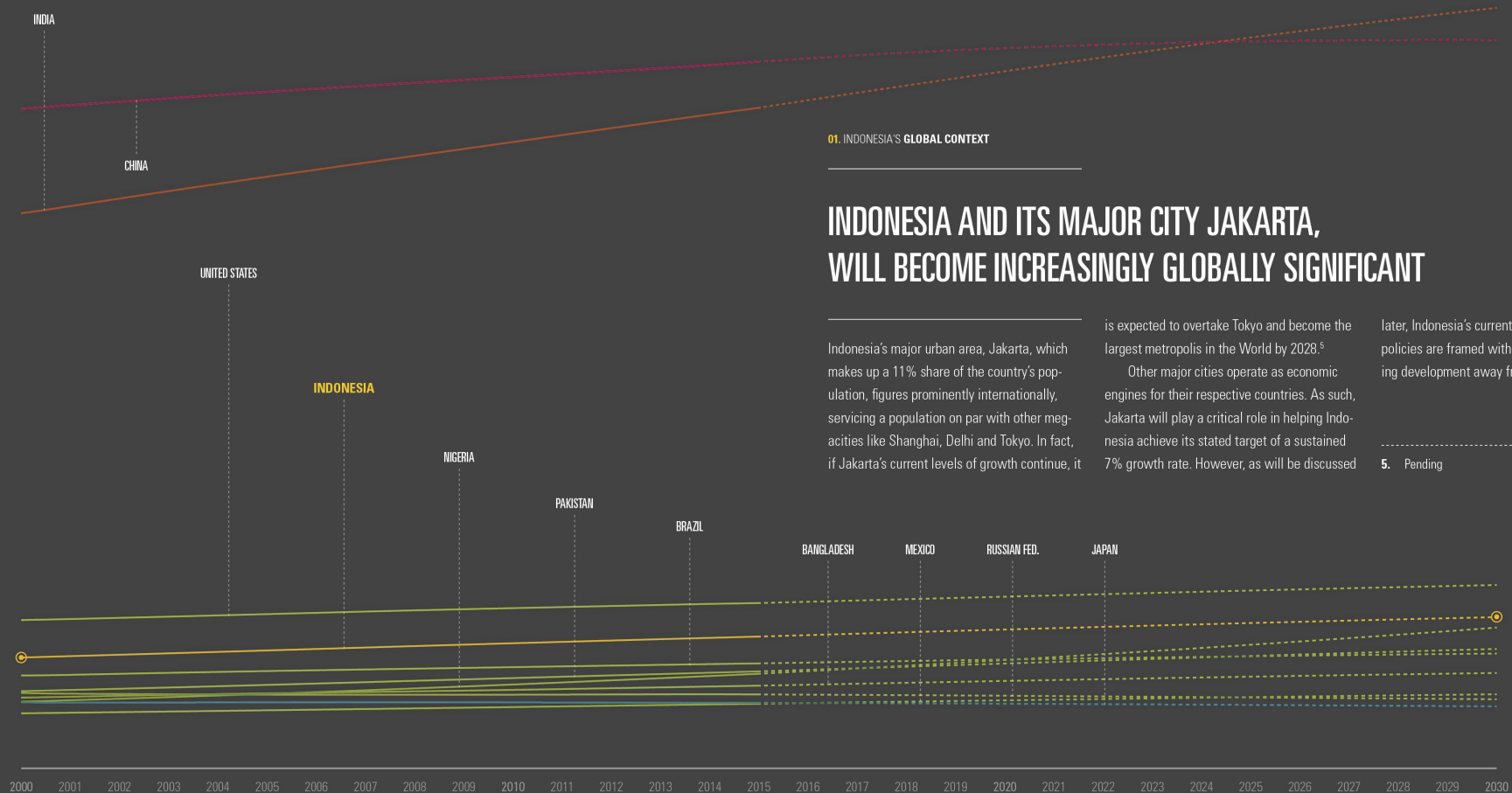
23 M



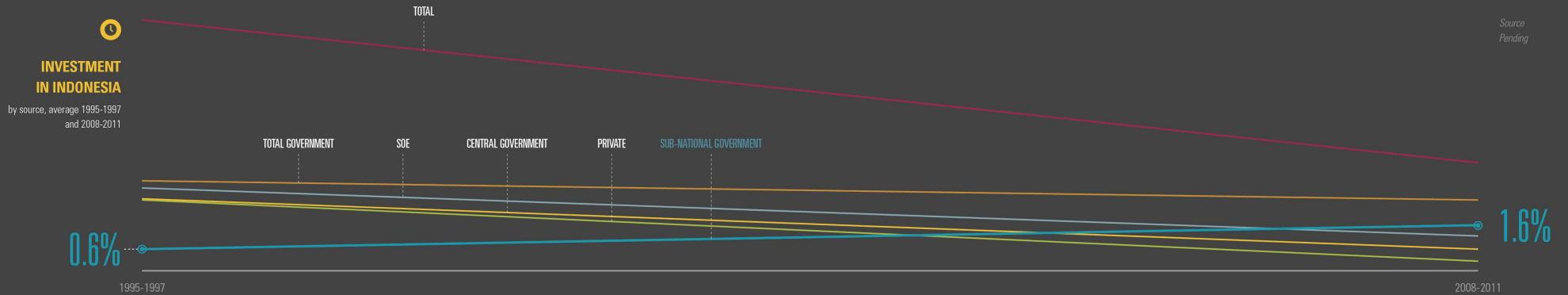
Source
United Nations, Department of Economic and Social Affairs, Population Division (2014). *World Urbanization Prospects: The 2014 Revision*, custom data acquired via website.

POPULATION IN LARGEST COUNTRIES
projections, 2000-2030
(in Millions of people)

215 M



Source
World Bank, Health Nutrition and Population Statistics: Population estimates and projections.



03. INDONESIA'S INFRASTRUCTURE CRITIQUES

INVESTMENTS IN INFRASTRUCTURE ARE NOW THE RESPONSIBILITY OF LOCAL GOVERNMENTS, DESPITE THEIR LACK OF ACCESS TO CAPITAL AND THEIR LACK OF CAPACITY TO IMPLEMENT SUCH PROJECTS

The decentralization process that took place in the late 1990's aimed to shift power in order to give local authorities more accountability and mitigate corruption. Unfortunately, since local governments had less access to capital, expertise, and technical capacity for infrastructure planning, decentralization also led to 22% less investment

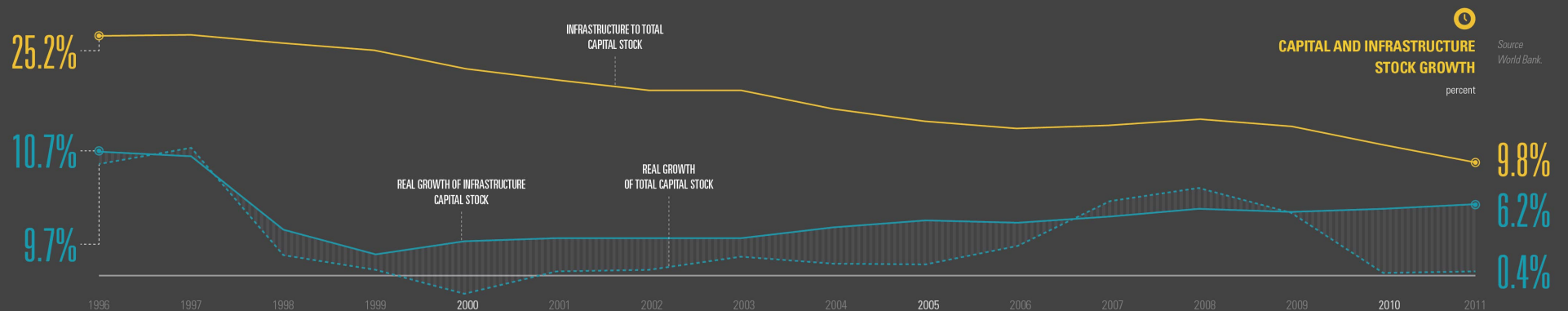
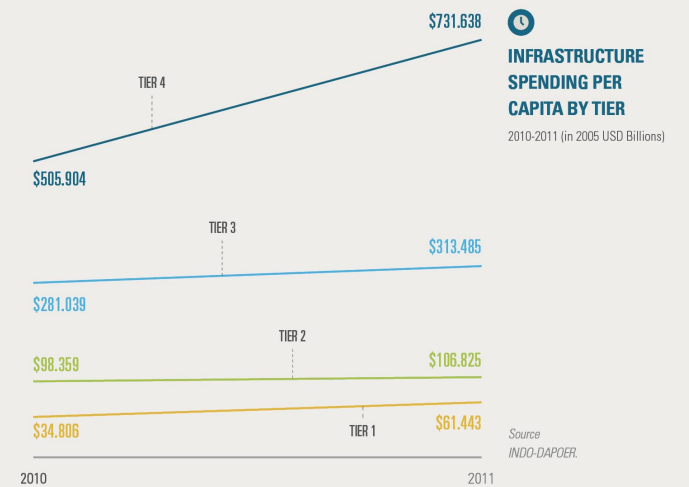
in infrastructure. Before the shift, sub-national governments accounted for roughly 25% percent of public investments in infrastructure; after the shift, they were directly accountable for roughly 65% of total public infrastructure investment expenditures.

Decentralization may have provided its cities more power to self-determine a bold new

future, but to do so they need enabling infrastructure. More specifically, Indonesia's great cities will need the capacity and the financing to plan and implement the infrastructure needed to reap the economic benefits that urbanization can provide. Without it, large cities like Jakarta, Surabaya, Makassar and Medan will face diseconomies associated with urbaniza-

tion, notably increasingly greater levels of congestion, pollution, slums and dire consequences from natural disasters.

Investments in infrastructure have gone to small cities over large cities, where the capacity to make use of financing is limited and where the impact of infrastructure will affect a smaller proportion of people. This is the result of an effort to decentralize growth throughout Indonesia, by prioritizing central transfers for infrastructure investments for smaller cities. As a result, city districts with populations of less than 500k have 3.3 times the level of public investments in infrastructure per capita as compared to larger cities, on average.



INDONESIA IS THE ONLY COUNTRY WHOSE MAJOR URBAN AGGLOMERATION IS LOSING PRIMACY



INDONESIA'S MAIN CITIES BY TIER

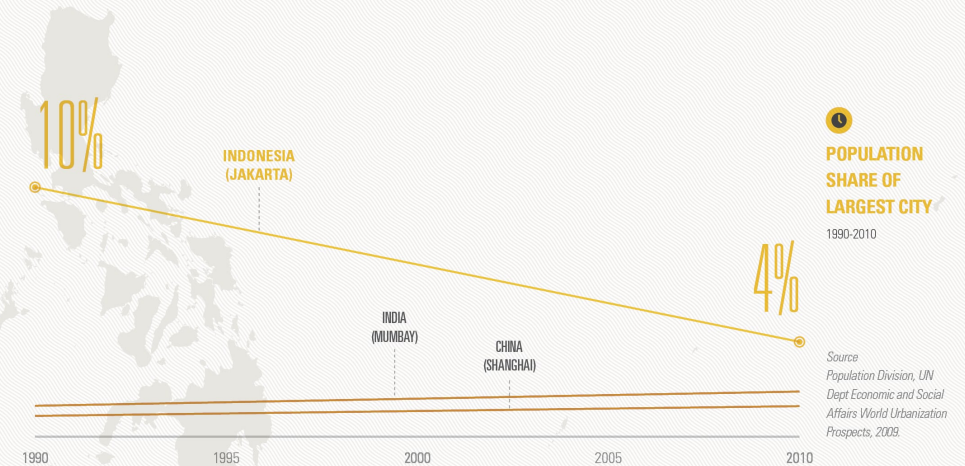
Source:
PUMA, 2015.

- Tier 1 cities
- Tier 2 cities
- Tier 3 cities
- Tier 4 cities

URBAN DENSITY
concentration of people

The efficiencies provided by agglomeration economies increase with scale, and as such, larger cities tend to grow at an exponentially faster rate. While Jakarta's growth reflected this dynamic during most of Indonesia's history, since 2000 it is the only major Asian economic capital that is not increasing in terms of its share of the country's population over time, or

'primacy'. In fact, second and third tier cities are growing at a much faster rate. The growth of second tier cities stems in part from explicit decentralization policies of the federal government



as well as the dysfunction that has come to define the first tier of cities of the country. Jakarta especially suffers from inadequate drainage

systems, acute traffic congestions, and other problems stemming from a general lack of infrastructure. Concentrating investment in large cities supports more people, while expanding sprawl and small city growth broadly leads to greater levels of pollution and deforestation.



TIER 2 CITIES ARE GROWING THE FASTEST

4.44%

POPULATION SHARE, AMONG KOTAS BY TIER

percent, 1990-2012
Source:
WDI, 2014.

While second tier cities are benefiting from greater levels of growth, they too soon will experience the diseconomies of scale associated with urbanization if the appropriate infrastructure isn't invested in. This is already occurring in Denpasar, a second tier city in which the population growth rapidly outpaced the city's investments in urban infrastructure. The response has largely been to try to limit growth, rather than to accommodate for it.