Boom or Bust:

Urbanization in Brazil and Indonesia

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Abstract

This article examines how two of the largest and economically diverse countries on two separate continents have developed through urbanization: Indonesia and Brazil. Indonesia is currently being inhabited across its more than seventeen thousand islands with massive urbanization in Jakarta. Brazil has experienced a long-term urban migration to a variety of cities. This article compares the histories of the two countries, their urban trends, and future initiatives to help with the massive influx of people.

I.   Introduction

Brazil and Indonesia have different histories and different economic structures. One commonality however is the massive urbanization that has occurred in both countries in recent years. The World Bank data shows that from 1970 onwards, both countries' total urban population has increased by more than thirty percentage points. Indonesia has now more than fifty percent of its population living in cities; Brazil has currently more than eighty-five percent of its population living in urban areas. With such an enormous influx comes a host of environmental, humanitarian, and policy issues.

Following this introduction, there will be a brief literature review of some major publications relating to urbanization in Brazil and Indonesia. The article will then provide some empirical background for both countries. The subsequent discussion section will review the main issues related to urbanization of the two countries, before the last section provides some conclusions.

II.   Brief Literature Review

Urbanization is a key issue in both Brazil and Indonesia, largely due to people migrating towards the cities from rural areas. This process of urbanization is well documented and examined in both countries in terms of extensive research by both the government and non-government sources.

- George Martin and Gordon McGranahan (2010) wrote the paper, "*Brazil's early urban transition: what can it teach urbanizing countries?*" for the United Nations Population Fund (UNFPA) and the International Institute for Environment and Development (IIED). It is one of the most extensive analysis with well-developed ideas concerning Brazilian urbanization and the results thereof. They dive into the main historical causes and why Brazil had such a different track than many other Latin American countries. It also examines the negative humanitarian and environmental effects of urbanization. Finally, they look at policy implemented by the Brazilian government in relation to urbanization.

- Taimur Samad, who is a Senior Urban Economist at the World Bank, made a presentation at the Australian National University in 2012 on "*Indonesia's Urban Development Towards Inclusive and Sustainable Economic Growth*". The presentation focuses first on the recent urbanization trends and comes to the conclusion that Indonesia's rapid urbanization is consistent with global experience. He then discusses the impact of population and economic concentration before linking urbanization and economic development to Indonesia's the Master Plan of Regional Development. He also examines the growth pattern of major cities and assesses the performance across metropolitan areas. The presentation concludes with some proposed policy actions, which differ based on class size of metropolitan areas.

- A PowerPoint Presentation entitled "*Demographic Patterns of Indonesia's Urbanization, 2000-2010: Continuity and Change at the Macro Level*" by Tommy Firman discusses the major trends of urbanization that have started to occur. He highlights his points through the use of a decade's worth of data from the Indonesian census and assesses the underlying trends of the data. This includes the major cities that have been migrated to and the impact of the island system upon urbanization

- "Urban Land and Housing Challenges in Brazil" is an article written by Heather Boyer (2005), which reports the results from a group of researchers who traveled through Brazil's urban housing structures to assess the situation. Boyer documents the groups findings and writes about the major housing problems associated with massive overcrowding, due to urbanization. Along with that, she also writes about the historical background that led to the major housing issues.

- Betty E. Smith (2010) discusses the overall implications of urbanization upon Latin America in her journal article entitled "Population and Urbanization in Latin America and the Caribbean". The article discusses some of the positive and negative implications of urbanization and how they were created. It also points to Brazil's city of Curitiba as one of the shining lights of policy in terms of urbanization.

III.   Empirical Background

Brazil is an upper middle-income country that has the world's largest dense rainforest. Indonesia is a lower middle-income country with thousands of individual islands. Despite many differences in landscape, both countries followed a similar trend of urbanization, with the share of urban population growing at about 30 percentage points since 1970. The increase of the urban population

of both countries is associated with economic growth but also lays the framework for many of the problems in their societies.

Figure 1 shows the purchasing power parity (PPP)-adjusted gross domestic product (GDP) per capita for both Indonesia and Brazil in 2011 dollars from 1990 to 2013. Brazil started at a GDP per capita of $9,997 in 1990, with progressive growth until 2013, when it reached $14,555. Indonesia's GDP per capita stood as $4,295 in 1990 and increased to $9,254 in 2013. Despite Brazil's impressive growth, Indonesia outperformed Brazil in terms of GDP per capita growth.

Figure 1: GDP per capita, PPP (constant 2011 international dollar)
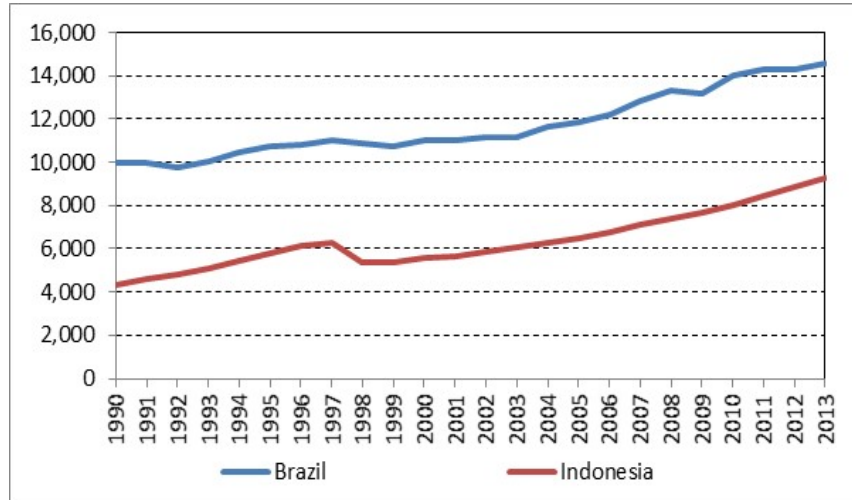
Source: Created by author based on World Bank (2015).

Figure 2 illustrates the evolution of life expectancy of both Indonesia and Brazil from 1970 to 2013. Indonesia's average life expectancy stood at 52 years in 1970, but grew steadily, reaching 70 years by 2012. Brazil's average life expectancy stood at 59 years in 1970, and also grew over the last four decades, reaching an average life expectancy of 73.6 years in 2012.

Figure 2: Life Expectancy at Birth, Total (years)
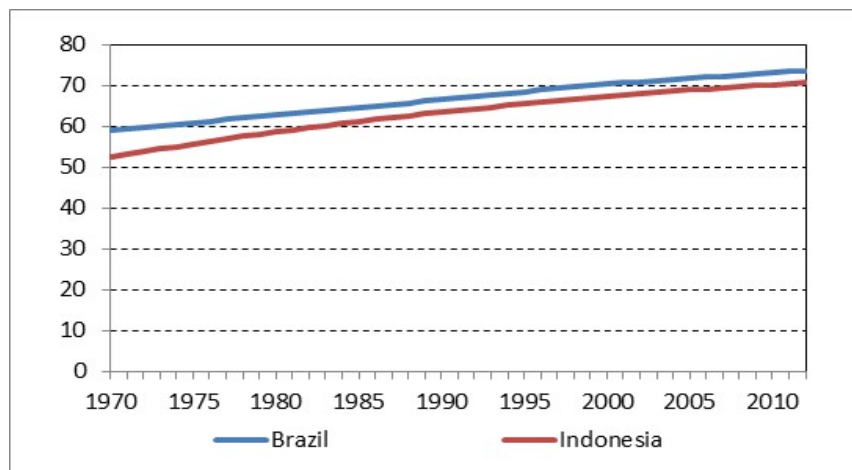
Source: Created by author based on World Bank (2015).

With the increase in GDP per capita and life expectancy came also an increase in adult literacy rates. There are considerable gaps in data availability, but as shown in Figure 3, Brazil had an adult literacy rate in 1980 of 74.5 percent, while Indonesia's literacy rate was at 67.3 percent. Literacy rates grew relatively sharply in the next 25 years, reaching close to 90 percent in 2004 in both countries, at which it more or less remained during the last ten years. What is worth pointing out is that Brazil's literacy rate was about seven percentage points above that of Indonesia in 1980, but that Indonesia slightly overtook Brazil by 2004.

Figure 3: Adult Literacy Rate (percent of people ages 15 and above)
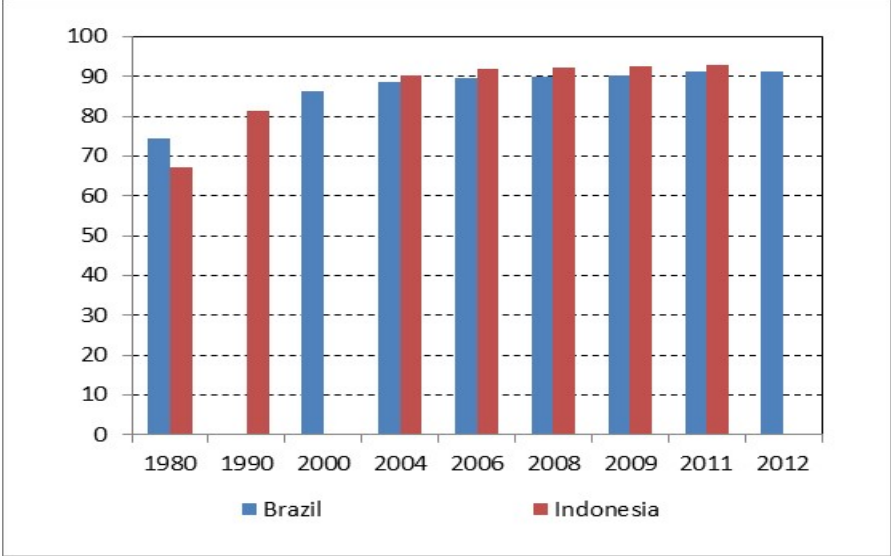
Source: Created by author based on World Bank (2015).

IV. Discussion

This discussion section is divided into two three major parts. The first sub-section will discuss the history of urbanization in Brazil and Indonesia and how they came to have such a large urban population. The second sub-section will discuss some of the key negative side effects of rapid urbanization, while the last sub-section will summarize some of the key benefits of urbanization.

IV.1. History of Urbanization

Brazil and Indonesia have drastically different histories which has caused very different trends of urbanization. The first is the radical difference in the time in which each country gained their independence. Brazil was first colonized by the Portuguese to capitalize on their abundant natural resources. This was at the peak of colonization and was very commonplace. The Portuguese invaders set up the base settlements, which became some of the largest cities in Brazil. They started inwards to extract resources but ended up creating cities along the coast to send the resources back to Europe. The two largest Brazilian cities: Sao Paulo and Rio de Janeiro, were built very close to the coast to provide for easy access to shipping. Early European settlers created a large impact upon the country as a whole.

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Indonesia was colonized by the Dutch and they united the islands under one rule in 1670. The Dutch settlers were focused on extracting a variety of natural resources across the thousands of Indonesian islands. Much like Brazil, the colonizers created cities around major areas with ease of export. Currently the largest city in Indonesia is Jakarta which sits directly on the coast.

Where the two countries differ in their colonial history is the time at which they gained independence. Brazil gained its independence in September of 1822. Indonesia, on the other hand, did not gain independence until far later in 1945. The time gap causes their relative urban patterns to be different.

Figure 4: Urban Population (percent of total)
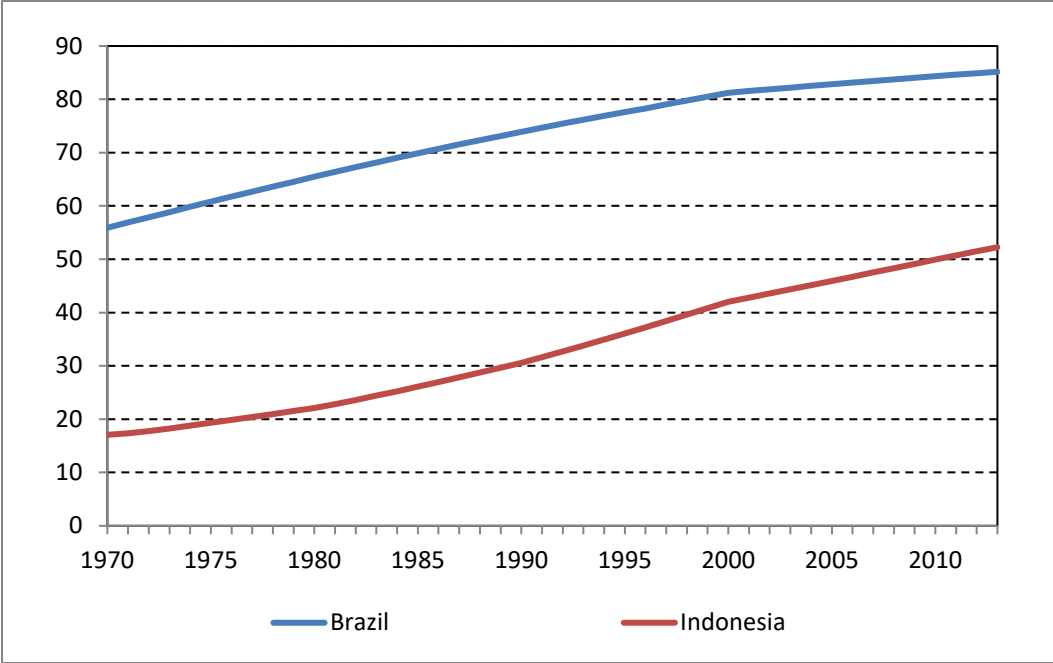
Source: Created by author based on World Bank (2015).

Brazil's earlier independence caused its urban population share to grow faster than Indonesia's. Figure 4 shows the percent of each country's population that is urban. Even as far back as 1970, Brazil's urban population was more than half of its total population, compared to Indonesia which had less than 20 percent of its population characterized as urban (World Bank, 2015). While the growth rate of urbanization was about equal between 1970 and 2010, Indonesia's urban population in 2010 was still a smaller percentage of its total than Brazil's in 1970 and by 2010, Brazil's urban population constituted more than 80 percent of its total population. According to the article "Brazils Early Urban Transition: What Can It Teach Urbanizing Countries?", Brazil had its first major urban boom in the 1930s. This was due primarily to the Great Depression and the massive downturn in agricultural prices making farming unsustainable economically. Plummeting agricultural prices along with a declining death rate created the beginning of an unprecedented migration into Brazilian cities.

Indonesia was not particularly affected by the Great Depression because all of their recourses were being outsourced by the Dutch to the Netherlands. Colonial rule and dependence on one economy sheltered Indonesia from this economic meltdown. Indonesia as a whole was not effected by urbanization until the early 1970s, after which it became also more vulnerable to the volatilities of the global economy.

Both of the two countries' largest cities, Jakarta and São Paulo, have seen massive growth in their population, shown in figure 5 below. These two cities have been at the core of some of the major problems that have erupted due to urbanization.

Figure 5: Population in Largest City (Jakarta for Indonesia / São Paulo for Brazil)
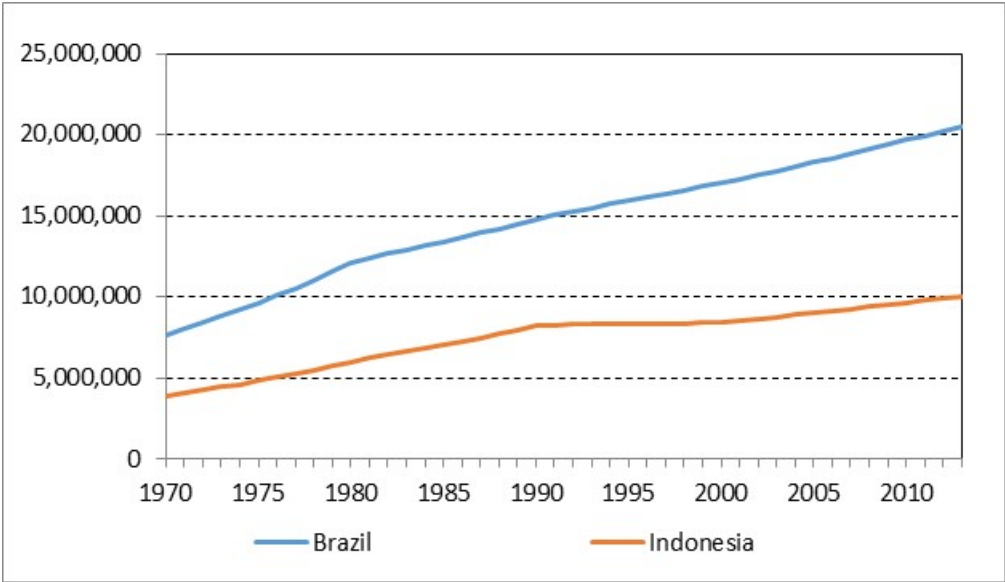
Source: Created by author based on World Bank (2015).

## IV.2. Favelas / Slums and Crime

Although urbanization is commonly regarded as a good thing, there are typically also negative side effects, like the emergence of favelas / slums and an increase in crime. These problems are usually associated to fast growing cities.

IV.2. a. Favelas and Slums

With the influx of people over the last 40 years came a host of problems for countries to deal with. Shown by the World Bank data in Figure 5, São Paulo multiplied its population by more than two and a half times in forty years (World Bank, 2015). Jakarta in Indonesia experienced a similar increase, doubling its population in the same time period. The major problems erupting from this rapid population growth is an absolute lack of housing availability. According to the Washington Post (2014) Brazil currently has a shortage of 6.4 million habitable housing units. The largest shortages are coming in both Rio and São Paulo. In Brazil, the housing shortage is compounded by a lack of affordability. As reported by Dewan and Dewi (2015), based on recent surveys, São Paulo is now the 10th most expensive city in the world, while Rio de Janeiro is in 12th position.

Significant housing shortages combined with very high housing prices has not stopped the massive migration of people into cities. Instead it has forced more Brazilians to live in inadequate favelas or slums. In many cases these favelas are built on the sides of hills. The favelas are poorly constructed, have inadequate plumbing and sanitation, and are mismanaged. However, even with the overwhelming number of favelas, Brazil has made impressive strides in trying to improve its urban conditions and public health, shown by figure 6. Brazil has significantly outpaced Indonesia, who is farther behind economically, in terms of ensuring potable, clean water for its residents. With the increase in clean water has comes an increase the health and sanitation rates across the country.

Figure 6: Improved Urban Water Source (percent of urban population with access)
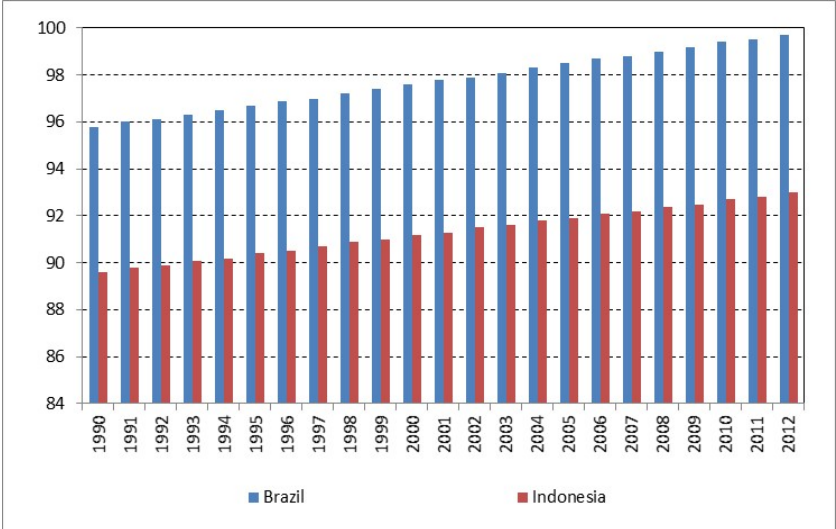
Source: Created by author based on World Bank (2015).

Indonesia has similar major housing shortages but stemming from a different cause. Indonesia has created a housing bubble after an influx of money from a tsunami in 2004. The influx in money caused one of the biggest upswings in housing prices in recent memory. As pointed out by Grazella (2013), the condominium prices of Jakarta rose between 11 and 17 percent on average between the first half of 2012 and 2013, after rising by more than 50 percent since late 2008. The average condominium price is now close to 80,000 US dollars (Grazella, 2013). This price inflation did not discourage urbanization. Instead it has created areas of extreme poverty next to areas of extreme wealth.

Jakarta is experiencing similar problems as Rio and São Paulo with extremely poor housing and sanitation, except that Jakarta's conditions are actually worse. The numbers tell a very depressing story with less than 50 percent of the city having access to piped clean water. Inadequate access to clean water and air pollution are major problems for the city. The premature death rate has risen to an exponential level. Jakarta has now one of the highest premature death rates per capita from air pollution (Lelieveld et al., 2013). However, this is mainly a problem within Jakarta, as shown by Figure 6, which shows that the rates of clean water in urban areas across all of Indonesia are

actually increasing. Indonesia has been making strides in their clean water infrastructure but with such massive urbanization occurring in Jakarta, the Indonesian government cannot keep up.

Both countries have this problem for a variety of major reasons: rapid and significant migration, poor planning and limited government response. In fact, the governmental response has been to discourage urbanization, which has failed and is the worst decision a government could make. Brazil has resorted to using military force to evacuate out squatters with rubber bullets and tear gas. This may sound harsh but the favelas they were living in were not only extremely unsafe but also run by drug lords. But forcing people out of the favelas without providing a reasonable alternative for both housing and sustenance can only fail. Indonesia has started an initiative to increase sanitation and housing but it currently has been somewhat ineffective. Both countries have had extremely similar problems with slums and the lives of those within them.

IV.2.b. Crime in major cities

With a large population in cities, crime is virtually inevitable. Brazil and Indonesia are two of the most notable in terms of problems with crime and safety. A major influx of people in such a short amount of time puts major stress on every aspect of society and especially public safety. The police have less control over the city and crime organizations take over areas of the city.

In both Brazil and Indonesia this loss of formal governmental and police control occurs predominantly in the slums and favelas of the major cities. Mehta (2014, 9th last paragraph) illustrates the breakdown of law and order in the Brazilian slums as follows: "But in the favelas there was no democracy. The traffickers continued with their own dictatorship; the people of the favela still had great trouble getting access to the courts or casting a vote." With crime being so commonplace in these areas, it is obvious that governmental action is needed. As described above, in one case the Brazilian military actually evacuated a favela with rubber bullets and tear gas to preserve the safety of the civilians and remove a drug lord's power.

Indonesia has had similar problems to the point where they have actually significantly increased their armed forces in the last 25 years. Similar to Brazil, Indonesia has had problems with crime. However, they do not have the same drug crime problem. Instead they have had major problems with street and digital crime. According to the "Jakarta Post" in the Safe City Index, Jakarta was ranked least safe amongst the 50 cities studied, which included places like Tehran, Iran. Much like Jakarta, Rio de Janeiro has had massive problems with crime across the cities, but especially in the slums. Unlike Rio, Sao Paulo has introduced a number of policies to combat crime and has had a steady decline in crime for many years. These policies include the eradication of many slums which are the base center of crime. Both Jakarta and Rio can take examples from São Paulo.

IV.3. Massive Benefits of Urbanization

Although much of the discussion above has been focused on the negative side effects of urbanization, both countries have excelled in the recent future. This was already illustrated in the Empirical Background section above. Hence, this sub-section focuses on the progress in reducing poverty by looking at the evolution of people living below the national poverty lines. As can be seen in Figure 7, both countries have some gaps in the availability of the data, however both countries have had a gradual downward trend since 2000. Indonesia in 2004 had a slight upward angle following their massive tsunami. After recovering from that the trend continued downward.

Both of the countries have the majority of their populations in urban areas so it is clear that the downward trend correlates in some ways with urbanization.

Figure 7: Poverty Headcount Ratio at National Poverty Lines (percent of population)
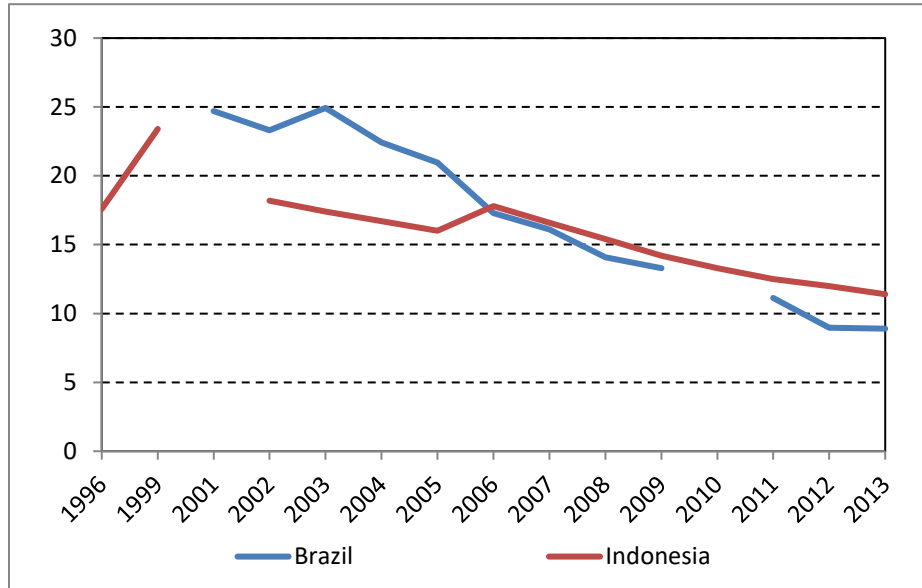
Source: Created by author based on World Bank (2015).

V.   Conclusion

Both Brazil and Indonesia have experienced a tremendous and overwhelming migration of residents from rural areas to urban areas. This has caused a rise in favelas / slums with inadequate sanitary conditions as well as increased crime. However, as was shown above, based on the increased GDP per capita, increased life expectancy, increased literacy rates, and reduction in people living below the national poverty lines, we can come to the conclusion that urbanization may be doing more good than harm. Both governments are also striving to improve conditions in their major cities but response is slow in comparison to the onslaught of people with needs. Other countries experiencing urbanization can learn from Indonesia and Brazil by trying to recognize an urbanization trend and investing in infrastructure like housing, water, and police presence as quickly as possible.

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