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Population trends in BRICS: Developments and projections

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Abstract

The purpose of the article is to analyze population trends in the BRICS countries in the period from 2000 to 2019 based on local realities and socio-economic indexes, as well as to study projections up to 2050. The article also explores initiatives of the United Nations Population Fund (UNFPA) in the field of demographic research relevant to BRICS, such as fertility, birth, and mortality rates. Thus, it is possible to determine the main characteristics of the population of the BRICS countries, their challenges and objectives, which allow us to predict with an eye to 2050 and the dynamics of the evolution of each member of the international cooperation grouping. Overall, it is argued that urbanization processes were one of the key factors driving population trends in the BRICS countries, especially those related to lower fertility rates. Finally, the current situation of BRICS in the international scenario is evaluated, given the explored attributes, with an emphasis on the importance of public policies favorable for the full development of the potential of the BRICS population. Therefore, member states' initiatives to promote higher levels of social welfare are investigated, as well as their benefits to local peoples, who together account for more than 40% of the world's total population.

Keywords: BRICS, demography, population, life expectancy.

JEL: J00, J11.

Introduction

The rise of BRICS as a cooperation grouping on interstate relations highlights particular processes of socio-economic and population growth. This group differs from other countries by specific dynamics of economic growth and development, and social inequality in their historical processes. If we consider BRICS as the main emerging

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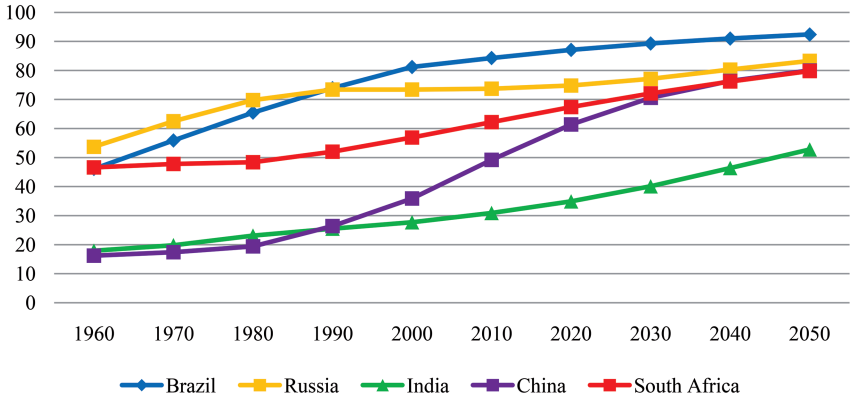
countries, their developmental experiences and social characteristics are peculiar, and they differ from each other. However, in a particular historical context, these countries have similar characteristics: development and economic growth are considered equivalent and associated with reducing poverty and inequality (BRICS Policy Center, 2013).

From the point of view of development theory, BRICS is at a decisive moment: its societies and economic activity profiles are changing from emerging to developed. According to Chang (2003), the development strategy of the current protagonists of the global economy was devised, first, on the basis of state initiatives, by prioritizing public investments and shaping scientific and technological development. After this embryonic stage, these countries preached such elements of their foreign policy as economic liberalization and its consequent deregulation as a way to guarantee their entry into international markets and hinder the rise of new developing countries — possible competitors that would develop along the same trajectory.

Therefore, BRICS as a cooperation grouping in the international system faces great challenges since on a global scale there is a process of maintaining inequalities in production and technology, which demystifies liberal precepts (mainly the self-regulation of markets) and reinforces peculiarities of each country's historical development. Thus, it is necessary to emphasize different processes and models of economic development evolving from constant interstate competitive pressure and uneven development. As a cooperation grouping on mutual assistance, BRICS seeks joint initiatives among its countries in order to strengthen each other and achieve their foreign policy goals.

As far as demographic research is concerned, BRICS is of paramount importance since despite integrating only five nations, they represent more than 40% of the world's population, and it is expected that in 2020, these countries will host 20% of the world's urban middle-class (Haffner & Monteiro, 2011).

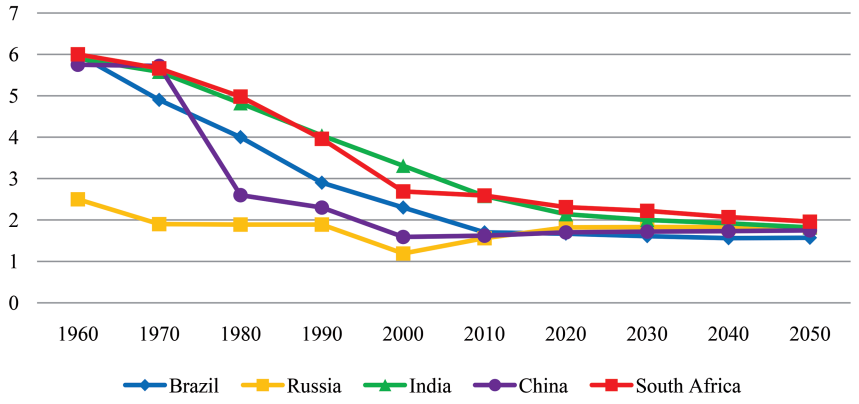
Throughout the second half of the 20th century, as well as in the following decades of the current one, the BRICS countries experienced higher levels of urbanization, which affected their population trends. Urbanization — that is, the population living in towns and cities — as a process is widely seen as one of the key factors in reducing fertility rates, and, consequently, reducing population levels in future generations due to higher levels of education and services (such as contraception) provided in urban regions (Martine et al., 2013). As a theoretical reference, this article analyzes correlations between urbanization levels and lower fertility rates that result in future low population growth in the BRICS countries later in the 21st century. Despite the fact that each of these countries faces its own specific challenges, which will be discussed later, all five societies have in common a steered urbanization trend. Figure 1 illustrates the processes of urban population growth and low fertility rates in the BRICS countries that have been going on for decades.



Note: Apart from India, which is still at an early stage of urbanization, all other BRICS countries are already highly urbanized societies (especially after the significant growth of cities in the 20th century) characterized by steady economic development.

Source: UNFPA (2019), author's elaboration.

Figure 1. Evolution of urbanization rates in the BRICS countries, from 1960 to 2050 *(projections for 2019 and beyond)*



Note: In all BRICS countries, even in India where most of the population is not urbanized, the fertility rate is estimated to be 2,1 children per woman or lower, which indicates that population is expected to decrease in future generations. Among demographics studies, there is a correlation between the urbanization rate and low fertility rate since urbanized families tend to have fewer children.

Source: World Bank (2018), UNFPA (2019), author's elaboration.

Figure 2. Total Fertility Rates (TFR) in the BRICS countries, from 1960 to 2050 *(projections for 2019 and beyond)*

As in their trade relations, current trends indicate mutual strengthening of the BRICS countries in the coming decades, which in relation to their demographic problems is summarized in the discussion points presented at the first meeting of BRICS Ministers

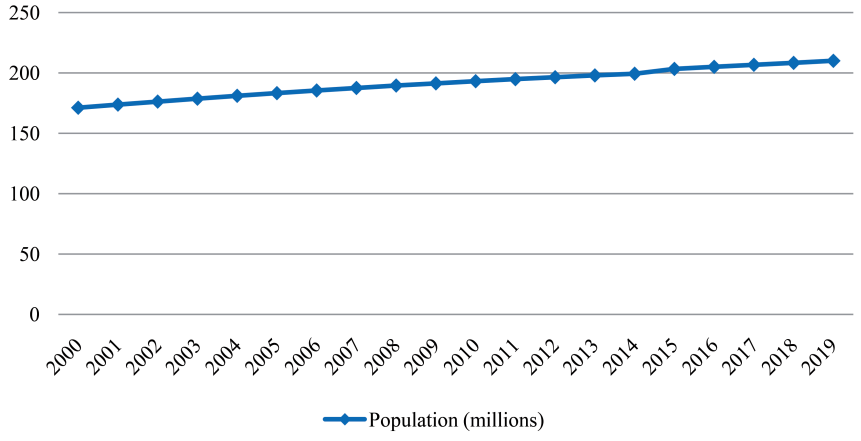
Responsible for Population Issues held in February 2015, in Brasília. The objective was to discuss relevant topics with a group equivalent to 2.9 billion people and develop a joint exchange of views on population and development issues. These topics were:

- Maternal mortality
- HIV/AIDS and sexually transmitted diseases
- Rural-urban migration and urbanization
- Aging and intergenerational transfers
- Gender differences in the labor market
- Gender equality and the role of women in caring for dependents *(children and elderly)* (UNFPA Brasil, 2015).

This article analyzes the most relevant demographic topics for each BRICS society, based on their specific and joint experiences and dynamics with an emphasis on the determining factors of population dynamics and social development of the member countries. The presented data, divided into sections, each dealing with one BRICS country, analyze the demographic evolution there in the period 2000–2019, establishing further trends until 2050 based on data from the United Nations Population Fund (UNFPA). All evolution data do not measure international migration flows — the so-called zero-migration variant (UNFPA, 2019) — which tend to affect the total number of migration hotspots. Therefore, all projections require constant updating — at least every decade — especially for countries with significant inflows and outflows of international migration.

1. Brazil: Aging and demographic transition

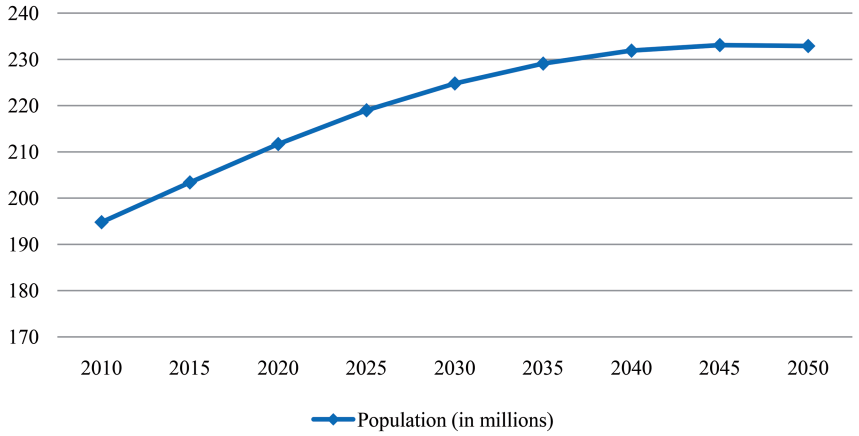
In Brazil, demographic analysis indicates considerable growth of population between 2000 and 2019; on average, about 1% per year: from approximately 170 million inhabitants in 2000 to 212 million in 2019 (Figure 3).



Sources: Instituto Brasileiro de Geografia e Estatistica (2020), author's elaboration.

Figure 3. Evolution of the Brazilian population between 2000 and 2019 *(millions of inhabitants)*

According to Figure 3, in addition to the decline in population growth, there is a future stabilization and reduction in the population of Brazil, a problem that will become a reality in the 2040s, according to Instituto Brasileiro de Geografia e Estatistica (2020). This forecast shows an increase in the life expectancy of Brazilians: from 70.4 years in 2000 to 76.5 years in 2019; as well as a decrease in the birth rate: from 21.13 births per thousand inhabitants in 2000 to 14.2 in 2019. The following Figure 4 illustrates IBGE projections for the evolution of the Brazilian population by 2050.



Note: After a population peak in the 2040s, there is the beginning of a slight decline in the population.

Sources: Instituto Brasileiro de Geografia e Estatistica (2020), author's elaboration.

Figure 4. Evolution of the Brazilian population *(decades, until 2050)*

According to the graphs above, Brazilian population is at the final stage of growth, which will continue, approximately, until the 2040s, with a population peak close to 230 million inhabitants. Since then, there is a slight decrease, i.e. a higher mortality rate than birth rate per year. Therefore, it is necessary to identify the main causes for this effect: aging of the population and demographic intergenerational transition. According to Giambiagi and Pinheiro (2012), the number of children is decisive for the age groups of Brazilians: in 2050, those aged 0 to 14 will represent just over half of their number in 2010, while the elderly will triple if the same time frame is analyzed.

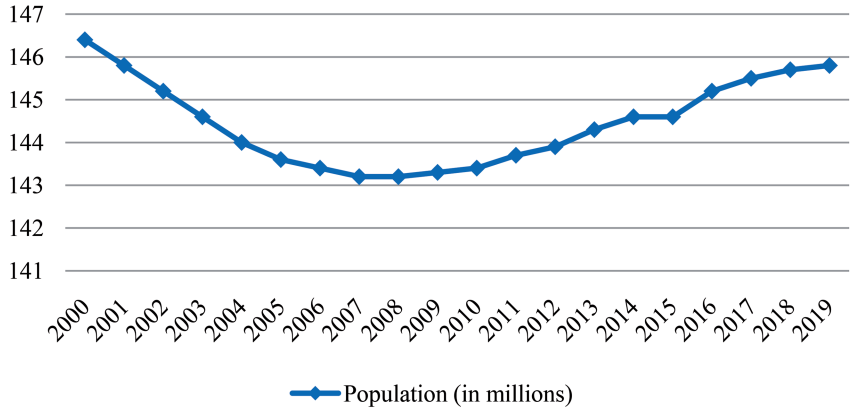
The demographic trends illustrated by Figures 3 and 4 highlight an unprecedented fact. This aging of the Brazilian population is accompanied by an increase in life expectancy, which is expected to be 81.2 years in 2050 (Instituto Brasileiro de Geografia e Estatistica, 2020). Therefore, one of the main population challenges for Brazil is the development of public policies necessary to manage the aging of Brazilians; this mainly concerns reforms in social security and productivity growth in national economy, since further economic development will be based on fewer young workers.

Estimates made by Giambiagi and Pinheiro (2012, p. 207) indicate that in the next 40 years, Brazilian GDP per employee should increase by 3.3% annually, so that GDP *per capita* will also grow by 3% per year, as there is no significant growth in the economically

active population. Thus, in the case of Brazil, public policy should focus on the growth of productivity of the Brazilian economy, so that the country maintains economic development and improves the standard of living.

2. Russia: Stagnation and fecundity

Regarding the Russian population, as shown in Figure 5, there was a slight decline in the first half of the 2000s: from 146 million people in 2000 to less than 144 million in 2005; the next half showed stagnation that remained stable until 2010. In the following decade there was a slight increase in contrast to the previous one. The population estimate for 2019 is a return to the data recorded in 2001, which indicates a timid recovery. However, compared to 2000, the population of Russia is still declining, and it is also declining compared to its peak registered in 1992: 148.5 million. Therefore, Russia has been experiencing population stagnation for almost three decades.

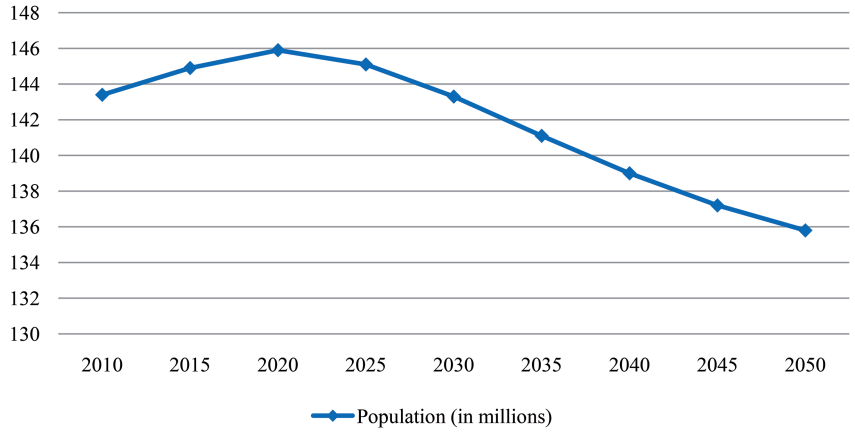


Note: First there is a decline in the population, then stagnation and a slight recovery.

Sources: UNFPA (2019), author's elaboration.

Figure 5. Evolution of the Russian population from 2000 to 2019 *(millions of inhabitants)*

According to demographic research carried out by the United Nations Department of Economic and Social Affairs, the trend from 2014 to 2050 is a continuous decline of the Russian population, mainly from the decade of 2020, as shown in Figure 6. It demonstrates the aging of the Russian society, whose average age since the same decade is more than 40 years. Therefore, from the population point of view, this is a serious problem, since the real decline is accompanied by the maintenance of fertility rates below the population replacement level set at 2.1 births per woman (United Nations. Department of Economic and Social Affairs.., 2019). According to former Deputy Minister of Labor and Social Protection of Russia, Sergey Velmyaykin, the BRICS states, like Russia, have "...a wide range of problems that affect our populations, such as aging and migratory waves. Our work should seek mutual goals" (AgênciaBrasil, 2015).



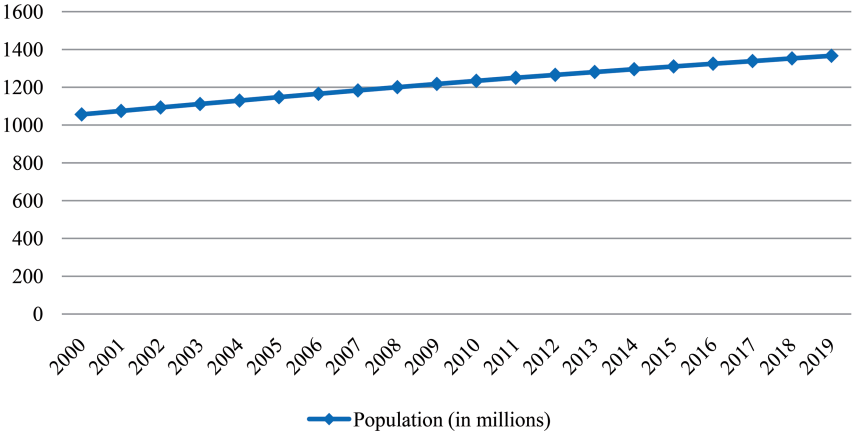
Note: There is a population peak of around 146 million people in the 2020s, while in 2050, a continuous decrease to about 136 million is projected.

Sources: UNFPA (2019), author's elaboration.

Figure 6. Evolution of the Russian population from 2010 to 2050 *(millions of inhabitants)*

3. India: Urbanization and growth

The Indian population, currently the second largest, continued to show record growth during the first decade of the 21st century and beyond. From 2000 to 2019, according to Figure 7, the number of Indians grew from just over 1 billion to almost 1.36 billion inhabitants, equivalent to an average of 2% per year. Despite not very high growth rates due to the size of the population, the absolute number of Indians born during



Note: The population is increasing by 2% per year, reaching approximately 1.36 billion people in 2019.

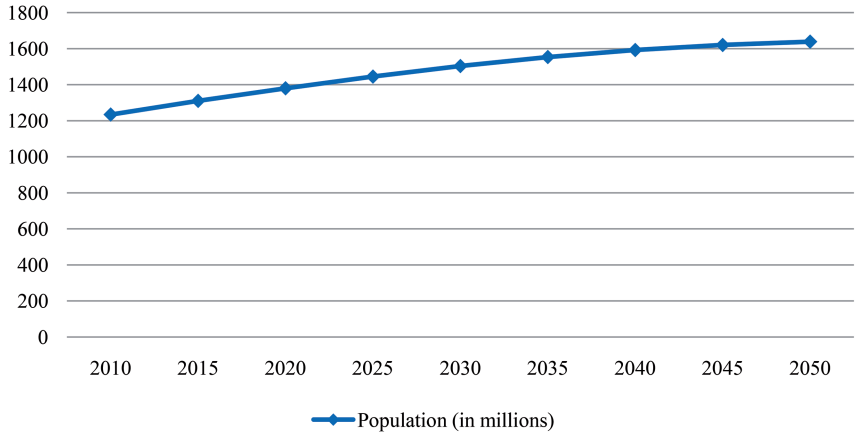
Sources: UNFPA (2019), author's elaboration.

Figure 7. Evolution of the Indian population, from 2000 to 2019 *(millions of inhabitants)*

this period was sufficient to overcome the total Brazilian population. This highlights the challenges the country faces in terms of overpopulation and migration dynamics: currently, urbanization is equivalent to 10% of the world's urban population divided into 35 metropolitan regions, which gives it a large margin for expansion, as only one-third of Indians live in urban areas (Sandhu, 2005).

In the post-independence period, a new model of economic activity has developed in India, concentrated in Calcutta, Mumbai and Chennai, which has led to significant social polarization and various stages of internal development. This uneven growth has resulted in overurbanization of provinces such as Chandigarh and Delhi (more than 80% of the urbanized population), which is very different from provinces like Bihar and Sikkim (approximately 10% of the urbanized population). Therefore, India's internal dynamics and migration flows are associated with concentrated economic growth in some provinces, resulting in different urbanization patterns across the country (Sandhu, 2005).

According to UN research, in the 2020s, the Indian population overtakes the Chinese in size and steady growth to reach 1.6 billion inhabitants, while China reaches its population peak around 2030 and begins a period of decline from then on.



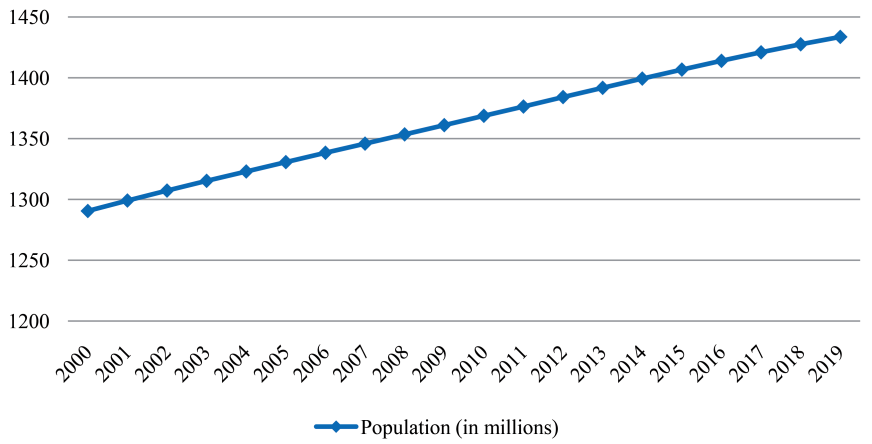
Note: The growth pace is decreasing throughout the decades; however, by absolute numbers, India is gaining approximately 400 million habitants until 2050.

Sources: UNFPA (2019), author's elaboration.

Figure 8. The Indian population growth from 2010 to 2050 *(millions of inhabitants)*

4. China: Urbanization and birth

Over the past three decades, the Chinese population has experienced an intensive urbanization process stimulated by vigorous industrialization. According to the Chinese National Bureau of Statistics (NBS), its urban population reached 60% in 2019; since 2012, most Chinese live in urban regions (Xinhuanet, 2020). As illustrated by Figure 9, more than 848 million Chinese are living in cities.



Note: Chinese authorities claim that over 60% of the population lives in urban areas, which is equivalent to more than 800 million inhabitants.

Sources: UNFPA (2019), author's elaboration.

Figure 9. Evolution of the Chinese population from 2000 to 2019

The growth of the Chinese urban population occurred at a time when the "one-child policy" was enforced in the cities. The official family planning policy, known worldwide as the "one-child policy," was announced on January 1, 1979, in response to China's serious demographic problem of overpopulation. Families were allowed to have only one child, both in rural and urban areas, and thus they received an "only child certificate." To ensure effectiveness in practice, every fertile couple had public access to contraception.

While criticism of such drastic methods was high in the early years, there were changes in strategy since the second half of the 1980s. To prevent this policy from completely failing in rural China, which strongly opposed strict compliance with such measures, some exceptions were created to make it more pleasant: authorizations for the birth of a second child for rural families with a daughter as the first child, as well as in urban areas if the first child was disabled or died; rural minorities were allowed to have two children, but government surveillance was not applied in the same way as to the Han, the broad ethnic majority in mainland China, being less strict to the former (Gomà, 2011).

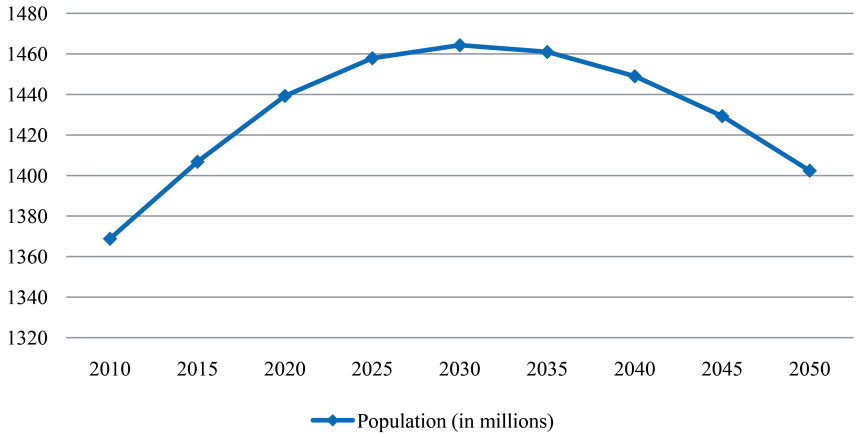
As in the 1990s, since 2001, family control policy was further strengthened, both in relation to inspection officers and official propaganda and in relation to legal regulations, despite the satisfactory results in maintaining the total population below 1.4 billion until 2010.

However, in October 2015, the CCP announced that it was ending support for the so-called "one-child policy" that had been initiated 35 years earlier. In the five-year plan for 2016–2020, this measure was replaced by another "...that allows each couple to have two children as a proactive response to the aging of population" (Domingo & Pérez, 2016). As stated above, in response to the rapid aging of the population, birth control came to be seen as a threat since the fertility rate fell sharply over several decades: from about 5.5 children per woman in 1970 to just over 1.5 children in 2010.

In response to the increase in the number of elderly people over 64, who represent 17% of the Chinese population, the national government has renounced the "one-child policy" as an attempt to maintain a stable population level and delay its decrease, which seems inevitable due to the continuous improvement of sanitary conditions, life expectancy, currently close to 80 years, and the fall in the fertility rate (Domingo & Pérez, 2016).

This birth control proposal by the Chinese Communist Party prevented the birth of approximately 400 million Chinese since the 1980s, which contributed to a premature decline of the economically active population, which registered its first drop of about 3.5 million in 2012 (Agência Lusa, 2013). These restrictions, due to the accelerated aging process of Chinese society, were revised in order to allow the Chinese youth population to grow again.

Figure 10 allows to identify the government's goals for changing birth policies by observing a decline in the Chinese population starting from 2030.



Note: The Chinese population peak is expected in the 2030s, followed by a sharp decrease in the following decades. In order to try to reverse this trend, the CCP proposed a revision of the strict birth control policy in urban zones.

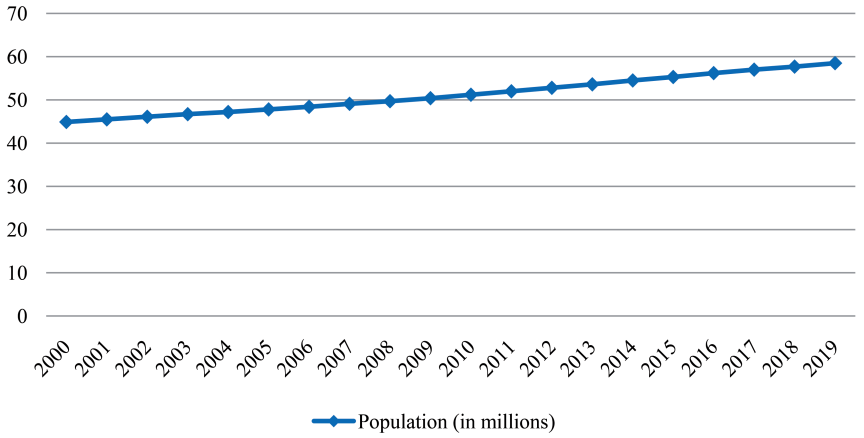
Sources: UNFPA (2019), author's elaboration.

Figure 10. Evolution of the Chinese population from 2010 to 2050

5. South Africa: Maternal mortality and HIV

The main population problems in South Africa are related to sexually transmitted diseases, especially HIV, and the high maternal mortality rate — 119 maternal deaths per 100 thousand births in 2017. As for HIV, it is a recurring theme in public health policies; South Africa is considered the country with the highest number of people infected with HIV — approximately 7.7 million in 2018, equivalent to 20% of the adult population. The epidemic is an important factor in the mortality structure of the country, while HIV-related deaths account for about a quarter of all deaths in the country. Therefore, despite

the young population, mortality is also high, which affects the low life expectancy in South Africa, estimated at 64 years (Central Intelligence Agency, 2020).

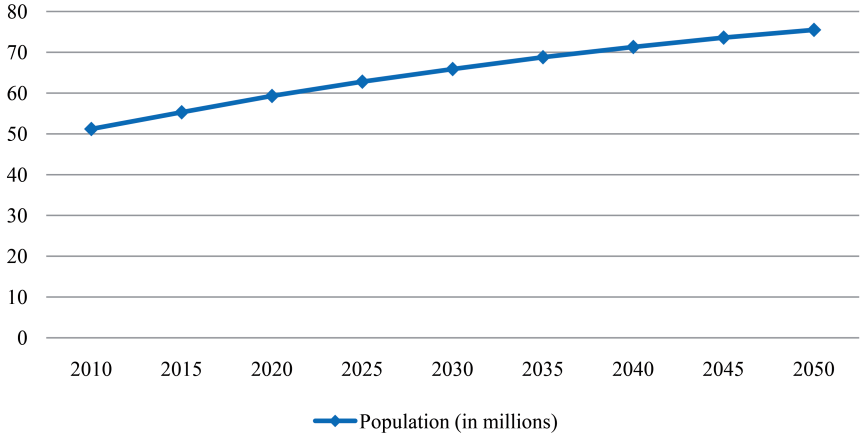


Note: During the first two decades of this century, there has been a stable and gradual growth due to high mortality rates, despite the young population — 27.9% under the age of 14.

Sources: UNFPA (2019), author's elaboration.

Figure 11. Evolution of the South African population from 2000 to 2019

South Africa's population continues to grow steadily over the next decades, while trends indicate annual growth rates below 1%. Therefore, the same current population challenges of the country remain equally relevant for the public policy in the long run. As shown in Figure 12, South Africa's population will exceed 60 million in the 2030s and will continue to grow gradually, approximately, by 25 million over four decades.



Note: There is a gradual increase, but it is characterized by persistently high mortality rates combined with a relatively low life expectancy of 64 years in 2020.

Sources: UNFPA (2019), author's elaboration.

Figure 12. Evolution of the South African population until 2050

Final considerations: BRICS on population issues

BRICS, a cooperation group formed by major emerging economies, has the potential to become one of the main forums for discussing population issues, as the countries bring together a group of more than 3 billion inhabitants — equivalent to approximately 40% of the world's population — and economic and demographic factors are seen as an opportunity for sharing experiences and cooperation (UNIC Rio de Janeiro, 2015). Due to the common trends in urbanization levels and declining fertility rates among emerging countries, BRICS as a group has a potential to cooperate on population issues, as well as exchange experience and address challenges on previously established priorities. Forums promoted with the support of the United Nations Population Fund (UNFPA) jointly discuss issues relevant to BRICS: maternal mortality, HIV and sexually transmitted diseases, urbanization, aging, and others. Therefore, according to Benoit Kalasa, director of the Technical Division of UNFPA, "...the benefits and potential of BRICS experiences are evident in many areas, especially on population" (UNIC Rio de Janeiro, 2015).

Furthermore, based on such exchanges, BRICS experts can discuss gender issues, such as efforts to ensure equality in labor market and gender equality. Such debates, according to Brazilian diplomat Carlos Paranhos, are important, because "The dialogue between BRICS countries is essential to better protect and promote the rights of all population groups, guaranteeing our populations higher levels of economic and social welfare" (BRICS Civic Forum, 2015).

A commitment to mutual cooperation in BRICS is essential to implement a unified policy to overcome the challenges that exist in each country. A single platform for discussions and exchange of information and experiences on population issues allows the member states to mutually strengthen the protection of the rights of their populations, so that economic development ensures a higher level of social welfare of their peoples.

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