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Brazil at Mid-Century

In 1950, Brazil was still in many ways a traditional society. The majority of the population lived in rural areas and just over a third lived in towns. Agriculture absorbed almost three-quarters of the male labor force and manufacturing accounted for only 13% of employed workers.¹ Over half of the population 15 years of age and older could neither read nor write,² with women being more illiterate than men.³ It was also a traditional society in demographic terms, with very high fertility and mortality making it a classic pre-modern society. Women had on average over 6 children (total fertility rate for women in their fertile years), making Brazil's crude birth rate of 44 per 1,000 resident population one of the highest in the world. Its crude mortality rate of 20 was high even by Latin American standards.⁴ The country was also split between a poor Northeast region whose standard of living was that of India and a Southeastern region whose living standard was close to that of Belgium.⁵ But it also had tremendous potential. Its 52 million persons in 1950 made Brazil the eighth largest country in the world in terms

¹ These percentages exclude inactive males and males who were students or in unpaid domestic labor. IBGE, *Recenseamento geral de 1950*, Série Nacional, Censo demográfico, vol. 1 (Rio de Janeiro, 1956), pp. 26–29, Table 22.

² IBGE, *Estatísticas do Século XX* (2003), Table pop_S2T02.

³ Some 60% of the women were literate compared to 54% of the men. More than half of white men and Asian men and women and 49% of white women were literate. Among browns and blacks, the literacy rate was less than 30% for both men and women. IBGE, *Recenseamento geral de 1950*, Série Nacional, vol. 1, p. 20, Table 17.

⁴ For the crude birth and death rates in 1950, see IBGE, “Séries históricas e estatísticas,” Tables POP 201 and POP 261. Accessed at: <https://seriesestatisticas.ibge.gov.br/series.aspx?t=taxa-mortalidade-infantil&vcodigo=CD100>.

⁵ Edmar Bacha and Herbert S. Klein, eds., *Social Change in Brazil, 1945–1985: The Incomplete Transformation* (Albuquerque: University of New Mexico Press, 1989), p. 3.

of population and it was ranked fifth in land mass. The per capita GDP in 1950 was US\$ 952 (in 1995 dollars) and the national GDP stood at US\$ 463 billion.⁶ At 6.1 persons per square kilometer it was one of the less-densely populated of nations and still had an open frontier with great potential.⁷

But the population was still living below advanced world standards in a host of indices. Its high levels of poverty and lack of infrastructure in health and sanitation meant that the average life expectancy at birth had only reached the lower 50s by mid-century. Brazilians were then averaging 10 to 15 years less of life expectancy than Argentines, Uruguayans, or even Paraguayans, all neighbors in this year of 1950. This difference existed for both sexes. Brazilian men averaged 49.1 years of life in 1950, 14 years less than Uruguayan men, and Brazilian women averaged 52.8 years of life, some 15 years less than Uruguayan women.⁸

But these indices of birth, death, and life expectancy were slowly changing. In the first national census of 1872, life expectancy was only in the upper twenties for both men and women.⁹ Life expectancy in 1910 reached 34.6 years for both sexes and slowly increased to 37.3 years by 1930, representing an increase of 0.4% per annum. Change was faster in the next two decades, with life expectancy now increasing at 1.7% per annum and reaching 52.3 years for both sexes combined by the early 1950s.¹⁰ By 1950, Brazilian life expectancy was finally reaching the middle ranks of the Latin American Republics and was just below the regional average life expectancy (see Graph 1.1).

The primary reason life expectancy was so low compared to its neighboring countries was the fact that Brazil still had a very high infant

⁶ Carlos Roberto Azzoni, "Concentração regional e dispersão das rendas per capita estaduais: análise a partir de séries históricas estaduais de PIB, 1939–1995." *Estudos Economicos* 27.3 (1997), Tables A2 and A3.

⁷ Density is taken from Giorgio Mortara, "The Development and Structure of Brazil's Population," *Population Studies* 8.2 (1954), p. 134. Population ranking is taken from www.un.org/esa/population/pubsarchive/india/20most.htm#1950. Size as of 1961 is taken from <https://data.worldbank.org/indicator/ag.lnd.totl.k2>.

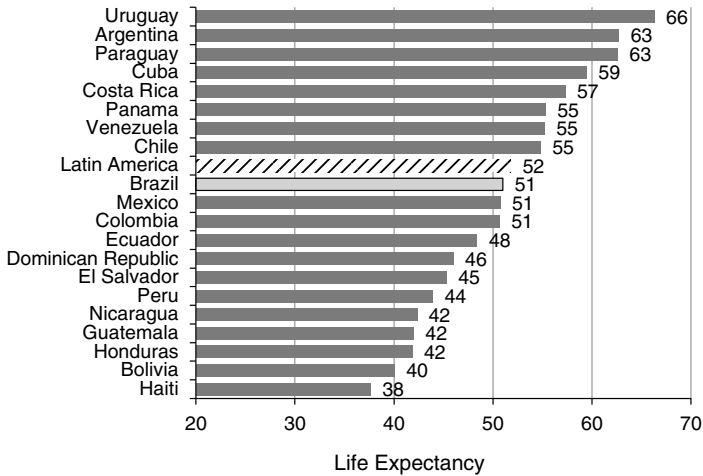
⁸ CELADE, *Observatorio demográfico* 3 (2007), pp. 33–37, Table 5.

⁹ Eduardo E. Arriaga, *New Life Tables for Latin American Populations in the Nineteenth and Twentieth Centuries* (Berkeley: Institute of International Studies, University of California, 1968), pp. 29–35, Tables III-3–III-6.

¹⁰ IBGE, "Séries históricas e estatísticas," Table POP 209. Accessed at: <https://seriesestatisticas.ibge.gov.br/series.aspx?no=10&op=0&vcodigo=POP209&ct=esperanca-vida>. CELADE current estimate for 1950–1955 is only 51 years for both sexes for Brazil, a year lower than the IBGE estimate. CELADE, *Observatorio demográfico* 3 "Population projection," p. 33, Table 5.

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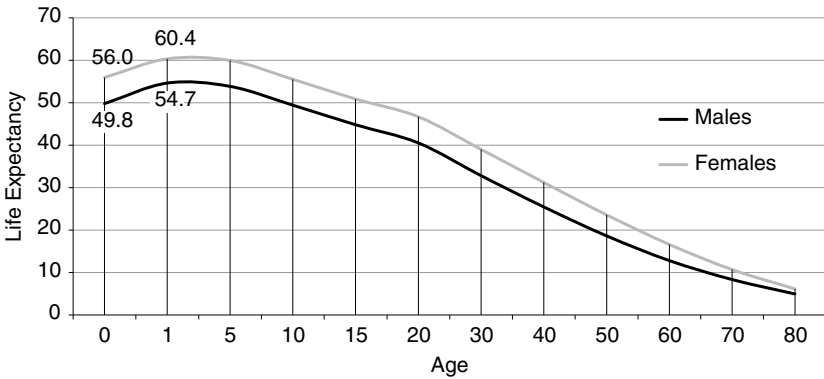
GRAPH 1.1 Life Expectancy (Both Sexes) by Country, Latin America, 1950–1955
 Source: CELADE, *Observatorio Demográfico 3* (1977), p. 35, Table 5.

mortality rate at mid-century. Its infant mortality rate was 135 deaths per 1,000 live births, a rate that was double or more than its Southern neighbors and even above the 128 deaths average rate for Latin America.¹¹ The same occurred with the child death rates (that is, children under the age of 5 dying per 1,000 live births). In 1950, it was 190 deaths of children under the age of 5 per 1,000 live births, which was close to the Latin American average but much higher than its southern neighbors, including even Paraguay (which was just 102 deaths).¹² Given these still very high child and infant mortality rates in the pre-modern period, a significant number of children died before their fifth birthday because of compromised socio-economic and disease conditions. In fact, almost a quarter of deaths reported in 1950 were to people under 15 years of age. This compares to only 9% of persons dying by that age in 1950 in the United States.¹³

¹¹ CELADE, *Observatorio demográfico 9* (2010), p. 48, Table 6. For a general discussion of pre-1950 patterns of fertility and mortality, see Mortara, “The Development and Structure of Brazil’s Population,” pp. 121–139, and Elza Berquó, “Demographic Evolution of the Brazilian Population in the Twentieth Century,” in Daniel Joseph Hogan, ed., *Population Change in Brazil: Contemporary Perspectives* (Campinas: NEPO/UNICAMP, 2001).

¹² CEPALSTAT. Accessed at: <http://interwp.cepal.org/sisgen/ConsultaIntegrada.asp?idIndicador=37&idioma=e>.

¹³ CELADE, “Brasil: Tablas Abreviadas de Mortalidad, 1950–55,” *Boletín demográfico. América Latina: Tablas de Mortalidad, 1950–2025*, 34.74 (2004), p. 62, Table 14, and Felicitie C. Bell and Michael L. Miller, *Life Tables for the United States Social Security*



GRAPH 1.2 Average Life Expectancy for Brazil by Sex, 1949/1951
 Source: IBGE, *Estatísticas do Século XX*, Table Saúde1952AEB-02.

Life expectancy at this stage of demographic development was mostly determined by changes in infant mortality. The impact of these high rates of infant mortality can be seen in 1950 in the differences in life expectancy for both men and women at birth and after one year of life. If one survived the first year of life, then 4 to 5 years were added to life expectancy (see Graph 1.2).

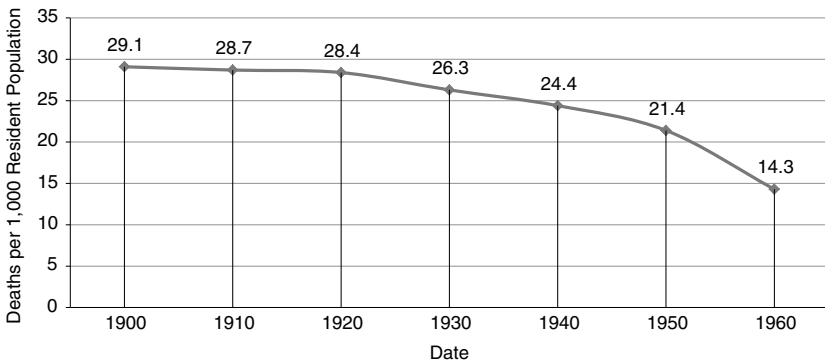
But despite its relatively higher mortality rates compared to its immediate neighbors to the south, Brazil in this period was finally beginning to experience a more rapid rate of decline in mortality, especially among newborns. This slow decline in mortality began earlier, with systematic vaccination and sanitation movements in the period from the 1890s to the 1910s, which were particularly important in lowering mortality levels in the expanding urban areas. It was a pattern common to all Latin America countries, though the richer ones declined much faster than the poorer ones prior to 1930.¹⁴ The introduction of antibiotics after World War II was the next major factor to reduce mortality along with the earlier efforts to provide potable water, sanitation, and the pasteurization of milk. Finally, there was the steady growth of national agriculture after mid-century which also led to the slow but steady decline in food prices and increased availability of food to both rural and urban populations. All these factors can be seen in their impact on Brazil's crude death rate, which went from an average decline of just -0.3%

Area 1900-2100, Actuarial Study No. 120 (Washington, DC: Social Security Administration Office of the Chief Actuary, 2005), p. 41, Table 6.

¹⁴ Eduardo E. Arriaga and Kingsley Davis, "The Pattern of Mortality Change in Latin America." *Demography* 6.3 (1969), p. 226.

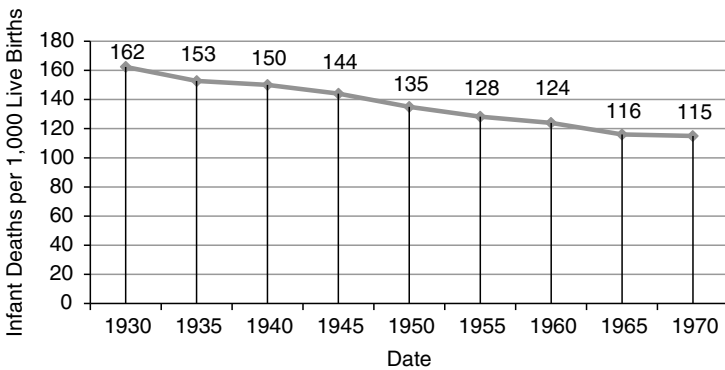
per annum between 1910 and 1930 to more than double that rate (or -1.0%) between 1930 and 1950. In the next twenty years, the crude death rate would decline at 3.1% per annum (see Graph 1.3).

This decline in the crude death rate was first driven by the decline in infant mortality – from 162 deaths of infants under 1 year of age per 1,000 live births in 1930 to 135 deaths per 1,000 live births in 1950 – a decline of 0.9% per annum. Unlike the crude death rate, however, this decline did not accelerate in the next twenty years, dropping only at 0.8% per annum from 1950 to 1970 (see Graph 1.4). But in the twenty-year period from 1970 to 1990 the decline would be explosive,



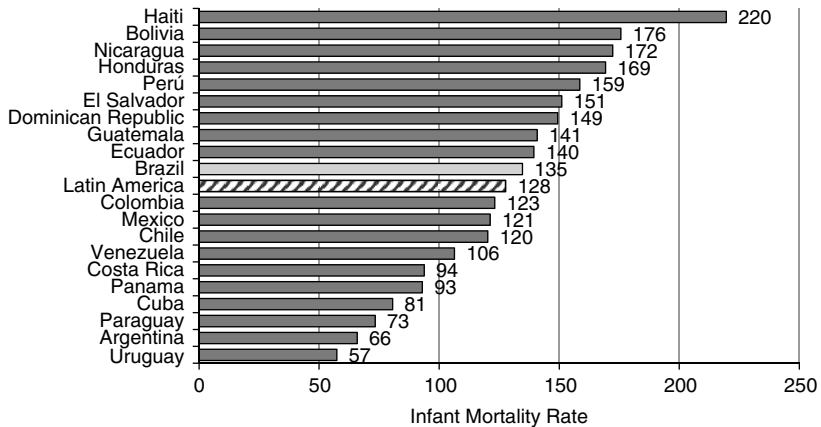
GRAPH 1.3 Crude Death Rates for Brazil, 1900–1960

Source: Berquó, “Demographic Evolution of the Brazilian Population in the Twentieth Century” (2001), Table 3.



GRAPH 1.4 Infant Mortality Rate in Brazil, 1930–1970

Source: IBGE, *Séries históricas*, Table CD100.



GRAPH 1.5 Infant Mortality Rate by Latin American Countries, 1950–1955
 Source: CELADE, *Boletín demográfico* 34.74 (2004), p. 24, Table 6.

increasing to a very significant rate of -4.2% per annum.¹⁵ However, even though the infant mortality rate declined, it was still a very high mortality rate by world standards in 1950, with most of the advanced countries then experiencing a rate in the range of 20 to 50 infant deaths per 1,000 live births, with only the most underdeveloped nations having rates over 100 infant deaths.¹⁶ It was also high compared to its southern neighbors, being twice the rate of Argentina in this period and even above the average rate for all of Latin America (see Graph 1.5).

If mortality was on an ever-increasing downward slope in 1950, fertility changed only moderately from 1900. It has been estimated that from 1900 to 1905 the average number of children being born to women in the age cohort of 14 to 49 years was 7.¹⁷ This meant that the crude birth rate was something like 46 to 47 births per 1,000 resident population. By 1950, it was still at around 44 births per 1,000 residents and the total fertility rate was 6 children.¹⁸ Thus the total fertility rate in the twenty-year period from the 1930s to the 1950s had declined by only 0.4% per annum (see Graph 1.6).

¹⁵ IBGE, “Séries históricas e estatísticas,” Table CD100. Accessed at: <https://seriesestatisticas.ibge.gov.br/series.aspx?t=taxa-mortalidade-infantil&vcodigo=CD100>.

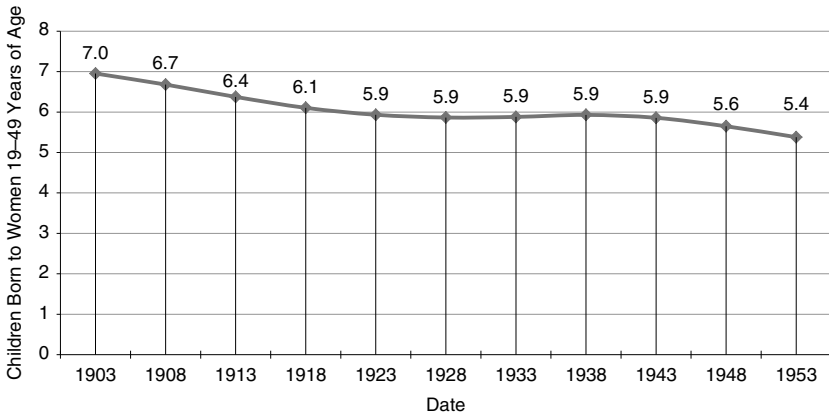
¹⁶ IBGE, *Anuário Estatístico do Brasil*, 1953, p. 562, Table IV.

¹⁷ Cláudia Júlia Guimarães Horta, José Alberto Magno de Carvalho, and Luís Armando de Medeiros Frias, “Recomposição da fecundidade por geração para Brasil e regiões: atualização e revisão,” Paper presented at the XII Encontro Nacional de Estudos Populacionais, ABEP, 2016, Table 6.

¹⁸ Mortara, “The Development and Structure of Brazil’s Population,” p. 22.

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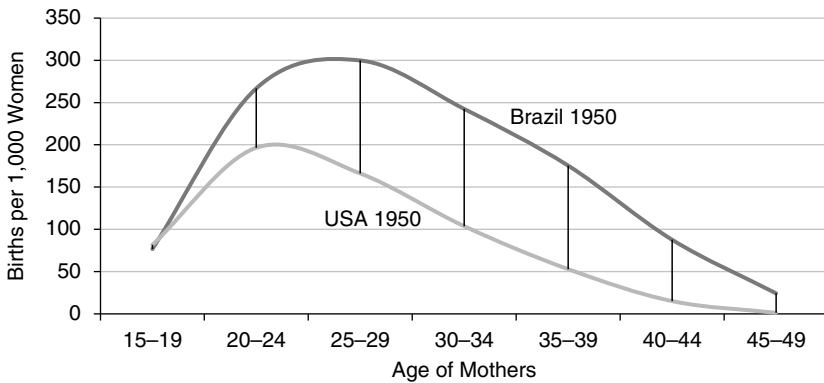
GRAPH 1.6 Total Fertility Rate of Brazil, 1903–1953

Source: Horta, Carvalho, and Frias, “Recomposição da fecundidade por geração para Brasil e regiões,” Table 6

Not only did fertility remain high in the first half of the twentieth century and in fact it increased slightly in the 1960s, but the average age for women giving birth also remained quite high, with the peak period for having children being 25 to 29 years, and with a very significant 24% of births occurring to women 35 years of age and older in 1950. All of which suggests a low use of contraception, since when contraception becomes common women avoid giving birth when they are older. One consequence of this is a reduction in family size. By comparison, in the United States in 1950, which had a total fertility rate of only 3 children, births peaked in the 20 to 24 age group and only 11% of the total births in that year occurred to women 35 years of age and older. This explains why the median age of mothers giving birth in Brazil was a very high 30 years of age as opposed to the United States, where the median age was 26 years (see Graph 1.7).¹⁹

Between the slowly declining death rate and the high fertility rate, the population was now growing at a very impressive rate in the last quarter of the nineteenth century and the first twenty years of the twentieth century. In fact, few countries in the world in the nineteenth century grew as rapidly as Brazil. On average, Brazil was growing at 2.3% per annum for the century after 1870, which meant that the population was doubling every thirty

¹⁹ Horta, Carvalho, and Frias, “Recomposição da fecundidade por geração para Brasil e regiões,” Table 3, and calculated from United States Department of Health, Education, and Welfare, *Vital Statistics of the United States, 1950* (Washington, DC, 1954), vol. 1, p. 85, Table 6.13.



GRAPH 1.7 Birth Rate by Age of Mother, Brazil, 1950–1955
 (live births per 1,000 women in specified age group)

Source: Horta, Carvalho, and Frias, “Recomposição da fecundidade por geração para Brasil e regiões,” Table 3; USA Vital Stat 1950, Table 6.08

years.²⁰ It reached its all-time high in the decade of the 1950s when it peaked at 2.99% per annum between the census of 1950 and that of 1960.²¹ At this rate the Brazilian population of 52 million of that year would have doubled to over 100 million by 1972. That this did not happen would be due to the very sudden and rapid decline in fertility after 1960, which we will examine in more detail in later chapters.

Between 1850 and 1950, the Brazilian population added an estimated 44.8 million persons, of which 41.4 million were due to the natural increase of births over deaths and only 3.4 million were due to net immigration.²² The continued economic dynamism of Brazil from the sugar and gold cycles of the colonial period through the coffee boom in the nineteenth century led to the massive introduction of African slaves and free European and Asian immigrants. Given this combination of high natural increase and of immigration, the Brazilian population grew so rapidly in the nineteenth century that by 1900 it had replaced Mexico as the largest nation in Latin America.²³

²⁰ Thomas W. Merrick and Douglas H. Graham, *Population and Economic Development in Brazil, 1800 to the Present* (Baltimore, Md.: Johns Hopkins University Press, 1979), pp. 30–31.

²¹ It would decline to 1.1% per annum between the census of 2000 and the census of 2010. IBGE, “Séries históricas e estatísticas,” Table CD106. Accessed at: <https://seriesestatisticas.ibge.gov.br/series.aspx?no=10&cop=0&vcodigo=CD106&t=taxa-media-geometrica-crescimento-anual-populacao>.

²² Mortara, “The Development and Structure of Brazil’s Population,” p. 122.

²³ Nicolás Sánchez-Albornoz, *La población de América latina: desde los tiempos precolombinos al año 2025* (Madrid: Alianza, 1994), p. 143.

Eventually, Brazil obtained over 10 million foreign-born immigrants – some 4.8 million of them Africans who arrived as slaves up to 1850 and 5.6 million European and Asian free workers who primarily arrived after the abolition of slavery.²⁴ It thus absorbed more African slaves than any other single colony or nation in the Americas and was able to attract a comparable number of free European immigrants. Along with Argentina it was the only Latin American state able to compete with the United States and Canada in taking a significant share of the great European transatlantic migration of the late nineteenth and early twentieth centuries.

But because of the high natural growth rates of the native-born population, European immigration had only a moderate impact on national population growth compared to its impact in Canada and Argentina in the same period. It was estimated that immigrants accounted for 14% of total growth of the national population between 1872 and 1890, some 30% in the peak decade of 1890–1900, and just 7% to 8% in the following four decades.²⁵ Brazil was more like the United States in this respect, since immigration accounted for less than 10% of the total growth in both countries in the century from 1841 to 1940.²⁶

Although international immigration brought in primarily adults of working age both in the era of the slave trade and after 1888, Brazil still had an extremely young population due to the very high levels of natural growth and very high fertility. Thus in the census of 1890 those under 19 years of age represented 51% of the total population, and this share rose to 55% of the national population in 1900 and 57% by the census of 1920.²⁷ Even as late as 1950, some 52% of the resident population was under the age of 19, and 42% under the age of 15, with both rates quite high by world standards.²⁸ With its high mortality rate and low life expectancy, only 3% of the population was over the age of 65. This meant that the median age of the national population in 1950 was 19 years of age. Because of this high ratio of children

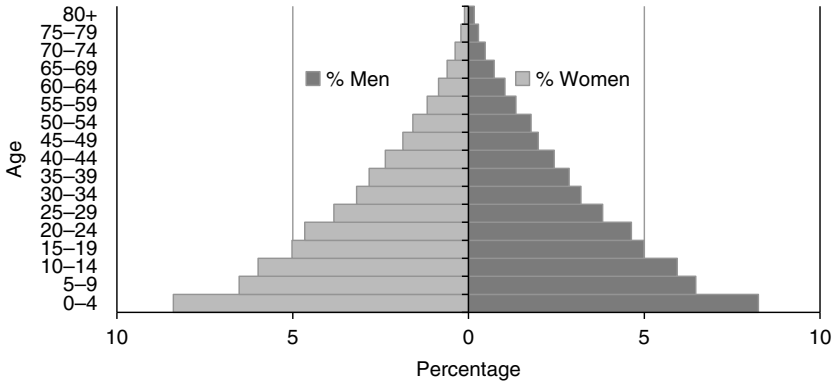
²⁴ The number of Africans is the estimated rate taken from the Trans-Atlantic and Intra-American slave trade databases at Emory University. Accessed at: www.slavevoyages.org/a sssessment/estimates; European and Asian immigration figures are taken from Maria Stella Ferreira Levy, “O Papel da Migração Internacional na evolução da população brasileira (1872 a 1972),” *Revista de Saúde Pública* 8 (Supl.) (1974), pp. 71–73, Table 1, and for 1820 to 1871 from Directoria Geral de Estatística, *Boletim comemorativo da exposição nacional de 1908* (Rio de Janeiro: Directoria Geral de Estatística, 1908), pp. 82–85.

²⁵ Merrick and Graham, *Population and Economic Development*, p. 37.

²⁶ Merrick and Graham, *Population and Economic Development*, pp. 38–39.

²⁷ Calculated from IBGE, *Estatísticas históricas do Brasil*, vol. 3, *Séries econômicas, demográficas e sociais de 1550 a 1988* (2nd edn), p. 31, Table 1.6: “População presente, segundo o sexo e os grupos de idade – 1872–1920.” All figures are only for the population whose age is known.

²⁸ Mortara, “The Development and Structure of Brazil’s Population,” p. 125



GRAPH 1.8 Age Pyramid of the Population of Brazil in 1950
 Source: CELADE, Population Projections, Revision 2013.

and low median age of the population, Brazil had a relatively high dependency ratio, that is the ratio of active workers aged 15–64 to dependent children and the elderly. The ratio was of 80 non-working dependents for every 100 working-age (15–64) adults.²⁹ The dependency rate reached its peak in 1960, at 83.2 non-workers to 100 workers. Because of their lower ratio of children to total population, the United States, United Kingdom, and France in 1950 had dependency rates of between the mid-50s to the mid-60s dependents per 100 workers.³⁰ But this was the peak year for Brazil and the very rapid decline of fertility in the following decades led to a steady decline in the dependency ratio which by 2016 was just half of the 1960 rate.³¹

Brazil in 1950 thus had all the characteristics of a pre-modern population experiencing both high fertility and high mortality, with a large base in infants and a low ratio of elderly resulting in a perfect pyramid of ages by sex (see Graph 1.8).

Brazilians at mid-century still predominantly defined themselves as white. This was due to the post-emancipation impact of European immigration and a continued level of racism which defined white as higher-status norm. Before the abolition of slavery in 1888, it seemed that Brazil would be

²⁹ Brazilian Age data, “Long-Term Population Estimates and Projections, 1950–2100.” Revision 2013. Accessed at: www.cepal.org/celade/proyecciones/basedatos_bd.htm.

³⁰ World Bank data for 1960 and 2016. See <https://data.worldbank.org/indicator/SP.POP.DPND>.

³¹ For dependency rates after 1950, see IBGE, “Séries históricas e estatísticas,” Table POP 220. Accessed at: <https://seriesestatisticas.ibge.gov.br/series.aspx?no=10&op=0&vcodigo=POP220&t=razao-dependencia>. According to the World Bank, the ratio was 44 in 2016. See <https://data.worldbank.org/indicator/SP.POP.DPND>.