

GROWTH OF POPULATION OF INDIA AND PAKISTAN
1801 - 1961

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Abstract

In India a series of enumerations undertaken in different regions in early 1870's are usually called the Census of 1872. The first all-India census taken in 1881 was followed by decennial censuses. The average annual (arithmetical) rate of growth of population was 0.4 per cent during fifty years, 1871-1921; and was much higher, namely, 1.85 per cent, during the next four decades, 1921-1961. In the earlier period, there were large annual fluctuations due to famines and epidemics. Steady growth from 1921 was possible because of gradual elimination of these disturbing causes.

Very little information is available for the country as a whole for the period, 1801-1871. There exists, however, a large volume of data relating to population changes in particular regions of India since the early nineteenth century. Examination of such regional data shows highly fluctuating changes in the population with a slow rate of growth, possibly, of the same order as in the period 1871-1921.

Decennial estimates were made for different regions in India. Data of relevant regional enumerations, where available, were used for this purpose, making suitable adjustments for under-enumeration and under-coverage, as far as possible. For regions for which such data were not available, it was assumed that the normal growth rate was the same as the average rate based on the two census decades of good seasons, 1881-1891, and 1901-1911. Growth rates were worked out for each decade, taking a notional view of deviations from a good or a bad census decade. Finally, an all-India series was constructed from the different regional series, starting with a population 207 million in 1801.

Accepting a population 125 million in 1600, as suggested by Kingsley Davis, the average annual (arithmetical) increase of population appears to have been 0.33 per cent between 1600 and 1800, 0.34 per cent between 1801 and 1871, 0.40 per cent between 1871 and 1921, and 1.85 per cent between 1921 and 1961.

A predominantly agricultural economy, an unchanging occupational pattern a slow rate of urbanisation, and a high birth rate and a high death rate were the characteristics of the historical demography of India upto 1921. Death rates began to fall after 1921, and reached to three-fifths of the 1921-30 level in 1951-60. This decline in death rate brought about a rapid population increase.

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1. General

1.1 Undivided India in 1941 had an area of 1,582,989 square miles. The share of India and Pakistan together in 1941 was 3.03 per cent of the area and 17.30 per cent of the population of the world, and 15.09 per cent of the area and 32.10 per cent of the population of Asia. The share of area remained much the same, but the share of population had decreased slightly to 16.92 per cent of the world, and 31.14 per cent of Asia in 1961. The growth of population of India upto 1921 was slow and highly fluctuating from year to year due to vagaries of the monsoon. With adequate and well distributed rainfall, there was good harvest, a large number of marriages, a higher birth rate. With an unsatisfactory monsoon there was drought, failure of crops, famine or pestilence or both, with high death rates. Migratory movements between India and other countries were negligible before the partition of India in 1947.

1.2 The Government of India decided in 1865 that a general census would be taken in 1871. A series of enumerations in different regions of India were conducted in the years around 1871, which are usually referred to as the Census of 1871. This series, besides being incomplete, was not synchronous. The first all-India census, was therefore, the one taken in 1881. Since then a decennial census was taken, but at every subsequent census up to 1921, a portion of the country was left out.

1.3 The accompanying table shows the population of undivided India from 1871 to 1961. During the entire period, the population of India and Pakistan [1] together increased by 108.59 per cent, or by an average of 1.21 per cent per annum.

The period, 1871-1921, was one of slow growth of the population with a total increase of 20 per cent in fifty years, or 0.4 per cent per year, due to fluctuating birth and deaths arising from good harvest or drought, famines, pestilence etc., from year to year. The increase in the next forty years, 1921-1961, was about 73.94 per cent, or at an average rate of 1.8 per cent per annum. The rate of increase rose steadily from 1.04 per cent between 1921-1931, to 1.30 per cent between 1931-1941, to 1.43 per cent between 1941-1951, and finally to 2.19 per cent between 1951-1961. The increase in the last decade alone was more than one-fourth of the enumerated population of undivided India in 1941.

TABLE 1.1 : POPULATION OF INDO-PAKISTAN SUBCONTINENT 1871-1961
(area covered 1,582,989 sq. miles)

year	population(million)		percentage increase*
	total	increase	
(1)	(2.1)	(2.2)	(3)
1871	256		
1881	258	2	0.78
1891	283	25	9.69
1901	286	3	1.06
1911	304	18	6.29
1921	307	3	0.99
1931	339	32	10.42
1941	383	44	12.98
1951	438	55	14.36
1961	534	96	21.92

* Percentage changes of population are given in terms of average arithmetical rates of increase.

1.4 Population growth was disturbed by a great famine during 1871-1881, a plague and another famine in 1891-1900, and by a disastrous influenza epidemic in 1911-1921. The only 'normal' period, 1881-1891, recorded an increase of 9.69 per cent. Recurrent famines gradually ceased to be of importance*. The whole of Central and Northern India, and Deccan plateau down to Tiruchirapalli had been subject to recurrent malaria; and the rest of India to endemic malaria. To quote the Census Commissioner, "tracts of recurrent malaria were almost conterminous with those of recurrent famines and epidemics and experienced recurrent crisis in population growth between 1881 and 1931" [5].

1.5 Variations in the rate of increase of population were not uniform in all regions and sub-regions. The overall growth in Bengal between 1872 and 1921 was of about 27 per cent; but the rate of increase in West Bengal was 6 per cent against 72 per cent in Eastern Bengal. During this period, there was a decrease of population in Rajputana and Baluchistan; but the growth in Assam, Cochin and Travancore was between 60 and 90 per cent. The general trend was fairly clear over the greater part of the country.

2. Pre-Census Decades, 1801-1871

2.1 Very little information is available for the country as a whole in the pre-census period, 1801-1871. There exists, however, a large volume of data relating to population changes in particular regions of India in early nineteenth century. Sources are of various types, and the data of varying quality. One important source was the statistical enquiries of the Survey of India relating to the resources of the country including population. Lord Wellesley arranged a return of population of the Bengal Presidency as early as 1801. Francis Buchanan carried out a

* A disastrous famine, however, occurred in Bengal during the war in 1943. According to the Official Commission, presided over by Sir John Woodhead, the number of deaths directly attributable to the famine was about one million with a total death of 1.5 million inclusive of deaths from indirect causes [2]. On the basis of a sample survey, P.C. Mahalanobis [3] estimated that half a million were turned into destitutes under war and famine conditions in Bengal. It may be mentioned for comparison that the persons killed in the second world war for the U.S.A. and Great Britain taken together was appreciably less than 700,000 [4].

multipurpose statistical survey of six districts of Bengal and Bihar between 1807 and 1814. The Bombay Presidency was enumerated in 1820-28, 1845, 1855-56. Dwarakanath Tagore, the grandfather of poet Rabindranath, was responsible for house census and a population estimate for each thana of the Bengal Presidency as early as 1822. A census was attempted in the Madras Presidency in the opening years of the nineteenth century and was repeated in 1821-22, and 1837-38, resulting in a quinquennial population census since 1851. In the North-West Provinces, enumeration was conducted in 1848, 1853 and 1865. A census was conducted in the Punjab and Sind in 1850's [6].

2.2 The picture which emerges is that conditions promoting or retarding the growth of population were more or less similar during the two periods, 1801-1871 and 1871-1921. Growth of population was very slow during the seventy years ended in 1871. Regional evidence, though available only for a few small number of tracts, confirms the trend.

2.3 Kanchanpur, Burdwan, 1825-1961 : Lal Behari Day [7] gave a detailed story of a village which he called Kanchanpur, later identified as Palasi, under the Police Station and the district of Burdwan in the present State of West Bengal. Day started with a "prosperous village" in 1825, and ended in 1870 with a picture of gradual decay, partly due to harassment by landlords, and partly because "the demon of the epidemic stalked from village to village and its ghastly form spread dismay and consternation wherever it went". He concluded, "there would be no question that the epidemic carried off a large percentage of population". Tarakrishna Basu resurveyed this village in 1933 [8] and again in 1959 [9]. In 1933, Basu wrote, "there is no doubt that the village is dying". The decay from 1874 to 1933 was attributed partly to epidemic and endemic diseases, and, partly to migration of the well-to-do families. Population, however, had increased enormously

between 1933 and 1959 when Basu resurveyed the village for the second time. The population was given as 1,500 in 1874; 872 in 1931; 1,466 in 1959; and 1,601 in 1961, showing, first an annual decrease of 0.91 per cent between 1874 and 1931; and secondly, an increase of 2.79 per cent between 1931 and 1961, resulting in a recovery to the same level of population as in 1874.

2.4 Burdwan district, 1814-1961 : The population of the then Burdwan district was estimated in 1814 by the Judge and Magistrate W.B. Bayley on the basis of enumeration conducted in 98 villages of this district and surrounding area. W.W. Hunter, the first Director General of Statistical Survey of India, identified many of the villages enumerated by Bayley, and concluded in 1870 that "these seem to prove the population of the district, whatever it might have been before the outbreak of the late fever epidemic, is not now much in excess of what it was in 1814". Both the village of Kanchanpur and the district of Burdwan recorded a declining or stationary population up to 1870's in the nineteenth century. Showing the same trend as in Kanchanpur, the population of the district of Burdwan also decreased between 1871 and 1931 by 3.31 per cent, but increased between 1931 and 1961 by 114.18 per cent.

2.5 Birbhum, West Bengal, 1801-1961 : Hashim Amir Ali and his colleagues surveyed five villages of Bolpur police station of Birbhum district in 1933 and 1958-[10]. Population increased in these villages during the interval as one would expect. The population of Bolpur police station as a whole (under the jurisdiction of which were the five villages mentioned above), showed a decline of 12 per cent between 1872 and 1921, and an increase of 132 per cent between 1921 and 1961. The corresponding rates of decrease and increase during the two periods for the district of Birbhum were 0.2 per cent and 68.79 per cent respectively. The population of the district in 1801, according to one estimate, was 700,000; that is, much greater than the population in 1872. The above figure was considered as an overestimate

by W.W. Hunter, but it is likely that the figure is correct and is indicative of a declining population between 1801 and 1971.

2.6 Broach, Gujarat, 1814-1961 : Broach district, now in Gujarat was surveyed by Lt. Col. Monier Williams in 1812, then consisting of three parganas [11]. The population of the same tract declined by 9.46 per cent between 1812 and 1872, by 1.95 per cent between 1872 and 1921, but increased by 61.73 per cent between 1921 and 1961*.

2.7 A corroboration of such fluctuating regional changes is also found in official documents and contemporary writings. The Court of Directors of the East India Company issued two circulars during 1801-20 to their servants in India to know precisely "how many villages were re-peopled". Col. James Tod, the author of Annals and Antiquities of Rajasthan, found depopulated tracts in the Northern and the Western India in the opening years of the nineteenth century. Sir John Malcolm in his Report on the Province of Malwa (1822) presented tables of re-peopled villages. The collector of Ahmednuggur district (now in the state of Maharashtra) wrote that "the thinness of population of the Ahmednuggur district, which had fallen into decay after the war and famine of 1803-04, and the recent effects of epidemic, have been insurmountable obstacles to any rapid improvement of their resources". Similar statements were made by the collectors of Poona, Khandesh and Dharwar around 1820 [12]. Mount Stuart Elphinstone writing in 1819 recorded the former populous districts North of Taptee "as almost an uninhabited forest" and the East of Godavari though open and fertile, deserted since 1803 [13]. Walter Hamilton recorded a

* As the area covered had varied marginally, population estimates were made comparable by multiplying the common area by relative density.

thinness of population in Hyderabad, Berar, Central India, Western India, and a vastness of population in the Bengal Presidency [14]. R.M. Martin wrote in 1939, "I am strongly of opinion that in many parts, there is a declining population, and although several districts of Bengal are densely populated, the greater part of our territory is thinly inhabited" [15].

3. Estimates : 1801-1871

3.1 Attempts were made to make a quantitative assessment of the trend of population. Firstly, existing data based on a regional enumeration were used as far as possible after making certain assumption regarding under-enumeration and under-coverage. On the basis of such assumption a decennial time series was built up from 1801 to 1961 for the three Presidencies, Bengal, Bombay and Madras, and also for the North-Western Provinces, Central India and Mysore. The past growth rates estimated by the first Census Actuary in 1881 were taken into consideration. ... Secondly, for regions for which population data were available for shorter periods, e.g., for the Punjab and Sind in 1850's or, for which no population data were available prior to 1870-72 enumerations, the growth rate was assumed as a first approximation to be the same as the average rate in the 'normal' census decades, 1881-1891 and 1901-1911 with adjustments for the incidence of rainfall, drought, famines etc. A list of disturbing factors (failure of rainfall, droughts, famine, pestilence etc.) was prepared for each region, and the list was critically examined for each decade to assess whether it was similar to or worse than the two normal census decades, and, if worse, to what extent the population growth was likely to have been affected. A decade in which population decreased was compared with the change in 1871-1881 or a similar census decade. When population figures were

available for only a few districts, ratio method (proportion of the population of these districts to the total population of the region in 1871) was used for making adjustments for the population of the entire region; also taking into consideration actual changes of boundaries in 1941, to the extent available. All-India estimates were obtained for each decade by aggregating the adjusted regional estimates, and are given in the following Table 3.1

TABLE 3.1 : POPULATION OF INDIA, 1801-1871
(area covered 1,532,989 sq. miles)

year	population (million)		percentage change*
	total	changes	
(1)	(2.1)	(2.2)	(3)
1801	207	-	-
1811	215	+ 8	+3.86
1821	205	-10	-4.65
1831	216	+11	+5.37
1841	212	- 4	-1.85
1851	232	+20	+9.43
1861	244	+12	+5.17
1871	256	+12	+4.92

3.2 On the basis of available evidence relating to regional fluctuations discussed earlier in this paper, it is reasonable to conclude that the reasons for fluctuations in the growth of population for the period 1801-1871 may be attributed to the same factors as were responsible for the fluctuations during the period 1871-1921, that is, to the incidence of droughts, disease, famines

* Note by P.C.M. The construction of the table of estimated population, 1800-1871, was the work mainly of D.P. Bhattacharya; the senior author suggested some guide lines and criteria for adjustments from fragmentary data or indirect information. An alternating series of increasing (+) and decreasing (-) population is somewhat suspicious and is possibly indicative of some kind of unconscious bias in making adjustments.

pestilence; etc. Lack of a strong Central Government with consequent lack of stable conditions of peace and order, rapid political changes and unsettled economic conditions, no doubt, were also additional factors for a declining or a virtually stagnant population upto 1841.

3.3 A brief account in the pre-census period is given below. The first decade, 1801-1810, was marked by war, banditry, famine and pestilence in several regions of northern, western and southern India. The second, 1811-1820, was affected by the worst cholera epidemic of India during 1817-1819 from Sylhet to Gujarat, from the Punjab to Cape Comorin, a devastating plague of rats in Gujarat, widespread famine in Rajputana and Western India; and a severe fever epidemic in some districts of Madras must have caused a large depletion of the population. The third decade 1821-1830, was better, but famines prevailed in Sind, Bombay, Madras, North-Western Provinces, Kashmir and in a part of Upper India, often accompanied by fever and cholera. Assam was a victim of anarchy and war between 1817 and 1826; the population was estimated to be reduced by a half during this period. Dr. Scutteten estimated the annual cholera mortality in the British India at 2.5 million and a total death of 18 million during 1817-1830. The fourth decade, 1831-1840, was one of the worst. According to the Famine Commission of 1880. there were two severe scarcities and two intense famines in the northern, western and southern parts of India; endemic fever and small pox in Bengal; cholera very extensively in Bengal, Madras and North-West provinces. Kashmir was considered to have lost 75 per cent of her population by early 1830's due to the cumulative affects of anarchy, famine, natural, calamities and several outbreaks of cholera. The fifth decade, 1841-1850, though marked by a severe scarcity in Bombay and prevalence of cholera in certain areas, was relatively free from calamities. The sixth decade, 1851-1860, also had famines and droughts in the North-West Provinces and Madras; cholera in several districts

of Orissa. The political turmoil of 1857 also caused some dislocation of economic life. The last decade of the pre-census period, 1861-1870, was worse. There were devastating famines in different regions, causing the death of one-fourth of the population of Orissa; and heavy mortality in West and North Bengal, Rajputana, Punjab, Madras and Central Provinces.

3.4 Mention may also be made of the ravages of the famine of 1802 in Khandesh and Ahmednuggur, the deserted villages of which had not been repopulated according to Col. Baird Smith's assessment in 1860's. The Guntoor famine of 1833 kept the land revenue at three-fourths of the normal level even in 1850. The effect of the famine of 1837 in the North-Western Provinces was "so great that ordinary bonds of society seemed to be broken...". In famines which occurred in the census period (1871-1961) many million lives could be saved through relief work, but in earlier years, in the absence of rapid relief work owing to difficulties of communication, mortality is believed to have been much higher. Even in the census period death rates in famine years between 1877 and 1900 were two to five times higher than those in ordinary years. Birth rates were reduced even in outlying areas not affected by a famine directly.

4. Concluding Remarks

4.1 It is of interest to look further back. W.H. Moreland estimated the population of India as 100 million in 1600 [16] on the basis of statistics of cultivation of different Subbas of Mughal India given by Abul Fazl in the Ain-i-Akbari. Kingsley Davis raised this figure to 125 million and assumed there was not much change for 150 years and a slow growth thereafter.

4.2 On the basis of the estimate given in the present paper of a population of 207 million in 1800, the average annual increase would be 0.33 per cent between 1600 and 1800; 0.34 per cent between 1801 and 1871; 0.40 per cent between 1871 and 1921; and 1.85 per cent between 1921 and 1961. Available evidence gives a consistent view of a slow growth of population up to 1921. A sudden acceleration in the rate of increase started from 1921 as already mentioned. The above picture is corroborated by data on birth and death rates. Estimated birth rates were between 46 and 49 in the period 1881-90 to 1921-30, dropped to 45 in 1931-40, to 40 in 1941-50, and, still more, to 42 in 1951-61. Estimated death rates fluctuated between 41.3 and 48.6 in the period 1881-90 to 1911-20, then dropped to 36.3 in 1921-30, to 31.2 in 1931-40, to 27.4 in 1941-50, and finally to 22.8 in 1951-60 [17]. Mortality rates were clearly responsible for the observed pattern of changes in the rate of growth of population.

4.3 The occupational pattern of the Indian Union up to 1961 shows generally the characteristics of an underdeveloped economy with more than 70 per cent of the labour force having been dependent on agriculture and associated activities throughout the census period. The percentage share of workers dependent on manufacturing and household industry was more or less constant at 8 or 9 per cent. The earlier pattern, 1871-1901, was perhaps more or less similar, with some people going over to agriculture owing to the decline of cottage industries. The declining ratio of land per capita as pointed out by W.W. Hunter in 1881 [18], and by the Census Commissioner in 1951, might be ascribed basically to the growth of population, and the increasing number of persons engaged in agriculture.

4.4 Urbanisation progressed at a slow rate in relation to the total population, 1.
The share of the urban population of undivided India increased from 9.3 per cent 2.
in 1881 to 12.8 per cent in 1941 (with, however, a percentage increase of about 40 3.
per cent in the urban rate of growth). For the Indian Union alone, the urban share 4.
was roughly steady with 17.35 per cent in 1951 and 17.99 per cent in 1961 (but in 5.
actual numbers the urban population was increasing quite fast). The corresponding 6.
share of Pakistan was 10.4 and 31.3 per cent in 1951 and 1961 respectively. 7.

4.5 The urban population in the Indian Union doubled between 1901 and 1961. 8.
The population of class I cities (100,000 and over) increased during this period 9.
by 500 per cent, or at the average rate of 8.3 per cent per year. The rate of 10.
growth of population of towns of smaller size was much slower; the smaller the 11.
size of the town, the lower was the rate of growth of the population. Finally, 12.
the population of class VI or the smallest towns (5,000 and less) declined by 47 13.
per cent during half a century. An increasing concentration of the urban popula- 14.
tion in large cities together with a gradual decline of small towns was one of the 15.
features of urbanisation. In the first half of the nineteenth century, the number 16.
of towns gradually declined partly owing to the gradually increasing economic inte- 17.
gration of the Indian Princely States with British India and their complete poli- 18.
tical and economic integration with the Union of India after independence in 1947, 19.
and partly due to the decreasing importance of indigenous trade and industry. 20.

5. The limitations of the paper have been already pointed out. The pattern of 21.
change of the population between 1801 and 1871 is a first attempt to give a rough 22.
indication of the trend subject to improvement by further investigations. The 23.
paper is also subject to other limitations associated with historical studies of 24.
the present kind.

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