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## Saint Lucia: Yesterday, Today & Tomorrow

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## *PRB OCCASIONAL SERIES: THE CARIBBEAN*

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# *Saint Lucia: Yesterday, Today & Tomorrow*

**by Leon F. Bouvier**
**January 1984**

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# Saint Lucia: Yesterday, Today & Tomorrow

## Saint Lucia Yesterday

Historically, Saint Lucia, with an area of 233 square miles, has not been considered overpopulated. In 1850, population density was a mere 15 persons per square mile; even in 1950, that density was still only 49 persons per square mile. Data for the late nineteenth century are sketchy at best, but still yield sufficient information to allow an examination of the demographic changes that have transpired over the past century and a quarter.

In 1843, a total of 20,694 persons lived in Saint Lucia, and by the time of the 1901 British Commonwealth census, the population had reached 49,883. Assuming that both censuses were comparatively accurate, this means an annual rate of growth of 1.5 percent. Given that both fertility and mortality were undoubtedly quite high (crude birth rates averaging 45 per 1,000 population and crude death rates averaging 25 per 1,000 would not be out of the ordinary for that period), some emigration must have also taken place, perhaps to such countries as British Guiana and Trinidad. An average annual net emigration rate for the period of 5 per 1,000 might well have been in effect.

*Table 1: Population of Saint Lucia, 1843–1921*

| Year | Number |
|---|---|
| 1843 | 20,694 |
| 1851 | 24,185 |
| 1861 | 26,674 |
| 1871 | 31,610 |
| 1881 | 38,551 |
| 1891 | 42,220 |
| 1901 | 49,883 |
| 1911 | 48,637 |
| 1921 | 51,505 |

Decennial censuses were undertaken from 1851 to 1921 (see Table 1) and again in 1946. There have been decennial enumerations of the population of Saint Lucia since 1960. These data allow for a fairly reliable analysis of the island's changing population from 1901 to 1960.

Population growth for the first two decades of this century was practically nonexistent. The 51,505 individuals enumerated in 1921 represented a gain of but 1,622 over the 1901 count—zero growth, for all practical purposes. Undoubtedly fertility and mortality remained high during this period. Death rates in particular must have been high especially during the 1918–20 worldwide influenza epidemic. Nevertheless, a zero rate of growth necessarily means that there was considerable emigration from the island. Interestingly, a similar pattern of no growth during the early twentieth century has been noted in other Caribbean islands. Barbados, for example, saw its population decline from 182,867 in 1891 to 156,774 in 1921. The movement of people away from the region apparently gained momentum after the turn of the century.

The 1.2 percent annual rate of growth observed between 1921 and 1946 stands in marked contrast to the situation 20 years earlier. At the 1946 census, Saint Lucia's population had reached 70,113—an increase of 18,608 over the 1921 count. The crude birth rate was 37.8 per 1,000 and the crude death rate was 15.1, yielding an annual rate of natural increase of 2.3 percent.

If this approximate rate was in effect over the 25 years preceding 1946, as is quite possible, this would indicate a continuing fairly high level of emigration of about 600 persons (net) per year. Only through such movements could the population growth rate have remained at 1.2 percent per year. By 1926, the Panama Canal had been long completed and demands for Caribbean workers had diminished. Also, the United States' quota laws

of the 1920s had the effect of limiting emigration to that country. However, movements from the Caribbean to the United Kingdom may have increased, and movements from Saint Lucia to the neighbouring larger islands may also have grown.

A monumental study of population change in the Caribbean undertaken by G.H. Roberts and Jack Harewood serves as the basis for the 1946–60 population analysis.* These eminent Caribbean demographers estimated the population size and vital statistics for each English-speaking Caribbean country for every year between 1946 and 1960. (Their data for Saint Lucia are given in Appendix Tables A and B.)

Over the 14 years between 1946 and 1960, the average annual rate of growth in Saint Lucia was 1.4 percent and by the latter year the population had reached 87,350. However, a substantial proportion of that growth occurred in the first four years. Indeed, more people were added to the population between 1946 and 1950 than between 1950 and 1960. To a considerable extent this can be accounted for by changes in emigration levels. The rate of natural increase (that is, the difference between births and deaths) actually grew over the period, from 2.3 percent in 1946 to 3.4 percent in 1960. The crude birth rate, in particular, went up from 35.6 per 1,000 population in 1950 to 48.5 in 1960, while the crude death rate fell only slightly, from 15.0 to 14.6.

Net international migration, however, which was slightly positive between 1946 and 1950, turned increasingly negative after 1950. Between 1956 and 1960 net emigration amounted to 10,820 people, almost as much as the surplus of births over deaths. For the entire 1946–60 period, net emigration equaled 42 percent of natural increase. This new migration stream had the United Kingdom as its destination and were it not for this large movement away from the island, Saint Lucia's population would have soared to over 100,000 by 1960.

Between 1960 and 1970 the annual rate of population growth increased over that of the previous decade—from 0.9 percent to 1.3 percent. Fertility remained high, at about 45 per 1,000 population. The high level of people leaving the island, which apparently rose in the mid-1950s, continued through the 1960s. The countries of destination no doubt changed during the decade, however, particularly as a result of the Caribbean Immigration Act of 1962, which severely limited movements from the West Indies to the United Kingdom. On the other hand, entry requirements to the United States and Canada were eased during the 1960s and emigration to those countries began to grow (see Table 2 for U.S. data).

## *Table 2: Permanent Saint Lucian-Born Immigrants Admitted to the United States, 1960–79*

| Year | Number |
|---|---|
| 1960–64 | 457 |
| 1965–69 | 773 |
| 1970–74 | 1,243 |
| 1975–79 | 2,727 |

The major contributor to increased population growth in the 1960s was the rapid decline in mortality. The crude death rate, estimated at 14.6 in 1960, fell to about 8.4 by 1970. The combination of continued high levels of fertility and falling mortality resulted in substantial natural increase that more than compensated for continued high levels of emigration. As a result of these variations in demographic behaviour, the population of Saint Lucia passed the 100,000 mark, for the first time in its history, in 1970.

*G.H. Roberts and Jack Harewood, *Estimates of Intercensal Population by Age and Sex and Revised Vital Rates for British Caribbean Countries, 1946–1960* (University of West Indies, 1964).

# Saint Lucia Today

According to the May 12, 1980 census of Saint Lucia (corrected for undercounts and adjusted to July 1 of that year), the population was estimated to be 120,300. This marks an increase of about 20,000 (19.2 percent) over the 100,893 enumerated in 1970, yielding an average annual rate of growth during the decade of 1.8 percent. The statistical office of Saint Lucia estimates that the population increased to about 124,000 by mid-1982, an average growth rate of 1.5 percent since 1980. As already noted, the population grew at similarly high rates before 1970—rates that are among the highest in the East Caribbean.

The size of a population can only be affected by natural increase (births minus deaths) or net migration (that is, movements either into or out of a nation). In Saint Lucia, despite a long history of net emigration, population growth rates have been surprisingly high. During the 1970s, the estimated net emigration rate was 11 per 1,000 population, according to the government's statistical office. This suggests that about 1,200–1,400 more people left the country than entered it in any given year. Using reverse projection* demographic techniques, for this report emigration has been estimated at about 1,500 per year. As decennial growth from natural increase was approximately 35,000, this lends further credence to the net emigration estimation of 15,000 for the decade. In other words, overall growth amounted to 20,000 (35,000 minus 15,000).

*The reverse projection method "survives" the population by age and sex backward in five-year intervals. By using appropriate survival rates, a population—males aged 45–49 in 1980, for example—can be restored to the number who would have been 40–44 in 1975 and 35–39 in 1970. Assuming relatively complete censuses in both 1970 and 1980, any differences in the age-sex distribution in 1970 between the restored and the actual enumerated population must be accounted for by either immigration or emigration. This yields only a rough estimate of the level of net migration over a decade; nonetheless it is the best available, short of actual data on migration itself.

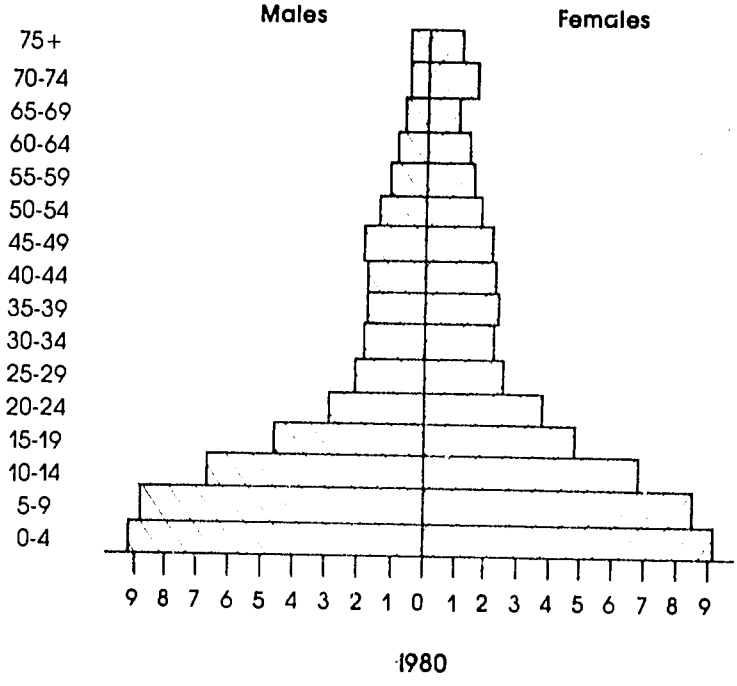
The birth rate fell between 1970 and 1980 from about 45 to 29.3 per 1,000. More telling is the decline in the total fertility rate (TFR), the number of live births per woman according to the age-specific rates of a particular year. In 1970 women averaged close to 6 live births; by 1980, the figure had fallen to 4.3. Although this is a significant drop, fertility is nevertheless still high by Caribbean standards. And according to the statistical office, fertility has increased since 1980, so Saint Lucia continues to have one of the highest fertility levels in the region.

Data for 1977 to 1982 (see Table 3) illustrate the recent variations in fertility rates. Between 1977 and 1980 the crude birth rate fell by 6.4 percentage points and the actual number of births also declined, despite increases in the overall population. The number of births registered in 1980 was the lowest in many years. Since then, however, rates as well as numbers have risen. By 1982, according to provisional data, the crude birth rate was 32.6 and the 3,405 births were the most recorded since the early 1970s. As a result, the TFR of 4.3 in 1980 increased to 4.7 in 1981 and to an estimated 4.9 in 1982. This unexpected increase may well be a temporary phenomenon; it is too early to arrive at a more definite conclusion.

## *Table 3: Crude Birth and Death Rates in Saint Lucia, 1977–82*

| Year | Crude Birth Rate | Crude Death Rate |
|---|---|---|
| | (per 1,000 population) | |
| 1977 | 35.7 | 7.1 |
| 1978 | 33.5 | 6.7 |
| 1979 | 31.5 | 7.2 |
| 1980 | 29.3 | 6.7 |
| 1981 | 31.2 | 6.9 |
| 1982 | 32.6 | 6.6 |

## *Figure 1: Age-Sex Distribution of Saint Lucia, 1980*




Progress in reducing mortality rates in Saint Lucia has been noted in recent years. The crude death rate, for example, fell from 8 to 7 per 1,000 over a decade. By 1980 life expectancy for males was 67.4 years at birth; for females, it was 71.8. In 1982, life expectancy had risen to 68.7 and 72.4, respectively, levels much more typical of developed than developing nations.

The infant mortality rate has also dropped significantly in recent years. In 1980 it was 29 per 1,000 live births, considerably lower than in 1970. Progress has apparently continued to the present day. Provisional 1982 data indicate an infant mortality rate of 22.4. The combination of a young population and considerable success in prolonging life expectancy has resulted in an extremely low crude death rate, which is expected to remain low for the foreseeable future.

As already noted, the historical pattern of net emigration continued through the 1970s. The assumption of 1,500 per year used in this report represents a rate of 12.5 per 1,000 in 1980—slightly higher than the official estimate. Although a considerable number of Saint Lucians migrate to neighbouring countries such as Martinique and Barbados, many are moving to the metropolitan nations, particularly Canada and the United States. As Table 2 indicates, the number entering the latter increased considerably in the 1970s.

Because of continued high fertility and relatively constant levels of net emigration, the population of the island did not age appreciably during the 1970s. This is in marked contrast to some other East Caribbean nations, where the median age often increased as much as four or five years in just one decade. In Saint Lucia, the median age crept up from about 15.5 in 1970 to 16.5 in 1980—where it still remains—which means the country has one of the youngest populations in the East Caribbean.

Changes in the proportional distribution by age have thus been negligible. The proportion under age 15 was 49.4 in 1970 and 49.6 in 1980 (see Figure 1). The 65-or-older group increased its share ever so slightly, from 5.1 to 5.3. The dependency ratio (the number of people under 15 and over 64 per 100 persons between those ages) was barely altered during the decade—from 120 to 122 dependents per 100 working-age individuals.

Saint Lucia's demographic future is uncertain. There is widespread agreement that the population cannot increase much more, given its growing density. Although possible, a population of 200,000 seems far too large. Yet with persistently high fertility, a doubling of the population in the not-too-distant future is quite possible, even with continued net emigration. Some means of limiting the island's population will have to be found.

## Saint Lucia Tomorrow

It is not possible to make predictions about the future population of Saint Lucia, or, indeed, of any other nation. Rather, projections of future population levels are developed based on alternative assumptions about fertility, mortality, and migration. These result in a series of different scenarios that it is hoped will be of value to policymakers as they develop population-related policies for the future.

***Demographic Assumptions:*** Three models of fertility have been selected. One keeps the fertility at its current approximate level of 4.5. Although the 1982 provisional data indicated a TFR of 4.9, it has been assumed that such a high level will not continue. A TFR of 4.5 is somewhat higher than that recorded in 1980 but lower than in 1982. The second model assumes a decline to 2.9 by 1990, after which the TFR would remain at that level. The third model assumes a replacement-level fertility of 2.1 by 1990, which is the level needed for all growth to eventually come to an end in the absence of migration.

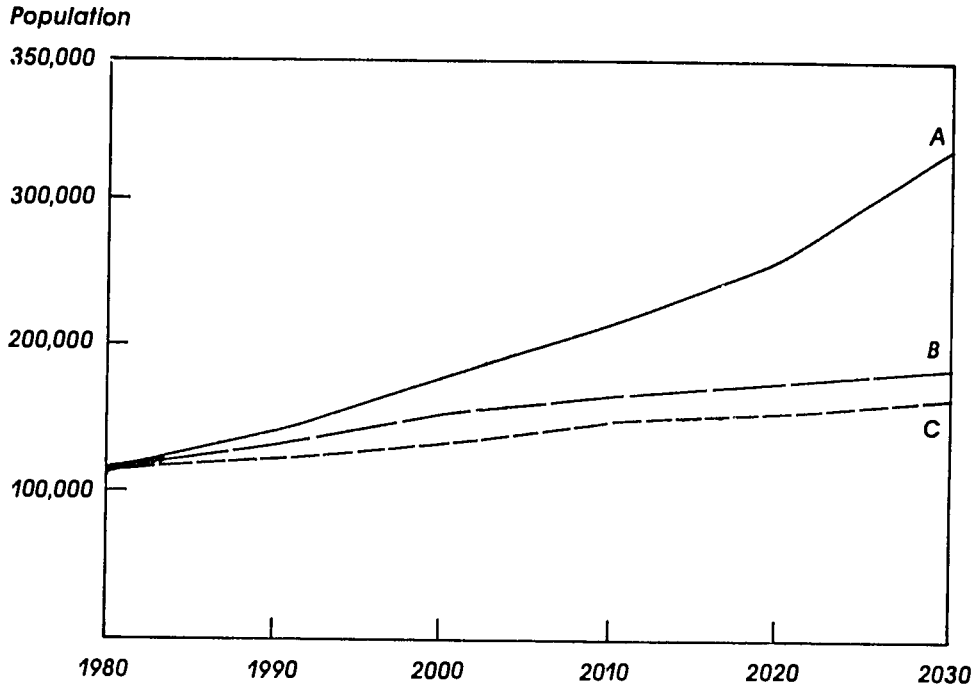
These represent substantial fertility declines in just ten years, but it is not an impossible task. It would of course require increased family planning usage on the part of Saint Lucian men and women, particularly by adolescents and young adults. In 1982, almost 30 percent of all births occurred to adolescent women, under age 20, and only about one-quarter of all women in sexual unions were using contraceptives. Reductions in adolescent fertility and increases in contraceptive use could quickly lower the birth rate.

Only one pattern of mortality levels is used. It begins with a life expectancy of 68.7 for males and 72.4 for females, the current levels according to the Saint Lucian statistical office, and assumes continued improvements until 2020, when life expectancy would be 73.9 for males and 77.5 for females. No further changes would be anticipated.

Three models of migration are used. One postulates a constant level of net emigration at the 1980 level, that is to say 1,500 per year. The second assumes that future net emigration will be halved, to 750 per year. Finally, for illustrative purposes, the third model assumes no net emigration whatsoever.

The last model—an end to emigration—is of course highly unlikely. A continuation of the current situation is very possible. However, a reduction in the number of people leaving Saint Lucia in the future is also possible. The United Kingdom has for all practical purposes been eliminated as a country of destination. Both the United States and Canada are reexamining their immigration laws. Finally, nearby receiving countries such as Barbados and Trinidad are themselves concerned about popula-

## *Figure 2: Population of Saint Lucia, 1980–2030*




A TFR of 4.5, net emigration of 1,500
B TFR of 2.1 net emigration of 750
C TFR of 2.9, net emigration of 1,500

tion growth and are increasingly reluctant to accept immigrants from neighbouring islands. A 50 percent reduction in net emigration is certainly a plausible development that must be considered.

Based on various combinations of these fertility and migration assumptions, some basic scenarios of future population growth have been constructed (see Figure 2; for supporting data, see Appendix Table C):

> ***Scenario A*** – current fertility (4.5) and current net emigration (1,500 per year)
>
> ***Scenario B*** – replacement-level fertility (2.1) and half the current level of emigration (750 per year)
>
> ***Scenario C*** – declining fertility (2.9) and current net emigration (1,500 per year).

In addition, two scenarios with zero net emigration will be discussed briefly to illustrate the built-in momentum for growth even with replacement-level fertility, as well as with current levels of fertility.

***Population Projections:*** A continuation of current demographic behaviour in the future (Scenario A) would lead to considerable growth. In just 16 years the population would approach 175,000, some 45 percent more than in 1980. By 2017 a doubling of numbers would have occurred and in less than 50 years, in 2030, Saint Lucia's population would top 340,000. This is what can be expected if fertility remains around 4.5, if life expectancy increases slightly, and if net emigration remains at about 1,500 per year.

Furthermore, in 2030 the crude birth rate would be 33.7 and the crude death rate 4.8. With a continued net loss through migration of 1,500 people, the actual rate of growth would then be 2.5 percent per year with no slowdown in prospect. Indeed, because of its large base popula-

tion in 2030, numerical growth would become even more dramatic thereafter. Under this scenario the population in 2050 would have passed an incredible 565,000!

Such growth patterns cannot be maintained for very long. Realistically, levels of net emigration cannot be expected to remain constant. They are more likely to drop in future years. The only other reasonable solution would be to reduce fertility levels drastically.

Scenarios B and C have been prepared as possible alternative means of arriving at a zero-growth society of no more than 175,000 over the next 50 years. Scenario B illustrates the level of fertility that will be needed if net emigration levels are halved. If net emigration falls to 750 per year, it would be necessary to lower the total fertility rate to 2.1 by 1990 to ensure that the island's population does not pass 175,000 in the future. Even under this scenario, the population would still increase by some 30,000 by the turn of the century, a growth of 25 percent over 20 years. The number of Saint Lucians would peak at just over 175,000 in 2030 before beginning a slight decline.

Since a total fertility rate of 2.1 is the level needed to attain zero population growth eventually without migration, it may seem surprising that with some net emigration, growth would still occur for the next 50 years before stopping. This reflects the built-in momentum for growth in a young population. Scenario D (not shown in Figure 2, but the data are in Appendix Table C) exemplifies this well. Assuming a TFR of 2.1 and no migration, Saint Lucia would grow to 160,000 by 2000 and 220,000 by 2030. Only in 2050, with the population at 235,000, would zero growth be realized. No further change would take place after that year.

Scenario C illustrates the level of fertility needed if net emigration remains at its current estimated level of 1,500 per year. Fertility would have to fall from 4.5 to 2.9 by 1990 to assure an eventual peak population of no more than 170,000 in 2035. Increases over the next 50 years would be somewhat smaller than under Scenario B. The population at the end of the century would be approximately 145,000, and by 2030, it would be 168,000. After 2035, the growth rate would become slightly negative, resulting in 162,000 Saint Lucians at mid-century.

Just as slight differences in fertility can significantly affect future population size, so too can any change in the level of migration have considerable effect, whether more people enter or leave a region. Scenario E (not in Figure 2, but see Appendix Table C for data) considers what would happen if suddenly all migration came to an end but fertility remained at current levels. By 2000, the population would almost double to 224,000; in 2015, it would surpass 360,000; and in 2030 it would total 531,000, obviously not a viable policy option!

Scenarios B and C both appear to be reasonable options to follow if it is decided that population growth in Saint Lucia should end in the not-too-distant future at some number well below 200,000. There are, of course, other ways to combine the demographic elements of B and C and arrive at a variety of intermediate scenarios. For example, if net emigration fell to 1,000 annually, a TFR of about 2.4 would be needed to attain zero population growth below 175,000. At any rate, it is clear that if eventual population stability is desired, fertility must be drastically reduced irrespective of what occurs with emigration.

***Age Distribution:*** The size of the future population of a country is necessarily of tremendous importance. But so, too, is its age distribution. Two nations may be of similar size and even have the same growth rates, yet they can exhibit vastly different age distributions. The impact of the latter on the society can often be as critical as the former. Whether a nation has a high proportion of young, elderly, or working-age people in its population depends on different levels of fertility, mortality, and migration.

Under Scenario A (that is, a continuation of current demographic behaviour), variations in age distribution would not be substantial, particularly after 1990 (see Table

## *Table 4: Percent Distribution of Population by Age-Group in Saint Lucia, 1980–2030*

| Scenario | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 |
|---|---|---|---|---|---|---|
| **Scenario A** | | | | | | |
| Under 15 | 49 | 42 | 43 | 42 | 41 | 41 |
| 15–64 | 45 | 51 | 49 | 51 | 54 | 54 |
| 65 or older | 6 | 7 | 7 | 7 | 5 | 5 |
| **Scenario B** | | | | | | |
| Under 15 | 49 | 37 | 26 | 27 | 22 | 19 |
| 15–64 | 45 | 57 | 67 | 66 | 70 | 70 |
| 65 or older | 6 | 6 | 7 | 7 | 8 | 11 |
| **Scenario C** | | | | | | |
| Under 15 | 49 | 38 | 32 | 32 | 28 | 26 |
| 15–64 | 45 | 54 | 59 | 59 | 64 | 63 |
| 65 or older | 6 | 8 | 9 | 9 | 8 | 11 |

4). A slight decline in the proportion under 15 as well as among the elderly would occur, but most changes would happen in this decade. The current large proportion of youth reflects the high fertility of the past 15 years. This has resulted in a population with a median age just above 16. Beyond 1990 change would be minimal, although the dependency ratio would fall from 96 in that year to 85 by 2020, a rate still relatively high by Caribbean standards.

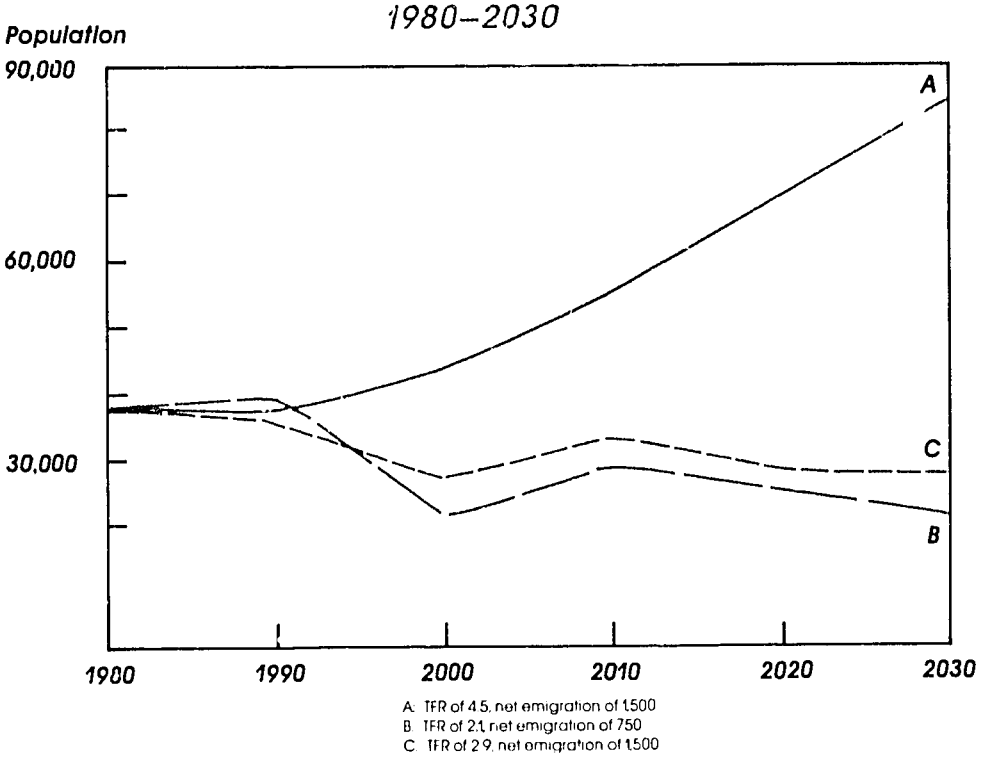
Scenarios B and C both result in a significantly older Saint Lucian population. With very low fertility of 2.1 and reduced net emigration (Scenario B), the proportion of persons under 15 in the population would fall from its present 49 percent to 26 percent in 2000 and 19 percent in 2030. The elderly population, on the other hand, would rise from 6 to 7 percent in 2000 and to 11 percent in 2030. As a result, the dependency ratio would fall dramatically. While today there are 122 persons of dependent ages per 100 working-age individuals, there would only be 49 in 2000 and but 41 in 2030. Clearly, such a scenario is encouraging for the economy of the nation.

The age distribution resulting from the demographic behaviour assumed under Scenario C (a TFR of 2.9 and current net emigration) differs slightly from that under Scenario B. The proportion of youth, while falling, would not do so as rapidly. By 2000 that proportion would be 32, and by 2030 it would be 26. The proportion of elderly would increase under Scenario C as it would under B, reaching 11 percent by 2030. The dependency ratio of Scenario C would not be quite as positive as under Scenario B, though it would be in the same direction. From 98 in 1990, the rate of dependents to working-age people would fall to 67 in 2000 and to 57 by the year 2020.

When examining the changes in age distribution that would result from these three scenarios, the situation under B seems the best, though C is also a substantial improvement over A. Surely this is to be expected. Continued high fertility (under A) necessarily leads to a high dependency ratio and to large proportions of young people, notwithstanding high levels of emigration. Thus not only does declining fertility contribute to a smaller population, it also results in a more economically manageable age distribution of that population.

Rates and proportions only depict a part of the demographic profile of the future population of Saint Lucia. For the policymaker, a much more relevant issue is what the changing proportions mean for schools, for the labour force, and for the elderly. The actual number of people

*Figure 3: School-Age Population (5–14) in Saint Lucia, 1980–2030*



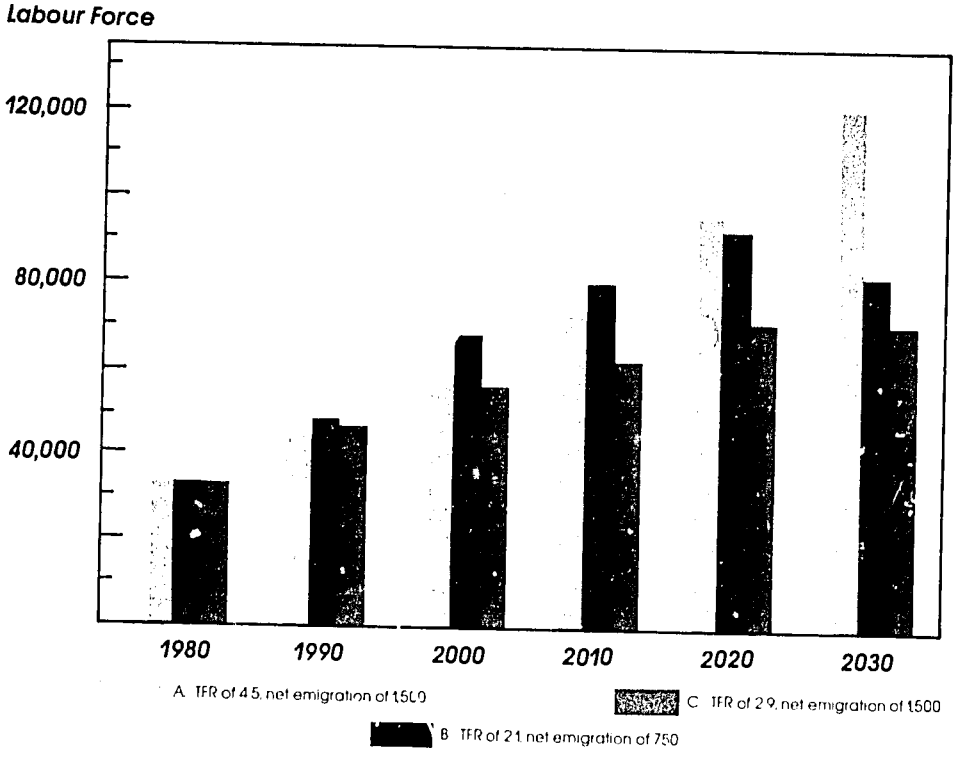

there might be in various age-groups must be examined if demographic projections are to be of any value to potential users.

***School Enrollment:*** The number of children age 5–14 (here assumed to represent the school enrollment population) could increase by about 7,400 by the turn of the century—an increase of 20 percent over 1980. Between 2000 and 2030 a near-doubling of this young population could occur, with their numbers approaching 86,000 by the latter year. All this will take place if Scenario A proves to be an accurate picture of future demographic behaviour (see Figure 3; for supporting data, see Appendix Table D). The number of school-age children would have grown from 37,595 to nearly 86,000 in just 50 years.

Educational conditions will be greatly improved if either Scenario B or C are followed. In Scenario B, where fertility falls to 2.1 and net emigration is limited to 750 per year, the population 5–14 would increase slightly in 1990 (because fewer young people would be leaving the country). Afterwards, however, their numbers would fall quite dramatically to 22,862 in the year 2000, some 15,000 less than in 1980. The slight growth that would occur in 2010 reflects the large number of women who would be in their reproductive years in the 1990–2000 decade (as a result of the high number of births prior to 1980). Thereafter the declining pattern would resume and by 2030 school enrollments (that is, children 5–14) would number less than 22,000.

With fertility at 2.9 and continued high levels of emigration (Scenario C), school enrollments would still decline in the future, although not as rapidly as in Scenario B. By the turn of the century 27,017 Saint Lucians would be between 5 and 14. After a brief increase in 2010, numbers would once again fall, to just under 28,000 by 2030.

## Figure 4: Labour Force in Saint Lucia, 1980–2030



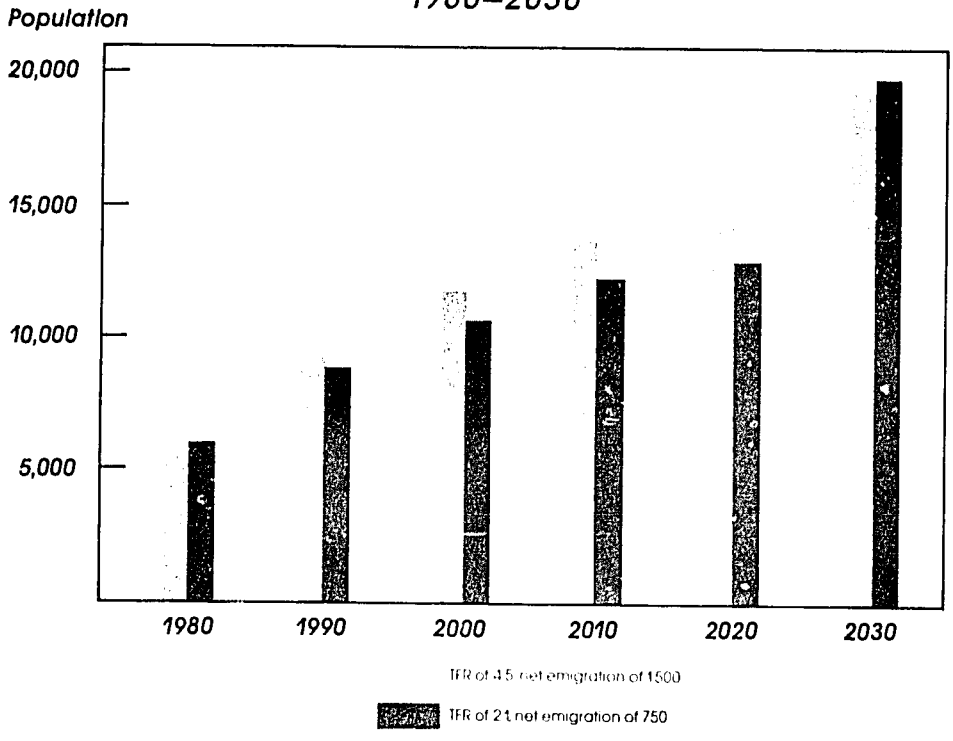

A substantial reduction in fertility would have a very strong impact on the educational system of Saint Lucia. Being able to plan for lower school enrollments within the next 15 years could not help but improve the quality of that education. Furthermore, with reduced numbers of 5–14 year olds in school, facilities could possibly be made available for increasing enrollments among older adolescents.

***Labour Force:*** Between 1980 and 1990, some 11,000–15,000 jobs will have to be created in Saint Lucia, even allowing for a continuation of 1981's reported unemployment rate of 14.5 percent. These figures represent both the growth in the population 15 or older and changes in the labour force participation rates as projected by the International Labour Office.

Under Scenario A, by the year 2000, 58,242 people would be either working or looking for work, an increase of 23,549 (67 percent) over 1980 (see Figure 4; for supporting data, see Appendix Table E). At current unemployment levels, this would mean that some 8,500 Saint Lucians would be job hunting, usually unsuccessfully. Beyond 2000 the size of the labour force would continue to grow, to 72,000 in 2010 and 121,000 in 2030. Given that an assumption of a continuation of current demographic patterns ensures a continuation of growth, this is to be expected. However, the proportion of people in the 15–64 age-group would grow at a faster rate than that of the entire population. For example, while the total population of Saint Lucia would increase 185 percent over the next 50 years, its labour force would swell 250 percent.

In Scenario B it is assumed that net emigration will be reduced by 50 percent while fertility falls to 2.1 by the year 1990. With fewer people leaving Saint Lucia, particularly young adults, the demand for

## *Figure 5: Elderly Population (65 or Older) in Saint Lucia, 1980–2030*




jobs would increase. Only after 2010 would the impact of lower fertility be noted among those in the labour force. Thus the labour force would grow more rapidly than under Scenario A, and by 2000 it would consist of 68,371 persons. By 2020, however, there would be nearly 94,000 job seekers or holders, slightly smaller than under Scenario A. Nevertheless, job creation will be a critical problem both immediately and later.

Scenario C (reduced fertility with current net emigration) is the most favourable path to follow as far as the labour force goes. Demands for jobs would approximate those under A until the turn of the century, when 58,174 Saint Lucians would need work. Later the demands, although still growing, would not accelerate as fast as under A or B, reflecting by then the declines in fertility that Scenario C assumes would take place after 1990.

In sum, job creation will be a critical problem in Saint Lucia for the foreseeable future regardless of fertility and migration levels. With unemployment already high, the spectre of an increase in the labour force of some 11,000–15,000 by 1990 and of 25,000–35,000 by century's end warrants serious consideration.

***The Elderly:*** One demographic fact does not depend on which scenario is followed: Saint Lucia can plan for a vastly expanded elderly population in future years. Here what demographers refer to as the cohort effect is particularly important. The elderly of the future, at least until 2045, are already born. Thus changes in fertility will have absolutely no effect on their numbers. And since there is a tendency for elderly emigrants to return to their homeland, any reductions in overall net emigration will not significantly affect those numbers in future years. To be sure, improve-

ments in longevity beyond those already projected would lead to even larger numbers of the elderly, but this report already assumes considerable optimism on this point.

From a total elderly population of 6,670 in 1980, the island can expect an increase of between 4,500 and 6,000 by the year 2000. And within 50 years there will be close to 20,000 St. Lucians 65 or older regardless of scenario (see Figure 5; for supporting data, see Appendix Table F). Indeed, under Scenarios D and E (assuming no net emigration) the numbers also increase to just over 20,000. Although these numerical projections can be made with considerable confidence, it is not as easy to determine what proportion of the population the elderly will represent in future years. As discussed in the section on age distribution, this could vary from 7 to 9 percent in the year 2000 and from 5 to 11 percent in 2030, depending on future patterns of fertility and migration.

Being aware now of the coming "senior boom" in Saint Lucia should be of great interest to those responsible for developing long-range plans for the nation. The expenditures related to increasing numbers of elderly are significant. However, it is important to bear in mind that, as discussed, declines in fertility will result in fewer school-age children. If the country is successful in reducing fertility, expenditures might well be transferred from education to health and care of the elderly.

***Conclusion:*** The next 10–15 years will be critical insofar as Saint Lucia's eventual population size and related socioeconomic development are concerned. Emigration at recent levels cannot be relied upon as a means of alleviating growth problems. In fact, fertility levels are so high that even with considerable continuing emigration the population size could easily pass 200,000 in the foreseeable future. A rapid reduction in fertility is thus an important goal if the nation is to arrive at zero population growth soon. Even then the changes in age distribution could be quite disruptive. School enrollments may fall along with fertility, but labour force demands will soar no matter which fertility and migration path is followed. And after the turn of the century the elderly population will grow significantly, leading to new demands on the social support system. Rapid declines in fertility could, of course, alleviate many of the problems facing the nation as it approaches the next century. It remains to be seen if this will develop.

One thing is certain: what was once an underpopulated island is gradually becoming overpopulated. Since 1850, density has increased from 15 persons per square mile to 77 persons today and it could reach 115 in the early twenty-first century.

# *Appendices*

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## *Table A: Population and Crude Birth and Death Rates in Saint Lucia, 1946–70*

| Year | Population | Crude Birth Rate | Crude Death Rate | Rate of Natural Increase |
|---|---|---|---|---|
| | (number) | (per 1,000 population) | | (percent) |
| 1946 | 70,113 | 37.8 | 15.1 | 2.3 |
| 1950 | 79,980* | 35.6 | 15.0 | 2.1 |
| 1955 | 86,780* | 41.3 | 12.0 | 2.9 |
| 1960 | 87,350 | 48.5 | 14.6 | 3.4 |
| 1970 | 100,893 | 43.9 | 8.4 | 3.5 |

*End of Year Estimates

## *Table B: Components of Population Change in Saint Lucia, 1946–60*

| Year | Births | Deaths | Natural Increase | Net Migration | Population Change |
|---|---|---|---|---|---|
| 1946–50* | 12,910 | 5,650 | 7,260 | +1,850 | 9,110 |
| 1951–55 | 15,510 | 5,860 | 9,650 | −2,850 | 6,800 |
| 1956–60** | 16,700 | 5,310 | 11,390 | −10,820 | 570 |

* From April 7, 1946 to December 31, 1950
**From December 1955 to April 7, 1960

## *Table C: Current and Projected Population of Saint Lucia, 1980–2030*

| Scenario | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 |
|---|---|---|---|---|---|---|
| A | 120,300 | 140,016 | 173,584 | 213,037 | 267,493 | 341,627 |
| B | 120,300 | 136,633 | 151,038 | 164,491 | 171,906 | 175,540 |
| C | 120,300 | 131,809 | 144,793 | 156,011 | 163,022 | 168,531 |
| D | 120,300 | 134,978 | 159,829 | 181,988 | 201,579 | 219,490 |
| E | 120,300 | 159,500 | 224,200 | 307,804 | 423,548 | 531,310 |

A: TFR of 4.5, net emigration of 1,500
B: TFR of 2.1, net emigration of 750
C: TFR of 2.9, net emigration of 1,500
D: TFR of 2.1, net migration of zero
E: TFR of 4.5, net migration of zero

## *Table D: Current and Projected School-Age Population (5–14) in Saint Lucia, 1980–2030*

| Scenario | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 |
|---|---|---|---|---|---|---|
| A | 37,595 | 35,936 | 44,964 | 56,425 | 66,071 | 85,911 |
| B | 37,595 | 38,883 | 22,862 | 29,613 | 24,846 | 21,814 |
| C | 37,595 | 35,926 | 27,017 | 33,316 | 28,904 | 27,850 |

## *Table E: Current and Projected Labour Force in Saint Lucia, 1980–2030*

| Scenario | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 |
|---|---|---|---|---|---|---|
| A | 34,693 | 45,311 | 58,242 | 72,248 | 96,034 | 121,250 |
| B | 34,693 | 49,098 | 68,371 | 80,552 | 93,850 | 81,757 |
| C | 34,693 | 47,719 | 58,174 | 63,260 | 70,362 | 71,727 |

## *Table F: Current and Projected Elderly Population (65 or Older) in Saint Lucia, 1980–2030*

| Scenario | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 |
|---|---|---|---|---|---|---|
| A and C | 6,669 | 9,911 | 12,688 | 13,942 | 14,417 | 19,108 |
| B | 6,669 | 8,782 | 11,079 | 12,470 | 13,606 | 19,925 |

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