

## THE POPULATION FACTOR IN CARIBBEAN DEVELOPMENT

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"People are our greatest resource" is a frequently heard slogan in overpopulated countries. But people are only a potential resource, just as unmined minerals are only potential, in their contribution to the economy. In order to realize that potential, a country's population must be healthy and long-lived, educated and skilled, and endowed with land and capital in productive quantities and combinations. In short, it must be developed.

One of the dangers facing areas like the Caribbean that embark on new programs of economic development is that, although production may be gradually increased, the mounting needs of a rapidly growing population will swallow up these gains as fast as they are made--leading only to the sustenance of a larger population on the old, meager level of existence.

Since population growth under certain conditions tends to retard the betterment of man's material condition,<sup>1/</sup> this paper addresses itself

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1. "First, it increases the pressure of numbers upon a nation's land and resource equipment as of any given time. Second, it tends to accentuate this pressure through time by accelerating the rate at which the store of exhaustible and non-replaceable natural resources is used up and the costs of their use are increased. Third, it diminishes the rate at which capital can be accumulated, and this diminution is greatly accentuated when, as is the case in most overpopulated countries, much potential capital is utilized in maintaining for a few years children who eventually die before they reach a productive age. Fourth, given the rate of capital formation, the rate at which the equipment of the labor force can be increased is reduced." Joseph J. Spengler, "The Population Obstacle to Economic Betterment," American Economic Review, Vol. XLI, No. 2, May 1951, pp. 350-51.



to the demographic dilemma that confronts all of the dependent Caribbean territories (British, French, Dutch, U. S.) with almost equal urgency. It discusses the three variables--fertility, mortality, and migration--that are responsible for population movements, and examines critically various measures aimed at slowing down the rate of population growth.

#### Present Demographic Position

The present population of the Caribbean territories stands at 7 million, or twice the population of Florida. Crude densities are high in the islands (Table I), with Barbados' 1,400 per square mile a near world record. If the United States had the density of Barbados, it would contain over twice the population of the planet! The mainland territories, on the other hand, with less than 6 persons per square mile would fall in the "underpopulated" category but for the fact that most of the people in the Guianas are crowded into coastal clusters while the vast interior remains almost uninhabited. Further, when "cultivated area" is substituted for "total area" to give a more significant man-land ratio for countries that are primarily dependent on agriculture, then many of the Caribbean units show densities of the order usually associated with urban concentrations.

Crowded as they are today, the Caribbean territories have suffered from a chronic scarcity of people--at least in the eyes of the ruling class--for the better part of their history. Neither the slave trade of the 18th century nor the immigration of indentured East Indians in the 19th century could satisfy the needs of plantation owners or provide for



much more than a replacement of the population.<sup>2/</sup> Thus the uncoiling of the population spiral which we are witnessing today is a phenomenon of the 20th century. To be exact, it dates from the decade immediately following World War I. Census data for the British territories, where the longest uninterrupted record is available, are used to tell the story. In the 30 years preceding 1921, the population increased by less than 25 percent; in the 33 years following 1921, it grew by 70 percent, with a marked acceleration after 1946. In terms of annual increments, the 1921-46 rate of growth was 1.4 percent, while after 1946 it was much greater, 2.4 percent.

Two factors are clearly responsible for this acceleration in the rate of population growth. The first is the control over an ever widening range of diseases, expressed in steep declines in mortality. The second is a continuation of high fertility. The way in which these factors complement each other to produce rising rates of natural increase in all of the Caribbean territories is illustrated in Table I.

This progressive swelling of annual population increments is often described as the acute phase of a region's demographic transition from a wasteful equilibrium of high fertility and high mortality towards a more efficient and life-saving balance of low fertility and low mortality. If, then, we could be assured of steady progress towards the new, low-level equilibrium, we would look forward with confidence to an end of the population explosion.

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2. For an excellent summary of the region's demographic history, see G. W. Roberts, "Some Demographic Considerations of West Indian Federation," Social and Economic Studies (University College of the West Indies, Jamaica, B. W. I.), Vol. 6, No. 2, June 1957, pp. 262-69.



In the Caribbean, however, there is as yet no appreciable evidence of declining birth rates,<sup>3/</sup> while thanks to the spectacular successes of public health programs and the extension of medical services throughout the territories, death rates are now nearly equal to those of the metropolitan countries. Moreover, conspicuous reductions in infant mortality rates (Table I) are reflected in the ever-widening base of the area's population pyramid. In Jamaica, for example, infant deaths declined from 127 per 1,000 live births in the late 1930s to 60 in 1955, a reduction of over 50 percent.

The grafting of a Western mortality on populations with "young" age distributions and high fertility rates can only lead to still higher growth rates in the future. With the probability that a death rate of 9 per 1,000 will be general within the next few years and with the prevailing fertility, the Caribbean is moving toward an annual rate of natural increase of the order of 3 percent. Unless large-scale emigration intervenes, the region may thus look forward to a doubling of its population in less than the span of a generation.

#### Population Projections

A number of population projections prepared for the Conference on the Demographic Problems of the Area Served by the Caribbean Commission, held in July-August 1957, bear out this conclusion. The estimates up to 1970 and the assumptions on which they are based are presented in Table II. Three different projections have been prepared for the British territories; they foresee increases of 41 to 50 percent for the period 1955-70. Even

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3. The only evidence so far comes from Puerto Rico, where crude birth rates have fallen from 42.2 in 1947 to 34 in 1956.



assuming emigration from the more crowded islands on a scale comparable to Jamaica's recent emigration experience to the United Kingdom (Projection II), the British territories may have a 1970 population of 5 million, as compared with 3.5 million in 1955.

Puerto Rico alone among the dependent Caribbean territories is shown as reaching a stationary population level. It should not be concluded, however, that Puerto Rico is on the verge of balancing its fertility and mortality; rather, the projection assumes a movement to the mainland of 50,000 Puerto Ricans per annum through the 15-year period under scrutiny. <sup>4/</sup>

The French and Dutch territories, whose projections are not as refined and therefore not as useful as those of the British areas, also face the prospect of sizeable accretions to their populations with no downturn in the rate of natural increase in sight.

A population increase of 40 or 50 percent within the next fifteen years means that there will be ever larger numbers of potential workers for whom jobs will have to be created at considerable capital cost. <sup>5/</sup> It also points to a growing strain on educational and welfare facilities as the number of school-age children increases.

#### Some Approaches to Population Control

With a record of high fertility and steeply falling mortality, with limited acreage of cultivable land, and a shortage of capital to provide

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4. This assumption, in turn, is predicated on a continuation of full employment in the United States.

5. The vicious circle of poverty and overpopulation is such that the burden of dependent children precludes a larger rate of individual saving and thus of investment, which in turn is needed to provide equipment for new jobs and higher productivity per worker.



employment for a rapidly expanding labor force, the territories of the Caribbean can no longer postpone the search for new ways to alleviate the rising population pressure. Although there has been no conscious effort so far to formulate an integrated population policy within the Caribbean area, several approaches have been advanced from time to time for public discussion.<sup>6/</sup> Three of these prospects--migration, industrialization, and fertility control--will now be examined for their potential effectiveness.

At different times during the recent history of the Caribbean, migration has played an important role in slowing down population growth in several of the densely settled islands. Between 1911 and 1921, for example, the outward movement of people to the United States and Latin America successfully retarded growth rates throughout the region. Again in 1955, the departure of thousands of Jamaicans for the United Kingdom took away 43 percent of the island's natural increase. And Puerto Rico's postwar experience with migration on a massive scale has given the island a "breathing spell" from population pressure that has been fully utilized

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6. For example, G. W. Roberts, "Some Demographic Considerations of West Indian Federation," Social and Economic Studies, Vol. 6, No. 2, June 1957, pp. 275-85 ("Consideration of Population Policy"); G. W. Roberts, The Population of Jamaica, Cambridge: The University Press, 1957, Chapter 9 ("Growth Prospects"); Clarence Senior and Douglas Manley, Jamaican Migration to Britain, Kingston: Govt. Printer, 1955; H. D. Huggins, M. G. Smith, L. Braithwaite, G. E. Cumper, J. M. Stycos, and Arthur Brown, "Possible Solutions of Problems of Over-Population," Paper 3(d) prepared for the Technical Conference on the Demographic Problems of the Area Served by the Caribbean Commission, Port of Spain, Trinidad: Caribbean Commission, July 1957; J. M. Stycos, Kurt Back, and D. O. Mills, Prospects for Fertility Reduction: The Jamaica Family Life Project, A Preliminary Report, New York: The Conservation Foundation, October 1957, mimeo.



to promote education and economic development. Puerto Rico's population would be larger by 25 percent than it is today, had not out-migration accounted for almost 500,000 persons or two-thirds of total natural increase during the years 1946-56.<sup>7/</sup>

But the negative aspects of migration must also be considered. In the Caribbean, large-scale emigration has tended to deplete the most valuable segment of the sending territory's labor force at a time when skill and enterprise are crucial to local development. In Jamaica, for instance, the number of skilled workers lost through emigration in 1955 was more than twice the number of accessions to the ranks of these workers.<sup>8/</sup> The accumulation of workers abroad and the danger of a return flow in the event of a recession in the receiving country is often cited as another negative function of migration.

In addition to external migration, it has been frequently suggested that populations might be transferred from the crowded islands to the sparsely settled mainland territories of the Guianas. Estimates of the capital investment required to establish one new worker in an undeveloped area vary considerably, but all such estimates are many times the cost of emigrating to the United Kingdom in search of employment. Serious students of the British territories have therefore concluded that:

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7. Clarence Senior, "Demography and Economic Development," a paper delivered at the Economic Development Conference, University College of the West Indies, Mona, Jamaica, August 1957, p. 26.

8. G. W. Roberts and D. O. Mills, Study of External Migration Affecting Jamaica, 1953-55, unpublished ms.



The strong abstract argument for transfer of population from the islands to British Guiana is in practice contradicted by the difficulty of opening up the hinterland..., by the lack among potential emigrants of the qualities needed for such a pioneer life and by the rapid current increase of the Guianese population. 9/

The same writers are equally realistic about prospects for new large-scale migrations to areas outside of the Caribbean other than the metropolitan countries:

"The West Indian is objectionable on racial grounds to many of the countries which stand in theoretical need of settlers, while various practical and political difficulties cut him off from others."<sup>10/</sup>

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Industrialization per se is not a cause of population change. But over the past two centuries in the Western countries industrial development has induced not only a rise in production but also the kind of social and economic changes that pave the way for voluntary limitation of fertility. The question before us, then, is whether the Caribbean territories can rely on industrialization and concomitant urbanization to provide a solution to their population problem.

In our search for an answer, we are fortunate to be able to turn to a living case study within the region itself. Puerto Rico's mid-20th century industrial revolution--known to many as "Operation Bootstrap"--

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9. H. D. Huggins et al, "Possible Solutions of Problems of Over-Population," Paper 3(d) prepared for the Technical Conference on the Demographic Problems of the Area Served by the Caribbean Commission, Port of Spain, Trinidad: Caribbean Commission, July 1957, p. 9.

10. Ibid.



has been described elsewhere on this program. It should be noted, however, that Puerto Rico's unique advantages with regard to the availability of capital and the accessibility of the U. S. consumer market may limit the applicability of the island's recent experience to other territories. It is common knowledge that Operation Bootstrap has already resulted in a substantial increase in the island's output and living standards. The effects of industrialization on fertility levels, however, are not as clear-cut. Ten years is too short a time for slight changes in attitude to be clearly reflected in the statistical record. <sup>11/</sup> Emigration, for instance, has certainly contributed to the modest decline that has been observed in both the crude birth rate and the age specific fertility of the female population in Puerto Rico; its effect has simply been to reduce the chances for mating of the female population staying on the island.

Two other factors that bear on Caribbean fertility prospects must also be considered, for they may be instrumental in bringing about results different from those achieved in the West in the course of industrialization. First, we have some indication that the massive attack on certain diseases (with DDT on malaria and penicillin on venereal disease), apart from its immense effect on the health and well-being of the population, is also the cause of a recent rise in fertility in many Caribbean territories. The possibility of a relationship between improvements in health and the levels of fertility remains an extremely important

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11. Fertility is a function of so many variables that it often becomes very difficult to determine the quantitative contribution of any specific factor affecting it because it is impossible to hold all the others under adequate control.



subject for study. 12/

The second factor that may have an effect on fertility contrary to that expected from a development program has to do with patterns of fertility that are peculiar to the Caribbean. On the basis of recent censuses, three types of family unions can be distinguished: the formally married, the common-law union, and the keeper relationship. All available studies seem to confirm that fertility is highest in the married and lowest in the least stable keeper relationship. 13/ This pattern tends to make current overall fertility rates somewhat lower than they might otherwise be. Hence, any economic or social development that would pave the way for more stable unions would have a tendency to promote a rise in the level of the population's fertility. As Roberts put it:

For possibly with the rising standard of living, greater urbanization and improvement in social conditions that may follow industrialization, the idea of marriage as a binding element of family life may spread, and the general stability of the family unions increase. 14/

Thus it seems clear that in the Caribbean area any assumptions of imminent and inevitable declines in fertility as a result of economic development must remain open to question, and that therefore the avenues for accelerating widespread acceptance of voluntary family limitation should be seriously investigated.

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12. G. W. Roberts, "Some Demographic Considerations of West Indian Federation," Social and Economic Studies, vol. 6, no. 2, June 1957, p. 282.

13. G. W. Roberts, The Population of Jamaica, chs. 8 and 9; Judith Blake, J. M. Stycos, and Kingsley Davis, Family Structure in Jamaica: The Social Context of Reproduction, to be published in 1958.

14. G. W. Roberts, "Some Demographic Considerations of West Indian Federation," Social and Economic Studies, vol. 6, no. 2, June 1957, p. 284.



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In assessing the chances for the adoption of family planning in the Caribbean we must consider, first, the attitudes of the population towards smaller families and their motivation to reach that goal, and second, the degree to which the means for family limitation are available <sup>15/</sup> in the area.

It had been generally assumed in the past that Caribbean women desire as many children as possible, that they feel they must fulfill an ordained reproductive quota, or that they have no opinion as to desirable family size. A number of recent studies of this question disclose how wrong were these assumptions.

In Puerto Rico <sup>16/</sup> the average lower-income mother maintains that two or three children are the ideal number, in Jamaica, <sup>17/</sup> three or four. Moreover, few women who have had at least this number desire more children, and virtually none want an unlimited number. While we must not over-

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15. This section is based on Paper 3(d) prepared by the Jamaican delegation and a representative of The Conservation Foundation for a discussion of "Possible Solutions of Problems of Over-Population" at the Technical Conference on the Demographic Problems of the Area Served by the Caribbean Commission, July-August 1957. There is no information on the outlook for family limitation in the Dutch and French territories of the Caribbean because of their governments' official objection to birth control on moral and ethical grounds.

16. J. M. Stycos, Family and Fertility in Puerto Rico, New York; Columbia University Press, 1955, p. 243.

17. J. M. Stycos, Kurt Back, and D. O. Mills, Prospects for Fertility Reduction: The Jamaica Family Life Project, A Preliminary Report, New York: The Conservation Foundation, October 1957, p. 49.



estimate the intensity of such desire for the smaller family, it is clear that the large family ideal is not a value which would seriously hamper the introduction of family planning.

With respect to the economic availability of the means for fertility control, only Puerto Rico fulfills the criteria of adequate supply, distribution, and price of birth control techniques. <sup>18/</sup> Barbados and Jamaica have a few private clinics dispensing information and materials, but only a network of public facilities providing materials free of charge could effectively service the entire population.

Effectiveness, furthermore, depends on the spreading of information. In order to use the facilities, the public must have at least a rudimentary knowledge of birth control techniques and their availability at the clinic. In Jamaica, for example, most women are not even aware that methods of contraception exist; and they tend to associate "birth control" with abortion, a practice that meets with almost universal condemnation. This shows that a sustained educational effort is a prerequisite to an effective program of family planning in the Caribbean. <sup>19/</sup>

Inevitably, such a program will be expensive. It needs to be "tailor-made" for each territory, even for each segment of the popula-

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18. Free supplies of the more commonly used contraceptives are made available in 160 health units scattered over the island.

19. An experimental educational program was carried out in Jamaica in 1957 under the auspices of The Conservation Foundation. Pamphlets, discussion meetings accompanied by an educational film, and case work methods were tried out. Two major conclusions stand out: (1) An educational program in the area of fertility control meets with little community resistance; (2) A sustained educational program can be assured of considerable success in promoting family planning.



tion. This requires research, training of case workers and nurses, and an investment of capital funds. But compared to the cost of providing for the yearly arrival of 250,000 new Caribbean citizens, to the cost of mass population transfers to the empty lands of the Guianas, or even to the construction of new medical, welfare, and educational facilities, a fertility control program would seem a bargain indeed.