

SWP167

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

Economics Staff Working Paper No. 167

FAMILY PLANNING AND FERTILITY TRENDS IN JAMAICA

November 1973

This paper is one in a series of papers the Population and Human Resources Division plans to produce on evaluation of national family planning programs and factors which distinguish successful programs from those which are not so successful in bringing about fertility declines. It describes the recent trends in fertility in Jamaica and examines the factors which are associated with them. The paper concludes that, although the current fertility rates in Jamaica are very much higher than those observed in the country during much of the period before 1950 when there was very little organized family planning effort, official or private, there has been a noticeable decline in the rates since the official program was launched. However, it is difficult to demonstrate a direct link between the decline in the fertility rates and the official family planning programs. One possible reason for this lack of association between fertility decline and the official family planning efforts is increased use of contraceptives from commercial channels by motivated couples especially during the early phase of the program. Another possible reason is the relatively low continuation rates; the statistics of the number of new acceptors of the official program probably include even persons who visited the clinics just for information and greatly exaggerate the number of persons actually using contraceptives at any given time. Thirdly, fertility decrease caused by the official program was probably counterbalanced by fertility increase caused by the emigration of a substantial number of relatively low fertility women.

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FAMILY PLANNING AND FERTILITY TRENDS IN JAMAICA

SUMMARY AND CONCLUSIONS

This paper describes the trend of fertility in Jamaica in recent years and examines the factors which are associated with it. In particular, it attempts to evaluate the role of the official family planning program in the fertility decline of the latter half of the 1960s.

The Jamaican birth rates and fertility rates have been relatively low in comparison with the current rates in many developing countries, and over the past fifty years they have shown considerable fluctuations. The current birth rate (35 per 1,000) is relatively low and is about 7 points less than the 1960 level. However, it is not the lowest in Jamaican history and is in fact about 4-5 points higher than the previous low. The current fertility rate (GRR of 2.7) is not very high but is as much as 30 percent higher than the rate observed 30 years ago and is only slightly below the 1960 level. However, there has been a noticeable increase in fertility during 1960-1966 and a noticeable decrease since the official family planning program was launched in 1966/1967.

Until recently, sterility, marital status distribution and migration were the principal factors affecting fertility changes in Jamaica. Among these, sterility and marital status have been the principal factors during 1943-1960; the effect of sex-selective migration on the birth rate was contrary to the effect of age-selective migration, so that the net effect of migration was relatively negligible. On the other hand, during 1960-1970 migration was the principal factor affecting the Jamaican birth rate contributing nearly 90 per cent of the total decline. At the same time, migration of relatively low fertility women seems to have contributed to an increase in the average fertility level of the women in the country during 1960-1966.

The principal point of interest in this analysis is the role of family planning program in the fertility decline during the latter half of the '60s. The main conclusion is that it is difficult to demonstrate a direct link between the observed fertility decline and the official family planning program. No service statistics could be cited to explain the significant fertility fall in 1967 and no direct relationship could be demonstrated between the large number of acceptors of family planning and the small fertility decline during 1969-1971. However, these situations do not provide conclusive evidence against family planning as a cause of the fertility decline. Depending on the magnitudes of fertility differentials and continuation rates, two interpretations,

both involving family planning, may be put forward for the observed fertility trend. Concomitant with the introduction of the official family planning program in 1966, the practice of family planning became more widespread in the island, especially among women who were motivated to have a small family, partly utilizing the clinical services but mostly using commercial channels. The initial impact was a significant reduction in the birth rate and fertility rate, but as the number of motivated couples depleted, the reduction in the birth rate also slowed down. At that stage, while the official program appears to have been successful in recruiting a large number of acceptors, it failed to motivate them strongly and to keep them in the program long enough to produce a significant effect on the birth rate. The official statistics of the number of new acceptors probably included even persons who visited the clinics just for information and thus exaggerate the number of persons actually using contraceptives.

Alternately, a more generous role may be given to the official family planning program. As a result of the emigration of a large number of low fertility women, the average fertility rate of women in Jamaica has increased since 1966 and the program has been successful to avert not only the additional births caused by the increase in the fertility rates, but was also instrumental in reducing the fertility rates below the 1968 level. Thus, the apparent lack of association between service statistics and fertility changes after 1968 is due to the intervention of fertility increase caused by the emigration of a substantial number of low fertility women. The credibility of this interpretation depends on the magnitude of the continuation rates and the nature and magnitude of fertility differentials, both of which are not accurately known. A third factor is the change in the marital status distribution, which for this short period was assumed to be not very large. However, a more conclusive analysis of the impact of family planning program on the Jamaican fertility rates would require additional information on all these three factors.

FAMILY PLANNING AND FERTILITY TRENDS IN JAMAICA

1. Introduction. Jamaica was the first country in the world to receive a loan from the IBRD for a population project. It was also one of the first in the Western Hemisphere to adopt a policy of slowing down the growth rate of its population through family planning. The country has a long history of private and public activities in the field of family planning services. Recently the government has created a National Family Planning Board which is entrusted with the task of carrying out national objectives in family planning. Currently Jamaica is spending about a million Jamaican dollars for family planning and it receives financial assistance from several outside agencies. In view of this long interest in family planning and fertility control, and considerable expansion of the program in recent years, it is of great interest to know what has been the general movement of fertility rates in Jamaica in recent years and what are the factors associated with such movement. It is of particular interest to know what the family planning program has achieved in terms of fertility reduction.

2. Usually, even under normal situations, it is rather difficult to isolate the demographic impact of a family planning program. In the case of Jamaica, this problem is all the more difficult because of two special situations. The first one is external migration which is a very significant component of population growth in Jamaica. Since migrants usually include a very high proportion of females in reproductive ages, Jamaican birth rate is very much influenced by the extent and age distribution of external migration. Inasmuch as usable data on the volume and characteristics of migration are not readily available, one of the main problems in evaluating the effect of family planning on fertility is the problem of eliminating the effect of migration.

3. In many countries, especially those which have shown a drop in their birth rate in recent years, changes in age at marriage and proportion marrying appear to have made significant impact on the birth rate. In situations where detailed information on marital status distribution is available, the effect of nuptiality can be easily estimated and separated out from the program effect. In the Jamaican situation, this is rather difficult in view of the fact that "fertility is to a large degree independent of nuptiality".^{1/}

^{1/} G. W. Roberts, The Population of Jamaica, p. 291.

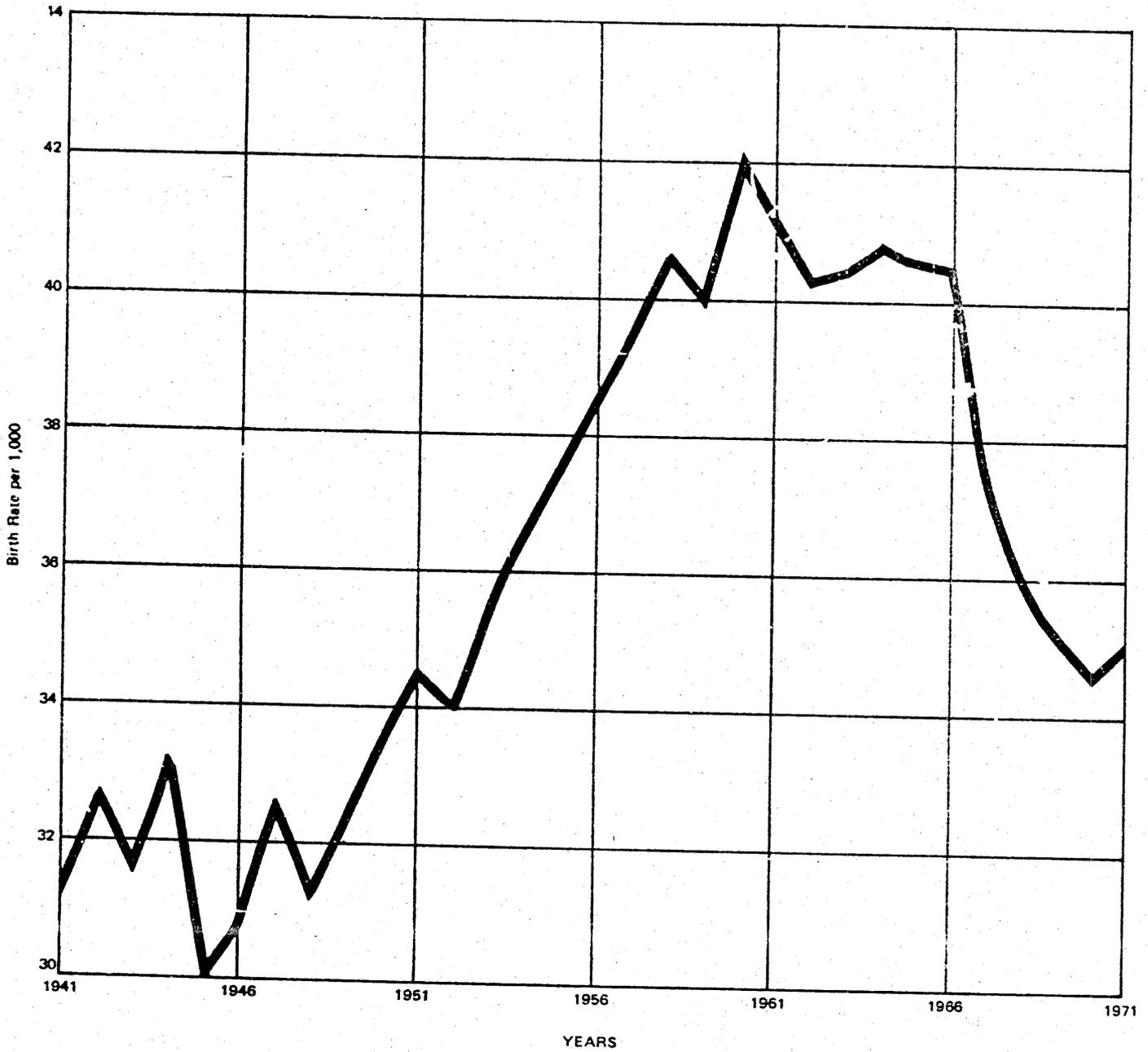
4. A third problem, common to most developing countries, is related to availability of statistics needed for estimating fertility changes. In Jamaica, birth registration is fairly accurate, and statistics on total births are very promptly published. But there is considerable delay in producing cross-tabulation of births by age of mother, parity, etc., and even when they are made available, it will be difficult to use them in post-census years, because of lack of information on the volume and sex-age marital status composition of migrants. Although data on new acceptors of official family planning are available, little is known about their continuation rates.

5. Fertility Trends. Jamaican fertility rate has never been extremely high and over the past 50-year period it has shown considerable fluctuation. The crude birth rate remained below 40 per 1,000 population during most of the years for which records of births are available and the Gross Reproduction Rate (GRR) remained below 3.^{1/} An exception in recent years is the period 1956-1966 when the rates exceeded these limits, although not by wide margins. There have been three distinct phases of fertility change since 1920: (i) 1921-1943 when both the birth rate and the fertility rates declined; the crude birth rate declined from about 37 to 32 and the GRR from about 2.64 to 2.08; (ii) 1943-1960 when both the birth rate and the fertility rates increased; the crude birth rate to 42 and the GRR to 2.77; (iii) 1960-1971 when birth rate declined and the fertility rates remained more or less constant; the crude birth rate decreased from 42 to 35 and the GRR declined slightly to 2.71. It is instructive to compare the current fertility measures with some of the past rates. Although the crude birth rate has shown considerable decline in recent years since the country began an active program in family planning, the present rate is by no means the lowest in recent history. For quite a number of years around 1945 when there was no family planning program, official or private, the Jamaican birth rate remained at about 32 which is significantly below the current low rate. Comparison of fertility rates is even more instructive. The current GRR, even after several years of family planning, is about 30 percent higher than the rate during the forties.

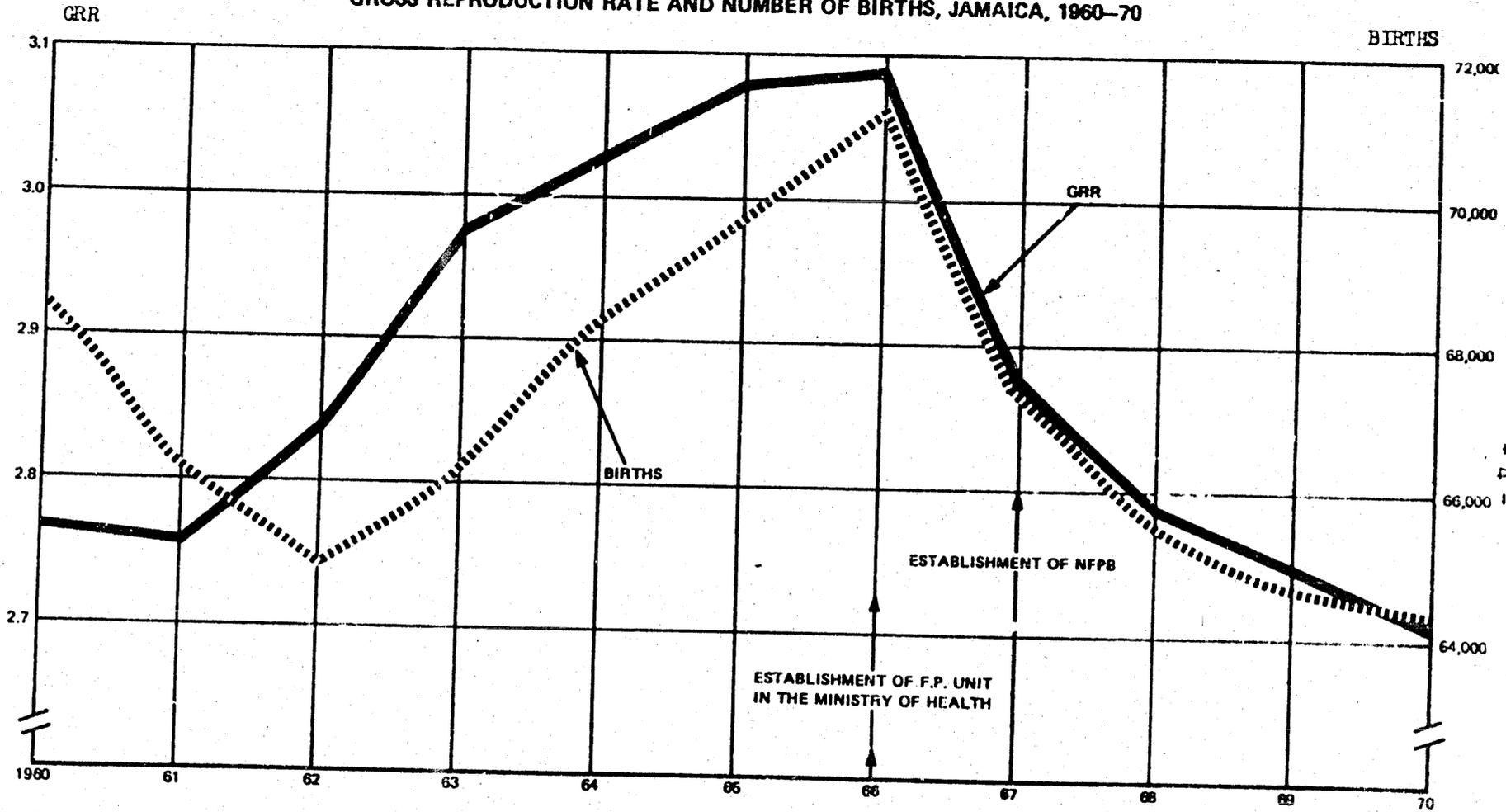
6. The crude birth rates are available on a yearly basis, but fertility measures (specific fertility rates and their derivatives) are usually calculated only for census years: 1943, 1960 and 1970. As a result, the intercensal fluctuations are not revealed by the figures given above. At the same time, yearly fluctuations in fertility rates, particularly those for the period 1965-1970, are the ones most needed to evaluate the impact of family planning program. Although it is shown that between 1960 and 1970 there was only a very small decline in the fertility rates, this does not preclude the possibility that fertility rates fell much more rapidly since the expansion of national family planning program in 1966/67. If there was an increase in fertility rates between 1960 and 1965 it automatically implies that there was decline by more than that amount during 1966-1970. The possibility of such an increase cannot be ruled out in view of the parabolic trend in the annual number of births during the sixties.

1/ A crude birth rate of 40 and a GRR of 3 indicate a relatively high level of fertility, but much higher rates are observed in many other countries. For example, in Nigeria the birth rate is about 50 and the GRR is about 3.3. In Iraq the birth rate is about 49 and the GRR is about 3.5. On the other hand, in countries like Germany the birth rate is as low as 13-14 and the GRR is below 1. GRR is a measure of the average number of daughters a woman would have if she experienced a given set of age specific birth rates throughout her reproductive ages.

CRUDE BIRTH RATE OF JAMAICA 1941-1971

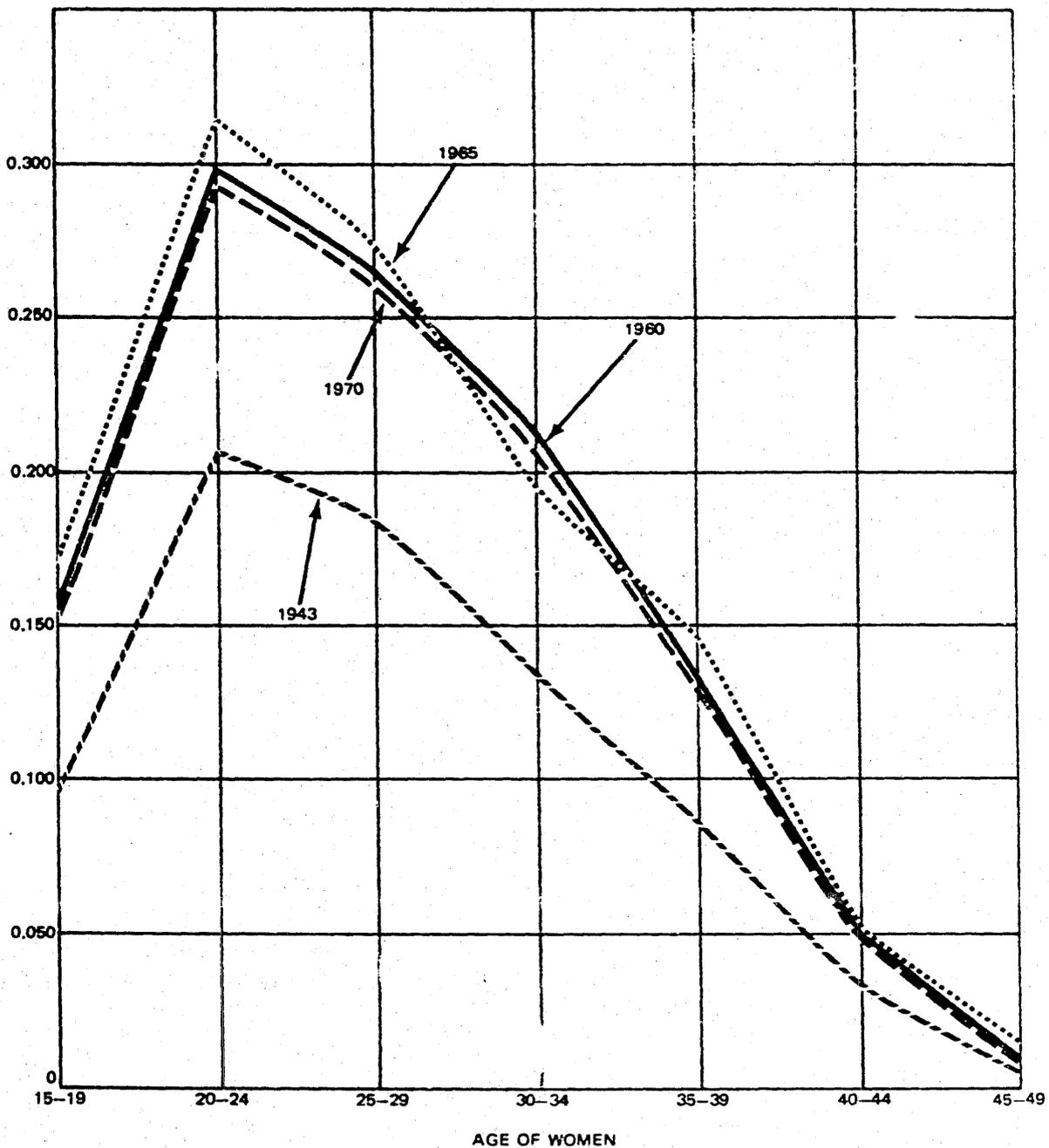


GROSS REPRODUCTION RATE AND NUMBER OF BIRTHS, JAMAICA, 1960-70



SPECIFIC FERTILITY RATES FOR JAMAICA FOR 1943, 1960, 1965 AND 1970

Sp. F. Rates



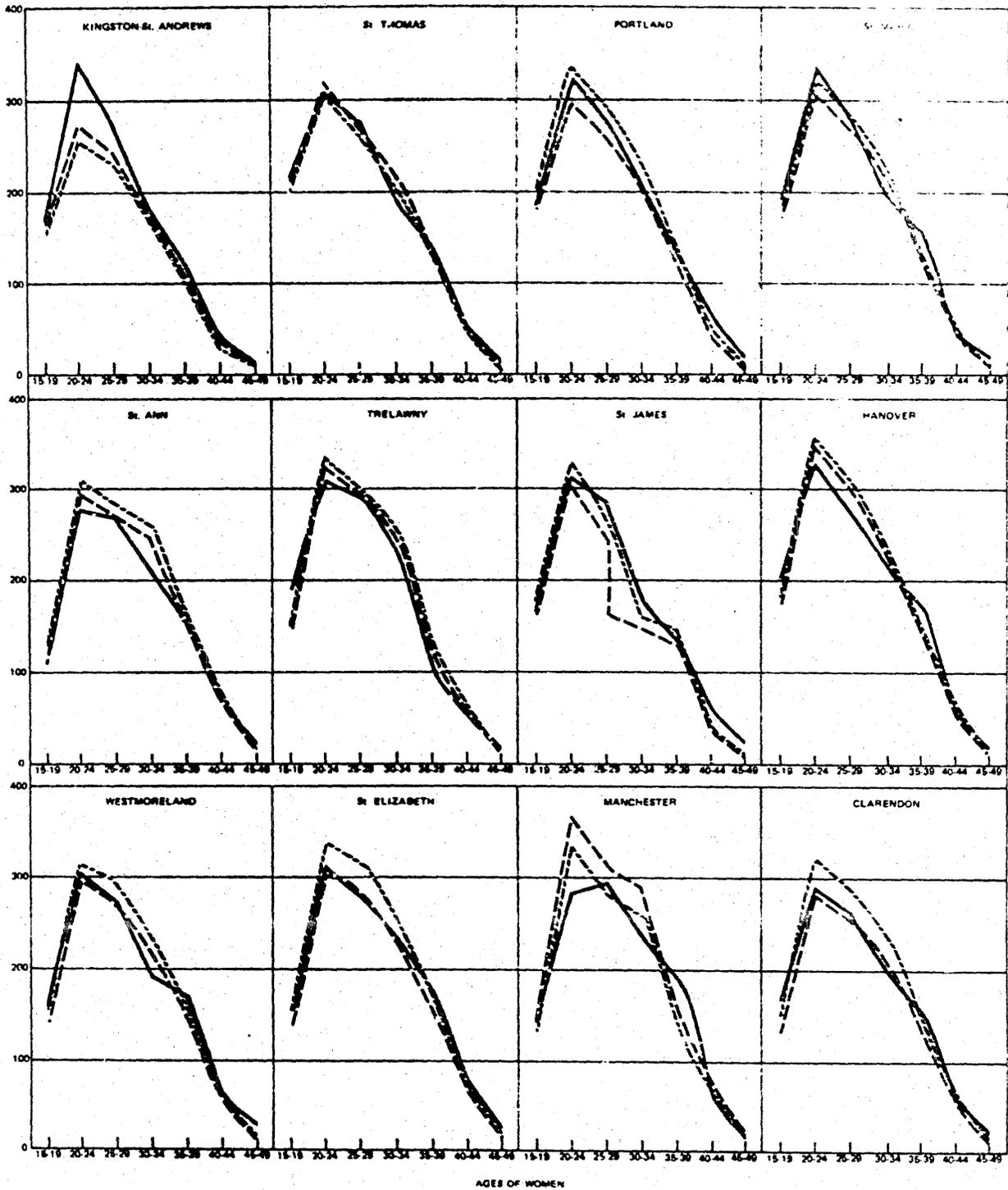
SPECIFIC FERTILITY RATES BY PARISHES, JAMAICA 1960, 1965 AND 1970

Sp. Fertility Rate per 1,000

1960

1965

1970



7. The annual number of births registered in Jamaica decreased from about 68,000 in 1960 to 65,000 in 1962, increased to 71,000 in 1966 and then decreased again to 64,000 by 1970. Does this mean that there was a similar fluctuation in the fertility rates? The question cannot be answered without knowing the number and age composition of women in the reproductive ages in the intermediate years and the distribution of births by age of mother. The total number of women in the reproductive ages decreased from 347,000 in 1960 to 338,500 in 1970. The path of this decline is not exactly known, but available data indicate that migration had been heavy during 1960-62 and again after 1966 and, therefore, the number of women should have decreased for a while, then increased and decreased again, the same trend which the number of births is known to have followed. Reconstructing this path on the basis of the available information on the annual number of migrations and estimating GRR for every year, the pattern shown in the accompanying chart is obtained. ^{1/} Although the trend shown in the chart may not be exact, there seems to be little doubt that the GRR did increase during the first half of the decade and decrease thereafter.

8. Using an alternate method in which the actual distribution of births in 1965 and estimated age distribution of women in that year are used, estimates of specific fertility rates of each of the 13 parishes are obtained. ^{2/} These estimates confirm the earlier conclusion about the intercensal variation in fertility rates during 1960-70. The GRR (for the country as a whole) seems to have increased by about 11 percent (the minimum estimate is 4 percent) during 1960-65, and decreased by about 12 percent (the minimum estimate is 6 percent) during 1965-70. The increase during the first half and the decrease during the second half are shared by most of the age groups giving additional evidence to the parabolic trend.

^{1/} In this method, the annual number of births (without their distribution by age of mother) and age distribution of women in reproductive ages are used to calculate the specific fertility rates indirectly. The 1960 pattern of specific fertility rates are used for all years.

^{2/} In this method, the number of women in 1965 in each age group is obtained (without utilising the estimates of migration) as a simple average of the size of the cohort in 1960 and 1970. For example, the number of women 15-19 years in 1965 is taken as the average of women 10-14 years in 1960 and 20-24 years in 1970. Similarly, estimations were made for other age groups. Obviously the method assumes uniform migration. Since migration was known to be relatively heavier during the first half, the numbers of women obtained by this method are likely to be overestimates and the specific fertility rates are likely to be underestimates. The GRR for Jamaica obtained by this method is 2.9 which is slightly lower than that obtained by assuming heavier migration during the first half (GRR 3.1). However, this method also confirms the conclusion that fertility rates increased during 1960-65.

However, neither the upward movement nor the downward movement is shared by all the parishes. A very consistent pattern is observed in Kingston-St. Andrews area where all the seven specific fertility rates increased during 1960-65 and all of them decreased during the following years. In fact, the national pattern is dictated by the trend in Kingston-St. Andrews area. A second point to note about the parishes is that they show a consistent decline of the fertility rates at ages above 35 years. These are the age groups in which the impact of family planning efforts is reflected most and the consistent decreases in all the parishes may be construed as a reflection of the impact of family planning. A similar consistent decline is noticed in the 15-19 age group also, but in the most fertile age group (20-24 age span), although most parishes indicate decreases, some do not. Taking all these facts together, and noting particularly that the estimates of specific fertility rates obtained for 1965 by the second method are probably minimum estimates, there seems to be sufficient evidence to conclude that the fertility rates declined significantly since the introduction of national family planning program. Whether the decline can in fact be attributable to the program is debatable.

9. Factors Associated with Fertility Trends. A number of interesting questions emerge from the discussion of the trend of the crude birth rate and Gross Reproduction Rate. Why is it that the Jamaican birth rate remained below 40 during most periods, when in many African and Asian countries rates as high as 50 or more were observed? What were the factors which caused the rates to fall during 1921-43; which raised the rate above 40 during the early sixties? How is it that the crude birth rate declined significantly during 1960-70 at a time when fertility rates showed only moderate decline? What are the reasons for the possible increase in fertility rates during 1960-66 and the possible decrease during 1966-72?

10. In the first place it should be noted that the decline in fertility during 1921-43 and the increase during 1943-60 are real in the sense that they are not contributed entirely by changes in the sex-age composition of the population. GRR is not affected by sex-age composition and it shows the same type of change shown by the crude birth rate during these periods. Secondly, it is difficult to substantiate that the fertility decline during 1921-43 which amounted to a decline of CRR by 21 percent was due to increased use of modern contraceptive techniques. It is equally difficult to explain the observed upward trend during 1943-60 in terms of reduced use of contraception. It will be more reasonable to assume that factors other than contraceptive use were involved in the changing trends, particularly those before 1960. Two such factors are migration and nuptiality.

11. Migration. During most of the present century, external migration has been an important component of population growth in Jamaica. Although never sufficient to induce a decline in population, migration was large enough to influence significantly rates of population growth and age-sex composition. Large scale outward movement of population from Jamaica which

began around 1880 when the French began work on the Panama Canal came to a standstill in the early 1920s. During the next 20 to 25 years, the net outward movement of the past was replaced by net inward movement of about 26,000 former emigrants. The intercensal periods since 1943 witnessed an accelerated trend in net emigration. It is estimated that the net loss due to migration was 178,000 during 1943-60 and 288,000 during 1960-70. Emigration was especially heavy during 1960-62 when the country had a net loss of 146,000. It slowed down during the mid 60s but increased again towards the end of the decade. Until 1960 emigrants included a greater number of males, but during 1960-70 females outnumbered males. As is evident from Table 6 (page 26) emigrants included a disproportionate number in the young adult ages: 64 percent during 1943-60 and 69 percent during 1960-70 in the age group 15-49 years.

Net International Migration to Jamaica 1911-1970

| Period | Total | Males | Females |
|---------|----------|----------|----------|
| 1911-21 | - 77,100 | - 48,800 | - 28,300 |
| 1921-43 | + 25,800 | + 15,100 | + 10,700 |
| 1943-60 | -178,000 | -106,500 | - 71,500 |
| 1960-70 | -288,000 | -139,000 | -149,000 |

12. Migration affects fertility indices in two ways: first through its effect on age-sex composition and second through fertility differentials between the migrants and non-migrants. The former effect is on the birth rate and the latter is on specific fertility rates and measures derived from them. The effect of migration on the birth rate depends on the sex-age composition of migrants in comparison with that of the non-migrants. Usually migrant women include a relatively high proportion in the reproductive ages and emigration tends to reduce the birth rate in the country of origin. However, the sex composition is equally important, and, depending on it, the net effect on the birth rate can be either positive or negative.

13. The figures below indicate the relative contributions of migration and other factors on the changes in the birth rate during the last two intercensal periods. A number of conclusions emerge from these figures. Without fresh migration and fertility change, the crude birth rate would have declined in both the intercensal periods. However, the effect of

Change in CBR by Components: 1943-60 and 1960-70

| Factors | 1943-60 | | 1960-70 | |
|---|---------|------|---------|------|
| | Change | % | Change | % |
| 1. Total change in CBR | + 9.6 | +100 | - 7.7 | -100 |
| 2. Compositional change due to migration and fertility changes before the beginning of the intercensal period | - 3.4 | - 35 | - 3.0 | - 39 |
| 3. Compositional change due to migration during the intercensal period | + 2.7 | + 28 | - 3.7 | - 48 |
| 4. Fertility change during the intercensal period | +10.3 | +107 | - 1.0 | - 13 |

Note: This analysis assumes that the migrants and non-migrants have the same fertility rates.

intercensal migration was not in the same direction in the two periods; it was positive during 1943-60 but negative during the following period.^{1/} Migration reinforced the prevailing trend in both the periods; it added to the increase due to fertility increase during 1943-60 and added to the decrease due to fertility decrease during 1960-70. Secondly, while the net increase in the birth rate during 1943-60 is very close to the effect of fertility change during the period, the net change in the birth rate during 1960-70 has no relation to the change in the fertility rate during the period. More or less the entire decline in the birth rate in Jamaica during the sixties is contributed by compositional changes arising from migration and past fertility changes and very little is a reflection of recent fertility changes.

14. It is much more difficult to assess the effect of fertility differentials as there are no data on the fertility rates of migrants. Professor Roberts, who made a special study of migration during 1953-55, thought that migrants have higher fertility. "Manifestly these (migrants)

^{1/} The effect of migration on the birth rate depends on the age-sex composition. In the calculations shown here, the age distribution of net migration as estimated from the censuses is used. Alternate calculation using the percentage age distribution of out-migration during 1953-55 also show that migration tends to increase the birth rate during 1943-60.

may have higher fertility than the population at large though there are no means of determining the fertility of such group".^{1/} However, in the same study he concluded that the proportion of illiterates among the emigrants was very small and that the great body of the emigrants were educationally above the average of all workers in the island. The few illiterates among the emigrants were males. More than half of the female emigrants moved out to seek employment and of those females who emigrated for employment, nearly half were dressmakers by profession and only about 12 percent were housewives. More recent data seem to indicate that the occupational and educational differentials between the female migrants and non-migrants have become sharper. Thus, among the migrants (males and females) to the U.S.A., Canada and the U.K., the proportion of unskilled labour declined from 47 percent in 1968 to 23 percent in 1970. The most common occupations of the more recent migrant women were nursing and household personal services; occupations generally associated with single women.

15. The education and occupational differentials have no significance for our analysis unless they are indications of fertility differentials. The Jamaican data do indicate significant fertility differentials between socio-economic groups. For example, in 1960, Kingston-St. Andrews area showed a GRR of 2.30 in comparison with rates varying between 3.26 and 2.84 in other parishes. Comparable differentials were evident in 1965 and 1970 also. Similarly, women with secondary and university education had, on an average, only about 1.73 children (corresponding to a GRR of 0.85) while those with no formal education had about 4.58 children (corresponding to a GRR of 2.26).^{2/} Thus, if fewer of the migrant women were "married" (that is living with husband or common law partner) or more of them were relatively better educated and/or originated from the Kingston-St. Andrews area, it is most likely that migrant women would have lower fertility rates than the non-migrants.

1/ G. W. Roberts, and D. O. Mills, Study of External Migration Affecting Jamaica; 1953-55, p. 63.

2/ The general decline in completed fertility with rising levels of educational attainment is evident from the figures given below:

| Educational Categories | Average No. of Children | Index |
|--|-------------------------------|-------|
| 1. No formal education | 4.58 | 100 |
| 2. Elementary, extending to St: 3 | 4.47 | 98 |
| 3. Elementary, extending to St: 4 to 5 | 4.26 | 93 |
| 4. Elementary complete | 3.80 | 83 |
| 5. Secondary and University | 1.73 | 38 |

16. The implication of a lower fertility rate for the migrants is obvious: migration will increase the average fertility level of women in the country. For example, if the GRR of migrants is 2.0 and that of the non-migrants 3.0 and if 25 percent of the women in the childbearing period emigrate, the average GRR of all women would increase from 2.75 before migration to 3.0 after migration. In actual practice, migration of women in childbearing period was about 15 percent during 1943-60 and 31 percent during 1960-70. Thus, although it is difficult to establish whether emigration did in fact affect the fertility trends during 1943-60 and 1960-70, if the migrants had a different level of fertility, the effect would be much greater during 1960-70 than during 1943-60. This is not only because the rate of female migration was much greater during the recent period but also because the differentials were probably much sharper in that period. The subsequent analysis will show that changes in marital status distribution (mating types)^{1/} or sterility rates cannot fully account for the observed increase in the fertility rate during 1943-60. This raises the suspicion that migration also contributed to the increase during this period.

17. It was shown earlier, more or less conclusively, that the fertility rates in Jamaica and in most of the parishes increased during 1960-65 and decreased during the following five years. One possible reason for this increase is the emigration of a large number of women with less than average fertility.^{2/} For example, with a fertility differential of about 37 percent, a migration of 118,800 women in the childbearing ages would increase the GRR by 10 percent (from 2.77 to 3.05) which was the estimated increase between 1960 and 1965. These figures are given merely to indicate that the estimated increase in GRR is not too much to be explained by migration differentials.

18. Marital Status Distribution. In recent years, in most developing countries which have shown declines in fertility rates, change in age at marriage is found to have played an important role.^{3/} In the case of Jamaica, nearly two-thirds of the births take place outside marriage, and therefore, analysis of the changes in age at marriage and/or proportion ever-marrying are not sufficient to isolate the influence of mating pattern on fertility changes. According to the 1960 Census only 26 percent of the women 15 years or above were living with their husbands (married); 19 percent were living with their common law partner; and nearly 34 percent had never lived with a partner. At the same time, nearly 70 percent of the women were mothers;

^{1/} See table below (para. 19) for the different types.

^{2/} Another possible reason is the change in the composition of women by mating types. However, no data on this change are available now and hence its effect cannot be evaluated.

^{3/} Examples are: Singapore, Taiwan, Tunisia, etc.

that is, with at least one child. Thus a substantial number of women in the reproductive ages who did not live with a husband or common law partner were involved in reproduction. The Jamaican census data do not provide a basis for distinguishing between women who are exposed to pregnancy and those who are not; the number of women who are married or living with a common law partner is only a part of the total exposed group. However, some rough estimate of the influence of mating patterns may be obtained by examining the changes in proportion "single" and proportion childless.

19. Proportion Single. In a society in which births take place within marriage fertility among single women is zero. In Jamaica, although "single" women (women who are not living with their husbands or common law partners) are exposed to pregnancy and many have children, their fertility rates are relatively low. The following statistics give a rough indication of the differentials. The 1943 census shows that the

Distribution of Women by Mating Types and Average Number
of Children Ever Born

| Family Type | Percentage Distribution | | Children per Woman over 45 years: | | Children per Mother over 45 years: | |
|-------------|-------------------------|------|-----------------------------------|------|------------------------------------|------|
| | 1943 | 1960 | 1943 | 1960 | 1943 | 1960 |
| Married | 26.3 | 29.0 | 5.88 | 4.8 | 6.64 | 5.6 |
| Common Law | 17.4 | 18.8 | 4.76 | 3.8 | 5.60 | 4.7 |
| Single | 49.3 | 42.6 | 3.32 | | 4.74 | |
| Others | 7.0 | 9.6 | | | | |

fertility level of single women was about 45 percent less than that of married women. A similar picture probably existed in 1960 also. Thus, a decrease in the proportion of single women would, other things remaining unchanged, increase the national fertility. Between 1943 and 1960 the proportion of single women did decrease and the proportion married did increase. Therefore, the change in the marital status distribution appears to be one of the factors which raised the fertility level during 1943-1960, although the total impact is probably not great. A rough calculation shows that it is unlikely that the effect of the decrease in proportion single would exceed 3 percent.

20. Some additional insight into the relation between fertility change and the distribution of women by marital status is obtained by analyzing the data at the parish level. For this purpose fertility rates in parishes were correlated with proportion single and proportion married in 1943 and 1960. The coefficients were not statistically significant and were not always in the expected direction. In general, the proportion married is a better indicator than proportion single of the fertility level in a parish. The correlation coefficients were above +0.5 for both 1943 and 1960, but were

slightly below the 5 percent level of significance. However, statistically significant coefficients were obtained when changes in fertility rates during 1943-1960 were correlated with changes in proportion single during that period (-0.577 when absolute changes were used and -0.718 when relative changes were used in the calculation). Thus, although a significant proportion of inter-parish variation in fertility rates cannot be explained by inter-parish variation in marital status distribution, a significant portion of the intercensal changes in fertility rates in the parishes can be explained by this factor.

21. Proportion Childless. One reason why fertility level of single women is lower than that of married women is that more of the former are not exposed to pregnancy. One indicator (clearly an underestimate) of the number of women exposed to pregnancy is the number of mothers in the reproductive ages. The accompanying chart shows that the proportion of zero parity women (childless women) is extremely high in Jamaica and that between 1943 and 1960 there has been a significant decline in the proportion in all the age groups. From about 37 percent in 1943 the overall proportion decreased to about 30 percent in 1960, with the highest decline in the most fertile ages. At older ages there has been very little change, but at the same time nearly 20 percent of the women who passed the childbearing period remained childless. As shown in the chart this is a sharp contrast with most other countries where the proportion of zero parity women at ages 45 and above is much lower.

22. The statistics on proportion single and proportion childless serve to answer two questions. First, the relatively low fertility rate of the Jamaican women may be explained by the relatively high incidence of childlessness and high proportion of "single" women. Had childlessness in Jamaica been similar to that in Kenya (for example) the Total Fertility Rate in Jamaica would have been about 6.8 instead of the observed 5.4 and the Crude Birth Rate would have been about 50 instead of 40. Second, the increase in the fertility rates during 1943-1960 can be partly explained by the decreases in childlessness and the proportion of "single" women. The figures given below indicate that the GRR increased by 45 percent during 1943-60. If the specific fertility rates were adjusted and GRR is calculated for mothers only, the increase during 1943-60 would have been only about 9 percent. Thus, a very large share of the increase may be accounted for by the decrease in the proportion of women of zero parity in the prime childbearing ages.

23. Since decrease in childlessness appeared to have played a significant role in the fertility increase during 1943-60, it is appropriate to enquire further how this change came into being. Childlessness can be caused by biological causes or by social factors. Since there has been a very rapid increase in the expectation of life at birth (about 13-14 years during the 17 year period) during this period it is reasonable to conclude the sterility caused by venereal disease, etc., has probably decreased. At the same time

| Age Group | Fertility Rate Per 1000 Women (42-44) | % of Mothers (1943) | Fertility Rate Per 1000 Mothers | Fertility Rate Per 1000 Mothers (59-61) | % of Mothers (1960) | Fertility Rate Per 1000 Mothers |
|-----------|--|---------------------------|---------------------------------------|--|---------------------------|---------------------------------------|
| 15-19 | 94 | .134 | 701 | 150 | .222 | 676 |
| 20-24 | 207 | .479 | 432 | 289 | .651 | 444 |
| 25-29 | 186 | .639 | 291 | 257 | .783 | 328 |
| 30-34 | 134 | .720 | 186 | 206 | .810 | 254 |
| 35-39 | 87 | .770 | 113 | 128 | .810 | 158 |
| 40-44 | 32 | .810 | 39 | 48 | .810 | 59 |
| 45-49 | 6 | .820 | 7 | 10 | .810 | 12 |
| TFR | 3.73 | | 8.85 | 5.44 | | 9.65 |

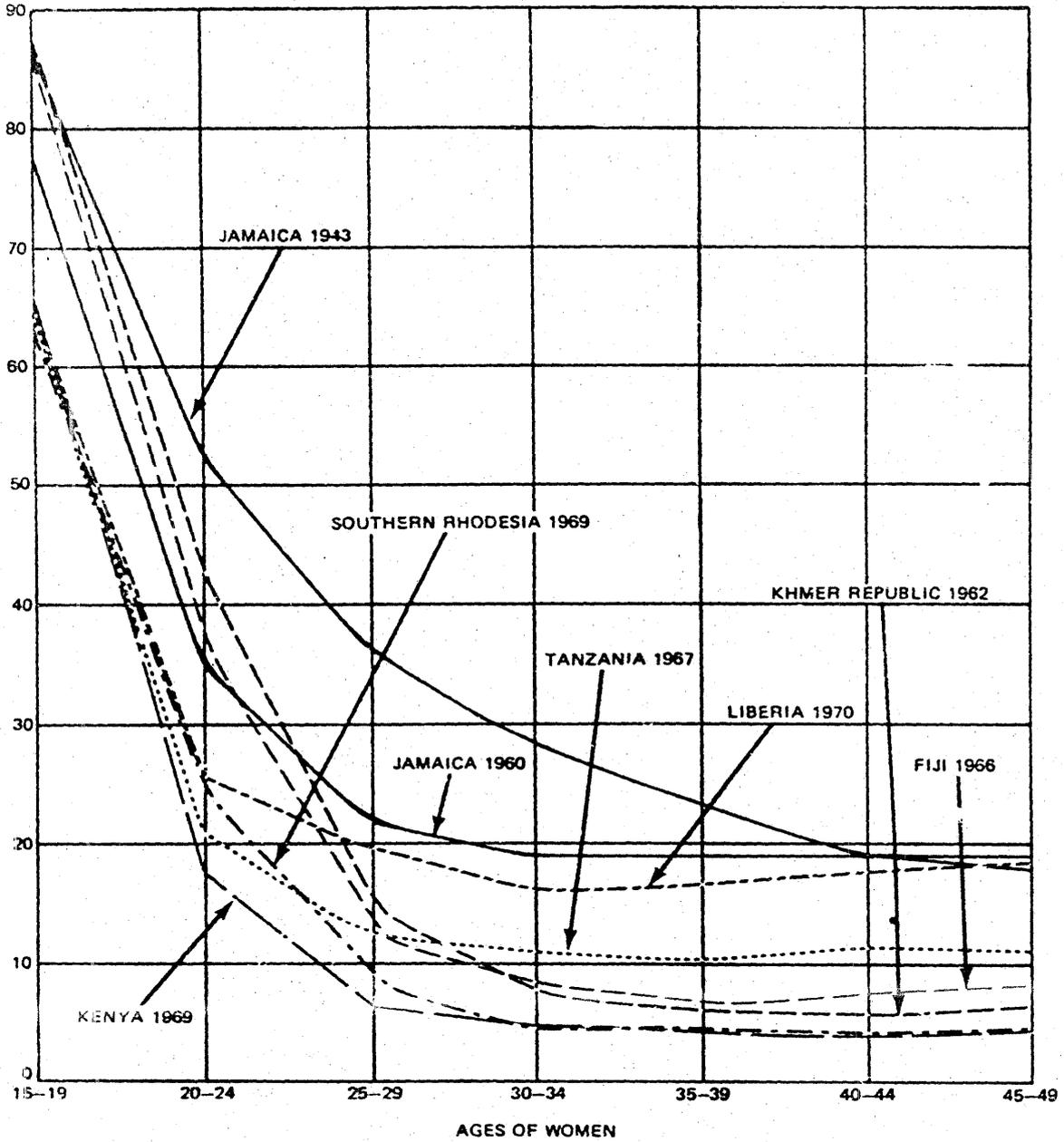
it is unlikely that the entire drop can be explained by this factor; social factors are also involved. The prevalence of childlessness varies from one mating type to another being highest among single and lowest among married. Between 1943 and 1960 childlessness decreased from 37 percent to 30 percent if all mating types together are considered, but among married women the decrease was less than one percentage point and among common law women it was only half as much as for all women.

| Age | Proportion Childless | | | | | |
|----------|----------------------|------|---------|------|------------|------|
| | All Women | | Married | | Common Law | |
| | 1943 | 1960 | 1943 | 1960 | 1943 | 1960 |
| All Ages | 37.3 | 29.9 | 15.1 | 14.4 | 23.4 | 19.0 |
| 15-19 | 86.6 | 77.8 | 40.2 | 32.7 | 50.2 | 39.4 |
| 20-24 | 52.1 | 34.9 | 25.8 | 18.8 | 32.6 | 20.6 |
| 25-29 | 36.1 | 21.7 | 20.7 | 13.7 | 24.2 | 15.8 |
| 30-34 | 28.0 | 19.0 | 17.4 | 12.9 | 19.7 | 15.7 |
| 45-59 | 17.1 | 19.0 | 12.1 | 14.6 | 14.6 | 17.5 |

Thus, the decrease in childlessness was greatest among the single. This differential decline probably points to a very important cause of childlessness among Jamaican women. Apart from sterility, childlessness among the single may also be caused by the absence of a partner during part of their reproductive ages and/or due to a greater use of abortion to terminate pregnancies. Both these factors may be affected by the general economic condition in the country resulting in a higher proportion of childless

PERCENTAGES OF CHILDLESS WOMEN BY AGE GROUP
IN JAMAICA AND SELECTED OTHER COUNTRIES

PERCENTAGES (%)



women during years of economic depression and lower proportion during period of economic prosperity. Thus, although a part of the childlessness is caused by biological factors which tend to reduce childlessness as mortality conditions improve, other causes of childlessness are economic and social in origin and as a result the proportion of childless women may fluctuate according to the economic and social condition of the period. During 1943-1960 both these factors seemed to have worked in the same direction resulting in a much reduced proportion of women of zero parity and a much higher fertility level in 1960. The significance of this factor during 1960-70 is not known as the marital status data from the 1970 census are not yet available. Until these data become available, analysis of the factors associated with fertility change during 1960-70 will remain incomplete.

24. Family Planning. Although Jamaica has a long history of family planning activities at the private level, it was only in 1966 that a family planning unit was established in the Ministry of Health and only in 1967 that the Jamaican National Family Planning Board was created to implement the national policies in family planning. The Board provides family planning services through a network of rural and urban clinics: about 150 part-time clinics, 14 full-time clinics and 5 night clinics. Though contraceptive methods are available in these clinics on a cafeteria system, three methods are especially encouraged: oral contraceptives, intra-uterine devices and condoms. More than half the new acceptors preferred oral contraceptives and about a tenth opted for IUD.

25. The overall performance of the program is measured by the number of women who accepted one or other of the contraceptives. Between November 1968 and December 1971 nearly 75,000 women were registered as new acceptors in the program. This is about 25 percent of all women in the childbearing ages and is not far from the target set by the Board of 79,000. Some parishes such as Kingston-St. Andrews, Portland, St. James, etc., showed relatively higher acceptance rates; others showed lower acceptance rates but none showed a rate below 4 percent per year.

26. As mentioned earlier, a significant decline in the birth rate and the fertility rate occurred in Jamaica during 1966-67 coinciding with the establishment of the family planning unit in the Ministry of Health and the creation of the National Family Planning Board. The birth rate declined by 3 units (from 40.5 in 1966 to 37.6 in 1967) and the GRR declined from 3.05 to 2.88. It is, however, difficult to establish any direct link between the two developments. In the first place, family planning service statistics are not available for these years. It is not possible to calculate the number of births averted by the program and compare the balance with the registered number of births. Secondly, the time interval between the establishment of the family planning offices and the decline in the birth rate is too short for the official program to recruit the large number of acceptors necessary to produce a decline of 3 units in the birth rate. This, however, does not

mean that family planning could not have been the principal factor which brought about the decline. The introduction of the official program with the wide publicity associated with it and the improvement of contraceptive supplies in the pharmacies could have greatly increased the demand for contraceptives from the commercial channel, especially by those who were already motivated to reduce their family size. A quick depletion of this motivated group could be the reason for the greatly reduced rate of decline of the fertility rates after 1967. An alternate explanation, of course, is changes in the marital status distribution, but it is doubtful whether enough change in the marital status distribution could take place in a period of 12 to 24 months in order that the birth rate fall by 3 units. Net emigration increased from 13,000 in 1965 to 30,000 in 1967 and a very high proportion of these emigrant women was in fertile age groups. It is, however, doubtful whether migration could have caused a decline in the GFR because of the expected lower fertility rates among the emigrants.

27. The decline in the birth rate and the fertility rate continued beyond 1967, but at a decelerated rate. Between 1968 and 1971, the decline in the birth rate was only about 1 unit at a time when 69,000 new acceptors were reported to have been recruited by the program. The expected impact of these new acceptors on the birth rate is shown below:

| YEAR | Number of New Acceptors | Estimated No. of Births Averted | Cumulative Reduction in the Birth Rate | Birth Rate | |
|------|-------------------------------|---------------------------------------|---|------------|--------|
| | | | | Expected | Actual |
| 1969 | 28,870 | - | - | - | 35.2 |
| 1970 | 19,014 | 4,828-6,432 | 2.6-3.4 | 31.6-30.8 | 34.5 |
| 1971 | 21,472 | 6,729-8,922 | 3.5-4.7 | 30.7-29.5 | 35.0 |

Source: Jamaican National Family Planning Program, Report of First External Review, Annex 6

Based on these numbers of acceptors during 1969-71, the crude birth rate should have declined to about 31 by 1970 and 30 by 1971. But the actual birth rate was 34.6 in 1970 and 35.0 in 1971. Thus, the expected decline of about 5 units in the birth rate did not materialise and the rate in 1971 remained not far below the 1968 level.

28. At the parish level, all but three showed a real decline in the fertility rates during 1968-70, but the extent of the decline was not correlated with the proportion of women in the childbearing ages who accepted the official family planning services (see Table). In an earlier section it was shown that the specific fertility rates at ages 35-39 years declined in all the parishes, and it was suggested that this uniform decline in these ages in all the parishes is probably an indication of the success of the

Distribution of Acceptors of Family Planning Program
in 1969-70, Number of Women 15-49 in 1970 and Change in
General Fertility Rates 1969-70 by Parishes in Jamaica

| PARISH | No. of Women 15-49 1970 | No. of Acceptors of F.P. 1969-70 | Acceptors per 100 15-49 | Change in GFR % 1968-70 |
|----------------------|----------------------------------|---|-------------------------------|-------------------------------|
| Kingston-St. Andrews | 134,791 | 21,088 | 15.6 | - 0.6 |
| St. Thomas | 12,537 | 837 | 6.7 | -11.7 |
| Portland | 12,049 | 1,851 | 15.4 | + 8.4 |
| St. Mary | 17,448 | 1,884 | 10.8 | -15.0 |
| St. Ann | 22,539 | 3,101 | 13.8 | - 3.0 |
| Trelawny | 10,653 | 1,245 | 11.7 | - 6.2 |
| St. James | 21,705 | 3,248 | 15.0 | + 2.4 |
| Hanover | 10,331 | 1,379 | 13.3 | - 6.8 |
| Westmoreland | 20,450 | 1,623 | 7.9 | - 1.2 |
| St. Elizabeth | 22,383 | 2,285 | 10.2 | - 0.6 |
| Manchester | 22,886 | 2,459 | 10.7 | + 9.7 |
| Clarendon | 31,986 | 2,514 | 7.9 | - 3.1 |
| St. Catherine | 35,429 | 3,429 | 9.7 | - 1.7 |
| JAMAICA | 375,200 | 46,971 | 12.5 | - 1.2 |

family planning program. However, the parishes where a large proportion of women accepted the program did not, in general, show a larger decline in the fertility rate in this age group.

29. Thus, it bears that, both the time series and cross-sectional analysis fail to reveal any direct relationship between the number of acceptors of family planning and fertility changes during 1968-70. With the available statistics it is difficult to demonstrate that the official family planning program in Jamaica made any noticeable effect on the fertility rate. However, the above analysis is not sufficient to prove conclusively that the program was not effective in averting births; only that the available service statistics are not sufficient to indicate this effect.

30. The apparent contradiction between the achievement of targets of the family planning program and the lack of significant fertility reduction may be resolved in terms of a very high drop-out rate from the program and/or a possible fertility increase. There appears to be a wide range in the effectiveness of different clinics in terms of the total number of new acceptors and the number of new acceptors per session indicating that there is possibly a limited demand for the types of services offered. As a consequence of this weak demand, a sizeable number of new acceptors does not continue in the program for long periods. The scanty data that are available indicate that the proportion of new acceptors who have never made a second visit increased from 17 percent in 1968 to 33 percent in 1970. Therefore, the impact of the number of new acceptors on fertility rate is not so great in Jamaica as in other countries where the drop-out rates are much smaller.^{1/}

31. Emigration was fairly moderate during 1965 and 1966, but it increased considerably since 1966. This higher emigration rate coupled with an increasing fertility differentials between the migrants and the non-migrants could increase the fertility rate of Jamaican women during 1968-70 much above the 1966 level. Perhaps the family planning program was able to avert the additional births caused by this increase in fertility although the program could not avert enough births to produce a much greater impact on the birth rate.

32. Thus depending on the magnitudes of fertility differentials and continuation rates, two interpretations may be given for the trend. Concomitant with the introduction of the official family planning program in 1966, the practice of family planning became more widespread in the island, partly utilizing the government services but mostly using commercial channels. The population utilizing the services were the ones already

^{1/} The fault can as well be with the statistics of the number of acceptors. As Mr. A. Cernada writes in "Family Planning Dropouts And How to Communicate With Them": in one Caribbean country, the public information campaign is oriented to a "go to your local health clinic for information about how not to have a baby" approach. Records indicate that 90-95 of a 100 women receive some method after a visit and are classified as "acceptors". No wonder that there are many who never return and are considered to have discontinued use since it seems reasonable to assume that some came for information only but were pressed to carry away contraceptives.

motivated to reduce their family size. The initial impact was a significant reduction in the birth rate, but as the number of motivated couples depleted, the reduction in the birth rate also slowed down. At this stage, while the official program appears to have been successful in recruiting a large number of acceptors, it failed to keep them in the program long enough to produce a significant effect on the birth rate. The fault may as well be in the statistics of acceptors and not in the continuation of those who really wanted services and asked for them. This interpretation indicates that unless the present high level of new acceptors is maintained and sustained by a greatly increased continuation rate, the family planning program in Jamaica is unlikely to succeed in reducing the birth rate. Alternatively, one may give a more generous interpretation of the role played by the official family planning program in the reduction of fertility rates. As a result of the migration of a large number of low fertility women, the average fertility rate of the women in Jamaica had increased and the program has been successful to avert not only the increase in the number of births caused by the increase in the fertility rates, but in addition it was also able to reduce the fertility rate below the 1968 level. This interpretation takes the view that the official program together with commercial channels have done a fairly good job of family planning services and they are likely to do at least as well in the near future. The sharp decline in fertility rate during 1967 was due to the wider use of contraceptives from commercial channels by motivated couples. The apparent lack of association between service statistics and fertility changes after 1968 is due to the intervention of fertility increase caused by the migration of low fertility women. The credibility of this interpretation depends on the magnitude of the continuation rates and the nature and magnitude of fertility differentials. A third unknown factor is changes in the marital status distribution, which, for this short period of 3 years, may be assumed to be not very large. However, a more conclusive analysis of the impact of family planning program on the Jamaican fertility rates would require additional information on these three factors. New researches on continuation rates and fertility differentials should have high priority in any program of demographic research in Jamaica.

Table 1: Crude Birth Rate in Jamaica 1921-1970

| Year | Birth Rate |
|---------|------------|
| 1921-25 | 36.5 |
| 1926-30 | 36.4 |
| 1931-35 | 33.4 |
| 1936-40 | 32.1 |
| 1941-45 | 31.8 |
| 1946-50 | 32.0 |
| 1951-55 | 35.6 |
| 1956-60 | 40.1 |
| 1961-65 | 39.0 |
| 1966-70 | 36.7 |

Table 2: Trends in Specific Fertility Rates in Jamaica

| Age Group | 1942-44 | 1959-61 | 1969-71 |
|-----------|---------|---------|---------|
| 15-19 | 0.094 | 0.150 | 0.151 |
| 20-24 | 0.207 | 0.289 | 0.294 |
| 25-29 | 0.186 | 0.257 | 0.265 |
| 30-34 | 0.134 | 0.206 | 0.215 |
| 35-39 | 0.087 | 0.128 | 0.134 |
| 40-44 | 0.032 | 0.048 | 0.048 |
| 45-49 | 0.006 | 0.010 | 0.008 |

Table 3: Population Growth, 1960-1970

| Year | Year-end Population | Births | Deaths | Natural Increase | Net Emigration | Net Change |
|---------|------------------------|--------|--------|---------------------|-------------------|---------------|
| Numbers | | | | | | |
| 1959 | 1,608,000 | | | | | |
| 1960 | 1,617,000 | 68,413 | 14,321 | 54,092 | 45,000 | + 2,000 |
| 1961 | 1,611,000 | 65,128 | 14,193 | 51,935 | 58,000 | - 6,000 |
| 1962 | 1,619,000 | 64,913 | 14,167 | 50,746 | 43,000 | + 8,000 |
| 1963 | 1,659,000 | 66,189 | 15,159 | 51,030 | 11,000 | +40,000 |
| 1964 | 1,694,000 | 68,359 | 13,267 | 55,092 | 20,000 | +35,000 |
| 1965 | 1,740,000 | 69,769 | 14,064 | 55,684 | 10,000 | +46,000 |
| 1966 | 1,784,000 | 71,364 | 14,268 | 57,076 | 13,000 | +44,000 |
| 1967 | 1,808,000 | 67,438 | 13,295 | 54,143 | 30,000 | +24,200 |
| 1968 | 1,827,000 | 65,402 | 14,557 | 50,845 | 32,000 | +19,000 |
| 1969 | 1,851,000 | 64,688 | 14,094 | 50,594 | 27,000 | +24,000 |
| 1970 | 1,878,000 | 64,375 | 14,352 | 50,023 | 23,000 | +27,000 |

| Year | GRR | Rate per 1,000 Population | | | | |
|------|------|---------------------------|-----|------|------|-------|
| 1960 | 2.77 | 42.4 | 8.9 | 33.5 | 27.9 | + 5.6 |
| 1961 | 2.76 | 41.0 | 8.8 | 32.2 | 35.9 | - 3.7 |
| 1962 | 2.84 | 40.2 | 8.8 | 31.4 | 26.6 | + 4.9 |
| 1963 | 2.98 | 40.4 | 9.3 | 31.1 | 6.7 | +24.4 |
| 1964 | 3.03 | 40.8 | 7.9 | 32.9 | 11.9 | +20.9 |
| 1965 | 3.08 | 40.6 | 8.2 | 32.4 | 5.8 | +26.8 |
| 1966 | 3.09 | 40.5 | 8.1 | 32.4 | 7.4 | +25.0 |
| 1967 | 2.88 | 37.6 | 7.4 | 30.2 | 16.7 | +13.4 |
| 1968 | 2.79 | 36.0 | 8.0 | 28.0 | 17.6 | +10.4 |
| 1969 | 2.75 | 35.2 | 7.7 | 27.5 | 14.7 | +13.1 |
| 1970 | 2.71 | 34.5 | 7.7 | 26.8 | 12.3 | +14.5 |

Table 4: Specific Fertility Rates by Parishes 1960, 1965 and 1970

| | | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|
| Kingston-St. Andrews | 1960 | 149 | 250 | 229 | 164 | 103 | 28 | 6 |
| | 1965 | 171 | 336 | 275 | 179 | 121 | 36 | 8 |
| | 1970 | 156 | 272 | 243 | 174 | 109 | 30 | 6 |
| | | | | | | | | |
| St. Thomas | 1960 | 200 | 304 | 260 | 206 | 131 | 44 | 2 |
| | 1965 | 215 | 305 | 276 | 190 | 139 | 46 | 11 |
| | 1970 | 207 | 314 | 269 | 213 | 135 | 45 | 7 |
| Portland | 1960 | 202 | 335 | 290 | 229 | 139 | 45 | 8 |
| | 1965 | 163 | 321 | 276 | 207 | 131 | 62 | 16 |
| | 1970 | 179 | 297 | 257 | 203 | 123 | 40 | 7 |
| St. Mary | 1960 | 179 | 320 | 282 | 221 | 128 | 46 | 6 |
| | 1965 | 196 | 331 | 280 | 191 | 156 | 46 | 16 |
| | 1970 | 170 | 304 | 268 | 210 | 122 | 46 | 6 |
| St. Ann | 1960 | 116 | 309 | 282 | 261 | 160 | 76 | 14 |
| | 1965 | 125 | 276 | 267 | 207 | 152 | 67 | 21 |
| | 1970 | 111 | 290 | 265 | 245 | 150 | 73 | 13 |
| Trelawny | 1960 | 149 | 333 | 300 | 253 | 130 | 64 | 12 |
| | 1965 | 191 | 309 | 291 | 230 | 209 | 57 | 14 |
| | 1970 | 145 | 325 | 292 | 247 | 127 | 62 | 12 |
| St. James | 1960 | 179 | 327 | 266 | 160 | 144 | 44 | 11 |
| | 1965 | 166 | 311 | 287 | 183 | 135 | 59 | 23 |
| | 1970 | 165 | 301 | 247 | 147 | 132 | 41 | 10 |
| Hanover | 1960 | 163 | 356 | 310 | 233 | 150 | 60 | 10 |
| | 1965 | 203 | 323 | 277 | 216 | 171 | 59 | 14 |
| | 1970 | 177 | 344 | 299 | 225 | 145 | 58 | 10 |
| Westmoreland | 1960 | 152 | 316 | 294 | 234 | 161 | 58 | 12 |
| | 1965 | 154 | 304 | 274 | 195 | 170 | 56 | 25 |
| | 1970 | 140 | 291 | 271 | 216 | 149 | 54 | 11 |
| St. Elizabeth | 1960 | 155 | 336 | 316 | 256 | 172 | 72 | 18 |
| | 1965 | 153 | 305 | 281 | 231 | 179 | 75 | 25 |
| | 1970 | 156 | 302 | 284 | 230 | 155 | 65 | 16 |
| Manchester | 1960 | 132 | 330 | 283 | 261 | 141 | 64 | 15 |
| | 1965 | 147 | 285 | 296 | 235 | 196 | 63 | 15 |
| | 1970 | 147 | 367 | 315 | 290 | 157 | 71 | 17 |

(continued next page)

| | | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 |
|---------------|------|-------|-------|-------|-------|-------|-------|-------|
| Clarendon | 1960 | 152 | 320 | 290 | 238 | 151 | 67 | 13 |
| | 1965 | 171 | 291 | 265 | 200 | 158 | 63 | 24 |
| | 1970 | 133 | 281 | 254 | 209 | 132 | 59 | 11 |
| St. Catherine | 1960 | 161 | 308 | 279 | 229 | 132 | 53 | 12 |
| | 1965 | 169 | 312 | 273 | 198 | 158 | 50 | 14 |
| | 1970 | 158 | 303 | 275 | 225 | 130 | 52 | 12 |
| JAMAICA | 1960 | 155 | 299 | 266 | 213 | 132 | 50 | 10 |
| | 1965 | 169 | 315 | 276 | 196 | 149 | 52 | 16 |
| | 1970 | 151 | 292 | 260 | 208 | 129 | 49 | 10 |

Table 5: GRR in Jamaica and Parishes 1960, 1965 and 1970

| Parish | 1960 | 1965 | 1970 |
|----------------------|-------|-------|-------|
| Jamaica | 2.771 | 2.889 | 2.707 |
| Kingston-St. Andrews | 2.303 | 2.778 | 2.444 |
| St. Thomas | 2.837 | 2.911 | 2.932 |
| Portland | 3.074 | 2.946 | 2.729 |
| St. Mary | 2.916 | 2.995 | 2.775 |
| St. Ann | 3.010 | 2.751 | 2.825 |
| Trelawny | 3.057 | 3.204 | 2.981 |
| St. James | 2.791 | 2.872 | 2.570 |
| Hanover | 3.207 | 3.123 | 3.097 |
| Westmoreland | 3.022 | 2.906 | 2.788 |
| St. Elizabeth | 3.259 | 3.076 | 2.929 |
| Manchester | 3.020 | 3.047 | 3.362 |
| Clarendon | 3.032 | 2.887 | 2.659 |
| St. Catherine | 2.892 | 2.892 | 2.848 |

Table 6: Sex-Age Composition of Net Emigration from Jamaica
1943-60 and 1960-70

| Age | 1943-1960 | | | 1960-1970 | | |
|----------|-----------|---------|----------|-----------|----------|----------|
| | Males | Females | Total | Males | Females | Total |
| All Ages | -106,500 | -71,500 | -178,000 | -139,300 | -148,700 | -288,000 |
| 0-4 | - 7,700 | - 4,800 | - 12,500 | - 13,800 | - 12,700 | - 26,500 |
| 5-9 | - 1,000 | + 1,300 | + 300 | - 5,400 | - 4,300 | - 9,700 |
| 10-14 | - 2,200 | + 500 | - 1,700 | - 7,200 | - 7,000 | - 14,200 |
| 15-19 | - 8,000 | + 1,000 | - 7,000 | - 29,000 | - 22,900 | - 51,900 |
| 20-24 | - 19,000 | - 8,200 | - 27,200 | - 25,200 | - 17,700 | - 42,900 |
| 25-29 | - 21,400 | - 8,700 | - 30,100 | - 17,200 | - 20,700 | - 37,900 |
| 30-34 | - 13,800 | - 8,700 | - 23,000 | - 16,200 | - 23,000 | - 39,200 |
| 35-39 | - 8,200 | - 8,300 | - 16,500 | - 10,200 | - 15,700 | - 25,900 |
| 40-44 | - 7,300 | -13,500 | - 20,800 | - 3,600 | - 8,200 | - 11,700 |
| 45-49 | - 3,800 | - 7,700 | - 11,500 | - 5,300 | - 10,500 | - 15,800 |
| 50-54 | - 3,100 | - 4,900 | - 8,000 | - 3,900 | - 3,700 | - 7,600 |
| 55-59 | - 6,400 | - 7,600 | - 13,000 | - 5,100 | - 5,900 | - 11,000 |
| 60-64 | - 2,900 | - 2,600 | - 5,500 | - 2,000 | - 2,200 | - 4,200 |
| 65-69 | - 3,800 | - 4,700 | - 8,500 | + 1,000 | + 100 | + 1,100 |
| 70-74 | - 100 | + 100 | - | + 100 | - 700 | - 600 |
| 75+ | + 2,300 | + 5,400 | + 7,400 | + 3,700 | + 6,300 | + 10,000 |

Table 7: Family Planning Targets and Achievements by Parish
1969, 1970 and 1975

| Parish | 1969 | | 1970 | | 1975 |
|----------------------|---------------|---------------|---------------|---------------|---------------|
| | Target | Achieved | Target | Achieved | Target |
| Kingston-St. Andrews | 8,000 | 11,320 | 10,000 | 9,768 | 14,000 |
| St. Thomas | 800 | 623 | 500 | 314 | 400 |
| Portland | 1,100 | 1,380 | 1,200 | 471 | 500 |
| St. Mary | 1,200 | 1,286 | 1,100 | 598 | 750 |
| St. Ann | 2,000 | 2,014 | 1,900 | 1,087 | 1,100 |
| Trelawny | 700 | 904 | 700 | 341 | 400 |
| St. James | 1,500 | 2,061 | 1,600 | 1,187 | 1,100 |
| Hanover | 1,000 | 958 | 900 | 419 | 450 |
| Westmoreland | 1,700 | 752 | 1,600 | 871 | 600 |
| St. Elizabeth | 1,700 | 1,417 | 1,300 | 868 | 800 |
| Manchester | 1,600 | 1,622 | 1,500 | 837 | 750 |
| Clarendon | 1,600 | 1,589 | 1,500 | 955 | 900 |
| St. Catherine | 1,800 | 2,174 | 1,800 | 1,255 | 1,200 |
| TOTAL | 24,700 | 28,000 | 25,600 | 18,971 | 22,950 |

Source: Jamaican National Family Planning Program, Report of First External Review Annex 5, pp 1 and 2.

