Family Size and Population Growth in Western Countries

SOME FACTS

THE MORE CHILDREN married couples have, the faster the population will grow. The two factors—family size and the rate of increase in the total population—are evidently connected, but an exact correlation between the two cannot be expected because of the influence of other vital elements such as marriage and mortality—not to speak of migration. Moreover, attention can hardly be limited to contemporary measurements of the two factors, as there will often be a time lag before the second reflects the first. Given, however (say), three countries that are broadly similar in their general demographic characteristics but with appreciably differing prospects for the completed family size of their young couples, the chances are that in the near future their growth rates will diverge correspondingly, even if they are not doing so at present.

In these notes, some statistics will be given for the United States of America, for France and for Great Britain. In recent years the rates of growth of their populations have differed markedly, as the following figures show:

	U.S.A.	FRANCE	BRITAIN
Population in Millions, 1950	152	41·7	44·0
,, ,, 1962	187	46·4	46·3
Average Annual rate of growth 1950–1962	1·7%	0·9%	0·4%

The differences between the figures in the bottom line may not at first sight seem to be very significant. When their economic implications are considered, however, they must be viewed in a new light. The United States population is now growing at a rate of nearly 2 per cent per annum —as rapid a pace as for the world as a whole and one almost certainly too high to be matched for long by a corresponding increase in resources. By contrast, Britain's growth is at a much more comfortable level from an economic viewpoint. That of France is intermediate between the two. The question is, what can be said of the implications of the growth rates in terms of completed family size?

Reference to the figures available from the latest United Nations *Demographic Year Book* to feature fertility as a special subject (that of 1959) reveals some figures of completed family size that are by no means startling. The most modern data of this kind relate to women aged 45–49, and so having just completed their family building, and are as follows:

	PROPORTIONS OF ALL WOMEN WITH COMPLETED FAMILY SIZE SHOWN		
	U.S.A. (1959)	FRANCE (1954)	BRITAIN (1951)
NUMBER OF CHILDREN IN THE FAMILY			
0	17	18	20
1	21	24	26
2	25	23	24
3	15	14	13
4	10	8	7
5 and over	12	13	10
Total	100	100	100
AVERAGE NUMBER OF CHILDREN (APPROXIMATE) PER WOMAN	2¼	2¼	2

The differences in average family size between the three countries are not very marked in these data. It must be borne in mind, however, that the figures relate mainly to the fertility of twenty or more years before the date shown. Moreover, the particulars were measured at different times over a range of eight years, and, as they include spinsters, they also reflect the varying proportions marrying. In

recent years, fertility has been rising in the U.S.A. and in Britain, and the size of the family has increased. In the United States of America, birth rates for third and fourth children in particular have risen very sharply during the last ten years.

The following figures relate to the expected total numbers of births of currently married couples where the wife is aged between fifteen and fifty; the American data omit non-whites and the average family size may thus be a little understated:

	PROPORTIONS OF CURRENTLY MARRIED WOMEN WITH EXPECTED COMPLETED FAMILY SIZE SHOWN		
NUMBER OF CHILDREN IN THE FAMILY	U.S.A. (1955)	FRANCE (1962)	BRITAIN (1963)
0	5	15	10
1	8	20	25
2	28	24	25
3	26	17	15
4	20	10	15
5 and over	13	14	10
Total	100	100	100
AVERAGE FAMILY SIZE	3	nearly $2\frac{1}{2}$	nearly $2\frac{1}{2}$

[SOURCES: (i) U.S.A. *Family Planning, Sterility and Population Growth*, by Freedman, Whelpton and Campbell (1959) p. 217.
(ii) FRANCE. *Population*, July–Sept. 1962, p. 531.
(iii) BRITAIN. Unpublished rough estimate.]

The figures represent a mixture of experiences of cohorts, the average expected family size being higher for the most recent marriages and lower for the earlier marriages in both the U.S.A. and in Britain. Their international differences still do not fully reflect the variations in the rate of population growth.

In general terms, if one allows for these countries (say) 3 per cent for losses due to mortality, and 7 per cent for non-marriage and for broken marriages, but 5 per cent for illegitimate children, the net total loss in a generation is of the order of 5 per cent. Thus 2·1 children per couple will be necessary for population replacement. It follows that 4·2 children per couple would double the population in a generation, i.e. in a little over twenty-five years, and this would correspond to a rate of growth of nearly 3 per cent per annum. As a broad measure, one may hypothecate for such highly-developed countries the following scale of rough equivalences:

AVERAGE NUMBER OF CHILDREN PER MARRIED COUPLE IN COMPLETED FAMILY	RATE OF GROWTH OF POPULATION % per annum
2	—
$2\frac{1}{2}$	$\frac{3}{4}$
3	$1\frac{1}{2}$
$3\frac{1}{2}$	$2\frac{1}{4}$
4	3

The figures in the right-hand column are slightly rounded-up. They would apply only in the long run, in the absence of migration, and if other demographic factors were stable and in accordance with expectation. In particular, the present growth rates may differ from the theoretical level for a variety of reasons, one of which could be that the age-distribution of the population does not conform to the pattern that would eventually emerge in conjunction with the stable demographic factors assumed.