

COMPARATIVE FERTILITY IN THE LOCAL GOVERNMENT AREAS OF ENGLAND AND WALES, 1951

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In the course of time, the total population of a given area can grow in either or both of only two ways, *i.e.* by an excess of births over deaths and by an excess of immigrants over emigrants. In England and Wales, virtually nothing is known of internal migration, and estimates made from successive censuses (Taylor, 1950) inevitably can disclose trends alone. In analysing catchment areas for administrative data we may therefore most profitably first look at fertility. Here again sources are meagre, and little is known of the true fertility of sub-areas of England and Wales. Crude birth-rates, the most usual official indices of fertility, are misleading, since they take no account of age-sex structure. Comparison of proportions of children to total population in local government areas is likewise vitiated by two considerations:

- (a) they merely reflect the fertility experience of the past decade;
- (b) they entirely disregard the effects of emigration and immigration.

Thus a statement to the effect that Newtown A is of inherently high fertility because it has a large annual number of births has no prognosticatory value, since some standardizing procedure to take stock of the age-sex-marital structure is an indispensable prerequisite to legitimate comparison. With that end in view the Registrar-General introduced in 1949 a Comparability Factor designed to compensate for the different age and sex composition of different areas; but we have had little information concerning its derivation. We are told that:

“The Birth Rate area comparability factors and the ratios of the local adjusted birth rates to the national rate shown in columns 9 and 10 of Table E serve a similar purpose to those shown for death rates, as explained in Section 7 below.”

After explaining that the use of the factor is to aid comparability, Section 7 refers us to page 5 of the Statistical Review text published in 1938/1939—or a decade before the birth rate area comparability

factor was devised. Little elucidation could therefore be expected or derived from this source. Two new publications, however, have recently changed this picture (General Register Office, 1953, 1954).

With the publication of the Census (ONE per cent. sample) Tables, we have, and for the first time in 20 years, accurate figures referable to populations of local areas, and this makes it possible to compute comparable fertility indices showing the force of fertility in each area. Accordingly, the following Tables show the comparative fertility in 1951 of large areas in England and Wales. Thus the birth rates for each area have been standardized by this indirect method, and the values (England and Wales = 100 in 1951) are valid measures of the fertility level of each area in that year.

In Table I, legitimate Live-Birth Rates for England and Wales in 1951 are calculated from births given in the Registrar-General's Review and the population estimated at the 1951 Census.

TABLE I
ENGLAND AND WALES 1951

Age of Mother at Maternity	No. of Married Women	Total Legitimate Live Births	Fertility Rate per 1,000 Married Women
15-19	61,400	24,299	395.75
20-24	722,900	177,936	246.14
25-29	1,267,200	211,296	166.74
30-34	1,297,300	134,592	103.75
35-39	1,418,000	73,599	51.90
40-44	1,388,700	21,557	15.52
45-49	1,259,500	1,479	1.17
Total			980.97

It is true that the Census Date, (midnight, April 8/9, 1951), was not located exactly at the centre of the year, but the final rates computed are not affected by this fact; and the Census figures are probably more accurate than the alternative, *viz.* the Registrar General's mid-year population. We may now apply the rates cited to each local population of married women to ascertain the number of births expected if their fertility rates were those of England and Wales (Table II).

*In receipt of a Research Fellowship from the Rockefeller Foundation.

TABLE II
REGIONS OF ENGLAND AND WALES (NORTHERN REGION)

Age of Mother at Maternity	Fertility Rate in England and Wales	Married Women in Northern Region	Expected Births
15-19	395.75	4,600	1,820
20-24	246.14	57,000	14,030
25-29	166.74	94,800	15,807
30-34	103.75	91,900	9,535
35-39	51.90	92,500	4,801
40-44	15.52	97,100	1,507
45-49	1.17	87,600	102
Total			47,602

Actual legitimate births = 51,900.
Expected legitimate births = 47,602.
Fertility = 109 per cent. of average for England and Wales.

Comparison of "expected" births with recorded births now gives us a picture of fertility for each local area compared with England and Wales. The values are summarized in Table III.

The difference between the Registrar-General's figures and those shown in Table III clearly demonstrates the limitations of the crude method. Thus, for example, the West Riding of Yorkshire, which is, in fact, some 6 per cent. below the fertility level for England and Wales, appears by the Registrar-General's method to be 1 per cent. above it. The method here set forth can of course be used for smaller areas than those shown when a reliable estimate of the age, sex, and marital status distribution is available.

REFERENCES

Taylor, W. (1950). "Birmingham and its Regional Setting". p. 261. British Association for the Advancement of Science.
General Register Office (1953)' "Statistical Review, Tables, Civil, 1952", p. v. H.M.S.O., London.
— (1954). "Statistical Review, Text, Civil, 1946-50", p. 131. H.M.S.O., London.

TABLE III
COMPARATIVE FERTILITY RATES FOR 1951

Region	Expected Births (using England and Wales fertility)	Actual Legitimate Births	Fertility in 1951	Registrar-General's Ratio
England and Wales	644,742	644,758	100	100
Northern	47,602	51,900	109	114
East and West Ridings	63,885	61,250	96	103
North-Western	91,341	96,800	106	103
North Midland	52,612	51,213	97	105
Midland	69,709	68,318	98	103
Eastern	44,986	45,173	100	102
London and South-Eastern	159,503	148,050	93	88
Southern	37,464	39,190	105	103
South-Western	40,797	43,153	106	101
Wales	36,842	39,711	108	106
<i>Conurbations</i>				
Greater London	125,278	114,035	91	85
West Midland	35,601	34,849	98	102
West Yorks.	24,751	24,595	99	100
South East Lancs.	35,891	35,707	99	98
Merseyside	19,765	24,292	123	118
Tyneside	12,925	13,841	107	109
<i>Large Administrative Counties and City</i>				
Essex	24,578	22,431	91	93
Kent	22,576	21,964	97	97
Lancashire	28,352	28,563	101	96
London	52,672	48,790	93	91
Middlesex	32,756	29,124	89	80
Surrey	17,645	17,081	97	83
Yorks., West Riding	25,363	23,934	94	101
Birmingham	18,195	17,540	96	103