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AVERAGE AGE AT FIRST MARRIAGE FOR WOMEN
IN MID NINETEENTH CENTURY ENGLAND AND
WALES : A CROSS-SECTION STUDY

N.F.R. CRAFTS

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I.

Age at marriage has achieved considerable prominence in discussions of the English demographic revolution but surprisingly little is known about variations in it either over time or among regions and social groups at points in time. Even following the advent of civil registration relatively little information is available for the mid nineteenth century. There are national averages of age at first marriage for England and Wales for isolated years only until 1867 but no less aggregative information in published form. Moreover in the early years of civil registration only a small proportion of marriage certificates record the ages of the parties and even those that do are not necessarily reliable ^{1/}.

This paper uses a methodology developed by Coale in an attempt to compensate for these deficiencies in our knowledge of mid nineteenth century nuptuality. Estimates of mean age at first marriage for women are derived for the counties of England and Wales. These estimates are then reviewed in the context of the literature on age at marriage and population change in the first half of the nineteenth century. In particular a brief consideration is made of patterns of association between age at marriage and urbanization and mortality conditions and of the extra information yielded about the possible importance of changes in age at marriage as a factor in population growth.

II.

Coale has recently published a standard schedule of first marriage frequencies, which he shows has general validity in describing cohort nuptiality ^{2/}. He demonstrates that nuptiality experience can be summarised satisfactorily by a family of standard curves differing only in terms of origin, vertical and horizontal scale. To fit a standardised curve to the nuptiality experience of a cohort only three parameters are needed, the origin (a_0 in Coale's notation), the proportion ultimately ever-married (c), and a horizontal scale factor (k). Coale gives a method for determining a_0 , c and k which merely requires knowledge of proportions of population ever-married at 20-24 years of age, 25-29 and 30-34 and use of standard tables given in his paper ^{3/}.

Fitting the standardised curve permits from Coale's Tables 2 and 3 estimates of median and modal age at marriage where only the proportions of population ever-married at ages 20-24, 25-29 and 30-34 are known. This information is available for the counties of England and Wales from the 1851 census onwards. The approach adopted here is to use this data in combination with Coale's standardised curves to generate estimates of average age at first marriage for women for the mid-nineteenth century in the absence of any direct evidence.

Strictly speaking this procedure is methodologically slightly impure. Coale's techniques are ideally to be used in cohort analysis, whereas the data which exists for mid-nineteenth century England and Wales is for the cross-sections of population at different ages observed in the 1851 and 1861 censuses. However, as Coale points out, his schedules are applicable to cross-sections where nuptiality has been stable ^{4/}. The results presented in Table 1 below are based on women who were born between 1826 and 1841 and married between 1841 and 1861. There are good grounds for regarding the assumption of stability as acceptable for the English counties over this period. A comparison of proportions of women ever-married at age 45-9 by county for the 1851 and 1861 censuses indicates differences were negligible ^{5/}. Moreover this is a period of peace and post dates the major upheavals of the French Wars, the parliamentary enclosure movement and the classic Industrial Revolution. At the national level mean age at first marriage varied within only very narrow limits and the marriage rate was fairly constant ^{6/}.

Table I presents estimates of mean and median age at first marriage for women based on the application of Coale's standard schedules to the county age and marital condition data in the 1861 census. Details of the method used in deriving these estimates are given in the appendix.

TABLE I. Average Age at First Marriage and Proportions Ultimately Ever-Married for Women; Cross-Section of English Counties in 1861.

	Estimated Mean Age at First Marriage	Estimated Median Age at First Marriage	Percentage Ever-Married 45-9
Durham	23.0	22.2	91.8
Staffordshire	23.1	22.4	92.8
Northamptonshire	23.7	23.0	90.5
Lancashire	23.9	23.2	88.7
Yorkshire West Riding	23.9	23.3	90.3
Buckinghamshire	24.0	23.2	88.5
Derbyshire	24.0	23.2	89.5
Essex	24.0	23.2	88.9
Warwickshire	24.1	23.3	90.5
Huntingdonshire	24.2	23.4	90.5
Kent	24.2	23.4	86.1
Hampshire	24.3	23.4	90.5
Nottinghamshire	24.4	23.6	89.4
Suffolk	24.4	23.5	88.2
Yorkshire East Riding	24.4	23.6	87.0
Norfolk	24.5	23.7	88.3
Northumberland	24.5	23.6	86.6
Worcestershire	24.5	23.7	88.0
Cambridgeshire	24.6	23.7	90.8
Hertfordshire	24.6	23.8	87.5
Leicestershire	24.6	23.8	90.9
Lincolnshire	24.6	23.9	90.5
Wiltshire	24.6	23.9	86.4
Yorkshire North Riding	24.7	23.9	86.4
London	24.9	24.0	84.5
Monmouth and Wales	24.9	24.1	89.6
Oxfordshire	24.9	24.1	87.1
Cheshire	25.0	24.1	87.8
Cumberland	25.0	24.1	83.0
Gloucestershire	25.0	24.2	85.0
Devon	25.1	24.3	85.5
Middlesex	25.1	24.2	82.2
Surrey	25.1	24.2	83.3
Sussex	25.1	24.3	83.7
Cornwall	25.2	24.2	89.1
Dorset	25.2	24.4	86.4
Bedfordshire	25.3	24.4	88.9
Westmoreland	25.4	24.6	84.8
Somerset	25.5	24.5	85.3
Berkshire	25.6	24.7	86.7
Shropshire	25.6	24.7	87.0
Herefordshire	25.8	24.8	88.0
Rutland	25.8	24.9	90.8

Source : Derived from 1861 Census; for details of method see Appendix.

The 1861 census was preferred to the 1851 census as it could be expected to be more accurate and as it deals with marriage behaviour from the period for which comparison can be made with the Registrar General's figures for England and Wales as a whole. Results were also derived for the 1851 census which were in general very similar, except that mean age at marriage for virtually all counties was estimated as being slightly higher.

There are undoubtedly some errors in the estimates given in Table I. The fit of the standard schedules is only rarely exact. It is usually very close, however, and there seems no reason to suppose that the general picture of relative marriage ages is far out. The rank order of counties corresponds with a priori notions in that mining and textile counties generally have relatively low average marriage ages. It is also worth noting that an unweighted average of the estimated county figures gives a mean age at first marriage for women of 24.6 years which compares with the range of figures for England and Wales as a whole of 24.3 to 25.2 years for 1839/41 to 1899, with 1839/41 at 24.3 and 1851 at 24.6 years ^{7/}.

III.

A number of writers have maintained that the early period of industrialization was one in which changes in the socio-economic structure led to earlier marriage, and that the changes in nuptiality were sufficient to substantially augment population growth. The most comprehensive recent argument was advanced by Habakkuk ^{8/}. He discusses a variety of possible forces operating to reduce age at marriage but ultimately puts the major stress on urbanization ^{9/}.

Habakkuk's hypothesis can be tested with the aid of the estimates in Table I. Obviously an investigation at this level runs an unavoidable risk of the 'ecological fallacy' but it may nevertheless be an interesting guide to the plausibility of Habakkuk's thesis until such time as a major investigation of nineteenth century marriage certificates is undertaken. The following regression result was obtained for a cross-section of 41 counties (London and Monmouth and Wales were omitted) :

$$A = 25.248 - 0.016 U \quad R^2 = .184 \\ (111.173) \quad (-2.970) \quad F (1,39) = 8.821$$

A is mean age at first marriage for women as estimated in Table I and U is urbanization in 1851 ^{10/}, and t statistics are reported in parentheses.

As hypothesised by Habakkuk there is a significant and negative relationship between urbanization and marriage age. The estimated coefficient is not very large, however. For example, if this coefficient were valid as a measure of the effect of urbanization on marriage age over time, then the increase in the urbanization of England from 34% in 1801 to 59% in 1861 ^{11/} would have generated a fall of only about 0.4 years in mean age at first marriage for women in that period. This does not, of course, represent an estimate of what actually happened to age at marriage over time, merely an estimate of the impact of urbanization. There may well have been other important influences on age at marriage over time which do not appear in the cross-section. Even within the cross-section only 18% of the variation is explained and our inability to specify, measure and include other important independent variables in the regression can be expected to have biased the estimated coefficient.

Still this evidence does not constitute very strong support for Habakkuk's position. A fall in age at marriage of less than half a year induced by nineteenth century urbanization would not have had any major impact on population growth ^{12/}.

The county estimates also permit an assessment of the degree of association between a lower age at marriage and mortality conditions. Crafts and Ireland showed that the impact of a change

in age at marriage on population growth rates would be much smaller where life expectancy was low ^{13/}.

A crude indicator of life expectancy by county for 1861 was obtained by calculating infant mortality from the Registrar General's Report ^{14/}. The Spearman rank order correlation coefficient between infant mortality and mean age at marriage was -0.58 (N=42), not surprisingly given the inverse association between urbanization and age at marriage. If this association was typical of earlier times, as seems probable, then this would have weakened the effect on population growth of falls in age at marriage, especially at the levels of mortality generally prevailing during the classic Industrial Revolution period.

The patterns of association between urbanization, mortality and age at marriage seem to be consistent with the opinion expressed by Crafts and Ireland that changes in age at marriage probably did not play a major role in generating population growth during the period before 1850 ^{14/}.

Appendix

The estimates in Table I were obtained as follows.

From the 1861 census for each county Coale's R_2 and R_3 were calculated and used to calculate a_o and k as described on p.214 of Coale's paper.

From Table 3 of that paper it is apparent that median age at first marriage is at $(\text{median} - a_o)/k = 10.07$. Median age at first marriage was obtained by substituting into this formula for each county the estimates of a_o and k already obtained.

Similarly, from Table 2 of Coale's paper modal age at first marriage is at $(\text{mode} - a_o)/k = 8.1$.

Mean age at first marriage cannot be directly obtained. However, since the distributions in question are all unimodal and asymmetric, an estimate of mean age can be obtained given knowledge of median and mode for each county by use of the empirical relation $\text{mean} - \text{mode} = 3(\text{mean} - \text{median})$.

The proportion ultimately ever-married at age 45-49 was obtained directly from the 1861 census.

Footnotes

1/ See the discussion in R.B.Outhwaite, "Age at Marriage in England from the late Seventeenth to the Nineteenth Century", Transactions of the Royal Historical Society, 23 (1973), pp.55-70.

2/ A.J.Coale, 'Age Patterns of Marriage', Population Studies, 25 (1971), pp.193-214.

3/ Ibid., p.214.

4/ Ibid., p.195.

5/ In only 7 out of 43 counties was it more than 1.5 percentage points.

6/ R.B.Outhwaite, loc.cit., p.58 and B.R.Mitchell and P.Deene, Abstract of British Historical Statistics, (Cambridge 1962), pp.45-6.

7/ R.B.Outhwaite, loc.cit., p.58.

8/ H.J.Habakkuk, Population Growth and Economic Development since 1750 (Leicester, 1971) pp.35-46.

9/ Ibid., pp.44-46.

10/ Figures communicated privately by Dr.C.M.Law of Salford University, and based on definitions developed by him and used in his paper 'The Growth of Urban Population in England and Wales', Transactions of the Institute of British Geographers, 41 (1967), pp.125-143.

11/ Also based on Dr.Law's data.

12/ See the estimates given in N.F.R.Crafts and N.J.Ireland, "A Simulation of the Impact of Changes in Age at Marriage before and during the Advent of Industrialization in England", Population Studies (forthcoming)

13/ Ibid., pp.

14/ Twenty Fourth Report of the Registrar General.

