Economics 301Y1:

Economic History of Later Medieval and Early Modern Europe, 1250 - 1750

Topic No. 6 [13]:

The Population Problem and Economic Development in Early-Modern Europe, 1500 -1700:

Was There a ‘Malthusian Trap’ in Early-Modern Europe?

READINGS:

The most and more important readings are indicated by asterisks: ** and *

Within each section, all readings, except collections of reprinted essays, are listed in chronological order of original publication (when that date can be ascertained).

A. Important Readings: General and Particular


B. General Readings: Methodological and Demographic Surveys for Europe


(a) Chapter 4, ‘Births, Marriages, and Deaths’, pp. 84-112.

(b) Chapter 5, ‘Did the Peasants Really Starve? Famine and Pestilence in Pre-Industrial Society’, pp. 113-34.


Part I: General


Part II: Great Britain


(b) D.V. Glass, ‘Two Papers on Gregory King’, pp. 159 - 220.


Part III: Continental Europe


(b) J. Meuvret, ‘Demographic Crisis in France from the Sixteenth to the Eighteenth Century’, pp. 507-22.

(c) Carlo Cipolla, ‘Four Centuries of Italian Demographic Development’, pp. 570-87.


introduction, pp. 1-10.

20-28).

‘La population’, pp. 156-75.

20. Fernand Braudel, The Mediterranean and the Mediterranean World in the Age of Philip II,

History of Europe, Vol. II: The Sixteenth and Seventeenth Centuries (London,

22. David Loschky, ‘Economic Change, Mortality, and Malthusian Theory’, Population Studies,
30 (1975), 439-52.


24. Jan De Vries, The Economy of Europe in an Age of Crisis, 1600-1750 (Cambridge, 1976),
Chapter 1, ‘The Age of Crisis’, and Chapter 2, ‘The Agrarian Economies on
Divergent Paths’, pp. 1-83, but especially pp. 4-16.

25. Charles Wilson and Geoffrey Parker, eds., Introduction to the Sources of European
Economic History, 1500-1800 (London, 1977). See the population tables
commencing each section: for Italy, Spain, Portugal, the Low Countries, British
Isles, France, Germany.

Olive Ordish and reissued as Agricultural Fluctuations in Europe from the
Thirteenth to the Twentieth Centuries (London, 1980). Part II, Chapters
4-6: ‘Changes in the Agrarian Economy of Western and Central Europe from the


(Cambridge, 1980). Part One, ‘Methodology’ (chapters 2-5), pp. 9 - 48; Part Two:


(d) E.A. Wrigley, ‘Elegance and Experience: Malthus at the Bar of History’, pp. 46-64.


(g) Philip Kreager, ‘Demographic Regimes as Cultural Systems’, pp. 131 - 55.


Although this essay may appear to be too early in the period for this tutorial topic, it is in fact very relevant. It is the best analytical survey of the previous demographic crisis, arguably more deserving of the description ‘Malthusian’; and Smith makes several useful comparisons between the two. He also provides a very clear analysis of Malthus and the so-called Malthusian model.


C. English Demography: Some Particular Studies


18. Peter H. Ramsey, ed., The Price Revolution in Sixteenth-Century England (London, 1971). Several of the authors in this collection also give strong weight to the demographic factor in this inflation: Phelps Brown and Hopkins, Hammarstrom, and Brenner. In contrast to Outhwaite, however, they often ignore the necessary role of monetary factors.


preceding this demographic topic on early-modern England.


See also the review article on this book by Michael Flinn, in The Economic History Review, 2nd ser. 35 (1982), 443-57.


47. R. I. Rotberg and T. K. Rabb, eds., Population and Economy: Population and History from the Traditional to the Modern World (Cambridge, 1986). This is a reprint in book form of The Journal of Interdisciplinary History, 15:4 (Spring 1985), containing the following articles (with the pagination as in the journal version):


(g) Brinley Thomas, ‘Escaping from Constraints: The Industrial Revolution in a Malthusian Context’, pp. 729-54.


with advanced mathematics and econometrics.


Although this essay may appear to be too early in the period for this topic, it is in fact very relevant. It is the best analytical survey of the previous demographic crisis, arguably more deserving of the description ‘Malthusian’; and Smith makes several useful comparisons between the two. He also provides a very clear analysis of Malthus and the so-called Malthusian model.


76. David M. Palliser, Towns and Local Communities in Medieval and Early Modern England (Aldershot: Ashgate, 2006).


D. Fertility and The ‘European Marriage Pattern’:

Marriage Patterns, Family Structures, and Fertility in Late Medieval and Early Modern
Europe. In chronological order of publication


28. David Herlihy, Medieval Households (Cambridge, Mass. 1985), chapters 4, 5, and 6 (pp. 79 - 156), for later medieval marriage patterns, parenthood, childhood, etc.


(b) Roger Schofield, ‘Did Mothers Really Die?’ pp. 231-60.


**


33. Walter Prevenier, ed., Marriage and Social Mobility in the Late Middle Ages/ Mariage et mobilité sociale au bas moyen-âge. Studia Historica Gandensia no. 274 (Ghent, 1989).


40. Merry E. Wiesner, Women and Gender in Early Modern Europe, New Approaches to European History I (Cambridge and New York: Cambridge University Press, 1993).


E. The Demographic Role of Climatic and Ecological Changes


(b) Andrew Appleby, ‘Epidemics and Famine in the Little Ice Age’, pp. 63-84.


(d) John Eddy, ‘Climate and the Role of the Sun’, pp. 145-68.


**F. Mortality Issues: Harvests, Famine, Nutrition, and Disease**


32. Roger Finlay, ‘Natural Decrease in Early Modern Cities’, and:
   Allan Sharlin, ‘Natural Decrease in Early Modern Cities: A Rejoinder’, both in:


(f) David R. Weir, ‘Markets and Mortality in France, 1600 - 1789’, pp. 201 - 34.

(g) E. A. Wrigley, ‘Some Reflections on Corn Yields and Prices in Pre-Industrial Economies’, pp. 235 - 78.


25


83. Richard Easterlin, ‘How Beneficent is the Market? A Look at the Modern History of
Mortality’, European Review of Economic History, 3:3 (December 1999), 257-94. Covers the period from the 16th to 20th centuries.


89. Bruce S. Fetter, ‘History and Health Sciences: Medical Advances Across the Disciplines’, Journal of Interdisciplinary History, 32:3 (Winter 2002), 423-42. A review essay:


96. Ethne Barnes, Disease and Human Evolution (Albuquerque: University of New Mexico Press, 2005).


100. Richard D. Oram, “It cannot be decernit quha are cléan and quha are foule”: Responses


G. Population, Prices, Wages, and Purchasing-Power: The Standard of Living Controversy of the 16th and 17th Centuries


** 7. E.H. Phelps Brown and S.V. Hopkins, ‘Seven Centuries of the Prices of Consumables Compared with Builders’ Wage-Rates’, *Economica*, 23 (Nov. 1956), reprinted in the following:


   c) E.H. Phelps Brown and Sheila V. Hopkins, *A Perspective of Wages and Prices* (London, 1981), containing additional statistical appendices not provided in the original publication, or in earlier reprints.


51. Sevket Pamuk, ‘The Black Death and the Origins of the “Great Divergence” Across Europe, 1300 - 1600’, European Review of Economic History, 11:3 (December 2007), 289-

H. Poverty and Vagrancy in Tudor - Stuart England


QUESTIONS

1. When, where, and how did Europe's population begin to recover from the last medieval contractions: in the mid-15th century, late-15th century, or early 16th century? To what extent did Europe's population grow in the course of the later 16th and early 17th centuries? Did it surpass the late-medieval peak (of ca. 1300?)

2. If Europe's population did grow larger than ever before, how was Europe able to feed, clothe, and house such a larger population? In particular how was Europe able to sustain a larger urban population than ever before: in more and larger cities? What were the sources and mechanisms for additional food supplies? How important were overseas discoveries and the New World in feeding the Old?

3. What sources and what kind of evidence have been utilized to estimate the extent of Europe's population growth in the 16th and 17th centuries? How reliable are the data for England and the continent? In particular, how reliable are wage and price data for estimating population growth?

* 4. Did Europe's population grow to such an extent that Europe began to experience ‘Malthusian pressures’ (i.e. of overpopulation) by the 17th century? If so, were the population pressures more or less severe than those experienced in the early 14th century? Again, how reliable are wage and price data as evidence for such ‘Malthusian pressures’: were standards of living for wage-earners depressed in the later 16th century? What happened to real incomes and standards of living of the peasantry, of landowners, of merchants and artisans? To the extent that poverty was a social problem, what factors other than over-population may have been responsible? [See also the readings on Vagrancy].

5. What were the other economic and social consequences of Europe's population growth in the 16th and 17th centuries? How and why did experiences vary in different parts of Europe?

6. In particular what industries seem to have been stimulated by population growth, and which ones were hindered by it? In general, did demographic expansion mean economic expansion and growth?

7. How did population growth encourage producers to economize on scarce resources (those with inelastic supply curves especially): in agriculture and in industry? Why did responses to demographic pressures vary by region and country?

8. How, when, where, and why did Europe's population cease to grow in the 17th century? What roles did famine, disease -- the plague especially -- warfare, limitations on fecundity/fertility play in slowing down or curbing population growth? Why did Germany, Italy, and Spain in particular appear to have suffered severe population losses in the 17th century? What effect did the cessation of demographic expansion have upon general European economic growth?

9. How, when, where, and why did the plague era come to an end in western Europe? In eastern Europe?

10. Why did population begin to grow once more in the 18th century, to constitute the modern ‘demographic revolution’?

11. Is there any connection between climatic and demographic changes? What relationships, if any, are to be found between/among climate, the harvest, famine and malnutrition, disease and mortality, average age of first marriage, fecundity and live birth rates?

* 12. What is Hajnal's ‘European Marriage Pattern’ and what influence did it have on European
demographic change from the 14th to 18th centuries? How does it relate demography to the economy? See section C of the bibliography.
Table 1. The Populations of Europe, by Regions, 1500 - 1800

<table>
<thead>
<tr>
<th>Region</th>
<th>1500</th>
<th>1550</th>
<th>1600</th>
<th>1650</th>
<th>1700</th>
<th>1750</th>
<th>1800</th>
</tr>
</thead>
<tbody>
<tr>
<td>North West</td>
<td>7.6</td>
<td>9.5</td>
<td>11</td>
<td>14.25</td>
<td>15.1</td>
<td>17.4</td>
<td>25.3</td>
</tr>
<tr>
<td>NW %</td>
<td>12.5%</td>
<td>13.6%</td>
<td>14.1%</td>
<td>19.2%</td>
<td>18.1%</td>
<td>17.9%</td>
<td>20.7%</td>
</tr>
<tr>
<td>Central</td>
<td>29</td>
<td>33.75</td>
<td>36.9</td>
<td>33.5</td>
<td>38.2</td>
<td>43.8</td>
<td>53.5</td>
</tr>
<tr>
<td>Cent %</td>
<td>47.6%</td>
<td>48.3%</td>
<td>47.4%</td>
<td>45.0%</td>
<td>45.7%</td>
<td>45.1%</td>
<td>43.8%</td>
</tr>
<tr>
<td>Mediterranean</td>
<td>18.3</td>
<td>20</td>
<td>22.3</td>
<td>19.6</td>
<td>22.8</td>
<td>26.5</td>
<td>31.2</td>
</tr>
<tr>
<td>Med %</td>
<td>30.0%</td>
<td>28.6%</td>
<td>28.6%</td>
<td>26.3%</td>
<td>27.3%</td>
<td>27.3%</td>
<td>25.5%</td>
</tr>
<tr>
<td>Eastern</td>
<td>6</td>
<td>6.6</td>
<td>7.7</td>
<td>7.1</td>
<td>7.4</td>
<td>9.4</td>
<td>12.2</td>
</tr>
<tr>
<td>East %</td>
<td>9.9%</td>
<td>9.5%</td>
<td>9.9%</td>
<td>9.5%</td>
<td>8.9%</td>
<td>9.7%</td>
<td>10.0%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>60.9</td>
<td>69.85</td>
<td>77.9</td>
<td>74.45</td>
<td>83.5</td>
<td>97.1</td>
<td>122.2</td>
</tr>
</tbody>
</table>

Table 2: Estimated Populations of England and Wales in Millions, and Crude Birth and Death Rates per 1000: according to Wrigley-Schofield (1541 - 1871)

<table>
<thead>
<tr>
<th>Year</th>
<th>England: Population in millions</th>
<th>Wales: Population in millions</th>
<th>England: Life Expectancy at Birth</th>
<th>Intrinsic Growth Rate</th>
<th>Crude Birth Rate/1000</th>
<th>Crude Death Rate/1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1541</td>
<td>2.830</td>
<td>3.031</td>
<td>33.94</td>
<td>0.92</td>
<td>37.17</td>
<td>30.34</td>
</tr>
<tr>
<td>1546</td>
<td>2.908</td>
<td>3.115</td>
<td>38.82</td>
<td>1.42</td>
<td>37.88</td>
<td>25.98</td>
</tr>
<tr>
<td>1551</td>
<td>3.065</td>
<td>3.282</td>
<td>39.59</td>
<td>1.31</td>
<td>35.62</td>
<td>24.82</td>
</tr>
<tr>
<td>1556</td>
<td>3.213</td>
<td>3.440</td>
<td>22.38</td>
<td>-1.17</td>
<td>30.24</td>
<td>40.16</td>
</tr>
<tr>
<td>1561</td>
<td>3.036</td>
<td>3.251</td>
<td>36.66</td>
<td>0.97</td>
<td>37.06</td>
<td>26.70</td>
</tr>
<tr>
<td>1566</td>
<td>3.174</td>
<td>3.398</td>
<td>39.67</td>
<td>0.91</td>
<td>34.16</td>
<td>24.21</td>
</tr>
<tr>
<td>1571</td>
<td>3.310</td>
<td>3.545</td>
<td>41.06</td>
<td>0.77</td>
<td>32.37</td>
<td>22.73</td>
</tr>
<tr>
<td>1576</td>
<td>3.448</td>
<td>3.692</td>
<td>41.56</td>
<td>1.02</td>
<td>34.20</td>
<td>22.43</td>
</tr>
<tr>
<td>1581</td>
<td>3.631</td>
<td>3.889</td>
<td>42.70</td>
<td>1.27</td>
<td>34.12</td>
<td>21.56</td>
</tr>
<tr>
<td>1586</td>
<td>3.841</td>
<td>4.113</td>
<td>37.05</td>
<td>0.75</td>
<td>32.09</td>
<td>25.70</td>
</tr>
<tr>
<td>1591</td>
<td>3.938</td>
<td>4.217</td>
<td>38.05</td>
<td>0.81</td>
<td>32.12</td>
<td>24.75</td>
</tr>
<tr>
<td>1596</td>
<td>4.057</td>
<td>4.344</td>
<td>37.82</td>
<td>0.63</td>
<td>31.50</td>
<td>24.95</td>
</tr>
<tr>
<td>1601</td>
<td>4.162</td>
<td>4.457</td>
<td>38.53</td>
<td>0.75</td>
<td>33.24</td>
<td>24.77</td>
</tr>
<tr>
<td>1606</td>
<td>4.310</td>
<td>4.616</td>
<td>39.59</td>
<td>0.76</td>
<td>33.05</td>
<td>24.07</td>
</tr>
<tr>
<td>1611</td>
<td>4.476</td>
<td>4.793</td>
<td>36.79</td>
<td>0.41</td>
<td>31.60</td>
<td>26.14</td>
</tr>
<tr>
<td>1616</td>
<td>4.568</td>
<td>4.892</td>
<td>40.31</td>
<td>0.81</td>
<td>32.30</td>
<td>23.37</td>
</tr>
<tr>
<td>1621</td>
<td>4.745</td>
<td>5.081</td>
<td>33.39</td>
<td>0.11</td>
<td>30.91</td>
<td>28.85</td>
</tr>
<tr>
<td>1626</td>
<td>4.762</td>
<td>5.099</td>
<td>39.69</td>
<td>0.74</td>
<td>31.81</td>
<td>23.68</td>
</tr>
<tr>
<td>1631</td>
<td>4.926</td>
<td>5.275</td>
<td>39.72</td>
<td>0.71</td>
<td>31.66</td>
<td>23.80</td>
</tr>
<tr>
<td>1636</td>
<td>5.090</td>
<td>5.450</td>
<td>34.03</td>
<td>0.18</td>
<td>31.47</td>
<td>28.59</td>
</tr>
<tr>
<td>1641</td>
<td>5.130</td>
<td>5.494</td>
<td>36.32</td>
<td>0.43</td>
<td>31.97</td>
<td>26.79</td>
</tr>
<tr>
<td>1646</td>
<td>5.231</td>
<td>5.602</td>
<td>39.74</td>
<td>0.29</td>
<td>27.79</td>
<td>23.63</td>
</tr>
<tr>
<td>1651</td>
<td>5.308</td>
<td>5.684</td>
<td>39.14</td>
<td>0.31</td>
<td>28.55</td>
<td>24.22</td>
</tr>
<tr>
<td>1656</td>
<td>5.391</td>
<td>5.773</td>
<td>33.04</td>
<td>-0.60</td>
<td>25.74</td>
<td>28.68</td>
</tr>
<tr>
<td>1661</td>
<td>5.280</td>
<td>5.654</td>
<td>33.27</td>
<td>-0.38</td>
<td>28.22</td>
<td>28.92</td>
</tr>
<tr>
<td>1666</td>
<td>5.229</td>
<td>5.600</td>
<td>32.48</td>
<td>-0.47</td>
<td>28.53</td>
<td>30.03</td>
</tr>
<tr>
<td>1671</td>
<td>5.159</td>
<td>5.524</td>
<td>37.41</td>
<td>-0.04</td>
<td>28.40</td>
<td>26.25</td>
</tr>
<tr>
<td>1676</td>
<td>5.185</td>
<td>5.552</td>
<td>32.40</td>
<td>-0.39</td>
<td>28.91</td>
<td>30.75</td>
</tr>
<tr>
<td>1681</td>
<td>5.109</td>
<td>5.471</td>
<td>31.27</td>
<td>-0.26</td>
<td>30.32</td>
<td>32.14</td>
</tr>
<tr>
<td>1686</td>
<td>5.036</td>
<td>5.393</td>
<td>35.93</td>
<td>0.47</td>
<td>31.87</td>
<td>28.56</td>
</tr>
<tr>
<td>1691</td>
<td>5.094</td>
<td>5.455</td>
<td>36.35</td>
<td>0.42</td>
<td>30.05</td>
<td>28.06</td>
</tr>
<tr>
<td>1696</td>
<td>5.118</td>
<td>5.481</td>
<td>38.06</td>
<td>0.71</td>
<td>31.25</td>
<td>26.67</td>
</tr>
<tr>
<td>1701</td>
<td>5.211</td>
<td>5.580</td>
<td>38.47</td>
<td>0.83</td>
<td>32.06</td>
<td>26.39</td>
</tr>
</tbody>
</table>
### The Population of England (with Wales)

Quinquennial Demographic Data from Generalised Inverse Projection, 1541 - 1871

<table>
<thead>
<tr>
<th>Year</th>
<th>England: Population in millions</th>
<th>with Wales Population in millions</th>
<th>England: Life Expectancy at Birth</th>
<th>Intrinsic Growth Rate</th>
<th>Crude Birth Rate/1000 England only</th>
<th>Crude Death Rate/1000 England only</th>
</tr>
</thead>
<tbody>
<tr>
<td>1706</td>
<td>5.334</td>
<td>5.712</td>
<td>38.50</td>
<td>0.45</td>
<td>28.48</td>
<td>25.67</td>
</tr>
<tr>
<td>1711</td>
<td>5.382</td>
<td>5.764</td>
<td>36.89</td>
<td>0.34</td>
<td>29.47</td>
<td>26.77</td>
</tr>
<tr>
<td>1716</td>
<td>5.428</td>
<td>5.813</td>
<td>35.75</td>
<td>0.38</td>
<td>31.65</td>
<td>27.91</td>
</tr>
<tr>
<td>1721</td>
<td>5.503</td>
<td>5.893</td>
<td>35.49</td>
<td>0.39</td>
<td>32.80</td>
<td>28.21</td>
</tr>
<tr>
<td>1726</td>
<td>5.602</td>
<td>5.999</td>
<td>25.34</td>
<td>-0.95</td>
<td>31.16</td>
<td>36.99</td>
</tr>
<tr>
<td>1731</td>
<td>5.414</td>
<td>5.798</td>
<td>36.34</td>
<td>0.58</td>
<td>35.13</td>
<td>27.46</td>
</tr>
<tr>
<td>1736</td>
<td>5.599</td>
<td>5.996</td>
<td>35.26</td>
<td>0.46</td>
<td>33.79</td>
<td>28.47</td>
</tr>
<tr>
<td>1741</td>
<td>5.723</td>
<td>6.129</td>
<td>34.27</td>
<td>0.24</td>
<td>31.71</td>
<td>28.78</td>
</tr>
<tr>
<td>1746</td>
<td>5.782</td>
<td>6.191</td>
<td>36.47</td>
<td>0.62</td>
<td>32.68</td>
<td>27.02</td>
</tr>
<tr>
<td>1751</td>
<td>5.922</td>
<td>6.342</td>
<td>39.77</td>
<td>0.99</td>
<td>32.97</td>
<td>24.61</td>
</tr>
<tr>
<td>1756</td>
<td>6.149</td>
<td>6.584</td>
<td>38.12</td>
<td>0.75</td>
<td>31.87</td>
<td>25.82</td>
</tr>
<tr>
<td>1761</td>
<td>6.310</td>
<td>6.757</td>
<td>35.37</td>
<td>0.61</td>
<td>33.48</td>
<td>28.29</td>
</tr>
<tr>
<td>1766</td>
<td>6.449</td>
<td>6.906</td>
<td>36.19</td>
<td>0.68</td>
<td>33.88</td>
<td>27.69</td>
</tr>
<tr>
<td>1771</td>
<td>6.623</td>
<td>7.093</td>
<td>39.09</td>
<td>1.01</td>
<td>34.90</td>
<td>25.47</td>
</tr>
<tr>
<td>1776</td>
<td>6.913</td>
<td>7.403</td>
<td>37.74</td>
<td>0.99</td>
<td>35.76</td>
<td>26.57</td>
</tr>
<tr>
<td>1781</td>
<td>7.206</td>
<td>7.717</td>
<td>35.81</td>
<td>0.76</td>
<td>34.86</td>
<td>27.81</td>
</tr>
<tr>
<td>1786</td>
<td>7.434</td>
<td>7.960</td>
<td>38.97</td>
<td>1.25</td>
<td>36.89</td>
<td>25.23</td>
</tr>
<tr>
<td>1791</td>
<td>7.846</td>
<td>8.402</td>
<td>37.92</td>
<td>1.22</td>
<td>37.17</td>
<td>26.07</td>
</tr>
<tr>
<td>1796</td>
<td>8.256</td>
<td>8.841</td>
<td>38.93</td>
<td>1.15</td>
<td>35.51</td>
<td>24.82</td>
</tr>
<tr>
<td>1801</td>
<td>8.671</td>
<td>9.286</td>
<td>40.02</td>
<td>1.43</td>
<td>37.60</td>
<td>24.08</td>
</tr>
<tr>
<td>1806</td>
<td>9.232</td>
<td>9.887</td>
<td>40.58</td>
<td>1.52</td>
<td>37.90</td>
<td>23.68</td>
</tr>
<tr>
<td>1811</td>
<td>9.864</td>
<td>10.563</td>
<td>41.25</td>
<td>1.69</td>
<td>39.18</td>
<td>23.25</td>
</tr>
<tr>
<td>1816</td>
<td>10.628</td>
<td>11.381</td>
<td>40.84</td>
<td>1.70</td>
<td>39.48</td>
<td>23.54</td>
</tr>
<tr>
<td>1821</td>
<td>11.457</td>
<td>12.269</td>
<td>40.47</td>
<td>1.75</td>
<td>40.22</td>
<td>23.73</td>
</tr>
<tr>
<td>1826</td>
<td>12.374</td>
<td>13.250</td>
<td>41.43</td>
<td>1.56</td>
<td>37.30</td>
<td>22.40</td>
</tr>
<tr>
<td>1831</td>
<td>13.254</td>
<td>14.193</td>
<td>40.89</td>
<td>1.36</td>
<td>36.03</td>
<td>22.43</td>
</tr>
<tr>
<td>1836</td>
<td>14.100</td>
<td>15.099</td>
<td>40.56</td>
<td>1.19</td>
<td>35.27</td>
<td>22.47</td>
</tr>
<tr>
<td>1841</td>
<td>14.937</td>
<td>15.995</td>
<td>41.71</td>
<td>1.23</td>
<td>35.61</td>
<td>21.61</td>
</tr>
<tr>
<td>1846</td>
<td>15.910</td>
<td>17.037</td>
<td>38.99</td>
<td>0.92</td>
<td>35.06</td>
<td>23.71</td>
</tr>
<tr>
<td>1851</td>
<td>16.732</td>
<td>17.918</td>
<td>40.46</td>
<td>1.11</td>
<td>35.98</td>
<td>22.65</td>
</tr>
<tr>
<td>1856</td>
<td>17.781</td>
<td>19.040</td>
<td>41.53</td>
<td>1.22</td>
<td>35.89</td>
<td>21.92</td>
</tr>
<tr>
<td>1861</td>
<td>18.976</td>
<td>20.320</td>
<td>40.62</td>
<td>1.24</td>
<td>36.30</td>
<td>22.71</td>
</tr>
<tr>
<td>1866</td>
<td>20.222</td>
<td>21.655</td>
<td>41.47</td>
<td>1.31</td>
<td>35.95</td>
<td>22.06</td>
</tr>
<tr>
<td>1871</td>
<td>21.501</td>
<td>23.024</td>
<td>41.00</td>
<td>1.23</td>
<td>35.00</td>
<td>22.60</td>
</tr>
<tr>
<td>1881</td>
<td>26.046</td>
<td></td>
<td></td>
<td></td>
<td>33.90</td>
<td>18.90</td>
</tr>
<tr>
<td>1891</td>
<td>29.086</td>
<td></td>
<td></td>
<td></td>
<td>31.40</td>
<td>20.20</td>
</tr>
<tr>
<td>Year</td>
<td>England: with Wales Population in millions</td>
<td>England: Life Expectancy in millions</td>
<td>Intrinsic Growth at Birth Rate/1000 England only</td>
<td>Crude Birth Rate/1000 England only</td>
<td>Crude Death Rate/1000 England only</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------</td>
<td>-------------------------------------</td>
<td>---------------------------------</td>
<td>------------------------------------</td>
<td>----------------------------------</td>
<td></td>
</tr>
<tr>
<td>1901</td>
<td>32.612</td>
<td></td>
<td></td>
<td>28.50</td>
<td>16.90</td>
<td></td>
</tr>
<tr>
<td>1911</td>
<td>36.136</td>
<td></td>
<td></td>
<td>24.30</td>
<td>14.60</td>
<td></td>
</tr>
</tbody>
</table>

### Other Estimates of English Population Growth, 1880 - 1910

<table>
<thead>
<tr>
<th>Year</th>
<th>Population in Millions</th>
<th>Birth Rates per 1000</th>
<th>Death Rates per 1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>26.000</td>
<td>32.9</td>
<td>19.2</td>
</tr>
<tr>
<td>1890</td>
<td>29.000</td>
<td>30.0</td>
<td>18.3</td>
</tr>
<tr>
<td>1900</td>
<td>32.500</td>
<td>27.6</td>
<td>15.9</td>
</tr>
<tr>
<td>1910</td>
<td>36.100</td>
<td>21.8</td>
<td>14.5</td>
</tr>
</tbody>
</table>

### Table 3. Changing Demography of Colyton, Devonshire (England)

**Average (Mean) Age of First Marriage, 1560-1837**

<table>
<thead>
<tr>
<th>Period</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>1560 - 99</td>
<td>28.1 years</td>
<td>27.0 years</td>
</tr>
<tr>
<td>1600 - 29</td>
<td>27.4</td>
<td>27.3</td>
</tr>
<tr>
<td>1630 - 46</td>
<td>25.8</td>
<td>26.5</td>
</tr>
<tr>
<td>1647 - 59</td>
<td>26.9</td>
<td>30.0</td>
</tr>
<tr>
<td>1660 - 99</td>
<td>27.6</td>
<td>28.8</td>
</tr>
<tr>
<td>1700 - 19</td>
<td>28.1</td>
<td>30.7</td>
</tr>
<tr>
<td>1720 - 49</td>
<td>26.2</td>
<td>27.2</td>
</tr>
<tr>
<td>1750 - 69</td>
<td>25.0</td>
<td>26.3</td>
</tr>
<tr>
<td>1770 - 99</td>
<td>27.6</td>
<td>26.4</td>
</tr>
<tr>
<td>1800 - 24</td>
<td>25.6</td>
<td>24.9</td>
</tr>
<tr>
<td>1825 - 37</td>
<td>25.9</td>
<td>23.3</td>
</tr>
<tr>
<td>Period</td>
<td>Average Age of First Marriage for:</td>
<td>Completed Family Size of Women who married under 30</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td>1560-1646</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>1647-1719</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>1720-1769</td>
<td>26</td>
<td>27</td>
</tr>
<tr>
<td>1770-1837</td>
<td>27</td>
<td>25</td>
</tr>
</tbody>
</table>

**Sources:**


<table>
<thead>
<tr>
<th>DECADE</th>
<th>MALES</th>
<th>FEMALES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1590 - 99</td>
<td>29.3</td>
<td>25.6</td>
</tr>
<tr>
<td>1600 - 09</td>
<td>28.3</td>
<td>25.7</td>
</tr>
<tr>
<td>1610 - 19</td>
<td>27.5</td>
<td>25.6</td>
</tr>
<tr>
<td>1620 - 29</td>
<td>27.6</td>
<td>25.2</td>
</tr>
<tr>
<td>1630 - 39</td>
<td>27.3</td>
<td>25.2</td>
</tr>
<tr>
<td>1640 - 49</td>
<td>27.4</td>
<td>25.7</td>
</tr>
<tr>
<td>1650 - 59</td>
<td>27.5</td>
<td>25.6</td>
</tr>
<tr>
<td>1660 - 69</td>
<td>27.4</td>
<td>25.9</td>
</tr>
<tr>
<td>1670 - 79</td>
<td>28</td>
<td>26.2</td>
</tr>
<tr>
<td>1680 - 89</td>
<td>27.7</td>
<td>25.8</td>
</tr>
<tr>
<td>1690 - 99</td>
<td>27.1</td>
<td>25.9</td>
</tr>
<tr>
<td>1700 - 09</td>
<td>27.4</td>
<td>26.0</td>
</tr>
<tr>
<td>1710 - 19</td>
<td>27.3</td>
<td>26.3</td>
</tr>
<tr>
<td>1720 - 29</td>
<td>27</td>
<td>25.9</td>
</tr>
<tr>
<td>1730 - 39</td>
<td>26.9</td>
<td>25.5</td>
</tr>
<tr>
<td>1740 - 49</td>
<td>26.5</td>
<td>24.8</td>
</tr>
<tr>
<td>1750 - 59</td>
<td>26.1</td>
<td>25.0</td>
</tr>
<tr>
<td>1760 - 69</td>
<td>25.9</td>
<td>24.5</td>
</tr>
<tr>
<td>1770 - 79</td>
<td>26.1</td>
<td>24.3</td>
</tr>
<tr>
<td>1780 - 89</td>
<td>25.9</td>
<td>24.0</td>
</tr>
<tr>
<td>1790 - 99</td>
<td>25.3</td>
<td>24.0</td>
</tr>
<tr>
<td>1800 - 09</td>
<td>25.3</td>
<td>24.0</td>
</tr>
<tr>
<td>1810 - 19</td>
<td>25.1</td>
<td>23.6</td>
</tr>
<tr>
<td>1820 - 29</td>
<td>25.2</td>
<td>23.8</td>
</tr>
<tr>
<td>1830 - 39</td>
<td>24.9</td>
<td>23.1</td>
</tr>
</tbody>
</table>

Source: E.A. Wrigley, R.S. Davies, J.E. Oeppen, and R.S. Schofield, *English Population History from Family Reconstitution, 1580- 1837* (Cambridge and New York:
Cambridge University Press, 1997), pp. 130-34.
### Table 6: English and French Population, 1681 - 1821

<table>
<thead>
<tr>
<th>Year</th>
<th>England and Wales</th>
<th>England only</th>
<th>France</th>
<th>England as % of France</th>
</tr>
</thead>
<tbody>
<tr>
<td>1681</td>
<td>5.28</td>
<td>4.93</td>
<td>22.4</td>
<td>22%</td>
</tr>
<tr>
<td>1821</td>
<td>12.31</td>
<td>11.49</td>
<td>30.2</td>
<td>38%</td>
</tr>
</tbody>
</table>

### Table 7: Growth Rates of English, French, and Dutch Populations from 1681 to 1821 (% per annum)

<table>
<thead>
<tr>
<th>Country</th>
<th>% per annum</th>
<th>Overall % growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>0.95%</td>
<td>133%</td>
</tr>
<tr>
<td>France</td>
<td>0.28%</td>
<td>39%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.06%</td>
<td>8%</td>
</tr>
</tbody>
</table>
Table 8. Estimated Population Totals and Percentage Growth Rates*

Population Totals (millions)

<table>
<thead>
<tr>
<th></th>
<th>1550</th>
<th>1680</th>
<th>1820</th>
<th>1900</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>3.0</td>
<td>4.9</td>
<td>11.5</td>
<td>30.5</td>
</tr>
<tr>
<td>France</td>
<td>17.0</td>
<td>21.9</td>
<td>30.5</td>
<td>38.5</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1.2</td>
<td>1.9</td>
<td>2.0</td>
<td>5.1</td>
</tr>
<tr>
<td>Spain</td>
<td>9.0</td>
<td>8.5</td>
<td>14.0</td>
<td>18.6</td>
</tr>
<tr>
<td>Italy</td>
<td>11.0</td>
<td>12.0</td>
<td>18.4</td>
<td>32.5</td>
</tr>
<tr>
<td>Germany</td>
<td>12.0</td>
<td>12.0</td>
<td>18.1</td>
<td>43.6</td>
</tr>
<tr>
<td>Western Europe</td>
<td>61.1</td>
<td>71.9</td>
<td>116.5</td>
<td>201.4</td>
</tr>
</tbody>
</table>

Percentage Growth Rates (Overall: for periods designated)

<table>
<thead>
<tr>
<th></th>
<th>1550-1680</th>
<th>1680-1820</th>
<th>1820-1900</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>64</td>
<td>133</td>
<td>166</td>
</tr>
<tr>
<td>France</td>
<td>29</td>
<td>39</td>
<td>26</td>
</tr>
<tr>
<td>Netherlands</td>
<td>58</td>
<td>8</td>
<td>149</td>
</tr>
<tr>
<td>Spain</td>
<td>-6</td>
<td>64</td>
<td>33</td>
</tr>
<tr>
<td>Italy</td>
<td>9</td>
<td>53</td>
<td>77</td>
</tr>
<tr>
<td>Germany</td>
<td>0</td>
<td>51</td>
<td>142</td>
</tr>
<tr>
<td>Western Europe</td>
<td>18</td>
<td>62</td>
<td>73</td>
</tr>
</tbody>
</table>

*Notes and sources: The totals shown become progressively more accurate. Some of those for 1550 and 1680 are subject to very wide margins of error. In many cases the figures used are based on estimates for dates close to the year heading each column rather than for the year itself. The estimates refer to the present territories of the countries shown. The English data exclude Wales and Monmouthshire. For 1820 and 1900 all totals are taken from or estimated from B.R. Mitchell, *European Historical Statistics*, 2nd edn. (Cambridge, 1981), table BI, except for England in 1820.
<table>
<thead>
<tr>
<th>Year (census or estimate)</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1500 (estimate)</td>
<td>50,000 (or more)</td>
</tr>
<tr>
<td>1600</td>
<td>200,000</td>
</tr>
<tr>
<td>1650</td>
<td>350,000</td>
</tr>
<tr>
<td>1750</td>
<td>550,000</td>
</tr>
<tr>
<td>1801 (census)</td>
<td>1,088,000</td>
</tr>
<tr>
<td>1851 (census)</td>
<td>2,491,000</td>
</tr>
<tr>
<td>Year</td>
<td>50,000-</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>100,000</td>
</tr>
<tr>
<td>1300</td>
<td>4</td>
</tr>
<tr>
<td>1500</td>
<td>5</td>
</tr>
<tr>
<td>1650</td>
<td>14</td>
</tr>
</tbody>
</table>