Survival of the richest? Social status, fertility and social mobility in England 1541-1824

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Overview

Research question and motivation

Objective: looks at the role of socio-economic status as a determinant of fertility and social mobility in pre-industrial England.

The motivation arises from Clark's main findings about the fertility gap between the rich and the poor and the implications of that on the spread of 'middle-class values'.

Two elements: higher fertility in the richest + rigid social structure

Data description

The paper uses the family composition database created by the Cambridge Group. It contains statistics on 26 Anglican parishes in England and covers the period 1541 to 1871.

Figure: Family reconstitution form

Data description

Each Family Reconstitution Form builds on a unique marriage and includes:

- Dates of birth and death of the spouses
- Number of offspring
- Offspring birth and death dates
- Spouses occupations at marriage and at death

If the couple's offspring themselves went on to marry, then the family reconstitution form will link us to the marriage, and hence a family reconstitution form for the offspring.

Data description

Advantages and disadvantages of the Cambridge Group data against Clark's data:

Advantages	Disadvantages
Wide population	No direct information of wealth
Larger geographical area	Data missing due to migration
Huge detail of demographic var	Data are mostly rural

Table: Data comparison

Classification of occupations

Characteristics of the sample

- No women include
- Total sample 89,887 but occupation is known for 15,159
- Death dates required so the sample is reduced to 9,925 for the fertility analysis
- For the social mobility analysis the son's occupation is required so the sample is reduced to 1,396
- Spouses occupations at marriage and at death

Classification of occupations

The social groups was constructed based on the classification of the occupations carried out by Clark (2010)

Social groups	
7	Gentry/Independent
6	Merchants/Professionals
5	Farmers
4	Traders
3	Craftsmen
2	Husbandmen
1	Labourers/Servants

Figure: Social groups according to Clark and Cummins (2010)

Classification of occupations

The middle class in terms of values and wealth. As to the values, the only variable we can observe is literacy

Social group	pre-1725	1725–74	1775–1824	Total	N
7	1.00	0.91	1.00	0.96	53
6	0.67	0.76	0.84	0.79	153
5	0.45	0.83	0.89	0.84	113
4	0.67	0.95	0.90	0.91	112
3	0.67	0.87	0.82	0.83	298
2	0.31	0.66	0.56	0.59	185
1	0.50	0.29	0.29	0.30	376
Total	0.57	0.68	0.62	0.64	
N	72	546	672		1,290

Figure: Literacy rate by group

Empirical strategy

Generalized Linear Model:

- Random component: distribution of dependent variable (Negative Binomial)
- Link function (logit)
- Systemic Component: variables specification

Fertility by social group

Did wealthier fathers leave more children?
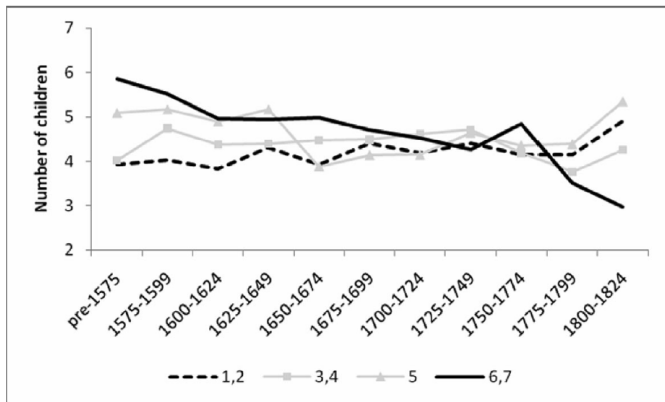
Figure: Fertility by social group

Fertility by social group

What really matters is the the number of children surviving by social class
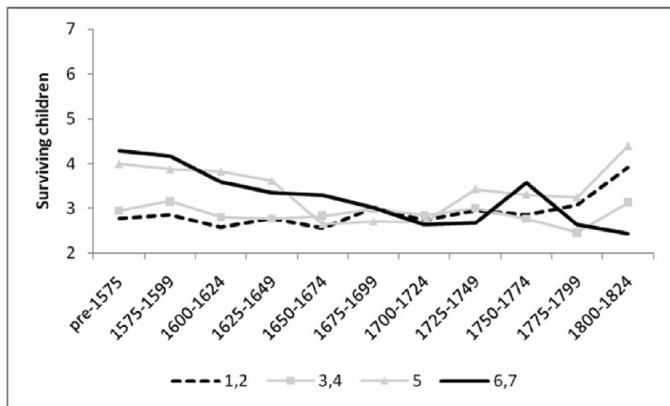
Figure: Reproductive success by social group

Fertility by social group

Dependent var.: surviving sibship size Period: pre-1750		
	Coef.	Std. error
Group 7	0.166***	0.048
Group 6	0.208***	0.035
Group 5	0.164***	0.040
Group 4	0.136***	0.035
Group 3	0.093***	0.029
Group 2	0.105***	0.029
Constant	0.944***	0.083
Parish controls	yes	
N	7,047	
Pseudo R^2	0.007	

*** significant at 1%

Figure: Regressing net fertility on social group for the period until 1750

Fertility by social group

Period	Groups	N	Constant	Coefficient	Std. error	Pseudo R²	Extra children
pre-1575	6, 7 vs 1, 2	357	1.125	0.461***	0.113	0.025	1.802
1575–1624	6, 7 vs 1, 2	1,470	1.084	0.354***	0.061	0.023	1.256
1625–74	6, 7 vs 1, 2	1,789	1.089	0.226***	0.052	0.006	0.752
1675–1724	6, 7 vs 1, 2	2,203	0.861	−0.005	0.052	0.009	−0.011
1725–74	6, 7 vs 1, 2	2,744	0.444	−0.009	0.053	0.016	−0.014
1775–1824	6, 7 vs 1, 2	1,362	1.305	−0.175**	0.083	0.047	−0.593

*** significant at 1% ** significant at 5%

Figure: Regressing net fertility on social group by 50-year period

Fertility by social group

What explains fertility gaps between classes?

how parents were able to regulate their fertility at a time of limited or no access to contraception

- Delaying marriage
- Stopping
- Spacing

Fertility by social group

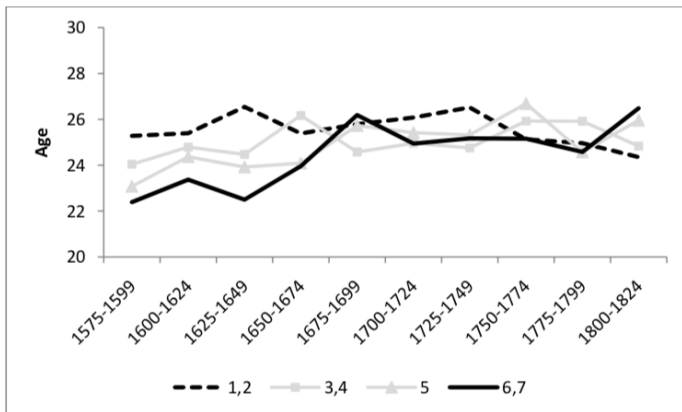Delaying marriage: The Rich woman are married first

Figure: Wife's age at first marriage

Fertility by social group

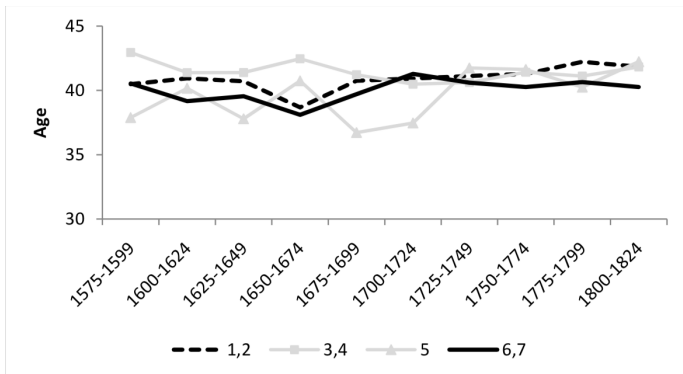Stopping: The decision to stop having children

Figure: Wife's age at last birth marriage

Fertility by social group

Spacing: Regulating time intervals between the birth of each child.
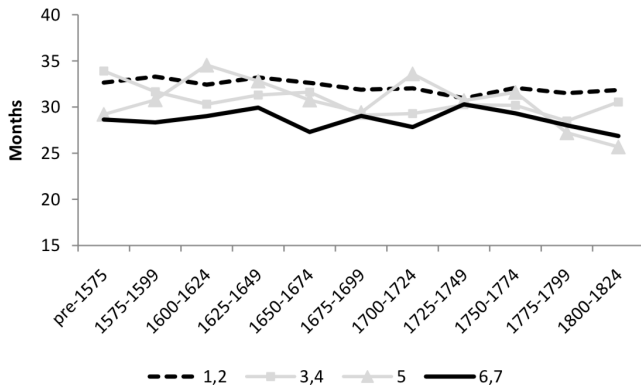
Figure: Average length of birth interval

Fertility by social group

The reason that wealthier groups gave birth to more offspring was that less time went by between each birth, and also the fact that they married earlier

Social group	Age group						
	15-19	20-24	25-29	30-34	35-39	40-44	45+
6,7	0.317	1.197	2.034	1.759	1.586	0.521	0.085
5	0.170	1.327	1.980	2.222	1.500	0.788	0.063
3,4	0.180	1.035	1.827	1.870	1.607	0.944	0.196
1,2	0.090	0.814	1.802	2.030	1.607	0.791	0.168
N	720	712	680	634	561	501	486

Figure: Average number of children by woman's age group

Fertility by social group

Living conditions and fertility

Figure: Shares of social groups

Memes or Genes?

The degree of downward mobility of the higher classes
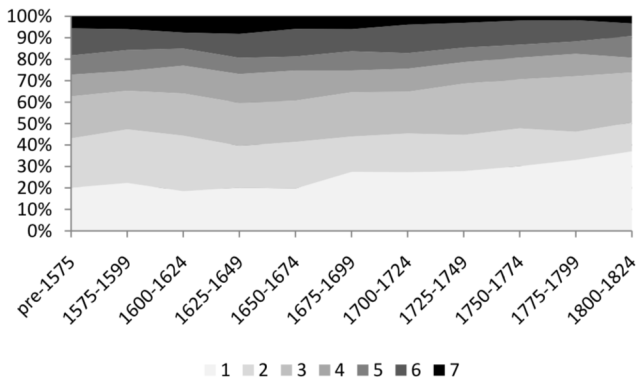
		Son's group							Total	N
		7	6	5	4	3	2	1		
Father's group	7	81.08	4.05	4.05	2.7	1.35	4.05	2.7	100	74
	6	4.62	50	3.85	12.31	11.54	9.23	8.46	100	130
	5	4.17	4.17	51.67	6.67	7.5	17.5	8.33	100	120
	4	2.66	7.98	5.85	51.06	13.3	10.64	8.51	100	188
	3	0.97	5.18	1.62	7.12	62.46	10.36	12.3	100	309
	2	0.31	5.57	6.81	5.88	13	51.7	16.72	100	323
	1	0	4.37	1.98	6.35	17.86	15.08	54.37	100	252
Total		5.73	9.53	8.09	12.82	23.64	20.99	19.2	100	
N		80	133	113	179	330	293	268		1,396

Figure: Outflow mobility, pre-1750

Memes or Genes?

The degree of upward mobility of the lower class

		Son's class							Total	N
		7	6	5	4	3	2	1		
Father's class	7	75	2.26	2.65	1.12	0.3	1.02	0.75	5.3	74
	6	7.5	48.87	4.42	8.94	4.55	4.1	4.1	9.31	130
	5	6.25	3.76	54.87	4.47	2.73	7.17	3.73	8.6	120
	4	6.25	11.28	9.73	53.63	7.58	6.83	5.97	13.47	188
	3	3.75	12.03	4.42	12.29	58.48	10.92	14.18	22.13	309
	2	1.25	13.53	19.47	10.61	12.73	57	20.15	23.14	323
	1	0	8.27	4.42	8.94	13.64	12.97	51.12	18.05	252
Total		100	100	100	100	100	100	100	100	
N		80	133	113	179	330	293	268		1,396

Figure: Inflow mobility, pre-1750

Conclusion

As conclusion the paper offer the suggestion that the spread of the middle class values to lower social classes, through social mobility, might have been a stimulus to England's industrial revolution by testing:

- The middle class families were more successful in terms of reproduction than their lower social-class counterparts
- The pre-industrial England was socially static over time. According to the Cambridge data

As both analysis were true we can construed that the suggestion were true

References

Clark et al. (2010) Malthus to modernity: England's first fertility transition *Mimeo*

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The End