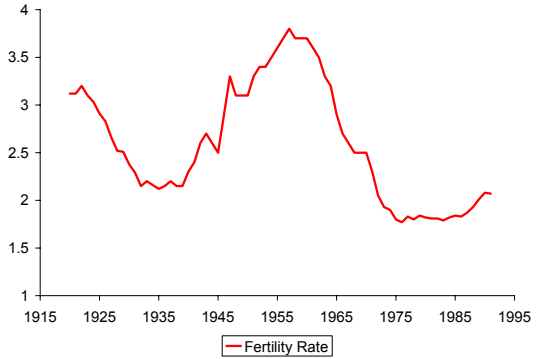
The Baby Boom and Baby Bust

- Existing Explanations
- The New Story
- The Doubts
- Overcoming the Doubts
- Conclusions



Existing Explanations:

- Relative income hypothesis.
- Relative male and female wages.
- Birth control.

Conclusions:

- Model abstracts from important aspects of fertility choice: quantity-quality tradeoff, the economic contributions of children, marriage and divorce.
- If these are taken into account, nonlinearities naturally arise.
- Technological progress in household sector may account for more than just the Baby Boom.

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The New Story:

- Fertility is determined by income and cost of children.
- Cost of children depends on wage (time cost) and efficiency of household production.
- Utility is such that substitution effect outweighs income effect if wages and income rise in proportion.
- Baby boom is temporary decline in cost of children due to productivity gains in household production.

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The Doubts:

- Children are output, not input in the household production function.
- Calibration is non-standard:
  - Unusual functional form for utility.
  - Key parameters not based on independent evidence, but chosen to match data.
- Model requires large jump in home-production efficiency between 1940 and 1950, and little change at other times.
- Model has difficulty matching the Baby Bust. ⟵

Overcoming the Doubts:

- Incorporating standard elements into the choice problem is likely to strengthen the conclusions.
- The economic role of children:
- Marriage and divorce:
- Technological change as driving force behind other explanations.

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Home Production of Goods:

- Children can participate in home production of goods.
- Effect of raising efficiency of home production can go either way.
- Simple example:

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Example for Home Production of Goods:

$$\max \left\{ \log(c) + \log(h - \bar{h}) + \log(n) \right\}$$

subject to:

$$\begin{aligned} c &= w(1 - l) \\ n &= x l^{1-\gamma} \\ h &= x n^{1-\phi} \end{aligned}$$

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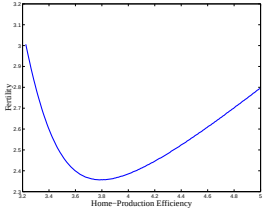
Example for Home Production of Goods:

- At low x, fertility is high since children are productive at home.
- Fertility initially falls in x, but rises once $\bar{h}$ loses significance.
- Fertility as a function of x:



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Fertility and the Family:

- Children are highly durable goods.
- It is difficult to raise children outside marriage.
- Stability of marriage should affect fertility.
- A simple model of divorce and fertility:

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A Simple Model of Divorce:

- Marriage lasts at most two periods.
- Fertility is determined in the first period, but time cost arises in the second period.
- In the second period, "marital distress" $M \in [0, 1]$ arises.
- Woman decides on fertility and divorce.

$\rightarrow$

The Decision Problem:

$$\max \left\{ E \left[\frac{c^{1-\sigma}}{1-\sigma} + \frac{n^{1-\sigma}}{1-\sigma} - M \right] \right\}$$

subject to:

$$c = \begin{cases} (1 + (1-l))\, w & \text{if married} \\ (\lambda + (1-l))\, w & \text{if divorced} \end{cases}$$

$$n = x l^{1-\gamma}$$

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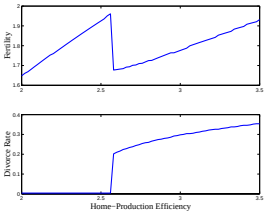
Outcome:

- Choice objects: l and $\bar{M}$.
- For low x, increases in x increase fertility, but not the divorce rate.
- For intermediate range of x, increasing x lowers fertility and increases divorce.



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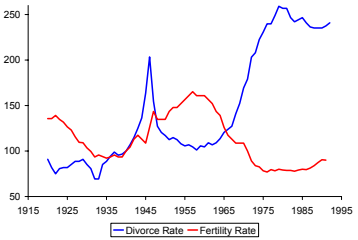
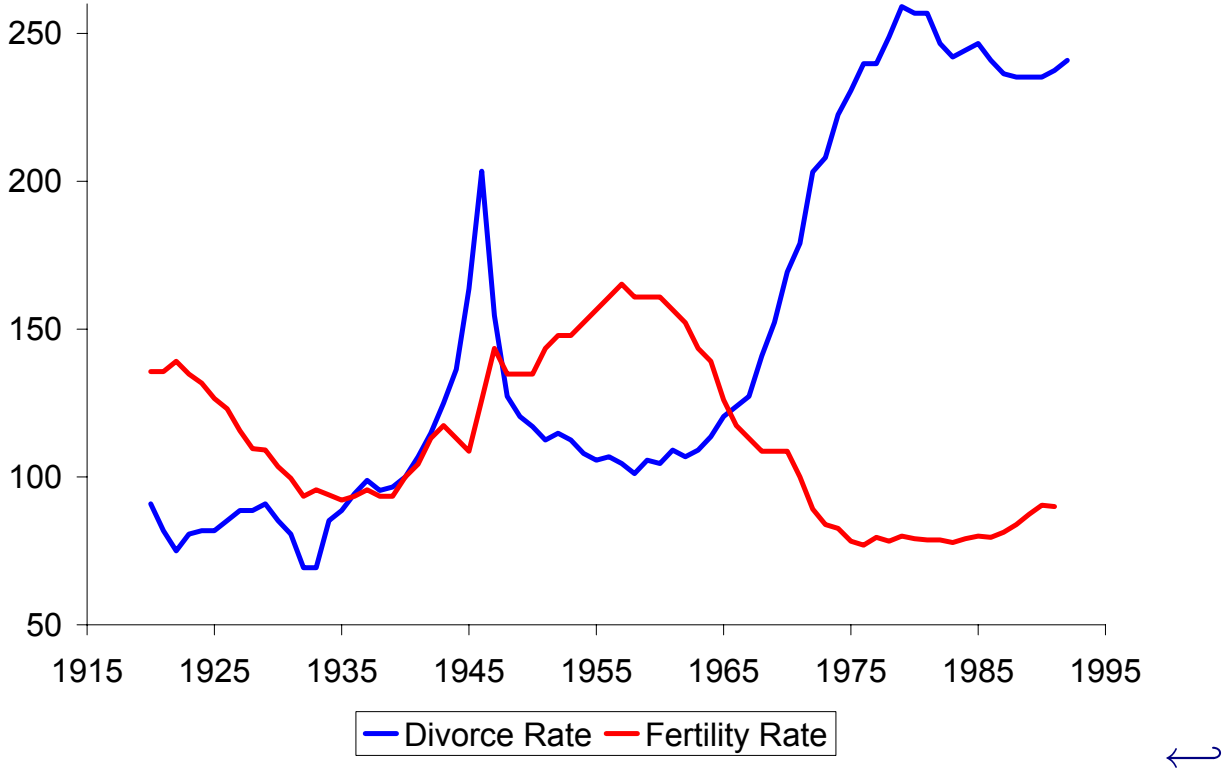
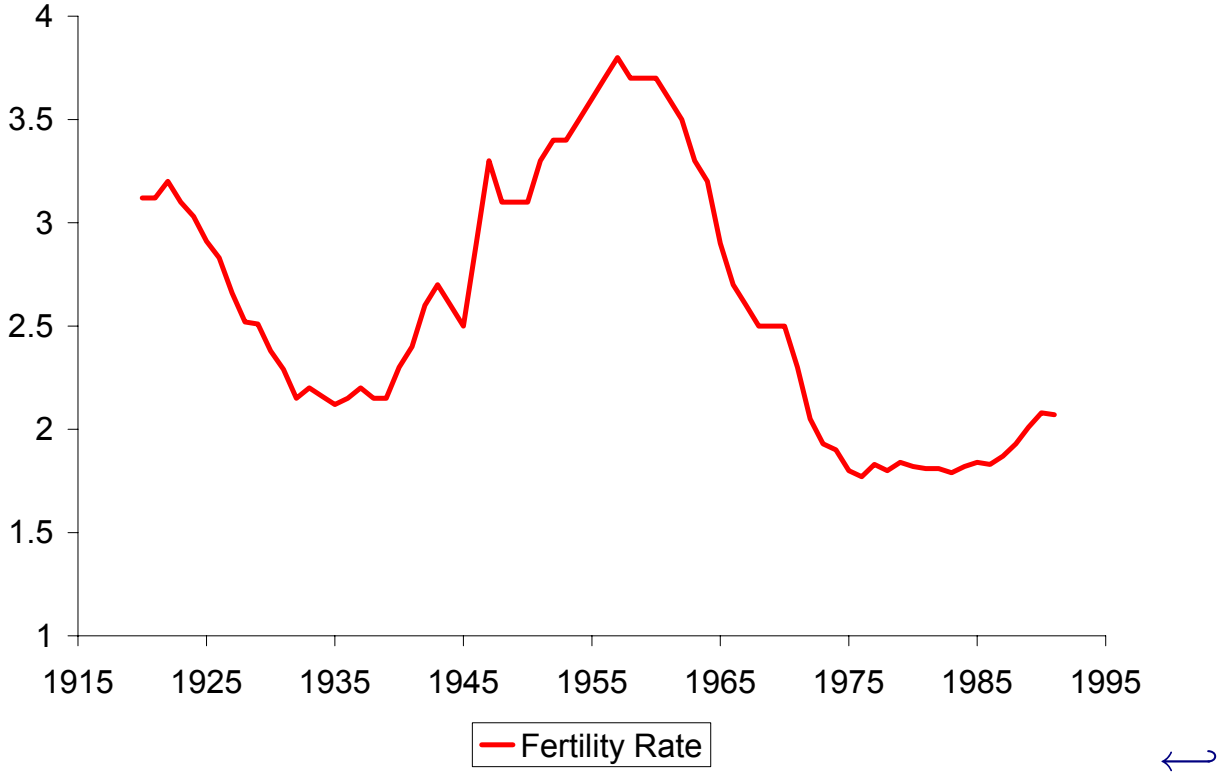
Fertility and Divorce in the Data:

- The “Baby Boom” was also a “Divorce Bust.”
- Divorce rates more than doubled between 1960 and 1975.




250
200
150
100
50
1915
1925
1935
1945
1955
1965
1975
1985
1995
Divorce Rate
Fertility Rate


4
3.5
3
2.5
2
1.5
1
1915
1925
1935
1945
1955
1965
1975
1985
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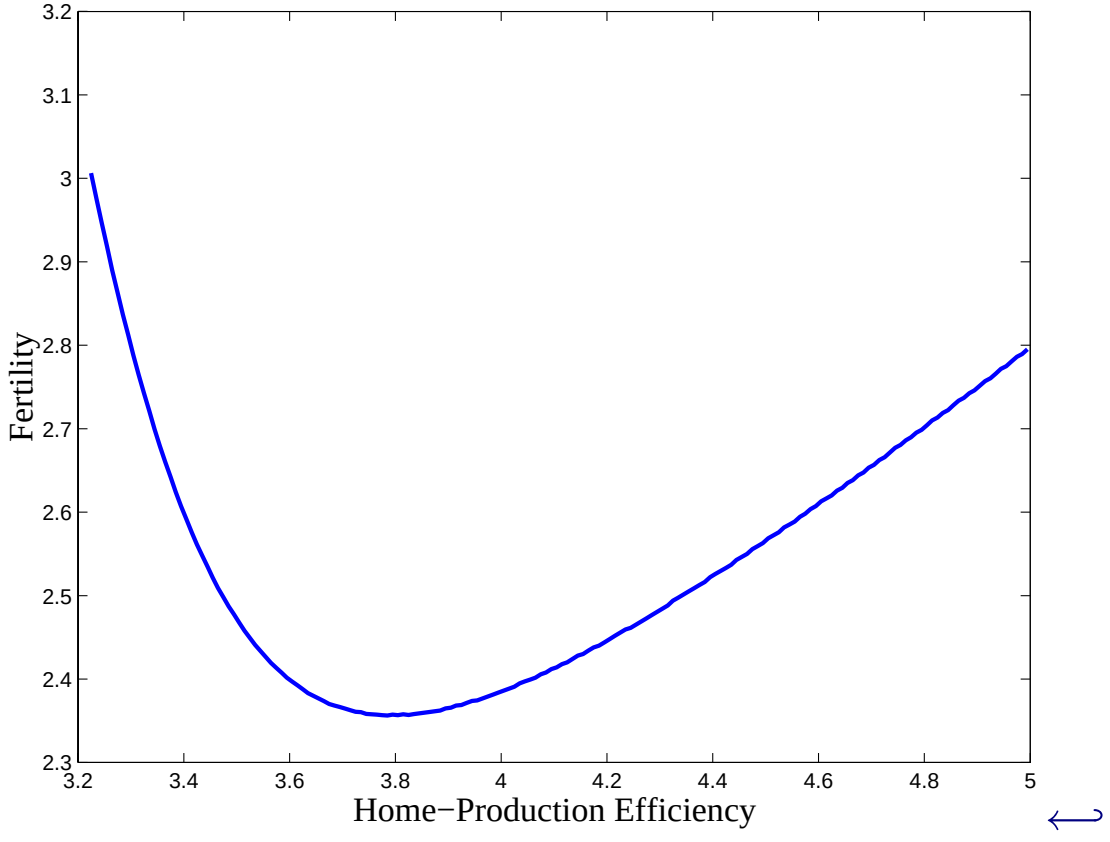
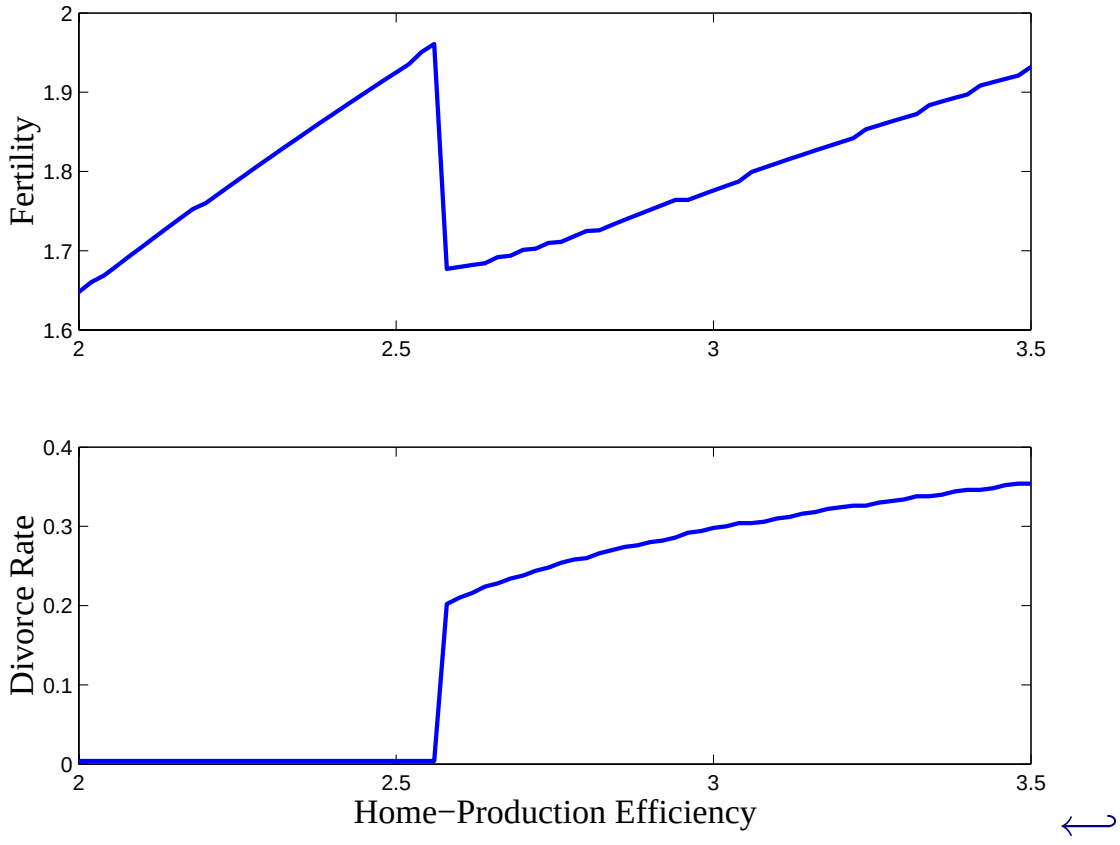
Fertility Rate


Fertility
Home−Production Efficiency
3.2
3.1
3
2.9
2.8
2.7
2.6
2.5
2.4
2.3
3.2
3.4
3.6
3.8
4
4.2
4.4
4.6
4.8
5


Fertility
2
1.9
1.8
1.7
1.6
2
2.5
3
3.5
Divorce Rate
0.4
0.3
0.2
0.1
0
2
2.5
3
3.5
Home−Production Efficiency