



DEVELOPMENT ECONOMICS

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Chapter 3

Population Growth



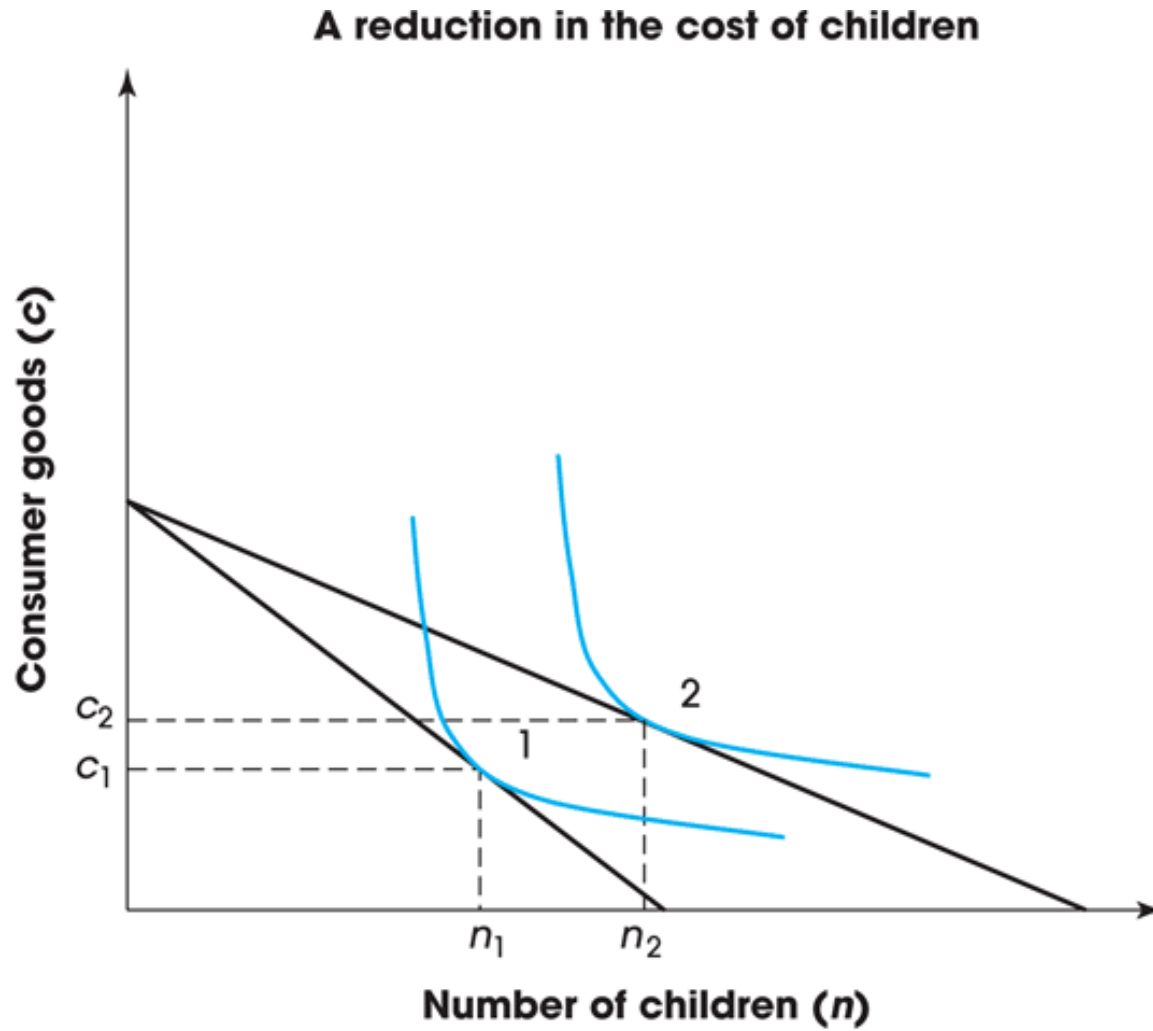
THE DETERMINANTS OF FERTILITY RATES

The Economics of Fertility Choices

How can we make economic sense of *fertility decisions*? Conventional consumer theory assumes a utility function bundling consumer goods and children subject to a budget constraint (Figure 3.6).

- *Shifts in relative price*: A reduction in cost of a good relative to other goods leads to an *income effect* and a *substitution effect*.
- If the income effect dominates, then it is possible to increase consumption of all goods (panel a).
- If the substitution effect dominates, people tend to increase consumption of cheaper good, and reduce consumption of more expensive goods (panel b).
- Evidence shows that the *income effect dominates when there is a decrease in the cost of children and the substitution effect dominates when there is a decrease in the price of other goods*.

THE DETERMINANTS OF FERTILITY RATES



With an initial choice of consumer goods and number of children at point 1, a reduction in the cost of children shifts the budget line on the horizontal axis and leads to an increase in the demand for consumer goods and number of children (point 2).

THE DETERMINANTS OF FERTILITY RATES



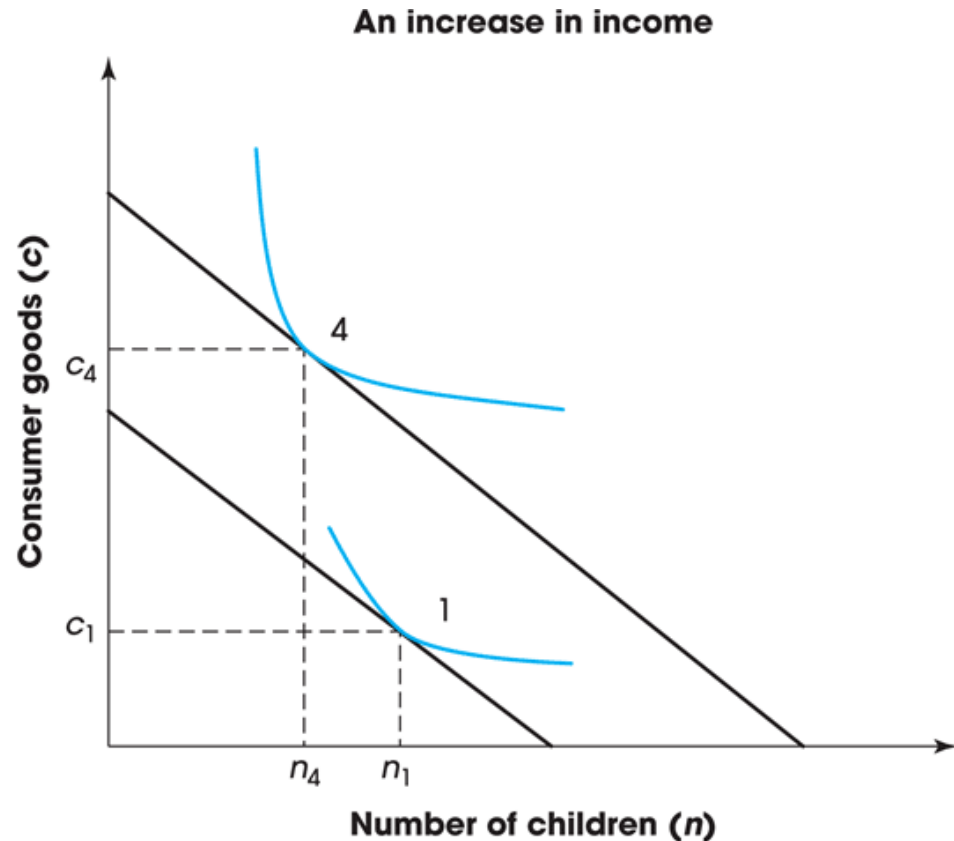
Starting from an initial choice of consumer goods and number of children at point 1, a reduction in the cost of consumer goods leads to an increase in the demand for those goods and a reduction in the demand for children (point 3).

THE DETERMINANTS OF FERTILITY RATES

- If there is an upward *shift in income*, it's possible to afford both more children and consumer goods (Figure 3.7).
 - *Inferior goods* are defined as goods for which demand decreases as income increases (potatoes, rice, millet).
 - A *normal good* is one for which consumption increases as income increases.
- Typically, poor families have more children than rich families.
Are children inferior goods?
- Or, is the cost of children *relatively* higher in rich countries?
Two possible explanations:
 - The *opportunity cost* of having children, especially for women, increases with economic development.
 - There is a *quantity-quality trade off*. At higher levels of development, parents choose to invest more time and money per child.

THE DETERMINANTS OF FERTILITY RATES

Figure 3.7.
Fertility
Choices and
Increases in
Income.



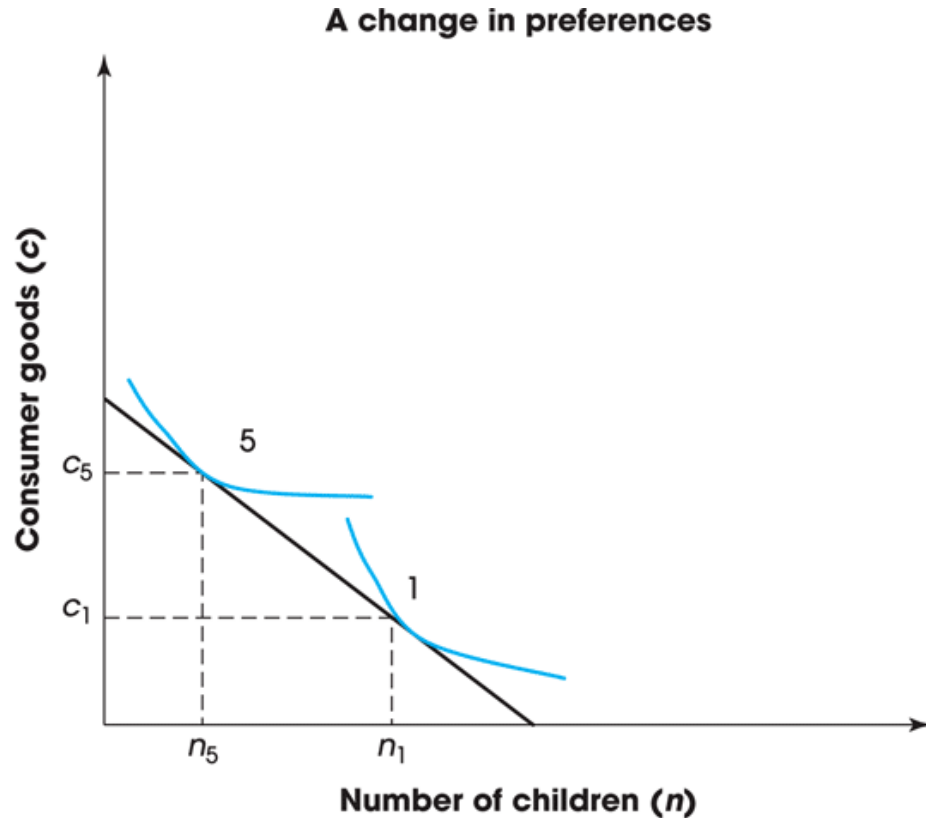
Starting from an initial choice of consumer goods and number of children at point 1, an increase in income leads to an increase in the demand for consumer goods and a reduction in the demand for children. The latter effect is due to a quantity-quality tradeoff in the choice of children. As incomes increase, the opportunity cost of time also increases and parents prefer to invest in child quality rather than in child quantity, spending more time and money on a smaller number of children.

THE DETERMINANTS OF FERTILITY RATES

- A *shift in preferences* is another possible explanation for fertility choices (Figure 3.8).
- The change in the relative benefits of having children translates into a change in the shape of *indifference curves* between consumption and children.
- Preference can change for noneconomic reasons, especially *social norms*.
- A reduction in benefits will result in fewer children and more consumption of goods and services.
- The benefits of having children are at least partly related to the differences in *institutions* across countries.

THE DETERMINANTS OF FERTILITY RATES

Figure 3.8.
Reduction in
the Benefits
of Having
Children.



Starting from an initial choice of consumer goods and children at point 1, changes in preferences lead to an increase in demand for consumer goods and a reduction in the demand for children. These changes in preferences are related to the development of pension programs and urbanization that eliminate the need to have children who will ultimately have to care for their aging parents, points that we discuss below.

THE DETERMINANTS OF FERTILITY RATES

Fertility Choices and Institutions

In societies with *no social security*, children may represent an investment for *retirement* and a source of *financial security*. Therefore, poor parents tend to have more offspring where:

- Infant and childhood mortality are high.
 - Children tend to be less educated, because they may potentially be less productive.
 - Because of extreme poverty children move away from their parents.
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- In advanced economies, parents can use the promise of *inheritance as an incentive* to make sure their children take good care of them.
 - In the absence of economic incentives, however, you often find that poor countries *enforce parental support through cultural and social values*.