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**ECONOMIC BENEFITS OF SLOWING POPULATION GROWTH**

**Volume I – Charts**

**68TMP-122**

**Prepared for the Agency for International Development  
by TEMPO, General Electric's Center for Advanced Studies  
Santa Barbara, California**

## **PREFACE**

**This fourth section of the GE-TEMPO material, entitled Economic Benefits of Slowing Population Growth, consists of two Volumes, one of Charts and another of accompanying Notes.**

**Together, the Charts and Notes are intended primarily to be used as a simplified but valid explanation of the effects of rapid population growth on economic development and of the economic benefits of slowing population growth. They are also useful as a guide for training purposes.**

**The style is simple and direct and provides the basis for informative discussion of a wide range of issues related to population growth and development.**

**The Charts are designed as convenient aids in the presentation and discussion of the material contained in the Notes.**

**These kit materials were prepared under a U.S. Agency for International Development contract with TEMPO in Santa Barbara, California. The project team includes Dr. Stephen Enke, Dr. William McFarland, Dr. Ross Eckert, Dr. Richard Zind, Mr. Arthur DeVany, Mr. Donald O'Hara, and Mrs. Roberta Remak. These charts and notes are primarily the responsibility of Dr. Enke.**

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**CHAPTER I**  
**INTRODUCTION TO THE PROBLEM**

**A. ECONOMIC DEVELOPMENT MEANS MORE INCOME PER CAPITA**

- 1. Economic development means many things, including  
higher consumption levels,  
more savings and investments from incomes,  
more capital per worker,  
new industries and technology, as needed,  
extra education and health opportunities.**
- 2. All these benefits mean more economic output per head of population.**
- 3. Output is income for the nation as a whole.**
- 4. Income per person is a good index of economic development.**
- 5. Income per person is a ratio—GNP/Population.**

**b. POPULATION INCREASES THREATEN ECONOMIC DEVELOPMENT**

- 1. Some LDCs have populations increasing over 3 percent per year.**
- 2. A few LDCs have GNPs increasing under 5 percent per year.**
- 3. A GNP increase of 5 percent, with a population increase of 3 percent means income per person is increasing at 2 percent a year.**
- 4. A 3 percent increase in population doubles population before 25 years**
- 5. Yet, GNP cannot more than double in 25 years, unless:**
  - employed labor doubles,**
  - capital stock more than doubles,**
  - adopted technology improves.**

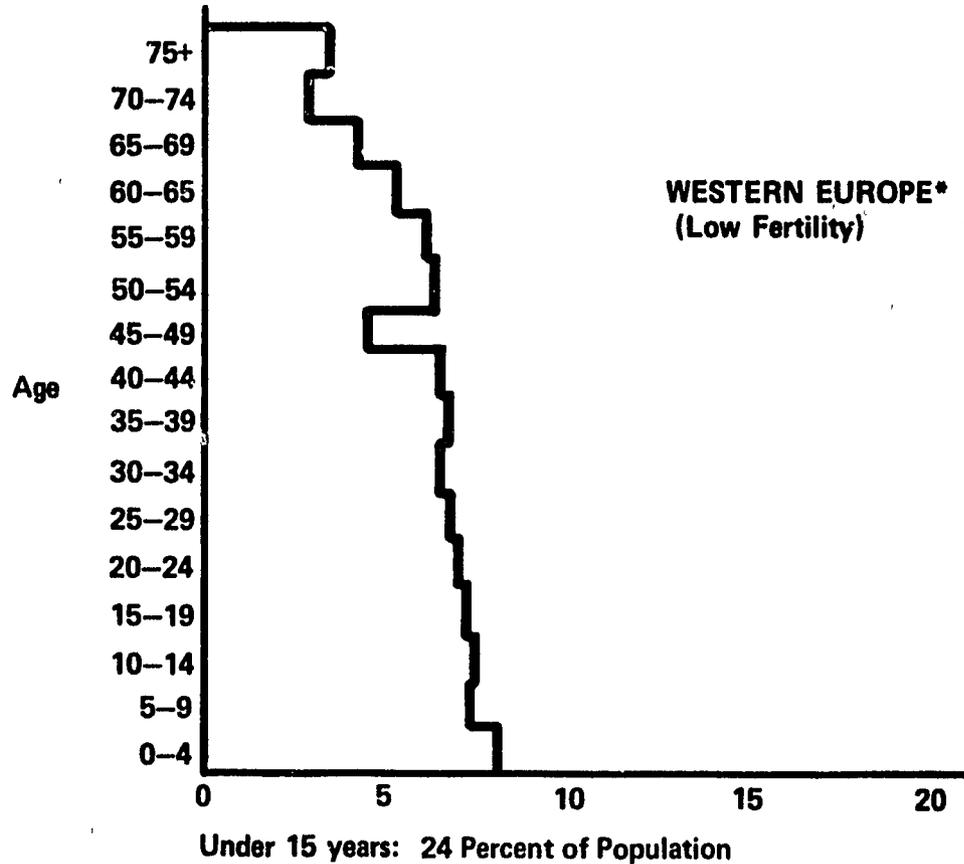
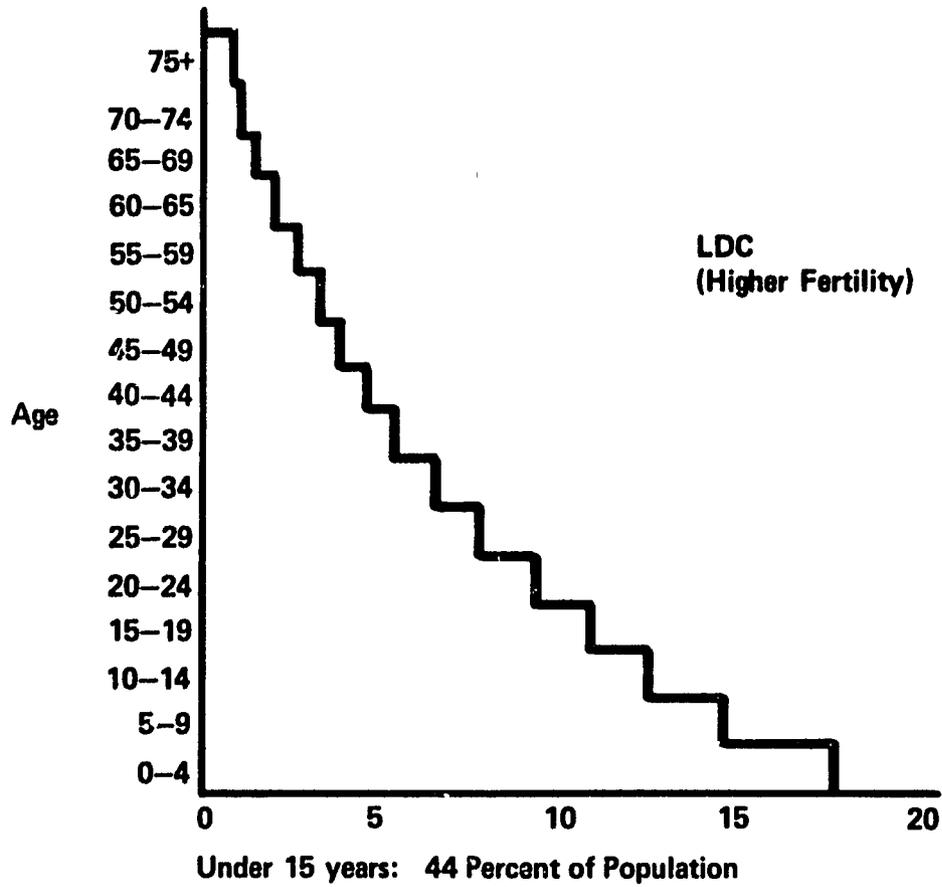
**C. POPULATION INCREASES CAUSED BY DECLINING DEATH RATES**

- 1. Why do some LDCs have population increases of 3 percent a year—doubling populations within 25 years?**
- 2. For thousands of years death rates were almost as high as birth rates.  
Life expectancies were about 30 years—not 60 years or more.  
It took hundreds of years for populations to double.**
- 3. In many advanced countries, birth rates began declining slowly before 1875—as did death rates.  
LDC's death rates have declined dramatically only since WWII.  
Yet, LDC's birth rates continue at very high levels.**

**D. HIGH BIRTH RATES—BURDENSOME CHILD DEPENDENCIES**

- 1. Children consume, but they produce few goods and services.  
The more children under 15 in a family, the less for everyone.  
Children are burdensome—however much loved.**
- 2. The percentage of children increases with higher birth rates.  
Where birth rates are over 4 percent per year, children under  
15 will be around 40 percent of the population.  
(Child dependency rates are not sensitive to death rate changes.)**
- 3. A population of 40 percent children is a serious burden.  
A quarter of food is eaten by those too young to produce.  
Governments cannot afford 25 percent of the population in school.**
- 4. All LDCs have high birth and child dependency rates.  
Developed countries have ratios typically half as much or less.  
Poor countries are handicapped by high birth rates.**
- 5. High birth rates are burdensome—however abundant are resources.**

**E. CONTRASTING AGE DISTRIBUTIONS**



\*Western is a composite age distribution for selected countries in Western Europe.

**F. HAVING FEWER CHILDREN “RELEASES” CONSUMPTION**

1. How do fewer births promote economic development?
2. Fewer births mean fewer consumers relative to producers.  
Children can do little useful work.  
Even when adult, with little capital or land, an extra worker produces extra only a fraction of what he consumes.
3. Families with fewer children can save more now and later.
4. Thus, fewer births should mean:
  - less labor to capital—meaning higher wages per worker,
  - a smaller population—leaving more income per person,
  - more education and health services per child.
5. Economic development is not countless families living miserably  
It means families living better—even if there are fewer of them.  
Compare Red China and Switzerland. Which is developed?

## **G. BASIC HUMAN NEEDS**

- 1. "Development" also means a better quality of family life.**
- 2. Rich or poor, what do most parents want?**
  - a happy family that lives together,
  - some children—healthy and educated,
  - more "advancement" opportunities for children.
- 3. Larger families are more often poor and, as a result, they**
  - cannot properly feed or adequately educate their children,
  - do not save and invest,
  - find it more difficult to try better ways to produce.
- 4. Most "middle class" families in all countries usually**
  - know family planning—where to go, what to get, when to use,
  - often practice it,
  - have below-average-size families.
- 5. The poor often need family planning—but cannot now use it. The middle classes often use it—but ordinarily need it less. Should not the poor and unaware have the same choices?**
- 6. Governments can give more control over family size to poor and unaware parents—the large majority.**

## **H. PARENTS' ABILITY AND DESIRE TO REDUCE BIRTHS**

- 1. LDC surveys often show that parents finally have more children than they had wanted.**
- 2. Very primitive and remote couples may:**
  - **be ignorant of how to avoid pregnancy,**
  - **feel too embarrassed to seek assistance from a clinic,**
  - **fear contraceptives will be too expensive,**
  - **be unable readily to obtain supplies,**
  - **lack sustained motivation.**
- 3. Abortion is a common substitute for contraception among those who want fewer children.**

**CHAPTER II**  
**ACCELERATING OUTPUT OR SLOWING POPULATION**

**A. INCOME PER PERSON—REMEMBER THE DENOMINATOR**

- 1. Economic development has many objectives.  
Many of these require higher output per head of population.  
More output per head means more income per head.**
- 2. Output (or income) per person is a ratio.  
Output (GNP) is the numerator.  
Population is the denominator.**
- 3. LDC governments use funds and resources to increase GNP.  
Most LDCs spend little to slow population increase.  
GNP per person can be increased more by spending extra to  
reduce the population denominator.**

**B. EXPENDITURES ON GNP OR POPULATION?**

1. Imagine an LDC that, in 10 years (1980), expects:
  - a GNP or output (V) of \$2,500 millions,
  - a national population (P) of 12.5 million,
  - an income per head (V/P) of \$200 a year.
  
2. Today (1970) the LDC's government can spend \$2.5 million extra a year for 10 years on:
  - more plants and capital investment, OR
  - doctors, clinics, and supplies to reduce births.
  
3. Extra plants mean more V than was expected.  
Extra clinics mean less P than expected.  
Which extra expenditure will most raise V/P?

**C. SPENDING ON CAPITAL FOR OUTPUT**

**1. What  $\Delta V$  results in 1980 from \$25 million invested will depend on the rate of return on capital ( $r$ ).**

**2. The possibilities include:**

$r =$	<b>10 percent</b>	$\Delta V =$	<b>\$2.50 million</b>
	<b>15 percent</b>		<b>3.75 million</b>
	<b>20 percent</b>		<b>5.00 million</b>

**3. All calculations below assume  $r$  equal 10 percent as an example only.**

**D. SPENDING ON CONTRACEPTION**

- 1. Suppose each "acceptor" of contraception costs \$5 per year. Then \$2.5 million yearly permits 500,000 acceptors yearly. By 1980 there might be 5 million acceptor-years.**
- 2. How many fewer births by 1980 ( $\Delta P$ ) result depends on the "otherwise" fertility ( $f$ ) of the contraceptive users:**

<b>f = 0.20/year</b>	<b><math>\Delta P</math> = 1.00 million</b>
<b>0.25</b>	<b>1.25</b>
<b>0.30</b>	<b>1.50</b>

- 3. All calculations below assume  $f$  equal 0.25/year as an example only.**

**E. TRADE-OFF ANALYSIS: A HYPOTHETICAL EXAMPLE**

- 1. If \$25 millions extra means a  $\Delta V$  of \$2.5 millions or a  $\Delta P$  of 1.25 million people, the loss of GNP is \$2 for each birth less.**
- 2. If  $V/P$  is \$200, and  $\Delta V/\Delta P$  is \$2, having one less birth costs 1/100 of the extra GNP typically needed for one more living person each year.**
- 3. For \$25 million over 10 years, income per head in this example is raised 100 times more through  $\Delta P$  than  $\Delta V$ .**
- 4. This ratio would be half (twice) as great if costs per year of contraceptive use were not \$5 but \$10 (\$2.50).**
- 5. This sample analysis includes caveats (see next page).**

**F. CAVEATS**

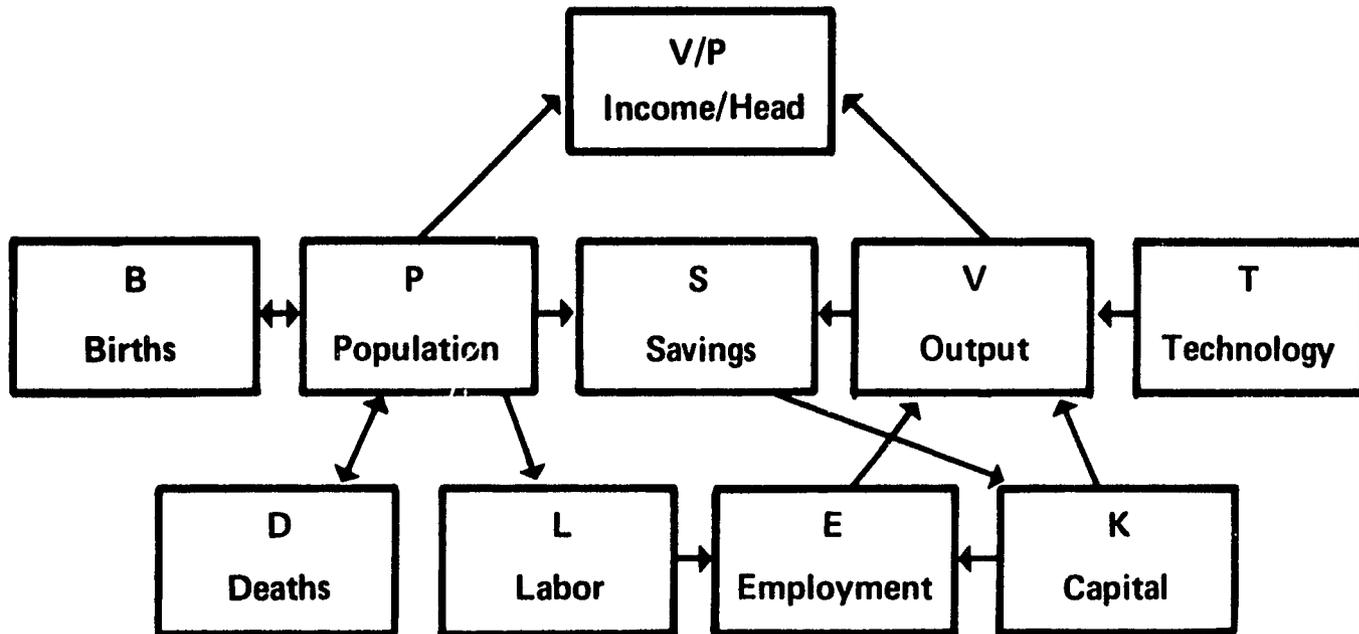
- 1. Trade-off example is more important for the idea than the ratios.**
- 2. An example covering more than 15 years would show a reduction in population growth also decreasing the growth of the labor force.**
- 3. The supposed choice is only between a little more investment or contraception.**
- 4. In practice more birth control might not reduce investment.**
- 5. Gains from improving quality of population, through more education and health, are not compared.**

**CHAPTER III**  
**ECONOMIC IMPACTS OF POPULATION GROWTH**

**A. POPULATION AND INCOME PER HEAD**

- 1. Income per head is a ratio of national output to population ( $V/P$ ).**
- 2. A larger or smaller population has little influence on national output produced.**
  - More population means more labor available but not necessarily so many more jobs.**
  - Less population means more savings, more jobs open, and more capital.**
  - The choice is often between labor and capital, with output about the same.**
- 3. A smaller population with the same national output gives a higher income per head.**

## B. DETERMINANTS OF INCOME PER HEAD



### INTERPRETATION OF CHART

1. Less B, same D, less P
2. Less P, less L,\* less E (for same K)
3. Less P, more S (for same V), more K
4. More K, more E (for same L)
5. More K, somewhat less E, same V
6. Same V, less P, more V/P

\*Less P gives same L first 15 years

### **C. SMALLER FAMILIES MAY INCREASE OUTPUT**

- 1. Fertility and productivity may interact within families.**
  - National output ( $V$ ) depends partly on stock of capital ( $K$ ) and on improved technology ( $T$ ).
  - $K$  comes from savings, and smaller families can save more.
  - $T$  comes from experimentation, and smaller families can better risk innovations.
- 2. The type of parents that plans its family size is more likely to save and innovate to improve its economic status.**
- 3. Family planning, if used, encourages families to aspire, save, and innovate, thus increasing  $V$ .**

**D. IT'S THE RATE OF POPULATION INCREASE THAT MATTERS**

- 1. Most LDC s have empty areas that will be developed—sometime. Many LDC s can have 2 or 3 times present populations—sometime. What determines "sometime"?**
- 2. A country's GNP is limited by—**
  - how much labor, capital, and land it has,
  - how efficiently it uses its labor, capital, and land—technology.
- 3. A 3 percent rate of increase means double the population in 25 years. Double population may double available labor—but double labor does not double output without double capital and land. Doubling capital in 25 years requires considerable saving. Available land of equal worth cannot be doubled.**
- 4. The "rescuing" element is often technology—using resources in better ways to produce more per unit. It's a race—population versus capital and technology. If capital and innovation win, output per person can rise.**
- 5. Most countries can support a larger population—sometime. The slower this rate, the more income per person can rise. It is the rate of population increase that matters.**

**E. HOW FEW BIRTHS ARE DESIRABLE?**

- 1. Are fewer births always better than more births?  
Would it be desirable to have no births for, say, 15 years?  
Don't children give their parents real income through enjoyment?**
  
- 2. As birth rates steadily decline:**
  - child dependency burdens lessen,
  - families save more,
  - national capital stock per worker increases more rapidly,
  - each worker produces and earns more,
  - eventually, infants' earnings in the labor force are almost as great as their costs of childhood rearing.
  - any small negative difference is offset by the enjoyment a few children give their parents.
  
- 3. None of these analyses suggest that a period of no births is desirable—only that fewer births are usually desirable today.**

**CHAPTER IV**  
**"DEVELOPA"—A TYPICAL LDC**

**A. "DEVELOPA"—1970 TO 2000 AD**

**1. Developa represents a typical LDC from 1970 to 2000 AD that will develop faster if it reduces its birth rate.**

**2. Situation in 1970**

<b>Income per head</b>	<b>\$200</b>
<b>Savings/income</b>	<b>6.9 percent</b>
<b>Unemployment</b>	<b>15.0 percent</b>
<b>Children/population</b>	<b>43.9 percent</b>
<b>Crude birth rate</b>	<b>44.0 per thousand</b>
<b>Crude death rate</b>	<b>14.0 per thousand</b>

**3. Contrasted are the economic results of "high" fertility vs. "low" (i.e., declining) fertility 1970 to 2000 AD.**

**B. DEVELOPA—THE DEMOGRAPHIC ASSUMPTIONS**

<b>Population—1970</b>			<b>10 million</b>		
<b>Initial fertility rates in 1970</b>					
<b>(per thousand)</b>					
<b>Age</b>	<b>15—19</b>	<b>111</b>	<b>Age</b>	<b>30—34</b>	<b>248</b>
	<b>20—24</b>	<b>295</b>		<b>35—39</b>	<b>183</b>
	<b>25—29</b>	<b>304</b>		<b>40—44</b>	<b>81</b>
				<b>45—49</b>	<b>20</b>

<b>Crude Birth Rate</b>	<b>“High”</b>	<b>“Low”</b>
<b>(per thousand)</b>		
<b>1970</b>	<b>44</b>	<b>44</b>
<b>1985</b>	<b>44</b>	<b>30</b>
<b>2000</b>	<b>44</b>	<b>26</b>

**Life expectancy increases from 1970 to 2000 AD:**

	<b>Males</b>	<b>Females</b>
<b>1970</b>	<b>51.9</b>	<b>55.0</b>
<b>2000</b>	<b>57.3</b>	<b>60.8</b>

**C. DEVELOPA—THE ECONOMIC ASSUMPTIONS**

<b>GNP in 1970:</b>	<b>\$2.0 billion</b>
<b>Initial capital stock:</b>	<b>\$5.0 billion</b>
<b>Annual saving is:</b>	<b>20 percent of GNP minus \$30 per head</b>
<b>GNP increases (with full employment)</b>	
<b>6 percent if:</b>	<b>Labor increases 10 percent</b>
<b>3.5 percent if:</b>	<b>Capital increases 10 percent</b>
<b>Doubling labor and capital increases GNP by 95 percent</b>	
<b>Technology (the "State of the Arts") improves 1.5 percent a year.</b>	

**D. DEVELOPA—ITS FUTURE SUMMARIZED**

<b>Fertility:</b>	<b>AD 1985</b>		<b>AD 2000</b>	
	<b>High</b>	<b>Low</b>	<b>High</b>	<b>Low</b>
<b>Population, millions</b>	<b>15.9</b>	<b>14.4</b>	<b>25.7</b>	<b>18.8</b>
<b>GNP, \$ billions</b>	<b>4.05</b>	<b>4.10</b>	<b>9.03</b>	<b>8.98</b>
<b>Income per head, \$</b>	<b>255</b>	<b>284</b>	<b>352</b>	<b>478</b>
<b>Employment, millions</b>	<b>5.04</b>	<b>5.08</b>	<b>8.36</b>	<b>7.87</b>
<b>Capital, \$ billions</b>	<b>8.47</b>	<b>8.65</b>	<b>18.65</b>	<b>20.30</b>
<b>Unemployment, percent</b>	<b>11.5</b>	<b>10.7</b>	<b>8.3</b>	<b>5.4</b>
<b>Savings/GNP, percent</b>	<b>9.7</b>	<b>10.6</b>	<b>12.6</b>	<b>14.4</b>
<b>Capital/worker, \$ thousands</b>	<b>1.68</b>	<b>1.70</b>	<b>2.23</b>	<b>2.58</b>
<b>Children/work age population</b>	<b>.845</b>	<b>.674</b>	<b>.866</b>	<b>.501</b>
<b>Crude death rate/1000/yr.</b>	<b>13</b>	<b>11</b>	<b>11</b>	<b>10</b>
<b>Crude birth rate/1000/yr.</b>	<b>44</b>	<b>33</b>	<b>43</b>	<b>26</b>

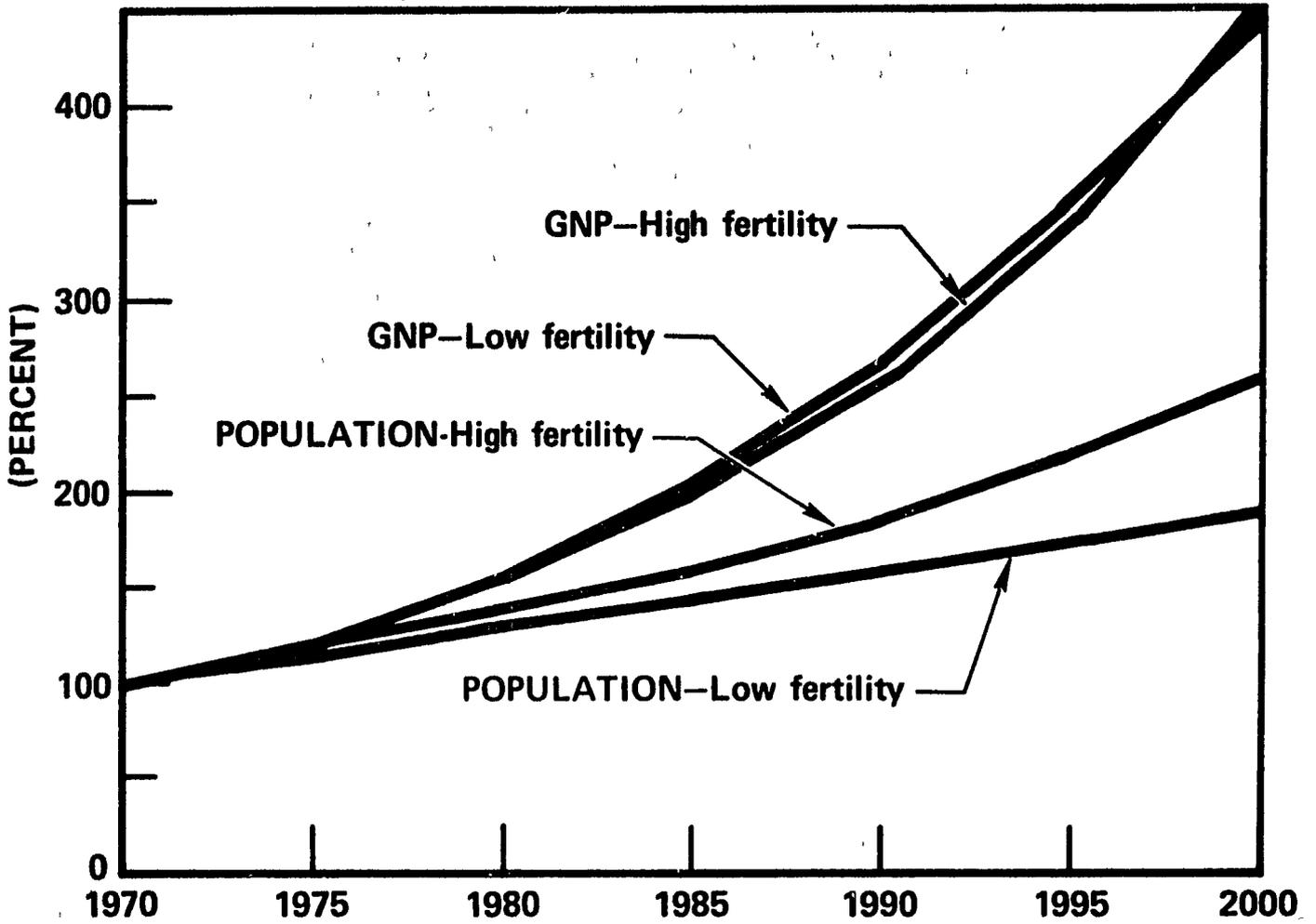


Figure D-1. Population and GNP as percents of 1970 values.

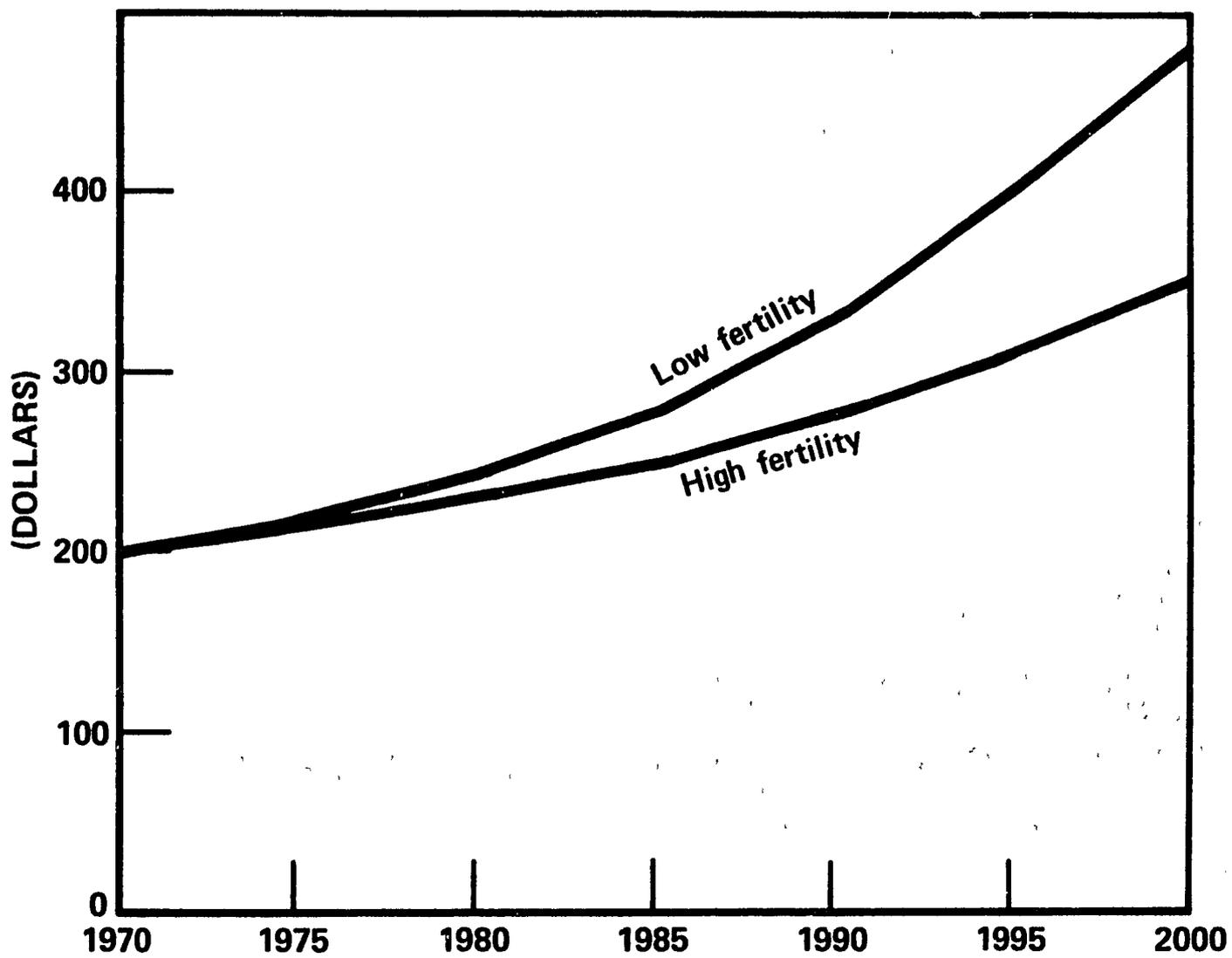


Figure D-2. Income per capita.

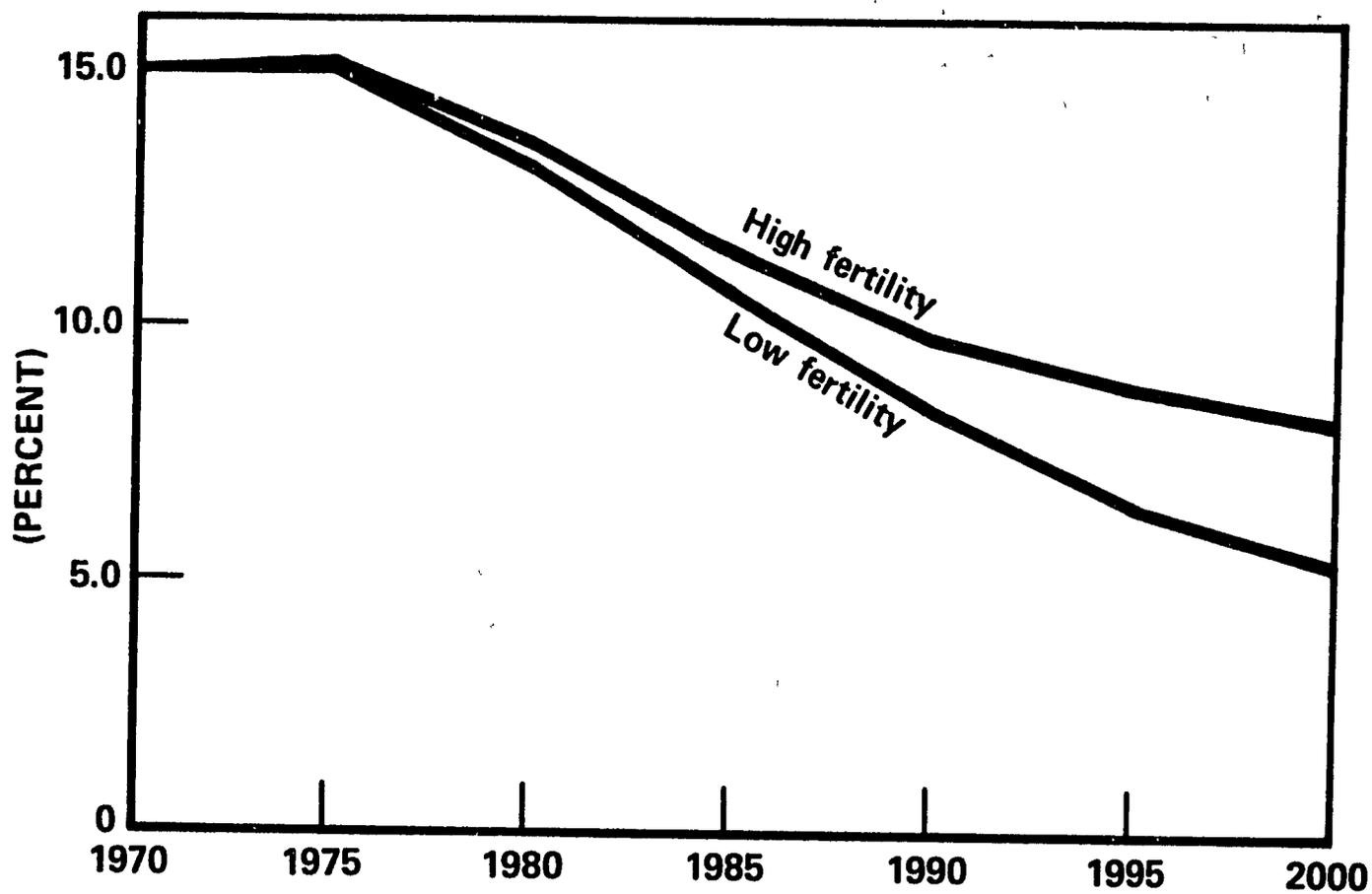


Figure D-3. Rate of unemployment.

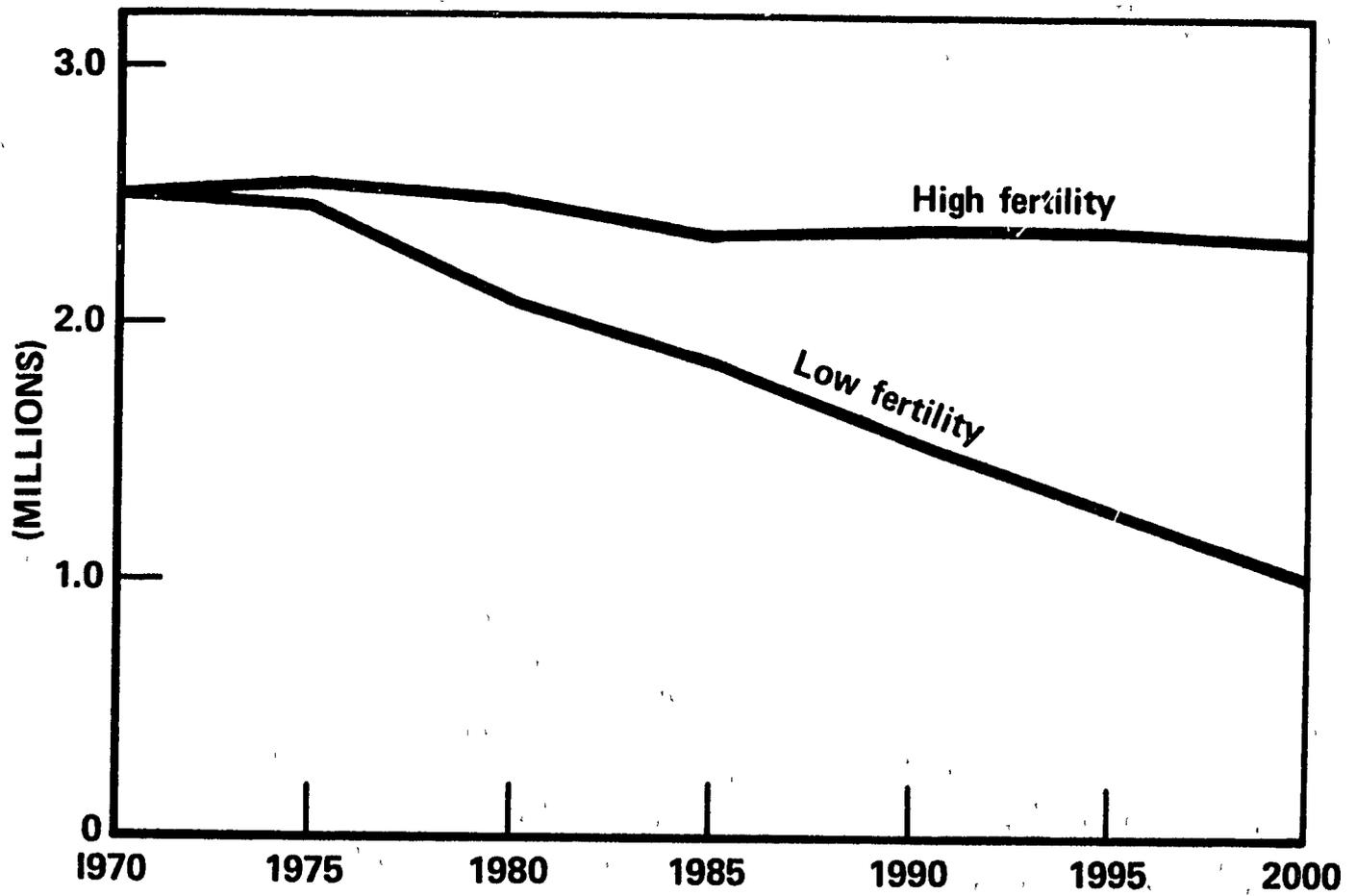


Figure D-4. Population below the \$100/year "poverty line."

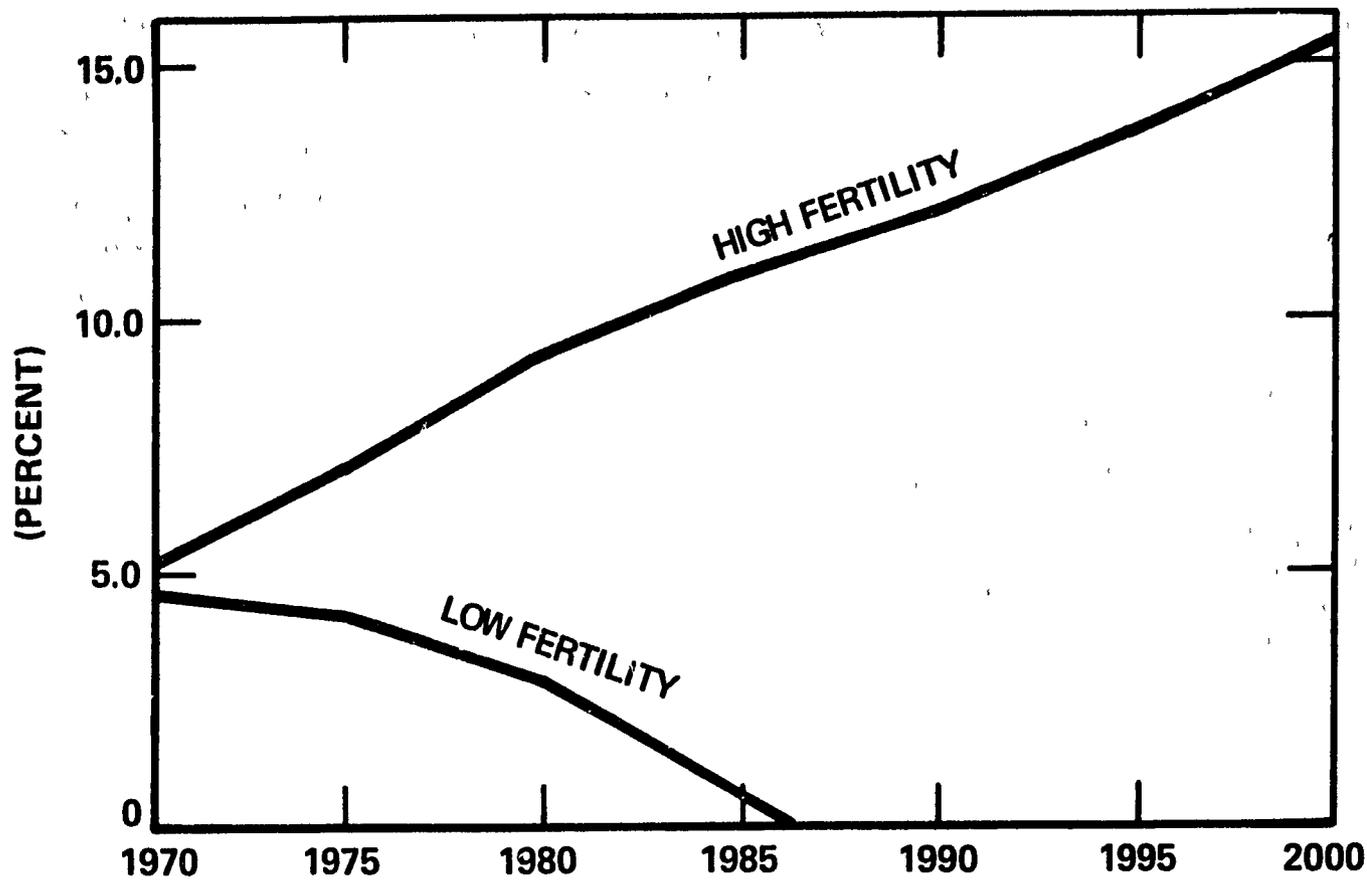


Figure D-5. Foreign assistance needed to increase income per head by 3 percent per year (as percent of GNP).

**E. DEVELOPA—THE MAIN RESULTS**

**By the year 2000, lower fertility gives**

- almost the same gross national product,
- 27 percent smaller population,
- 36 percent higher income per head.

**By the year 1985, lower fertility gives**

- 7 percent less unemployment,
- 9 percent higher savings rates,
- 20 percent fewer dependent children.

**CHAPTER V**

**GROWING POPULATIONS INCREASE SOCIAL SERVICE COSTS**

**A. DEVELOPA-PUBLIC SERVICE NEEDS IN 1985**

<b>Assumed Fertility Projection</b>	<b><u>High</u></b>	<b><u>Low</u></b>
<b>Persons living below \$100 "poverty line" (millions)</b>	<b>2.34</b>	<b>1.85</b>
<b>Urban resident population (millions)</b>	<b>6.29</b>	<b>5.72</b>
<b>School-age population (millions)</b>	<b>5.86</b>	<b>5.27</b>
<b>Number of deliveries (thousands)</b>	<b>698</b>	<b>455</b>
<b>Workers (equivalent) unemployed (millions)</b>	<b>653</b>	<b>610</b>

**B. DEVELOPA—COST OF EDUCATION**

	1970	1980		1990	
		"high"	"low"	"high"	"low"
<b>School-age Population (millions)</b>					
primary, 5 to 14	2.64	3.60	3.46	5.88	3.82
secondary, 15 to 19	1.03	1.40	1.40	1.91	1.78
<b>School Enrollment Ratios</b>					
primary	.50	.60	.60	.70	.70
secondary	.10	.20	.20	.30	.30
<b>Recurrent Operating Costs (\$millions)</b>	13.2	21.6	20.8	34.9	26.1
<b>Special "Capacity" Costs (\$millions)</b>	2.0	5.3	3.4	8.3	2.5
<b>Total Cost in Relation to 1970</b>	100	177	159	284	172

**C. MEDICAL SERVICE COSTS**

- 1. Perhaps for each patient-day-cost of hospital medical care there is:**
  - a recurrent operating cost of \$5 per patient day.
  - a special capacity cost of \$5,000 per new bed.
- 2. Because of more available medical services, the number of patient-days per 1,000 persons is expected to increase from 600 to 800 by 1985.**
- 3. In 1985, hospital medical service costs will be:**
  - High fertility – \$69.2 millions
  - Low fertility – \$60.7 millions.

**D. THE CAPACITY MULTIPLIER—SERVING X PERCENT MORE PEOPLE COSTS OVER X PERCENT MORE**

**All public services (postal, sanitation) have both recurrent operating and special net investment costs.**

**Suppose: P is population served, X is percent increase in P. R is recurrent costs, and S is special costs per person served.**

**Then extra recurrent costs are  $X \cdot P \cdot R$ , and extra special costs are  $X \cdot P \cdot S$ .**

**Extra total costs are  $(R + S)/R$  times X percent of last year's recurrent costs.**

**This relation also holds for services that the private sector provides.**

**CHAPTER VI**  
**METHODS AND COSTS OF FAMILY PLANNING**

**A. MAXIMUM DEMAND FOR CONTRACEPTION**

- 1. Contraceptive users cannot exceed 10 percent of the population.**
- 2. For every 100 people in a high birth rate LDC, approximately:**
  - **40 are too young to have children—leaving 60,**
  - **20 of the 60 are too old or not exposed—leaving 40,**
  - **20 of the 40 are having children or want children—which leaves 20.**
- 3. Of the 20 per 100 who wish to avoid pregnancies, 10 are women and 10 are men.**
- 4. For each couple, only one need use contraceptives.**
- 5. For every 100 of population, perhaps 7 women and 3 men at most would be “acceptors.”**

## **B. METHODS OF CONTRACEPTION**

- 1. Governments could offer various family planning services.**
- 2. Each method differs in effectiveness ("safety") and costs.  
If budgets are not constraints, safest methods are best.  
Best methods need one decision and unsustained motivation—  
(e.g. IUDs vs. pills).**
- 3. Pros and cons of methods include:**
  - **IUDs—insertion by doctor, sometimes expelled unknowingly.**
  - **pills—expensive over time, users can forget to take.**
  - **condoms—distribution costs, require careful use.**
  - **diaphragms—require medical fitting, spermicides also needed.**
  - **female sterilization—expensive, irreversible.**
  - **male sterilization—cheap, ordinarily irreversible.**
  - **withdrawal—no necessary equipment, requires strong motivation, not very safe.**

**C. DIRECT COSTS OF METHODS ARE LOW**

1. Some typical direct costs are:
  - pills—25 ¢ a month to make, double to distribute,
  - condoms—75 ¢ per 10 distributed,
  - IUDs—2 ¢ to make, \$5 to insert,
  - vasectomies—under \$10 if many done,
  - withdrawal—costs nothing.
2. After several years, costs per “acceptor” will be lower if there are relatively more IUDs and vasectomies.
3. In LDCs a feasible “mix” of methods means direct program costs of around \$5 per acceptor each year.

#### **D. VARIOUS INCENTIVES POSSIBLE**

**Use of family planning can be increased by government offering incentives.**

**Generous awards can be given to:**

- **acceptors of IUDs,**
- **volunteers for sterilization,**
- **doctors inserting IUDs,**
- **finders of acceptors and volunteers,**
- **women who remain non-pregnant.**

**Retailers can be provided with free contraceptives to sell.**

**E. TOTAL COSTS OF NATIONAL PROGRAMS**

- 1. If 10 percent of population are "acceptors," each directly costing around \$5 a year, the cost per head of population is 50¢.**
- 2. Most LDC s spend at least \$10 per head of population yearly for economic development.**
- 3. If total annual cost with incentives of a national family planning program was \$1 per head, \$9 would remain for traditional development investments.**

## **CHAPTER VII**

### **INVALID ARGUMENTS FOR DOING NOTHING ABOUT POPULATION GROWTH**

**A. "FAMILY PLANNING TAKES TOO LONG"—FALSE**

- 1. "No LDC can wait 25 years for a family planning program head—it's quicker to work on increasing output." (False)**
- 2. Family planning brings benefits in one year—some dams take a decade before giving power and irrigation.**
- 3. Efforts to raise the growth of per capita income—GNP/population—will be more successful if investments to increase the growth of GNP are combined with expenditures to slow the growth of population.**

**I. "MORE FOOD NOT FEWER MOUTHS"—UNECONOMICAL**

**1. "With more labor, capital, and better technology every LDC could import more food—so why is a reduction in births needed?"—(Unwise)**

**2. Because:**

**As regards agriculture, development involves the reduction of capital and labor resources required to satisfy the country's demand for food. This reduction can be accomplished by**

**modernizing agricultural production so that more food can be produced with fewer resources**

**and**

**reducing the rate of increase in the demand for food by slowing population growth.**

**3. Slowing population growth also allows more rapid modernization of agriculture.**

**C. "EMPTY LANDS NEED MORE PEOPLE"—FALSE**

- 1. "Many LDC s have barely inhabited areas. These areas have workable land and resources. Without inhabitants they cannot develop."—(False)**
- 2. High fertility is not the answer.  
Children are born where their mothers are, often in cities.  
Empty lands need capital, which has other, and often better, uses.**
- 3. The answer is migration of adults with capital—if the empty lands are worth developing.**

**“RAPID POPULATION GROWTH MEANS CHEAP LABOR”—UNDESIRABLE**

- 1. “High fertility means more workers and lower wages, which lowers costs and increases sales.”—(Partly true, unfortunately)**
- 2. Extra workers without capital have only muscle power to sell.  
If not productive, low wage workers cost more per output unit.  
Workers with low earnings cannot buy many goods.**
- 3. Development is for both capitalists and workers.  
Neither can produce without the other.  
Stronger markets come from increased productivity of capital and labor.**

**“REDUCED MORTALITY ENSURES REDUCED FERTILITY”—UNPROVEN**

1. **“Many LDC parents regard surviving children as ‘old-age’ insurance.”  
Falling death rates mean that fewer live births are needed.  
Won’t parents therefore have fewer pregnancies?”**
2. **Parents may not perceive age-specific mortality rates.  
Longer life expectancy means longer old age—needing more children.  
Having children may be more biological than rational.**
3. **Declining mortality rates so far have not induced lower fertility rates in LDC s.**

**F. "MORE POPULATION MEANS MORE INDUSTRY"—FALSE**

- 1. A truly developing country has rising incomes per head. This means more effective purchasing power—especially for non-food products.  
Families buy more industrial products—motor scooters, appliances, furniture, housing, etc.**
- 2. A large but poor population buys few industrial products—cheap cotton cloth, sandals, hand tools, soap, etc.**
- 3. Fewer births and higher family incomes can increase the demand for factory goods and, hence, promote industrialization.**

**G. "DEVELOPMENT INDUCES FAMILY PLANNING"—DANGEROUS**

- 1. "Developed nations had spontaneous family planning—without government programs. Apparently income, education, and urbanization induce low fertility. LDC's governments can afford to wait." (Dangerous)**
- 2. History is not repeating itself.**

**In developed countries, birth and death rates fall together, slowly, over 100 years.**

**Death rates fell suddenly in LDC s—but birth rates continue at the same high levels.**
- 3. Rapid population increase slows development.**

**Without development, fertility rates could decline only very slowly without government interventions.**

**LDC s may exist without real development for decades.**

**H. "GOVERNMENTS SHOULD REMAIN NEUTRAL"—FALSE**

- 1. "Family size is a private matter and no proper concern of governments." (False)**
- 2. Most governments are not neutral; they are pronatalist.**
  - They have laws against abortion.
  - Distribution of contraceptives may be illegal.
  - "Family allowances" are often paid.
  - Inflation makes children better "old-age insurance" than financial savings.
  - Free education makes extra children less costly.
  - Military conscription takes sons off the farm.
- 3. To be truly neutral, governments should provide family planning services to offset the influence of other programs.**

## **CHAPTER VIII**

### **THE POPULATION EXPLOSION: SOME FAMOUS QUOTATIONS**

**"Population control is a necessary complement to policies designed to raise food production and improve the standards of living in developing countries."**

**—Robert S. McNamara, President  
The World Bank**

**"Population increase constitutes the most dangerous obstacle . . . ."**

**—President Nasser, February 1966**

**"Family planning is at the base of our whole endeavor of national development."**

**—Prime Minister Indira Gandhi of India**

**"Either the birth rate of the world must come down or the death rate must go back."**

**—U.S. National Academy of Sciences,  
April 1963**

**“Economic progress and social change will be frustrated as population continues to increase at its present rate.”**

**– Carlos Leras Restrepo, President  
Colombia, Summer 1968**

**“It is not enough to get planned parenthood merely recognized as a laudable concept. The future of mankind will depend on the extent to which this concept is realized in practice.”**

**– Mohammed Ayub Khan, President  
Pakistan**

**“Unless population growth can be restricted, we may have to abandon for this generation our hopes of economic progress in the crowded lands of Asia and the Middle East.”**

**– Eugene Black, Former President  
The World Bank**

**“. . . population growth now consumes about two-thirds of economic growth in the less developed world.”**

**– Former President Lyndon Johnson  
February 1966**

**“Many of the benefits from aid are offset by population growth. Unless greater progress is made in control programs, even massive aid will be relatively ineffective in raising living standards in many underdeveloped countries.”**

**– U.S. Senate Foreign Relations  
Committee, July 7, 1966**

**“The worldwide population explosion in particular, with its attended grave problems, looms as a menace to all mankind and will have our priority attention.”**

**– U.S. Republican Party  
1968 Platform**

**CHAPTER IX**  
**CONCLUSIONS**

- 1. A developing country includes more and more developing families—families that have fewer children, save more, and innovate more.**
- 2. High birth rates are burdensome—even if there is plenty of land and no population pressure.**
- 3. Every country can have a larger population without economic cost—sometime; but the rate of population growth must be slow enough that savings and innovation can increase far more rapidly.**
- 4. Efforts to increase income per head should be directed toward accelerating the growth of GNP and slowing the growth of population.**
- 5. Direct costs of family planning may be as low as \$5 per acceptor a year over a 5-year period.**
- 6. The maximum possible number of voluntary acceptors would be about 10 percent of the population.**

- 7. Direct costs of a full program might be as low as \$0.50 a year per person of population—or 5 percent of what a typical LDC spends for economic development.**
- 8. A typical LDC, with reduced fertility, would soon have**
  - a higher income per head,
  - less serious unemployment,
  - reduced costs for education, health, and other social services,
  - fewer people living in poverty,
  - smaller foreign assistance requirements.
- 9. Birth control seeks to promote quality of population—fewer children can be given better schooling and health care.**
- 10. Large poor populations do not necessarily favor rapid industrialization or national security.**
- 11. Throughout the world, the better off and more educated tend to use birth control—so might the poor and unaware if given the same knowledge and alternatives.**