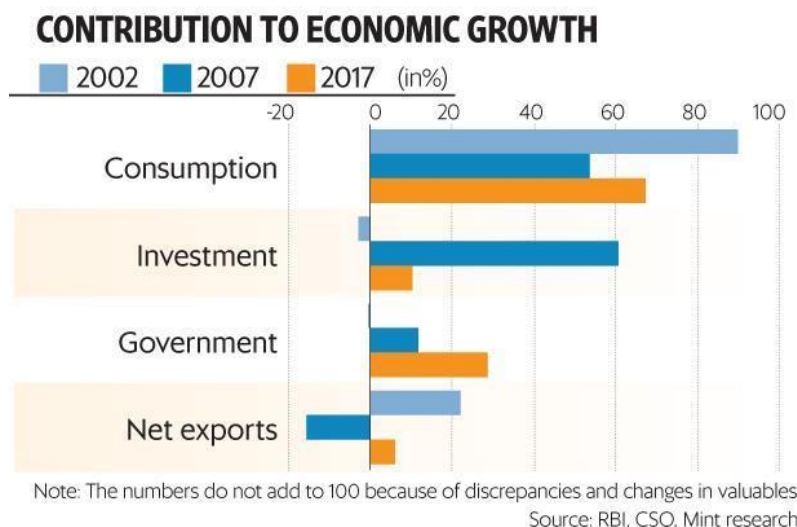


# Economic Growth and the New Economy



## Introduction

- Two definitions of economic growth were given in Chapter 8.
  - The increase in real GDP, which occurs over a period of time.
  - The increase in real GDP per capita, which occurs over time. This definition is superior if comparison of living standards is desired.
- Growth has been impressive in capitalist countries during the past half century. Real GDP in the U.S. increased by 450 percent.
- This chapter explores economic growth in more depth than Chapter 8.

## Six Main Ingredients of Growth

- Four supply factors relate to the ability to grow.
  - The quantity and quality of natural resources,
  - The quantity and quality of human resources,
  - The supply or stock of capital goods, and
  - Technology.
- Two demand and efficiency factors are also related to growth.
  - Aggregate demand must increase for production to expand.
  - Full employment of resources and both productive and allocative efficiency are necessary to get the maximum amount of production possible.

## Production Possibilities Analysis (Figure 17-1)

- Growth can be illustrated with a production possibilities curve (Figure 17-1), where growth is indicated as an outward shift of the curve from AB to CD.

- Aggregate demand must increase to sustain full employment at each new level of production possible.
- Additional resources that shift the curve outward must be employed efficiently to make the maximum possible contribution to domestic output.
- And for economy to achieve the maximum increase in monetary value, the optimal combination of goods must be achieved (allocative efficiency).
- Focus on the supply side is illustrated in Figure 17-2, where growth depends on labor inputs multiplied by labor productivity.
  - Increased labor inputs depend on size of population and labor force participation rate (the percent of population actually in the labor force).
  - Productivity is determined by technological progress, the availability of capital goods, quality of labor itself, and efficiency with which inputs are allocated, combined, and managed.
- Aggregate demand-aggregate supply framework can also be used to illustrate growth, as seen in Figure 17-3. Aggregate supply shifts outward with economic growth, and in recent decades aggregate demand has shifted outward by an even greater amount. Nominal GDP rises faster than real GDP. (Key Question 3)
- Extended AD-AS model is shown in figure 17-4 where short-term and long-term aggregate supply are differentiated in Figure 17-4.
  - Long-run potential output is shown at  $Q_1$ . It depends on resources and productive efficiency.
  - If potential output increases, the long-run supply curve shifts from  $AS_{LR1}$  to  $AS_{LR2}$ .
  - If aggregate demand rises from  $AD_1$  to  $AD_2$ , real output rises to  $Q_2$  and prices to  $P_2$ .
  - At  $P_2$  there will be a different short-run AS curve,  $AS_2$ .
  - The result is some mild inflation and increases in real GDP.

### **Growth Record of the United States (Table 17-5)**

- Real GDP has increased more than sixfold since 1940, and real per capita GDP has risen by a multiple of three.
- Rate of growth record shows that real GDP has grown 3.1 percent per year since 1948 and real GDP per capita has grown about 2 percent per year. In last four years of century, U.S. economic growth surged and averaged more than 4 percent per year. But the arithmetic needs to be qualified.
  - Growth doesn't measure quality improvements.
  - Growth doesn't measure increased leisure time.
  - Growth doesn't take into account adverse effects on environment.
  - International comparisons are useful in evaluating U.S. performance. For example, Japan has grown more than twice as fast as U.S. since 1948 (see Global Perspective 17-1) but less in past decade.

**Accounting for growth is an attempt to quantify factors contributing to economic growth as shown in Table 17-1. Important research has been done in the area by Edward Denison.**

- More labor input is one source of growth. Labor force has grown about 2 million workers per year for past 25 years and accounts for about one-third of total economic growth.
- Technological advance, the most important factor, has been estimated to contribute to about 26 percent of the U.S. growth record since 1929.
- Increases in quantity of capital are estimated to have contributed 18% to economic growth in U.S. since 1929.
- Education and training improve the quality of labor. (See Figure 17-6 and Table 17-1)
- Improved resource allocation and economies of scale also contribute to growth and explain about 12% of total.
  - Improved resource allocation has occurred as discrimination disappears and labor moves where it is most productive, and as tariffs and other trade barriers are lowered.
  - Economies of scale occur as the size of markets and firms that serve them have grown.
- Other factors influence growth and are more difficult to measure.
  - Social cultural environment and political stability are "growth friendly" in U.S.
    - Respect for material success provides incentive to increase incomes.
    - Market system rewards actions that increase output.
    - Property rights and legal system encourage growth.
    - Positive attitudes toward work and flow of energetic immigrants also add to growth.

### **Productivity Growth and the New Economy (Figure 17-7)**

- Improvement in standard of living is linked to labor productivity - output per worker per hour.
- The U.S. is experiencing a resurgence of productivity growth based on innovations in computers and communications, coupled with global capitalism. Since 1995 productivity growth has averaged 2.9% annually - up from 1.4% over 1973-95 period. "Rule of 70" projects real income will double in 23 years rather than 50 years.
- Much recent improvement in productivity is due to "new economy" factors such as:
  - Microchips and information technology are the basis for improved productivity. Many new inventions are based on microchip technology.
  - New firms and increasing returns characterize the new economy.
    - Some of today's most successful firms didn't exist 25 years ago: Dell, Compaq, Microsoft, Oracle, Cisco Systems, America Online, Yahoo and Amazon.com are just a few of many.
    - Economies of sale and increasing returns in new firms encourage rapid growth. (See Table 17-1)
  - Sources of increasing returns include:
    - More specialized inputs.
    - Ability to spread development costs over large output quantities since marginal costs are low.
    - Simultaneous consumption of many customers at same time.
    - Network effects make widespread use of information goods more valuable as more use the products.

- Learning increases with practice.
- Global competition encourages innovation and efficiency.
- Macroeconomic outcomes include increases in aggregate supply (shift to right). See Figure 17-3.
- Faster growth without inflation is possible with higher productivity.
- The natural rate of unemployment seems to be lower (4.5 - 5.0%).
- Federal revenues increase with economic growth; a 1995 deficit of \$160 billion became a \$167 billion surplus in 2000.
- Skepticism about long-term continued growth remains.

### **Is Growth Desirable and Sustainable?**

- An antigrowth view exists.
  - Growth causes pollution, global warming, ozone depletion, and other problems.
  - "More" is not always better if it means dead-end jobs, burnout, and alienation from one's job.
  - High growth creates high stress.
- Others argue in defense of growth.
  - Growth leads to improved standard of living.
  - Growth helps to reduce poverty in poor countries.
  - Growth has improved working conditions.
  - Growth allows more leisure and less alienation from work.
  - Environmental concerns are important, but growth actually has allowed more sensitivity to environmental concerns and the ability to deal with them.
- Is growth sustainable? Yes, say proponents of growth.
  - Resource prices are not rising.
  - Growth today has more to do with expansion and application of knowledge and information, so is limited only by human imagination.

### **LAST WORD: Some Pleasant Side Effects of the New Economy**

- Economists Jason Sappington and W. Michael Cox point to other benefits of New Economy besides improved living standards.
- Crime rates are down possible due to better job and income prospects.
- Welfare rolls have fallen from 5.5% of U.S. population in 1995 to 2.5% in 1999.
- Charitable contributions increased an average 9% annually, much higher than previous increases in giving.

Minority well being improved with decreased poverty and unemployment rates