Economic Growth and the Determinants of Productive Capacity

The limit of an economy's ability to produce real goods and services is set by the quantity and quality of its basic productive resources and technology. At any given moment, an economy's total productive capacity may be fixed, but over time an economy can increase (or decrease) its capacity to produce real goods and services by increasing (or decreasing) the quantity and/or the quality of its productive resources.

An economy's productive resources can be classified in several different ways. Some of our resources are physical or tangible: things that we can see, count, weigh or measure. Other resources that are useful in the production process are intangible. Intangible resources are more difficult to identify and measure, but no less important than tangible resources.

At any given time, an economy's productive capacity is determined by the quantity and quality of its

- **Human Resources:** labor resources, but not all labor is equal. Different people have different skills, based on their investment in *human capital.* Human capital (education and skill level) and entrepreneurship are difficult to measure.
- **Natural Resources:** the gifts of nature that are useful in producing goods and services. There are fixed, exhaustible and renewable natural resources.
- **Capital Goods:** the plant, equipment and machinery needed to make other goods and services
- **Technological Progress:** when production becomes more efficient, producing more output without using any more inputs: additional capital or labor
- **Public Policy:** the basic social, economic, legal and political values and institutions supported by a society that either aid or hinder efficient markets and the production of goods and services

In practice, economic growth is usually measured by changes in real GDP or, better still, changes in real GDP per capita: gross domestic product per person adjusted for changes in prices. The rate of economic growth is the average annual percentage change in real GDP per capita. Economists use real GDP per capita to measure living standards across time and between countries.

To summarize, economic growth occurs because an economy experiences technical progress, increased investments in physical capital and increased investments in human capital. In the most fundamental sense, economic growth is concerned with increasing an economy's total productive capacity at full employment.

Adapted from Phillip Saunders, *Introduction to Macroeconomics: Student Workbook,* 18th ed. (Bloomington, Ind., 1998). Copyright 1998 Phillip Saunders. All rights reserved. Activity revised by Elaine McBeth, College of William and Mary, Williamsburg, Va.

Part A
Measuring Economic Growth in Hamilton County and Jefferson County

Figure 47.1

Year	Hamilton Real GDP	Hamilton Population	Jefferson Real GDP	Jefferson Population
1	$2.1 billion	70,000	$500,000	15
2	2.5 billion	80,000	525,000	16
3	2.8 billion	90,000	600,000	17
4	2.7 billion	86,000	650,000	18

1. Using Figure 47.1 as a reference, fill out the tables in Figures 47.2, 47.3 and 47.4.

Figure 47.2

Time period	Hamilton % Change in Real GDP	Jefferson % Change in Real GDP
From Year 1 to Year 2		
From Year 2 to Year 3		
From Year 3 to Year 4		

Figure 47.3

Year	Hamilton Per Capita Real GDP	Jefferson Per Capita Real GDP
1		
2		
3		
4		

Figure 47.4

Time period	Hamilton % Change in Per Capita Real GDP	Jefferson % Change in Per Capita Real GDP
From Year 1 to Year 2		
From Year 2 to Year 3		
From Year 3 to Year 4		

2. When did Hamilton County experience the largest growth in real GDP? ____________

   In per capita real GDP? ____________________

   Are these growth rates different? Explain.

3. When did Jefferson County experience the largest growth in real GDP? ____________

   In per capita real GDP? ____________________

   Are these growth rates different? Explain.

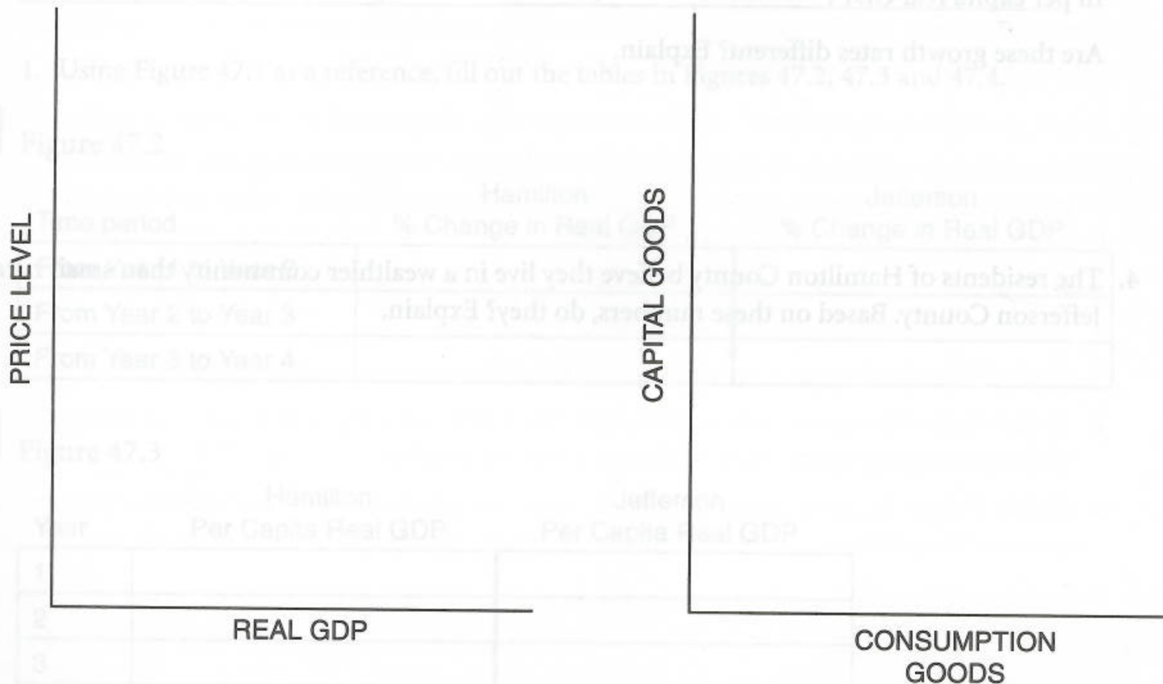
4. The residents of Hamilton County believe they live in a wealthier community than small rural Jefferson County. Based on these numbers, do they? Explain.

Part B
Analyzing the Reasons for Economic Growth

Economic growth can be illustrated by a rightward shift of the long-run aggregate supply curve or a shift outward of the production possibilities curve of consumption goods vs. capital goods.

5. Draw a graph that includes AD, SRAS and LRAS and then draw a graph of a PPC.

Figure 47.5
Relationship Between LRAS and PPC: Increased Investment in Education



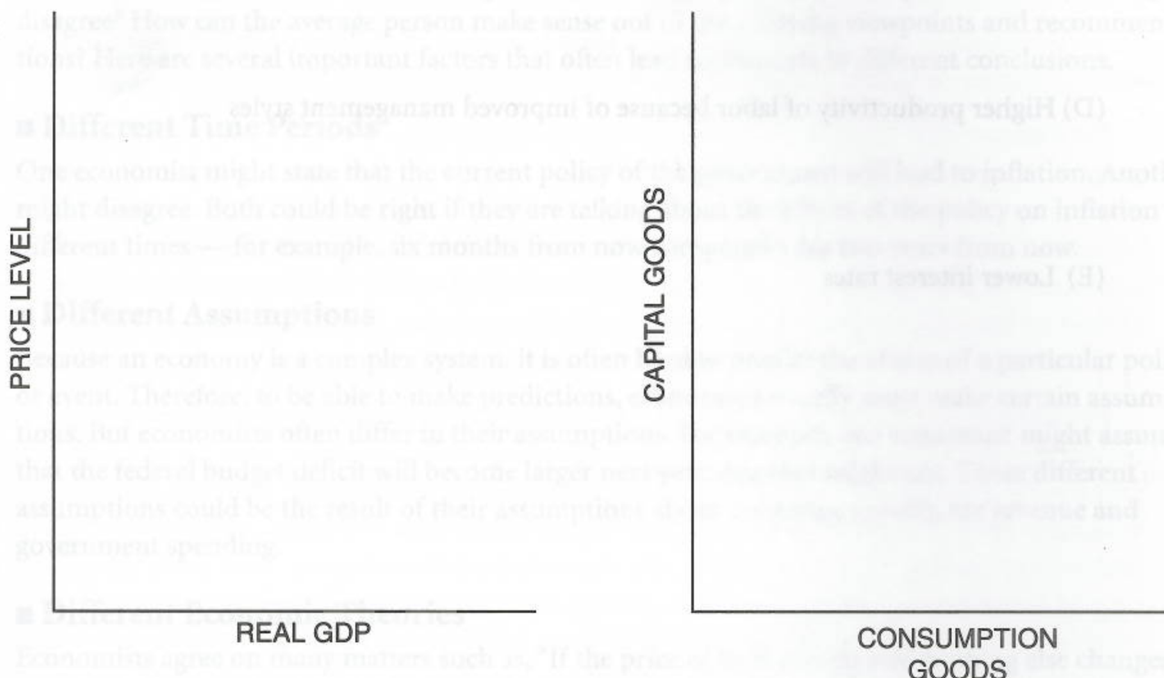
(A) On each graph you drew, show the effect of an increased investment in education that makes the work force more productive. Explain your reasoning.

(B) Of the five factors that affect economic growth, which factor is increased by this investment in education?

Advanced Placement Economics Macroeconomics: Student Activities © National Council on Economic Education, New York, N.Y.

6. Explain how fewer government regulations will affect economic growth. Cite an example to support your explanation. Show the effect of fewer government regulations on the graphs in Figure 47.6.

Figure 47.6
Relationship Between LRAS and PPC: Fewer Government Regulations



7. Briefly explain how the following policies will affect economic growth and why.

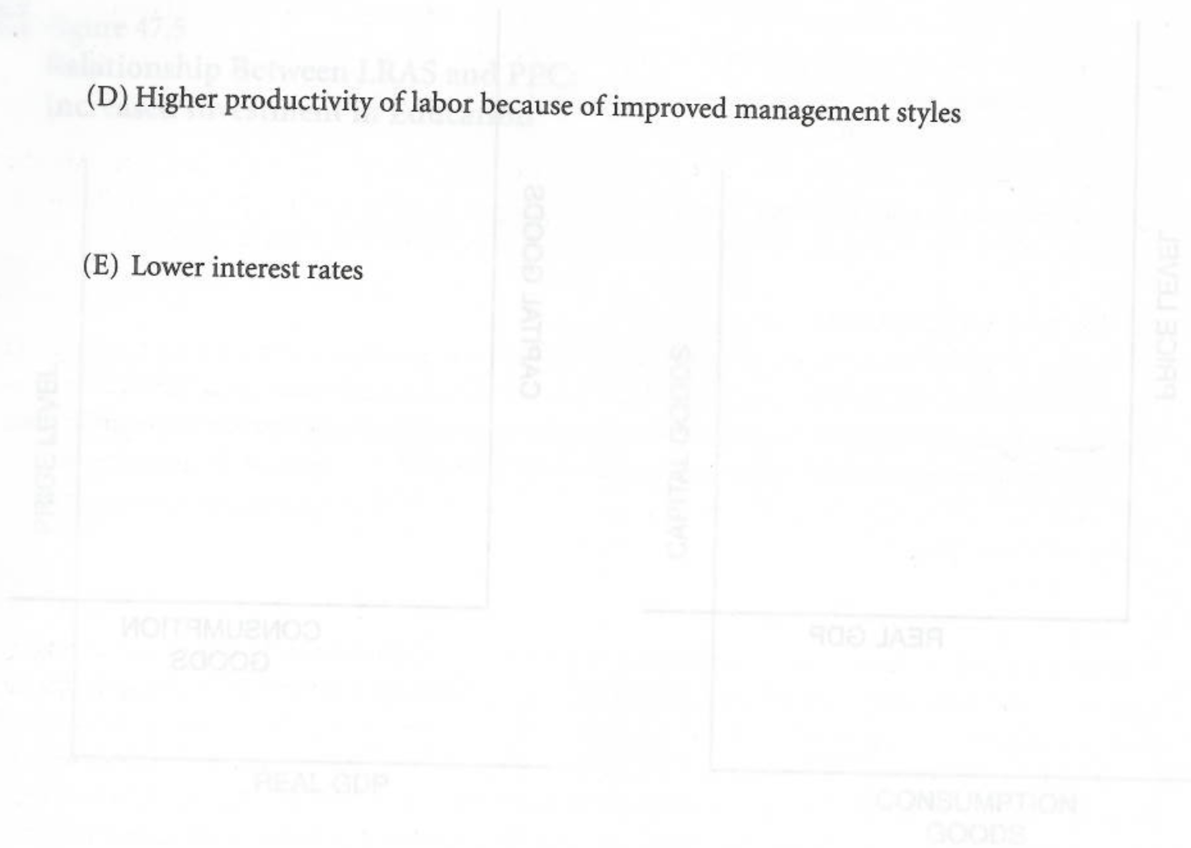
(A) Higher taxes on businesses

(B) Improvements in technology

(C) Less savings by people who want to enjoy the good life

(D) Higher productivity of labor because of improved management styles

(E) Lower interest rates



Advanced Placement Economics Macroeconomics: Student Activities © National Council on Economic Education, New York, N.Y.