



# Understanding Economics

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2<sup>nd</sup> edition

by Mark Lovewell and Khoa Nguyen

## Chapter 17

# **Economic Growth**

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# Chapter Objectives

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In this chapter, you will:

- learn about economic growth, its resources, and its impact
- examine economic development, its dynamics, the vicious circle of poverty, and the strategies used to break the circle

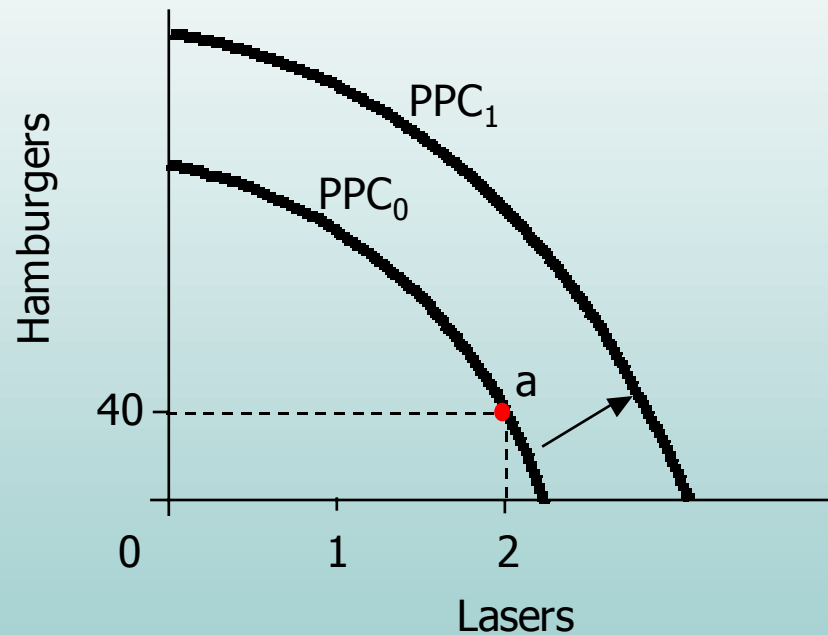
# The Production Possibilities Curve

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- Economic growth can be portrayed using the production possibilities curve in two ways
  - an outward shift in the production possibilities curve due to technological change or an increase in economic resources
  - a movement towards the curve because not all resources have been employed or used to their fullest capacity

# The Process of Economic Growth

Figure 17.1, Page 430



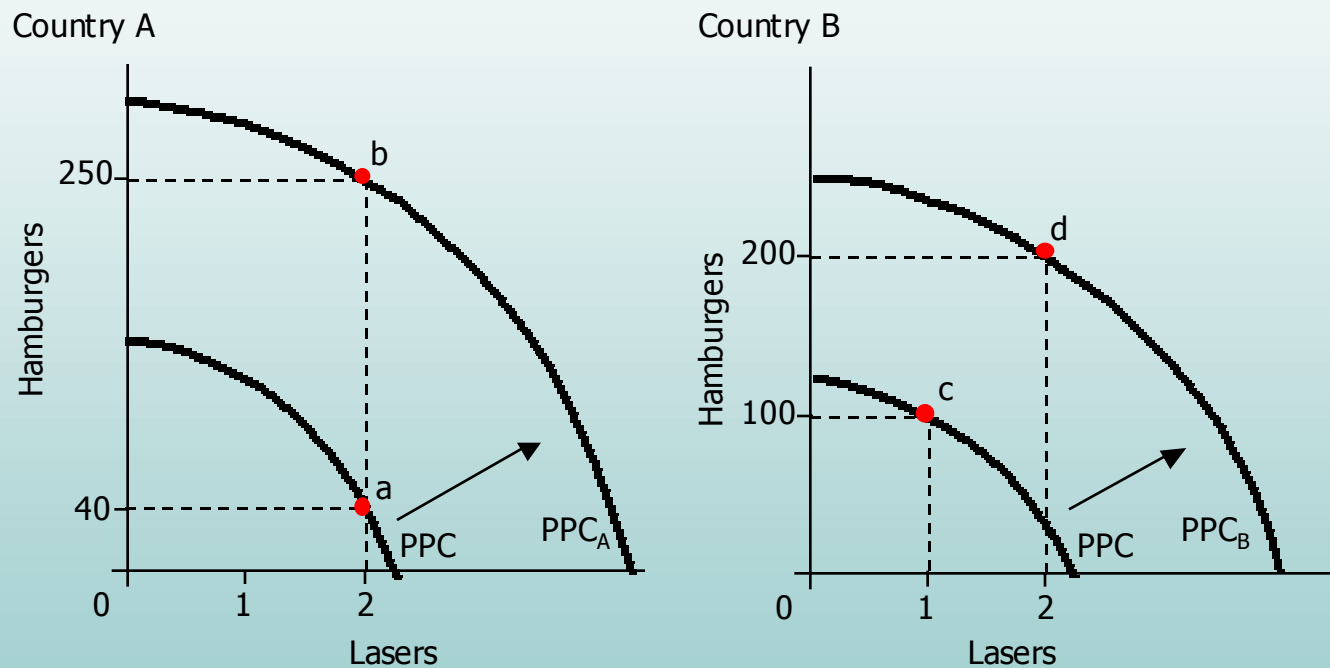
# Growth Strategies

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- An economy can increase its rate of economic growth by expanding its production of capital goods at the cost of fewer consumer goods in the same period
- The benefits of a high growth strategy multiply over time allowing a country to produce not only more capital goods but also more consumer goods

# Production Options and Their Implications

Figure 17.2, Page 431



# The Rule of 72

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- The Rule of 72
  - shows the effects of exponential growth
  - states that the number of years it takes a variable to double can be estimated by dividing 72 by the variable's annual percentage change

# GDP and Growth Rates

Figure 17.3, Page 433

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	Real GDP in Country X (2% annual growth in real GDP)	Real GDP in Country Y (4% annual growth in real GDP)
1998	\$ 100.00 billion	\$100.00 billion
1999	102.00 billion	104.00 billion
2000	104.04 billion	108.16 billion
2001	106.12 billion	112.49 billion
2002	108.24 billion	116.99 billion
2003	110.41 billion	121.67 billion
2004	112.62 billion	126.53 billion
2005	114.87 billion	131.59 billion
2006	117.17 billion	136.86 billion
2007	119.51 billion	142.33 billion
2008	121.90 billion	148.02 billion



# Sources of Economic Growth (a)

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- A main cause of growth in Canada's real output is the increase in the quantity of labour
- Growth in per capita output is closely associated with growth in labour productivity which depends on six factors
  - the quantity of capital
  - technological progress
  - the quality of labour
  - efficiency in production



# Sources of Economic Growth (b)

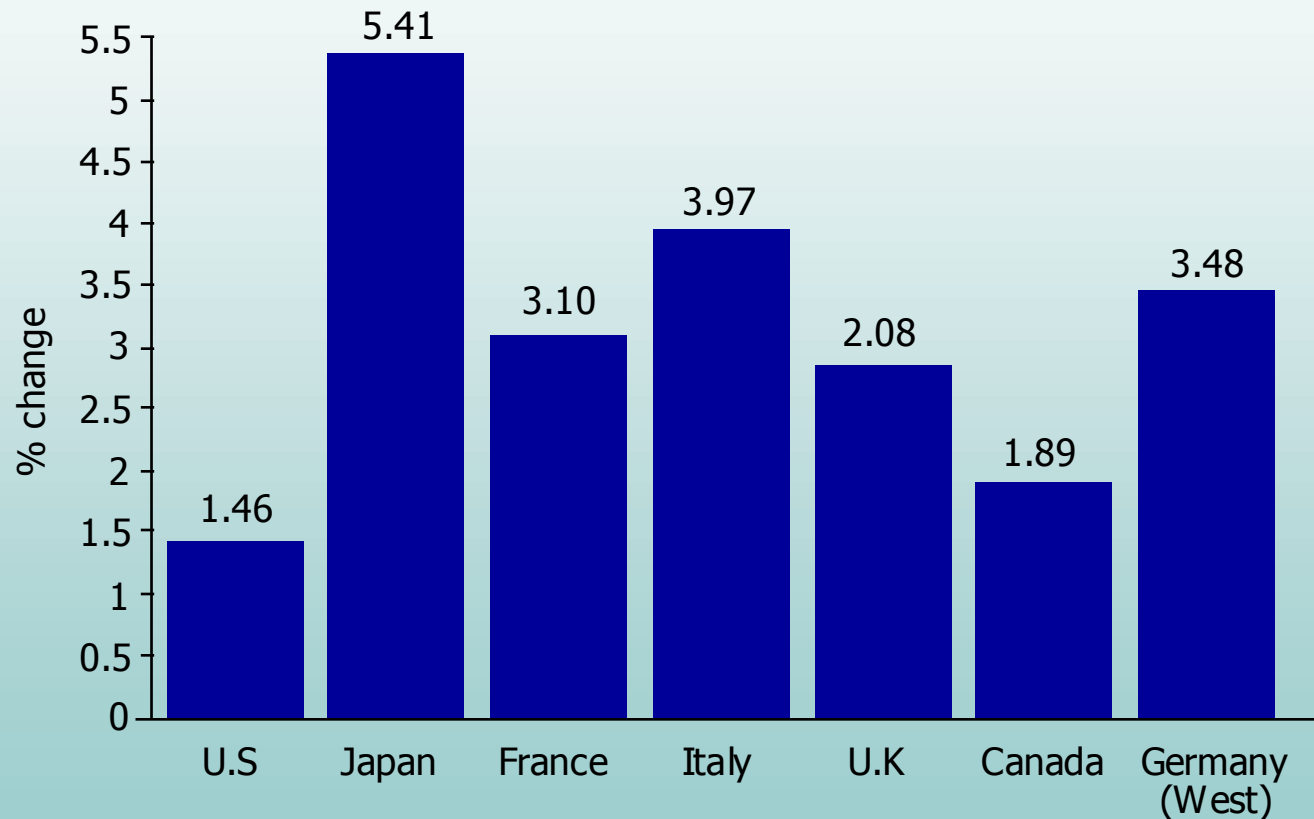
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- the quantity of natural resources
- social and political factors

# Labour Productivity Growth in Selected Countries (1950 – 1996)

Figure 17.4, Page 433

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# The Benefits of Growth

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- There are three main advantages of economic growth
  - its positive effect on living standards
  - its possible effect on social improvements
  - its psychological benefits

# The Costs of Growth

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- There are three main disadvantages of economic growth
  - its opportunity cost in terms of sacrificed current consumption
  - its environmental costs
  - its social costs

# The World's Rich and Poor

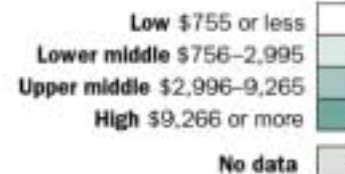
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- The World Bank classifies nations into three groups based on their per capita GNP (1995 figures)
  - high-income countries (US\$9266 or more)
  - middle-income countries (US\$756 to \$9265)
  - low-income countries (US \$755 or less)

# Countries Classified by per Capita Income Figure 17.5, Page 438

## The World by Income

This map presents economies classified according to World Bank estimates of 1999 GNP per capita. Not shown on the map because of space constraints are French Polynesia (high income); American Samoa (upper middle income); Fiji, Kiribati, Samoa, and Tonga (lower middle income); and Tuvalu (no data).



# Indicators of Living Standards for Selected Countries (a)

Figure 17.6, Page 440

	Per Capita GNP (1999)	Average Annual Growth Rate (%) 1998-1999)	Population (millions) (1999)	Life Expectancy at Birth (male, years)	Infant Mortality (per 1000 live births, 1998)	Adult Illiteracy (females %) (1998)	Per Capita Energy Consumption (kg of oil Equivalent) 1997)
<hr/>							
High-Income Countries							
1. Japan	32 230	0.8	126.6	77	5	...	4 084
2. U.S.	30 600	3.1	272.9	74	n.a.	...	8 076
3. Sweden	25 040	3.8	8.9	77	5	...	5 869
4. Canada	19 320	2.8	30.6	76	7	...	7 930
All high-income countries	25 730	2.1	890.9	75	6	...	5 369



# Indicators of Living Standards for Selected Countries (b) Figure 17.6, Page 440

	Per Capita GNP (1999)	Average Annual Growth Rate (%) 1998-1999)	Population (millions) (1999)	Life Expectancy at Birth (male, years)	Infant Mortality (per 1000 live births, 1998)	Adult Illiteracy (females %) (1998)	Per Capita Energy Consumption (kg of oil Equivalent) 1997)
Middle-Income Countries							
1. Hungary	4 650	5.8	10.1	66	12	1	2 492
2. Mexico	4 400	2.4	97.4	69	35	11	1 501
3. Egypt	1 400	4.0	62.4	65	59	58	656
4. China	780	6.3	1 249.7	68	36	25	907
All middle-income countries	2 000	1.5	2 666.8	67	38	20	1368

# Indicators of Living Standards for Selected Countries (c) Figure 17.6, Page 440

	Per Capita GNP (1999)	Average Annual Growth Rate (%) 1998-1999)	Population (millions) (1999)	Life Expectancy at Birth (male, years)	Infant Mortality (per 1000 live births, 1998)	Adult Illiteracy (females %) (1998)	Per Capita Energy Consumption (kg of oil Equivalent) 1997)
Low-Income Countries							
1. Honduras	760	-3.9	6.3	67	46	27	532
2. Indonesia	580	0.3	207.0	64	52	20	693
3. India	450	4.9	997.5	62	83	57	479
4. Ethiopia	100	4.8	62.8	42	173	70	287
5. All low-income countries	410	2.5	2 417.0	59	107	49	563
World	4 890	1.3	5 974.7	65	75	32	1 692

# The Gap Between Rich and Poor

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- Despite higher average growth rates in low-income countries than in high-income countries per capita incomes in most low-income countries have risen less quickly in dollar terms
- this is because of the relative size of incomes in each group of countries



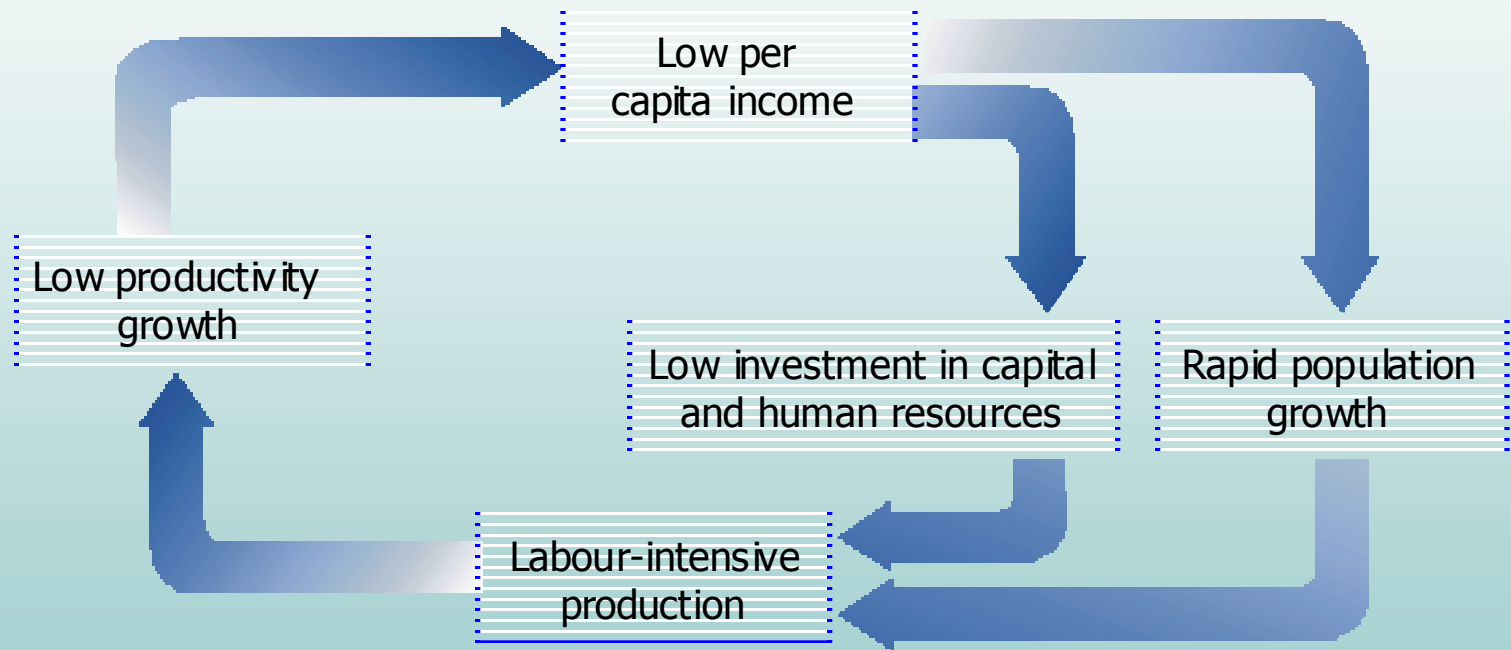
# The Dynamics of Development

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- Economic development is an increase in a country's per capita income accompanied by a rise in living standards for the bulk of the population
- Many low-income countries trying to foster economic development are trapped by the vicious cycle of poverty whereby low living standards result in slow growth thereby keeping living standards low in the future

# The Vicious Cycle of Poverty

Figure 17.7, Page 441



# Strategies for Development (a)

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- Breaking the vicious cycle of poverty involves three domestic strategies for development
  - ensuring political and economic stability
  - investing in human capital and capital goods
  - population control

# Global Populations Trends

Figure 17.8, Page 443

	1990	Population (millions)	2003 (estimated)	Estimated Annual; Growth Rate (%)	
		2000 (estimated)		1990-2000	2000-2030
Low- and Middle-Income Countries	4445	5294	7736	1.8	1.3
Sub-Saharan Africa	474	635	1313	3.0	2.4
East Asia and Pacific	1641	1891	2442	1.4	0.9
South Asia	1128	1368	2004	1.9	1.3
Europe and Central Asia	489	517	566	0.6	0.5
Middle East and Northern Africa	236	315	600	2.9	2.2
Latin America and the Caribbean	438	516	721	1.7	1.1
High-Income Countries	817	864	920	0.6	0.2
World	5262	6157	8664	1.6	1.2

# Strategies for Development (b)

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- Breaking the vicious cycle of poverty involves three international strategies for development
  - trade liberalization
  - foreign aid



# Shifting Gears (a)

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- Nuala Beck identifies three movements that have shaped economic development since 1850
  - commodity processing (C circle)
  - mass-manufacturing (M-circle)
  - technology (T-circle)

# Shifting Gears (b)

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- According to Beck each circle has been driven by a crucial resource in abundant supply
  - steel (C-circle)
  - energy (M-circle)
  - microchips (T-circle)
- According to Beck the emerging T-circle represents Canada's new economy which already employs 70% of Canadians

# Long-Term Economic Growth (a)

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- According to Stanford economist Charles Jones, there were virtually no gains in average living standards between the days of the Roman Empire and end of the 18<sup>th</sup> century.
- In the past 100 years, there has been a spectacular rise in living standards (by historical standards).

# Long-Term Economic Growth (b)

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- Jones highlights two reasons for this rise
  - rapid population growth, which led to many more people producing many more ideas
  - a major improvement in institutions that promote innovation, with the development of property rights, in particular for inventors

# Long-Term Economic Growth (c)

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- In the past century, average living standards and population have risen
  - The world's per capita consumption in today's dollars was \$270 (US) in 2500 BCE and \$360 (US) in 1500 and \$322 (US) in 1900. Today it is \$3116 (US).
  - Population figures have also risen over the past 100 years, from 1.6 billion in 1900 to 6 billion today.



# Understanding Economics

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## Chapter 17 **The End**

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