Chapter 10 sources of Growth

Classical Long-Run Policy

10-2 Sources of Growth

The Sources of Growth

- Economists identify five important sources of growth:
  1. **Growth-compatible institutions**
  2. **Investment and accumulated capital**
  3. **Available resources**
  4. **Technological development**
  5. **Entrepreneurship**

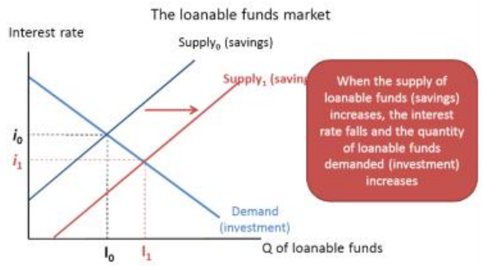
Growth-Compatible Institutions

- Markets and private ownership of property foster economic growth
- When individuals get much of the gains of growth themselves, they work harder
- Corporations are growth-compatible institutions because of limited liability, which gives stockholders an incentive to invest their savings in large enterprises
- Informal property rights limit borrowing by the poor, and hence limit growth

Investment and Accumulated Capital

- Although capital is a key element in growth, capital accumulation does not necessarily lead to growth
- Capital may become obsolete
- Capital is much more than physical machines and includes:
  - **Human capital** are skills that workers gain from experience, education, and on-the-job training
  - **Social capital** is the habitual way of doing things that guides people in how they approach production

Investment and Accumulated Capital



Available Resources

- The growth in the U.S. in the 20th century was due in part to its large supply of natural resources
- What is a resource depends on the production processes of an economy and technology
- New technology can overcome a lack of resources
- Greater participation in the market will increase the labor force participation rate and economic growth

Technological Development

- **Technology** is the way we make goods and supply services
- Changes in technology and changes in the goods and services we buy fuel growth
- Advances in technology shift the production possibility curve *outward* by making workers more productive
- Important developments in biotechnology, computers, and communications have helped fuel U.S. growth

Entrepreneurship

- Entrepreneurship is the ability to get things done using creativity, vision, willingness to accept risk, and a talent for translating vision into reality
- Entrepreneurs have been central to growth in the U.S.
- Examples of American entrepreneurs include:
  - Thomas Edison – generation and use of electricity
  - Henry Ford – automobile production
  - Bill Gates – computers and software
  - Mark Zuckerberg – Facebook?

The Classical Growth Model

- The Classical growth model is a model of growth that focuses on the role of capital accumulation in the growth process
- According to the Classical growth model, the more capital an economy has, the faster it will grow
- Classical economists focused their analysis and their policy advice on how to increase investment because saving leads to growth

Savings → Investment → Increase in capital → GROWTH

The Law of Diminishing Marginal Productivity

- The predictions for the long term were incorrect because increases in technology and capital overwhelmed diminishing marginal productivity
- The focus changed to technology, not land or capital
- Without growth in technology, investment will not generate sustained growth
  - **Eventually the per capita growth would stagnate**

Technology

- Technological advance is the result of what the economy does, it:
  - Invests in research and development
  - Makes advances in pure science
  - Works out new ways to organize production
- The common knowledge aspect of technology creates positive externalities which is the key to growth
  - **Positive externalities** are positive effects on others not taken into account by the decision maker

New Growth Theory

- **New growth theory** is a theory that emphasizes the role of technology in the growth process
- Technology is recognized as an important ingredient in growth
- Modern growth theory is named new growth theory

Tech Advance → Investment → Further Tech Advance → GROWTH

Learning by Doing

- New growth theory also highlights learning by doing
- **Learning by doing** is meant to improve the methods of production through experience
- Learning by doing overcomes the law of diminishing marginal productivity because it increases the productivity of workers
- Learning by doing leads to unlimited growth potential that can accelerate over time

Technological Lock-In

- Does the economy always use the "best" technology available?
- Technological lock-in occurs when old technologies become entrenched in the market
- More efficient technologies may be available
- Network externalities lead to technological lock-in
- **Network externality** is an externality in which the use by one individual makes a technology more valuable to other people

Growth Policies

- General policies that are good for growth include:
  - Encouraging saving and investment
  - Formalizing property rights and reducing bureaucracy and corruption
  - Providing more of the right kind of education
  - Promoting policies that encourage technological innovation
  - Promoting policies that allow taking advantage of specialization

Chapter Summary

- Growth is an increase in the amount of goods and services an economy can produce when both labor and capital are fully employed
- Growth increases potential output and shifts the production possibility curve out, allowing an economy to produce more goods
- Per capita growth means producing more goods and services per person
- Five sources of growth are (1) growth-compatible institutions (2) capital accumulation (3) available resources (4) technological development and (5) entrepreneurship

Chapter Summary

- The loanable funds market translates saving into investment that is necessary for growth and the interest rate equilibrates saving and investment
- New growth theory emphasizes the role of technology in the growth process
- Policies that are good for growth are those that: (1) encourage saving and investment, (2) formalize property rights, (3) provide the right kind of education, (4) encourage technological innovation, and (5) take advantage of specialization