Chapter One

Introduction to and Summary of Economic Growth: Perspectives on New Theory and Policy

Economic Growth: The New Perspectives for Theory and Policy

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According to UN, 48 countries are classified as the least-developed countries (LDC) with a GNI per Capita of less than US$1,000. However, only 4 countries have escaped from being classified as the least-developed countries since the 1970's. * source: Wikipedia
1-1 Background

1. Why can’t they catch up?
   - “South America Syndrome”
   - Korea & Taiwan
   - China & India

2. Why are industrialized countries growing slowly?
   - US
   - Japan
   - EU

Figure 1.1 Comparison of GDP per capita
Economic growth has slowed down in industrialized developed countries experiencing periodic depression, stagnation and economic crisis.

While Greece, Ireland and Portugal have received financial assistance from the IMF, the Euro zone itself is under a financially difficult situation. The fiscal crisis has spread to countries with greater economic scale such as Italy and Spain.

Figure 1.2 Government debt to the GDP ratio of Euro zone countries (Eurostat)
1-1 Background

Limitation of current research:

• Existing theories on economic growth have clear limitations in the aspect of how much they can effectively contribute to actual economic growth.

This textbook will present:

1. Theories on economic growth for countries and leaders promoting economic growth.

2. Especially, theories of economic growth and national development for agricultural developing countries pursuing industrialization and late-starting industrialized countries pursuing development.
In an agricultural society, there is a lack of supply to satisfy demand & products are consumed when supplied.

- Say’s rule: production induces demand.

In an industrial society, through mass-production technology, supply exceeds demand.

- Demand can not catch up with supply leading to economic crisis: Say’s rule is not valid.

In the future knowledge-based society, new technology creates new demand triggering economic growth.

- Supply again genuinely creates demand.
1-2 Assumptions about economic growth

Three types of Demand Creation

1. Demand created when an existing unfulfilled demand (due to lack of supply) is satisfied.

2. Demand encroached on a demand supplied by other products before being replaced.

3. Demand created by brand new technology: “new demand creation”
1-2 Assumptions about economic growth

In agricultural societies:

• Most demand creation was from satisfying existing demand: eating for survival.

• After the advent of mercantile communities, eastern regional products like spices created some new demand.

In industrial societies:

• Not replacement demand but new demand induced by new products plays a crucial role in economic growth.

• Food, clothing, & shelter occupy a relatively smaller portion; production & consumption of products that can satisfy new demand increase.
In U.S., food expenses occupied 24.3% of family expenditure in 1960 but it reduced to 13.1% in 2002; however, transportation and communication expenses and culture and entertainment expenses have increased constantly up to now (U.S. Department of Labor, 2006).

In developing countries, demand creation can still be realized through replacement demand with price competition using relatively low wages.

Successful late-starting industrialized countries, such as Germany and Japan began their economic growth through replacement demand.

Late-starting industrialized countries with a low level of technology and capital can strategically rely on government industrial policies.
Two types of economic growth:

- In quantitative growth, production is increased by mainly increasing input.
- In qualitative growth, production is improved by technological advancements.

In agricultural societies:

- Qualitative growth is slight because technological advancements are slow to occur, and quantitative growth gradually decreases because of agriculture’s characteristic of diminishing marginal returns. Therefore, growth becomes stagnant.
In industrial societies:

• Short-term production shows diminishing returns.

• Qualitative growth due to the comparatively fast rate of technological advancements.

• Quantitative growth through capital investment and accumulation.

• If rely on quantitative growth, an economic **vicious cycle** such as an economic crisis is inevitable since supply eventually surpasses demand.

• But through qualitative growth, a **virtuous cycle** is possible because new products will continuously create new demand.
Less than 10% of U.S. households possessed telephones (in 1900), automobiles (in 1915), or refrigerators (in 1930).

In knowledge-based societies: as spreading speed of a new technology becomes much faster, new technology will immediately lead to new demand.
1-3 The characteristics of economic growth

Figure 1.4 Diffusion of IT technologies (A.C. Nielsen Company, 1996)
1-3 The characteristics of economic growth

- Important aspect in long-term economic growth is whether growth is accelerating or not.
- Key factor: technological level (industrial structure), not short-term growth speed.
- In industrial societies, only qualitative growth can be the correct indicator.
- Change from decelerating agricultural society to society with accelerating economic growth is a discontinuous phenomenon: mutation of economic system, not evolution.
- Case of Industrial Revolution in England
1-4 Divergence of economies

- Absolute convergence hypothesis
- Conditional convergence hypothesis
- But divergence is being observed!

Figure 1.5 Divergence Model of industrial development

- Economic development levels between industrialized countries and late-starting developed countries are diverging.
Figure 1.6 Trace of GDP per capita by national group (international dollar in 1990)
What causes this divergence?

**Specialization by international trades:** agricultural countries are specialized in agriculture, while late-starting industrialized countries are specialized in lower value-added industries.

- Effects: Missing out opportunity to industrialize, or face slow growth.
- In the future **knowledge-based** society, however, if all knowledge-based industrial countries create new demand from new technologies (e.g. IT, BT & NT), the economic growth between these countries will be similar since values created are similar: no more divergence.
• **Agricultural economy** is a simple reproduction economy; it doesn’t achieve virtuous circle of economy by itself.

• Growth of pure agricultural society in the past achieved through expanding territories (farmlands and farmers) *e.g.* conquest wars.

• Essence of economic growth in **industrial societies** is expansive reproduction that enables economic growth.

• Securing resources and markets through trade are essential ⇒ economic/political colony system.
Economic Development and War:

- Disparity in economic development between early industrialized countries and late-starting countries leads to disparity in technological levels and weapons systems.

- **Phoenix Factor** (Organski and Kugler, 1977) ⇒ Better post-war economic development for losers

  Why?

1. Destruction of former inefficient political systems.
2. New technology introduced by victors.
3. **Production technology and talented personnel** acquired during war contributed to post-war performance.
New war-free Phoenix Factor:

- Speed of postwar development depends on investment in technology and engineers during war, rather than the result of war.

- In the production sector, intellectual factors such as information and technology have become so much more important than material factors such as resources and energy ⇒ no need for resource war.

- Economic development in knowledge-based society and virtuous cycle of expansive reproduction depend solely on R&D of advanced technology.

- Importance of government policies.
Industrial Classification Systems:

• Fisher (1939) and Clark (1940) - primary, secondary and tertiary industries
• International Standard Industrial Classification (ISIC) system
• Baumol (1985)
• Scharpf (1990)
• Evangelista (2000)
New Classification System by value creation:

- Classification system and Economic growth
- Two types of industries:

1. value-creation industries
   - deals with originals that ‘can be reproduced and stored systematically’
     e.g. computer programming industry
   - can be divided into base value industries which actually create originals, like manufacturers, and extended value industries which improve the value of originals through marketing and distribution.
2. transferred value industries

- do not create originals or increase value, but only transfer created value.
- do not increase a country’s net wealth i.e. no economic growth.
- are divided into three types:
  1. Production support service industries
e.g. Financial services, legal services
  2. Private service industries
e.g. beauty, art and medical services
  3. Public service industries
e.g. education and national defense
Table 1.1 below shows that if a country has a higher economic development level, the financial level is also higher.

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<thead>
<tr>
<th></th>
<th>Low income</th>
<th>Middle income</th>
<th>High income</th>
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<tbody>
<tr>
<td>GDP LEVEL</td>
<td>6.42</td>
<td>22.33</td>
<td>70.89</td>
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<tr>
<td>FINANCIAL LEVEL</td>
<td>0.72</td>
<td>0.86</td>
<td>0.96</td>
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<tr>
<td>average</td>
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1-6 Economic growth based industrial classification

• Financial services contribute to the efficient distribution of capital.

• Schumpeter (1911) mentioned that the proper functions of finance services are necessary for economic development.

• But excessive development of finance (without manufacturing) may be problematic.

Figure 1.7 The relationship between the financial development level and the economic growth rate (the mean value of each income group)
• For economic growth, the deconstruction of discourse between the role of government from Keynes' point of view and the role of market from Hayek's point of view are historically conflicting.

• However, in reality, due to disparities in economic condition and technology level between early industrialized countries and late-starting industrialized countries, the economic development level between these countries diverged.

• Developed countries have a relative advantage in free-market theory and late-starting developed countries have a relative advantage in the theory of the government’s role in the development process.

• Analyzing the virtuous cycle of the economy and the relative conditions of nations can help us better understand historically conflicting views.
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