ASIA’S JOURNEY TO PROSPERITY
Policy, Market, and Technology over 50 Years

Chapter 3: Dynamics of Structural Transformation
Outline

01 Overview of Asia’s transformation
02 Critical contribution of agriculture
03 Industrialization as the path to high income
04 Large and growing imprint of services
05 Urbanization as a geographic transformation
06 Looking ahead
07 Questions and further readings
1. Overview of Asia’s structural transformation

• Structural transformation in Asia can be described in several ways.

- It involves diversifying and deepening production, linking processes to global value chains (GVCs), in manufacturing, and increasingly in services as well.

- It shifts resources not only to more productive sectors—but also to more productive activities, within sectors.

- It also facilitates urbanization, transferring resources from rural to urban areas.

It is the shift of resources across broad sectors—from agriculture to industry and services.
In the 1960s, developing Asia was an agrarian, low-income region. Today, it has transformed into a global manufacturing powerhouse, with diverse exports, burgeoning cities, and expanding middle class. Structural transformation has been a key driver of economic growth.


1. Overview of Asia’s structural transformation (cont.)

• Over the past half century, developing Asia has followed a similar pattern of structural transformation as today’s high-income countries, though at a much faster pace.

A striking feature of development is the secular decline in the share of agriculture and corresponding increase in the combined share of industry and services (in output or employment). Industry’s share increases to a certain point and then starts to decline, as the economy shifts from the industrialization stage to a “deindustrialization” stage, while services’ share continues to increase.
2. Critical contribution of agriculture

- Structural transformation in Asia began with agriculture productivity growth, driven by technological progress and policy and institutional reforms.

  • After the war, **food problem** was the foremost concern. Agriculture then was predominantly subsistence farming, using manual labor.

  • **“Green Revolution”** (GR) began with increased investment in irrigation, improved seed varieties, and the use of modern inputs such as fertilizers and pesticides.

  • Mechanization such as the increased use of tractors and harvesters also contributed to agriculture’s modernization and structural transformation.
This agricultural modernization contributed to Asian development in several ways.

- It supplied food and solved food problems.
- It supplied labor and other inputs to other sectors.
- It created new market for industrial goods and services.
- It earned foreign exchange.
- It helped in poverty reduction.

Asia’s experience shows that productive agriculture and a dynamic rural economy are key to successful structural transformation and inclusive development.
2. Critical contribution of agriculture (cont.)

- The Green Revolution, in particular, increased food production.

More than a technological fix, the Green Revolution encompassed policy and institutional changes, including land reform.

Investments were poured into rehabilitating irrigation systems, improving farm-to-market roads, and establishing networks of agricultural research and extension services.

Governments directly intervened in markets—establishing rural credit systems; subsidizing key inputs (e.g. fertilizers, power, and water); and providing price support.

Increase in food production and agricultural productivity

Total Cereal Production, Asia (million tons)

2. Critical contribution of agriculture (cont.)

- Agriculture also contributed to the development of other sectors by providing surplus labor or as inputs to manufacturing.

01 Primarily rural
In the beginning, an economy is primarily rural, and most of the population are employed in agriculture. As improvements in agriculture increase, agriculture productivity increases.

02 “Lewis turning point”
Surplus labor in subsistence agriculture starts to shift in the industry sector without reducing agricultural output. This happens until the excess labor is exhausted.

03 Growth of industry
The increased food surplus helps prevent the rise of living costs for urban workers. Low food prices enabled urban households to spend more on education and health, in the long run contributing to the increased supply of productive labor.
3. Industrialization as the path to high income

- Workers moved out of agriculture and into the industry sector, particularly, manufacturing. The manufacturing sector itself transformed as it diversified and upgraded.

Manufacturing Output, 1970-2018
(gross value added as % of GDP)

Manufacturing Employment Share, 1970-2018
(% of total)

ASEAN = Association of Southeast Asian Nations, GDP = gross domestic product, NIEs = newly industrialized economies, PRC = People’s Republic of China.

Notes: ASEAN4 includes Indonesia, Malaysia, the Philippines, and Thailand. NIEs include Hong Kong, China; the Republic of Korea; Singapore; and Taipei, China.

A structural shift toward manufacturing spurs greater capital accumulation.

Manufacturing exhibits economies of scale.

Many manufactured goods have high income elasticities of demand, which generate strong demand as incomes rise.

It brings technological progress.

It enhances incentives for workers to acquire skills adapted to new tasks, which, in turn, strengthens the foundation for future growth.

Manufacturing geared toward export markets can generate the foreign exchange needed to finance capital goods imports.

Why is manufacturing important for development?
3. Industrialization as the path to high income (cont.)

• Can industrialization be bypassed? Many Asian economies achieved high growth by promoting manufacturing and exports.

❖ They used a variety of ways to promote manufacturing: large capital investment, investment in research and development, opening to trade and foreign direct investment (FDI), education and skills training, setting up special economic zones.

❖ Historically, manufacturing was important in almost all high-income countries worldwide before de-industrialization.

GDP = gross domestic product, PRC = People’s Republic of China.
Notes: GDP and exports of goods and services are in constant national 2011 prices. Trade-to-GDP ratio is based on nominal values. Trade refers to exports plus imports of goods and services.
4. Large and growing imprint of services

Services is perhaps the most diverse of the three broad sectors of an economy.

It covers, among others:

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
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<tbody>
<tr>
<td>Wholesale and retail trade</td>
<td>Administrative and support service activities, Public administration</td>
</tr>
<tr>
<td>Hotel and food service</td>
<td>and defense, Compulsory social security, Human health and social work</td>
</tr>
<tr>
<td>Information and communication</td>
<td>activities, Arts, entertainment, and recreation</td>
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<tr>
<td>Real estate activities</td>
<td>Repair of vehicles, Transportation and storage, Education, Financial</td>
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<td></td>
<td>and insurance activities, Professional, scientific, and technical</td>
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<td></td>
<td>activities</td>
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4. Large and growing imprint of services (cont.)

- Services continue to gain in importance in the region.

**Services and output**

In 2018, services accounted for a little more than half of developing Asia’s total value added.

In general, the services sector expands as an economy becomes more developed.

**Services and employment**

Since the services sector is labor-intensive, it has already made a huge contribution to employment and thus inclusive growth in Asia.

Services will continue to create more jobs in developing Asia, including the shift from the informal to formal sector.

**Services Share in Output**

(gross value added as % of GDP)

<table>
<thead>
<tr>
<th>Year</th>
<th>Share</th>
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<tbody>
<tr>
<td>1970-1979</td>
<td>34.3</td>
</tr>
<tr>
<td>1990-1999</td>
<td>48.6</td>
</tr>
<tr>
<td>2018</td>
<td>54.0</td>
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</tbody>
</table>

**Services Share in Employment**

(% of total employment)

<table>
<thead>
<tr>
<th>Year</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970-1979</td>
<td>14.9</td>
</tr>
<tr>
<td>1990-1999</td>
<td>25.2</td>
</tr>
<tr>
<td>2018</td>
<td>41.0</td>
</tr>
</tbody>
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GDP = gross domestic product

Two salient trends in the services sector are the shift toward high value-added services and the increasing importance of services trade.

**Shift toward high value-added services**

Technological progress is fueling the growth of high value-added service industries and activities across Asia. Rapidly rising disposable incomes and the fast-growing middle class are also boosting demand for more personalized services tailored to individual preferences.

**Increasing tradability of services**

The advent of information and communications technology (ICT) has made services tradable, especially in the Philippines and India, global leaders of business process outsourcing.

Services trade is becoming increasingly important along with those embedded in GVCs.
4. Large and growing imprint of services (cont.)

- Tourism is expanding rapidly, as Asia is increasingly both a desirable destination and a source of travelers.

348 million
Number of tourists who travelled to Asia in 2018, accounting for about one-fourth of all travelers

359 million
Number of Asian tourists who travelled abroad in 2018, accounting for one-fourth of all travelers

International Tourist Arrivals, 1995–2018
(million)

Note: While tourism has been temporarily disrupted by COVID1-19, it is expected to resume its strong growth once the pandemic recedes. Regional grouping follows United Nations (UN) World Tourism Organization aggregations.
5. Urbanization as a geographic transformation

- Urbanization is central to structural transformation. The shift of resources away from agriculture to industry and services is intertwined with the shift of people from rural to urban areas and the consequent growth of cities.

Manufacturing and many services often benefit from “agglomeration economies.”

In developing Asia, the share of urban population rose from 20% in 1970 to 46% or to about 1.9 billion urban residents in 2018.

Note: 2017 to 2020 data are projections.
5. Urbanization as a geographic transformation (cont.)

- The urbanization process is closely associated with stages of economic development. Urbanization rates are positively correlated with income per capita, as well as share of industry and services value added.

Asia’s urbanization process has been compressed, unfolding faster than in other regions.

Urbanization rate and GDP, 2017

GDP = gross domestic product, USD = United States dollars, VA = value-added
Asia is expected to continue high-speed urbanization, resulting in rising numbers of densely populated large cities.

If population trends continue, the UN projects some 3 billion people—or two-thirds of developing Asia’s population—will be living in cities by 2050.

Six out of the world’s 10 largest megacities are already in Asia (including two in Japan).

The number of Asian megacities are expected to increase from 15 in 2015 to 20 in 2025

A key challenge for governments is to harness the agglomeration economies of cities while minimizing negative effects from congestion.

5. Urbanization as a geographic transformation (cont.)

- Looking ahead, Asian economies should invest in urban infrastructure, urban-rural connectivity, and coordinated governance supported by civil society.

  Investments in urban infrastructure are needed—especially network infrastructure such as transport, water supply, sanitation, and waste management.

  Investments in education and health services are also needed.

  Connectivity between cities and between urban and rural areas must be strengthened.

  It is important to have strong governance and civil participation for planning and regulations regarding city development, land use, and environmental protection.
6. Looking ahead

- Given Asia’s diversity, the policy approach to further pursue further structural transformation varies among countries. It hinges on an economy’s development status and other specific conditions.

**High-income economies**
Need to innovate, avoid widening the income gap between high- and low-skilled labor, and address challenges coming from a declining working-age population and rapid aging.

**Economies at or near upper-middle-income status**
Need to invest in higher education and research, increase ICT networks and other high-quality infrastructure, and deepen and broaden financial markets. They need to address rising income inequalities, and strengthen economic institutions and policies.

**Low-income and lower-middle income economies**
Need to raise agricultural productivity, invest more in basic infrastructure (both rural and urban), improve secondary education and technical-vocational education and training (TVET), further improve the business environment to attract more FDI, and learn from their peers.
7. Questions and further readings

• Questions

01 What is structural transformation? Why it is important to development? What have been the features of structural transformation in Asia in the last 50 years?

02 What has been the role of agriculture in Asian development?

03 Why is manufacturing important to development? Can industrialization be bypassed?

04 What are some recent trends of the services sector in Asia? What are the drivers of these trends?

05 What are the policy recommendations for Asian low-income countries for them to pursue further structural transformation? For the region’s middle-income economies? For Asia’s high-income countries?
7. Questions and further readings (cont.)

**Further readings**

7. Questions and further readings (cont.)

- Further readings

Thank you!

The soft copy of the book can be downloaded at

https://www.adb.org/publications/asias-journey-to-prosperity