



YOUR LOGO

AGRICULTURAL DEVELOPMENT AND STRUCTURAL TRANSFORMATION

EE463 Globalization and International Development
FACULTY OF ECONOMICS
THAMMASAT UNIVERSITY

Module 8



Agriculture is a
DOMINANT sector in many of the
world's poor countries

Dwight Perkins

Key Sector Characteristics*

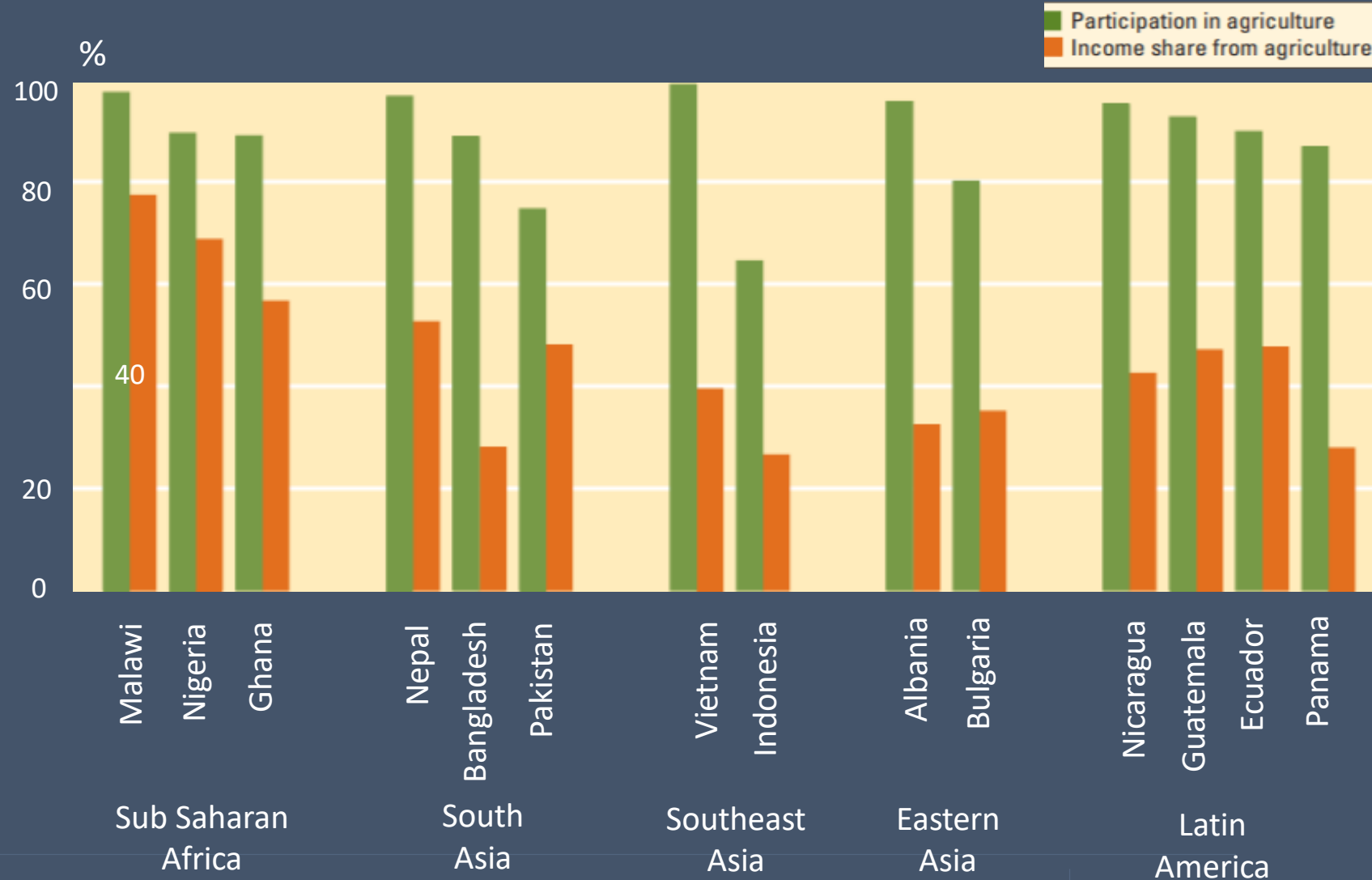
- Significant share of GDP
- High share of labor force
- Special characteristics of the agricultural production function
- Direct consumption of agriculture outputs by its producers (subsistence)
- Agriculture's role as a resource reservoir

*Timmer, Falcon and Pearson



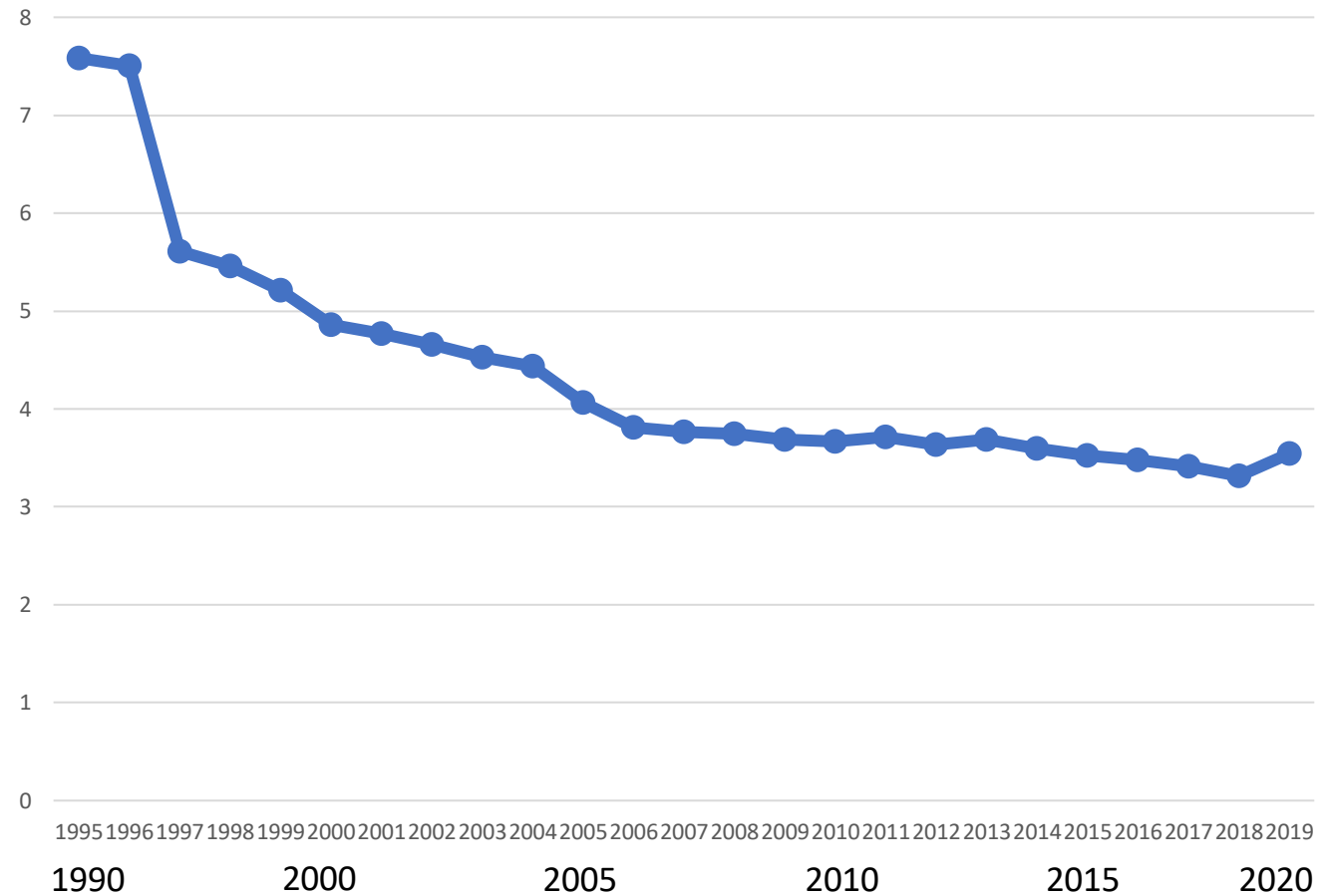
Labor Participation and Income Share

- Comparison across countries and regions
- High participation to income ratio indicates low productivity



Declining agriculture share of GDP

- Share of agriculture sector to total GDP worldwide has declined for 7.5% in 1985 to less than 3.5% in 2020



Features of Agricultural Production



Seasonality

farmers minimize costs through timing of activities such as planting and harvesting



Sources of risk

Farmers are exposed to price fluctuations and changes in weather



Geography

Agriculture is distributed through wide areas which requires effective marketing



Technology

Productivity growth is driven by technological change; acquiring technology is a challenge



AGRICULTURAL SYSTEMS

Traditional and modern, or settled systems

Traditional Systems

- **Shifting cultivation.** Producers cultivate an area until its fertility is exhausted. Opening up new areas sometimes involves slash and burn
- **Pastoral nomadism.** Producers travel more or less continuously in search of better pastures; usually based on livestock
- **Subsistence production.** Small scale, under 3 hectares; farmers consume most of production. Farmers are either land owners or are laborers



Settled Agriculture

- **Mixed farming** Farming method engaged in intensive annual and/or perennial cropping and livestock perennial crops to sell to the market
- **Commercial plantation farming** Farming method engaged in large-scale estate; generally specializes in cash crops such as coffee, tea, rubber and palm oil



Constraints to Agriculture Development

Economic

- Inefficient farm markets
- Poor quality infrastructure
- Low prices for agricultural produce
- Uncertainty of land tenure



Constraints to Agriculture Development

Technical

- Absence of agriculture inputs: seed variety, quality of seeds, fertilizers
- Poor land/soil quality
- Lack of technology and know how



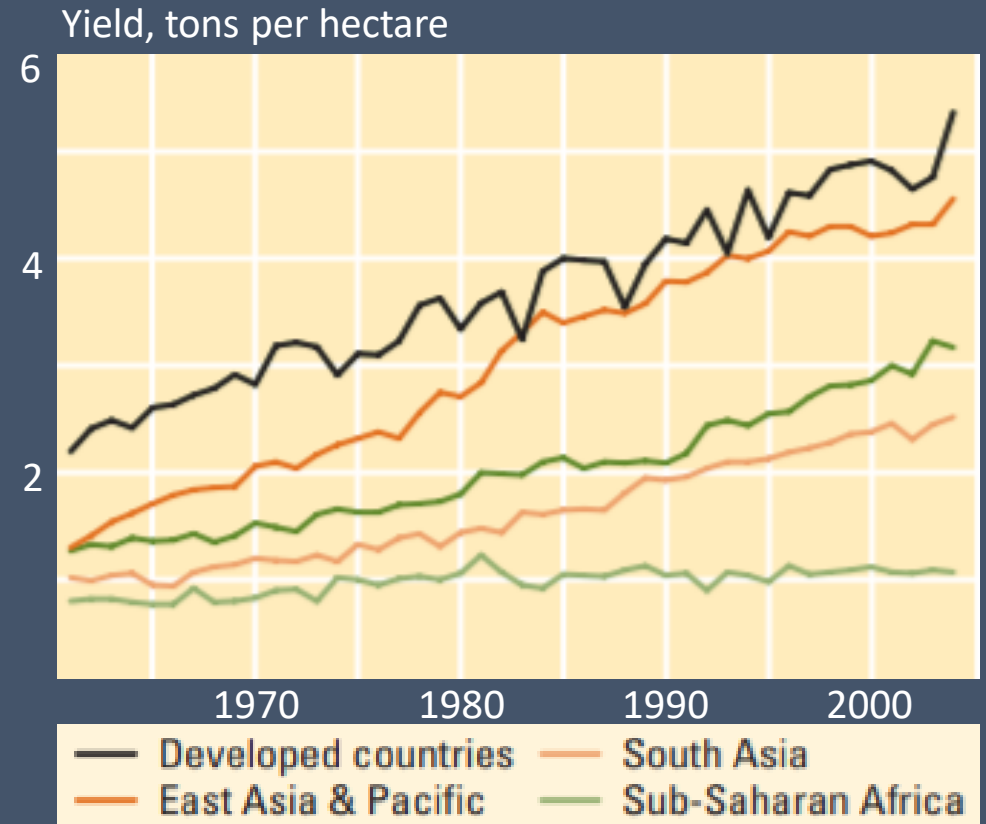


STRUCTURAL TRANSFORMATION

Changes in the portion of the agriculture sector's contributions to the overall economy

Trends in Agricultural Productivity

- **Increasing world agricultural production** particularly since the 1960s green revolution
- **Decline in economic growth rates** particularly since the 1980s, resulting in cuts in agricultural research and development expenditures
- **Marked differences across regions** in yield (tons per hectare). Sub Saharan Africa has not progressed much; East Asia and Pacific countries have substantially increased their crop yields



Labor Surplus Model (Arthur Lewis)

- **Diminishing returns:** crops require land while land is fixed. To increase production, farmers move to poorer land
- **Redundancy:** the agriculture sector has a large labor force, more than necessary to produce food. The surplus labor could be shifted to the industrial sector without reducing agricultural output
- **Shift from agriculture to industrial sector employment:** will continue until the decrease in agricultural employment will result in a decrease in agricultural output



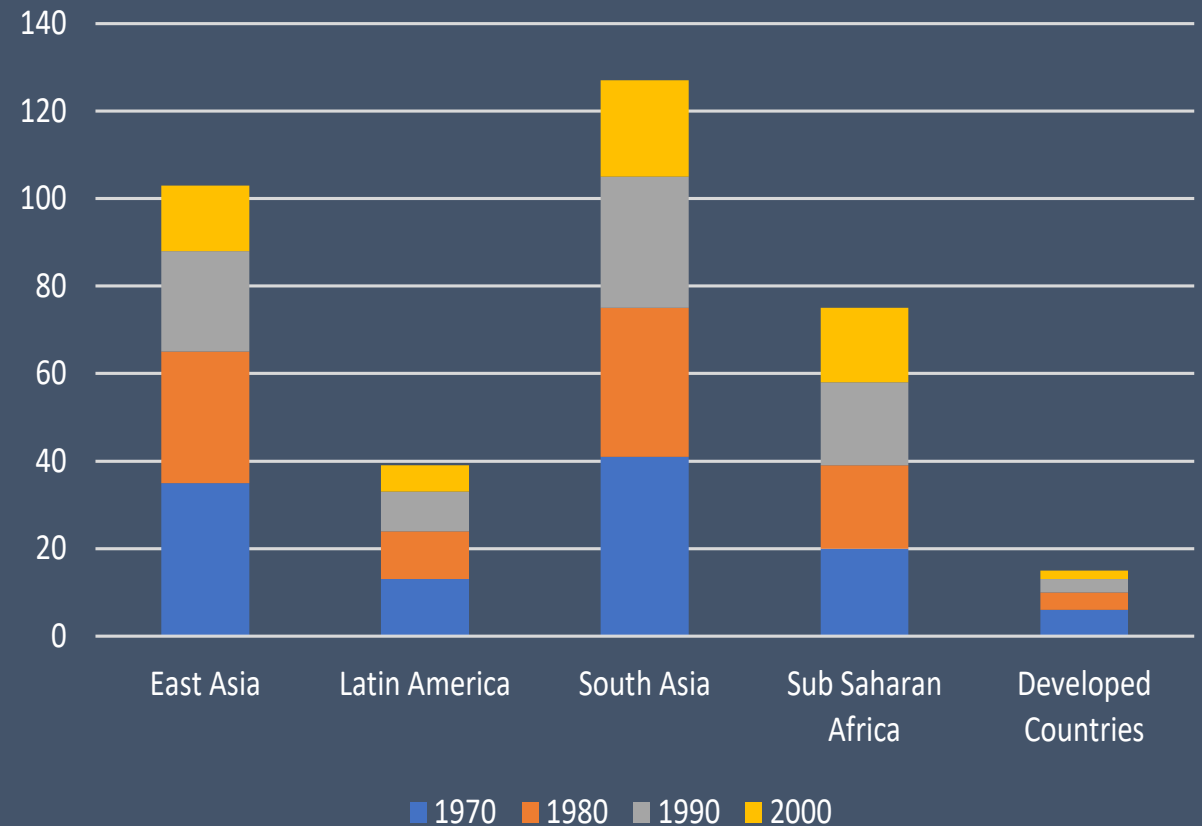


Structural transformation refers to systemic changes in sector proportions as economies grow

Dwight Perkins

Structural Transformation

- Despite its importance, agriculture share of GDP is declining
- At low levels of income, agriculture dominates share of GDP and employment
- As economies grow, share of agriculture decreases while manufacturing increases
- Followed by a demographic transition whereby birth rates and death rates become lower



Phases of Structural Transformation



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Phase 1

Output increase

Increase in agricultural output per worker creates surplus in rural economy

Phase 2

Surplus

Surplus is transferred to non agricultural sector (taxes, payment for agriculture inputs)

Phase 3

Market linkage

Integration of agriculture and non agriculture factors and market linkages; rural-urban migration supported by improved mobility

Phase 4

Integration

Agriculture sector is fully integrated into the economy



Summary

- The agriculture sector is unique, as it has a relatively large share of GDP and employment, features of the agricultural function, a large share of sector's output consumed by producers, and its role as a reservoir of resource
- The agricultural systems include shifting cultivation, pastoral nomadism, and subsistence farming; and mixed farming and plantation farming



Summary

- Agriculture is important because most of the world's poor live in rural areas and are engaged in agriculture; agriculture is important to ensure food security
- Agricultural growth is more effective in reducing poverty compared to industrial growth because in most developing countries people are disproportionately concentrated in rural areas and most are poor
- Growth in agricultural productivity plays an important role in facilitating the release of labor and capital from agriculture for employment in industry and services

THANK **Y**OU!