

# **Regional Rice Overview: The Broad Perspective**


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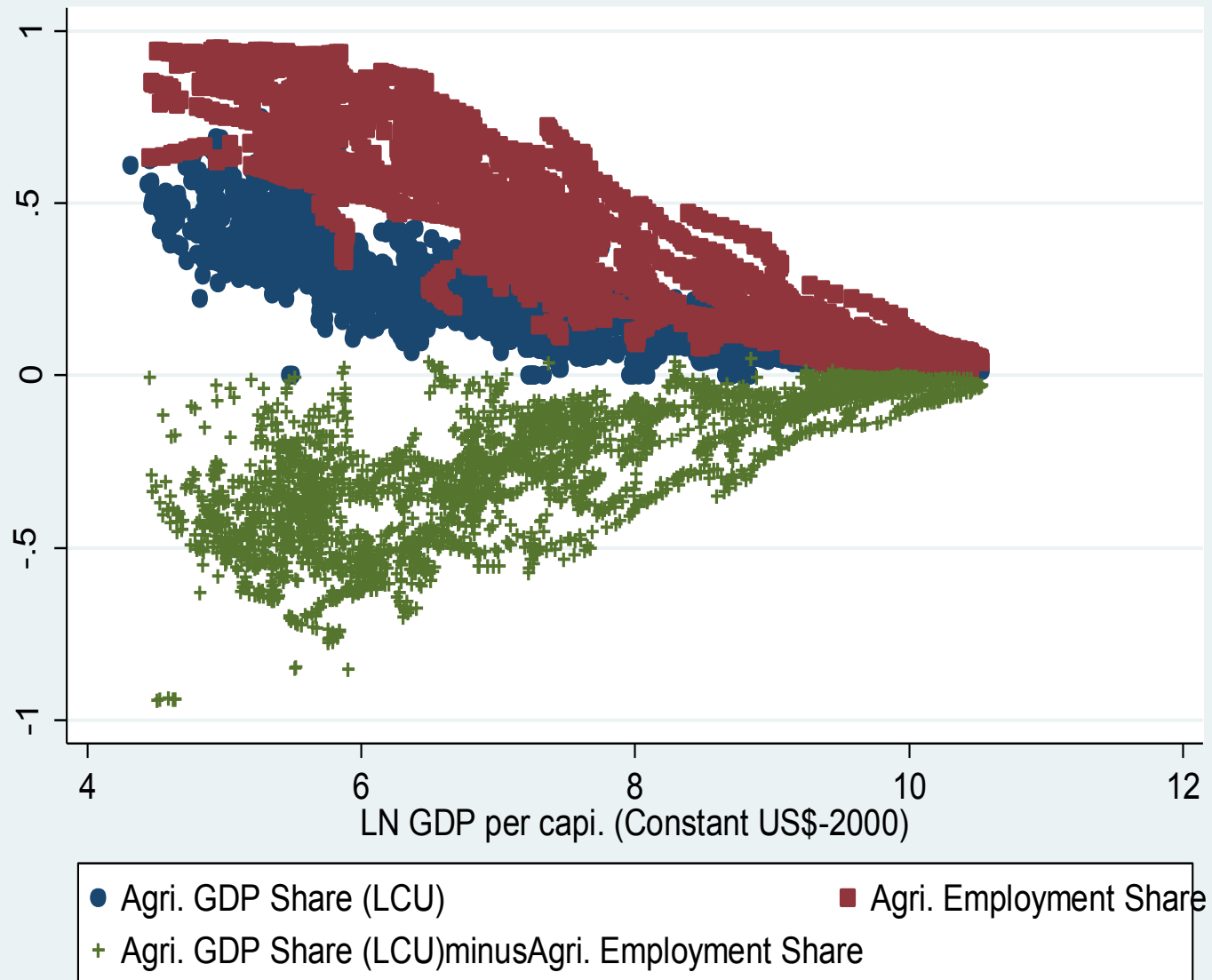
# The Three Transformations

- Structural Transformation
- Agricultural Transformation
- Dietary Transformation
- ...each driven by deep and basic global forces, as well as highly specific local factors

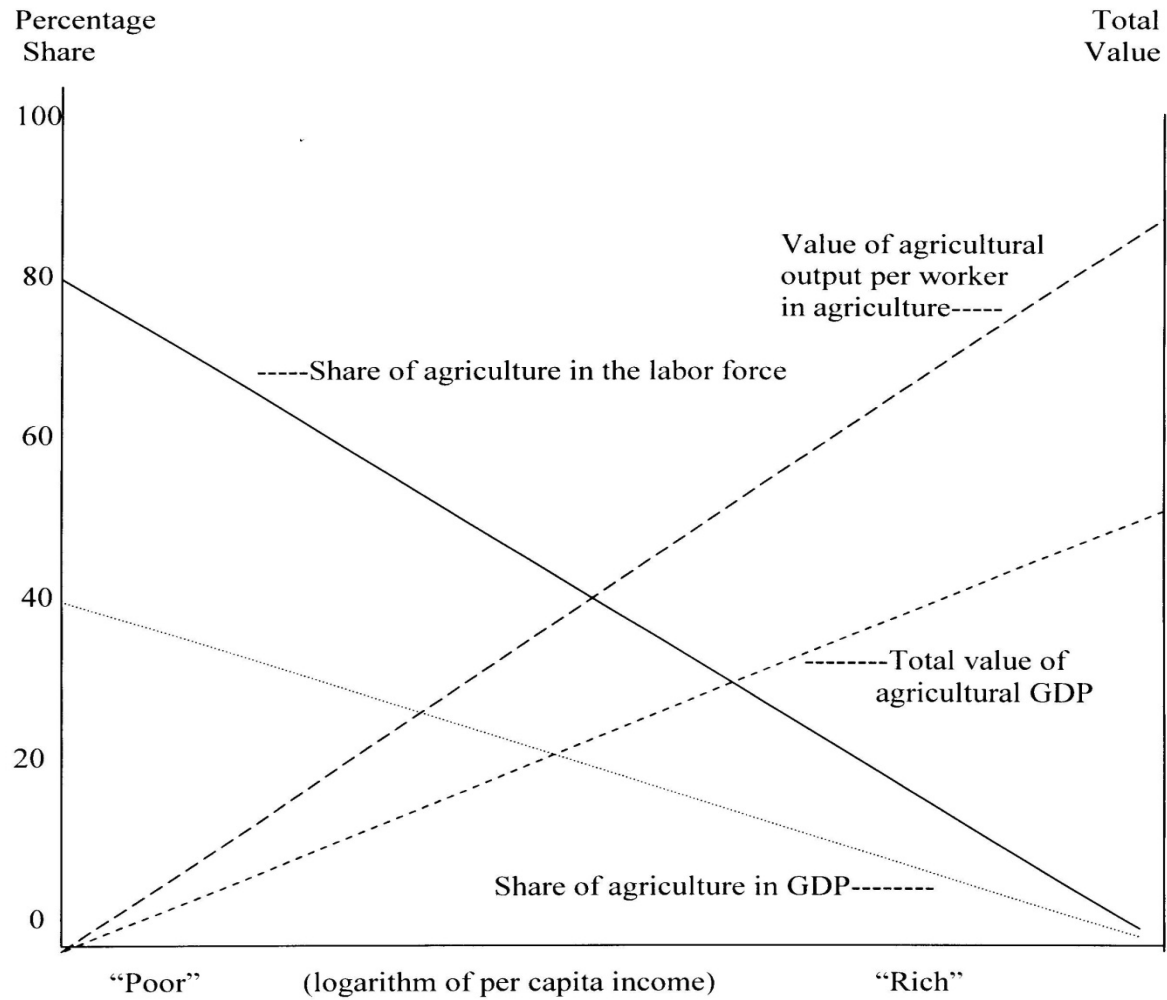
A detailed historical Chinese painting depicting a bustling river scene. In the foreground, several traditional wooden boats with thatched roofs are on the water, with people inside. A large, leafy tree stands on the riverbank. In the background, a multi-tiered pagoda rises above the trees, and a bridge is visible on the left. The scene is set in a traditional Chinese landscape with mountains in the distance.

# The structural transformation in historical perspective

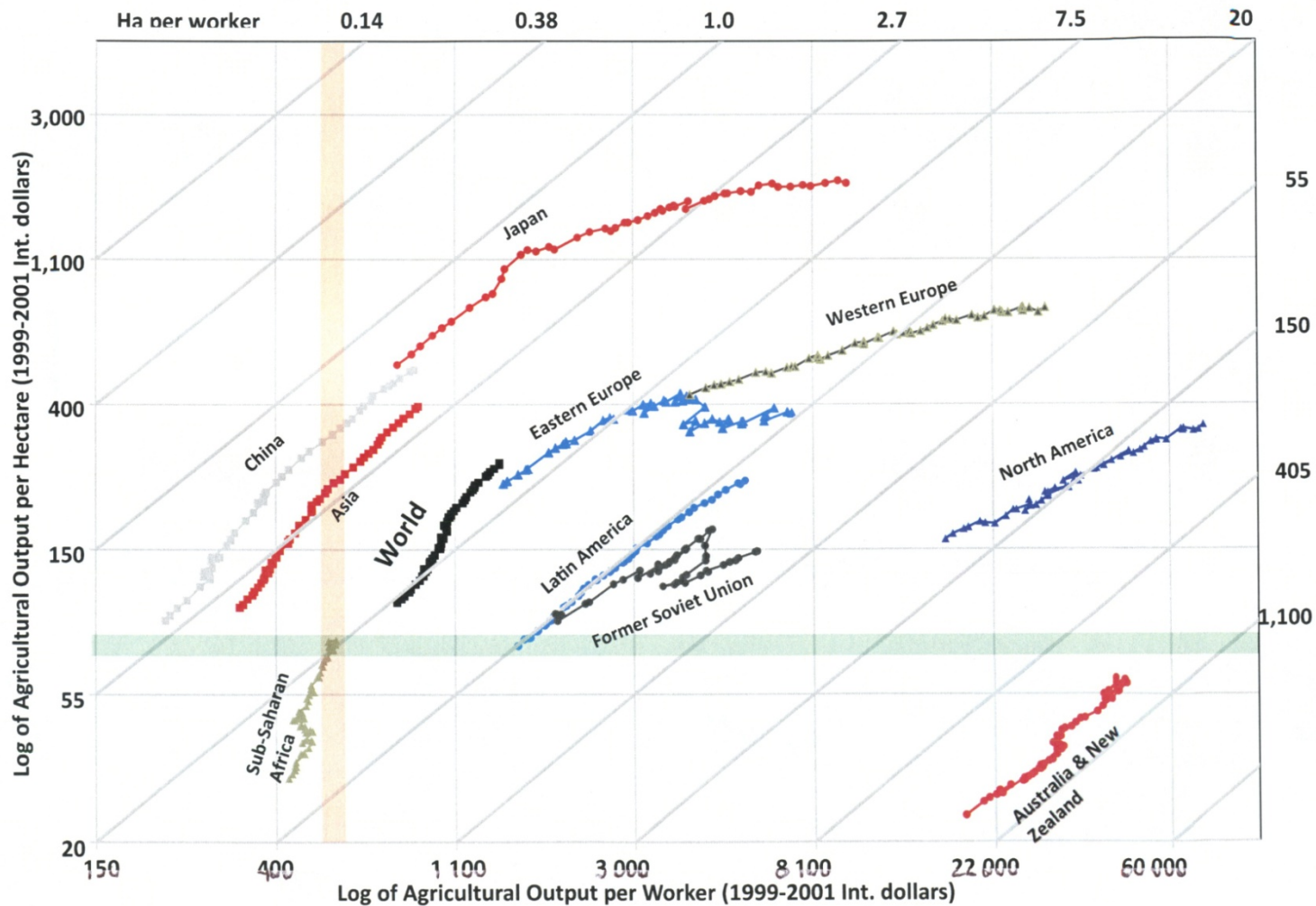
Figure 1. The structural transformation in 86 countries, 1965-2000



# The Changing Role of Agriculture during the Process of Economic Development



# Global Land and Labor Productivity Patterns, 1961-2009

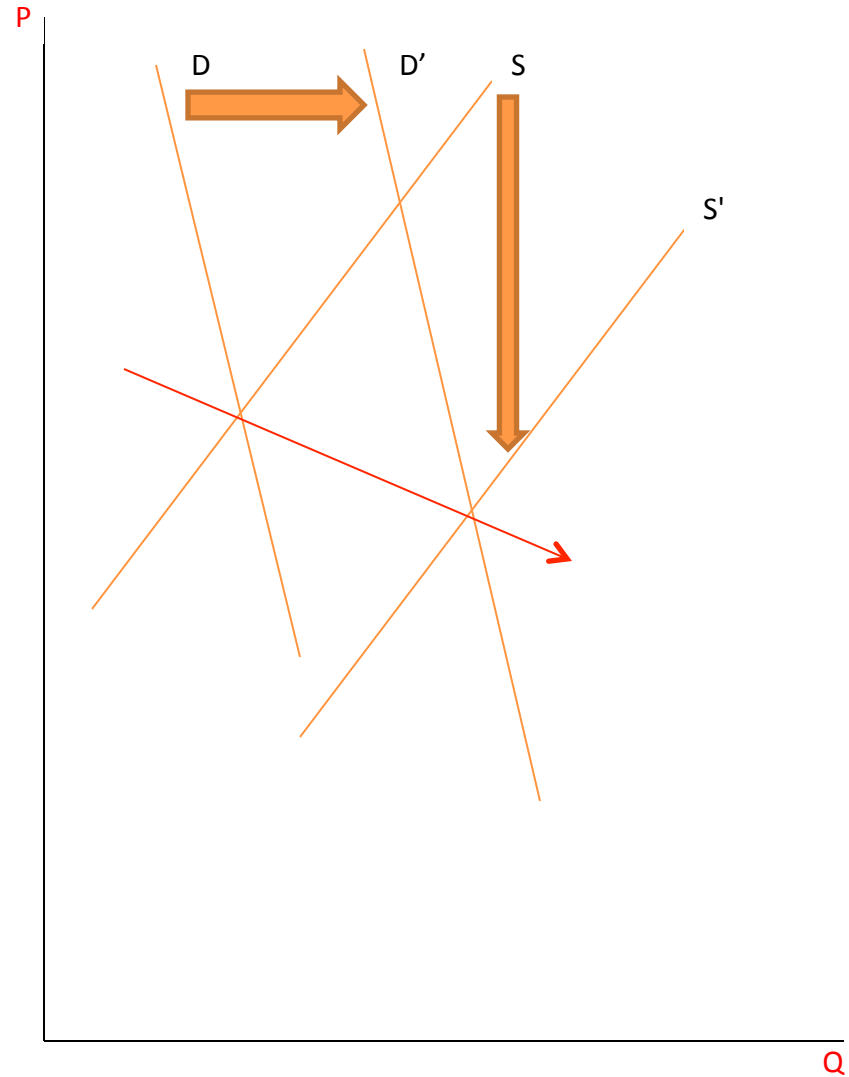
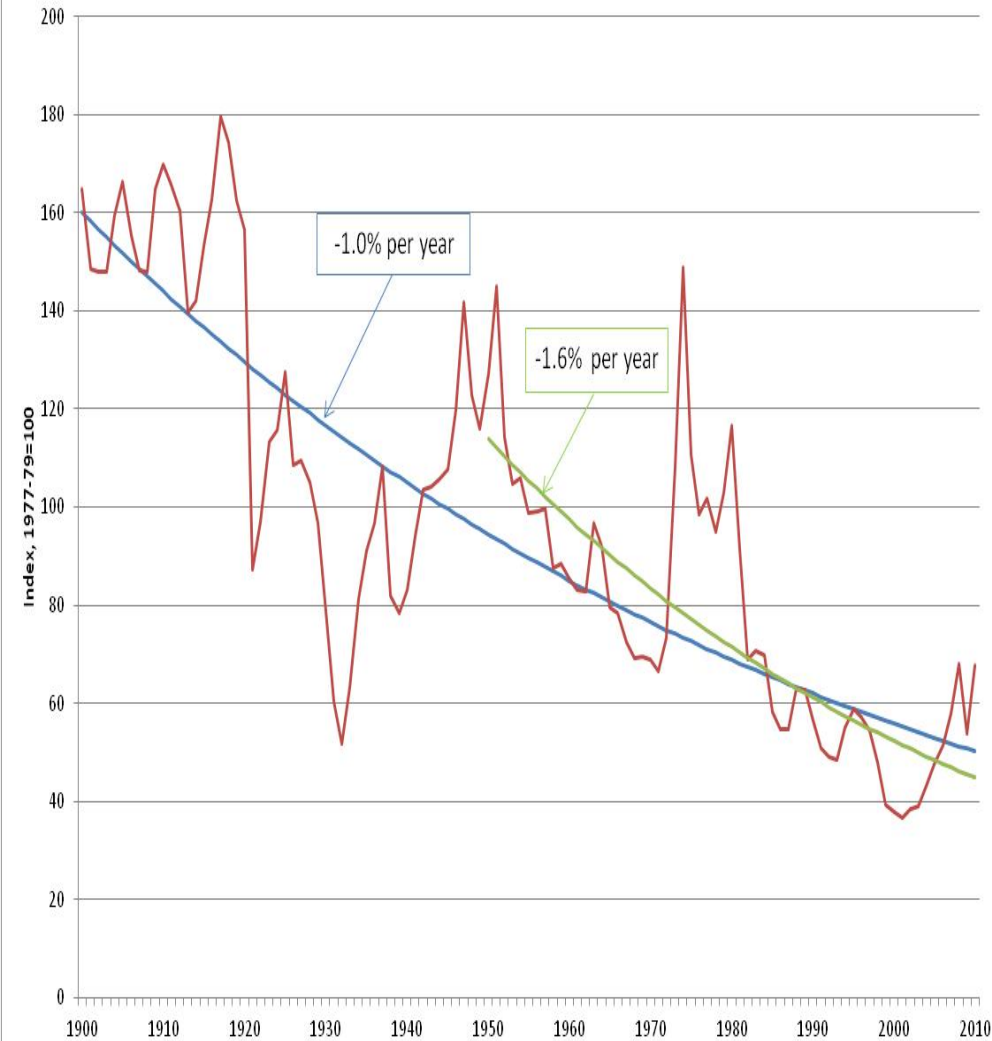


Source: Pardey (2011)



# The 20<sup>th</sup> Century decline in food prices

Grillis & Yang Global Agricultural Price Index (Updated)  
Adjusted for Inflation by the U.S. GDP Price Deflator



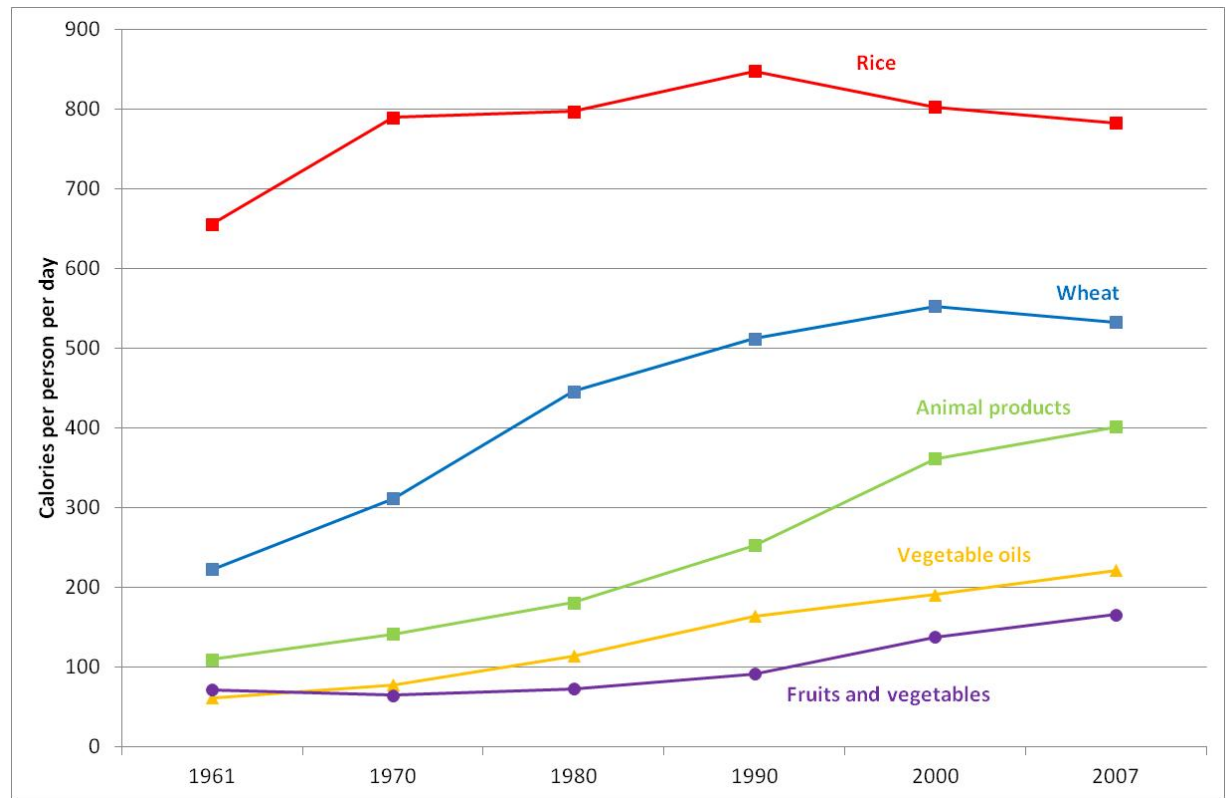
# Three Rice Revolutions

- ... in demand for rice
- ... in supply of rice
- ... in marketing of rice
- Market economies are driven by demand, so start with what is happening to rice demand.



# Asian diets are diversifying

Source: FAO food  
balance sheets



# The Changing Role of Rice in Food Consumption in Asia

Year	Total Calories	Calories from Rice	Rice as % of Total
1961	1805	656	36.3
1970	2069	790	38.2
1980	2200	797	36.2
1990	2443	848	34.7
2000	2606	803	30.8
2007	2668	783	29.3

## Average Annual % Increase/(Decrease)

1961-70	1.53	2.09	0.57
1961-90	1.05	0.89	(0.25)
1970-07	0.69	(0.03)	(0.71)
1990-07	0.52	(0.47)	(1.00)

*Source:* Data from FAO Food Balance Sheets.

“Calories” are daily per capita energy available.

# Implications for the role of rice in Asia's food security:

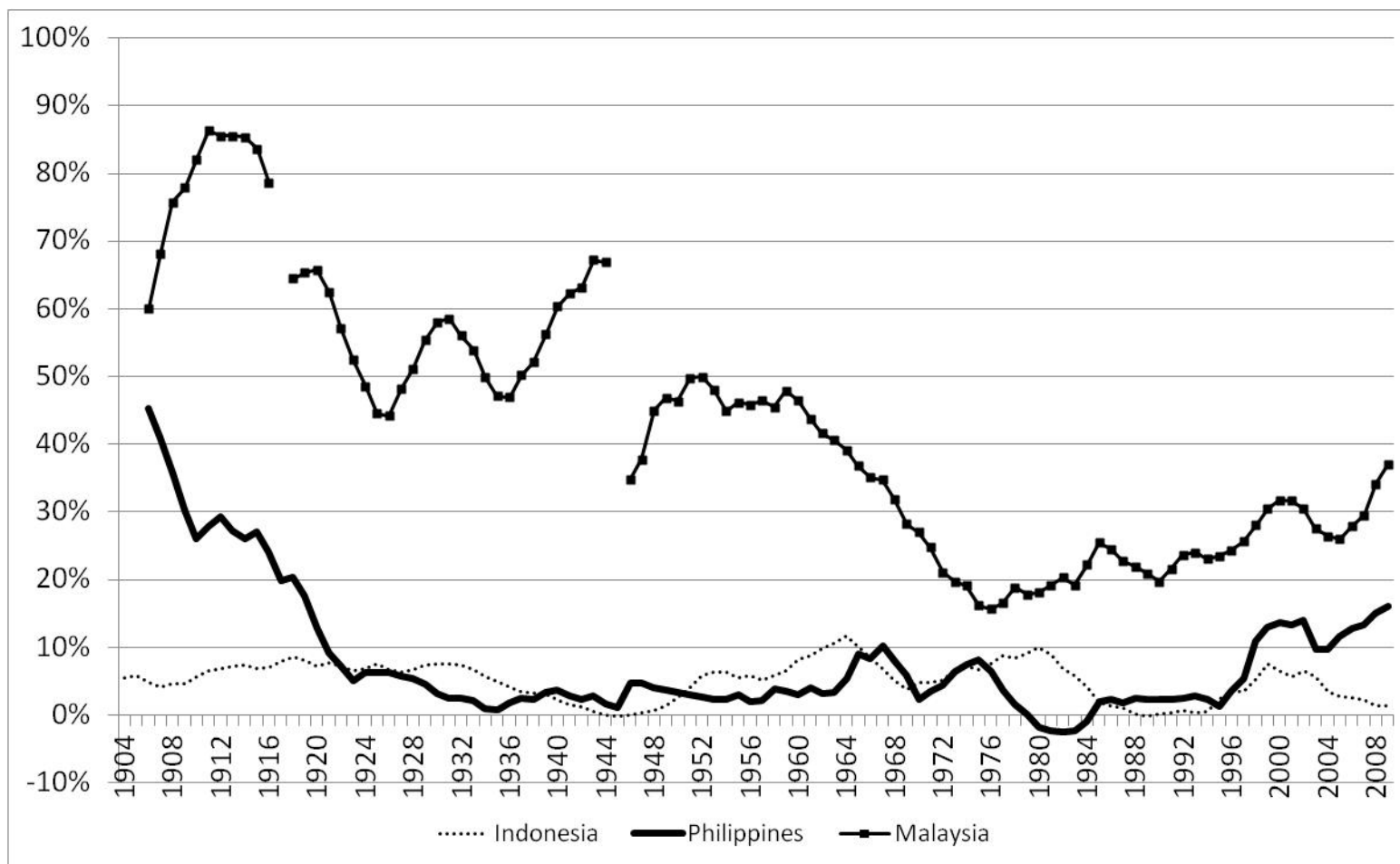
Rice is increasingly the food of the poor. This has significant implications for poverty if countries use “high” rice prices as a mechanism to guarantee “macro” food security and a high level of self-sufficiency in rice

## Implications (2)

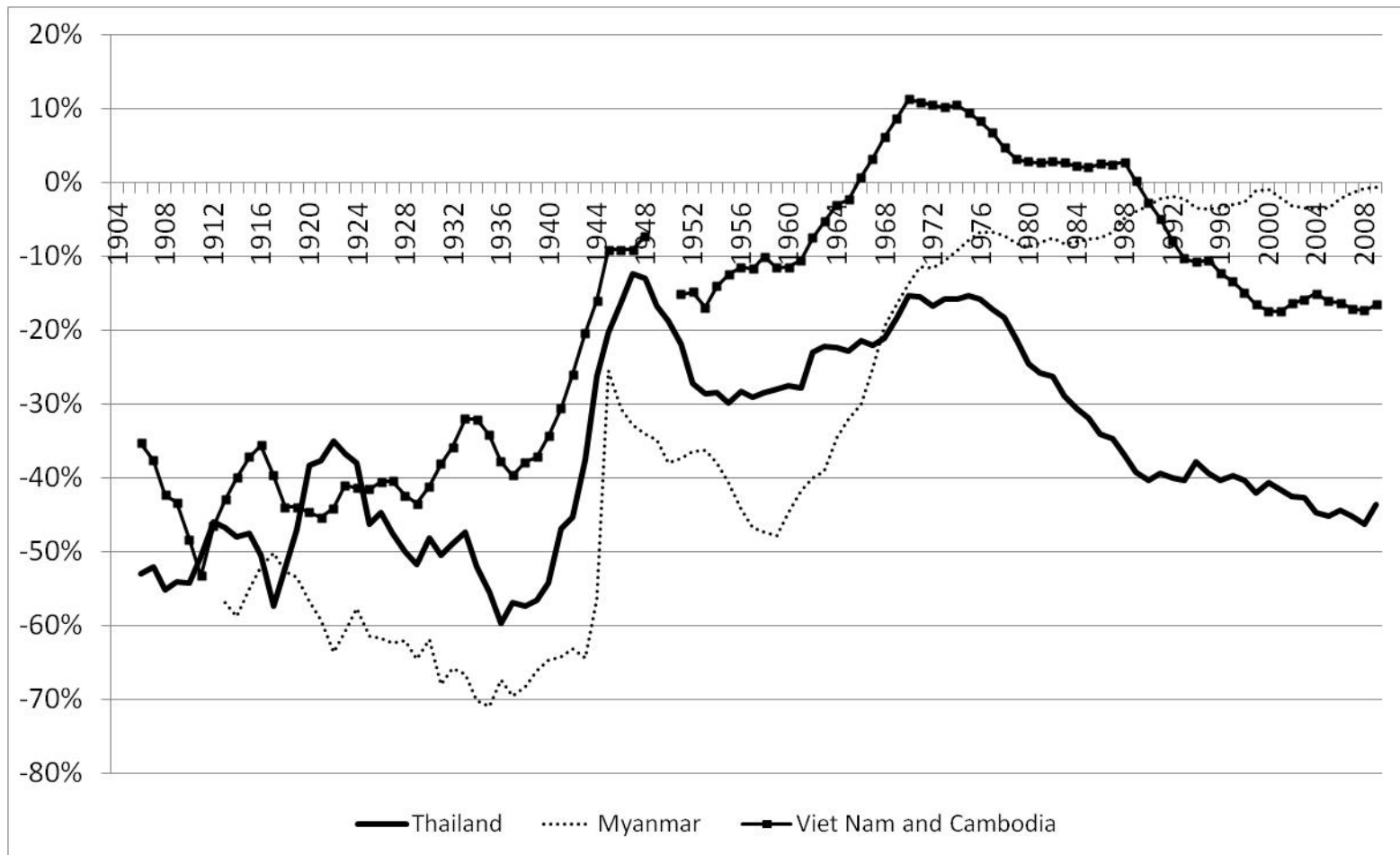
Following the changing patterns of rice consumption, the share of rice in agricultural output and in the overall economy is also falling rapidly.

Share of rice in GDP	Early 1960s	Late 2000s
East Asia	6.8 %	1.0 %
South Asia	8.4	2.7
Southeast Asia	14.5	3.8

## Percentage of rice imports in consumption, 1904-2009 (Dawe)



## Percentage of rice exports in production, 1904-2009 (Dawe)



## Net rice exports from Asia, 000 metric tons

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- 1965 223
- 1970 -1117
- 1975 94
- 1980 1947
- 1985 2962
- 1990 3779
- 1995 4894
- 2000 7594
- 2005 11190
- 2009 12071



# Modernizing Food Supply Chains: The Impact on Rice Distribution

	<b>Rice Economy</b> (starchy staples)	<b>Non-Rice Commodities</b> (Fruits and vegetables, meat/ dairy, processed foods, wheat)
<b>Farm inputs/ supplies</b>	Smaller area possible Higher yields, stress tolerance Consumer quality	More value/hectare, but what role for small farmers (what “assets” do they need to stay in?)
<b>Farm Production (management and knowledge)</b>	Very knowledge-intensive for good management practices; Access to inputs by farm size	Knowledge intensive; can there be effective extension for new technologies? Role of farm assets
<b>Procurement/ logistics and Wholesalers</b>	Less rural consumption as workers leave; more transporta- tion and storage; greater produc- tion instability with climate change	High transaction costs of dealing with small farmers; issues of quality control and product traceability
<b>Processing and value added</b>	Milling technology How to add value; branding?	Large share of consumer food expenditure is spent in this box
<b>Retail/consumer welfare and health dimensions</b>	Supermarkets as suppliers of rice? Increased price stability through private actions? Problems of access by the poor?	Modern supply chains are funneling consumer demand back up the system. The food system is less supply driven

# Challenges Ahead...

- Implications for food security of changing value chains
  - Increasing role of large-scale private sector in farming, processing and retail
  - Understanding the rice marketing system: Micro data from farm gate to retail
  - Feed inputs and livestock/aquaculture systems
  - Food quality, safety and traceability: Whose responsibility?

# Challenges (2)...

- Rapidly falling demand for rice not far off...
- Continued push to expand rice production...
- Fear of the rice market in major importing countries, with accelerated self-sufficiency campaigns
- A thin and unstable rice market, with lower prices for “commodity” rice

# Lessons for the Region

- Even when successful, all three transformations—**structural**, **agricultural** and **dietary**, can be painful for participants
- And yet they are the ONLY sustainable pathway out of poverty
- Good government policies can speed the transitions and mitigate the pain (mind the GAP)
- Growth with equity and stability is KEY

# Conclusions

- Things we have not talked about (but will)...
  - 1. Impact of climate change
  - 2. Will trade agreements change the playing field? Philippines & Indonesia
  - 3. Will rice escape the bio-fuel connection?  
If not, what will drive a connection between rice and petroleum? Wheat, corn, financial markets?