Food Security and Rice Market: Global Trends and Regional Perspectives

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Outline

I. Introduction
II. Global Trends
III. Food Security in East Asia
IV. Policy Response of East Asia
V. Conclusions and Implications
I. Introduction

- The sharp increase in global food prices during 2007-2008 has triggered the awareness of food insecurity problem.

Grain prices from 1990 to 2013

Main Driving Forces

- **Demand Side**
  - Economic Growth-
    - Global 4%, Developing 6%
  - Population Change-Urbanization
  - Biofuel Policies

- **Supply Side**
  - High Energy Cost
  - Climate Change
  - Stagnated Productivity Growth
  - Globalization and Trade
Rice per Capita Consumption in Major Asian Countries, 1990-2012

Instability is a Real Problem for Food Security

- Asian Foundation (2012), Food Security in Asia and The Changing Role of Rice
  - Technological revolution in rice and economic growth (Timmer2005b)
  - Asia is now richer, more urban, better connected and fed (Timmer2009a)
  - New food marketing system, such as modern supply chain and supermarket change the nature of farm-market-consumer interactions (Reardon2010)
  - Climate change really does seem upon us, with greatly increased uncertainty about weather patterns and
Farm Size – Another problem for Asia?

- **Globally**
  - there are about 525 million farms, out of which smallholdings of **less than 2 hectares** (ha) constitute **85%** (Oksana 2005).
  - Out of this, **87% of smallholding farms are located in Asia**, followed by Africa (8%).

- **In Asia**
  - **China** stands first in concentration of smallholdings followed by India, Indonesia, Bangladesh and Vietnam.
  - The number of small farms in China in 1997 was 189.4 million accounting for **47%** of smallholders in the world.
The Global Trends

- Oil prices were cut by nearly 70% and food prices by 33% from Jul to Dec 2008.
- However, as of Feb 2010, prices of food and fuel still remain much higher than they were for much of this decade.
- Both price crisis and policy reactions have adverse consequences for the poor and for long-term stability & efficiency of food system.

FAO; UNDP; OECD; IFPRI:

- The prediction of high food grain prices is expected to continue as policies aiming at achieving energy security and carbon dioxide emission reductions present a strong trade-offs with food security goals.
- The increase in food prices would be a negative development for low income, food-deficit countries, many of which are becoming more dependent on imported foods and food ingredients.
Global Net trade Position in food

Role of Net Food Trade in Food Consumption *
2003 - 05

* (Food Exports – Food Imports) / Food available for human consumption in terms of dietary energy

Source: FAOSTAT
Prevalence of undernourishment in total population (%)
Figure 4. Number of undernourished in selected regions from 1990 to 2014.

III. Food Security in East Asia

- **Difference between East Asia and global situation**
  - Asia: the increase in the number of food-insecure people of 4 percent from 2007 to 2008 was more a reflection of population growth than deepening food insecurity.

- **Factors affected most regions in East Asia**
  - ✓ cyclones,
  - ✓ floods,
  - ✓ droughts,
  - ✓ continuing conflicts
  - ✓ civil strife
Major Challenges in East Asia

- Small Farm Structure: How to Connect with Global Supply Chain and World Market
- Price Transmission Mechanisms
- Policy Intervention and Human Response
- Climate Change Adaptation
- Internalize External Environmental cost
### IV. Policy Response in East Asia - Consumer Orientated

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<th>Country</th>
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Source: FAO, July 2008, Crop Prospects and Food Situation, No. 3
## IV. Policy Response in East Asia - Producer Orientated

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<th>Production support</th>
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<td>Producer credit &amp; other</td>
<td>Minimum producer prices &amp; other</td>
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Source: FAO, July 2008, Crop Prospects and Food Situation, No. 3
IV. Policy Response in East Asia - Trade Orientated

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<th>Import tariffs &amp; other</th>
<th>Quantitative export controls</th>
<th>Export price control &amp; tax</th>
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IV. Policy Response in East Asia

- Most of the East Asian countries' government interventions focus on short-term measures such as reducing domestic food prices through changes in trade policies or changes in domestic taxes or subsidies.

- Despite these efforts, the severity of the food insecurity renders national action inadequate and requires multilateral cooperation.

- The establishment of a regional food reserve as a long-term measure would serve to stabilize extreme price fluctuations in the international market.
V. Concluding Remarks - Food Security

- It is a big challenge for East Asian countries to deal with rising food prices.
  - Brahmbhatt and Christiaensen (2008)
    - Setting greater international engagement and collaboration to address the competing demands of energy and food security.
  - Demeke et al. (2009)
    - Policies include releasing food stock to the market, reducing tariffs, price control, and export restriction.

- More analysis and international dialogue is needed to decide
  - whether the benefits from the current mix of policies really justifies the costs,
  - whether a new global deal can be struck covering both clean energy and food.
The quiet revolution in Asia’s rice value chains

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<th>Transformation in:</th>
<th>Upstream</th>
<th>Midstream</th>
<th>Downstream</th>
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| Technology        | • Widespread use of chemical fertilizer, pesticides, and fungicides  
                   • Variation in use of herbicides and in commercialization of seed sector  
                   • Generalized diffusion of small-farm mechanization | • Upgrading and upscaling of milling equipment  
                   • More expensive milling equipment | |

## The quiet revolution in Asia’s rice value chains

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| Marketing and finance | • Increasing commercialization of paddy farms  
• Increasing disintermediation 
• Disappearance of tied-output credit markets | • Increasing disintermediation 
• Emerging vertical integration/coordination 
• Emergence of packing and branding in rice 
• Decline of custom milling 
• Geographical lengthening of value chains 
• Emergence of contractual relationships of mills with wholesalers | • Diversification of marketed products 
• Increasing emergence in retail of mill-branded rice |

The quiet revolution in Asia’s rice value chains

<table>
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<th>Synthesis of quiet revolution processes in rice value chains in Asia</th>
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<td><strong>Transformation in:</strong></td>
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V. Concluding Remarks

- **Food Security in Asia and the Changing Role of Rice**
  - In East Asia, rice’s share has dropped from about a fifth of agricultural output to less than a tenth.
  - In Southeast Asia, agricultural output has dropped steadily, but slowly.
  - In 1961 agriculture was 3.7 times as important to Asian economies as to the world as a whole, and this ratio had climbed to 5.2 times as important in 2007.
  - Despite the rapid transformation of Asian economies, agriculture remains very important because structural transformation takes generations.
Thank You & Comment Welcome