Impacts of EU CAP Reform on China’s agricultural production and rural poverty

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Outline

• Introduction
• Background
• Methodology
• Simulation
• Preliminary result
Introduction

• Poverty issue is the most important issue in the developing countries, especially China

• China has still 40.07 million rural poor in 2007 (CNBS, 2009)
  – 1196 Yuan per year

• 207 million rural poor in 2005 (World Bank, 2008)
  – US$1.25 a day
• URAA provisions
  – Market access
  – Export subsidy
  – Domestic support

• Relation between trade liberalization and poverty
  – Reduction of domestic support in developed countries
  – Short run effect (Hertel et. al., 2003, Winters et. al., 2003)

• Domestic support as a necessarily part in trade
  – US Farm bill, EU CAP
Background

• What domestic support effects?
  – Domestic support has far little impact on developing countries than market access
  – But the smaller effect is on developing countries where poorest people living

• Conflicted views about whether the developing countries will benefit from the reduction of developed countries domestic support or not

• Focus on EU CAP Reform Health Check and China’s poverty – Does the impact exist?
EU CAP Reform and world trade

• Internal pressure
  – Budget: Once account for more than half of total
  – Over production

• External pressure – especially WTO
  – Negative view
    • Hurting developing countries
    • Distorting world trade
  – Positive view
    • Boost domestic production and export
    • Put downward pressure on world market prices
China - EU 25 Agricultural Trade

Value: Million € (Ecu)

Source: EUROSTAT / COMEXT
Modeling Work on the Effects

• GTAP and some other model
  – some EU specific reality must be considered and combined to the model to get a more realistic result

• National level model as a supplement
  – how to quantify the CAP reform
  – how to integrate them into the model
  – how to explain the result from such researches
Background

• China’s rural poverty in a open economy
  – New poverty line in 2008 - 1196 Yuan per year
  – Absolute poverty line and low income line
  – Rural poor number increased significantly in the new Statistical Communiqué
  – 14 million to 40 million

• Income inequity in rural China
  – farmers in coastal region has higher income
  – different income evolution speed in different income group
• Rural poverty alleviation
  – Depends largely on agricultural production and their price change, which may be changed just because of different trade policy change
  – Costal region can learn more information
  – Farmers in richer group can be better informed
    • Better education, human capital, access to non-farm opportunity
  – Agricultural production will be more important to poor farmers than any others
Methodology

- CAP Health Check
  - Im/Ex Change
    - CAPSiM
      - National
      - Household
      - Regional
      - Rural production & rural income change
GTAP model

- Mainly a static model
- Policy shock to get trade, production and welfare change
- Macro policy change could be considered in the model as some key variable change
  - Tariff cut
  - Import or export subsidy
  - Domestic price subsidy
  - Factor subsidy
GTAP model

• GTAP 7 Database
  – 57 sectors
  – 113 regions
  – Macroeconomic aggregates (GDP, private consumption, government consumption, and investment) 2004
  – trade data based on COMTRADE
  – Domestic support data for 2004 from the OECD PSE/CSE database
  – Other policy change data source
  – Other important data, such as energy data or so
GTAP model

• Dynamic model
  – Macro variable such as GDP, population and so
  – Time
  – Capital accumulation

• Data updating
  – Trade protected data
  – Parameter, coefficient

• GTAP model can also decompose different effects of different policy
  – Define Subtotal
CAPSiM (CCAP)

Output prices
Input prices
Investment:
- R&D
- Irrigation
Weather
Others

Area
Yield
Total Supply
Production
Stock
Import
Export

Price
Food
Feed
Seed/Others
Total Demand

Livestock
Income
Population
Habit change
Prices
Others

Macro Policy

Figure V.1 CAPSiM Framework
CAPSiM Updating

• Time series - from year 2004 to year 2007

• From 19 sectors to 22 sectors
  – Split FRUIT to (1) FRUIT and (2) MELON
  – Split FISH to (1) FISH, (2) SHRIMP and CRAB, (3) SHELL

• Household data 2005 (according to our partner, CCAP) to get new group description
Linking GTAP with CAPSiM

• Data aggregating
  – 20 sectors and 12 regions

• Data updating
  – Policy and macro variable, in different years

• EU Reform Baseline shock
  – Different tax and tariff reduction since 2004

• EU Reform Health Check policy shock

• Data output to CAPSiM
Simulation

• Baseline - EU CAP 2003
  – 1. Decoupling. Member states may retain 25% of the payments coupled.
  – 2. Set aside. 10% not sown each year.

• Scenario – Health Check
  – Decoupling: All decoupled
  – Set aside: Remove
  – Modulation: 2% in 2009 and 1% in the following three years respectively
## Baseline and scenario of simulation

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<td>EU-15</td>
<td>EU-10</td>
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<td>Percent coupled</td>
<td>2013</td>
<td>25%</td>
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<td>0%</td>
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<tr>
<td>Percent of Set aside.</td>
<td>2013</td>
<td>10%</td>
<td></td>
<td>0%</td>
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<td>Total direct subsidy</td>
<td>2005</td>
<td>97</td>
<td>35</td>
<td>97</td>
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<td>- Percent of Modulation</td>
<td>2006</td>
<td>96</td>
<td>35</td>
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<td>(reduction of direct payment)</td>
<td>2007</td>
<td>95</td>
<td>40</td>
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Preliminary result

Macro economic effect

- Really a little change
- Both China and EU’s welfare (equivalent variation) increases
- The international trade favors EU a little
Agricultural production changes

• Agricultural production in China is slightly affected
• The comparative advantage is just the same as in many opinions
• The changes are not very coinciding with the production change for international trade
Poverty impacts

Figure 1: The impacts across on average agricultural income in China's different regions (yuan/person)
Thanks!

Your comments will be greatly helpful!