Distributional Impacts of the 2008 Global Food Price Spike in Vietnam

by Andy McKay and Finn Tarp

New Directions in the Fight Against Hunger & Malnutrition: Festschrift in Honour of Per Pinstrup-Andersen
Cornell University 13-14 December 2013
Introduction (1)

- Professor Per Pinstrup Andersen (PPPA)
  - Best wishes + many thanks from DERG, Copenhagen, Denmark
  - Best wishes + many thanks from UNU-WIDER, Helsinki, Finland

- Political Economy of Food Price Policy Project (PEFPPP)
  - Some 15 country case studies (low- and middle-income) to uncover which political economy factors explain variations in policy responses across countries in times of increased food price volatility
  - OUP delegates reacted enthusiastically to book submission
Introduction (2)

• Background for present paper
  – The global food and fuel prices spike in 2008 (see next slide)
  – A crisis which very quickly became a major international policy concern
    • WB Chief Economist for Africa blog: possibly 700,000 excess deaths
    • UNICEF, WFP and international press followed suit: warnings about severe impact
    • RED ALERT!
  – But what happened in practice – in reality, in developing countries?
    • Did price increases get transmitted to consumers and producers?
    • If so, how, by how much?
    • Did governments intervene – if so how, and were interventions effective?
    • Who gained, who lost, and what was the impact on the poor?

• Context
  – Vietnam
    • A populous, dynamic south east Asian economy
    • With a particular political and economic history
  – Rice
    • Continues to play a critical and dominant economic role
    • And we find both net-producers, net-consuming producers and non-producers
The Price of Rice: 2008 Spike + Underlying Trend

Literature Review

• Analysis of price transmission, price incentives, supply response of producers, and welfare impact of price changes on consumers:
  – Winters, 2004; Abbott et al., 2012; Coxhead et al., 2008
    • Imperfect price transmission must be counted with + supply constraints matter
  – Jensen et al. (2010) Grapple with how to measure price incentives (for producers)
    • General equilibrium effects and country specific characteristics are crucial in assessing incentives faced by farmers
  – Deaton (1989) agriculture household model
    • “Net producer vs. net consumer” distinction critical (rice, Thailand)
  – Ravallion (1990): Labour position of household
    • Matters for welfare outcomes (Bangladesh)
  – Barrett and Dorosh (1996): Household wealth
    • Matters for welfare outcomes (Madagascar)
  – ”Getting prices right” not as straightforward as sometimes argued/assumed (Streeten: ”What price food”)

• Should governments intervene?
  – Stabilization objectives and market imperfections suggest intervention often second best policy option (Abbott, 2011; Martin and Anderson, 2011)
Impact of the 2008 price spike

• Friedmann & Schady (2009): Led to 30-50,000 excess deaths

• *Agricultural Economics* 2008 special issue
  – Ivanic & Martin (2008): 10 country cases generally focusing on negative impacts
    • Suggesting global poverty increased 3 percentage points
  – Heterogenous effects recognized
    • Consumers (-ive) vs. producers (+ive)
    • Warr (2008): Overall negative impact (Thailand)
    • Arndt et al. (2008): Fuel price hike more adverse (Mozambique)
    • Jensen & Miller (2008): No effect (Hunan province)
    • Benson et al. (2008): Limited effect (Uganda)

• Why are some countries better are able to define and implement policies more effectively than others
  – see PPPA: *Food Price Policy in an Era of Market Instability*
Background: Vietnam

- Mid-1970s: Collective mode of production
  - Pingali and Xuan (1992): Levels of rice production and productivity very low + Vietnam a net rice importer
  - Rice also staple diet (reference to small rice rations)

- Government reforms/policies/restrictions
  - Doi Moi in 1986
  - Decentralization reforms, especially in 1988 and 1993
  - Individual property rights (buying & selling allowed) – ”red books”
  - But, land use controlled: >1/3 of agricultural land must grow rice (according to annual production and export plans) and government continues to intervene in a variety of ways

- Vietnam quickly became 2nd largest rice exporter in the World, retains this position

- Income now much more diversified, non-farm activity increasing
  - But 10% of Vietnam’s value added comes from rice
  - Political, social and economic importance can hardly be overemphasized
In brief

• 24 years after the introduction of the *Doi Moi* reform process ... households sell their production output to private buyers, trade land and sell labor on the private market.
• At the same time the state ... retains a hugely important role in economic life.
• The state intervenes actively in the land market, supplies many inputs in agricultural production, strongly dominates formal markets for financial services, and plays a key role in a large number of local organizational activities.
• More specifically, authorities intervene heavily in farmers’ choice of crops,
• And while the land law gives households the right to sell, rent, exchange, mortgage, and bequeath their land, many farmers do not have the right to decide how to use their plots.
Data

• **VHLSS** – national (LSMS type) household survey (GSO, WB)
  – Used to identify net rice producers & consumers
  – Compute average household purchase price & sale price (regional and quintile levels)

• **VARHS** (Vietnam Access to Resources Household Survey)
  – Specialised rural household survey (12 provinces) (UoC, CIEM, ILSSA, CAP/IPSARD, Danida)
  – 2,080 households (in panel)
  – Used to analyse production and sales response (and providing contextual information)
Producer and Retail Price of Rice: Magnitude and timing of shock

NOTE: VHLSS shows 2008 spike smoothened even more out (smaller increase) for actual prices received by producers and paid by consumers.
# Shares of net producers and net consumers among rice producers

<table>
<thead>
<tr>
<th>by quintile:</th>
<th>2006</th>
<th>2008</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>75.6</td>
<td>73.0</td>
<td>63.6</td>
</tr>
<tr>
<td>% producing rice</td>
<td>of which</td>
<td>% producing rice</td>
<td>of which</td>
</tr>
<tr>
<td>% net producers</td>
<td>68.5</td>
<td>62.9</td>
<td>60.2</td>
</tr>
<tr>
<td>% net consumers</td>
<td>7.1</td>
<td>10.1</td>
<td>3.4</td>
</tr>
<tr>
<td>2nd</td>
<td>70.3</td>
<td>68.0</td>
<td>55.8</td>
</tr>
<tr>
<td>% producing rice</td>
<td>of which</td>
<td>% producing rice</td>
<td>of which</td>
</tr>
<tr>
<td>% net producers</td>
<td>66.5</td>
<td>63.4</td>
<td>53.5</td>
</tr>
<tr>
<td>% net consumers</td>
<td>3.8</td>
<td>4.6</td>
<td>2.3</td>
</tr>
<tr>
<td>3rd</td>
<td>61.4</td>
<td>55.6</td>
<td>48.6</td>
</tr>
<tr>
<td>% producing rice</td>
<td>of which</td>
<td>% producing rice</td>
<td>of which</td>
</tr>
<tr>
<td>% net producers</td>
<td>59.0</td>
<td>53.0</td>
<td>46.9</td>
</tr>
<tr>
<td>% net consumers</td>
<td>2.4</td>
<td>2.5</td>
<td>1.7</td>
</tr>
<tr>
<td>4th</td>
<td>41.7</td>
<td>40.7</td>
<td>35.5</td>
</tr>
<tr>
<td>% producing rice</td>
<td>of which</td>
<td>% producing rice</td>
<td>of which</td>
</tr>
<tr>
<td>% net producers</td>
<td>40.1</td>
<td>39.1</td>
<td>34.9</td>
</tr>
<tr>
<td>% net consumers</td>
<td>1.6</td>
<td>1.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Highest</td>
<td>13.9</td>
<td>16.1</td>
<td>17.0</td>
</tr>
<tr>
<td>% producing rice</td>
<td>of which</td>
<td>% producing rice</td>
<td>of which</td>
</tr>
<tr>
<td>% net producers</td>
<td>13.4</td>
<td>15.8</td>
<td>16.6</td>
</tr>
<tr>
<td>% net consumers</td>
<td>0.5</td>
<td>0.3</td>
<td>0.4</td>
</tr>
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<table>
<thead>
<tr>
<th>by region:</th>
<th>2006</th>
<th>2008</th>
<th>2010</th>
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<tbody>
<tr>
<td>Red River Delta</td>
<td>64.8</td>
<td>63.2</td>
<td>58.5</td>
</tr>
<tr>
<td>North East</td>
<td>70.3</td>
<td>68.7</td>
<td>68.9</td>
</tr>
<tr>
<td>North West</td>
<td>72.8</td>
<td>73.6</td>
<td>69.3</td>
</tr>
<tr>
<td>North Central</td>
<td>68.7</td>
<td>64.9</td>
<td>65.8</td>
</tr>
<tr>
<td>South Central</td>
<td>57.6</td>
<td>55.7</td>
<td>46.9</td>
</tr>
<tr>
<td>Central Highlands</td>
<td>39.2</td>
<td>38.7</td>
<td>29.7</td>
</tr>
<tr>
<td>South East</td>
<td>12.4</td>
<td>11.0</td>
<td>4.6</td>
</tr>
<tr>
<td>Mekong Delta</td>
<td>37.4</td>
<td>36.5</td>
<td>32.2</td>
</tr>
<tr>
<td>Total</td>
<td><strong>50.6</strong></td>
<td><strong>48.7</strong></td>
<td><strong>44.1</strong></td>
</tr>
</tbody>
</table>

### Total Shares

- **2006**: 50.6%
- **2008**: 48.7%
- **2010**: 44.1%

### Percent Change

- **2006 to 2008**: -1.9%
- **2008 to 2010**: -3.6%
### Av. total real per capita consumption

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th></th>
<th>2008</th>
<th></th>
<th>2010</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Median</td>
<td>Mean</td>
<td>Median</td>
<td>Mean</td>
<td>Median</td>
</tr>
<tr>
<td>Net consuming</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>producers (rural)</td>
<td>3,731</td>
<td>3,163</td>
<td>4,654</td>
<td>4,160</td>
<td>8,475</td>
<td>7,272</td>
</tr>
<tr>
<td>Net producers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(rural)</td>
<td>4,487</td>
<td>4,012</td>
<td>6,316</td>
<td>5,452</td>
<td>11,647</td>
<td>10,127</td>
</tr>
<tr>
<td>Non-producers (mainly urban)</td>
<td>8,806</td>
<td>6,920</td>
<td>11,383</td>
<td>8,945</td>
<td>21,303</td>
<td>16,482</td>
</tr>
</tbody>
</table>

Note: 2010 data in 2010 prices; others are in 2006 prices; in thousands of Vietnamese Dong.
Source: authors' calculations based on VHLSS Surveys, 2006, 2008 and 2010
# Production response: VARHS sample households

<table>
<thead>
<tr>
<th></th>
<th>% growing rice</th>
<th>average output</th>
<th>% selling</th>
<th>% using improved seeds</th>
<th>% subject to crop restrictions</th>
<th>average sales price (1000 VND/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>76.9</td>
<td>2,308</td>
<td>38.4</td>
<td>38.2</td>
<td>57.5</td>
<td>2.60</td>
</tr>
<tr>
<td>2008</td>
<td>73.5</td>
<td>2,349</td>
<td>56.1</td>
<td>35.2</td>
<td>39.4</td>
<td>4.20</td>
</tr>
<tr>
<td>2010</td>
<td>70.9</td>
<td>2,416</td>
<td>40.2</td>
<td>55.8</td>
<td>26.0</td>
<td>5.53</td>
</tr>
<tr>
<td>2012</td>
<td>68.8</td>
<td>2,760</td>
<td>40.1</td>
<td>47.7</td>
<td>35.4</td>
<td>6.05</td>
</tr>
</tbody>
</table>

Conclusions (1)

• Net producers
  – The very large majority of rice producers in Vietnam benefitted
  – Increased their production levels
  – Impact: sizeable downwards impact on poverty rate

• Non-producing households
  – Lost out, but these tend to be much better off on average (urban households) and above poverty line (except small minority)

• Net consuming producers also lost out
  – Mostly live in North-West, are poor and ethnic minorities, already poor
  – So little impact on poverty rate – but in deeper poverty (welfare dynamics)
Conclusions (2)

• Vietnam (rice exporter) reduced export quota and imposed export ban motivated by food security (poor harvests) and stabilization need -> widespread discussion
• To alleviate price impact granted exemptions from taxes on consumers (VAT) and producers (CIT)
• Producers: exemption from land taxes, increased extension support & credit
• US$3.3bn stimulus package for agriculture and rural development in 2009
• Vietnamese Government effective in responding to price fluctuations
  – Managed to smoothen price impact + maintain stable increase in producer incentives + ensure consumers not hit excessively
• But continues to face a challenge in relation to ethnic minorities