



# Agricultural Trade Policies & Food Security

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# Road Map

- Why do high and volatile prices matter?
- Trade policy options for poor countries?
- The collective action problem
- Policy options



**Why do high & volatile prices matter?**

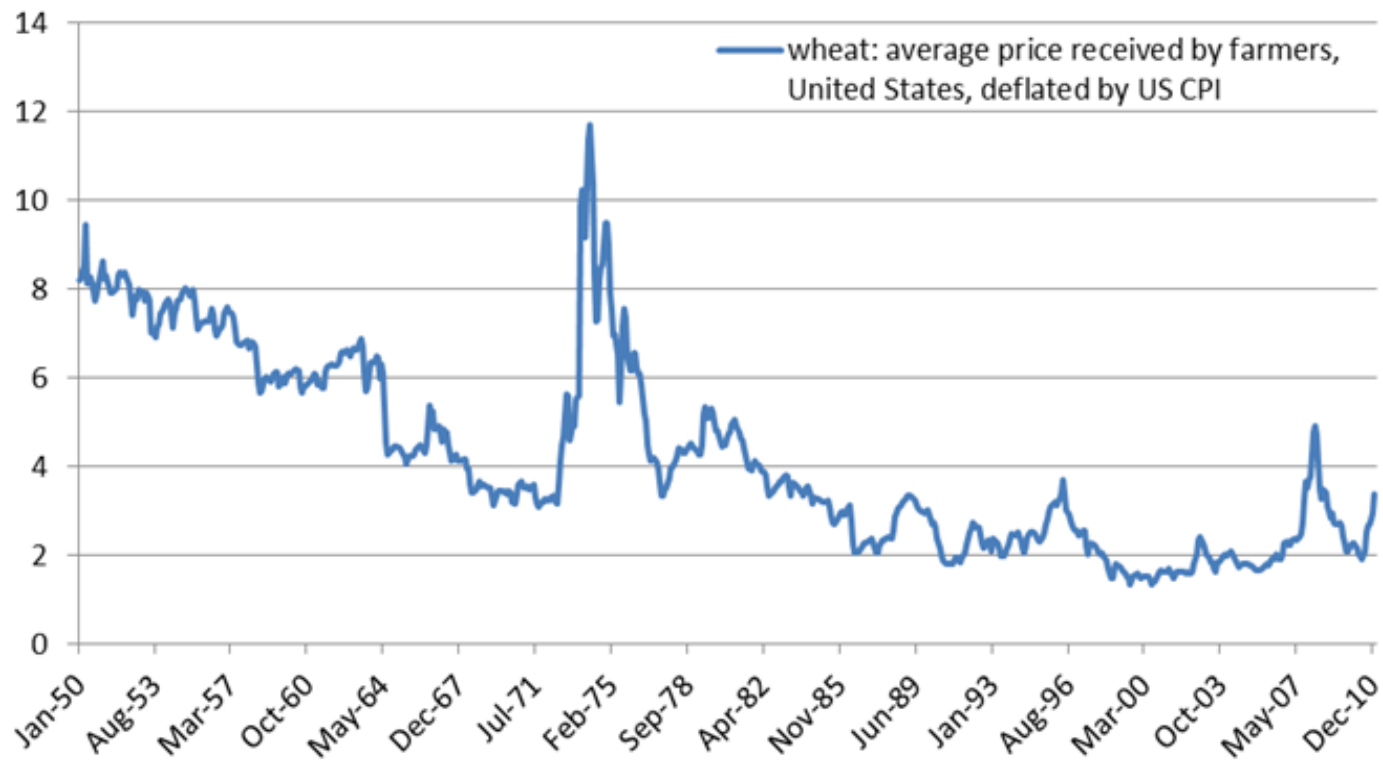
# Food price volatility

- Shocks to output are a major source both of income instability to farmers and of price volatility
- Shocks to demand from—for instance—biofuels, may also contribute
- Globalization helps reduce price volatility by diversifying sources of supply

# Impacts depend on stock levels

- If stocks are normal, adverse shocks can be absorbed by stock reduction
- Key problems arise when stocks are low
  - Reducing demand in line with supply requires large increases in price
- Prices spend long periods in the doldrums punctuated by short but intense price spikes

# Real wheat prices

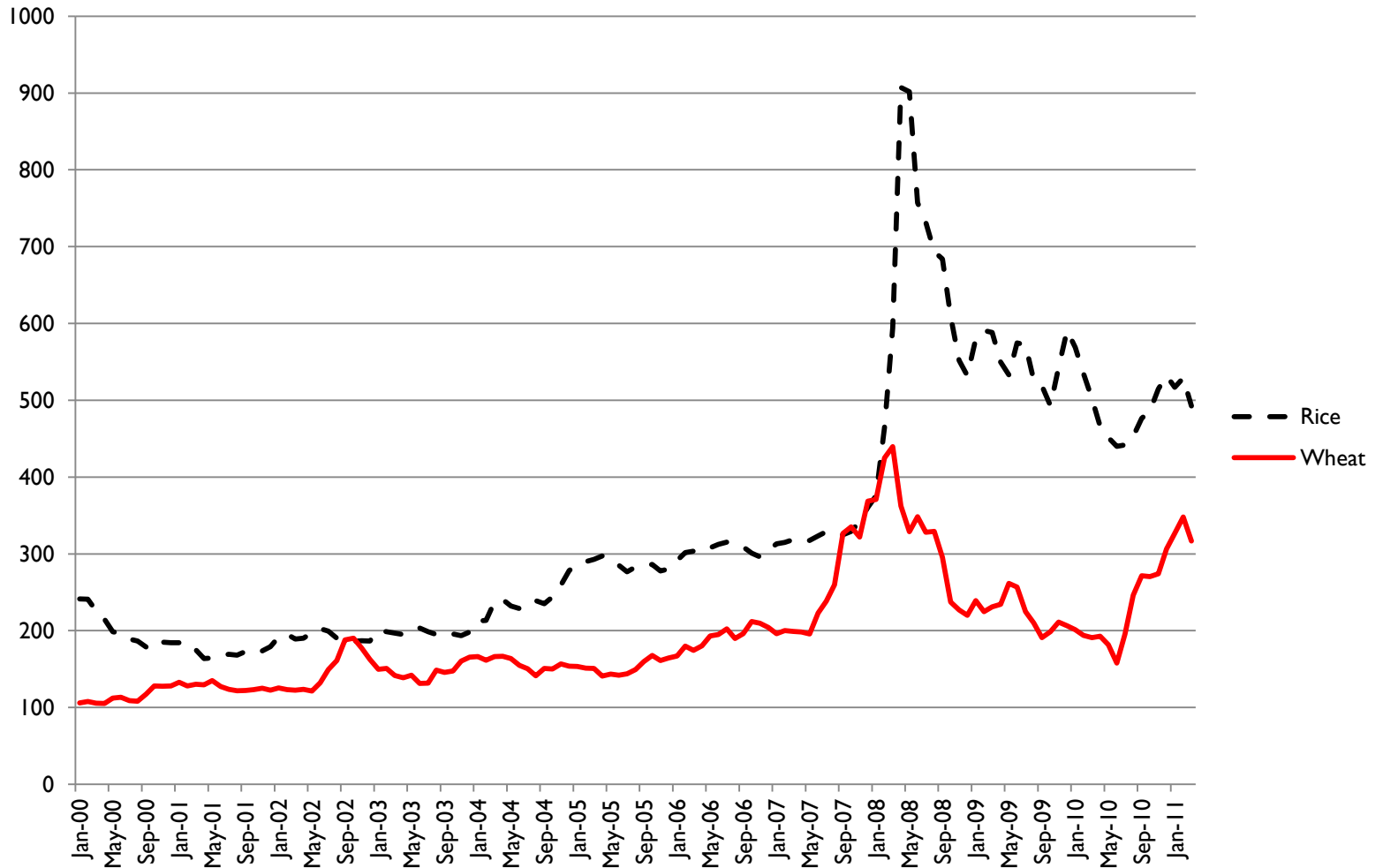


Source: USDA. Deflated using U.S. CPI

# Impacts of food prices on the poor

- Poorest spend 75% of income on staple foods
- 3/4 of poor people are rural & earn most of their income from farming
  - Poor farmers don't gain much from higher prices
    - Many are net buyers of staple foods
  - Little opportunity to increase output in response to higher prices
- Net impacts on poverty?
  - Are the gains to poor net sellers outweighed by the losses to poor net buyers?

# Rice & wheat prices, \$US

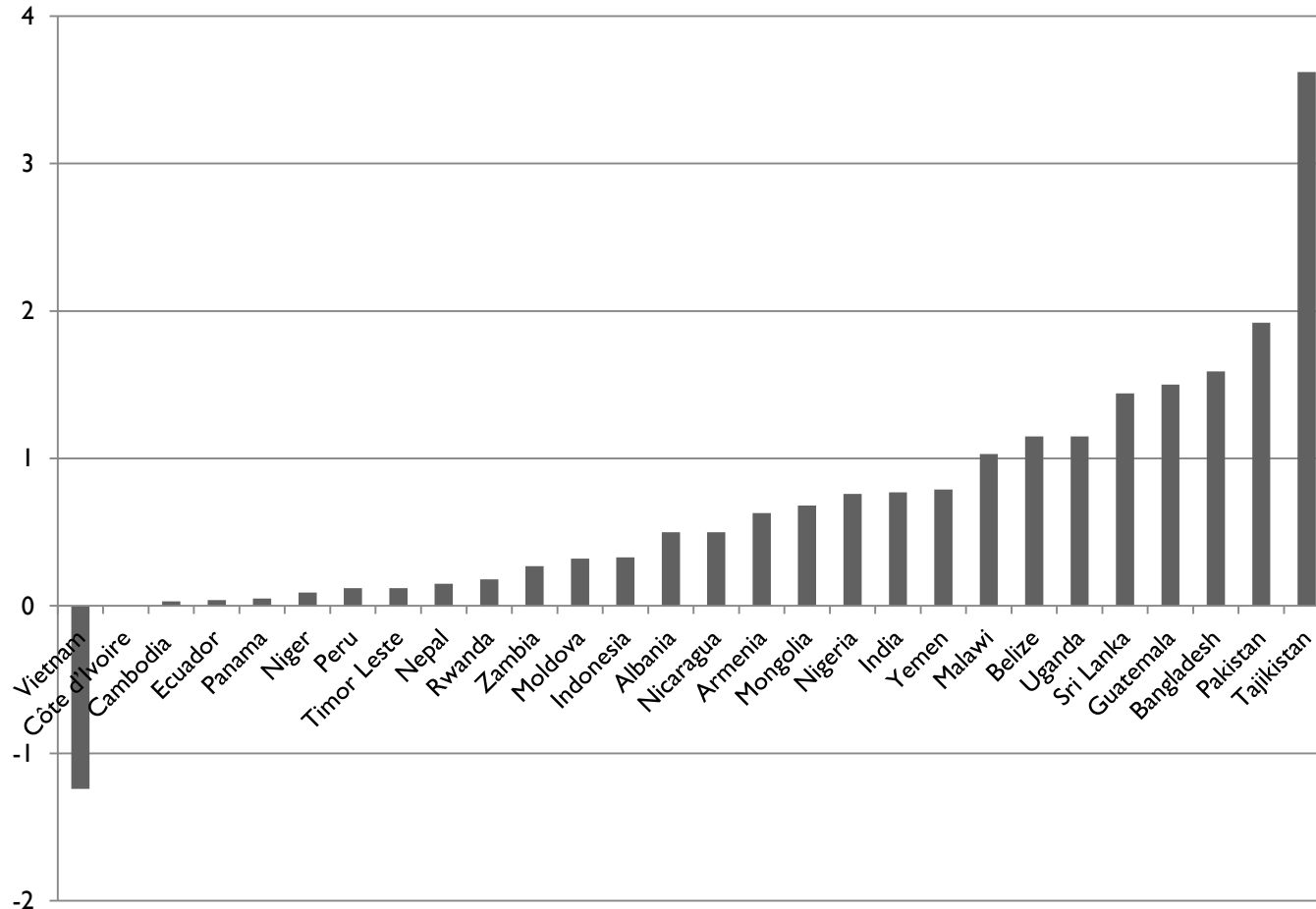




# 2010-11 price surge

- Especially June to December 2011
  - Wheat, maize, many other commodities
    - But fortunately not rice
- Used detailed data on the extent of pass-through into domestic prices
- Data on 28 countries & 38 commodities
- Estimate that 44 million have been pushed below the \$1.25/day poverty line
  - 68 million entering poverty; 24m escaping

# Poverty impacts by country, % pt





# Trade policy options for poor countries

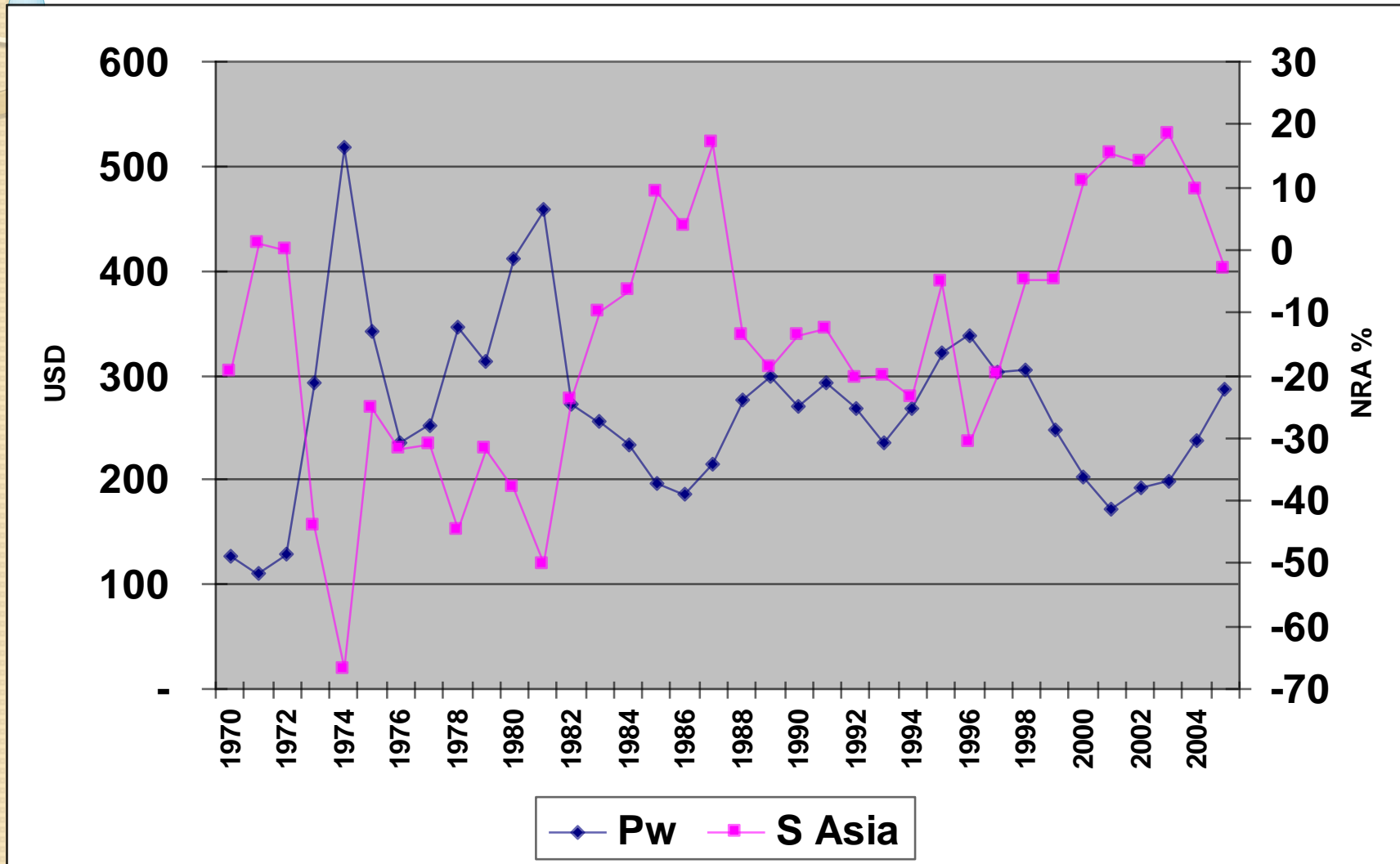
# What should poor countries do?

- An attractive policy option is to:
  - Restrict exports when world prices are high
    - Lower tariffs or pay import subsidies if an importer
- Gouel & Jean show this can be welfare-improving for a small open economy
  - Where food budget shares are high & policy makers are risk averse
  - Where these conditions are not met, volatility is theoretically preferable
  - Trade policy alone dominated by a combination of trade & storage policies

# In practice

- Many countries are strongly countercyclical with their trade policies
  - May also raise protection and/or pay export subsidies when prices slump
- Historically both industrial & developing countries have insulated in this way
  - Although major exporters have learned that this reduces their perceived reliability as suppliers and encourages importers to protect
  - Only WTO rules stopped rich countries using Variable Import Levies to export instability

# South Asia Rice: Nominal rate of assistance vs World Price: Correlation: -0.754



# Some simple principles

- Import tariff reductions more frequent than export restrictions
  - A mirror image so why criticize export restrictions more than import tariff reductions?
- Export bans frequently used but export taxes almost always preferable
  - Optimal price insulation likely to be partial
  - Zero exports most unlikely to be optimal
  - Export bans likely generate domestic price volatility
  - Prospect of periods of very low domestic prices likely to reduce supply



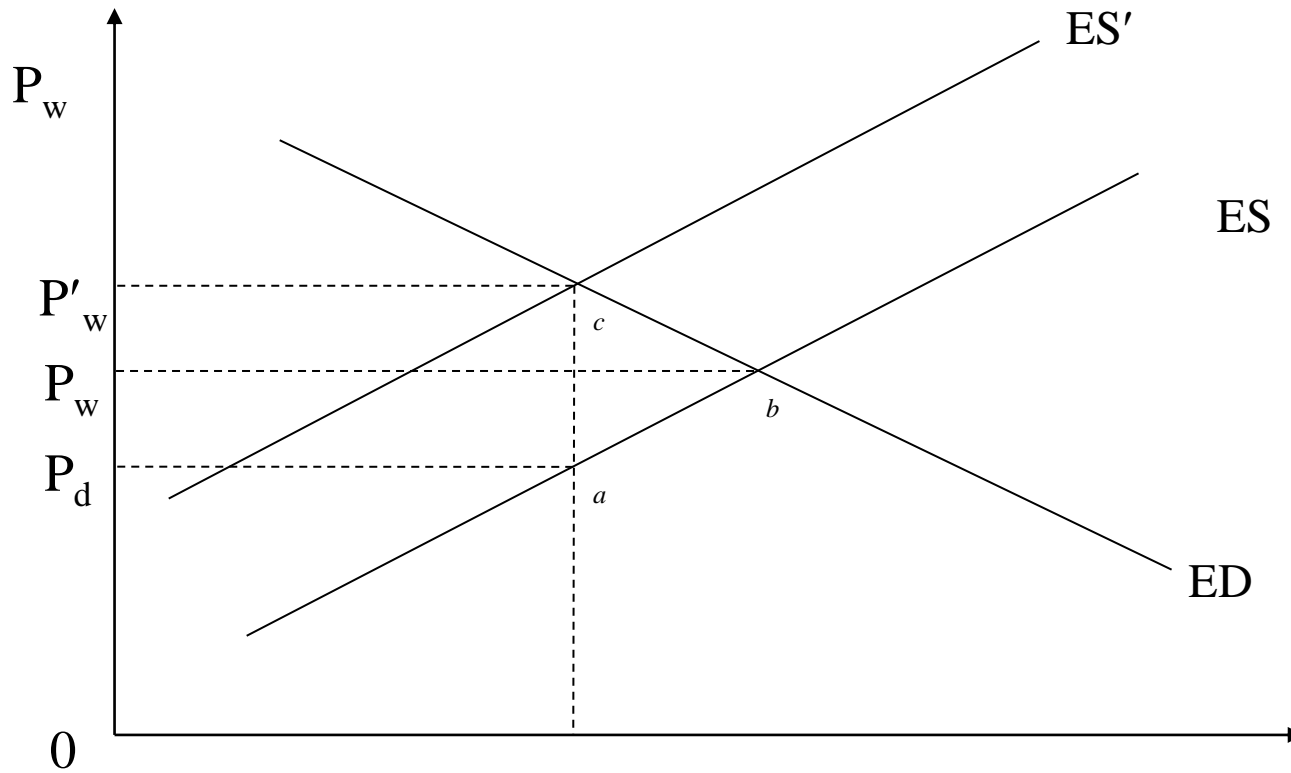
# The collective action problem



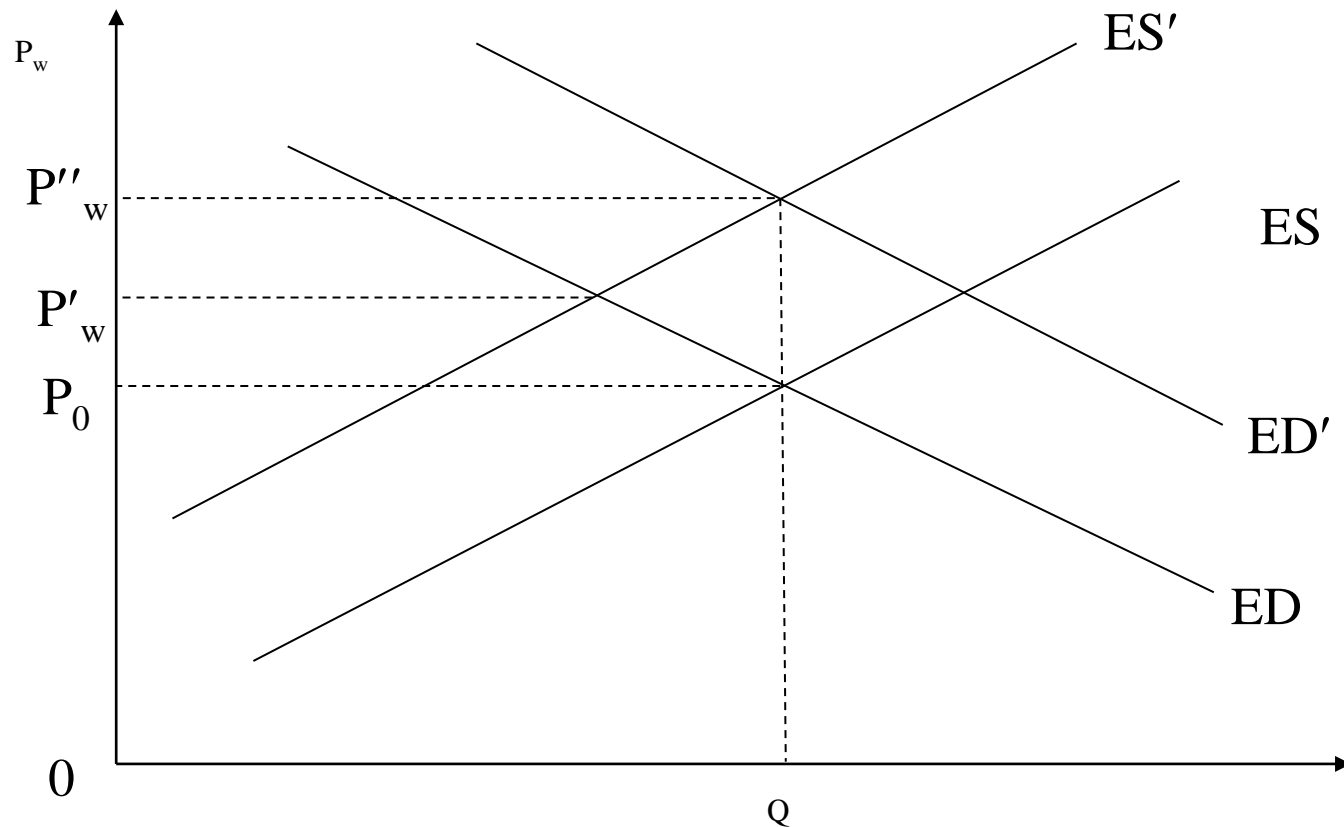
# A collective action problem

- If everyone attempts to reduce the impact of world price increases
- The policy appears to be a success
  - “Domestic prices rose less than world prices when prices surged”
- But it may be collectively completely ineffective
  - The world price increases one for one with attempts to lower domestic prices

# Export restrictions



# And lower import barriers



# Like the grandstand problem

- When everyone in a crowd stands up to get a better view
  - No one does!
- But unilateral refusal to participate isn't a solution
  - If I don't stand up, I get a terrible view!
- Unfortunately, insulation against staple food price changes can have more serious consequences
  - Magnifies the volatility of international income transfers

# Analyze price rises of 1973-4 & 2005-8

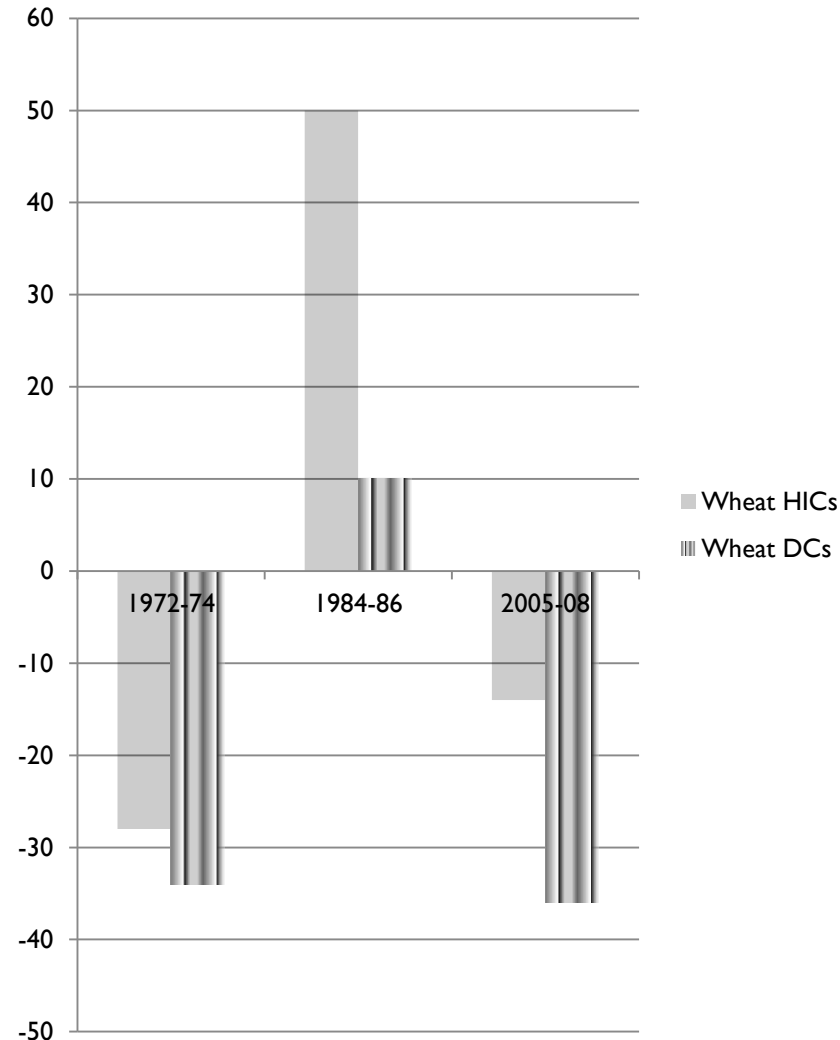
- Use World Bank data on distortions to agricultural incentives
  - Data for 75 countries
  - Update to 2008
- Assess the impacts of rising export barriers, declining import barriers, on world prices

# Estimated impacts on world prices

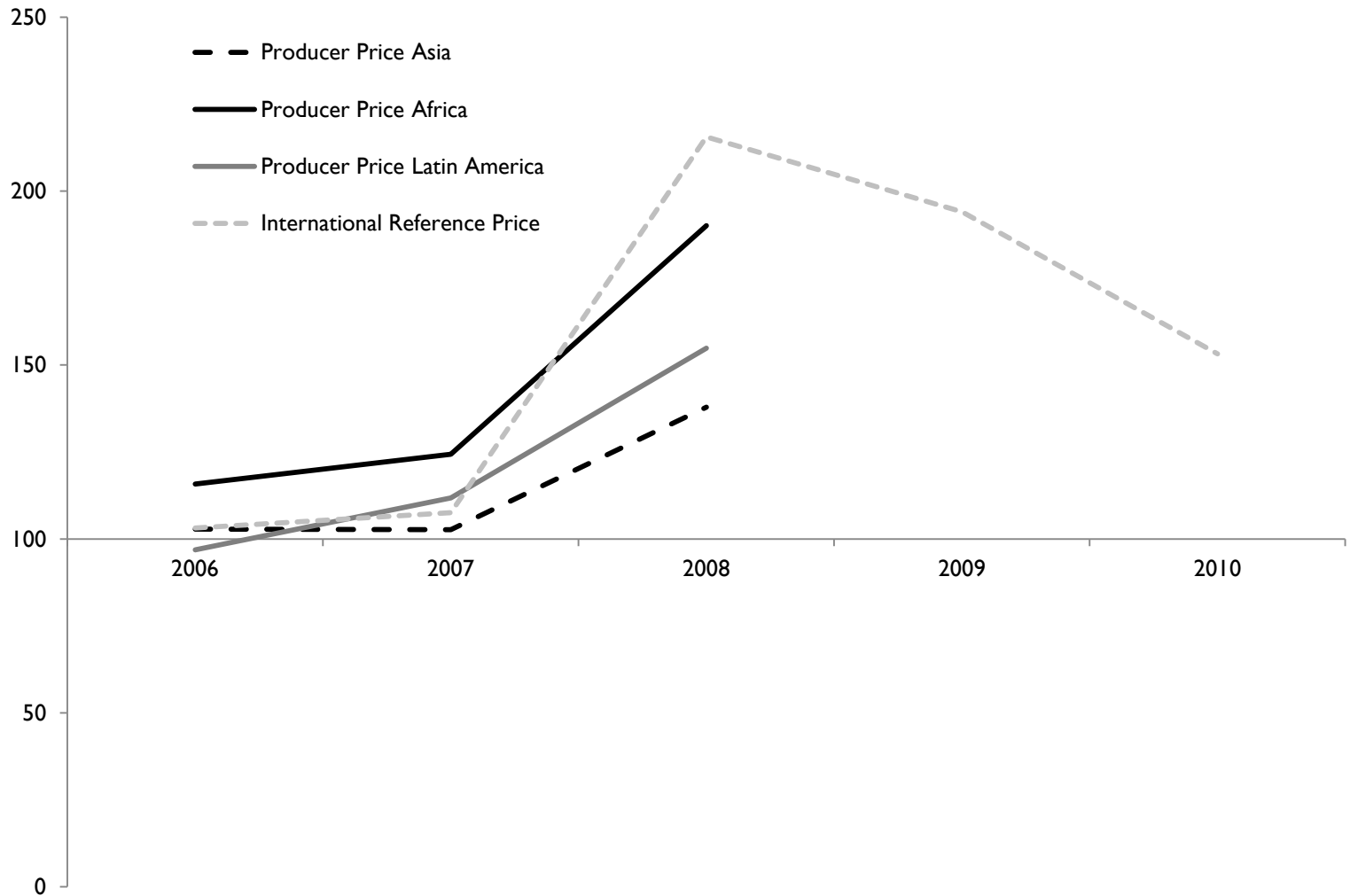
|              | <b>Impact of <math>\Delta</math><br/>Protn</b> | <b>Share due to<br/><math>\Delta</math> Protn</b> |
|--------------|--|---|
|              | %  | %   |
| Rice 2005-8  | 46   | 45  |
| Wheat 2005-8 | 28   | 30  |

# Insulation in rich & poor countries

- Developed countries have traditionally used insulating policies
  - Very strongly in 72-4 & 84-86,
  - But much less in 06-08
- WTO disciplines on insulation?
  - eg ban on variable levies?

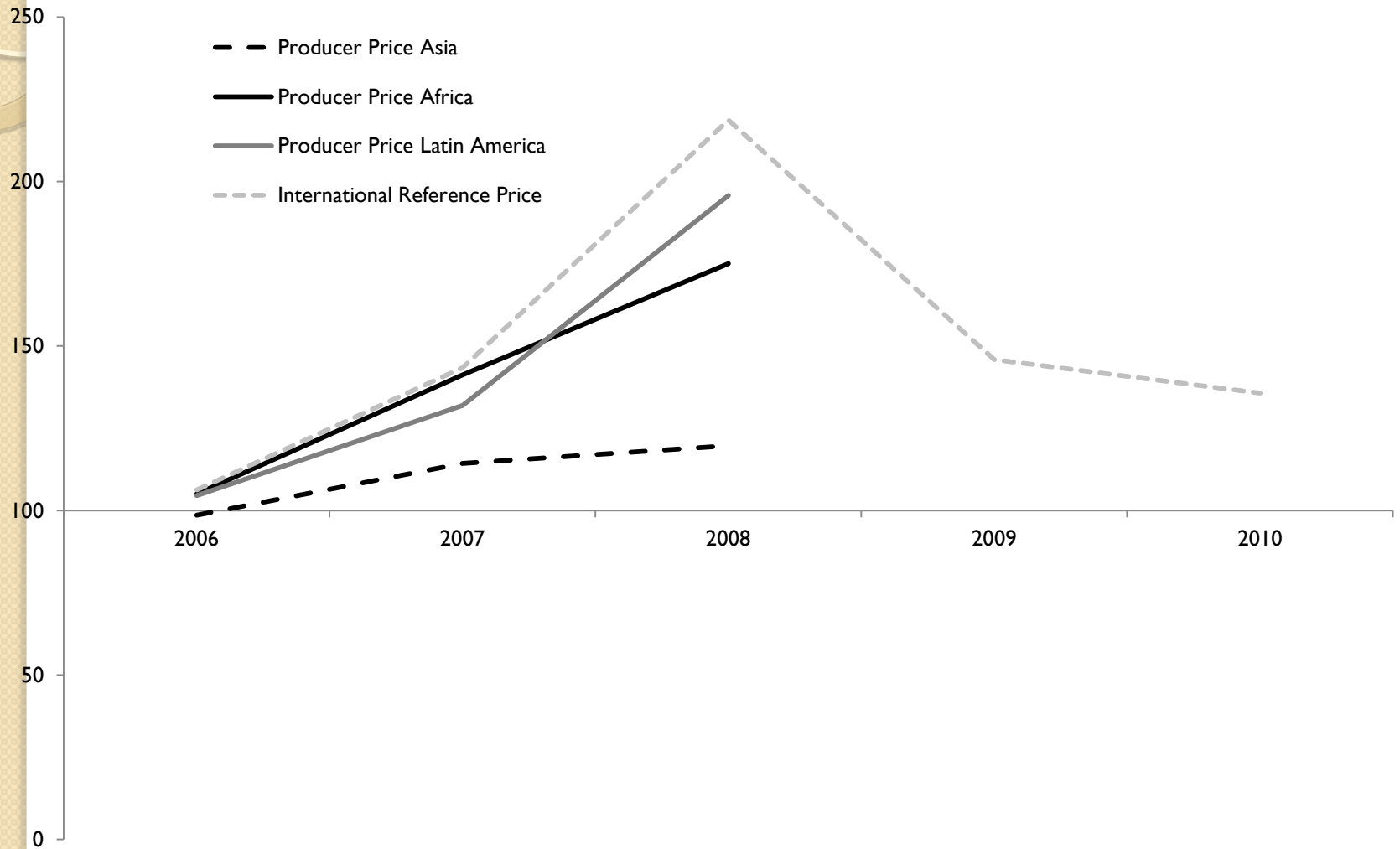


# 2008 surge, rice prices





# 2008 surge, wheat prices



# Insulation policies

- Clearly, insulation policies are much less effective than they appear to individual countries
  - Redistribute, rather than reduce, domestic price volatility
- For large countries, such as China, India and Vietnam, the effect is very direct
  - Export restrictions raise world prices, reducing the effectiveness of the policy
- For all countries, the collective action problem remains



# International policy options

# Current WTO policies

- WTO bindings limit import tariffs
  - Lower bindings mean less scope for tariff reductions
  - Variable import levies banned in Uruguay Round
  - Special Safeguards directly structured to insulate domestic prices
- Export disciplines are very weak
  - Export taxes not disciplined at all
  - GATT Article XI bans export quantitative restrictions
    - Except in cases of food shortage

# Questions for international policy

- How might cooperative policies improve on the current beggar-thy-neighbor regime?
- More information on stocks and policies
- Would restrictions on export barriers help increase the confidence of importers?
  - Should food aid be exempted from export bans
- Should policies focus just on export barriers?
  - Or include import barrier reductions?
- How might international disciplines on trade and storage policies work?
  - Convert export restrictions to taxes?
  - Aim to reduce the degree of insulation?

# Conclusions

- Prices of staple foods prone to intense but short-lived price spikes
  - Extremely costly for the poorest
- Optimal policy for an individual country likely to involve beggar-thy-neighbor policies like export restrictions & import subsidies
- But these policies collectively self-defeating
- A key challenge is designing new policy rules to deal with the collective-action problem

# References

- Gouel, C. and Jean, S (2011) 'Optimal food price stabilisation in a small open developing country' <http://are.berkeley.edu/documents/seminar/Trade.pdf>
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- Martin and Anderson, 'Export restrictions and Price Insulation during Commodity Price Booms' Policy Research Working Paper 5645