



*National and global food security:
what roles for trade and trade policies?*



Kym Anderson and Will Martin

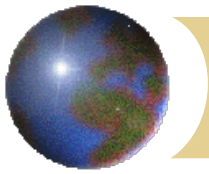
University of Adelaide and World Bank

kym.anderson@adelaide.edu.au

Wmartin1@worldbank.org

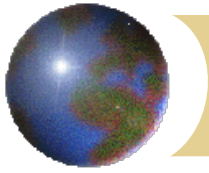
Forum on Reframing the Food Security Agenda

Adelaide, 13 February 2012

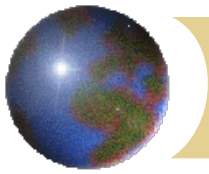


Take-away messages

- ✦ Food security is primarily a consumption issue, but also a prod'n issue globally, esp. in long run
- ✦ Global agric prod'n would be more efficient, int'l food prices less volatile, & food security greater, if governments reduced trade policy interventions
 - ✦ And invested more in Agric research and development
- ✦ Current food security concerns (SR price spikes, LR slowing crop yield growth) provide reform opportunities: don't waste a crisis!

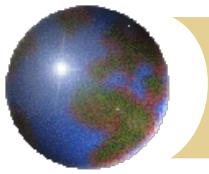


What is food security?



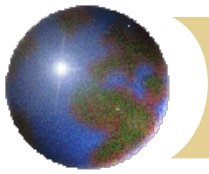
What is meant by 'food security'?

- ✦ Rests on three pillars:
 - ✦ availability, access, & utilization
- ✦ At the **national level**, food security is primarily an *access* issue
 - ✦ FAO's ideal "when all people, at all times, have physical, social and economic *access* to sufficient, safe & nutritious food which meets their dietary needs and food preferences for an active & healthy life"
- ✦ But **globally**, food security is also a production issue, as supply affects price, and price affects access



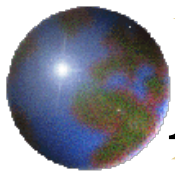
Causes of household food insecurity

- ✚ Poverty
- ✚ High food prices
 - ▣ Most poor people are rural– but net food buyers
- ✚ Inadequate policies to ensure access
 - ▣ eg social safety nets
- ✚ Lack of education/nutrition knowledge
- ✚ National food prodn has no direct impact
 - ▣ There is an indirect effect: higher farm incomes and higher wages help poor people afford food

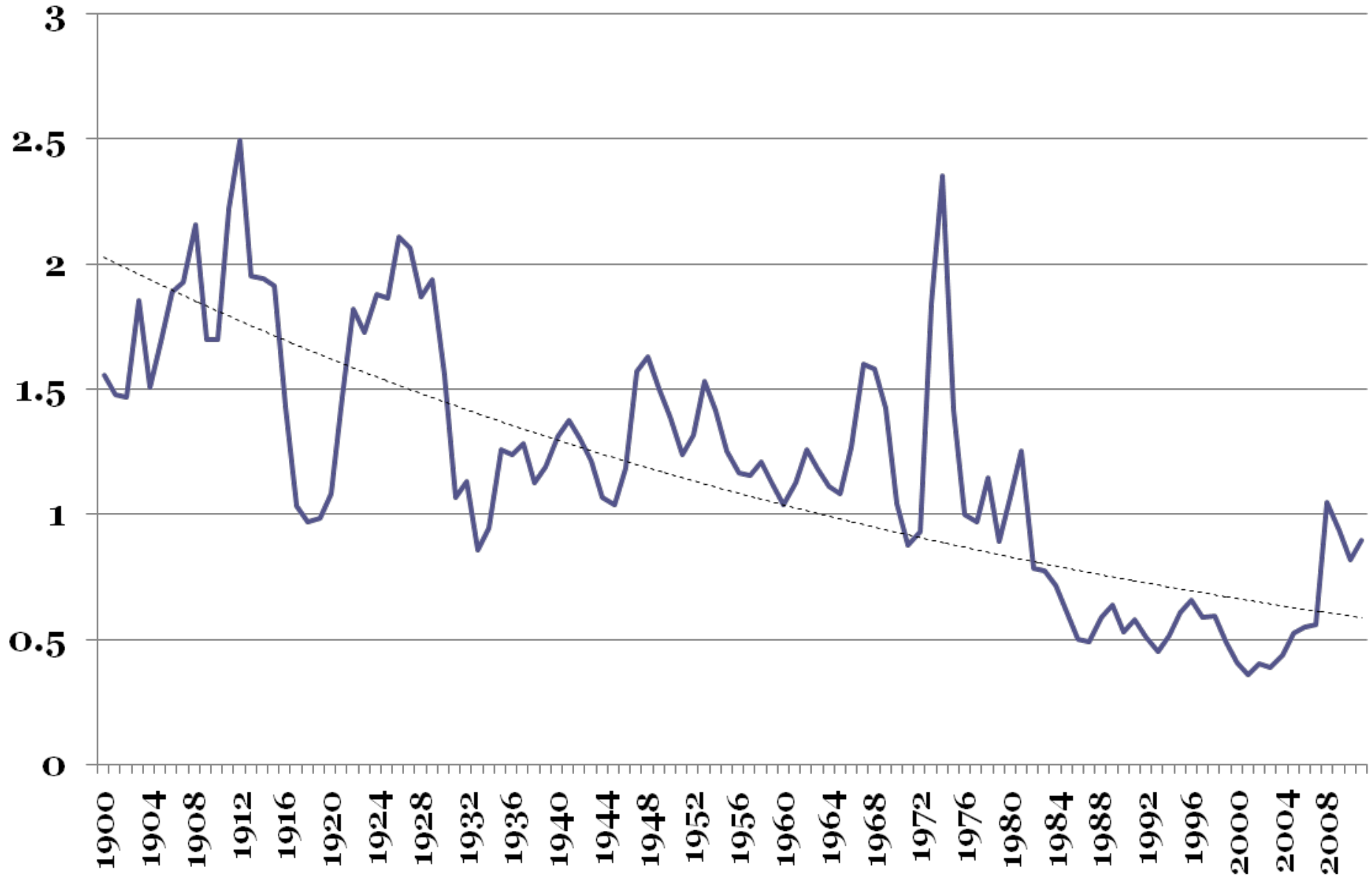


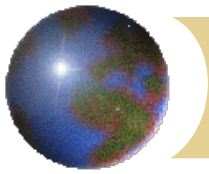
Short-run vs long run FS concerns

- ✦ Current political interest stems mainly from **recent food price spikes** (around trend level)
 - ✦ Have they pushed more people into poverty?
- ✦ Longer-run concerns have more to do with **higher trend levels of prices**, due to:
 - ✦ rapid income **growth in developing countries**, growth of **biofuel demand**, & declining **yield growth**
- ✦ Both SR and LR concerns often are addressed by **trade policy responses**
 - ✦ Yet SR **and** LR global food security concerns are often exacerbated by trade policies



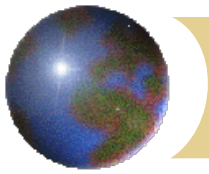
Index of real int'l rice price, 1900-2011





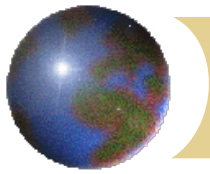
SR: Higher food prices raise poverty

- ✚ 2008 price spike raised global poverty by roughly 100 million people
- ✚ 2010 price increase led by wheat raised poverty by 44 million people
 - ▣ 68 million people falling into poverty
 - ▣ 24 million people rising out of poverty
 - Net sellers gaining from higher prices



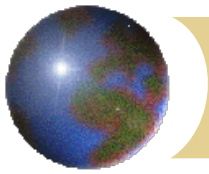
What of the future?

- ✚ Will the experience of the 20th century repeat?
 - ✚ Downtrend in real food prices, with technological improvements outpacing growth in population and incomes
 - ✚ and with occasional, self-correcting price spikes
- ✚ Or should we expect high, even rising int'l food prices & with greater volatility?



What policies need reforming to improve SR and LR global food security?

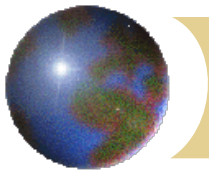
- ✚ Sound policy responses depend on understanding the causes
- ✚ Need to reflect on causes of recent SR price spikes and potential reversal of long-run downward price trend of 20th century



Causes of global food security concerns

⊕ Food **demand** factors:

- ⊠ *Short-term, maybe one-off*: hedging against wobbles in financial and housing markets
- ⊠ *New, but intermittent*: biofuel subsidies and mandates (for energy security)
 - adding hugely to global grain, oilseed & sugar demand,
 - Potential source of volatility
- ⊠ *Long-term, continuing*: Rapid income growth in Asia is expanding demand for livestock products, hence also for feedgrains and oilseeds
 - as well as for minerals and energy raw materials
- ⊠ *Long-term, prospective*: carbon taxes on fossil fuel use — or direct support of biofuels — will add to demand for renewables including biofuels



Causes of food security concerns (2)

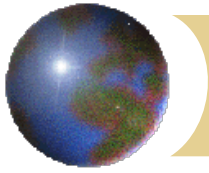
⊕ Food **supply** factors:

⊞ *Short-term:*

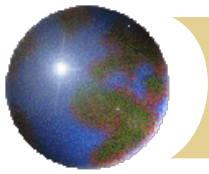
- drought/floods/wildfires
- Reductions in policy stocks

⊞ *Long-term, continuing:*

- Slowdown in growth of agric R&D investment has reduced crop TFP growth
- Climate change may slow crop yield growth and raise both the mean and variance of int'l food prices



Trade policy responses



Trade policies and price spikes

✚ **When international prices spike**

- ✚ Exporters restrict exports & importers lower tariffs
 - to protect domestic consumers

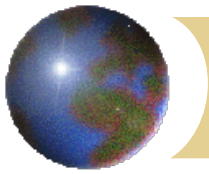
✚ **When international prices decline**

- ✚ Importers raise tariffs & many exporters pay subsidies
 - to protect farmers

✚ **Each increases volatility in world markets**

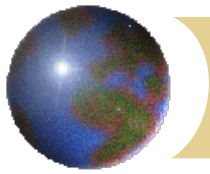
- ✚ Collectively ineffective in stabilizing domestic prices

✚ **Export restrictions make importers less willing to rely on world markets**



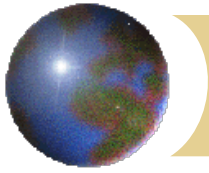
Self-sufficiency policies: long run impacts

- ✦ Protection of import-competing foods raises *availability* but may reduce *access* of the poor
- ✦ In a multi-country trading world, national income highest when specialization → comparative advantage
 - ✦ eg cash crops may boost farm income more than staple foods, esp. as commercial farming grows with econ. development
- ✦ Import restraints raise food prices & prejudice *access*
 - ✦ Raising productivity may increase farm incomes and increase *access* to food
- ✦ Food stamps or direct cash e-transfers to targeted poor households can more-efficiently ensure access
 - ✦ And even more so with better education about nutrition

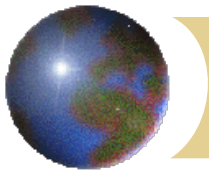


Will growth in emerging economies push up int'l food prices?

- ✦ China's impact so far has been much less on int'l prices for food than for minerals and energy
 - ✦ **But partly because of gradual removal of agric disincentives** over past 3 decades
- ✦ True also of **India**, plus Green Revolution contributed to its food self sufficiency from 1960s
 - ✦ and raised real incomes of the poor
- ✦ If large developing countries choose **not** to protect agriculture, they could well become larger agric importers- and make their poor people better off



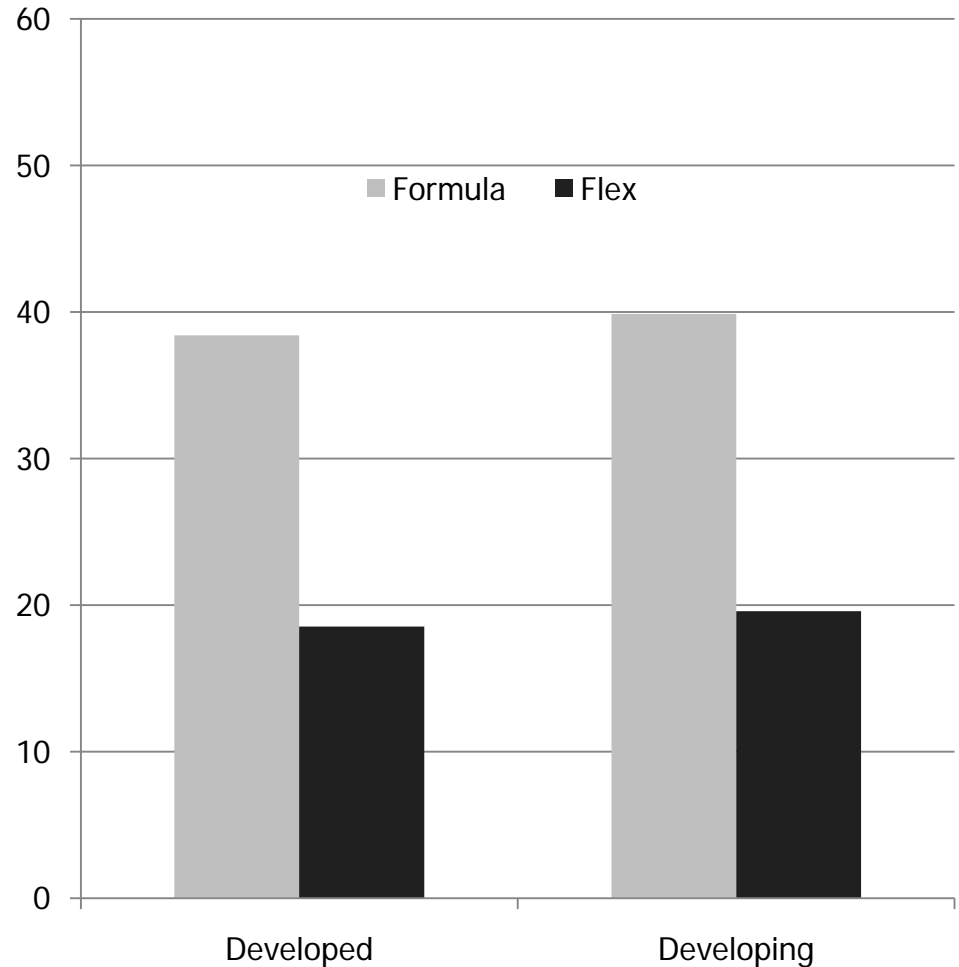
Potential policy responses

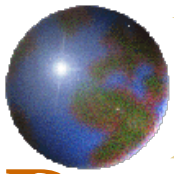


Doha Agenda Proposals

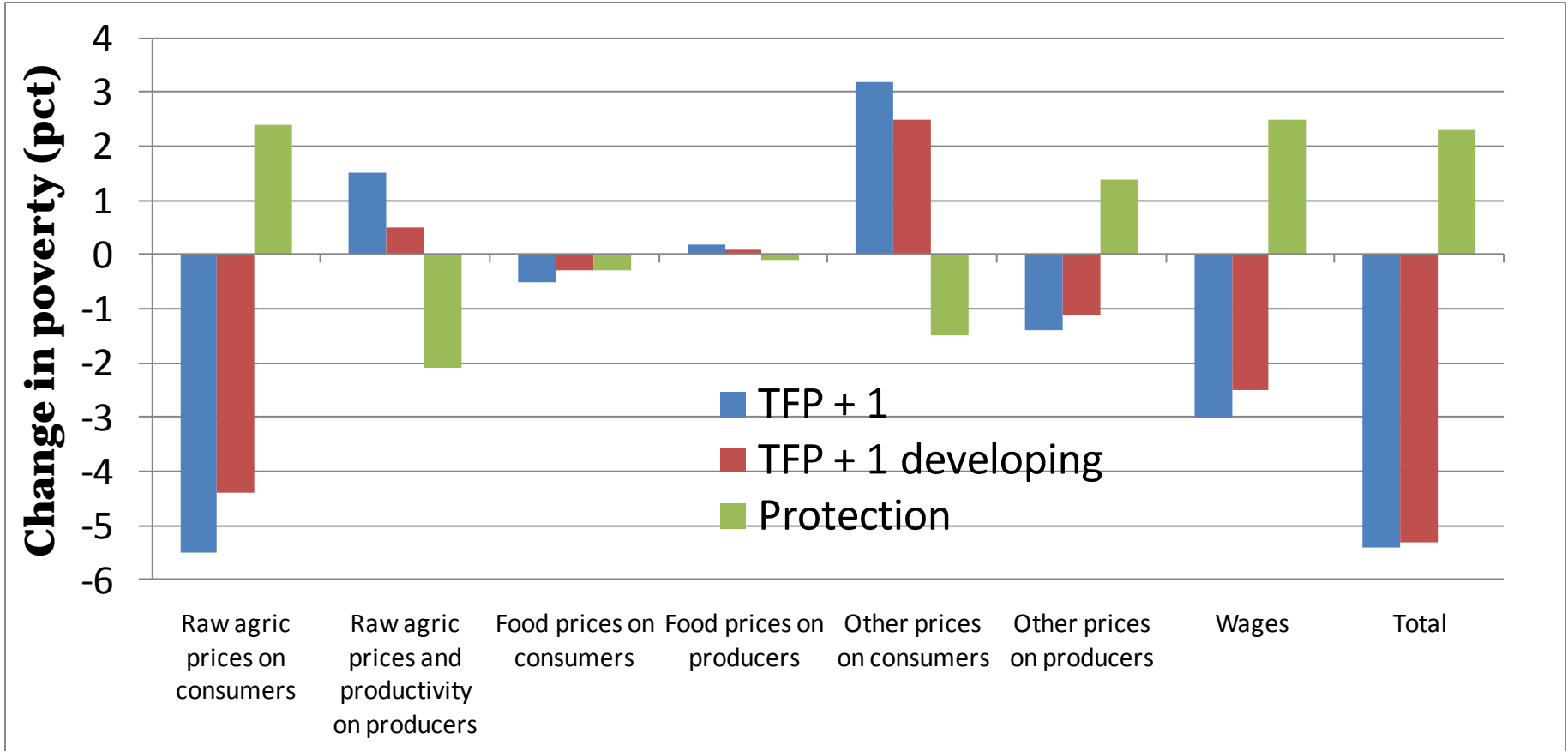
- Substantial cuts in agricultural tariffs
- Big cuts in Non-agricultural tariffs
- Prohibition of export subsidies
- Substantial economic gains
 - Conservative estimate \$160 bill/yr
 - Potentially greater gains from further liberalization
- Nothing on export restrictions
- Special safeguard needs special caution

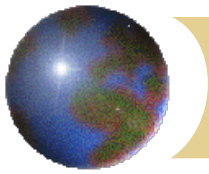
✚ Cuts in agricultural tariffs





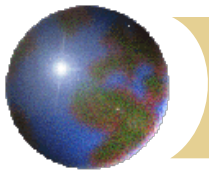
Decomposing global poverty impacts





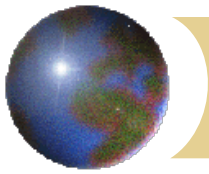
How can Austn agriculture contribute?

- ✦ Invest more in R&D all along value chain
 - ✦ Support R&D in developing countries
 - ✦ Develop varieties more suited to changing climate
- ✦ Press government to re-start WTO's Doha round
- ✦ Anticipate consumer demand for environmentally sustainable production/processing/transporting
- ✦ Demand better water market institutions/policies
- ✦ Hedge against price & exchange rate fluctuations



Conclusions

- ⊕ Food security is primarily determined by whether poor people have access to food
- ⊕ Good trade policies improve access to food and avoid exaggerating price volatility
 - ⊞ and help feed the world's 9 billion people in 2050
- ⊕ Recent experience of high and volatile prices suggests a need to combine open trade regimes with strong support to R&D



Thanks!

- ✦ Anderson, K. and S. Nelgen, "Trade Barrier Volatility and Agricultural Price Stabilization", *World Development* Jan. 2012
- ✦ Martin, W. and K. Anderson, "Export Restrictions and Price Insulation During Commodity Price Booms", *American Journal of Agric Econ* 94(2), Jan. 2012
- ✦ Anderson, K. and A. Strutt, "Agriculture and Food Security in Asia by 2030", Background Paper for Asian Development Bank Institute's project on *ASEAN, China and India: A Balanced, Sustainable, Resilient Growth Pole* (forthcoming 2012)
- ✦ Ivanic, M. and W. Martin, "Global Poverty Consequences of Growth and Industrialization to 2050", World Bank (forthcoming 2012)
- ✦ Martin, W. And Mattoo, A. *Unfinished Business: the WTO's Doha Agenda*, CEPR and World Bank.