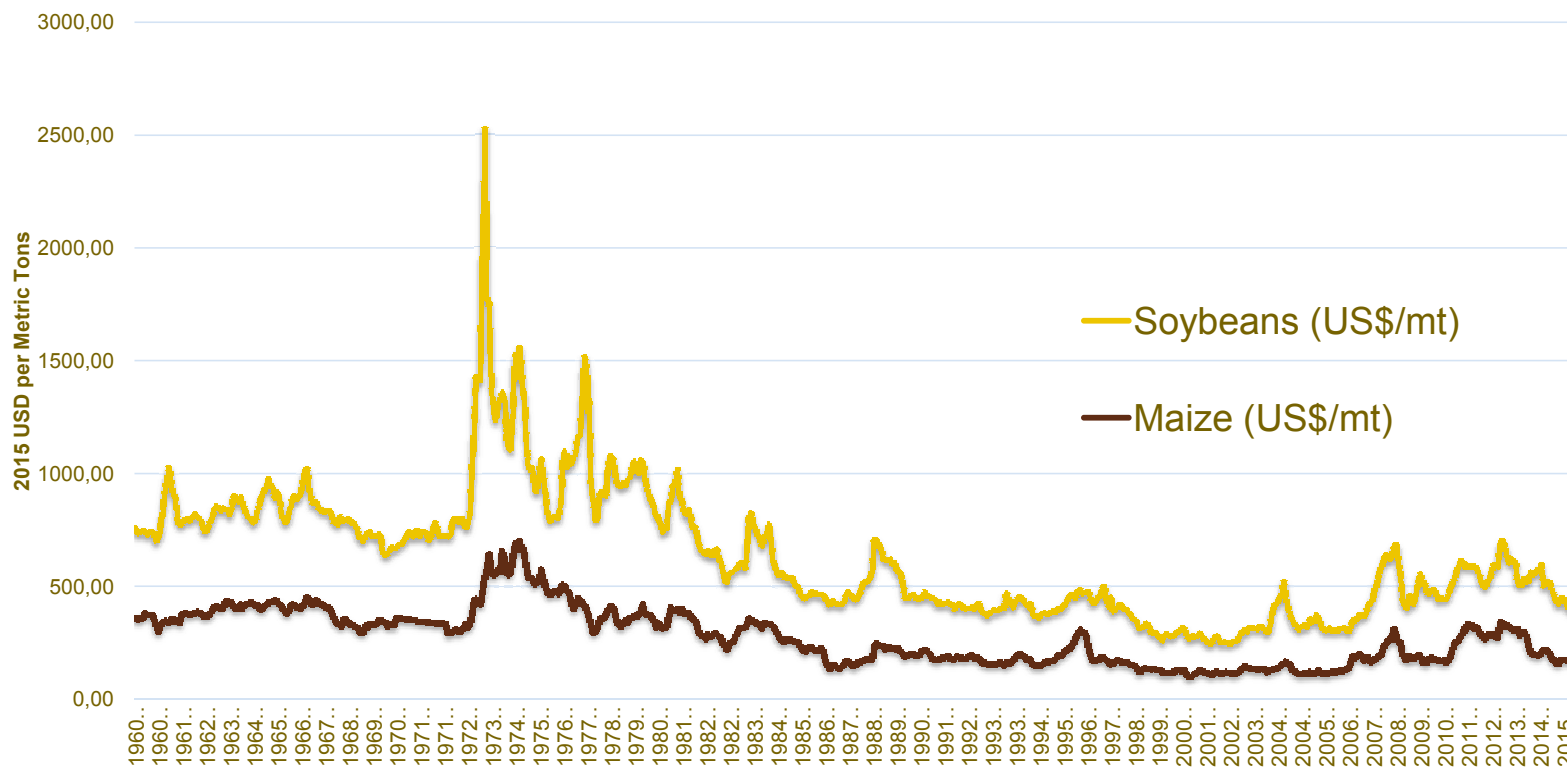**COMMENTS ON:**

SOUTHERN CONE CONTRIBUTIONS TO FOOD SECURITY AND GLOBAL ENVIRONMENTAL SUSTAINABILITY

Maximo Torero
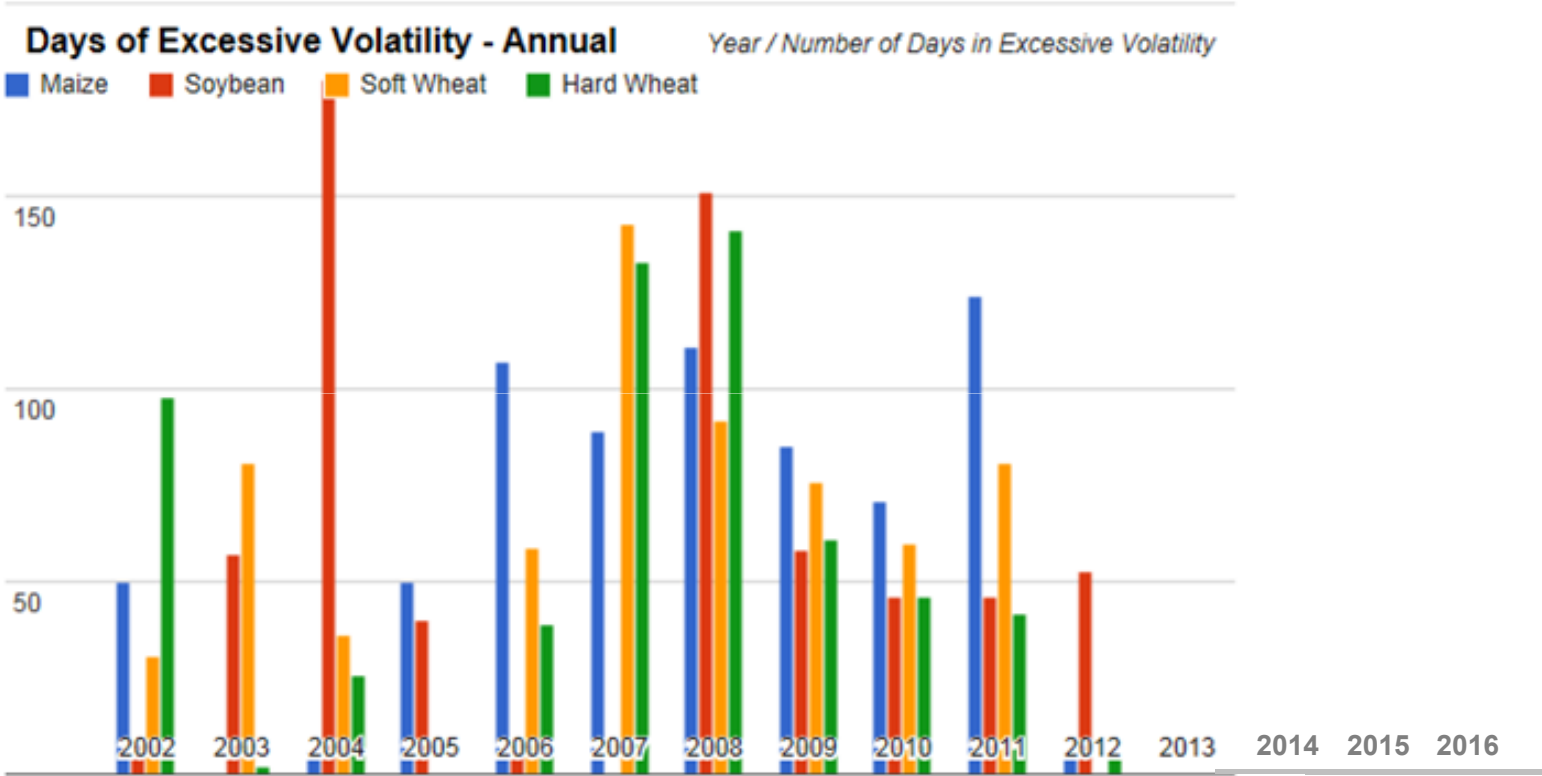
Food Security, Water Scarcity, the G-20 Agenda and the Strategic Role of Southern Cone Countries (Argentina, Brazil, Paraguay and Uruguay)

Photo: S. Allen; IFPRI

¿What we know?

Real Price Evolution in US$ 2015

Periods of Excessive Food Price Volatility

Days of Excessive Volatility - Annual   *Year / Number of Days in Excessive Volatility*

■ Maize   ■ Soybean   ■ Soft Wheat   ■ Hard Wheat

*Please note: Days of excessive volatility for 2013 are through March 2013*

Source: Martins-Filho, Torero, and Yao 2010. See details at http://www.foodsecurityportal.org/soft-wheat-price-volatility-alert-mechanism.

Climate Variability and Risk

- Moderate consensus that temperate regions will have increased variability in temperature and rainfall
- No consensus on tropical regions (IPCC AR4)
- But increased mean temperature increases risk
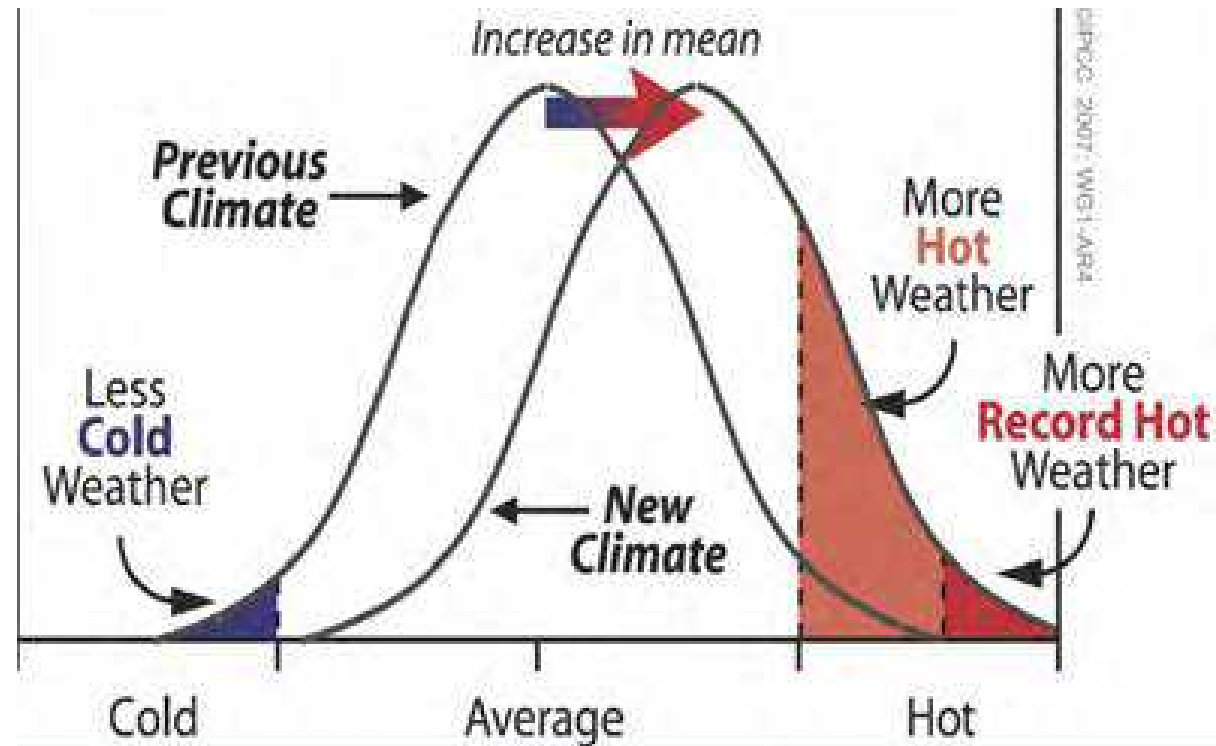
On Agriculture: Climate Change Price Impacts - Scenario Results

Figure 1. Impacts of climate change on global yields, area, production and prices of the 5-crop aggregate relative to baseline values in 2050 for each Shared Socioeconomic Pathway (SSP) and Representative Concentration Pathway (RCP) compared across five models
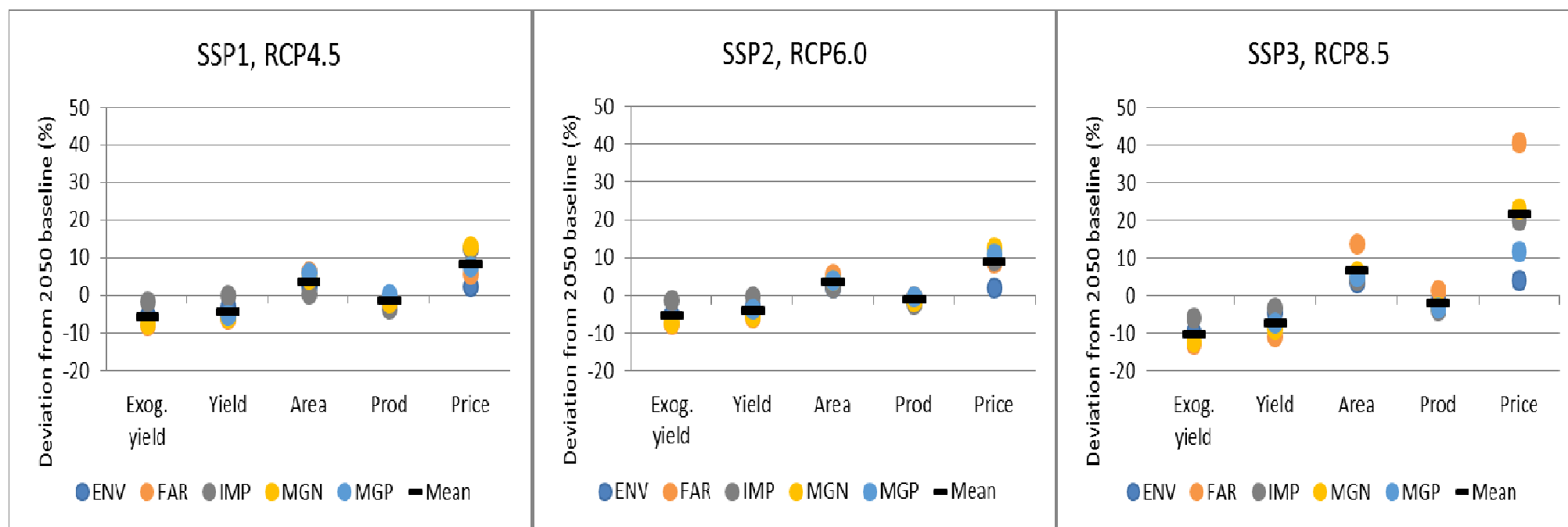
Note: ENV = ENVISAGE, FAR = FARM, IMP = IMPACT, MGN = MAGNET, MGP = MAgPIE.
Source: Work in progress by IFPRI, LEI-WUR, PIK, Purdue, USDA-ERS, IDS
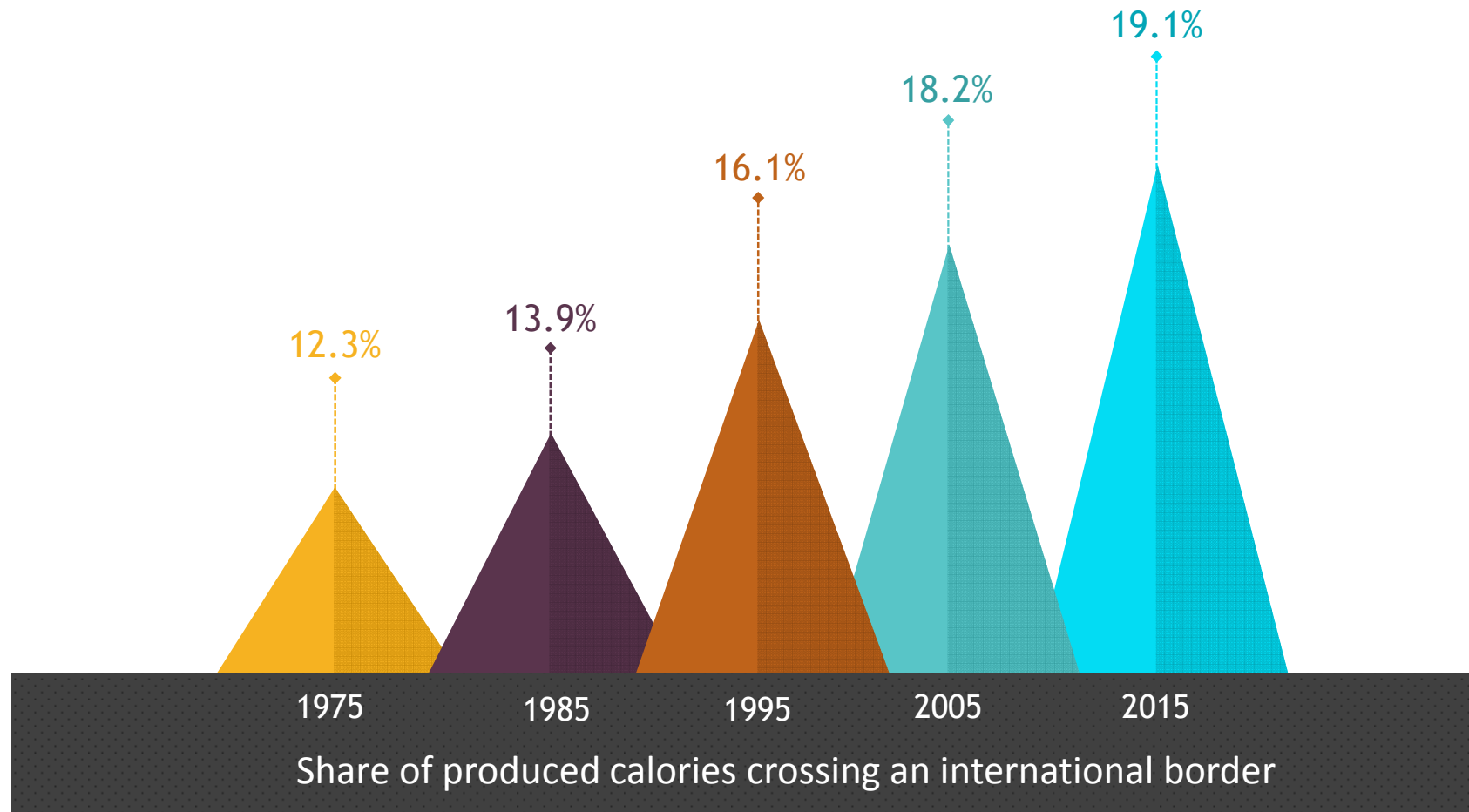
Different problems but same policies
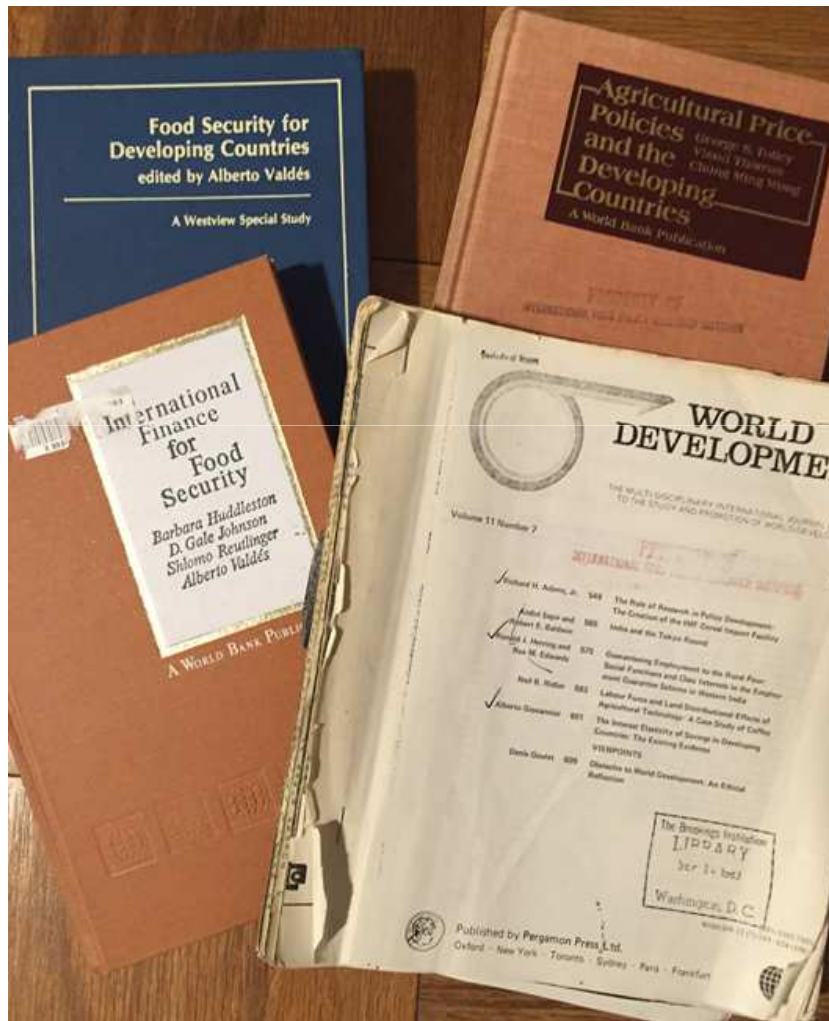
INITIATIVE ON SOARING FOOD PRICES

Country responses to the food security crisis:
Nature and preliminary implications of the policies pursued

A continuous trend towards internationalization of food markets

19.1%

18.2%

16.1%

13.9%

12.3%

1975   1985   1995   2005   2015

Share of produced calories crossing an international border

¿What is the role of LAC?

LAC imports from the world measured in calories has increased by 3.5 times since 1995

LAC Imports from World in Calories
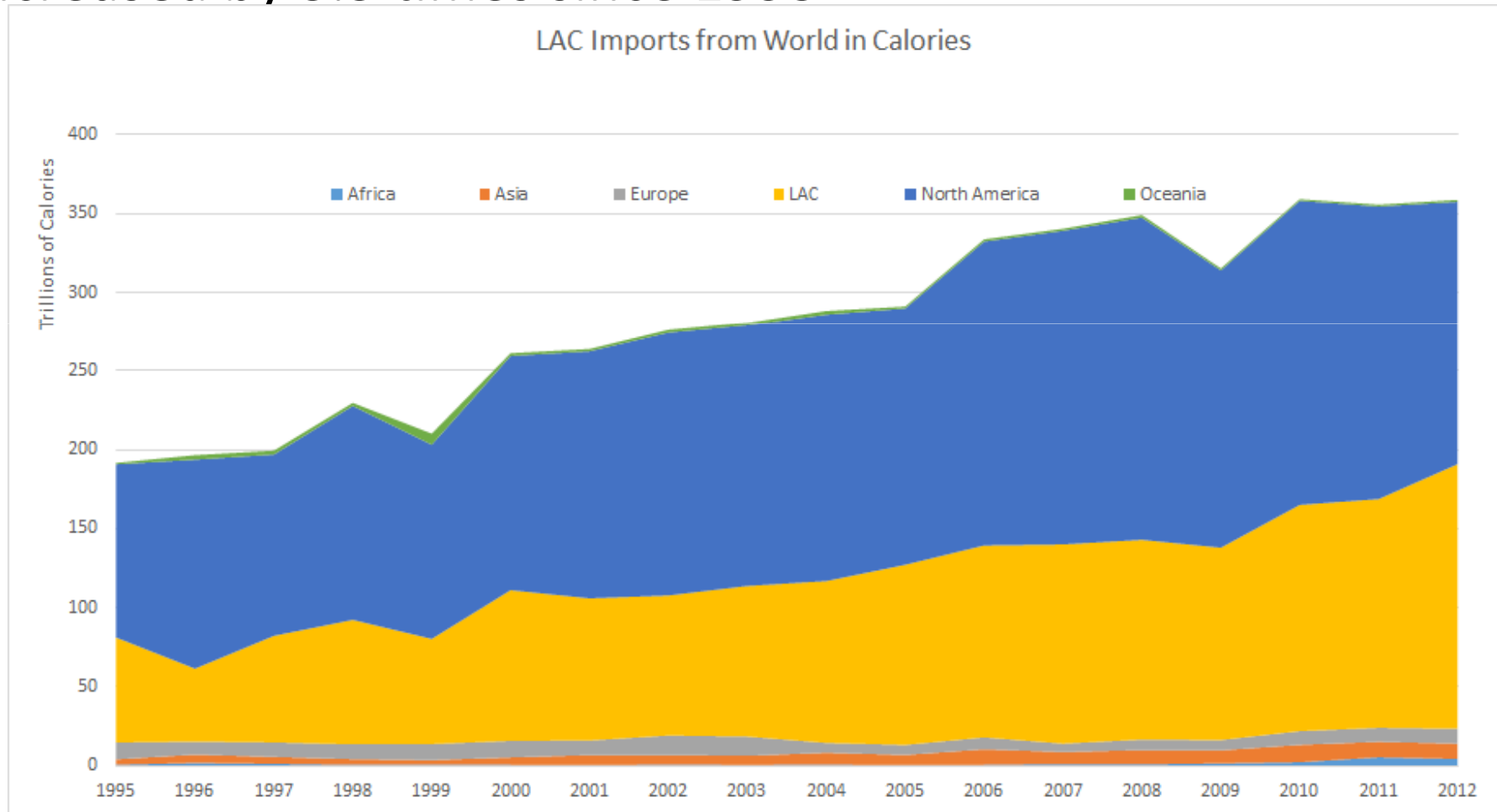
LAC exports to the world measured in calories had increased in 7.5 times since 1995
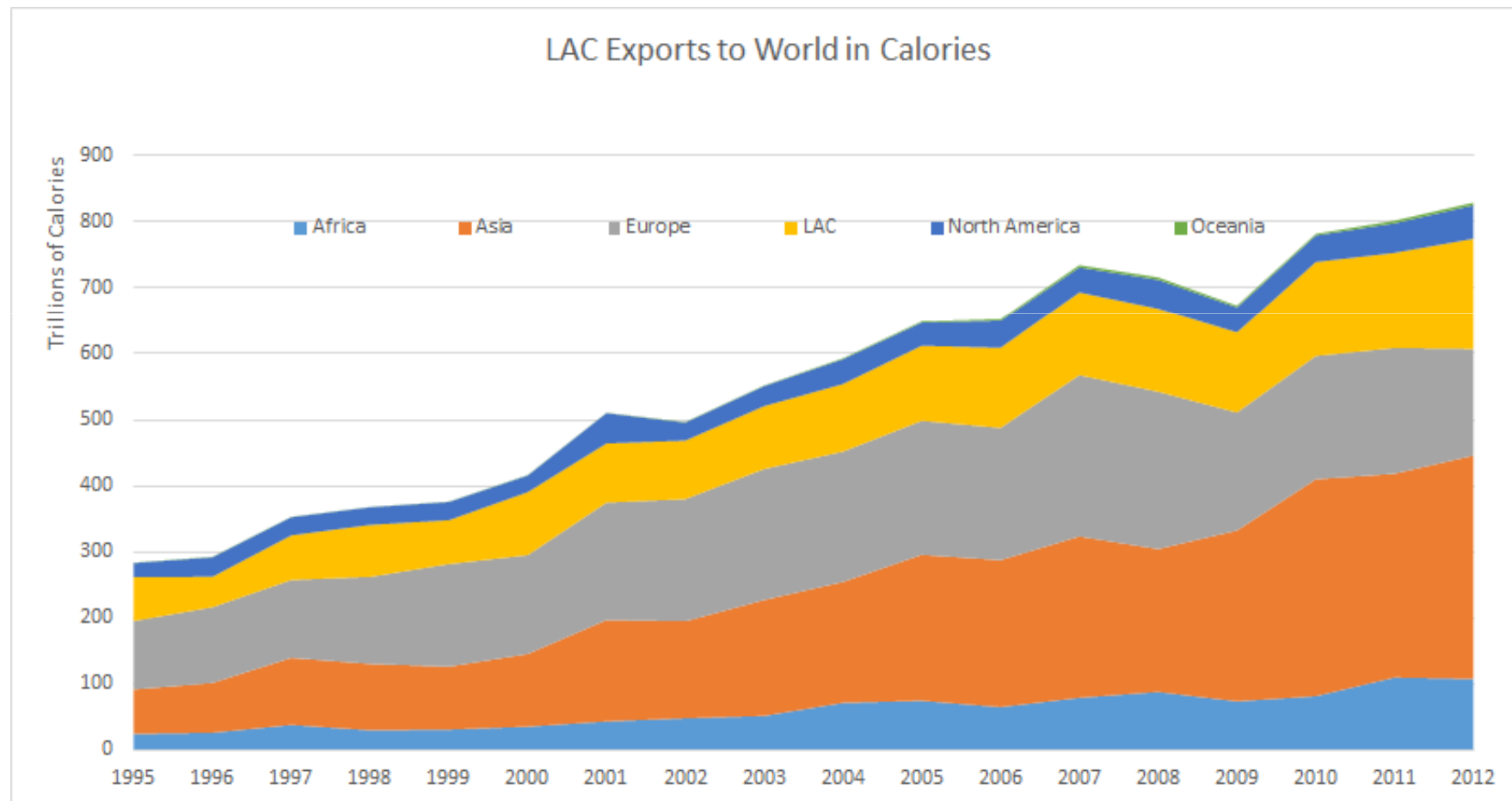
Ratio of agricultural productivity in the United States versus LAC
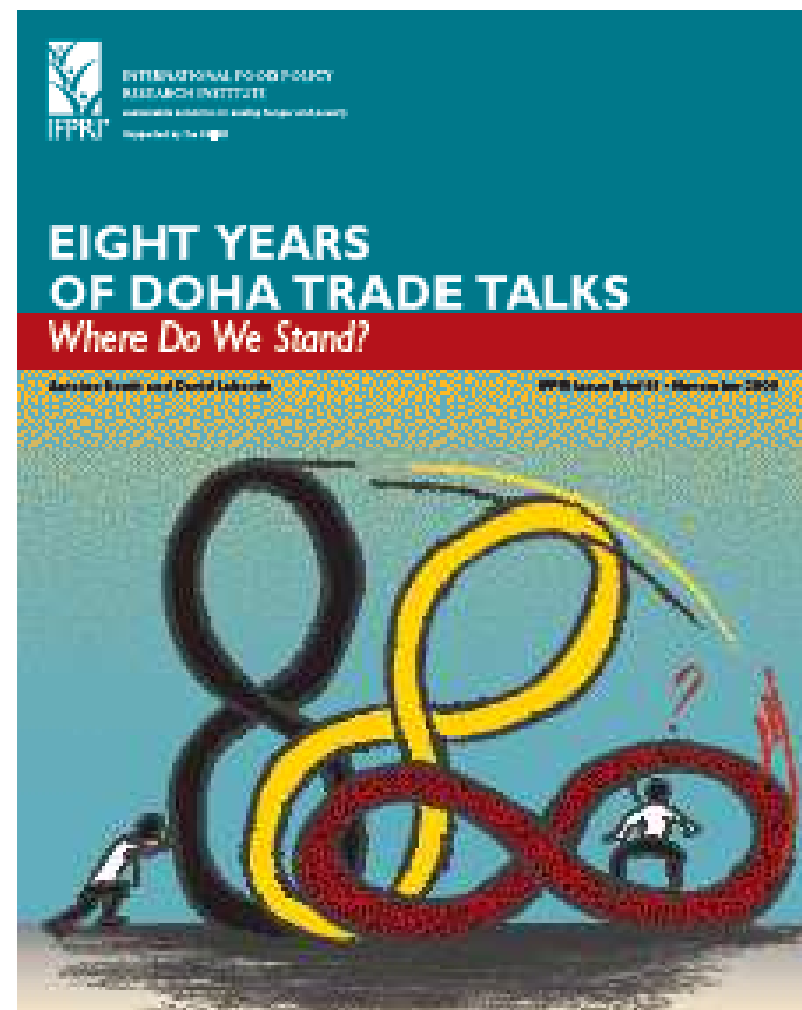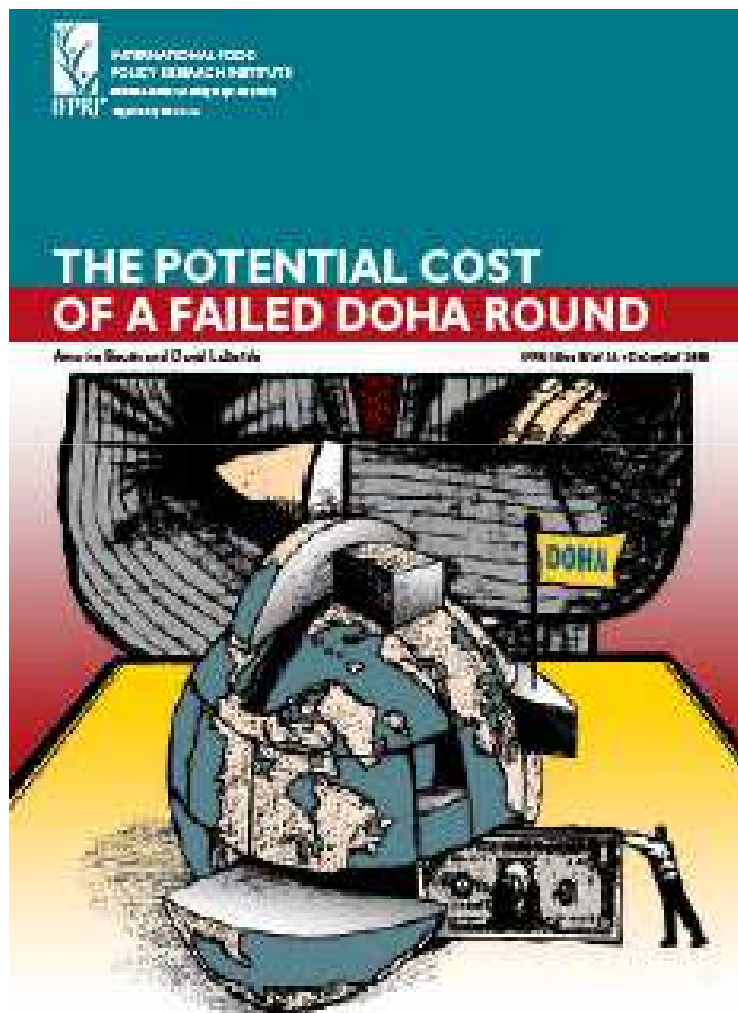

Agricultural Productivity in the US versus LAC
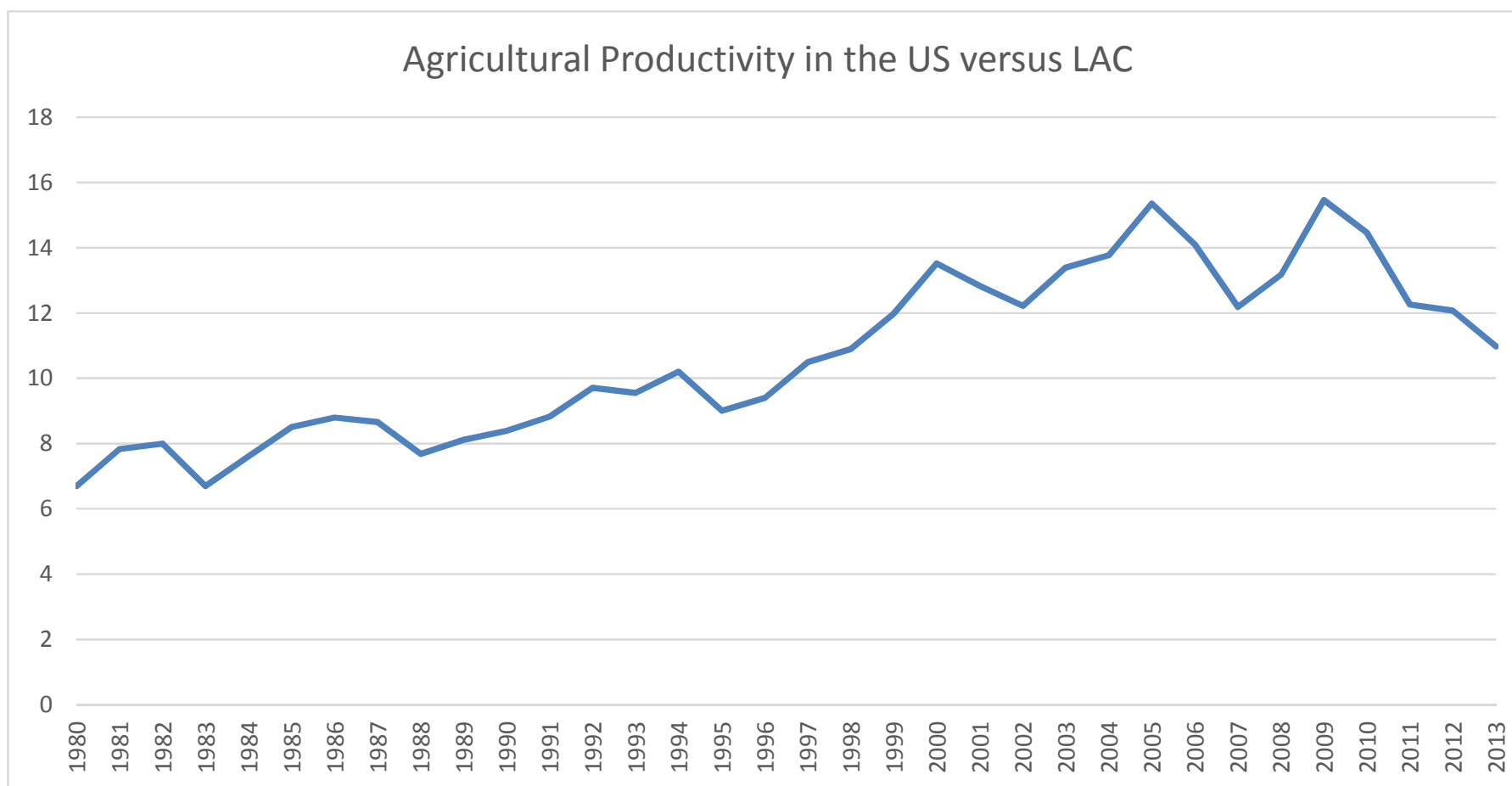
Note: Agricultural productivity is measured as Agriculture value added per worker in constant 2005 US$.
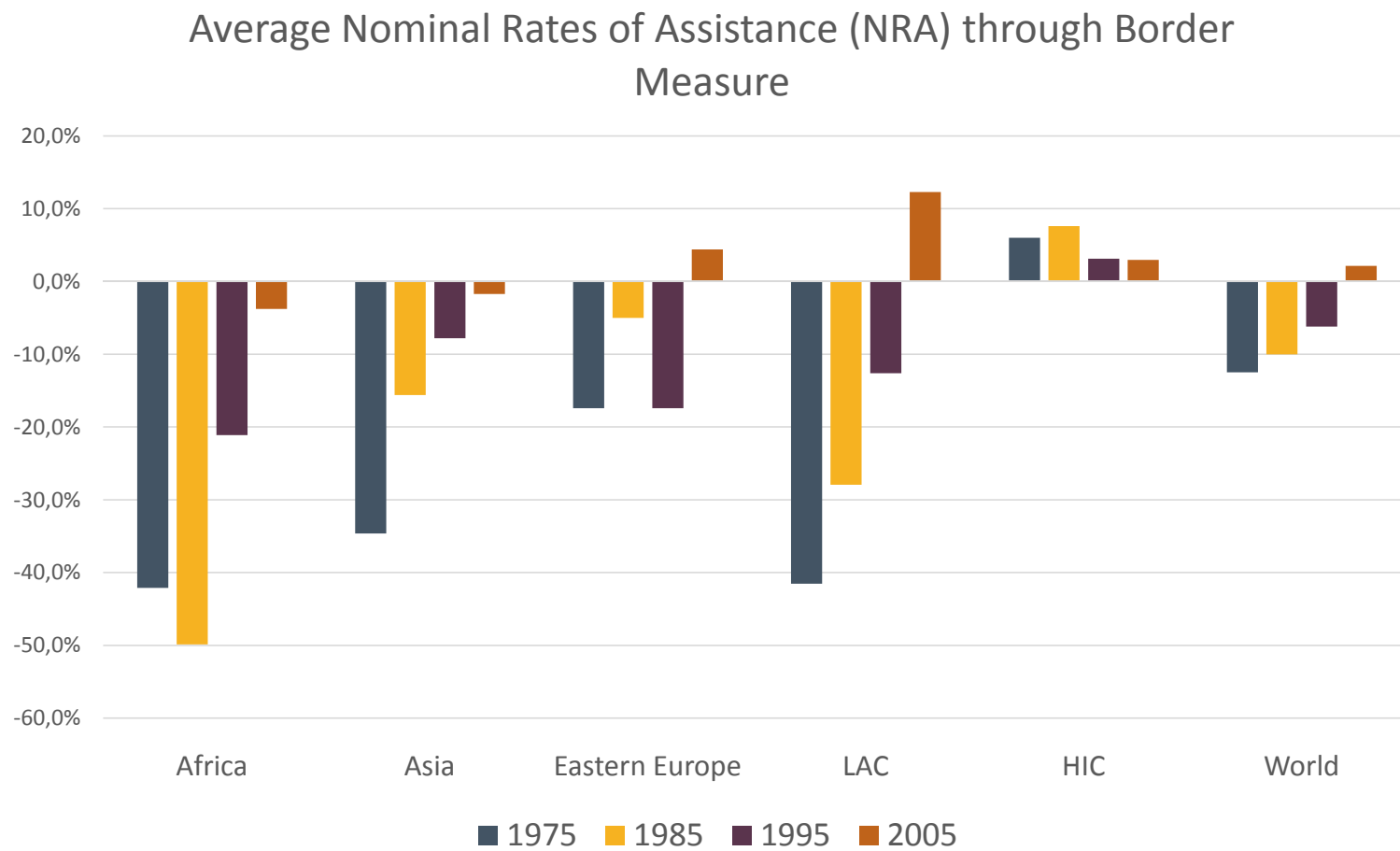*Source: World Development Indicators, 2013.*

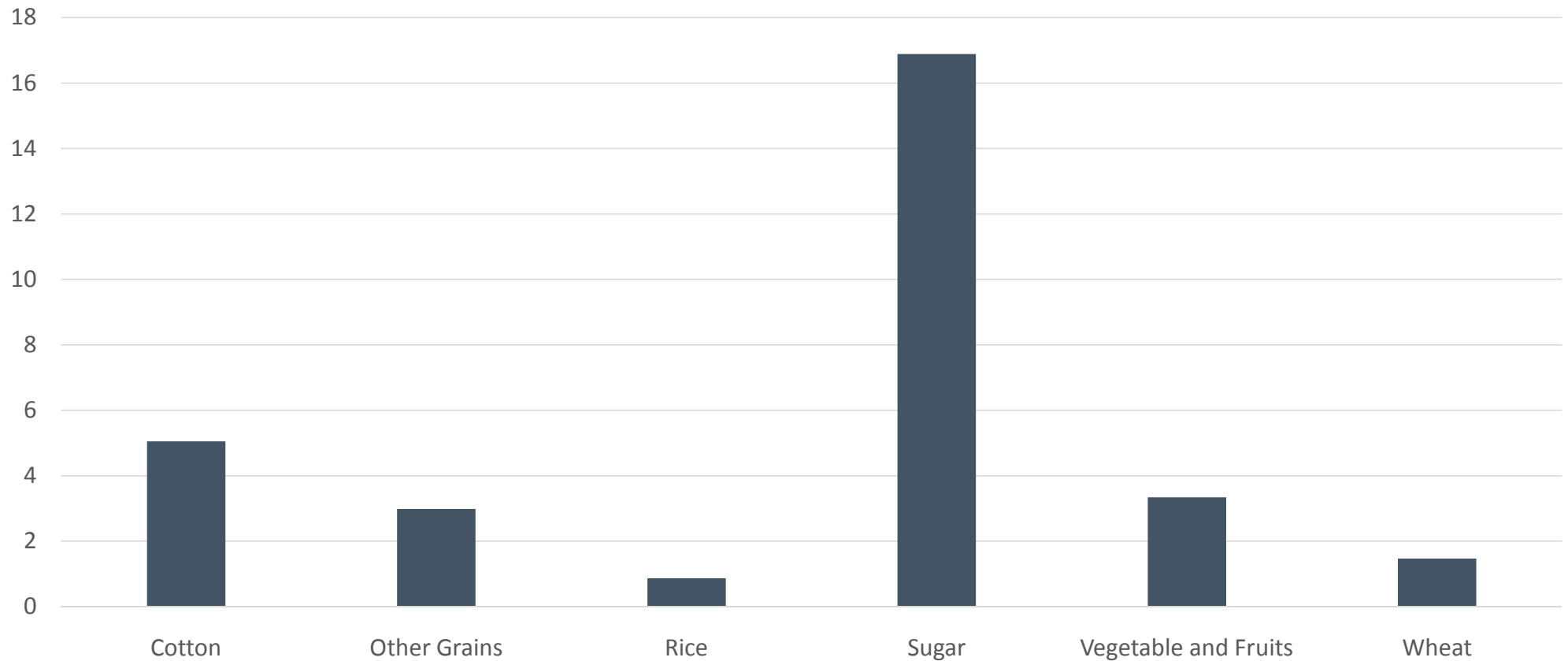# Some issues

… DOHA gone but now TRADE WARS?

Evolution by region of the price support through border measure

Average Nominal Rates of Assistance (NRA) through Border Measure

World Price increases due to climate change (average scenario)

Average Impact of climate change (yield effects) on fruits and vegetables consumption per capita, %, by 2050

APEC (Total)	North America	South America	Oceania	South East Asia	East Asia	High income Countries	Upper and Middle Income countries	Low and Middle income countries

Geographical grouping

Income grouping
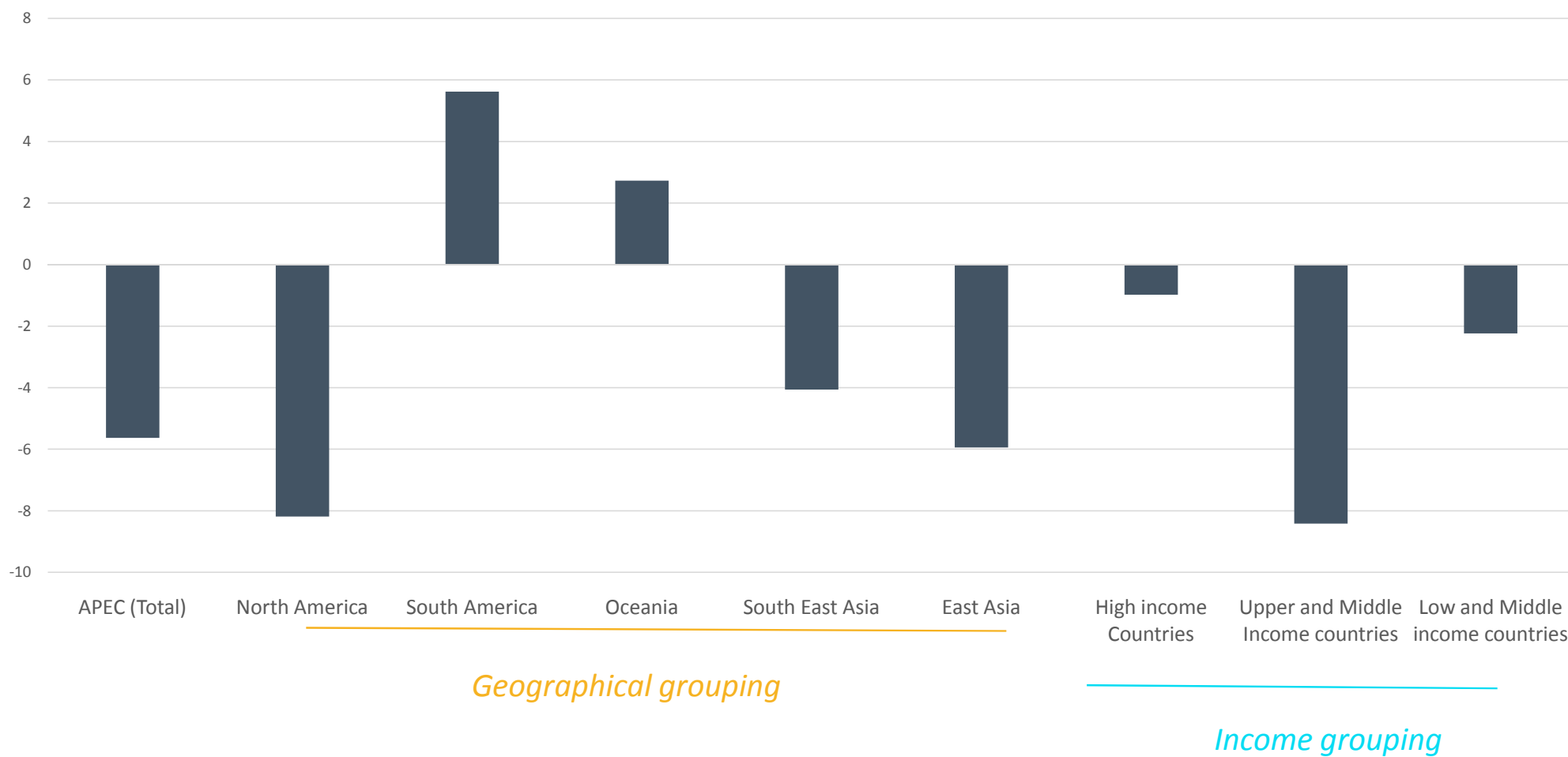
Huge uncertainty!
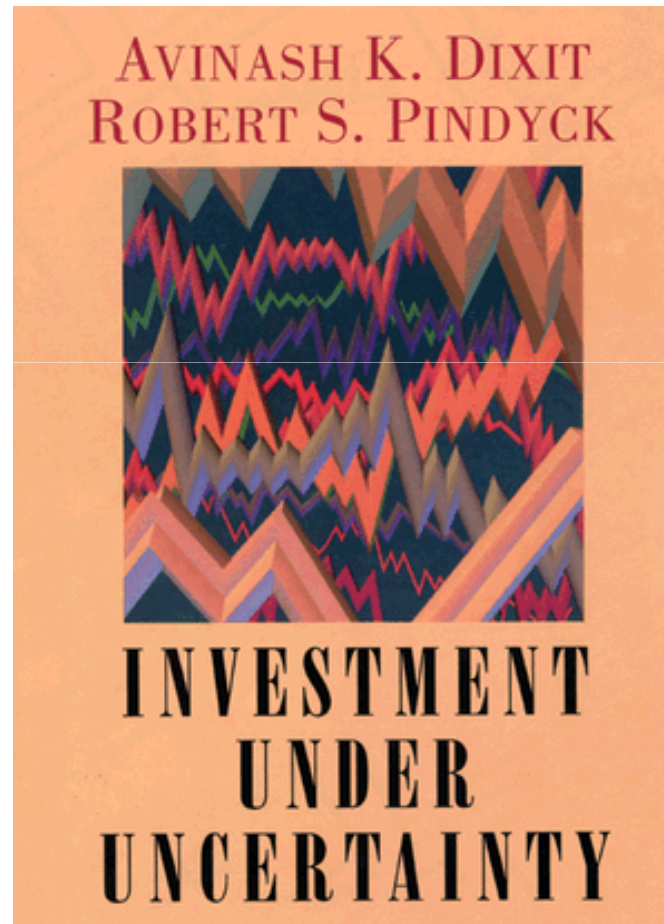
Way forward

Climate Smart Policies (CSP): But the Details Need More Evidence

1. Analysis is needed to close knowledge or information gaps regarding the degree of "climate smartness" of policies, investments and technologies.

2. Market signals cannot provide the necessary guidance because impacts are not easily observable and prices are missing on resilience and GHG emissions. So these need to be discovered through analysis.

3. In addition, climate smartness is highly location specific, so evidence needs to be spatially disaggregated.

Increase resilience to risk: risk coping instruments

Forecasts
- Keep improving forecasts
- Analytical data like the one for el Niño (weather, crop, soil)
- Market intelligence

Insurance
- Substantial amounts of uninsured risk in rural areas
- Small farmers are not protected against disasters
- But when insurance products are offered they are not purchased much.
- How can we create insurance products that:
  (i) Smallholder farmers want
  (ii) Protect farmers in bad years and that allowing them to increase agricultural investment

Final Comments

We need integrated modeling frameworks that
work at multiple geographical scales to:

1) Prioritize investments and provide an accurate understanding of
   tradeoffs

2) Increase velocity of technological innovation and adoption taking into
   account demand side

3) Design long-term economically and politically sustainable policies

Final Comments

More importantly, we requires an even closer collaboration between policy makers, private sector and research community.