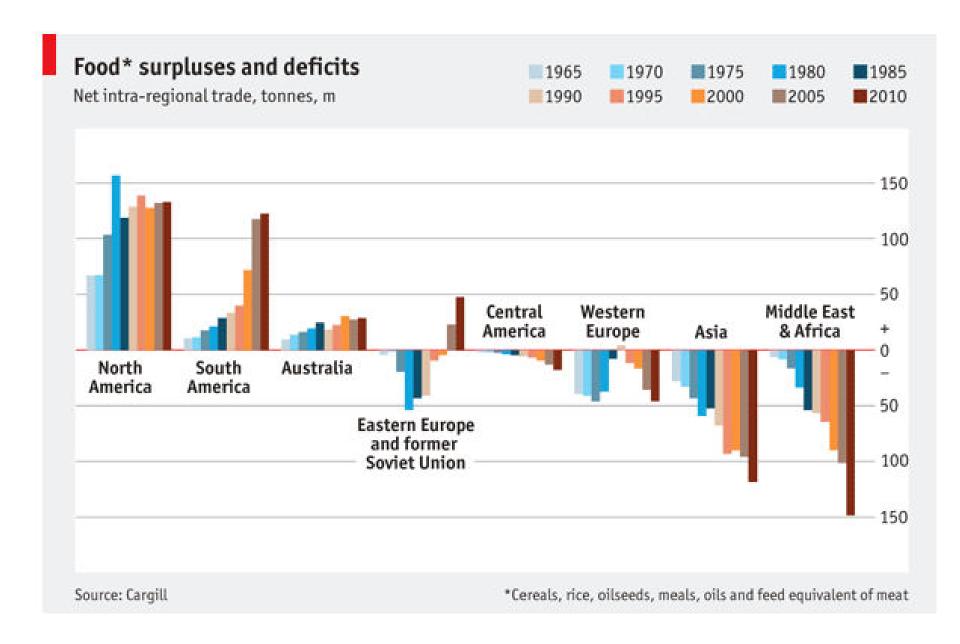
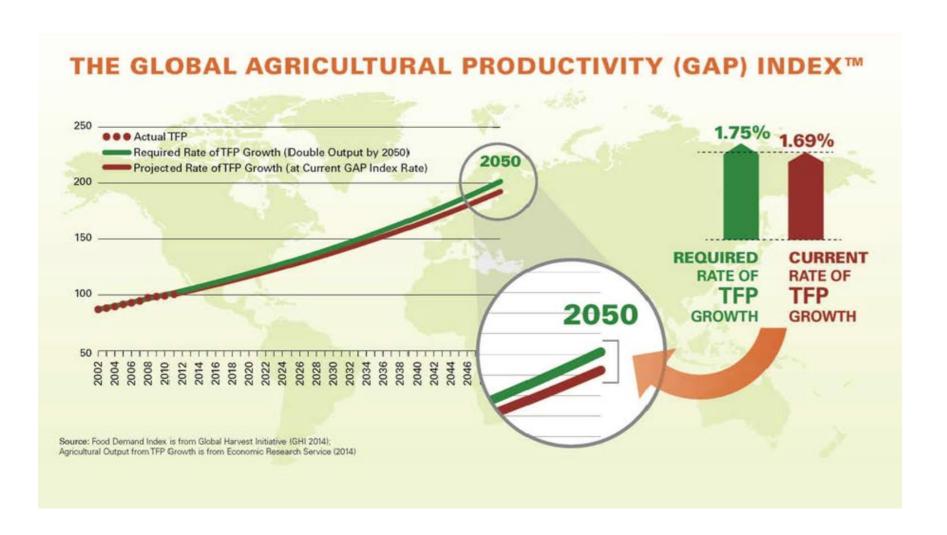


Content

- Historical developments
- An optimistic view on food production developments
- A pessimistic view on trade blocs
- Conclusions



Total Factor Productivity Gap



Total Factor Productivity

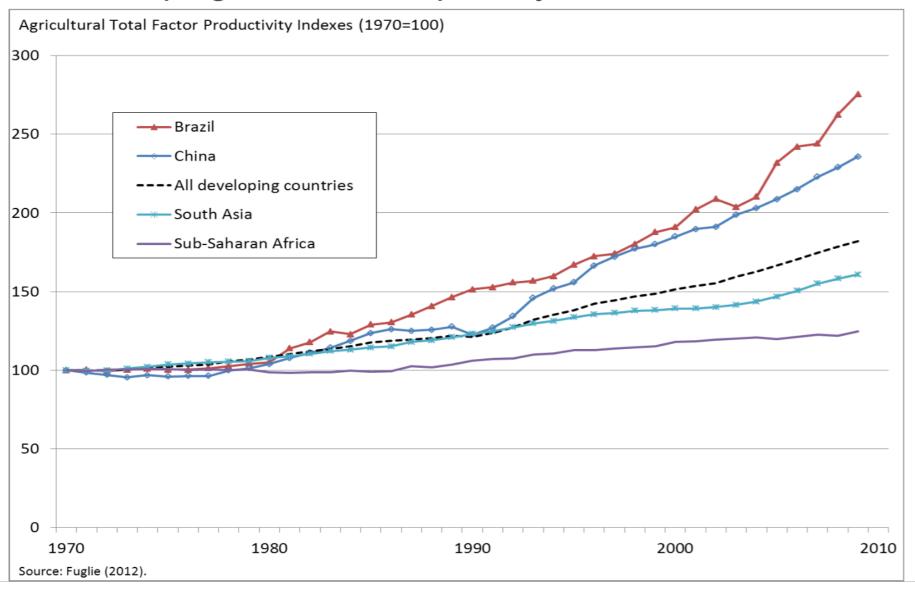
THE RATIO OF AGRICULTURAL OUTPUTS TO INPUTS





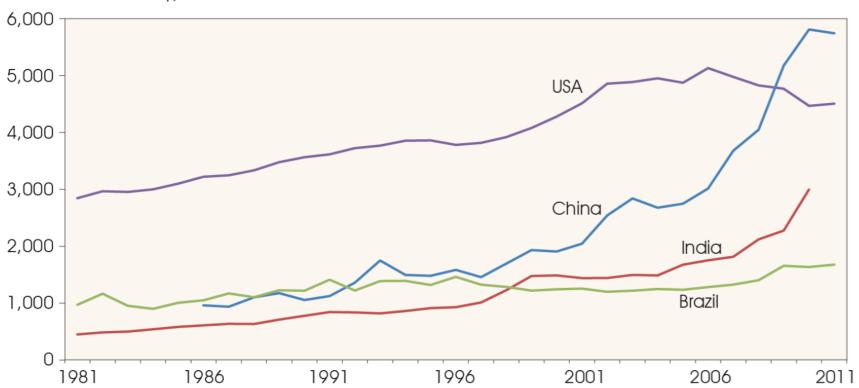
Source: Global Harvest Initiative

General picture: Acceleration in global TFP growth led by developing countries, especially Brazil and China

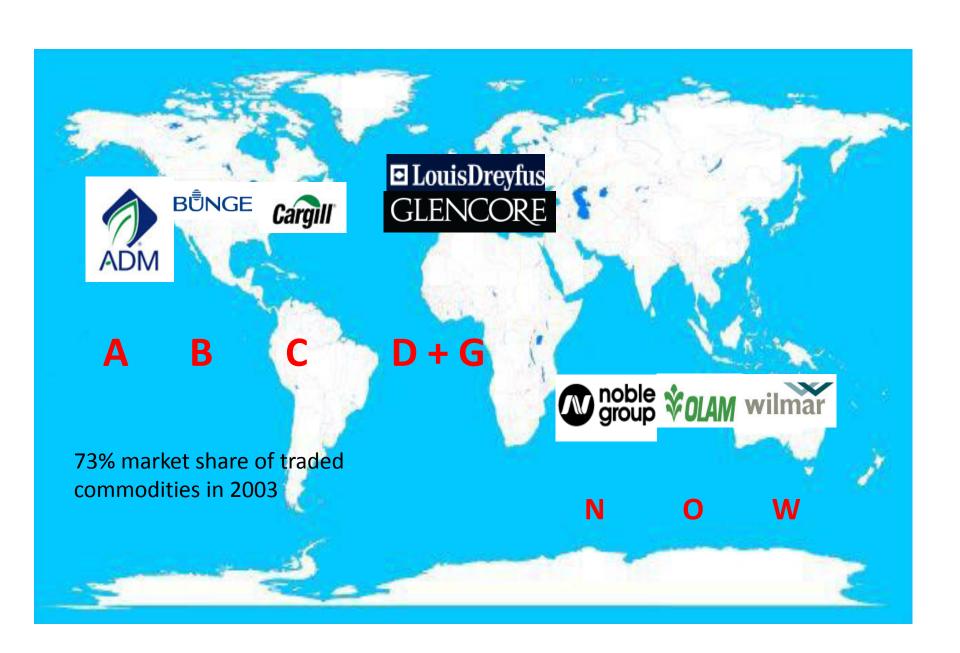


Public Agricultural R&D Spending

Constant 2005 PPP\$, millions



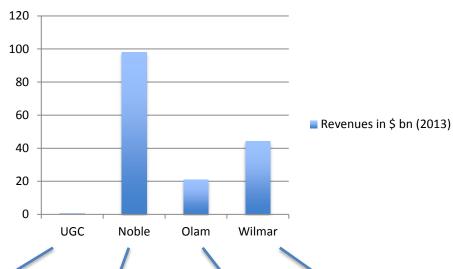
Source: United States Department of Agriculture, Economic Research Service and International Food Policy Research Institute (IFPRI).



Revenues in \$ bn (2013)

160 140 120 100 80 60 Revenues in \$ bn (2013) 40 20 Careill ADM Bunge

Revenues in \$ bn (2013)



2013 takeover by Summa Group Intent to become largest wheat trader by 2019

Quadrupling of revenues since 2007; April 2014

Indonesia, SSA Named as ,least environmentally friendly company in the world' by Newsweek in 2012

takeover by CofCo Sources: Murphy et al 2012; company websites

Strong

and LA

presence in SSA

Conclusions:

Tectonic shifts in global food-water trade

- Asian lions are on the move
- Led by public spending in R&D and strategic trading companies
- Gap to close is smaller than thought thanks to Asian investment in agriculture
- The remainder must come from investment in Africa