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Causes of imbalances
Implications to U.S. agricultural trade & competitiveness
Concluding Remarks

Macroeconomic Imbalances in the World Economy: implications to US agricultural trade & competitiveness

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Introduction

1. Increasingly integrated-globalized world economy
2. Macroeconomic imbalances
3. Implications to U.S. agricultural trade
   - Exch. rates
   - Growth in trade partner GDP
   - Rising prices of exhaustible resources
   - Foreign competition
Globalization-two waves

**The first wave: 1776 ~ 1914;** Transport cost fall (railroads, steamships)

1. Increasing returns to scale, North quickly out-grows the rest of the world’s economies.

2. This cause a de-industrialization of the South (India, China), due to North imports, incomes between North and South diverge

3. Reoriented the British economy; Share of workers in industry rose from 19% (1700) to 30% (1800) to 47% (1840)

4. New technologies lead to colonization (lock in growth path)

From 1910~14; to late 1960s **pattern** of rich North and poor South was largely unchanged

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Income divergence

**Income ratios, 5th-richest country to 5th-poorest country, 1960-95**

A worker in a rich country is 34 times more productive than the poor country.
The 2nd wave 1960~1970...

Cost of transport asymptotes, cost of “trading ideas” plummets (transistor)
Induces:

- Institutional changes, Uruguay Round, WTO, RTA, Decline of authoritarian regimes
- Southern innovators and industrialists now have both access to North’s technology, designs, ideas, and the South’s cheap labor
- Stimulates the re-industrialization of the South with agglomeration forces, out-sourcing, direct foreign investments, short-run capital flows.
- This causes re-adjustments in the North
The adjustments are just beginning!

**Allocation of world real GDP**

- Developing Econ.
- Emerging Econ.
- Other Advanced
- U.S.

**Distribution of world population**

- Developing Econ.
- Emerging Econ.
- Other Advanced
- U.S.
Increased harvesting of exhaustible resources

Natural resource price indices (base year 1990)

Source: International Monetary Fund.
World agricultural prices - will they continue upward trend?

- Bio-fuels
- Up-grading of diets in emerging mkt economies

Source: www.fao.org.giews/pricetool2
Global Imbalance: background

- Imbalance as measured by current account (CA)
- CA as net savings balance: if positive K outflow & positive external demand

\[ S - I = (G - T) + (X - M) \]

- Date to: Asian financial crises (late 1990s) & CA imbalances with U.S. and China most prominent
- Globally, must sum to zero so a country’s surplus is others’ deficit
- Implies a country’s surplus cannot continue to grow indefinitely; but a "small" deficit/surplus can exist indefinitely
CA - surplus countries

- Reliance on external demand as source of growth
- Size matters (China & Japan = 45% of total world CA surplus & jumps to 60% if CA surplus of Europe is removed from total)
- How to sustain? How to sterilize foreign exchange earnings?
- Exacerbated by high savings rates
2. **CA - deficit countries U.S.):** supplying external demand

- $ as numeraire currency
- Fiscal deficits
- Efficient capital markets
- Inflows caused decline in real interest rates (4.0% in 2000 to 2.0% in 2005)
- Reduce domestic savings & appreciate $ denominated asset prices while domestic prices remain subdued due to "undervalued" imports
- This gives illusion of wealth
- Growth in world K flows exceed 16% of world GDP
- Effectively; convert US consumption into Chinese savings which are then recycled back to U.S. financial mkts
Large CA imbalances are concentrated in a few countries

- Five countries (U.S., Spain, UK, Australia, Italy) account for 79% of world CA deficits
- Five countries (China, Germany, Japan, Saudi Arabia, Russian Federation) account for 71% of world CA surplus
The case of the U.S., Japan and China

Figure 1: Only a few countries account for a most of the world current account surpluses and deficits
The case of Europe

Europe problem different from U.S? Problem with the Euro?
The U.S. case

Figure 8: China, Japan and the Oil Exporters are financing the U.S. Deficit

Current Account in (billion of dollars)

This pattern suggests the recycling back to the US of foreign exchange earnings.
Major trading partners (narrow base?)

One-half of U.S. merchandise exports are accounted for by five countries

One-half of U.S. merchandise imports are accounted for by four countries

Share of total exports
Share of total imports

Canada
Mexico
UK
China
Japan
China’s growing importance
US has a distinct comparative advantage in services
Simple algebra of imbalances

- World current account imbalance sum to zero
- Therefore, one country’s surplus implies others’ deficit
- China vs rest of world; Size matters; Growth matters
- IF business as usual (simulation)

Thus adjustments must occur and they are...
Causes of imbalances

1. Savings glut relative to supply of "safe" assets
2. The twin-deficits hypothesis
3. The export-led growth hypothesis
4. Mis-measurement of the current account
The savings glut (Bernanke)

1. The U.S has the most efficient-relatively risk free capital markets & gov. debt instruments

2. East Asian of saving increased following EA financial crisis in late 1990s

3. Induced by collapse of safety net, new opportunities (educ., urban employment)

4. The savings glut exceed supply of "safe" assets which induced "innovations" e.g., securitized mortgages

5. Misc.: increase trade due to globalization is associated with increased asset holdings in destination country
The twin-deficits hypothesis

1. U.S. monetary and fiscal policy (and corresponding budget deficit) raised disposable income beyond factor earnings causing excess demand for tradable goods, an appreciation of the real exchange rate.

2. This causes a loss of competitiveness and the value of imports to exceed value of exports.

3. Most authors (e.g. Obstfeld and Rogoff [2005], Bernanke [2005]) find little empirical evidence to support this hypothesis.
Export-led growth hypothesis

1. Notion that a country undervalues its currency to increase its competitiveness in foreign markets & increase employment of resources at home, including capital deepening

2. Typically, must exchange $ holdings for goods, services and assets (e.g. US treasuries) valued in $

3. Implication is that China should allow its currency to float and to decrease $ holdings, and likely increase real interest rates
Mis-measurement of the current account

1. Mayer-Foulkes (2009): 70% of the profits of the foreign affiliates of US corporations were repatriated.
2. These repatriated funds enter the balance sheet as foreign capital inflows (tax avoidance)
3. Over 2008-2007, the level of these funds closely track US CA deficits.
4. Intangible assets (branded products, R&D) as a measure of external wealth are not reported, causing the CA imbalance to be overstated
Ag. trade & competitiveness: key factors

- Exch. rates
- Growth in trade partner GDP
- Rising prices of exhaustible resources
- Foreign competition
- Other: competition for resources with rest of US economy, tfp
Features of U.S. agricultural exports

Since domestic demand is relatively constant, growth lies in exports

Higher value added commodities are exported to higher income countries

Figure 2. Trade-weighted per capita income of U.S. agricultural importing countries by category of imports, 1970-2007

Share of U.S. Ag. Exports to Developing Countries Has Increased
U.S. agricultural exports are concentrated to a few countries

Thus a few trade partners are particularly important

Source: Shane, Mathew and Terry Roe (2011)
Potential for "new" markets?

**China's share of the real value of total U.S. ag. exports is rising**

**Growth in real value of U.S. ag exports to China is relatively large but "other" volatile**
### Results for total agriculture

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<th>Rate</th>
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* *, **, and *** denote significance at the 10%, 5% and 1% level, respectively.

Source: Shane, Roe and Somwaru
Figure 3. Total U.S. agricultural exports: Effect of exchange rate and trade partner trade-adjusted GDP on growth in predicted exports
Relative to aggregate manufacturing & services, ag. employs more of these resources
Foreign competition

Brazil? Commodity specific
Value added exposure to foreign markets

Net U.S. agricultural exports as percent of U.S. agricultural GDP
Concluding remarks

1. Devaluation of US dollar visa trading partners
2. Growth in trade partner real income
3. Other
   - Foreign goods, energy, raw materials more expensive
   - Increase production and employment in traded goods
   - Expand into foreign markets
   - Need to **grow** (& invest in growth) to reduce fiscal deficit
4. Optimistic