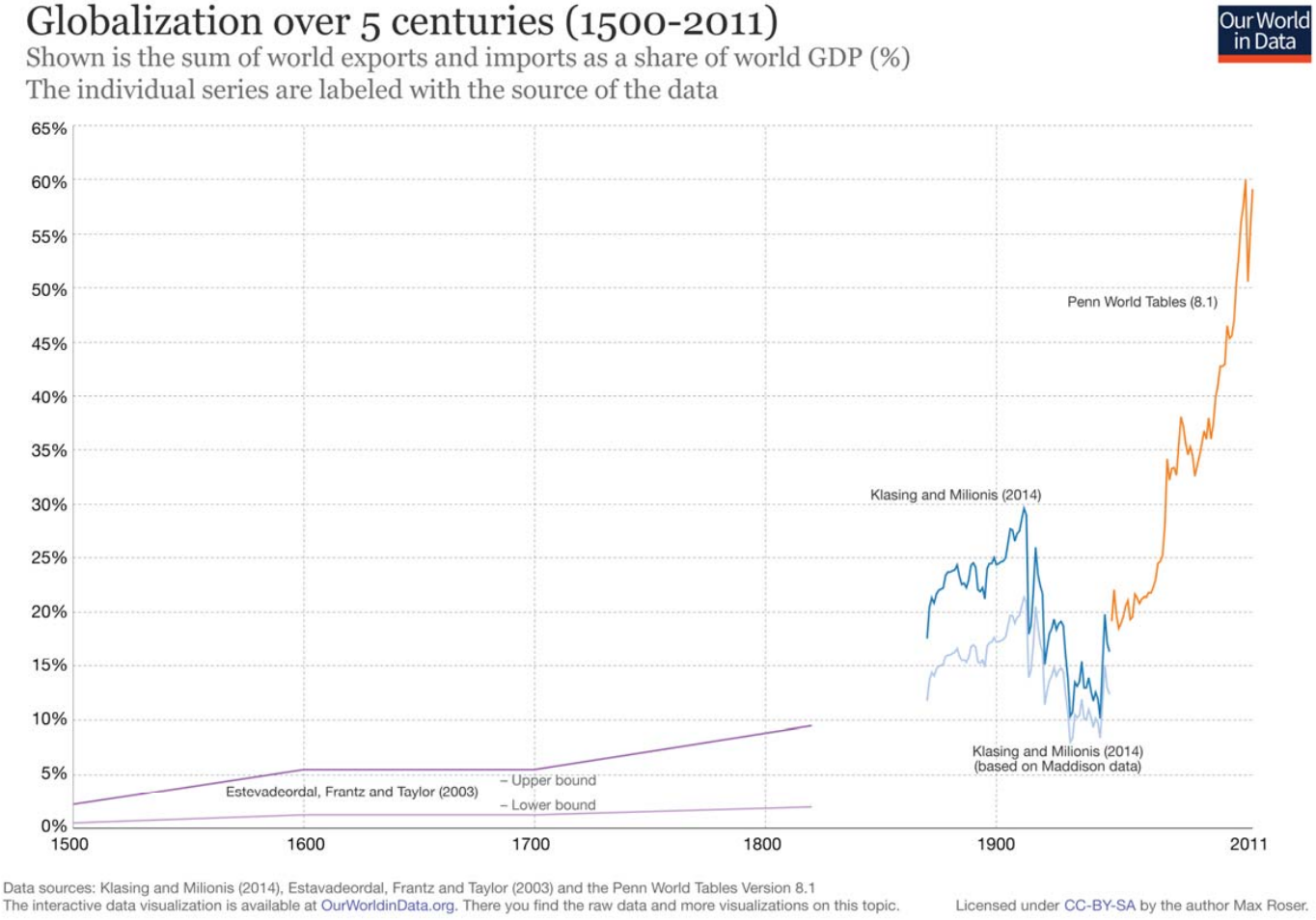
WHO TRADES WITH WHOM AND WHY?

OCEE WORKSHOP, OCTOBER 9, 2015



HOW DO ECONOMISTS EXPLAIN WHO TRADES WITH WHOM AND WHY?

Absolute Advantage Principle (Adam Smith, 1723-1790):

Countries benefit from exporting what they make cheaper than anyone else.

One Person-Day of Labor produces

Nation	Wine	Cloth	Absolute Advantage
U.S.	5 bottles	20 yards	Cloth
U.K.	16 bottles	8 yards	Wine

Opportunity Costs Without Trade

Nation	Wine	Cloth	Specialization
U.S.	(20/5) = 4, 1 bottle = 4 yards	(5/20)= 1/4, 1 yard = 1/4 bottles	Cloth
U.K.	(8/16) = 1/2 1 bottle = 1/2 a yard	(16/8) = 2 1 yard = 2 bottles	Wine

Limits to mutually beneficial trade

= U.S. will pay maximum of 4 yards of cloth

1 bottle of wine

= U.K. must receive minimum of 1/2 a yard of cloth

Gains from trade: International exchange ratio - 1 bottle of wine for 2 yards of cloth

Nation	Wine	Cloth
U.S.	Buys: 1 for 2 (saves 2 yards),	Sells: 1 yard for 1/2 bottle (twice what it receives at home)
U.K.	Sells: 1 for 2 (3 times what it receives at home)	Buys: 1 yard for 1/2 bottle (saves 1.5 bottles)

HOW DO ECONOMISTS EXPLAIN WHO TRADES WITH WHOM AND WHY?

Comparative Advantage (David Ricardo, 1772-1823):

Countries specialize in producing and exporting goods where they have a lower opportunity cost.

One Person-Day of Labor produces

Nation	Wine	Cloth	Comparative Advantage
U.S.	40 bottles	40 yards	Cloth
U.K.	20 bottles	10 yards	Wine

Opportunity Costs Without Trade

Nation	Wine	Cloth	Specialization
U.S.	(40/40) = 1, 1 bottle = 1 yard	(40/40) = 1, 1 yard = 1 bottle	Cloth
U.K.	(10/20) = 1/2 1 bottle = 1/2 a yard	(20/10) = 2 1 yard = 2 bottles	Wine

Limits to mutually beneficial trade

= U.S. will pay maximum of 1 yards of cloth

1 bottle of wine

= U.K. must receive minimum of 1/2 a yard of cloth

Gains from trade: International exchange ratio - 1 bottle of wine for 3/4 yards of cloth

Nation	Wine	Cloth
U.S.	Buys: 1 bottle for 3/4 cloth (saves 1/4 yards),	Sells: 1 yard for 4/3 bottle (gains 1/3 of a bottle)
U.K.	Sells: 1 for 3/4 (gains 1/4 of a yard)	Buys: 1 yard for 4/3 bottle (saves 2/3 of a bottle)

THEN AND NOW: COMPARATIVE ADVANTAGE AND GRAVITY

- **Standard pre-1980 trade theory envisaged countries specializing in accord with their comparative advantage — U.S. does cloth, England makes wine.**

  And these models suggest that how much countries trade should have a lot to do with whether they are similar or not. Cloth exporters shouldn't be selling much to each other, but should instead do their trading with wine exporters.

  In reality, however, there's basically no sign of any such effect: even seemingly similar countries trade with each other similar goods (intra-industry trade).

- **Simply put: Ricardian comparative advantage is clearly incomplete.**

- **Post-1980: (Old) New Trade Theory (Paul Krugman): Increasing returns to scale of production can create comparative advantage where none**

- **(New) New trade theory (Mark Melitz and Pol Antras): emphasizes firm-level differences and stresses the importance of firms rather than sectors in understanding the challenges and the opportunities countries face in the age of globalization.**

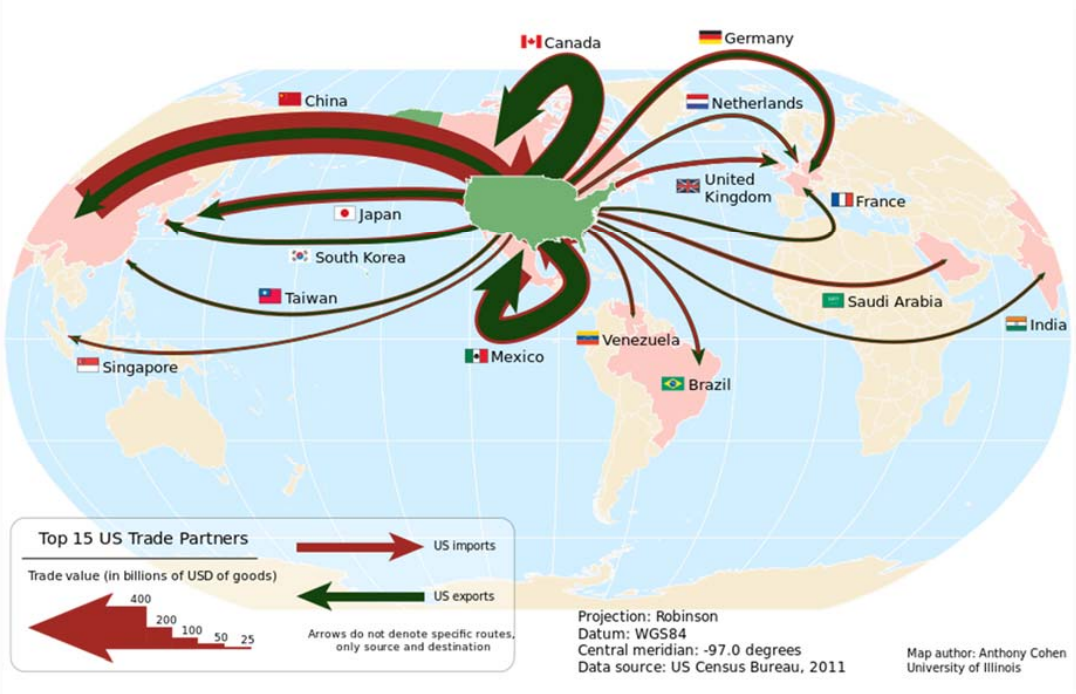
THEN AND NOW: COMPARATIVE ADVANTAGE AND GRAVITY

Gravity Works!

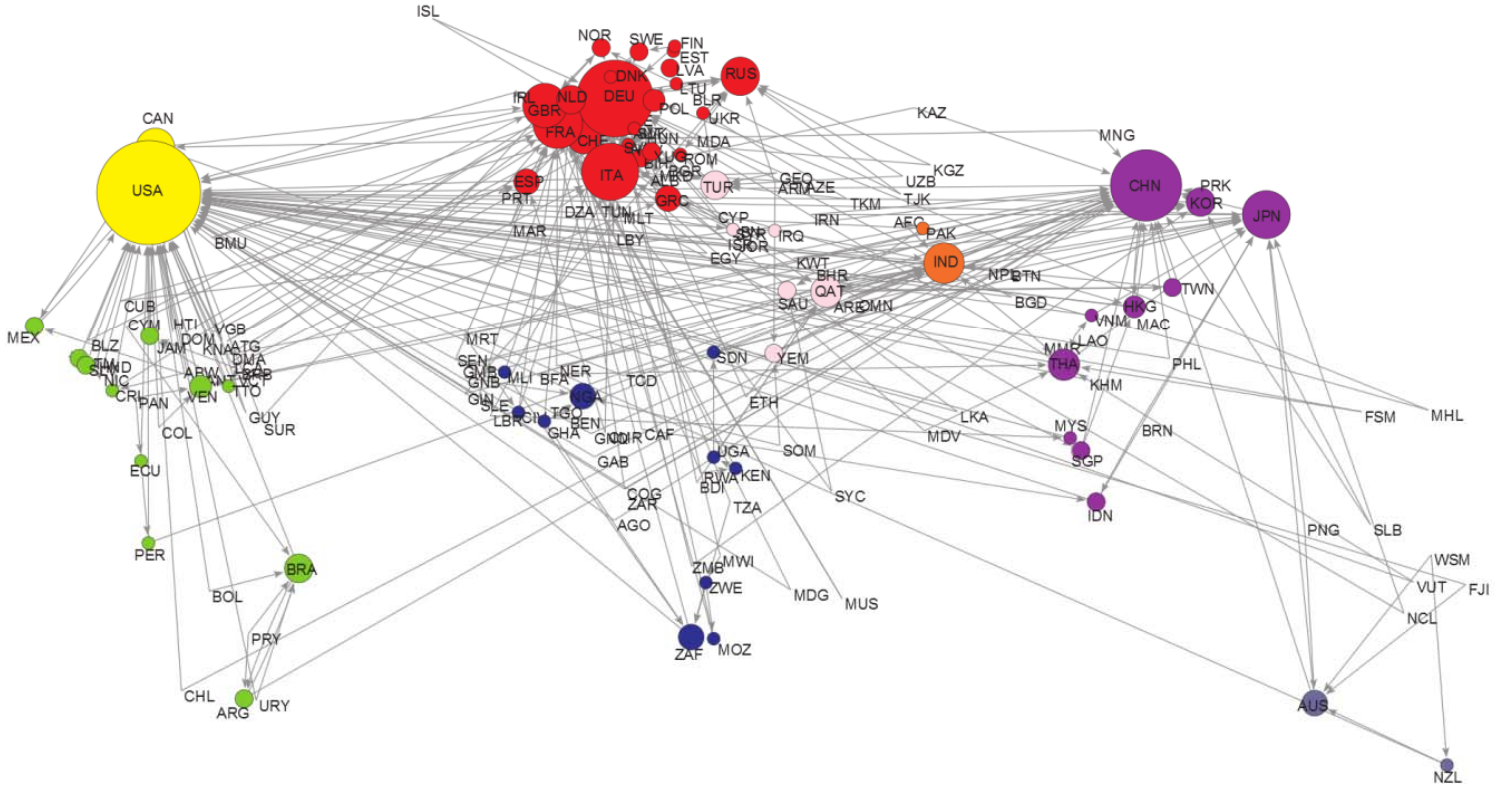
$$F_{ij} = C\frac{GDP_i \cdot GDP_j}{D_{ij}}$$

The gravity equation tells us that trade between any two regional economies is roughly proportional to the product of their GDPs and inversely related to distance.

Empirical evidence shows that similar countries trade about as much as a gravity equation says they should.



Map of World Trade in Goods as a Geographical Network (major two export partners,) 2007.



WORLD TRADE AS A NETWORK: REGIONAL TRADE AGREEMENTS

Regional Integration vs. Multilateral Liberalization: how does trade-bloc formation affect the pattern of world trade flows?

- **Old (unresolved) question → trade creation and trade diversion effects co-exist in most attempts of regional integration (Viner, 1950).**

- **Empirical evidence is mixed: conclusions regarding the impact of regional trade agreements are often based on gravity-type models using different time-span and different sets of Regional Trade Agreements (RTAs). Misspecification and missing dynamic effects are a concern.**
- **On average, trade creation effects may outweigh those associated with trade diversion but these are short-run effects. No consensus exists regarding improvements in welfare for members and non-members.**

Why are concerns over trade-bloc formation relevant today?

- **Doha Round: economic integration through RTAs received new impetus in the wake of the collapse of multilateral negotiations in 2006 and again in 2008.**
- **Proliferation of RTAs (449 in force as of April 7, 2015) raises concerns over the future of multilateral trade negotiations.**
  - **Evidence suggests that much of regional integration through RTAs may be motivated by potential considerations (greater political stability and building political capital for domestic reforms).**

WORLD TRADE AS A NETWORK: REGIONAL TRADE AGREEMENTS

Recent research: Reyes, Wooster and Shirrell (2010)

Research Objectives:

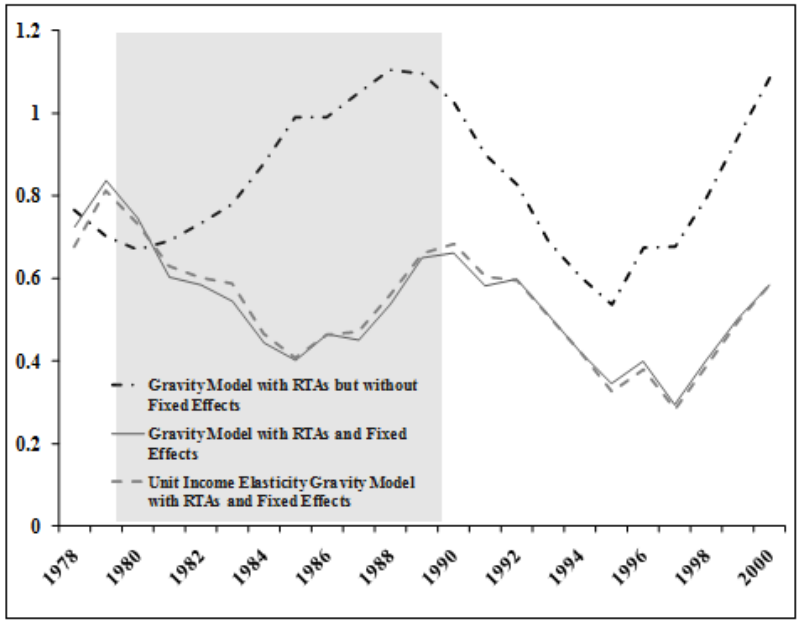
- **Evaluate the effects of RTA formation on global trade flows between 1970 and 2000 (32 RTAs considered).**
- **Model the world trade system as a complex network to determine whether RTA formation has a lasting impact in shaping world trade flows.**
  - **We compute the community structure for every year in the sample and compared this to null community structures based on models that account for regional and geographic classifications, or the implementation of RTAs within a simple or gravity-type framework.**

- **Contribution:**
  - **Complex network approach provides dynamic setting in which both short-run and long-run influences are considered.**
  - **Networks approach is important departure from previous research which relies on the gravity model framework with treatment effects for RTAs.**

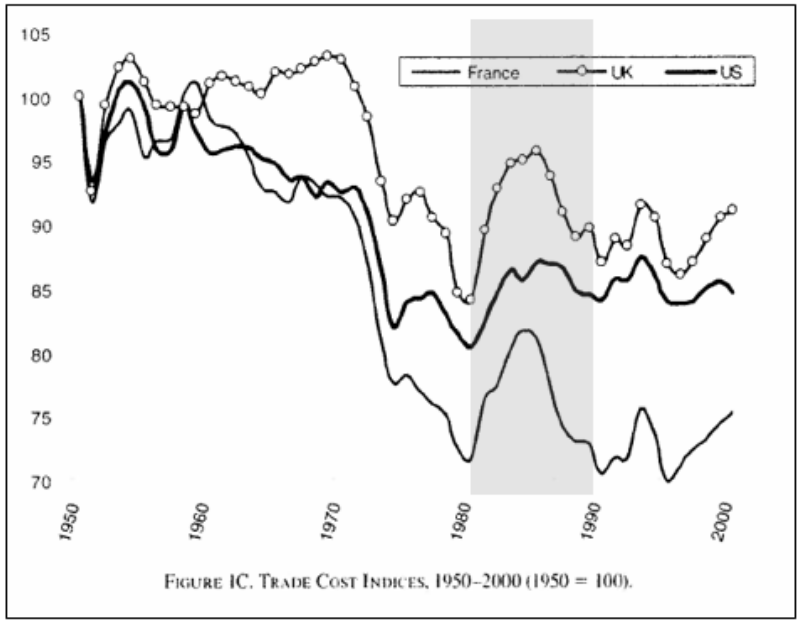
WORLD TRADE AS A NETWORK: REGIONAL TRADE AGREEMENTS

Recent research: Reyes, Wooster and Shirrell (2010)

Results:



VI Measures



Trade Costs: Jacks et al. (2008)

Results show that RTAs appear to have an effect that strengthens over time but has cyclical components to it. We document periods where bilateral trade flows in the world trade network are consistent with waves of RTAs formation. These cycles occur 1980-86 and 1990-96. We also find periods in which the pattern in the world trade network community structure is not explained by RTAs formation. These occur in the periods 1986 – 1990 and 1997 – 2000.

BACK TO BASICS: A COMPARATIVE ADVANTAGE EXPERIMENT

- **A fun game to play with students**
- **Teaches the principle of comparative advantage**
- **Suitable for individual or team play**
- **Suggested introductory information:**
    - **Comparative advantage principle;**
    - **Opportunity costs and how we calculate them**