

# Introduction, World Trade (1/25/2012)

Econ 390-001

## Equations

- $T_{ij} = AY_iY_j/D_{ij}$  gravity model
- $T_{ij} = A(Y_i)^a(Y_j)^b/(D_{ij})^c$  generalized gravity model

## Variable definitions

- $T_{ij} \equiv$  value of trade between countries i & j
- $Y_i \equiv$  GDP of country i
- $Y_j \equiv$  GDP of country j
- $D_{ij} \equiv$  distance between countries i & j
- $A \equiv$  constant term
- $a, b, c \equiv$  exponents for regression

## Definitions

- **import** – a good or service brought into a country for sale
- **export** – a good or service sent out of a country for sale
- **gross domestic product (GDP)** – total value of all final goods and services produced in an area per period
- **tariff** – a tax on imports or exports
- **quota** – a quantity restriction on imports or exports
- **export subsidy** – a payment to producers that export
- **broken window fallacy** – fallacy of taking into account easy to see positive effects of a policy, but not taking into account negative hidden effects of a policy
- **utility** – total satisfaction from consuming (or not consuming) a good or service
- **reverse inequality of value** – both parties to the trade value what they're getting more than what they're giving up



Fig. 1-1: Exports and Imports as a % of U.S. National Income

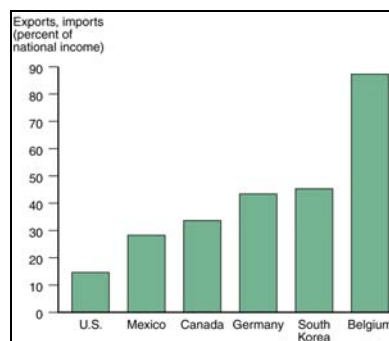


Fig. 1-2: Exports and Imports as a % of National Income in 2007

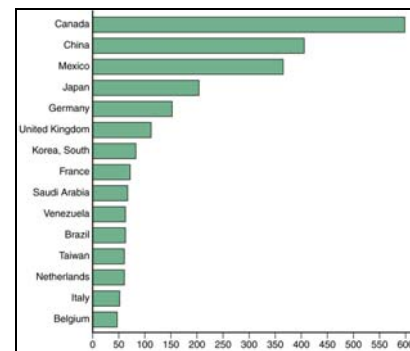


Fig. 2-1: Total U.S. Trade with Major Partners, 2008

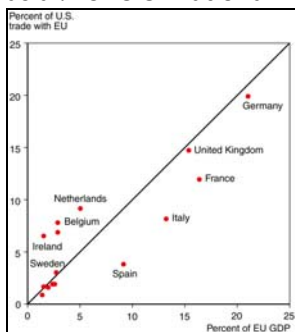


Fig. 2-2: The Size of European Economies, and the Value of

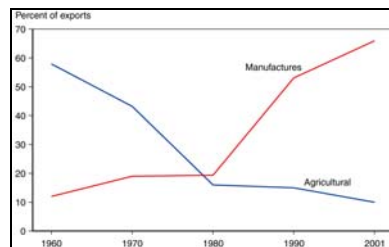


Fig. 2-6: The Changing Composition of Developing-Country Exports

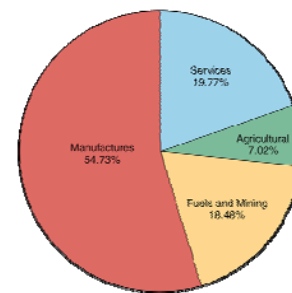


Fig. 2-5: The Composition of World Trade, 2008

## Principles

- Gross domestic product is different from gross national product.
  - GDP is scoped by location, GNP is scoped by ownership.
- The idea that disasters are good for the economy is an example of the Broken Window Fallacy (Bastiat).
  - Does breaking windows increase output with a multiplier? No! Money would have been spent on something else with a similar multiplier. The broken window is “what is seen,” whereas the alternative purchase is “what is unseen” (the opportunity cost).
- Work is a means to an end, not an end in and of itself.
  - WORK IS NO DAMN GOOD.
  - CONSUMPTION IS GOOD.
  - LEISURE IS GOOD.
- Often real income or GDP is used as a proxy for utility, but it is not a perfect proxy.
- Price is objective; value is subjective.
- Reverse inequality of value makes trades mutually advantageous, which is why people trade voluntarily.
  - Trade is not a zero sum game with a winner and a loser.
  - Trade is a positive sum game. Both parties are winners.
- Gains from trade can be thought of graphically as consumer surplus and producer surplus.
- It’s important to remember the limitations of models.
  - Models simplify, but often economists prefer a simple model to a correct one.
  - A model is only as good as its assumptions.
- Imports & exports (% of U.S. GDP) rises over the last 40 years.
- Imports > exports (financed by capital inflows: foreign investment in U.S.).
- Other countries rely far more on trade for their GDP than the U.S. does.
- 5 largest U.S. trading partners: Canada, China, Mexico, Japan, & Germany.
- Country’s GDP directly related to volume of imports & exports.
  - exports: larger economies produce more goods & services (more to sell)
  - imports: larger economies generate more income (more to buy)
- Other factors
  - distance – transportation costs, communication
  - cultural affinity – cultural ties → economic ties
  - geography – ocean harbors, lack of mountains
  - multi-national corporations – trade among divisions
  - borders – tariffs, customs, different language/money
- 1% increase in distance causes 0.7% to 1% decrease in trade.
- The U.S., Canada, & Mexico have a free trade agreement: the North American Free Trade Agreement (NAFTA, signed 1994). Even with free trade though, borders matter.
- The negative effect of distance is decreasing due to modern transportation and communication.
- The bulk of world trade is manufactured products.
- Developing countries are trending away from agriculture to manufacturing.
- A lot more services could be offshored / outsourced.

## Problems with GDP

- |                             |  |
|-----------------------------|--|
| I. Statistical Problems     | B. Don’t accurately measure output             |
| A. Measurement errors       | 1. Intermediate goods                          |
| B. Price index interaction  | 2. Non-market prices                           |
| II. Conceptual Problems     | III. Output is not a perfect proxy for welfare |
| A. Don’t include all output | A. Leisure                                     |
| 1. Underground economy      | B. Terms of trade                              |
| 2. Non-monetary activity    | C. Marginal utility ≠ total utility            |
|                             | D. War is bad                                  |