

BA-PIEC International Economics

Instructor: David Jinkins

Date: Sept. 2, 2014

- ▶ Today
 - ▶ Administrative stuff
 - ▶ Why you should care about international economics
 - ▶ Lightning course overview
 - ▶ Some facts about world trade
 - ▶ Trade and gravity

- ▶ Basic course structure:
 - ▶ Weeks 1-4, trade
 - ▶ Weeks 5-7, international finance

- ▶ The textbook:
 - ▶ International Economics: Theory and Policy, Krugman, Obstfeld, and Melitz, 10th edition.
 - ▶ Two semesters recommended
 - ▶ We are doing it in one quarter!
 - ▶ Online tutoring from textbook publisher
 - ▶ To access: pearsonmylabandmastering.com
 - ▶ Use my course id: jenkins85236
 - ▶ Free subscription with new text book
 - ▶ Not required, apparently helps in reviewing textbook

- ▶ Class locations and times
 - ▶ Tuesdays, SPs05 Lecture 11:40, 3 hrs
 - ▶ Wednesdays, SPs05 Exercise 14:25, 2 hrs
 - ▶ Tuesdays, SPs16 Lecture 8:55, 3 hrs
- ▶ No exercise class this week!

- ▶ Course evaluation:
 - ▶ 23 October: A four-hour, closed-book written examination
 - ▶ Based on
 - ▶ Problem sets
 - ▶ Lecture content
 - ▶ Textbook
 - ▶ Everything from class, homework, or textbook is fair game

- ▶ Email policy:
 - ▶ Administrative questions? Tina Østergaard, toe.stu@cbs.dk
 - ▶ Don't send me emails -(unless absolutely necessary)
 - ▶ Instead...

- ▶ Course wiki:
 - ▶ link at davidjinkins.com
 - ▶ other class-related stuff there
 - ▶ it's my first time with wiki

- ▶ Problem sets

- ▶ Will be one each week
- ▶ Typically posted by Friday
- ▶ Solutions in exercise class – will *not* be posted

- ▶ End administrative section

- ▶ Section 2: Why should you care about international economics?
 - ▶ Personally: Denmark is a small, open economy
 - ▶ Politically: News articles often incomplete
 - ▶ Intellectually: Many puzzles, some without explanation

Insight.
In
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Bloomberg

Denmark Seen Cutting Growth Outlook as Russia Dispute Weighs

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By Peter Levring | Aug 25, 2014 10:47 AM GMT+0200 | [0 Comments](#) [Email](#) [Print](#)

Denmark will probably cut its growth forecasts when it presents its budget outlook tomorrow as sanctions on Russia hurt companies such as brewer **Carlsberg A/S (CARLB)**, economists said.

Economists at **Danske Bank A/S (DANSKE)** and **Svenska Handelsbanken AB (SHBA)** foresee that the government may lower its growth forecast for this year by 0.1-0.2 percentage point from the 1.4 percent predicted in May. The Social Democratic-led coalition, which faces an election by September 2015, will present new forecasts with a 2015 budget draft.

The development in Russia has already



Photographer: Andrey Rudakov/Bloomberg

Carlsberg, the world's fourth-largest brewer, on Aug. 20 cut its full-year profit...

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Source:

<http://www.bloomberg.com/news/2014-08-24/denmark-seen-cutting-growth-outlook-as-russia-dispute-weighs.html>



Groups Call For Tough Policy on Foreign Currency Manipulation

By: Ed Scannell

08/20/2014 06:07 PM

Text size: + -

TWC News: Groups Call For Tough Policy on Foreign Currency Manipulation
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00:00 00:00

GREENSBORO—Leaders from three manufacturing groups held a news conference, calling on Congress, the White House and trade negotiators to get tough on countries engaged in currency manipulation.

China is their primary target, having tied the value of its dollar to the U.S. dollar instead of allowing it to be determined in foreign exchange markets.

Source:

<http://triadnc.twcnews.com/content/news/711005/groups-call-for-tough-policy-on-foreign-currency-manipulation/>

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Products exported by Denmark (2012)						Products imported by Denmark (2012)					
#	HS	Name	Value (USD)	Percent	#	HS	Name	Value (USD)	Percent		
1	3004	Packaged Medicaments	\$8,177,875,049.79	8.36%	1	2710	Refined Petroleum	\$5,379,524,830.09	5.65%		
2	2710	Refined Petroleum	\$4,910,322,186.42	5.02%	2	8703	Cars	\$3,083,743,985.68	3.35%		
3	2709	Crude Petroleum	\$4,638,983,773.37	4.74%	3	3004	Packaged Medicaments	\$2,684,025,948.15	3.13%		
4	0203	Pig Meat	\$3,484,759,799.09	3.56%	4	2709	Crude Petroleum	\$2,733,251,715.16	2.97%		
5	3002	Human or Animal Blood	\$1,854,135,694.87	1.89%	5	8471	Computers	\$2,555,616,322.40	2.78%		
6	8502	Electric Generating Sets	\$1,783,907,241.85	1.82%	6	2711	Petroleum Gas	\$1,666,628,479.83	1.81%		
7	4301	Raw Furskins	\$1,484,919,867.62	1.52%	7	8525	Broadcasting Equipment	\$1,272,029,934.44	1.38%		
8	0406	Cheese	\$1,461,697,612.22	1.49%	8	9018	Medical Instruments	\$894,085,805.43	0.97%		
9	8481	Valves	\$1,381,877,960.25	1.41%	9	8708	Vehicle Parts	\$837,019,790.45	0.91%		
10	2106	Other Edible Preparations	\$1,325,102,069.98	1.35%	10	9403	Other Furniture	\$750,072,793.92	0.82%		
11	9503	Models and Stuffed Animals	\$1,297,614,623.01	1.33%	11	6204	Non-Knit Women's Suits	\$702,640,041.98	0.76%		
12	8413	Liquid Pumps	\$1,124,521,418.91	1.15%	12	8481	Valves	\$690,883,958.25	0.75%		
13	9403	Other Furniture	\$1,114,487,558.67	1.14%	13	8517	Telephones	\$667,141,912.33	0.73%		
14	9018	Medical Instruments	\$1,063,007,319.19	1.11%	14	2304	Soybean Meal	\$663,094,986.76	0.72%		
15	3507	Enzymes	\$1,080,564,163.60	1.10%	15	7308	Iron Structures	\$656,877,037.50	0.71%		
16	8503	Electric Motor Parts	\$974,920,978.32	1.00%	16	6403	Leather Footwear	\$647,813,494.91	0.70%		
17	9021	Orthopedic Appliances	\$962,085,198.37	0.98%	17	2204	Wine	\$638,795,954.48	0.69%		
18	2937	Hormones	\$925,747,458.05	0.95%	18	8704	Delivery Trucks	\$621,965,032.77	0.68%		
19	8412	Other Engines	\$879,107,946.86	0.90%	19	8483	Transmissions	\$617,252,894.68	0.67%		
20	8504	Electrical Transformers	\$871,191,327.62	0.89%	20	8504	Electrical Transformers	\$591,459,372.15	0.64%		
21	0302	Non-fillet Fresh Fish	\$847,606,563.77	0.87%	21	6203	Non-Knit Men's Suits	\$572,642,744.52	0.62%		
22	8708	Vehicle Parts	\$845,603,001.36	0.86%	22	6110	Knit Sweaters	\$558,034,793.86	0.61%		

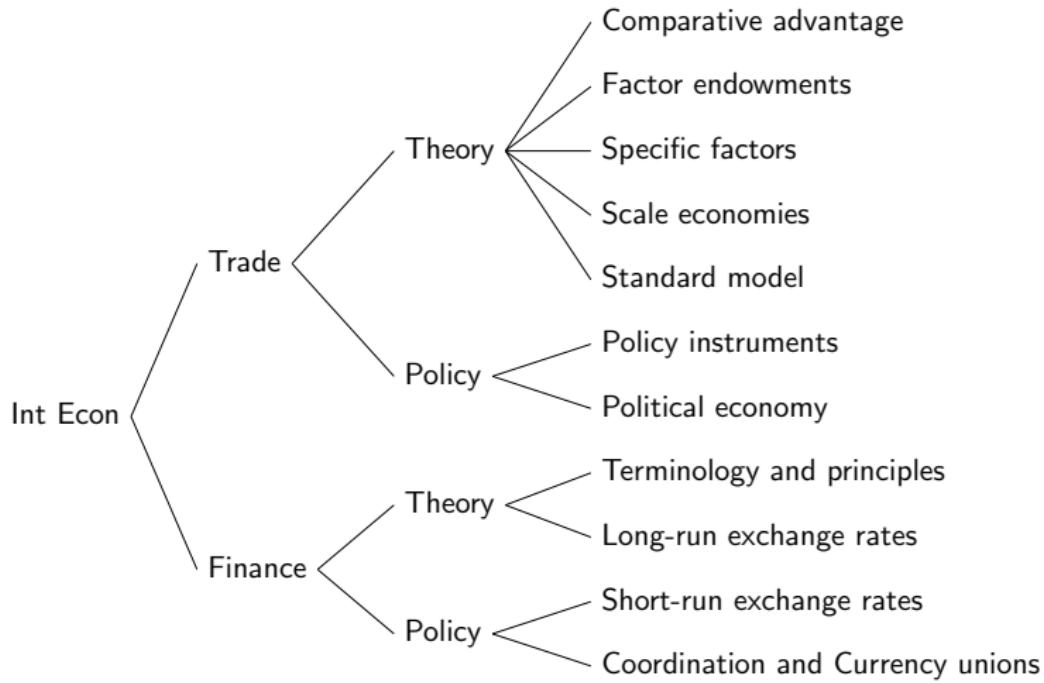
Source: http://atlas.media.mit.edu/explore/tree_map/hs/import/dnk/all/show/2012/

- ▶ Section 3: Lightning overview

Why International Economics?

Why International Economics?

- ▶ Not easy to move capital and especially labor across borders
- ▶ Many countries have different currencies
- ▶ Countries have different government policies
- ▶ Hard to enforce contracts internationally
- ▶ Countries may be better or worse at making different products
 - ▶ Climate for agriculture
 - ▶ More generally, technology
- ▶ Culture, language, tastes, etc are more likely to differ
- ▶ Last but not least:
 - ▶ Because of tariff collection, excellent data on shipments between countries



Comparative Advantage

- ▶ A country gains from trade, even if it is better at everything than all other countries
- ▶ *To a trained economist, the basic [comparative advantage] model seems almost trivial. Two goods, two countries, one productive factor, perfect competition: what could be simpler? Indeed, one of the fierce joys of being an international trade economist is that so many seemingly sophisticated tracts can be revealed as nonsense, so many self-important men unmasked as poseurs, using such a minimalist framework. And yet if one tries to explain the basic model to a non-economist, it soon becomes clear that it really isn't that simple after all.* -Paul Krugman
<http://web.mit.edu/krugman/www/ricardo.htm>

Factor endowments

- ▶ Obvious idea: China lots of labor \implies textiles, Denmark lots of capital \implies medical machinery
- ▶ For a long time, this was *the* economic trade model (Heckscher-Ohlin)
- ▶ Question: How do trade patterns change in response to technological changes?

Specific factors

- ▶ Lesson of early trade models: trade is great!
- ▶ Great for who – who is hurt by trade?

Specific factors



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Business & Money

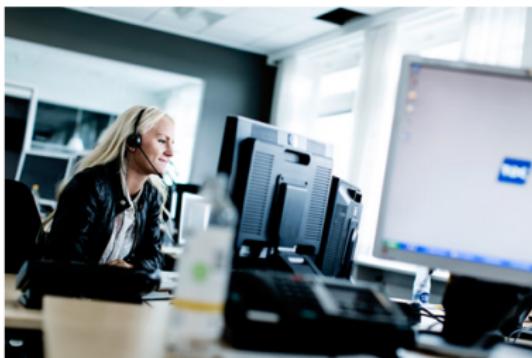


Photo: Uffe Weng/TDC

TDC outsources 800 Danish jobs

Published: 06 Aug 2014 13:18 GMT+02:00
Updated: 06 Aug 2014 13:18 GMT+02:00

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Employees working for the telecommunications firm in Copenhagen and Aarhus risk having their jobs moved to London.

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5. Jailed Dane begins new hunger strike in Bahrain

zendesk

Scale economies

- ▶ Specialization: Theme of introductory microecon.
- ▶ Decreasing marginal costs of production.
- ▶ Historical accident and the location of Silicon Valley.
- ▶ Multiple equilibria in trade models.

Policy instruments

- ▶ tariffs, quotas, subsidies
- ▶ product specifications

Political economy

- ▶ Can trade policy be good for a country?
- ▶ Is trade policy good for a country?
- ▶ How is trade policy made

Finance: terms and principles

- ▶ Basic issue:
 - ▶ Exporters paid in dollars
 - ▶ Costs are in kroner
- ▶ Exchange rates are critical
- ▶ Terminology: balance of accounts, trade deficit, etc.
- ▶ More generally, international risk sharing

Exchange rates

- ▶ What determines exchange rates in the long-run. PPP?
- ▶ Short run: Is China a currency manipulator?

Currency Unions

- ▶ Eliminate exchange rate uncertainty
- ▶ Policy coordination critical

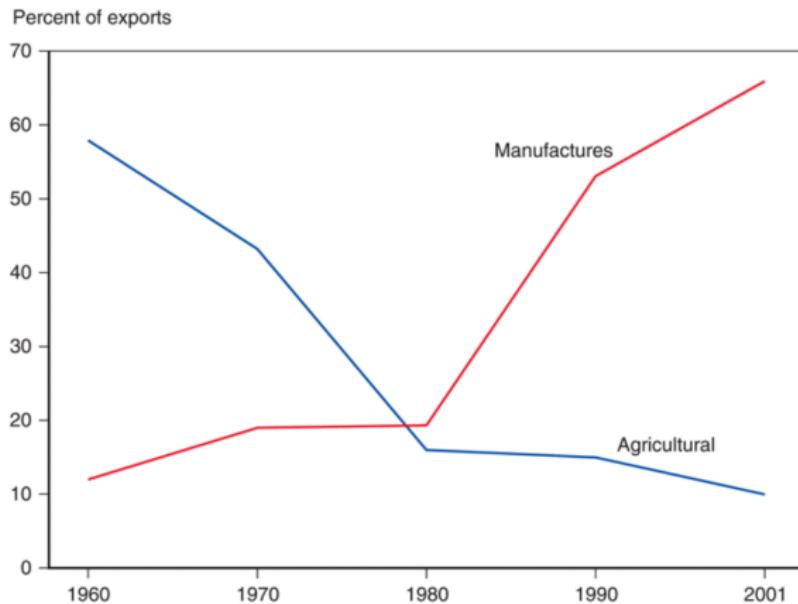
Section 4: Facts about international trade

- ▶ What do countries trade:
 - ▶ Agricultural produce
 - ▶ Primary goods
 - ▶ Manufactures
 - ▶ Services
- ▶ Composition of trade has changed over time
- ▶ Manufactures as a fraction of non-service trade

	United Kingdom		United States	
	Exports	Imports	Exports	Imports
1910	75.4	24.5	47.5	40.7
2011	72.1	69.1	65.3	67.2

Source: 1910 data from Simon Kuznets, *Modern Economic Growth: Rate, Structure and Speed*. New Haven: Yale Univ. Press, 1966. 2011 data from World Trade Organization.

► Developing countries trade composition

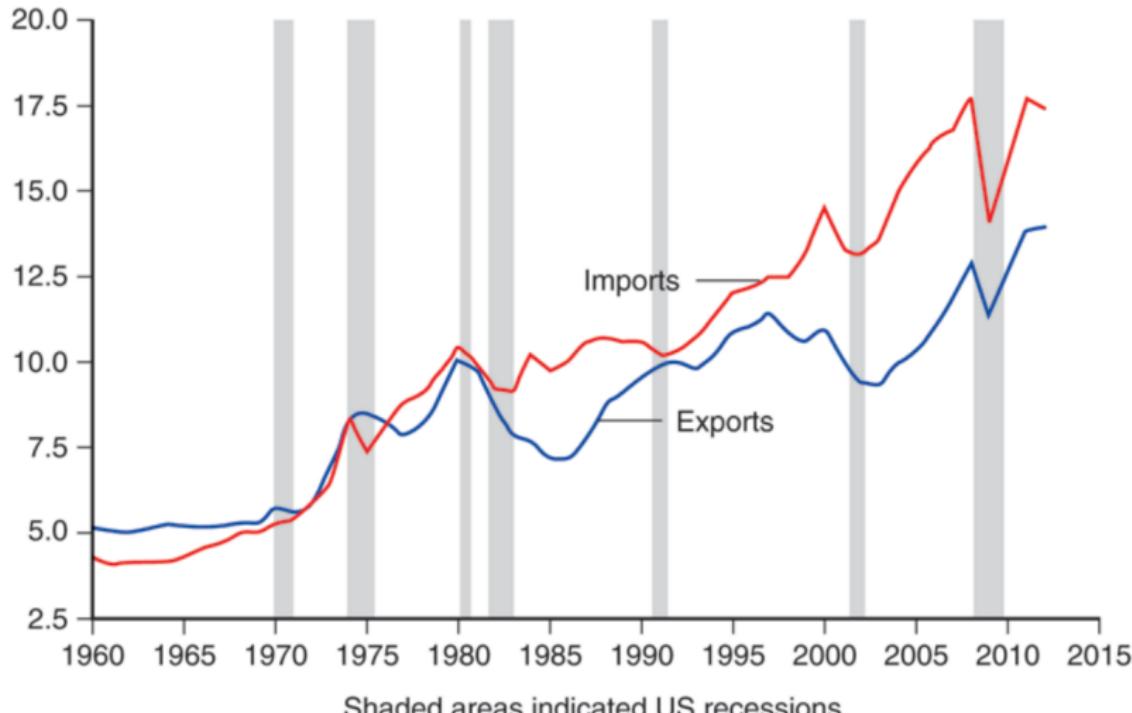


Source: United Nations Council on Trade and Development.

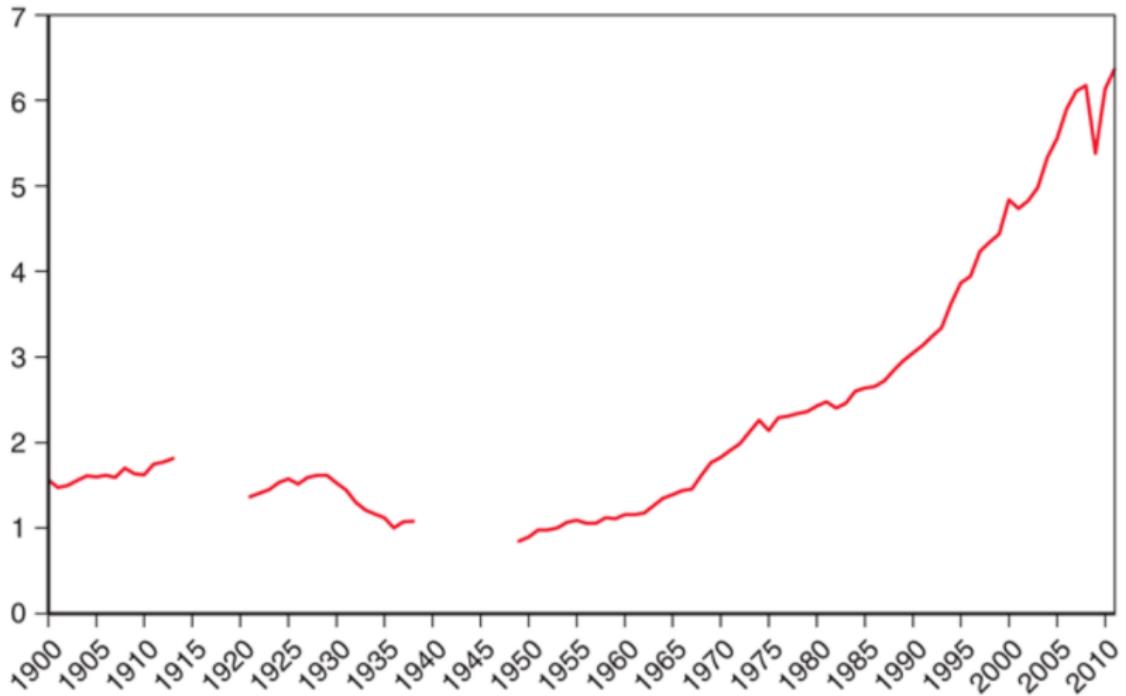
- ▶ “In the early 21st century, nations are more closely linked than ever before through trade in goods and services...”

Exports, imports
(percent of U.S.
national income)

MyEconLab Real-time data

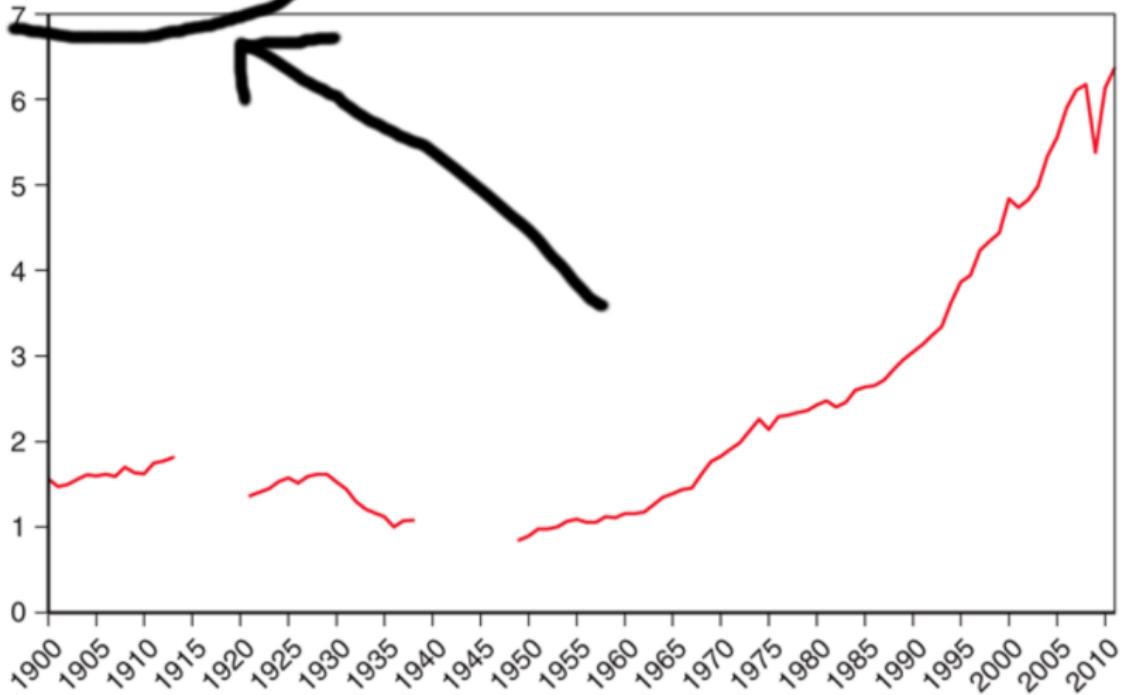


Ratio of manufactures
trade to production



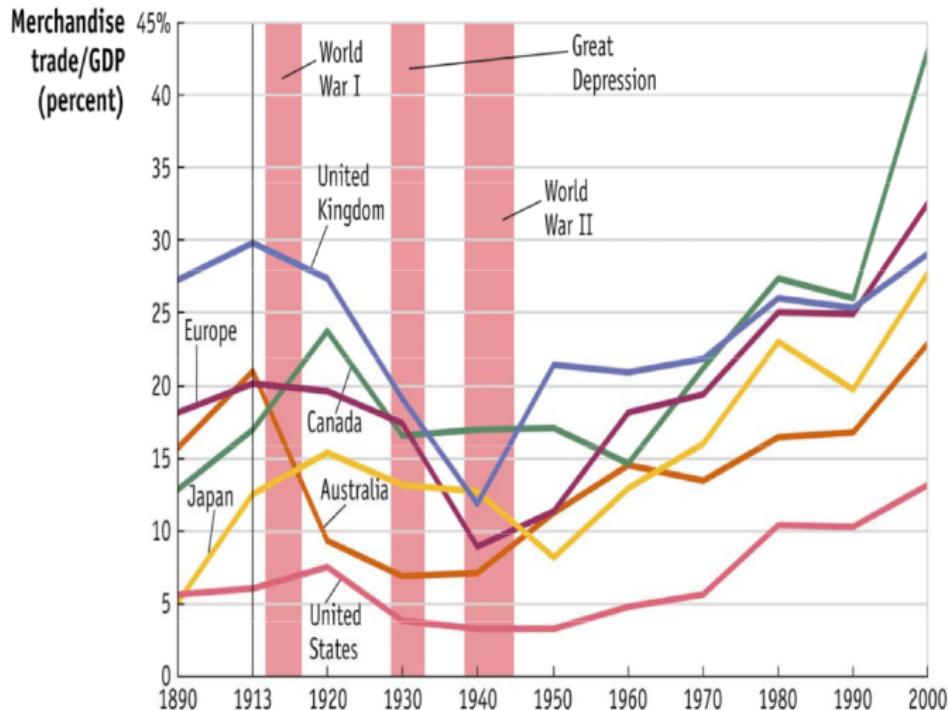
Source: UN Monthly Bulletin of Statistics, World Trade Organization

Ratio of manufactures
trade to production



Source: UN Monthly Bulletin of Statistics, World Trade Organization

► true, but . . .



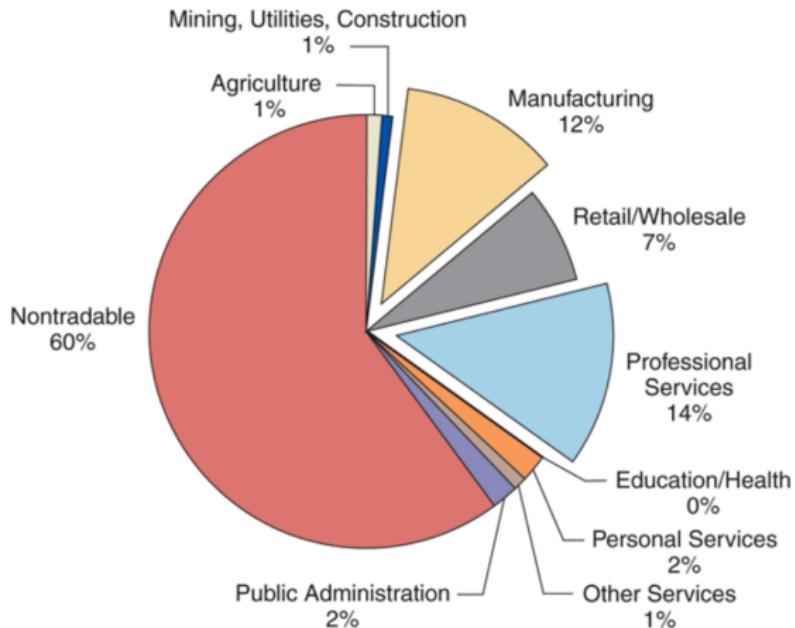
Source: Feenstra (1998)

- ▶ Service trade: Scary, because that is what developed countries do
- ▶ Labor force by sector (ag/manuf/service)

31	Canada	18,680,000	2011 est.	2%	15%	83%
98	Israel	3,227,000	2011 est.	2%	16%	82%
177	Antigua and Barbuda	30,000	1991	7%	11%	82%
153	Luxembourg	207,500	2011 est.	2.2%	17.2%	80.6%
17	United Kingdom	31,760,000	2011 est.	1.4%	18.2%	80.4%
53	Netherlands	7,785,000	2011 est.	2%	18%	80%
—	U.S. Virgin Islands	49,820	2007 est.	1%	19%	80%
—	Bermuda	38,360	2004	3%	17%	80%
—	Gaza Strip	348,200	2010	5.1%	15.6%	79.3%
3	United States	153,400,000	2011 est.	0.7%	20.3%	79.1%
—	Puerto Rico	1,479,000	2007	2.1%	19%	79%
—	Cayman Islands	23,450	2004	1.9%	19.1%	79%
103	Finland	2,676,000	2011	4.9%	16.7%	78.4%
95	United Arab Emirates	4,111,000	2011 est.	7%	15%	78%
158	Suriname	165,600	2007	8%	14%	78%
119	Jordan	1,771,000	2011 est.	2.7%	20%	77.4%
99	Denmark	2,857,000	2011 est.	2.5%	20.2%	77.3%
102	Norway	2,617,000	2011 est.	2.9%	21.1%	76%
106	Ireland	2,112,000	2011 est.	5%	20%	76%
46	Peru	10,800,000	2011 est.	0.7%	23.8%	75.5%

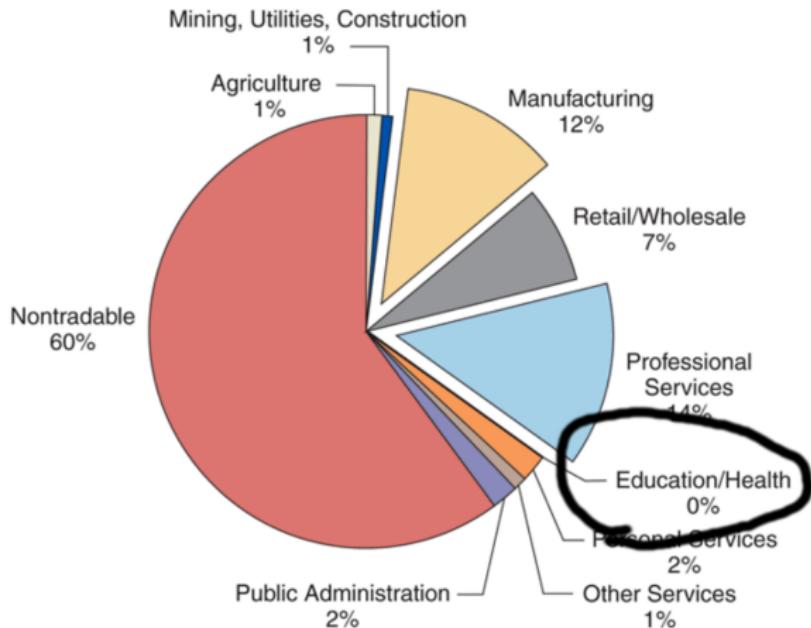
Source: http://en.wikipedia.org/wiki/List_of_countries_by_sector_composition_of_the_labor_force

- ▶ But many service jobs are 'non-tradable'



Source: J. Bradford Jensen and Lori G. Kletzer, "Tradable Services: Understanding the Scope and Impact of Services Outsourcing," Peterson Institute of Economics Working Paper 5-09, May 2005.

- ▶ But many service jobs are 'non-tradable'



Source: J. Bradford Jensen and Lori G. Kletzer, "Tradable Services: Understanding the Scope and Impact of Services Outsourcing," Peterson Institute of Economics Working Paper 5-09, May 2005.

- ▶ Section 5: Gravity and Trade

- ▶ Gravity equation (gravity):

$$F_{ij} = g \frac{M_i M_j}{d_{ij}^2}$$

- ▶ Gravity equation (trade):

$$X_{ij} = g \frac{\text{GDP}_i \text{GDP}_j}{d_{ij}^\theta}$$

- ▶ typically $\theta \approx 1$
- ▶ Empirical fact first observed by Tinbergen in 1960's.

- ▶ Gravity equation (trade):

$$X_{ij} = g \frac{\text{GDP}_i \text{GDP}_j}{d_{ij}^\theta}$$

- ▶ Key features:
 1. Everything enters multiplicatively – including distance
 2. No third country effects, except through GDP changes

- ▶ Numerator only

$$T_{ij}^* = \text{GDP}_i / \text{GDP}_j$$

- ▶ Larger countries export more to all locations
- ▶ Larger countries import more from all locations

► Numerator only

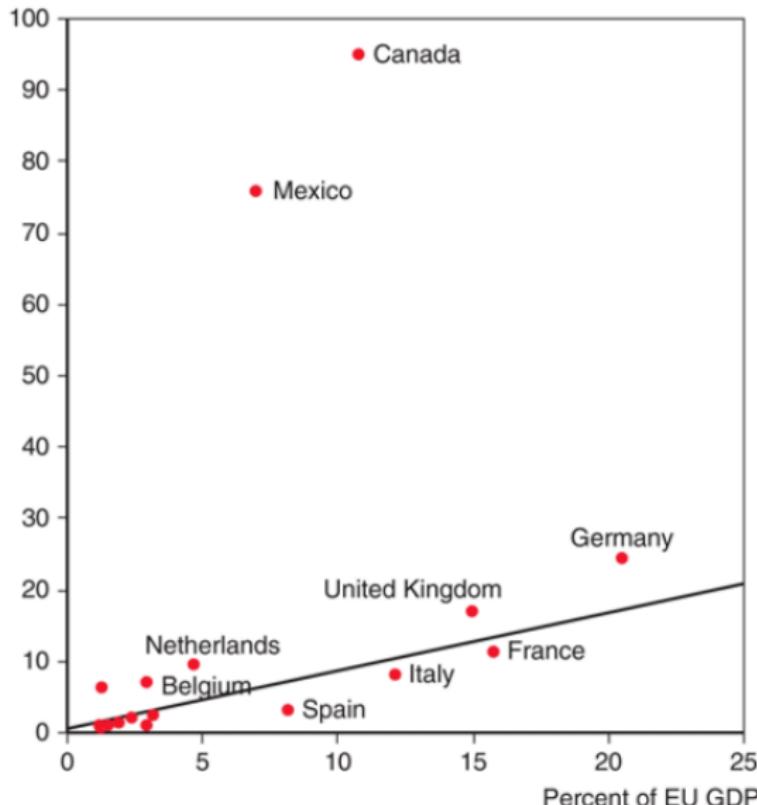
Percent of U.S.
trade with EU



Source: U.S. Department of Commerce,
European Commission.

► Numerator only

Percent of U.S.
trade with EU



Missing trade

- ▶ Distance extremely important for trade
- ▶ Doubling distance reduces trade by half
- ▶ Transport costs?
- ▶ Scale very little with distance

Missing trade

- ▶ Physical distance a proxy:
- ▶ Nearby countries have:
 - ▶ Similar Language
 - ▶ Cultural Affinity
 - ▶ Contiguity
- ▶ Even so, puzzling how little countries trade

Missing trade

- ▶ Canada has no tariffs with the United States
- ▶ Quite easy to cross the border
- ▶ ex: cross-border shopping

Missing trade



Source: Statistics Canada, U.S. Department of Commerce.

Missing trade

Trade with British Columbia, 2009

Canadian Province	Trade as Percent of GDP	Trade as Percent of GDP	U.S. State at Similar Distance from British Columbia
Alberta	6.9	2.6	Washington
Saskatchewan	2.4	1.0	Montana
Manitoba	2.0	0.3	California
Ontario	1.9	0.2	Ohio
Quebec	1.4	0.1	New York
New Brunswick	2.3	0.2	Maine

Source: Statistics Canada, US Department of Commerce

Border effect same as 2500-4000 km of distance!

Estimating Gravity

Gravity equation:

$$X_{ij} = g \frac{\text{GDP}_i \text{GDP}_j}{d_{ij}^\theta}$$

Logs:

$$\ln(X_{ij}) - \ln(\text{GDP}_i) - \ln(\text{GDP}_j) = \ln(g) + \theta \ln(d_{ij}) + \epsilon_{ij}$$

Question: Does Denmark have more trade with UK or the United States?

Why?

- ▶ UK GDP 2.5 trillion USD
 - ▶ US GDP 15 trillion USD
-
- ▶ Pop. weighted UK-DK distance 1000 km
 - ▶ Pop. weighted US-DK distance 7500 km

- ▶ 2012 DK-UK exports 9 billion USD
- ▶ 2012 DK-USA exports 7.5 billion USD

Summary

- ▶ Why you should care about international economics
 - ▶ Denmark is a small open economy
 - ▶ Poor media understanding of trade
 - ▶ Many puzzles, some not solved
- ▶ Lightning course overview
- ▶ Some facts about world trade
 - ▶ More trade in manufactures, less agriculture over time
 - ▶ Trade share of gdp is growing
 - ▶ Service trade not so alarming
- ▶ Trade and gravity
 - ▶ Trade closely follows a gravity specification
 - ▶ Distance effect very strong, still a puzzle

- ▶ Next time, the Ricardian (comparative advantage) model
 - ▶ Countries trade due to technology differences
 - ▶ There are always gains from trade, even for a country better at everything!
 - ▶ A deeply counter-intuitive idea