

Lecture 8(i)

Announcements

None

Lecture

0. Blurb about majoring in economics

1. Robinson-Friday

Robinson1/Robinson2 pictures (and connect the dots in case you missed the metaphor)

2. Further discussion of the effect of trade

3. Some Discussion of Trade between China and the U.S.

4. Free Trade Areas

5. Public Goods

# Majoring in Economics?

To declare a major in Economics you need to complete:

- ECON 1101: Principles of Microeconomics
- ECON 1102: Principles of Macroeconomics
- MATH 1271: Calculus I
- OR equivalent from another institution

*\*courses need to be completed with a C- or better*

Only declared majors are allowed to take 3xxx & 4xxx level Economics courses.

In order to proceed into ECON 3101: Intermediate Microeconomics you need to declare a major.

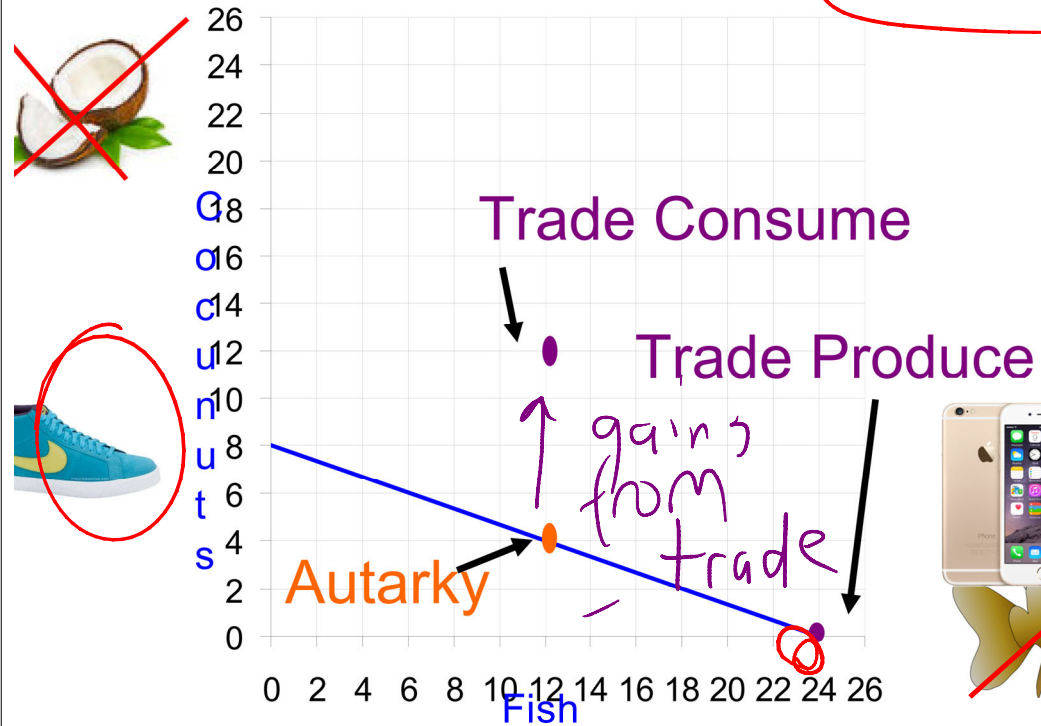
Please visit the Economics Department webpage under undergraduate [Majors & Minors](#) for more information regarding the course requirements.

You can also make an appointment with an Econ Advisor at [econ.appointments.umn.edu](http://econ.appointments.umn.edu) or email questions to [econadv@umn.edu](mailto:econadv@umn.edu).

UNIVERSITY OF MINNESOTA

# Comparative Advantage

~~Robinson PPF~~

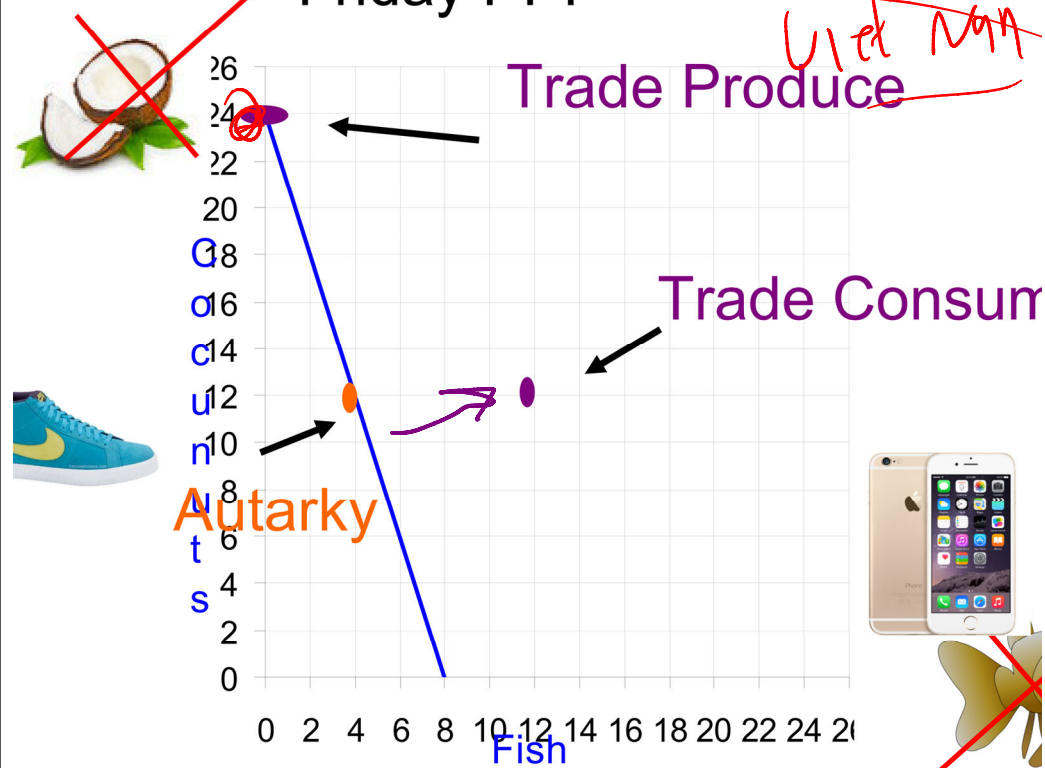


Op. Cost ~~1 Fish = 1/3 Coconuts~~

	Produce	Consume
Autarky	12 F, 4 C	12F, 4 C
Trade	24F, 0 C	12F, 12 C

# as a Basis for Trade

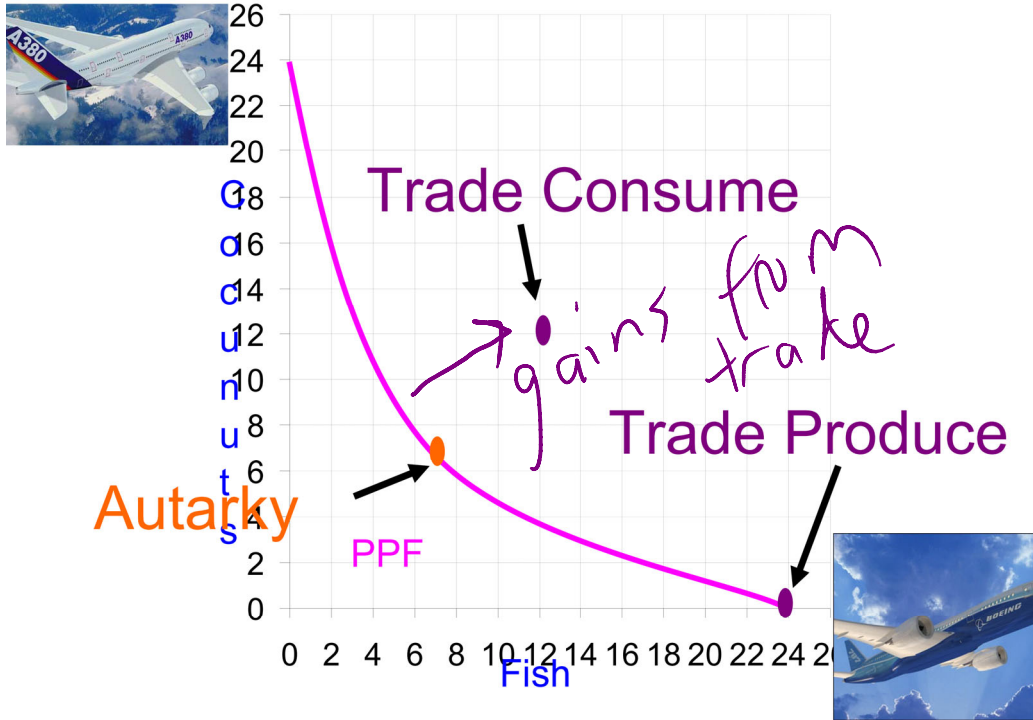
~~Friday PPF~~



Op. Cost ~~1 Fish = 3 Coconuts~~

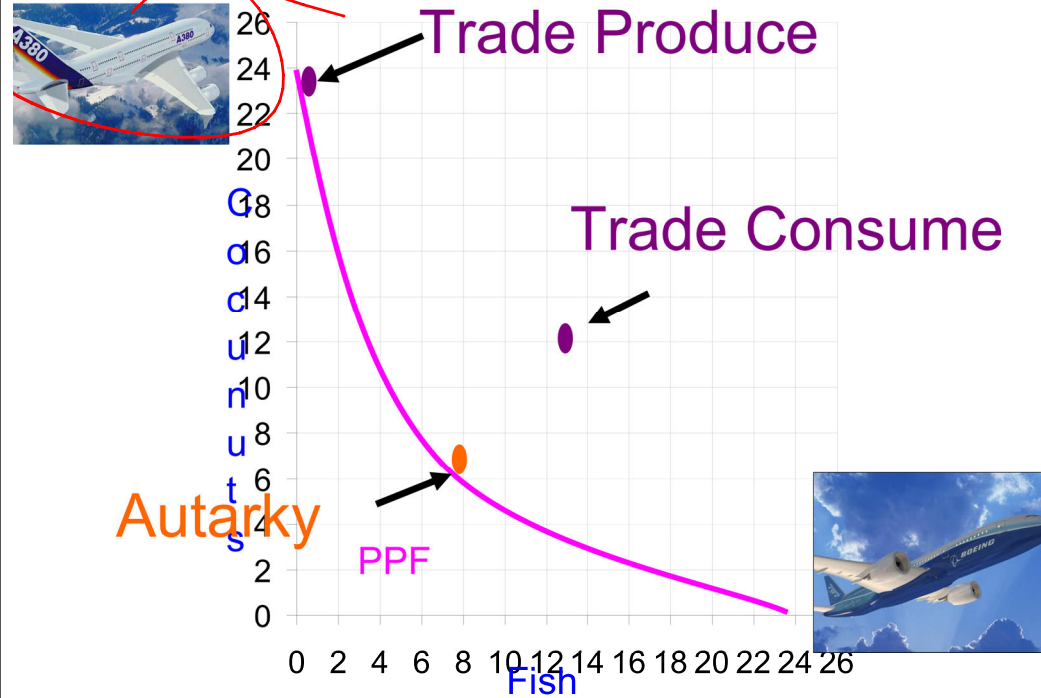
	Produce	Consume
Autarky	4 F, 12C	4 F, 12 C
Trade	0 F, 24 C	12F, 12C

# Increasing Returns Robinson 1 PPF



	Produce	Consume
Autarky	7 F, 7 C	7F, 7 C
Trade	24F, 0 C	12F, 12 C

# as a Basis for Trade Robinson 2 (clone) PPF



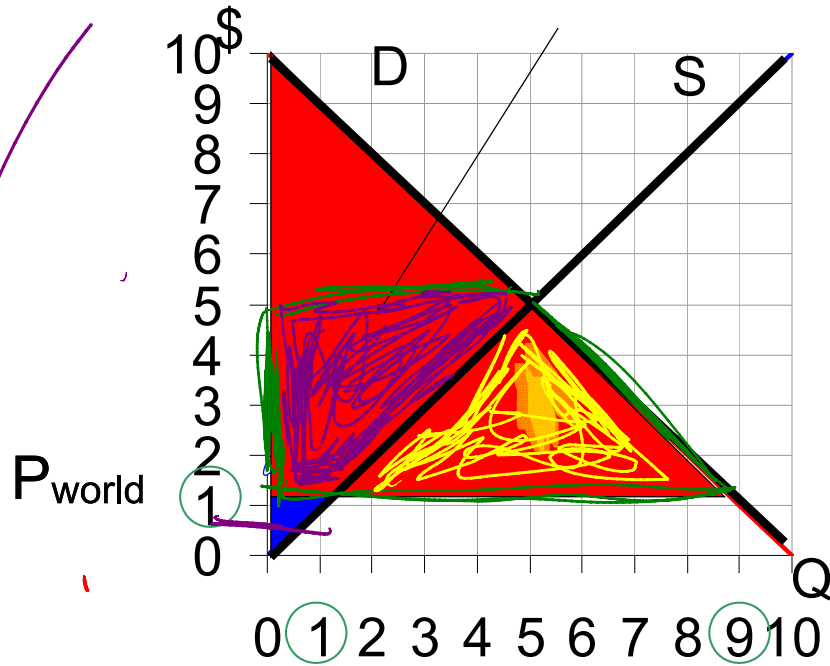
	Produce	Consume
Autarky	7 F, 7C	7 F, 7 C
Trade	0 F, 24 C	12F, 12C

## Recent economic history:

- Before 1990s,
  - US imports relatively small
  - much of it trade with advanced nations
  - or in natural resources with less developed nations
- Since 1980s, low skill workers in US have not fared well relative to high skill workers
  - Early research pointed to
    - Technological change (i.e. robots)
    - Decline in unions
    - Not trade

- Since the late 1990s
  - Imports of manufactured goods from China has exploded
  - The more recent research shows this is having impact on low wage workers
    - look at places like North Carolina which made goods like furniture now produced in China. Workers in those places are having a tough time (and if lucky get on disability).
- The picture of Robinson trading with Friday to exploit comparative advantage highlights how Robinson wins from trade
- 
- Picture leaves in the background that when Robinson is a country, there are different people in it with different interests:
  - consumers and high skill workers (who in the US tend to win from trade)
  - low-skill workers (who may lose)

So don't forget about this picture from last week



## Winners and losers

$$\Delta CS > 0$$

and

$$\Delta CS + \Delta PS > 0$$

but

$$\Delta PS < 0$$

A good argument for a social safety net (e.g. expansion of Medicaid under Obamacare).

Note this looks unilateral free trade for a consumer product.

If product is input for other products, then those other industries benefit from imports (e.g. auto industry benefits from imports of steel.):

Blocking imports of labor intensive goods won't necessarily bring the low skill jobs back, because firms may use robots instead.

Trade at world price of \$1 is good overall for Econland.

What about at a world price of \$0?

- Domestic producers are sure to complain that this is an “unfair” price. (For example, may only be zero because of subsidies of foreign governments.
- In this analysis, from the perspective of Econland, it doesn't really matter why the price is zero. Overall surplus in Econland is higher when  $P_{\text{world}} = 0$

Suppose the policy goal is to maximize overall Econland surplus (and have programs to compensate workers harmed by trade)

- Appropriate policy when foreign government subsidizes widgets so price equals \$0: send thank you note to foreign governments for subsidizing our free widgets. (Unilateral free trade is in Econland's interest overall.)

If you want to make a case that unilateral free trade is not in Econland's interest, you need to explain what's missing in the analysis. Here are three possibilities (in addition to the points already made about the division of the pie):

(1) Argument **assumes price equals the opportunity cost** to produce the good in Econland. Suppose instead price is greater than marginal cost because of increasing returns.

**Example: Boeing Dreamliner**

- \$170 million dollar price tag
- Marginal cost less (eventually), let's say \$150 million. Profit margin of 20 million is a return on \$5 billion R&D investment.

- If Delta Airlines is deciding between a Dreamliner or an Airbus plane, if it goes with the Dreamliner, a profit margin of \$20 million stays here (in the form of going to Boeing). This is a benefit that is **external** to Delta in its decision making.
- Can see that the U.S. has an incentive to encourage U.S. airlines to buy Boeing planes while Europe has an incentive to encourage European airlines to buy Airbus planes. (Not in U.S. interests to adopt free trade in aircraft unilaterally)
- Still may be gains from a **bilateral** trade agreement between U.S. and Europe where they have free trade in aircraft and enjoy gains from



variety like in Robinson 1/Robinson 2 trade.

(2) .Argument that unilateral free trade in widgets is good for Econland assumes no positive externalities from widget production in Econland.

- Suppose instead widgets are a high-tech, strategic industry with knowledge spillovers for other industries.
- There will be an incentive to promote these industries with subsidies and by restricting imports.
- Countries may want to engage in bilateral agreements to limit subsidies and import restrictions.

- Be wary of this argument, everybody seeking protection loves to claim their industry is “strategic.”

(3) National Defense. Suppose that widgets are used in warfare. Suppose that after the zero price widget imports drive out the domestic industry in Econland, there is an invasion of Econland by the army of PoliticalScienceland. PoliticalScienceland cuts off exports of widgets, and Econland has no widgets to use in self-defense.

The national defense argument for protectionist policy obviously doesn't make sense for industries like slippers, furniture, sugar!

### 3. More on China/US Trade

Some industries are intensive in low-skill labor. China has a comparative advantage in these.

Other industries are intensive in high-skill labor and high technology. The U.S. has a comparative advantage in these.

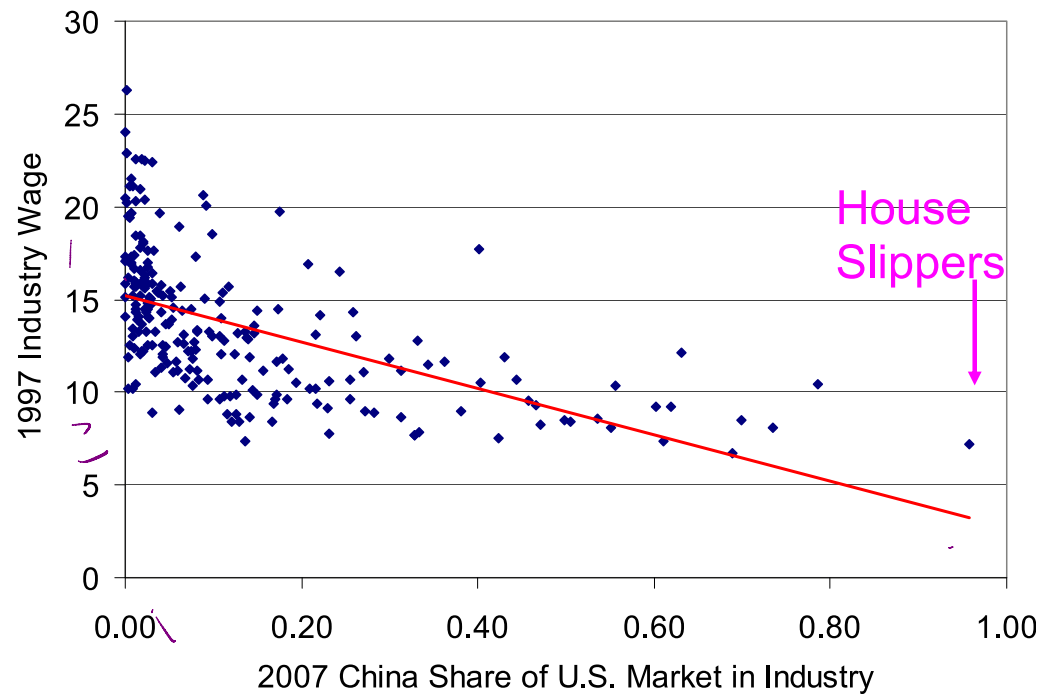
The homework provides some evidence that the pattern of trade is consistent with specialization according to comparative advantage. (Note: you still have to do the homework to calculate the slope of the regression line!)

Low skill industries tend to pay low wages. There is pattern in the data that China has tended to gain the most market

share in those industries that paid low wages within the U.S.

Example: House slipper manufacturing wage = \$7.16 in 1997. As of today, this industry has been virtually wiped out by Chinese.

Relationship Between Chinese Imports and U.S. Wages across Manufacturing Industries





Meet a typical worker at Foxconn assembling iPhones (as described in China Daily, April 2014

[http://www.chinadaily.com.cn/business/2014-04/22/content\\_17448989.htm](http://www.chinadaily.com.cn/business/2014-04/22/content_17448989.htm)

Working overtime at 10 hour days, earns 3,700 yuan a month (\$600).

No way a factory in US can pay someone \$600 a month to work 10 hour days.

## Comparative Advantage Trade

China

中国



US  
美国



assembly  
of iPhone



R&D  
for  
iPhone

Manufacturing jobs that involve labor-intensive, repetitive tasks in the manufacture of standardized good have been wiped out in the U.S.

- The textile and furniture industries, that had earlier located in places like North Carolina for low wages, have been decimated.

Another example: recall discussion of division of labor of iPhone

- Design: Apple headquarters in California
- Assembly: Foxconn in Shenzhen.

**Important: China is moving up technology ladder**

- One reason: making enormous investments in human capital
- Another reason: forced technology transfer for access to market
  - For more, see "[Quid Pro Quo](#)," article by Holmes, McGrattan, Prescott
  - GM, Ford, Volkswagen forced into joint ventures to sell in China's market
  - Tesla in news today. Opening in China without joint venture but will pay 25% tariff instead.

## 4. Free Trade Agreements

North American Free Trade Agreement  
might get new name  
USMCA

What is it about?

US/Mexico Part: mainly Robinson/Friday  
trade (trade based on comparative  
advantage)

US Canada Part: mainly  
Robinson1/Robinson2 trade  
(trade based on scale economies)

Other effects including political ones. (US  
Canada military allies. political)

NAFTA free movement of goods across 3  
countries.

United States: free movement if trade of  
goods and people across states.

European Union: free movement of goods  
and people across countries.  
(another plus factor is political: Made it less  
likely for Germany to get in wars with France  
and England).

Brexit: United Kingdom getting out. UK  
trying to get the free movement of goods part  
only. Let's see what happens in March.

# Brexit

