





# Linkages between countries

An **open economy** is one that engages in trade with other countries and countries are linked

- By trade in goods and services
- By flows of financial investment

A good way to understand economic interactions with other countries is by examining the *balance of payments* (BoP): the services, and assets.

# U.S. balance of payments, 2010 (in \$billions)

## CURRENT ACCOUNT

Table 29-1

Exports of goods	\$1,289	
Imports of goods	-1,935	
Balance of trade		-646
Exports of services	549	
Imports of services	-403	
Balance of services		146
Income received on investments	663	
Income payments on investments	-498	
Net income on investments		165
Net transfers		-136
Balance on current account		-471

It is composed of the current account: the record of :

b) Net income on investments,

c) N

# U.S. balance of payments, 2010 (in \$billions)

*financial account*,  
which records

a) purchases of assets a  
country has made abroad,

b) foreign purchases of

*capital account*.

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## FINANCIAL ACCOUNT

Increase in foreign holdings of assets in the United States	1,259	
Increase in U.S. holdings of assets in foreign countries	-1,005	
Balance on financial account		254

## BALANCE ON CAPITAL ACCOUNT

Statistical discrepancy		217
Balance of payments		0

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## The rest of the current account

The *balance of services* is the difference between the values of the exports and imports of services.

*Net exports* is the sum of the balance of trade and the balance of services.

The current account balance is the sum of net exports, *net income on investments*, and *net transfers*.

For simplicity, we will frequently ignore the latter two their sum is close to zero for the U.S. and think of net exports as being equal to the current account balance.





Foreign Exchange Market - a global market in which people trade one currency for another.

Nominal Exchange Rate    the number of units of

*Example: If one U.S. dollar can purchase 100 Japanese yen, then the exchange rate is  $¥100 = \$1$ ; or alternatively,  $¥1 = \$0.01$ .*



## Exchange Rate Listings

### Exchange Rate Between the Dollar and the Indicated Currency

Currency	Units of Foreign Currency per U.S. Dollar	U.S. Dollar per Unit of Foreign Currency
Canadian dollar	1.023	0.978
Japanese yen	76.870	0.013
Mexican peso	13.449	0.074
British pound	0.635	1.574
Euro	0.727	1.375



The two versions of the exchange rate are reciprocals of each other; 1.023 Canadian dollars bought 1 U.S. dollar, or equivalently 1 Canadian dollar bought  $1/1.023 = 0.978$  U.S. dollars.

# Foreign exchange market and exchange rate

o The dollar has a price in terms of how much foreign currency it buys.

**Domestic currency value** = foreign currency price X exchange rate

Example:

Price of T-shirt = 40TL

Exchange rate = 0.69\$ /TL

US. Dollar Value =

40TL X 0.69\$/TL = 28\$

# Foreign exchange market and exchange rate

- Equilibrium in the Market for Foreign Exchange
  - The exchange rate of the dollar is determined by its supply and demand.
  - Changes in the exchange rate affect imports and exports of the country.

# Market exchange rates are determined by supply and demand, just like any price.

o The demand for \$US comes from:

- a) Foreign firms and households wanting to buy U.S. goods and services
- b) Foreign firms and households wanting to invest in U.S. physical or financial assets
- c) Expectation: Currency traders believing the value of the \$US will rise

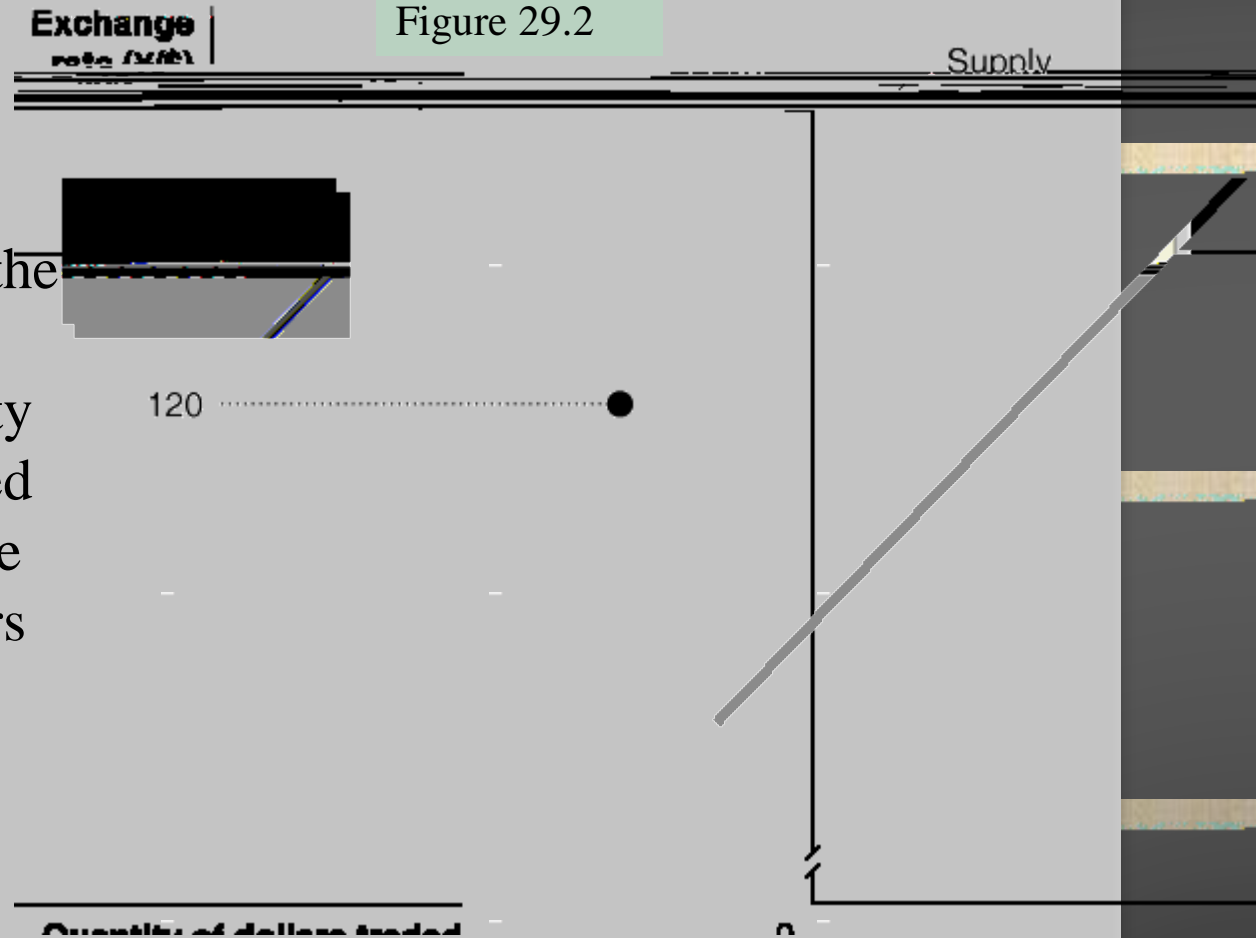
o The supply of \$US comes from:

- a) U.S. firms and households wanting to buy foreign goods and services

# Equilibrium in the foreign exchange market

Figure 29.2

The equilibrium exchange rate is the exchange rate at which the quantity of dollars supplied is just equal to the quantity of dollars demanded.







## Example of the effect of changes in exchange rate on trade

○ Price of wheat in yen is:

$$\underline{\$2 \times (88\text{yen} / \$1) = 176 \text{ yen}}$$

○ Price of camera in dollars is:

$$\underline{50,000 \text{ yen} \times (\$1 / 88 \text{ yen}) = \$568}$$

- What happens to the foreign price of these goods when the price of the dollar rises to 140 yen per dollar?
- Price of wheat in yen is:

o The camera then costs \$357 and the wheat costs 280 yen.

More cameras are sold in the U.S. and less wheat is sold in Japan.

o All else being equal, a higher price of the

# Example of the effect of changes in exchange rate on trade

## *o* RESULT:

**Currency appreciation** Occurs when the market value of a currency rises relative to another currency.

## Example of the effect of changes in exchange rate on trade

○ What happens to the foreign price of these goods when the price of the dollar falls to 50 yen per dollar?

○ Price of wheat in yen is:

$$\underline{\$2 * (50 \text{ yen} / \$1) = 100 \text{ yen}}$$

○ Price of camera in dollars is:

$$\underline{50,000 \text{ yen} * (\$1 / 50 \text{ yen}) = \$1000}$$

o Less cameras are sold in the U.S. and more wheat is sold in Japan

lower price of the dollar (depreciation or

## Example of the effect of changes in exchange rate on trade

### RESULT:

**Currency depreciation** Occurs when the market value of a currency falls relative to another currency.

Anything affecting the demand for foreign exchange will shift the demand curve to the right for an increase in demand, to the left for a decrease.

This might result from:

1. Changes in the demand for U.S.-produced goods and services, relative to foreign produced goods and services
2. Changes in the desire to invest in the U.S. relative to foreign countries
3. Changes in the expectations of currency trade



# Changes in the demand and supply for foreign exchange

Let's see the affect of these factors on the foreign exchange market—Just shift either supply or demand

1-

A) Changes in the demand for U.S.-produced goods and services and financial assets: foreigners want to buy more of our stuff

more demand for dollar (shifts out)

higher price of dollar

- Why do they want more of our stuff?
  - higher real incomes in their country
  - change in tastes (they like our stuff)



2-

A) Changes in the desire to invest in the United States

foreigners want to buy our bonds

more demand for dollar      higher price of dollar

2-

B) Changes in the desire to invest in foreign countries

o Americans invest in other countries

more supply of dollars      lower price of dollar

## 3- Changes in the expectations of currency traders about the likely future value of the dollar

- Expect dollar to be higher in future  
more current demand  
higher current price of dollar

## Currency speculation

A large amount of trade in foreign exchange is by *speculators*, currency traders who buy and sell foreign exchange in an attempt to profit from changes in exchange rates.

Speculators purchase and hold a currency when they believe it will appreciate; or they may engage in more complicated financial transactions, for example to buy currency in the future at a price agreed today.







# SUMMARY

- o An **exchange rate** is a rate that equates one currency to another currency.
- o **Appreciation of a currency** is when the rate increases. This makes the currency more valuable and the purchase of foreign final goods and services less expensive. Everything else the same, appreciation of a currency increases the country's imports and reduces the country's net exports; aggregate demand will decrease.
- o **Depreciation of a currency** is when the rate decreases. This makes the currency less valuable and the purchase of foreign final goods and services more expensive. Everything else the same, depreciation of a currency decreases a country's imports and increases the country's net exports; aggregate demand will increase.

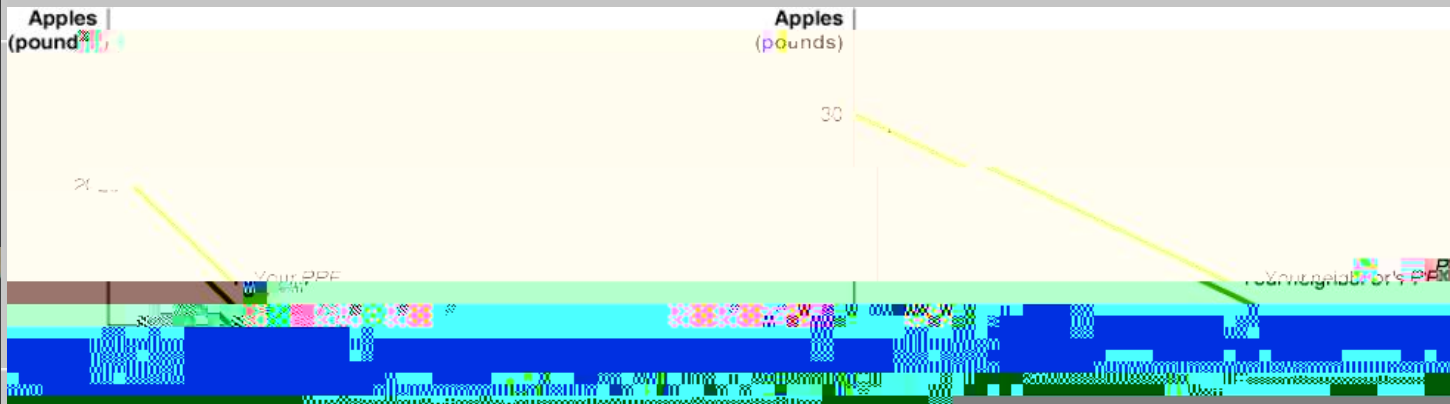
# Why Trade: GAIN

- Countries specialize in the production of goods and services based upon

- Describe comparative advantage and explain how it serves as the basis for trade.
- You and your neighbor each have a limited time to pick apples and/or cherries.
- The table shows the amount of each fruit that you could each pick, by devoting all of your time to that fruit.

Blank	You	Blank	Your Neighbor	Blank
Blank	Apples	Cherries	Apples	Cherries
Devote all time to picking apples	20 pounds	0 pounds	30 pounds	0 pounds
Devote all time to picking cherries	0 pounds	20 pounds	0 pounds	60 pounds

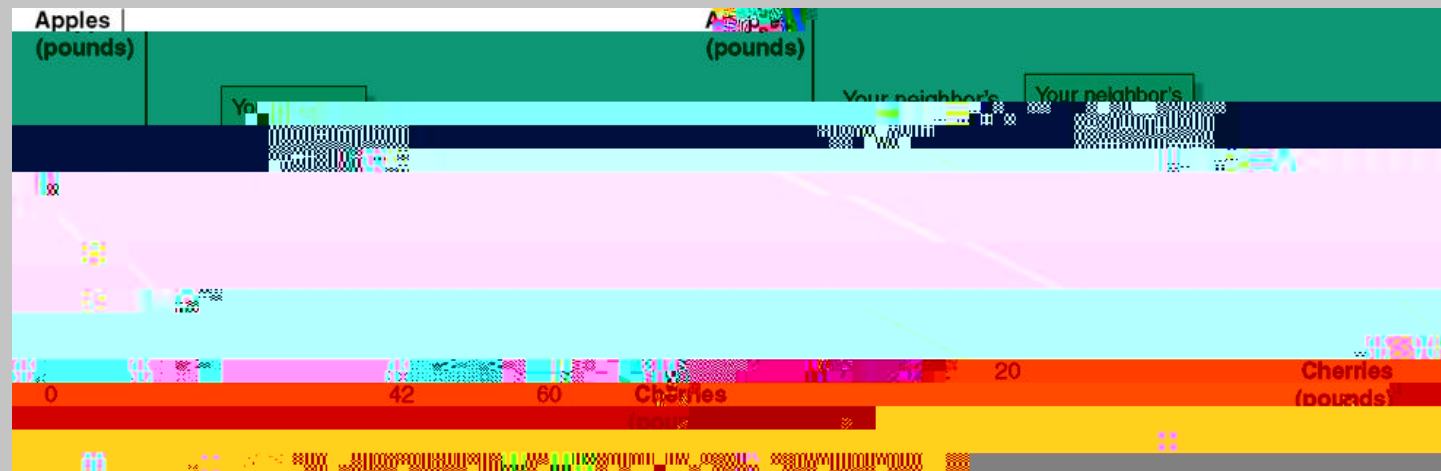
Figure 2.4 Production Possibilities for You and Your Neighbor, without Trade



- If you spend all of your time picking cherries, you can pick 20 pounds of cherries; or if you spend all your time picking apples, you can pick 20 pounds of apples.
- Your neighbor can similarly pick 60 pounds of cherries or 30 pounds of apples.



# Gains from Trade

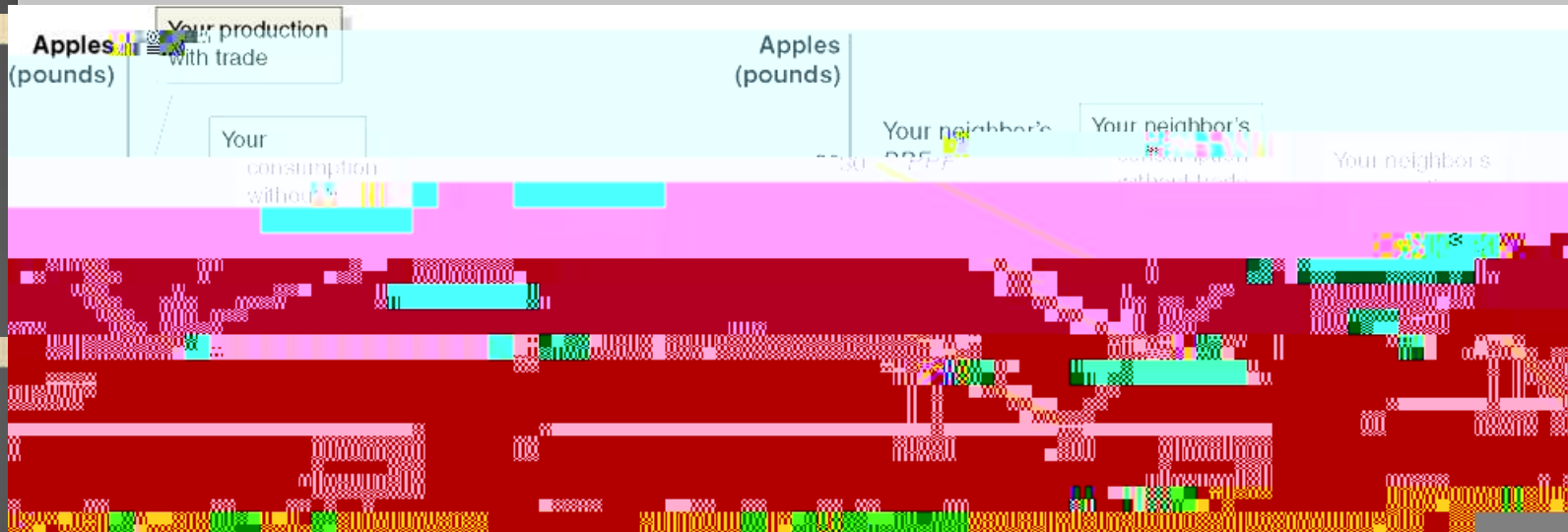


- When you don't trade with your neighbor, let's say you pick and consume 8 pounds of apples and 12 pounds of cherries per week—point in panel (a).
- When your neighbor doesn't trade with you, she picks and consumes 9 pounds of apples and 42 pounds of cherries per week—point in panel (b).

# Gains from Trade

- o If you specialize in picking apples, you can pick 20 pounds. If your neighbor specializes in picking cherries, she can pick 60 pounds.
- o If you trade 10 pounds of your apples for 15 pounds of your neighbor's cherries, you will be able to consume 10 pounds of apples and 15 pounds of cherries—point in panel (a).

# Gains from Trade



- o Your neighbor can now consume 10 pounds of apples and 45 pounds of cherries—point



## A Summary of the Gains from Trade

Blank	You	Blank	Your Neighbor	Blank
Blank	Apples (in pounds)	Cherries (in pounds)	Apples (in pounds)	Cherries (in pounds)
Production and consumption <b>without</b> trade	8	12	9	42
Production <b>with</b> trade	20	0	0	60
Consumption <b>with</b> trade	10	15	10	45
Gains from trade (increased consumption)	2	3	1	3

- o Both you and your neighbor are able to consume more with trade than without.

## Why do Countries Restrict Trade

Generally accepted that free trade enhances societal welfare of the countries

- But...

Why is complete free trade seldom practiced?

o <https://www.youtube.com/watch?v=Y2X3KPiAt0&list=PLF2A3693D8481F442&index=35>

What are trade restriction policies that countries use:

o <https://www.youtube.com/watch?v=e2gQxN10Bg&list=PLF2A3693D8481F442&index=36>