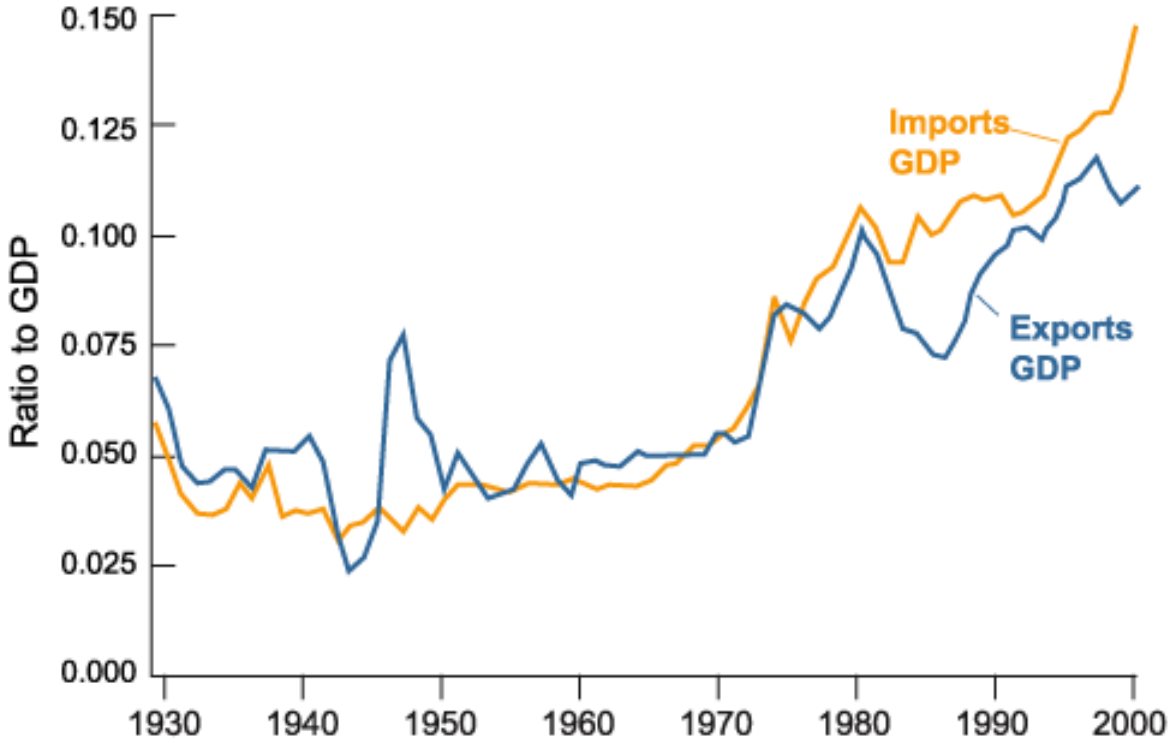
Openness in goods and financial markets

- Goods markets: frictions to free trade through tariffs and quotas.
- Financial markets: frictions to free trade through capital controls.
- Factor markets – in long run, labor and capital are also potentially mobile across countries.

U.S Imports and exports:

- Grown steadily in last 50 years.
- 1930 Smoot-Hawley act – sharp reduction in trade volume.
- Surpluses and deficits:
  - 1940's post-war period.
  - Mid-1980's – links to strong dollar and budget deficits.
  - Current period.


0.150
0.125
0.100
0.075
0.050
0.025
0.000
Ratio to GDP
1930
1940
1950
1960
1970
1980
1990
2000
Imports
GDP
Exports
GDP

Determinants of openness:

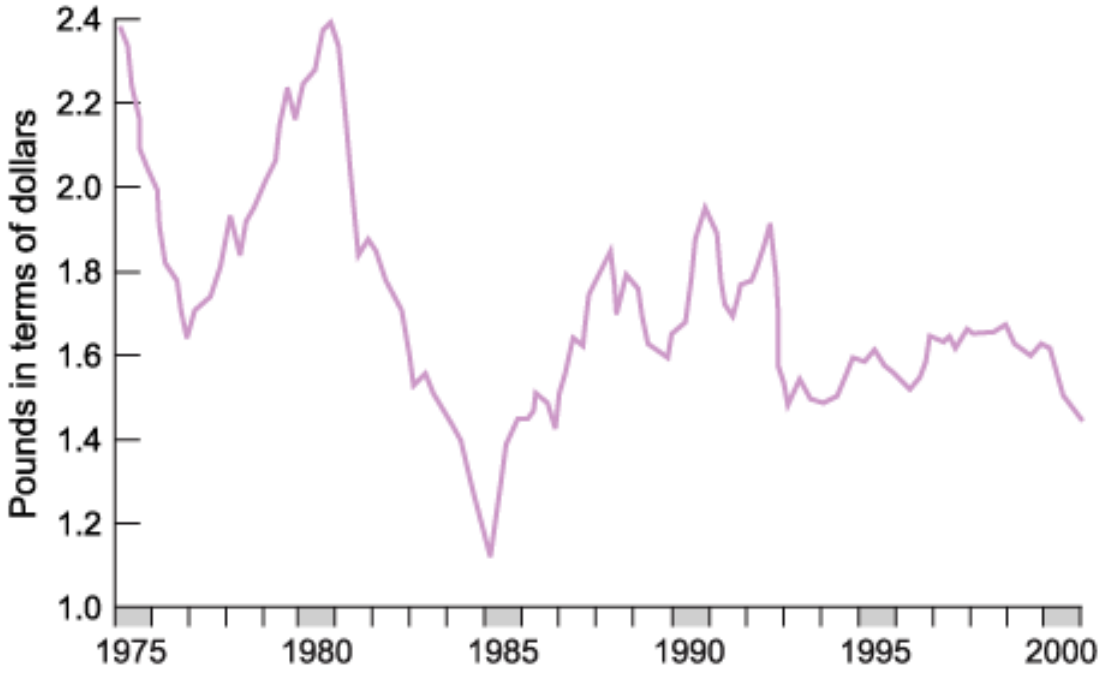
- Tradeable goods share better measure of degree of openness (extent to which U.S producers subject to world competitive pressures).
- Openness depends on:
  - Size (Belgium vs U.S)
  - Proximity to trading partners (Iceland vs Belgium).

Table 18-1 Ratios of Exports to GDP for Selected OECD Countries, 2000

Country	Export Ratio (%)	Country	Export Ratio (%)
United States	11	Switzerland	45
Japan	10	Austria	48
Germany	33	Netherlands	74
United Kingdom	27	Belgium	84

Real vs nominal exchange rates

- Open economy: decision whether to purchase domestic or foreign goods depends on the real exchange rate – the price of foreign goods relative to domestic good.
- The nominal exchange rate – the price of a foreign currency in terms of a domestic currency is what we observe.
- Let E denote the amount of dollars it takes to buy one unit of foreign currency. Ex: 1.2$ to buy one Euro.
  - An appreciation of the U.S. dollar implies that it takes less dollars to buy a unit of foreign currency: E falls.
  - A depreciation of the U.S. dollar implies that it take more dollars to buy a unit of foreign currency: E rises.


Pounds in terms of dollars
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
1975
1980
1985
1990
1995
2000

Real exchange rates: an example

- If the price of a Jaguar is £30,000, and a pound is worth 1.5 dollars, then the price of the Jaguar in dollars is £30,000 x $1.5 = $45,000.
- If a Cadillac is $40,000, then the relative price of a Jaguar in terms of Cadillacs is $45,000/$40,000 = 1.12
- To generalize this example to all of the goods in the economy, we use a price index for the economy, or the GDP deflator.

Real exchange rates

- Let P = domestic price level, P* foreign price level then the real exchange rate is defined as

$$\varepsilon \equiv \frac{EP^*}{P}$$

- Example:

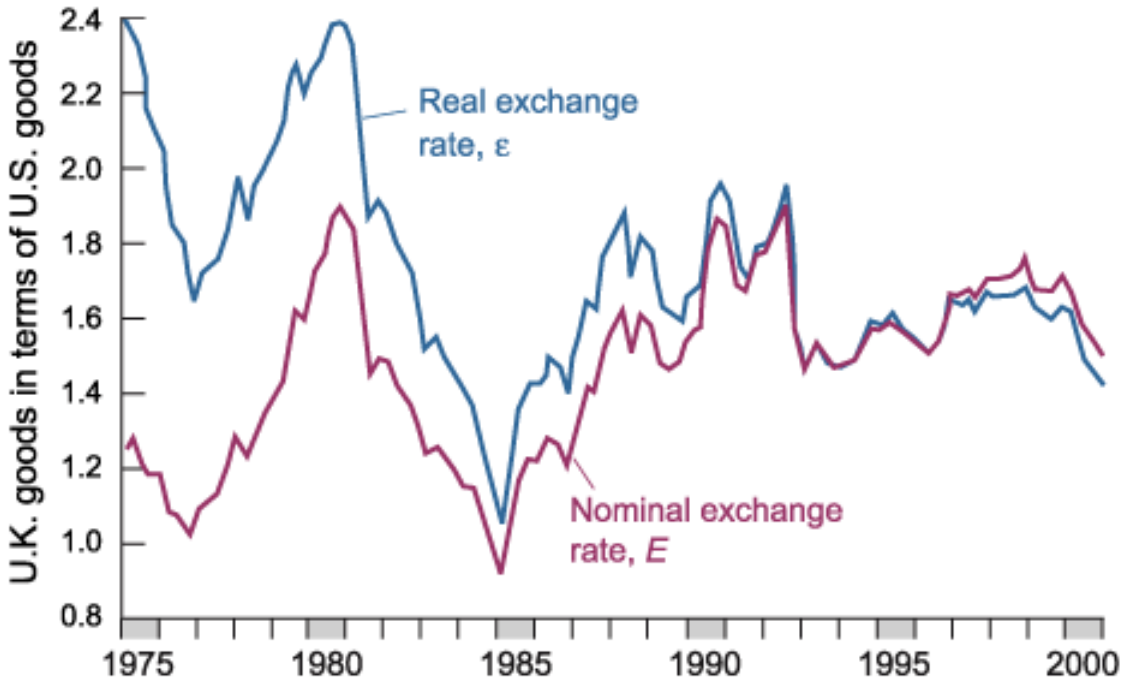
*P** = price of British goods in pounds

E = price of pounds in terms of dollars

*EP** = price of British goods in dollars

Real appreciations vs depreciations

- An increase in the relative price of domestic goods in terms of foreign goods is called a ***real appreciation***, which corresponds to a decrease in the real exchange rate, ε.
- A decrease in the relative price of domestic goods in terms of foreign goods is called a ***real depreciation***, which corresponds to an increase in the real exchange rate, ε.


U.K. goods in terms of U.S. goods
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
1975
1980
1985
1990
1995
2000
Real exchange rate, ε
Nominal exchange rate, E

Trade weighted exchange rates:

- To obtain a multi-lateral real exchange rate (the price of foreign traded goods relative to U.S traded goods) we take a weighted average of bilateral exchange rates.
- Weights depend on share of trade between countries.
- Example: Canada receives high weight in U.S. multi-lateral exchange rate.

Table 18-2 The Country Composition of U.S. Merchandise Trade, 2000

	Exports to		Imports from	
Countries	$ Billions	Percent	$ Billions	Percent
Canada	179	23	232	19
Western Europe	178	23	243	20
Japan	64	8	146	12
Mexico	86	11	136	11
Asia*	130	17	340	28
OPEC	20	3	42	3
Others	116	15	83	7
Total	773	100	1222	100

* Not including Japan.

OPEC: Organization of Petroleum Exporting Countries.

Trade weighted U.S real exchange rate