

# The Trade Deficit and Foreign Debt

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What is the role of trade deficits and surpluses?

- ▶ A trade surplus means the country **saves** for future consumption.
- ▶ A deficit means a country **borrow**s against future income.

Exactly analogous to borrowing and saving by individuals.

## Example: Trade across time

### Assumptions:

- ▶ 2 countries
- ▶ 1 good, perishable
- ▶ **A** has a good harvest in odd periods, **B** in even periods
- ▶ Households like smooth consumption

## Example: Trade across time

Year	1	2	3	4	5	6
Harvest						
A	100	0	100	0	100	0
B	0	100	0	100	0	100
Trade balance						
A	50	-50	50	-50	50	-50
B	-50	50	-50	50	-50	50

What does consumption look like?

- ▶ in autarky: volatile (not good)
- ▶ with trade: constant

## Trade as risk sharing

Consider the stochastic version of the previous example.

- ▶ In each year, one country has a good harvest.
- ▶ The probability of a good harvest in each country is  $1/2$ .

By trading bonds against goods, countries can achieve perfect consumption smoothing.

All of this is exactly the same for a **household**:

- ▶ saving in good times / dissaving in bad times
- ▶ this allows a household to smooth consumption

# Country budget constraint

Like a household, each country has a budget constraint of the form

- ▶ saving = income - expenditure

At the country level:

- ▶ income = GDP ( $Y$ )
- ▶ expenditure =  $C + I + G$
- ▶ saving = foreign asset purchases =  $Y - (C + I + G)$

# Foreign Saving and the Trade Balance

Now recall another identity:

- ▶  $Y = C + I + G + NX$
- ▶  $NX = EX - IM$  is the trade balance

Therefore: foreign asset purchases =  $NX$

- ▶ When the country produces more than it eats,  $EX - IM > 0$ .
- ▶ In return for selling goods, the country must acquire foreign assets.
- ▶  $EX - IM$  is **saving** by the country.

Trade surpluses export a country's excess savings.

Trade deficits import savings from abroad.

Politicians often want trade surpluses and foreign investment. This is not possible.

What Causes Trade Deficits?



# What Causes Trade Deficits?

- ▶ Why do countries run trade deficits?
- ▶ What could / should be done about them?
- ▶ How large a deficit can be sustained?

# NIPA

Recall the NIPA identity:  $Y = C + I + G + EX - IM$

Rearrange as

$$\underbrace{Y - T - C}_{\text{private saving}} + \underbrace{T - G}_{\text{public saving}} + \underbrace{IM - EX}_{\text{foreign saving}} = I \quad (1)$$

$T$ : tax revenues.

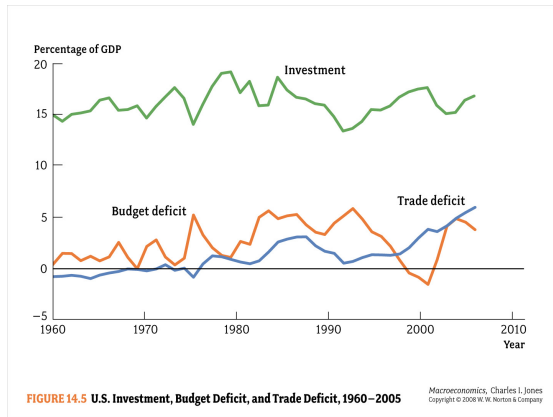
## Reasons for trade deficits

$$\underbrace{Y - T - C}_{\text{private saving}} + \underbrace{T - G}_{\text{public saving}} + \underbrace{IM - EX}_{\text{foreign saving}} = I \quad (2)$$

We get a trade deficit when we have:

1. High investment  $I$ .
2. Low private saving
3. Large government deficits

# The U.S. trade deficit

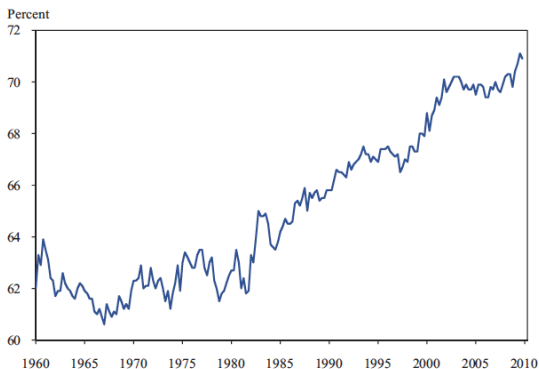


*I* has been roughly constant.

The trade deficit has been rising → saving must have declined.

# The Decline of U.S. Saving

Figure 4-1  
Personal Consumption Expenditures as a Share of GDP

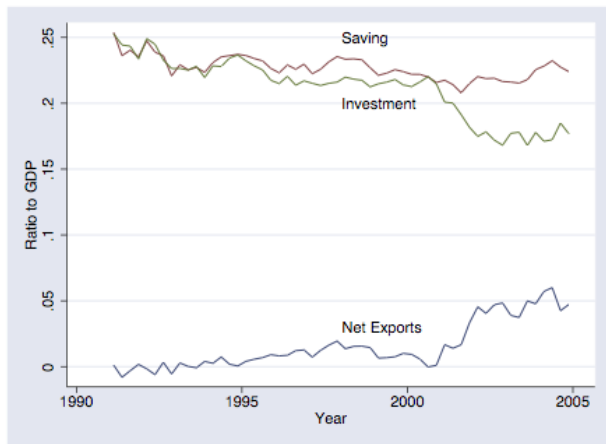


Source: Department of Commerce (Bureau of Economic Analysis), National Income and Product Accounts Table 1.1.10.

Source: Economic Report of the President (2010)

Consumption / GDP is rising - why? We'll come back to that...

## Low Investment in Other Countries



Source: Backus et al. (2009)

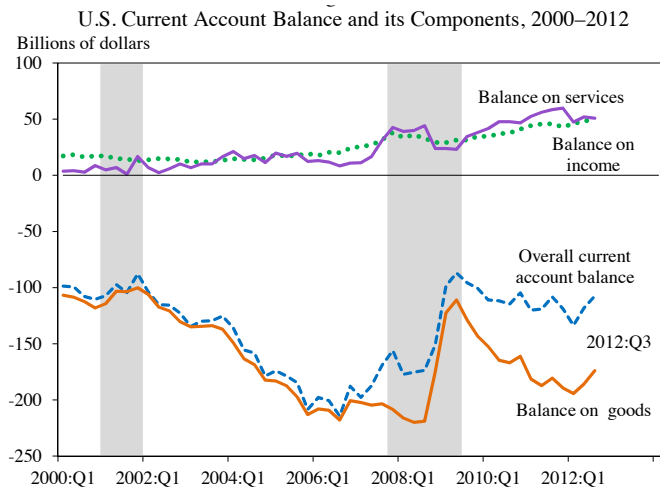
One reason for our deficit: surpluses in other rich countries.

Why? - They don't grow / invest.

## Foreign governments as buyers

- ▶ Since 2000: Deficits are financed largely by selling treasury bonds to foreign governments (Feldstein 2008).
- ▶ The likely motivation: sustain their own trade surpluses.

# Trade Surplus in Services



Source: Economic Report of the President 2013

The US still has a surplus in services and receives net income.



## How could the trade deficit be reduced?

$$\underbrace{Y - T - C}_{\text{private saving}} + \underbrace{T - G}_{\text{public saving}} + \underbrace{IM - EX}_{\text{foreign saving}} = I \quad (3)$$

Anything that improves the TB must do one of the following:

1. Increase private saving.
2. Reduce the government budget deficit.
3. Reduce investment.

*This is a key point – whenever you hear a story about the trade deficit, check that  $S^P, S^G, I$  are affected in the right way.*

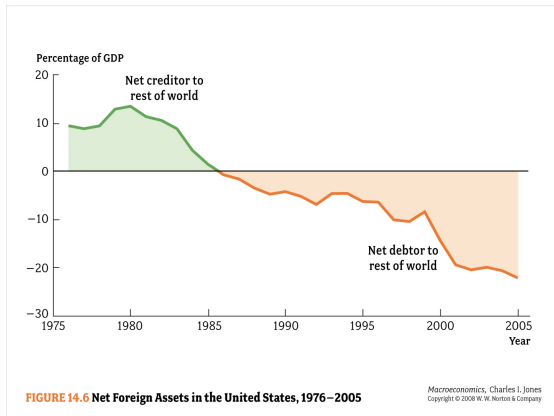
# Popular causes of the trade deficit

- ▶ Sluggish economic growth
- ▶ Too high cost of production
- ▶ Low wages in competitor countries
- ▶ Foreign trade restrictions or dumping
- ▶ “Overvalued” exchange rate

How do these relate to  $NX = S - I$ ?

## Consequences of Trade Deficits

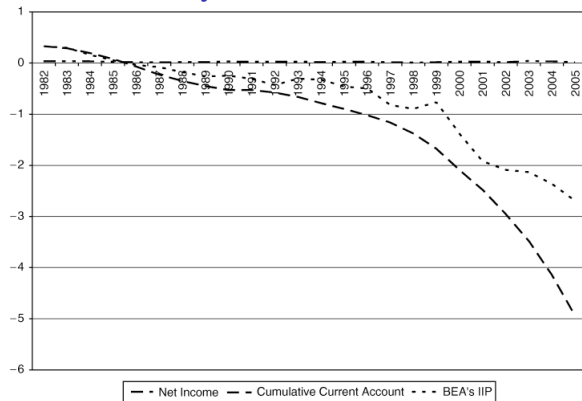
# Net foreign assets



Whenever the trade balance is in deficit, foreigners invest in the U.S.

The U.S. sells off assets.

# U.S. Interest Payments



Source: Hausmann and Sturzenegger (2006)

## A strange fact

Even though our net asset position deteriorates, we pay no (net) interest.

## U.S. Interest Payments

- ▶ If we continue to borrow, why don't we pay interest to the rest of the world?
- ▶ In 2005, the U.S. had \$5 trillion in net debt and **earned** about \$17 billion in net income.
- ▶ One reason: capital gains.
  - ▶ BEA estimates about \$2.3 trillion in capital gains (1982-2005)
  - ▶ This reduces the net debt from \$5 trillion to \$2.7 trillion.
- ▶ Second reason: U.S. assets earn a higher return than do foreign assets in the U.S.
  - ▶ Foreign direct investment is probably underestimated.
  - ▶ U.S. assets are safer / more liquid.

# Trade Deficits May Be Smaller

- ▶ We worry about trade deficits because of the interest payments they imply.
- ▶ As long as the U.S. enjoys a rate of return advantage, it can borrow from abroad without paying interest.
- ▶ The “true” deficit may be much smaller than official numbers suggest.
- ▶ In fact: the U.S. may run a “true surplus:” it acquires assets that pay more than the assets it sells.

# Does the trade deficit cost growth/jobs?

- ▶ We could have produced the goods we imported at home.
- ▶ Thoughts?



# How worrisome is the trade deficit?

- ▶ There is no definite upper bound to foreign debt.
- ▶ A country can keep borrowing as long as lenders can be convinced to lend.
- ▶ But note: countries do not borrow – individuals do.
  - ▶ The country's trade deficit is simply the sum of individual borrowing.
  - ▶ Why should we worry about that?
- ▶ What is the trade balance of North Carolina?

# Reading

- ▶ Blanchard (2013), ch. 19-6
- ▶ Poole, William (2003). A Perspective on U.S. International Trade. Federal Reserve Bank of St. Louis.

## Advanced Reading

- ▶ Jones (2013), ch. 14.
- ▶ Economic Report of the President 2010, ch. 4. [on trade deficits and saving rates]
- ▶ Backus et al. (2009)
- ▶ Is the trade deficit sustainable: Feldstein (2008), Hausmann and Sturzenegger (2006)

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