Principles of Macroeconomics

Lecture 7: The Macroeconomics of Open Economics 1

Instructor: Chi Man Yip

What is Trade Deficit?

FINANCIAL TIMES

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UK trade deficit swells to eight-month high

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Fall in currency has not made a big dent on the UK trade balance

Trade in goods export volumes

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AUGUST 10, 2017 by: Mehreen Khan

A fall in export volumes and climbing imports pushed up Britain's trade balance with

August 10, 2017. Financial Times.

What is Trade Surplus?

FINANCIAL TIMES

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Climbing imports shrink eurozone trade surplus

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AUGUST 17, 2017 by: Mehreen Khan

The eurozone's trade surplus in goods with the rest of the world shrunk by €1.7bn in June on the back of a healthy climb in imports in the bloc.

August 17, 2017. Financial Times.

What is Trade Deficit?

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Mexico Registers $1.52 Billion Trade Deficit in July

Increased shipments of crude oil and gains in exports of manufactured products lead export growth

By Anthony Harrup

Aug. 28, 2017 9:55 a.m. ET

MEXICO CITY—Mexico ran up a $1.52 billion trade deficit in July, a

DELL SMALL BUSINESS

August 28, 2017. The Wall Street Journal.

What is Trade Surplus?

MACLEAN'S

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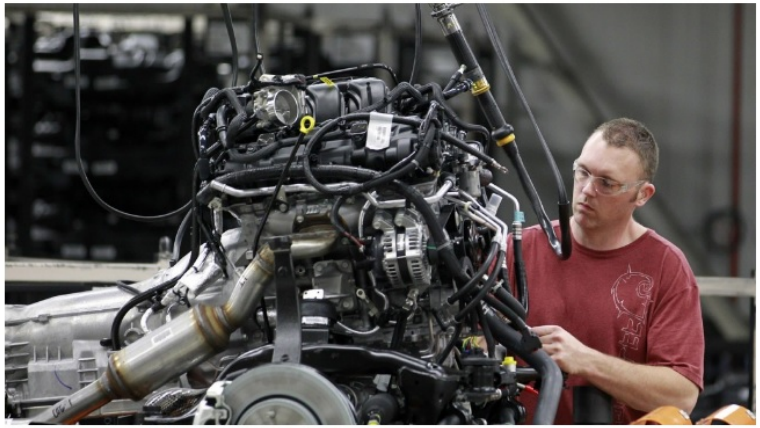
Oil exports drive Canada's trade surplus with the U.S.

Econ-o-metric: Canadian arguments about balanced trade with the U.S. don't matter to Trump. His NAFTA logic says deficits are for losers, full stop.

Kevin Carmichael

August 30, 2017



Canada's auto industry is exporting fewer vehicles and auto parts than the country imports.

Foreign Affairs Minister Chrystia Freeland says Canada doesn't measure the value of trade in terms of deficits and surpluses. But U.S. President Donald Trump does, which is why Statistics Canada's latest trade data will be more political than usual.

In the second quarter, Canada shipped goods to the United States worth $10.4 billion more than the stuff imported from its largest trading partner.

August 30, 2017. MACLEAN'S.

What Do We Learn?

- What is trade deficit? trade surplus?
- What factors affect trade deficit/surplus?

Definition: Goods

- **Exports**: goods & services produced domestically & sold abroad
- **Imports**: goods & services produced abroad & sold domestically
- **Net Exports/Trade Balance**: the value of a nation's exports minus the value of the imports

- **Trade Surplus**: EX>IM (i.e., NX>0)
- **Trade Deficit**: EX<IM (i.e., NX<0)
- **Balanced Trade**: EX=IM (i.e., NX=0)

Definition: Capital

- **Net Capital Outflow (NCO)**: the purchase of foreign assets by domestic residents minus the purchase of domestic assets by foreigners

Identity

- NCO=NX

e.g. A Canadian buys a durian from a Malaysian.

- The Canadian obtains a durian. (IM $\uparrow \rightarrow$ NX $\downarrow$)
- The Malaysian receives Canadian dollars (Purchase of domestic assets $\uparrow \rightarrow$ NCO $\downarrow$)

Other Identities

- Y=C+I+G+NX (Recall from Lecture 2)
- NCO=NX (This Lecture)

In a closed economy

- $NX = 0$
- $S = Y - C - G$ & $S = I$ (Recall from Lecture 3)

In an Open Economy

- $S = I + NX = I + NCO$
  - A nation's saving does not have to equal the amount it spends to purchase domestic capital.

$S = I + NCO$

- Suppose $S > I$. Then,
  - $NCO > 0 \Longleftrightarrow NX > 0 \Longleftrightarrow Y > C + I + G \Longleftrightarrow$ Trade Surplus
- Suppose $S < I$. Then,
  - $NCO < 0 \Longleftrightarrow NX < 0 \Longleftrightarrow Y < C + I + G \Longleftrightarrow$ Trade Deficit
- Suppose $S = I$. Then,
  - $NCO = 0 \Longleftrightarrow NX = 0 \Longleftrightarrow Y = C + I + G \Longleftrightarrow$ Trade Balanced

Small Open Economy with Perfect Capital Mobility

- **Small Open Economy**: an economy that trades goods & services with other economies &, by itself, has a negligible effect on world prices & interest rates.
- **Perfect Capital Mobility**: full access to world financial markets

Under the above 2 assumptions,

$r = r^w$

- r is the real interest rate
- r^w is the world real interest rate

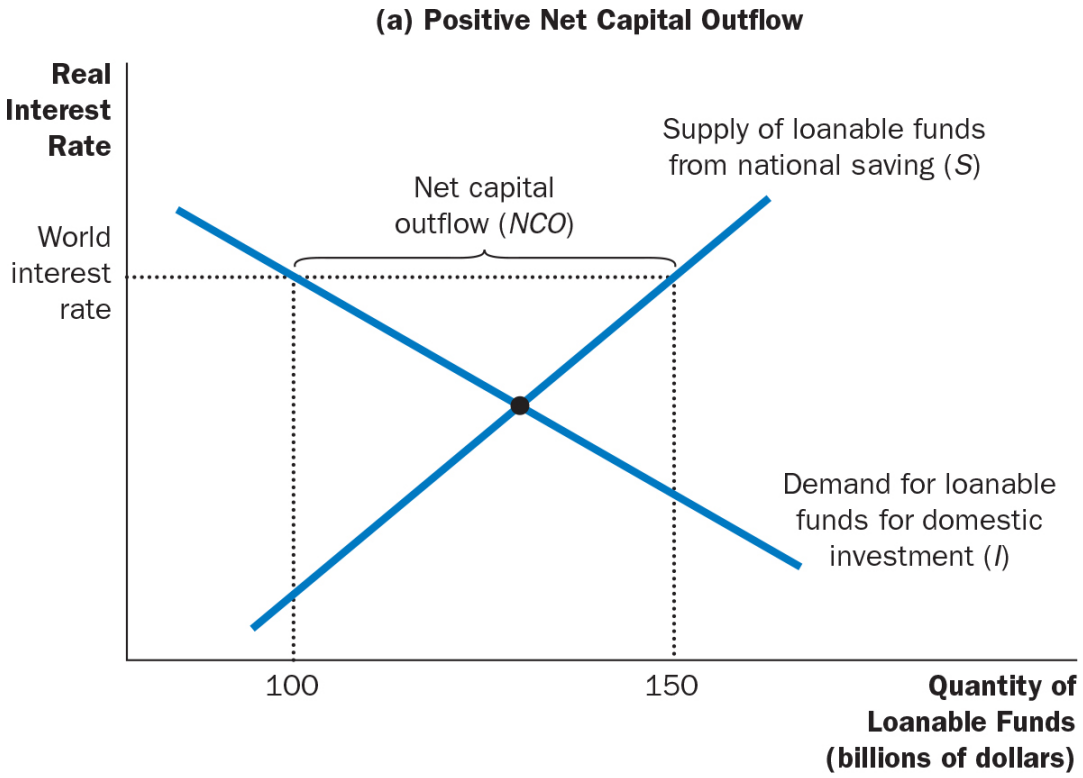
- The analysis on an open economy involves 2 markets:
  (i) **Market for Loanable Funds** &
  (ii) **Market for Foreign-Currency Exchange**

The Basics: Market for Loanable Funds

- **Price**: r is not determined by the supply and the demand for loanable funds.
- **Price**: $r = r^w$
- **Quantity**: S & I may not be equal
- **Demand**: Domestic investment determines the demand for loanable funds
- **Supply**: National saving determines the supply of loanable funds

Positive Net Capital Outflow

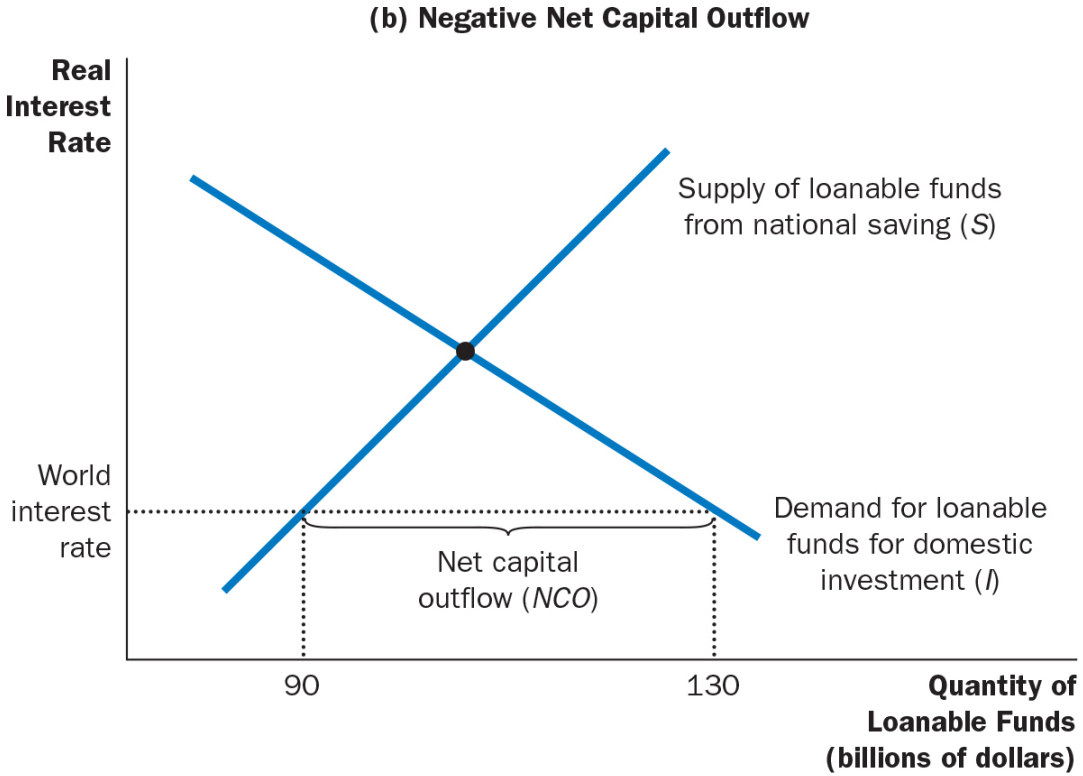
- Suppose $S > I$.



- $NCO > 0 \Longleftrightarrow NX > 0 \Longleftrightarrow Y > C + I + G \Longleftrightarrow$ Trade Surplus

Negative Net Capital Outflow

- Suppose $S < I$.



- $NCO < 0 \Longleftrightarrow NX < 0 \Longleftrightarrow Y < C + I + G \Longleftrightarrow$ Trade Deficit

Exercise 1:

- Suppose $S > I$ now. How do the following events affect the NCO?
  - A rise in the world interest rate
  - A rise in the government expenditure
  - A rise in the transfer
  - An introduction of the investment tax credit

Exercise 2:

- Suppose $S < I$ now. How do the following events affect the NCO?
  - A rise in the world interest rate
  - A rise in the government expenditure
  - A rise in the transfer
  - An introduction of the investment tax credit