Macroeconomics 1 (A European Perspective)

Week 1

Utrecht School of Economics

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Introduction

Self-Introduction

House Rules

- Respect each other!
- Ask, ask, and ask!
- Silence your phone for the comfort of others!
- Enjoy!

Empirical Project

- 6 mini empirical projects throughout the course
- Deadline: Friday night (see Blackboard for precise deadline)
- Group work (4-5 people/group) and be diverse!

Macroeconomics

Introduce yourself (name, where you live, and one favourite hobby)!

What is Macroeconomics? (Think of a word!)

Aggregate output

- Final goods
  GDP is the value of the **final goods and services** produced in the economy during a given period
- Value added
  GDP is **the sum of value added** in the economy during a given period
- Income
  GDP is **the sum of incomes** in the economy during a given period

Problem set

1. Assignment Tutorial 1, Question 1

	2012		2013	
	Quantity	Price	Quantity	Price
Cars	10	€2,000	12	€3,000
Computers	4	€1,000	6	€500
Oranges	1,000	€1	1,000	€1

Problem set

2. An economy is described by the following equations:

$$Y = C + I + G$$

$$C = 0.75Y_D + 20$$

$$T = 0.2Y + 4$$

$$G = 20$$

$$I = 25$$

(a) Calculate equilibrium output and equilibrium private and public saving.
(b) With how much does equilibrium output falls, if government reduces government expenditure with 1 unit?
(c) Explain the event in b) for the multiplier diagram (figure 3.2).

Problem set

3. The extended goods market

$$
\begin{aligned}
C &= c_0 + c_1(Y^D) && : \text{Consumption function} \\
I &= d_0 - d_1 i + d_2 Y && : \text{Investment function} \\
G &= g_0 - g_1 Y && : \text{Government expenditures} \\
T &= t_0 + t_1 Y && : \text{Taxes} \\
Y^D &= Y - T && : \text{Disposable income} \\
Z &= C + I + G + X - IM && : \text{Demand} \\
X &= x_1 Y* && : \text{Export} \\
IM &= m_1 Y && : \text{Import}
\end{aligned}
$$

Problem set

(a) Present the mathematical calculation of the multiplier.

(b) Which elements in the model increase the strength of the multiplier, and which elements decrease the strength of the multiplier? Explain!

(c) Some elements in the model can be labeled as 'automatic stabilizers'. i) Explain what an automatic stabilizer is, and ii) which elements can be labeled as such?

Problem set

4. Equilibrium income in the goods market model

   $C = c_0 + c_1 Y_D$

   $Y_D = Y - T$

   $I = \bar{I}$ (autonomous)

   $G = \bar{G}$ (autonomous)

   $T = \bar{T}$ (autonomous)

   (a) Define the equilibrium condition and derive the reduced form equation of this model.

   (b) By how much does Y increase when G increases by one unit?

   (c) By how much does Y decrease when T increases by one unit?

   (d) Why are the absolute values of the outcomes under (b) and (c) different?

   (e) Suppose that G and T increase by one unit each. What is the change in equilibrium GDP? Are the 'balanced budget' changes in G and T macroeconomically neutral?

   (f) How does the specific value of the marginal propensity to consume affect your answer to (e)?

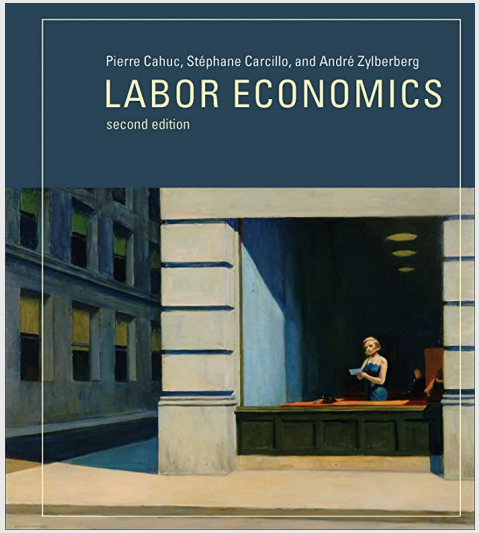
Questions?

Recap II

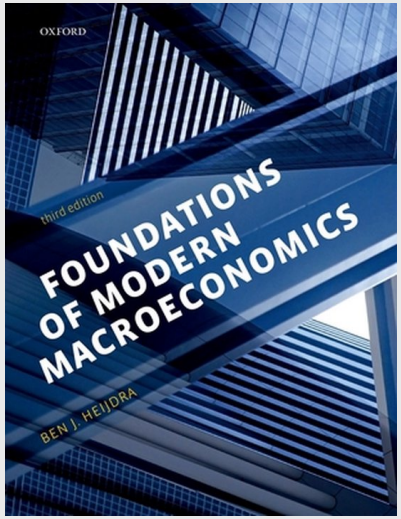
Recap: The unemployment rate

- **Employment**: The number of people who have a job
- **Unemployment**: The number of people who don't have a job, but **are looking** for one
- **Labour force (L)** = employment (N) + unemployment (U)
- **Unemployment rate (u)** $= \frac{U}{L}$

Further reference



(a) P. Cahuc - Labor Economics



(b) B. Heijdra - Foundations of Modern Macroeconomics

Recap: The inflation rate

Two measures of the price level

- The GDP deflator (P_t):

$$P_t = \frac{\text{Nominal GDP}_t}{\text{Real GDP}_t} = \frac{€Y_t}{Y_t}$$

  The GDP deflator is call an **index number**
  $\rightarrow$ In other words, $€Y_t = P_t Y_t$

- The consumer price index (CPI): The average price of consumption with a base year

- The two measures have discrepancy: Whereas the GDP deflator is the price of goods *produced*, the CPI is the price of goods *consumed*

Problem Set

Problem set

1. An economy is described by the following equations:

$$
\begin{aligned}
C &= c_0 + c_1 Y_D \\
Y_D &= Y - T \\
I &= b_0 + b_1 Y \\
G &= G \text{ (autonomous)} \\
T &= T \text{ (autonomous)}
\end{aligned}
$$

Suppose that consumers decided to consume less (and therefore save more) for any given amount of disposable income. Specifically, assume that consumer confidence (c_1) falls. What would happen to output, investment, public saving and consumption?

Problem set

2. In the lecture we introduced the circular flow and the three-way approach to estimate the GDP. The national accounts for the Netherlands are estimated by Statistics Netherlands (the CBS). Visit their site and search for ‘National accounts, approaches of domestic product (GDP)’

   CBS Open Data

   You will encounter the GDP from the output, the GDP from the generation of income, and the GDP from the final expenditure. Let’s focus on the year 2021.

Problem set

2. (a) What is the total GDP for the year 2021 (in bln euros)?
   (b) For the output-approach: which is the largest sector?
   (c) For the income-approach: which is the largest component?
   (d) For the expenditure-approach: present the composition of the GDP as presented in the lecture (in percentages).
   (e) For the numbers calculated in (d) compared to the Eurozone figures presented in the lecture: which components are high and which are low?
   (f) The tables do not only present 'value at current price' but as well 'value at prices of 2015.' What does this mean?

Problem set

3. As has been discussed in the lecture, GDP is considered to be conventional measure for the size of the economy, though a flawed measure of living standards. Many alternative measures have been developed, like the OECD Better Life Index (referred to in CORE exercise 13.1).

   OECD Better Life Index

   (a) How has the Better Life Index been composed?
   (b) One of the topics in the index is income. Is this equal to the GDP? Which are the 3 top ranked countries? What the position of your country?
   (c) One of the other topics in the Index is 'Work-Life Balance.' How has this index been composed and what's the top 3 for this topic?

Problem set

4. Read the following article from the Economist:

   https://www.economist.com/economics-brief/2016/08/11/where-does-the-buck-stop

   (a) Explain Keynes 'general glut'; what does this imply for the effectiveness of monetary and fiscal policy?
   (b) What were the comments from Friedman and Lucas on Keynes ideas?
   (c) What's the consequence of the 'saltwater economists' ideas on the effectiveness of monetary and fiscal policy?
   (d) Explain the importance of the actual value of the multiplier in the discussion of the results of the austerity measures that have been implied in Europa in recent years?
   (e) Remember the elements that define the strength of the multiplier and explain why the fiscal multiplier of the Netherlands will be smaller than the one of the US!

Questions?