Lecture 1: Introduction

ECON30009/90080 Macroeconomics

Semester 2, 2025

Welcome

☐ Welcome to ECON30009/90080 Macroeconomics!

☐ This subject is an introduction to the study of advanced macroeconomics.

☐ Use formal models (and some math) to analyze some of the fundamental questions in macro.

What to expect

☐ Make sure to read the syllabus! You can find it on LMS

☐ Key dates:

What	When	Worth
Group Assignment 1	28 August	8%
Mid-semester test	11 September	20%
Group Assignment 2	9 October	7%
Final Exam	TBA	65%

☐ Assignments submitted online via LMS. Mid-semester test and final on campus.

☐ A hurdle requirement applies to this subject (successful completion requires 50% or more in the final exam).

What is expected

☐ Pre-requisites for this class:

- Intermediate Microeconomics

- and Intermediate Macroeconomics

☐ Math!

- You need to know how to take derivatives

- And you need to know how to solve a system of equations

Supporting your Learning

○ Your tutors for this semester are Yobin Timilsena and Manting Huang.

○ Each week tutors will go through the solutions to the tutorial questions. Solutions posted at the end of the week.

○ A note: There is **no** tutorial during this first week of classes!

○ My office hours are: Monday 1030am -1130am or by appointment.

○ Any questions before we begin?

LET'S START!

Some questions

What is macroeconomics?

What does Macroeconomics study?

Macroeconomics is ...

- the study of the economy taken as a whole; whereas Microeconomics is the study of a part of the economy, taking the remainder as given

- In other words, macroeconomics looks at how the decisions of individuals add up to affect the economy

- which means: our focus will be on general equilibrium (what happens when all prices, wages, interest rates, quantities etc. adjust)

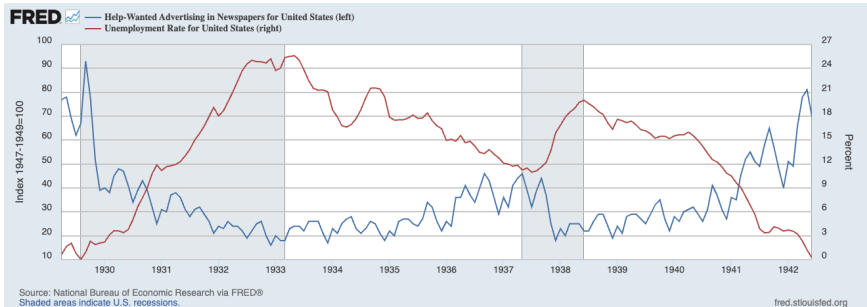# Some questions

When was Modern Macroeconomics founded?

The Great Depression

The Great Depression

FRED — Help-Wanted Advertising in Newspapers for United States (left)
— Unemployment Rate for United States (right)

Source: National Bureau of Economic Research via FRED®
Shaded areas indicate U.S. recessions.

fred.stlouisfed.org

The Great Depression

□ In the US, Real GDP fell 29% from 1929 to 1933.

□ Almost 1/3 of the banking system failed between 1930 and 1933.

□ Consumer prices fell 25%

□ The unemployment rate peaked at about 25%.

□ The 1929 stock market crash in the US led to a worldwide depression

□ Australia saw unemployment rates rise to 32% in 1932. (During COVID, unemployment rate peaked at 7.5%)

The Great Depression

☐ Prior to Great Depression, dominant view in economics was that economies should be able to reach full employment through a process of self-correction

Wait and let the market self-correct from 25% or 32% unemployment?

Keynesian Economics (1930s)

☐ The Great Depression largely seen as the episode which "birthed" modern macroeconomics as a distinct and separate field of study

☐ Macroeconomic issues like inflation, unemployment, and economic growth had been examined prior to Great Depression

☐ But Keynes challenged the view that markets would self-correct

☐ Putting forward a key alternative to classical economics, Keynes emphasized:

   ○ Prices can be sticky: prevent markets from clearing.

   ○ Fiscal policy can (and should!) play a key role in aggregate demand management.

Keynesian Economics (1930s) and Policy

☐ Keynesian Consumption function:

$$C_t = \overline{C} + MPC \times Y_t$$

☐ National Accounting (ignoring international trade):

$$Y_t = C_t + I_t + G_t = \overline{C} + MPC \times Y_t + I_t + G_t$$

which is equivalent to:

$$Y_t = \underbrace{\frac{1}{1 - MPC}}_{\text{multiplier}} \left(\overline{C} + I_t + G_t\right)$$

○ If MPC is large, multiplier effect is large, changes in government spending can have big impact on output

Keynesian Economics (1930s) and Policy

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☐ If MPC is large, multiplier effect is large, changes in government spending can have big impact on output

☐ Govts can fine-tune the economy through demand management

Keynesian Economics (1930s) and Policy

□ Keynesian Consumption function:

$$C_t = \overline{C} + MPC \times Y_t$$

□ But Keynesian consumption function is a *postulated* relationship between spending and income

□ Unclear how individuals change their consumption response if policy changes

□ Do households change $\bar{C}$ or MPC if government levies income taxes of 10% vs. 90%?

Critiques of Keynesian Economics

☐ Policy-makers were taking the postulated relationships between variables as fixed.

☐ Approach at the time was to run regressions on aggregate data to recover variables like $\overline{C}$ and MPC.

☐ Lucas critique: cannot use these macro-econometric models for policy evaluation because the parameters estimated are **not** policy-invariant

☐ Households can change their behavior in response to policy changes

☐ But to understand spending behavior, need to think about the household's decision-making process and examine spending from a micro-founded approach

BUILDING A MODEL

Micro-founded approach

☐ What does it mean to build a model from micro-foundations?

    ○ $\implies$ starts from individual optimizing behavior, adds up all agents' decisions and their interactions to see how they affect aggregate outcomes

☐ Supply and demand are the **collective outcomes of the individual optimizing behaviour** of households and firms.

☐ We will be using this microfoundations approach for all of this course!

Key Microfoundations

In this class, we focus on a few key micro decisions and equilibrium restrictions, and see how these add up to affect the aggregate economy.

☐ Should I consume today or save and consume tomorrow?

- ○ will help us understand determinants of savings (and investment!)

- ○ will help us understand how shocks affect the economy

☐ How hard should I search for a job?

- ○ will help us understand unemployment

How do we get to the answers?

General Approach in Macroeconomics:

☐ Ask a question

- Positive: Why is some feature of the world the way it is?

- Normative: What should some feature of the world be?

☐ Document the facts

- Need to determine quantities of interest and how to measure them

☐ Develop a model

- We use the model to tell a story about the facts

☐ Use the model to make predictions

Typical Macro Model Ingredients

☐ Agents:
- Households
- Firms
- Government

☐ Outcomes:
- Households: Consumption, Savings, Hours worked
- Firm: Output, Vacancies
- Government: Taxes, Debt, Government spending

☐ Agents interact in markets. Prices adjust to clear markets.

Towards building a consumption-savings model

Different Parts of a Model: we call an object a ...

☐ **Parameter**

  ○ an input that is fixed over time, except when the model builder changes it for an experiment.

☐ **Exogenous variable**

  ○ A variable that can change over time, but is not chosen by agents within the economy

☐ **Endogenous variable**

  ○ a variable that is chosen by agents in the economy or an outcome of the model

What's exogenous vs. endogenous?

☐ **Exogenous variable**

- Usually treat productivity and productivity shocks as exogenous.

- Examples
    - Weather-induced contractions
    - COVID-19

☐ **Endogenous variable**

- Examples
    - Given the interest rate and income, individuals choose whether and how much to save
    - Given productivity, firm chooses how much labour to use in production

Making decisions on the margin

☐ Endogenous variables are also called choice variables or decision variables

  ○ But not all endogenous variables are choice variables

  ○ Example, wages are determined through labour market clearing, but no single agent gets to decide the wage rate

☐ How do agents make their decisions or choices?

☐ In Economics, we think of agents making decisions on the *margin*

  ○ Example: a firm is considering hiring an additional worker

  ○ Is the additional (marginal) benefit of hiring a worker more or less than the additional (marginal) cost of that worker.

Where we are today?

☐ Most macroeconomic models today are micro-founded

☐ which is not to say Keynes' concepts are debunked (we still use his insights!)

☐ Rather, macro as a discipline has gone back and forth to provide a coherent microeconomic theory for short-run fluctuations in output and the role for policy

☐ Each theory has its contribution and flaws. What we know today is **not** truth set in stone, but the frontier of how much or what we know

☐ Your role is to have a critical eye over what we learn in class. Understand what assumptions underpin certain results, and what may change if those assumptions do not hold

Roadmap

☐ Today: an introduction to the micro-founded approach

☐ Thursday: the individual problem $\sim$ a 2 period household consumption-savings problem

☐ Next week: Permanent income hypothesis and introduction to firm's problem