MSF 6621

Finance Within the Macroeconomy

Spring 2023

Prof. Murray Z. Frank

Class Time: Tuesday and Thursday, 2:30 PM - 4:10 PM
Class Room: CSOM 1-114
Office Hour: Tuesday 4:10 - 5:10 PM, CSOM 3-267 (or by arrangement)
Teaching Assistant: Christos Kamara, kamar047@umn.edu, Office hours Friday 4:30

This course will provide you with an understanding of macroeconomics with special interest in the role of financial markets and institutions. You will learn a set of skills and concepts that will help you to analyze the foundations of the macroeconomy. We want to understand the main drivers of economic long run economic growth over time and across countries. We also want to understand how to use the mainstream AD/AS model of short run macroeconomic fluctuations.

The lectures are structured as Foundations, Growth, Labor, Inflation, AD/AS, Macro policy. We start by setting up a foundation that stresses the fact that things have to fit together coherently. To avoid misinterpretation it is important to be careful about how things are measured. The role of firms and financial markets are frequently misunderstood, so special effort is devoted to why these exist and what role they play. Next we learn to solve and use the Solow and Romer growth models. Special attention is paid to people both as consumers and as suppliers of labor. Money and inflation are both worth understanding. Then you will learn to use the AD/AS model to analyze the short run. Finally, the connections between fiscal and monetary policy through the government budget constraint are developed.

Key skills and conceptual take-aways from this course:

1. Explain how an economy, firms, labor and finance fit together.
2. Able to use the Solow and Romer growth models: i) to understand long term growth, ii) to predict shock effects, iii) to measure TFP iv) to examine GDP differences across countries
3. The role of consumption in the economy. Wealth effects. Ricardian equivalence.
4. Understand labor market using supply and demand, and using the bathtub model.
5. Understand money and inflation, the quantity theory of money, and fiscal theory
6. Able to use the AD/AS model to analyze the impacts of shocks and government policies.

Your ability to think is partly limited by the techniques and tools at your disposal. If you have not learned algebra, it would be hard to understand things for which algebra is important. If you have not learned to use the basic macroeconomic models, it is also hard to understand things

for which macroeconomics is important.

You need to have a firm command of how to apply key macroeconomic concepts to analyze new situations. To learn a language, or how to use a machine, or how to play a sport, you need to practice your new skills over period of time. In the same way, in order to learn macroeconomic methods of analyzing, you will need practice. The assignments and the grading are structured to help ensure that you get that practice. Several major policy debates underlie many modern policy proposals. You will read about these, and spend some time in class discussing them. There is a lot that needs to be done, and only limited time; so it is important to be well organized.

Grades:

3 assignments totaling 30%

4 read and write-ups totaling 20 %

5 mini-quizzes 20 %

Exam 30%

Assignment Dates: All are due to be submitted on our class Canvas page by 11:59 PM on the due date. (Feb 3, 13, and 23)

Textbook: Jones, C. 2020 Macroeconomics, 5th edition, W.W. Norton.

Topics by Class

Class 1. Measuring the economy

Class 2. Production equilibrium

Class 3. Firms and financial markets

Class 4. Solow Growth Model

Class 5. Growth Accounting and Ideas

Class 6. Consumption

Class 7. Labor market and unemployment

Class 8. Money

Class 9. Inflation

Class 10. The IS curve

Class 11. Monetary policy

Class 12. Fluctuations and AD/AS

Class 13. Government macro policy

Class 14. Final exam

1 Introduction

Topic: **1. Measuring the Economy**

Date: January 17

Read: Jones ch 1 and 2

Topic: **2. Production Equilibrium**

Date: January 19

Read: Jones ch 4

Topic: **3. Firms and financial markets**

Date: January 24

Mini-quiz 1

Read: Blair, M.,2003, Why I. M. Singer & Company Had to Incorporate, in Locking in capital: What corporate law achieved for business organizers in the nineteenth century, 442-454, UCLA Law Review

Read: Frank and Goyal, 2022, Corporate financial structure (Section 3), in Empirical Corporate Capital Structure, Handbook of Corporate Finance.

2 Long Run Economic Growth

Topic: **4. Solow Growth Model**

Date: January 26

Read: Jones ch 3 and 5

Read and writeup 1, due January 25. Population growth. 1) https://en.wikipedia.org/wiki/The_Population_Bomb, and 2) Fernandez-Villaverde 2021, The Demographic Future of Humanity: The Trends (Part I) https://www.thepublicdiscourse.com/2021/10/78340/ 3) CNN, 2022, South Korea spent $200 billion, but it can't pay people enough to have a baby

Topic: **5. Growth Accounting and Ideas**

Date: January 31

Mini-quiz 2

Read: Jones ch 6

3 People

Topic: **6. Consumption**

Date: February 2

Read: Jones ch 16

Read and writeup 2, due February 1. Technology improvement. 1) Romer, 2016, Economic Growth, https://paulromer.net/economic-growth/, and 2) https://en.wikipedia.org/wiki/Technological_singularity

February 3: Assignment 1 due

Topic: **7. Labor market and unemployment**

Date: February 7
Mini-quiz 3
Read: Jones ch 7

4 Inflation

Topic: **8. Money**
Date: February 9
Read: Jones ch 8 sections 8.1 - 8.2
Read and writeup 3, due February 6. Climate change - advocates and deniers. 1) IPCC, 2022, Climate Change 2022 Impacts, Adaptation and Vulnerability: Summary for Policymakers. 2) Happer and Lindzen, 2022, Comment and Declaration on the SEC's Proposed Rule: The Enhancement and Standardization of Climate-Related Disclosures for Investors.

February 13: Assignment 2 due

Topic: **9. Inflation**
Date: February 14
Mini-quiz 4
Read: Jones ch 8 sections 8.3 - 8.6

5 Short Run Fluctuations

Topic: **10. The IS curve**
Date: February 16
Read: Jones ch 9 and 11
Read and write-up 4, due February 15. Inflation. 1) Cochrane, 2022, WSJ inflation stability oped – with pictures. 2) Rogoff, 2022, The Age of Inflation. 3) Sargent and Silber, 2022, What Jerome Powell Can Learn From Arthur Burns.

Topic: **11. Monetary Policy**
Date: February 21
Mini-quiz 5
Read: Jones ch 12

<div align="center" style="color:red">February 23: Assignment 3 due</div>

Topic: **12. Fluctuations and AD/AS**
Date: February 23
Read: Jones ch 13

6   Topics

Topic: **13. Government Macro-Policy**
Date: February 28
Read: Jones ch 18

Topic: 14. Exam
Date: March 2

Spring break March 6 - 10.

Assignment Advice: Discussing things with your classmates is a good idea, but the work you hand in for assignments must be your own work. Late assignments will be penalized, 10% per day. Anything you submit ought to be a professional product. Anything less will be downgraded. This means that you will state your answer clearly and prominently. The answer must not be hidden in a pile of calculations. Your answer will be well justified and succinctly explained.

<div align="center">**The Course Design**</div>

To help you see how the course fits together, what follows is my perspective about the plan for the term in some detail. It should help you recognize why the class is structured as it is. I am not a believer in surprises. If you read and think about the syllabus, the course ought to be very predictable. I hope and expect that you will also find it to be very interesting. I certainly do!

Major skills and concepts that you will acquire on a class-by-class basis.

1. The importance of definitions and consistency. Key concepts in measuring an entire economy. Strengths and weaknesses of the methods of adjusting for inflation. Connections between national income and social welfare.
2. Detailed understanding of Cobb-Douglas production function and its use in measuring productivity (TFP). Able to solve a basic production economy model. Understand neoclassical marginal productivity theory of national income.
3. What is a corporation? Why they were invented? Alternative organizational forms for production. Understand how corporations and financial markets fit into an overall economy.

4. Review of growth and some basics of compounding. Use of ratio scales in graphing. Explain and solving a Solow growth model. Understand the difference between transitional dynamics and the steady state.

5. The growth accounting method. Able to apply the method within a country across time, and also to apply it to data from other countries. Understand the role of ideas (intellectual capital) in economic growth. Increasing returns. Connecting ideas and the Solow growth model.

6. Aggregate consumption and wealth effects. Intertemporal budget constraints. Ricardian equivalence.

7. Methods of understanding unemployment and the labor market using the supply and demand approach. Understand how to solve the bathtub model of unemployment and how to use it with the JOLTS data. Know some basic facts about international differences in unemployment, and income inequality.

8. What is money? The Quantity theory of money.

9. Inflation. Real and nominal interest rates. Hyperinflation and the role of monetary and fiscal decisions. Is 2022-2023 inflation pretty much the same as the 1970s?

10. The Phillips curve. Okun's Law. The IS curve.

11. The MP curve. The role of the Federal Reserve. Sticky expectations versus rational expectation.

12. Able to use the AS/AD model to evaluate the effects of shock and policies. Monetary policy rules. Macro-forecasting and the use of leading economic indicators. The Taylor rule.

13. Understand the government budget constraint. Fiscal problems in 2023 and the next couple of decades.

Worked exercises The textbook chapters mostly have one or two worked exercises at the end. You should try to do those on your own without looking at the answer. Once you are done, look at the answer. If exercise seems hard for a particular chapter, then you probably need to spend more time on that chapter.

Assignments These are questions are intended to make you think carefully and to use the macroeconomic concepts. Several of the questions will require that you do things on the computer using real world data.

Mini-quizzes Each based on the previous few classes. They are intended to help provide you with an ongoing sense of how your understanding of the class material is developing. This structure means that you cannot leave the class material to be learned in a crash session just before the final. You will need to keep up with the material on an ongoing basis.

Write-ups. Each write-up is due on Canvas one day before the class). For these you will submit a summary (maximum 2 pages) of the assigned readings for the day. Your write-up will

normally include: 1) key ideas and evidence, 2) the most interesting aspect of the readings, 3) the least convincing aspect of the readings, 4) your best guess as to how the authors would respond if told about what you called the least convincing aspect.[1] We will spend class time discussing these readings. Your write-up will help prepare you for those discussions.

Readings. These readings are intended to help enrich your understanding by providing additional perspectives and related topics that may seriously affect the macroeconomy. Hopefully you will find them interesting to think about. You ought to understand what they are saying and why. Some of these readings pertain to controversial topics, or take a rather specific perspective. You may or may not agree with the perspectives presented in those readings. Either way is fine. The point is to understand, not necessarily to agree.

Some of the readings are mainly factual, but most cover controversial topics. As you do the reading you should make note of the claims that are being made, and the evidence that is provided. You should distinguish the following categories: 1) claimed facts that "any reasonable person" would agree are true (e.g. in Minnesota it sometimes snows in the winter), 2) claimed facts that some people say are true but others dispute (e.g. government spending crowds out private investment), 3) opinions about what is desirable (e.g. increasing the age to get Social Security payments would be a good idea).

A common rhetorical device is to try to convince you that claims from category 2 or 3 belong in category 1. Keep your eyes open for it as you read the articles, and as you read or listen to macroeconomic news coverage.

If we are being extra careful, even category 1 can be a bit tricky as well. We may disagree about who to include in the set defined by "any reasonable person." If we say that someone is not a reasonable person, then can we ignore his/her arguments? Or, is that simply a version of ad hominem[2] argumentation? Facts that truly belong in category 1 are usually pretty obvious in practice. Facts that many people argue about, and call each other bad names for believing, obviously do not belong in category 1.

When we try to figure out what is true, even if we agree on fundamentals and perspectives, the evidence may not be conclusive. Everyone may be unsure to roughly the same degree. If we want to figure out if something is true, we worry about both false positive conclusions and false negative conclusions. In statistics we worry about this a great deal, and you should keep it in mind.

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[1]Even Wikipedia is not free of bias when covering such topics, see Greenstein, and Zhu, 2018, Do experts or crowd-based models produce more bias? Evidence from Encyclopedia Britannica and Wikipedia. MIS Quarterly. When reading the Wikipedia articles you should think about the point of view that is implicit.

[2]An ad hominem argument is an argument or a reaction directed against a person, rather than directed against the substance of the idea that they are suggesting. Ad hominem arguments should be avoided. Even a very bad and immoral person can suggest a good idea at times. Even a very good and moral person can suggest a poor idea at times. It is the ideas that we are trying to evaluate, not the moral worth of the person advancing the ideas.

A great deal of what we think we know has "a good chance of being true," but it is not certain. We necessarily end up taking many claims on faith. For example, I do not know all of the physics underlying the way that a car works. But I do not think the car is being pushed by invisible elves.

We all come to these topics with at least some background perspective and a base of factual knowledge. But as you read and think about things, you ought to learn things you did not previously know. It is particularly important to look for what are sometimes called "inconvenient facts". These are facts that are hard to reconcile with our background perspective. Such facts are of particular value – assuming that they are genuinely true. When you come across such a fact, verifying that it is true, and then considering how to reconcile it with your earlier thinking may enrich your understanding.

When an article is trying to convince you of something, pay particular attention to the reasons that they provide. How can you figure out if you ought to believe them? What kind of logic and evidence might be helpful? Often it will help to ask yourself: how would someone who disagrees with the author argue back? Sometimes you will also notice that the author may have ignored something important so that they have not made as strong a case as they could have. Do you think that the idea did not occur to the author?

You may find that you change your opinions on some topics. Or, you may find that you do not change them at all. Either way is great. The point is to learn about these macro issues – not to force a consensus. **Reasonable people can talk, understand each other's perspective, and still disagree.**

Final. The final covers the entire class. It is closed book, but you are permitted 1 piece of 8.5 by 11 inch paper with any notes you wish. **I repeat, only one piece of paper, not more!** You are permitted to have a calculator, but nothing with a memory or wifi (i.e. no laptops, cell phones, ipads, etc.)

Academic Policies

The Carlson School defines academic misconduct as any act by a student that misrepresents the student's own academic work or that compromises the academic work of another. Scholastic misconduct includes (but is not limited to) cheating on assignments or examinations, plagiarizing, i.e., misrepresenting as one's own work any work done by another, submitting the same paper, or substantially similar papers, to meet the requirement of more than one course without the approval and consent of the instructors concerned, or sabotaging another's work. Within this general definition, however, instructors determine what constitutes academic misconduct in the courses they teach. Students found guilty of academic misconduct face penalties ranging from lowering of the course grade or awarding a grade of F or N for the entire course, to

suspension from the University.

http://www1.umn.edu/regents/policies/academic/Student_Conduct_Code.html

Accommodations for Students with Disabilities

The University of Minnesota is committed to providing all students equal access to learning opportunities. Disability Services is the campus office that works with students who have disabilities to provide and/or arrange reasonable accommodations. Students registered with Disability Services, who have a letter requesting accommodations, are encouraged to contact the instructor early in the semester. Students who have, or think they may have, a disability (e.g. psychiatric, attention, learning, vision, hearing, physical, or systemic), are invited to contact Disability Services for a confidential discussion at 612-626-1333 (V/TTY) or at ds@umn.edu. Additional information is available at the DS website http://ds.umn.edu