

Business Economics 501 A/B and C/D

Analysis of Global Economic Conditions

WINTER 2023 SYLLABUS

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Office hours - Wednesdays, 5-6 pm (on Zoom), and by appointment

Course Description

This course examines the macroeconomic environment in which firms operate. The goal is for you to understand how macroeconomic forces and policies affect the overall health of a nation's economy and hence the business decisions that you make. The course will give you the tools to understand the key drivers of economic growth, inflation, unemployment, business cycles, fiscal policy and monetary policy, both in the US and in other countries.

Course Learning Objectives:

The course will help you to:

- ★ Explain what the headlines do and do not tell us about macroeconomic statistics such as GDP growth, inflation, and unemployment.
- ★ Understand the press releases from the Federal Reserve's policy-making committee.
- ★ Follow debates about the size of the government budget deficit and government debt.
- ★ Compare and contrast current macroeconomic policies in the US with policies in other major countries and regions, such as China, Japan and the Eurozone.

Class Format

There is a Canvas Module accompanying each class session.

The Modules list asynchronous content:

- Required readings
- Optional readings
- Pre-recorded content in the form of narrated powerpoint decks. Unless otherwise indicated, you are expected to watch the narrated powerpoints before class.
- Required Activities, such as watching a video or posting on a Discussion Board.

Required readings should be completed before class.

Be prepared to discuss "Application Cases" in class.

The Modules also provide links to powerpoint slide decks covered in class (generally posted the day before class).

Course Requirements

	<u>Approx. % of final grade</u>
Problem sets (dates listed below)	40%
Final exam (take-home: posted 3/7, due 3/13)	40%
Group presentation (various dates)	15%
Class attendance and participation	5%

Participation

To get full credit for participation, you must contribute* to class at least 6 times during the quarter.

*A participation contribution can take the form of saying something in class or posting a comment on an instructor-created Discussion Board.

Group Presentations

There is one group presentation in the course. A sign-up sheet will be available at the first class. Each group will select one of the topics listed below and prepare a 5-7 minute presentation. The presentation will take place at the beginning of class on the date listed. There will be a single grade for the group. The presentation must include a slide deck, which should be posted on Canvas in the associated Group Presentation Discussion Board by the due date. Each group should be prepared to answer questions following the presentation.

All of the presentation topics illustrate concepts that we cover in this course and the presentations should make reference to those concepts. Feel free to ask your instructor for research suggestions or for comments on draft presentations.

Group Presentation Topics and Presentation Dates

Topic 1 (1/19) What is “green GDP” – what is added to/subtracted from “regular” GDP? Describe the experiences of at least two countries that have tried to measure green GDP.
Topic 2 (1/24) In November 2016, the Indian government announced the demonetization of 500 and 1000 rupee notes. What was the goal of the demonetization, and how was it related to the underground economy? How did demonetization affect India’s GDP & the government’s ability to collect tax revenue?
Topic 3 (1/26) The US sent out stimulus checks in March 2020 (\$1200), December 2020 (\$600), and March 2021 (\$1400). What did the recipients do with that money – specifically, how much went to consumption and how much went to saving?
Topic 4 (1/26) The Tax Cuts and Jobs Act, passed in December 2017, cut corporate tax rates. What were the intended effects on business investment, and how were the tax cuts supposed to pay for themselves? What actually happened to business investment and why?
Topic 5 (1/31) What is the recent trend in the US trade deficit with the rest of the world? What are the major factors causing the deficit? How is the trade deficit related to US and foreign GDP growth?
Topic 6 (2/2) How and why has the US labor force participation rate changed since the Great Recession and as a result of the coronavirus pandemic?
Topic 7 (2/9) What caused the 2007-2008 hyperinflation in Zimbabwe and what were the effects on the economy? How did Zimbabwe end the hyperinflation? What is the inflation situation today?
Topic 8 (2/9) What caused hyperinflation in Venezuela starting in 2016? What measures has the government taken in response? What are the prospects for inflation in Venezuela in 2023?
Topic 9 (2/28) What has been the economic situation in Turkey over the past year? What economic policies has the government implemented and how well have they worked? In particular, what has been the interest rate policy?
Topic 10 (3/2) What determines the value of Bitcoins? Are Bitcoins the same as money? How is the control of the supply of Bitcoins different from the control of the US money supply? How have central banks around the world regulated crypto-currencies like Bitcoin?
Topic 11 (3/2) What is a central bank digital currency? What are the advantages and disadvantages? Pick a country that already has a central bank digital currency and describe how it works. What are the prospects for a US central bank digital currency?
Topic 12 (3/7) What kinds of US Treasury securities are issued in the primary market? How are new Treasury securities issued? What determines the mix of maturities outstanding?
Topic 13 (3/7) What is the US debt ceiling and why does it exist? What happens when we hit the debt ceiling? What are “extraordinary measures”? What is the current situation regarding the US debt ceiling?

Help Sessions and Problem Sets

Darwin will hold help sessions on Fridays, 10-11 am, on zoom. All information related to the review session (schedule, zoom information, slides, recordings, etc) will be available in the "Review Session Schedule and Materials" page in the Canvas Modules.

The help sessions are optional, but they are strongly encouraged. Darwin will review concepts from class, work on problem solving, and answer your questions.

There will be six problem sets, consisting of multiple choice and short essay questions. Problem sets will be posted on Canvas under "Assignments." You will have one week to complete each problem set (posted on Fridays, due on Thursdays).

Problem Set #	Date posted	Date due (at 11:59 pm)
1	Jan 11	Jan 17
2	Jan 18	Jan 24
3	Feb 1	Feb 7
4	Feb 8	Feb 14
5	Feb 22	Feb 28
6	Mar 1	Mar 7

Problem set answers should be submitted directly on Canvas. Note that the multiple choice and short essay answers must be posted separately. The lowest problem set grade will be dropped when course grades are calculated.

Final exam

The exam is take-home. It will be posted on March 7 and due on March 13 (at 11:59 pm). The exam will consist of both multiple choice and essay questions. Plan your schedule accordingly - **no early exams** will be provided under any circumstances.

Submission policies

Late submissions of exams or problem sets are subject to a 50% grade penalty for the first 48 hours after the due date, unless you request (and are granted) an extension before the due date. No credit will be given after 48 hours.

Note: no extensions will be granted for Problem Set #6.

Textbooks and Required Readings

Textbook:

David Miles, Andrew Scott, and Francis Breedon, Macroeconomics: Understanding the Global Economy, 3rd edition, John Wiley & Sons, 2012.

A digital version of the textbook will be linked on Canvas.

The other required readings are either posted on Canvas (in the Readings Module) or are readily available online (URLS listed). Additional readings may be provided on Canvas.

Communications

You can contact me by e-mail at dg2854@uw.edu. I check my e-mail regularly on weekdays.

I will use the Canvas website to post announcements, lecture notes, assignments, class recordings, and other course materials.

MBA Program and Class Expectations

Class Attendance:

Class attendance is critical to participation in the learning experience. In accord with Foster MBA Program policy, attendance is *required* except in cases of (1) illness or (2) unavoidable conflict with a job or internship interview that cannot be rescheduled. Regardless of the reason for missing a class meeting, you should notify your instructor in advance. You are responsible for the learning experience that takes place in your absence. Work with your classmates to address any material you may have missed, and contact the instructor and/or TA should you have remaining questions.

Student Professionalism in Class:

Each student is expected to be on time and to be prepared for each class meeting, as well as fully engaged in class content throughout the class meeting. If attending via Zoom, keep your video on during class sessions. Whether in person or online, only use your electronic devices for class-related activities. Thank you for supporting this policy.

The Honor Code:

I employ the principles and procedures espoused by Foster School of Business MBA Honor System to maintain academic integrity in the course. The Honor Code of the Foster School expressly prohibits cheating, attempted cheating, plagiarism, and lying to administration or faculty as it pertains to academic work. Suspected violations of the Honor Code will be handled by referral of the matter to the Foster MBA Honor Council.

The Honor Code will apply to course deliverables in the following manner:

- In order to maximize the student learning experience, the work you submit should be your own. Except as described below, do not get help from anyone in preparing deliverables for the course. This includes students currently or formerly enrolled in the course as well as others outside Foster. Sharing of course resources with others beyond the narrow range permitted with classmates is also considered a violation of the Honor Code.
- Plagiarism is the use of someone else's words without full attribution (full attribution means use of quotation marks and indication of the source in proper bibliographic form). Close paraphrasing is also considered plagiarism. See <http://depts.washington.edu/pswrite/plag.html> . The "someone else" is anyone from published authors to fellow students to the class instructor. My policy is to give a grade of 0 to any duplicate or plagiarized work.
- Problem Sets: you may consult with other students about the *interpretation* of questions while preparing homework assignments, but I expect you to select/write the answers yourself.
- Exams are individual endeavors. You are welcome to read any printed or online resources, but do not consult with any other person (including other students) as you prepare your exam answers. I expect your written answers to be entirely in your own words. Any quotations, even from class materials, should have quotation marks and source citations.

If you have any uncertainty about how the Honor Code applies to a specific deliverable in the course, please ask before taking action; when it is not possible to ask before acting, please err on the side of the most cautious interpretation.

Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at [Religious Accommodations Policy \(https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/\)](https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/). Accommodations must be requested within the first two weeks of this course using the [Religious Accommodations Request form \(https://registrar.washington.edu/students/religious-accommodations-request/\)](https://registrar.washington.edu/students/religious-accommodations-request/)."

SCHEDULE OF TOPICS, READINGS, AND ASYNCHRONOUS ACTIVITIES

The topics and readings given below are subject to change (with prior notice). Each reading should be completed before the date given. All readings are *required* unless otherwise indicated.

- All Chapter references are from the Miles, Scott, and Breedon textbook. Note that I have assigned only a subset of chapter sections.
- Other required readings are available online (posted on Canvas or at the URL given).
- Additional readings may be assigned.
- Links for narrated powerpoints and activities are in the Canvas modules.

Class 1, 1/3 Introduction to macroeconomics

Reading:

Textbook, Chapter 1

Optional reading:

If you are unfamiliar with US economic history or would like a refresher, the following are recommended background readings:

The site below presents an overview of US economic history through the end of the 1990s. Unless you have a particular interest in the 18th and 19th centuries, I suggest that you start with the sub-section "The Postwar Economy: 1945-1960" and continue to the end.

<https://usa.usembassy.de/etexts/oecon/chap3.htm>

If you would like to learn more about the history of central banking, you might find this article interesting:

<https://www.newyorker.com/magazine/2019/08/05/the-invention-of-money>

For a description of economic conditions leading up to the 2001 and 2008-2009 recessions, see Neil Irwin, "It's Another Rocky August in the Markets. Does It Look Like 1998, or 2007?" The New York Times, August 12, 2019 [posted on Canvas in Readings module]

For some views on the current economy, see "The debate over what's causing inflation," Planet Money, June 17, 2022,

<https://www.npr.org/2022/06/17/1105927579/the-debate-over-whats-causing-inflation>

Activity (required) – watch video (link is on Canvas):

Course Learning Goals

Note: this video was recorded in Spring 2020. With the exception of the reference to being in an economic free-fall, all the content is still relevant today.

Class 2, 1/5 Aggregate Supply and Aggregate Demand

Reading:

Chapter 11, pp. 269-270 and section 11.8

Watch narrated powerpoint recordings (view before class, links on Canvas):

Aggregate supply and aggregate demand 1

Aggregate supply and aggregate demand 2

Aggregate supply and aggregate demand 3

Aggregate supply and aggregate demand 4

Class 3, 1/10 Business cycles

Reading:

Application case: "The Great Semiconductor Shortage," Debra Glassman, September 2022

Chapter 11, sections 11.1-11.5

"Determination of the February 2020 Peak in US Economic Activity," National Bureau of Economic Research, June 8, 2020, <https://www.nber.org/news/business-cycle-dating-committee-announcement-june-8-2020>

"Determination of the April 2020 Trough in US Economic Activity," July 19, 2021, <https://www.nber.org/news/business-cycle-dating-committee-announcement-july-19-2021>

Neil Irwin, "The Recession Isn't Over Till They Say It's Over," New York Times, June 14, 2021.

Optional reading:

Robert Samuelson, "Janet Yellen is wrong. Expansion do die of old age," Washington Post, 2/21/16.

Watch narrated powerpoints:

Business cycles 1

Business cycles 2

Activity:

The Keynesian and Austrian schools are two of the schools of thought in macroeconomics. Economists at George Mason University imagined a debate between

John Maynard Keynes and Friedrich Hayek and made a music video about it. The subject of the debate is whether government spending helped end the Great Recession.

1. Watch the video. You can find it on YouTube at

<https://www.youtube.com/watch?v=GTQnarzmTOc>

2. Think about: Who won the debate? What similarities to the current situation do you see?

Class 4, 1/12 Measuring GDP

Reading:

Chapter 2

Patricia Cohen, "The Economic Growth That Experts Can't Count," New York Times, Feb. 6, 2017

David Leonhardt, "G.D.P. Is Broken, but We Can Fix It," New York Times, December 16, 2019.

Optional reading:

Ben Casselman, "U.S. Growth Has Continued, One Official Measure Shows," New York Times, August 25, 2022.

"Top 10 Countries with Most GDP from 1960 to 2017"

<https://www.youtube.com/watch?v=wykaDgXoajc>

World Happiness Report 2022, chapter 1,

https://happiness-report.s3.amazonaws.com/2022/WHR+22_Ch1.pdf

Activity:

Contribute to the Discussion Board about double-dip recessions.

Class 5, 1/17 Components of GDP – consumption

Reading:

Chapter 10, sections 10.1-10.2, p. 216, pp. 222-224, sections 10.6-10.7

Betty Joyce Nash, "Shoppers for the long haul: the past, present and future of consumption," Federal Reserve Bank of Richmond Region Focus. v. 14, no. 1. 1st Quarter, 2010, p. 17-19.

<https://fraser.stlouisfed.org/title/3941/item/476947/toc/503445>

Class 6, 1/19 Components of GDP – business investment and net exports

Reading:

Chapter 10, sections 10.8-10.10

Application case: "Microsoft and Nokia: Manufacturing Leaves China," Debra Glassman, January 2016

Optional reading:

Chapter 19, sections 19.1-19.6

Watch narrated powerpoints (after this class):

Investment-saving relationship

Inventory investment

Determinants of NX

Class 7, 1/24 Measuring unemployment

Reading:

Chapter 7, sections 7.1-7.2 (you may skim through the mathematical models in 7.2)

Caitlin Kenney, "Why Do The Jobs Numbers Change?" Planet Money Blog, October 5, 2012
<http://www.npr.org/blogs/money/2012/10/05/162361522/why-do-the-jobs-numbers-change?sc=nl&cc=pmb-20121005>

Optional reading:

Chapter 5

Renee Courtois, "The New Normal? Economists ponder whether the 'natural' rate of unemployment has risen," Federal Reserve Bank of Richmond, Region Focus, First Quarter 2010.

http://www.richmondfed.org/publications/research/region_focus/2010/q1/pdf/cover_story.pdf

Planet Money podcast 392, Aug. 6, 2012, "Keeping the Biggest Secret in the U.S. Economy, " <https://www.npr.org/sections/money/2012/08/03/158090937/episode-392-keeping-the-biggest-secret-in-the-u-s-economy>

Class 8, 1/26 Measuring unemployment (cont'd)

Reading:

Chapter 7, sections 7.3-7.5 (you may skim through the mathematical models in 7.4-7.5)

"What full employment really means," economist.com blog, January 29, 2017

Neil Irwin, "How Low Can Unemployment Really Go?" New York Times, Feb. 28, 2019.

Watch narrated powerpoints:

Unemployment 1

Unemployment 2

Class 9, 1/31 Measuring inflation

Reading:

Chapter 12, sections 12.1-12.2 and 12.8

Planet Money podcast 222, "The Price of Lettuce in Brooklyn":

www.npr.org/blogs/money/2010/10/22/130757997/the-friday-podcast-the-price-of-lettuce-in-brooklyn (story starts at about the 3:00 mark of the podcast)

Application case: "Holland-America Line and the Great Recession," Debra Glassman, January 2016.

Watch narrated powerpoint:

Introduction to inflation

Class 10, 2/2 Measuring inflation (cont'd)

Reading:

Chapter 12, sections 12.3 and 12.9

Chapter 13, section 13.3

"A Visual Guide to Deflation," from Mint.com and WallStats.com, April 8, 2009 (you do not have to read all the comments) <http://visual.ly/visual-guide-deflation>

Optional reading:

Planet Money, podcast "Inflation, deflation," July 1, 2020

<https://www.npr.org/2020/07/01/886036317/inflation-deflation>

A Visual Guide to Inflation, <http://visual.ly/visual-guide-inflation>

For a timeline of what US policymakers have said about inflation, see "U.S. policymakers misjudged inflation threat until it was too late," by Mike Madden and Rachel Siegel, The Washington Post, May 30, 2022 (updated June 18, 2022)

<https://www.washingtonpost.com/us-policy/2022/05/31/inflation-economy-timeline/>

Watch narrated powerpoints:

Inflation 1

Inflation 2

Class 11, 2/7 Phillips Curve; Introduction to stabilization policy

Reading:

Chapter 15, section 15.1 (skip discussion of figures 15.3 and 15.4), sections 15.3-15.5

Watch narrated powerpoints:

Introduction to the Phillips Curve

Schools of thought on stabilization policy

Class 12, 2/9 Stabilization policy: the spending multiplier

Reading:

Chapter 10, pp. 242-44; re-visit multiplier part of section 10.2

Class 13, 2/14 Monetary policy – commercial banks

Reading:

Chapter 12, sections 12.4-12.6

Chapter 17

Optional reading:

Chapter 12, section 12.9

Watch narrated powerpoint:

Functions of money

Introduction to the Federal Reserve 1

Introduction to the Federal Reserve 2

Activity:

There are movie depictions of bank runs in *It's A Wonderful Life* and *Mary Poppins*. I am fond of the latter, and I would like you to watch the bank run scene. It is available on Youtube at this link:

<https://www.youtube.com/watch?v=xE5klz0yUT0>

Questions for you to think about:

What caused the run on the bank? Does the movie version have any similarities to real-life, modern-day bank runs?

How did the bank in the movie try to stop the bank run? Was there anything else they could have tried?

Class 14, 2/16 Monetary policy – central banks

Reading:

Chapter 13, section 13.1

Planet Money, “Journey to the Center of the Fed,” May 8, 2020,

<https://www.npr.org/2020/05/08/852895616/episode-998-journey-to-the-center-of-the-fed>

Optional reading:

“A History of Central Banking in the United States,” Federal Reserve Bank of Minneapolis.”

<https://www.minneapolisfed.org/community/student-resources/central-bank-history/history-of-central-banking>

“Happy Fed Independence Day,” Planet Money episode 898, March 1, 2019; updated March 1, 2021

<https://www.npr.org/2021/03/01/972618276/happy-fed-independence-day-update> (Links to an external site.)

Watch narrated powerpoints:

Central banks in history

US bank regulation

Class 15, 2/21 Monetary policy - money creation

Reading:

Application case: “US Bank and Loan Loss Provisions in 2020,” Debra Glassman, November 2020

Watch narrated powerpoint:

Term structure of interest rates

Activity:

When Alan Greenspan was nearing the end of his term as Federal Reserve chairman, two of the main contenders for his job were Ben Bernanke and Glenn Hubbard. Ultimately, Bernanke was chosen and Hubbard got the consolation prize of becoming dean of the Columbia Business School. (Note: Bernanke and Hubbard were also competitors in the textbook market, as both had authored popular macroeconomics texts.)

At Columbia, MBA students have a tradition of presenting end of year skits. Below is a music video they produced about their dean's competition with Bernanke. What macroeconomic concepts are referenced in this video?

<https://www.youtube.com/watch?v=3u2qRXb4xCU>

Class 16, 2/23 Monetary policy - conventional policy tools

Reading:

Chapter 16, sections 16.10-16.13

Chapter 13, sections 13.8, 13.10

Pradnya Joshi, "Shocks, Recession and 9/11: When the Fed Intervenes," New York Times, March 14, 2017.

Mark W. Olson, "The Federal Open Market Committee and the Formation of Monetary Policy," speech to the American Council on Gift Annuities, Orlando, Florida, May 5, 2004.
<http://www.federalreserve.gov/boarddocs/speeches/2004/20040505/default.htm>

Class 17, 2/28 Monetary policy – unconventional policy tools

Reading:

Chapter 13, section 13.12

Jeffrey Cheng, Dave Skidmore, and David Wessel, "What's the Fed doing in response to the COVID-19 crisis? What more could it do?" Brookings Institution, July 17, 2020,
<https://www.brookings.edu/research/fed-response-to-covid19/>

Optional reading:

Joseph S. Tracy, "What the Fed Did and Why," speech on June 25, 2010
<http://www.newyorkfed.org/newsevents/speeches/2010/tra100625.html>

Watch narrated powerpoints:

Forward guidance

Abenomics

Eurozone monetary policy

Activity:

Contribute to the Discussion Board about the most recent FOMC press release.

Activity:

When Alan Greenspan was nearing the end of his term as Federal Reserve chairman, two of the main contenders for his job were Ben Bernanke and Glenn Hubbard. Ultimately, Bernanke was chosen and Hubbard got the consolation prize of becoming dean of the Columbia Business School. (Note: Bernanke and Hubbard were also competitors in the textbook market, as both had authored popular macroeconomics texts.)

At Columbia, MBA students have a tradition of presenting end of year skits. Below is a music video they produced about their dean's competition with Bernanke. What macroeconomic concepts are referenced in this video?

<https://www.youtube.com/watch?v=3u2qRXb4xCU>

Class 18, 3/2 Fiscal policy 1

Reading:

Chapter 14, sections 14.1 and 14.3-14.4

Congressional Budget Office, "Federal Debt: A Primer," March 2020, Summary section (prior to Chapter 1) only, <https://www.cbo.gov/publication/56309>

Peter Baker, "Arthur Laffer's Theory on Tax Cuts comes to Life Once More," New York Times, April 25, 2017.

Optional reading:

"Is the Fed Monetizing Government Debt?" Federal Reserve Bank of St. Louis Central Banker, April 1, 2013, <https://www.stlouisfed.org/publications/central-banker/spring-2013/is-the-fed-monetizing-government-debt>

David Wessel, "What we learned from Reagan's tax cuts," Brookings blog, December 8, 2017, <https://www.brookings.edu/blog/up-front/2017/12/08/what-we-learned-from-reagans-tax-cuts/>

"How Changes in Economic Conditions Might Affect the Federal Budget, June 2021"- try the Interactive Worksheet at <https://www.cbo.gov/publication/57191>

Watch narrated powerpoints:

Balanced budget multiplier

Supply-side economics

Activity:

Watch one of my favorite Yoram Bauman routines, which is about fiscal policy. Here it is: <https://www.youtube.com/watch?v=cW9dxFrAk-I>

Class 19, 3/7 Fiscal policy 2

Reading:

Chapter 15, section 15.2

Chapter 18, sections 18.1-18.6

Optional reading:

Martin Wolf, "Greek economy shows promising signs of growth," ft.com, May 19, 2019 [you do not have to read the comments on the article]

Fernando M. Martin and Christopher J. Waller, "Sovereign debt: a modern Greek tragedy," Federal Reserve Bank of St. Louis Review, September, 2012 - p. 321-340.
<http://research.stlouisfed.org/publications/review/12/09/321-340Martin.pdf>

"Continental Breakup," This American Life, January 20, 2012 (really good, but requires 57 minutes of listening)
www.thisamericanlife.org/radio-archives/episode/455/continental-breakup

Watch narrated powerpoints:

Greek debt 1

Greek debt 2

Class 20, 3/9 Productivity and automation

Reading:

Chapter 3, sections 3.3-3.4 only

Alana Semuels, "Automation is increasingly reducing U.S. workforces," Los Angeles Times, October 4, 2010.

Danielle Paquette, "Farmworker Versus Robot," Washington Post , February 17, 2019.
<https://www.washingtonpost.com/news/national/wp/2019/02/17/feature/inside-the-race-to-replace-farmworkers-with-robots/>

Application case: "Amazon Go Stores: Effects of Automation on Employment," Debra Glassman, September 2019

Optional reading:

Heather Long, "The U.S. could be on the verge of a productivity boom, a game-changer for the economy," Washington Post, August 18, 2021.

Matt O'Brien and Paul Wiseman, "Do we need humans for that job? Automation booms after COVID," Associated Press, September 5, 2021.

Watch narrated powerpoints:

Productivity 1

Productivity 2

Activities:

1. Contribute to the Discussion Board about what kinds of jobs can be automated.
2. Before class, watch this YouTube video of harvesting nuts using tree-shaking machines: "Walnut Harvest at Bella Viva", <https://www.youtube.com/watch?v=31CZw4NIE6g> . While you are welcome to watch the whole video, you only need to watch the first two minutes.

The tree-shaking machines replaced unskilled workers who previously harvested walnuts by hand using ladders and buckets (we will call this the "displacement effect"). What jobs are created by the advent of the tree-shaking machines (we will distinguish between the "productivity effect" and the "reinstatement effect")? How does this compare to the job loss and job creation produced by Amazon Go stores?