

QUESTIONS FOR DISCUSSION

1. Machlup, Fritz. "Why Economists Disagree." *Proceedings of the American Philosophical Society* 109 (Feb. 18, 1965): 1-7. <http://www.jstor.org/stable/985773>
 - a. This 50+ year old article does an excellent job of explaining why economists disagree. List the four causes of disagreement cited in the article. For each, briefly define the cause or illustrate it with an example.
 - b. Two economists can disagree, sometimes strongly. The best of economists do not resort to *ad hominem* arguments in these disagreements, recognizing that they are using different models. What three things characterize an economic model? For each of the three characteristics of economic models and drawing on the four causes of disagreement listed in the article, what causes disagreements between economists?
 - c. What is the difference between "positive economic analysis" and "normative economic analysis"? Which causes of disagreement between economists are part of positive analysis? Which are part of normative analysis? Can disagreements in the normative realm be resolved? Discuss with the members of your group.

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2. Alison Booth and Xin Meng, "The Impact of Within-Group Conflict on Trust and Trustworthiness," Voxeu.org (March 25, 2019).
<https://voxeu.org/article/impact-within-group-conflict-trust-and-trustworthiness>
 - a. Let's figure out all the basics of the research design:
 - What event are Booth & Meng analyzing?
 - Who do they study?
 - How do they go about their research (what is their research method)?
 - What do they find?
 - What are the three methods they used to try to identify causation?
 - Do they conclude their findings are causal?
 - b. In addition to trust and enhanced social capital, what are other factors that can foster economic growth through improved productivity? Draw a PPF that illustrates the effect of productivity change on an economy. (Be sure to label your axes!) Did you draw symmetric or asymmetric growth? Defend your choice to your group members.
 - c. Look at factors your group members listed in part (b). If you were a policy maker trying to encourage growth in a developing country, which factor would you focus on? Why? In your group, settle on one policy that the group would support and be prepared to defend your choice to your classmates.

If you are interested in reading the full paper, you can download it (use Berkeley VPN if you're not on campus) at https://cepr.org/active/publications/discussion_papers/dp.php?dpno=13354.

Citation: Booth, Alison L, Xin Meng, Elliott Fan, and Dandan Zhang, "The Inter-generational Behavioural Consequences of a Socio-Political Upheaval," CEPR Discussion paper DP 13354 (December 2018).

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3. “How Innovation Amplifies the Benefits of Free Trade,” by Rose Jacobs. *Chicago Booth Review*, 17 July 2018. <http://review.chicagobooth.edu/economics/2018/article/how-innovation-amplifies-benefits-free-trade>
 - a. What is the full name of “Chicago Booth”? (You won’t find the answer in the article but will need to google it.) What question did Hsieh, Klenow and Nath ask in their research? What data did they examine – what countries, what years, what relationship?
 - b. The usual model of the gains from trade was presented in lecture and in the textbook. The article refers to the usual model as showing a “one-time shock to the economy.” But Hsieh, Klenow and Nath argue that innovation can follow increased trade. Using the PPF graph, show the two effects separately: [1] the “one-time shock” associated with increased trade, and then [2] the long-term gains associated with innovation. According to the article, which economy in a trading partnership will benefit the most from the gains associated with innovation: high productivity countries such as the U.S. or their trading partners?
 - c. The article suggests that trading-partner countries which benefit disproportionately from gains associated with innovation should contribute money to the US (which is where the innovation takes place). Suppose it were possible to implement such a policy. Discuss with other members of your group where those funds should be applied – as payments to US companies conducting the research and development (R&D), as payments for government-funded research at universities or in private companies, as payments to US workers who lose their jobs as a result of innovation and trade, or in some fourth way that you specify. Together decide on one proposal that all four members of your group agree to. Make a bulleted list of the pros and cons for your group’s proposal.

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4. "Economics Has Failed America," by Daniel Altman. *Foreign Policy*, May 19, 2016.
<http://foreignpolicy.com/2016/05/19/economics-has-failed-america-globalization-trade/>
 - a. Which textbooks does the author cite in his article? In each case, how much do the authors write in their books about the costs of specialization and trade? What are the positive (vs. normative) aspects of the usual argument about the gains from trade? What are the normative aspects of the argument?
 - b. In a great podcast that explored questions around work, identity, and more ("Work as Identity, Burnout as Lifestyle," *The Ezra Klein Show*, Vox.com, <https://megaphone.link/VMP7590220227>), Ezra Klein's guest draws the distinction between work as a job and work as your identity. What happens when your identity is intimately tied up in your employment? ("I am a professor" versus "My job title is 'professor.'") If you then lose your job, do you lose your identity? Consider these questions in light of the displacement of workers that occurs when trade increases. Do you think work becoming someone's identity impacts the degree to which they oppose or support trade?
 - c. Some estimates are that more than 25 percent of all college students take a Principles of Economics class (<http://www.jstor.org/stable/1183192>). Nearly all of those Principles courses teach the gains from trade. Relatively few teach about the costs of specialization and trade. How do you think what is taught in economics principles courses affects the public policies that our elected officials enact? (Keep in mind that the vast majority of our elected officials took at most one econ class, a principles class like ours.)

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5. Maheshwari, Sapna, "How China Tariffs Could Make Your Sweaters and Pants Cost More," *New York Times*, June 5, 2019. <https://nyti.ms/2WetRFX>
 - a. What is a 'tariff'? What company's products are discussed in the article? What will a new 25 percent tariff do to the retail price of their products? Calculate the percentage increase in price for each of the 4 products in the graphic.
 - b. Using a model of supply and demand, illustrate the effect of a new tariff on the price of a product. In the analysis in the article, did the author consider both supply and demand, or just one side of the market? Explain.
 - c. The stated goal of the tariffs is to shift U.S. consumer demand from Chinese-made to American-made goods. Does the company in the article plan to shift production out of China and into the U.S.? Why or why not? With your group, come up with a list of at least two reasons that tariffs on Chinese-made goods would not lead to increased U.S. manufacturing. Share your list with the class. Together, think about whether each of your reasons are about the supply-side or the demand-side of markets.

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6. “How Trump’s Tariffs on Mexico are Taking Jobs from U.S. Workers,” by Erica Werner & Kevin Sieff. *Washington Post*, July 18, 2018.

https://www.washingtonpost.com/business/economy/trumps-tariffs-on-mexico-are-causing-layoffs-in-the-united-states/2018/07/18/03ec1e74-8473-11e8-9e80-403a221946a7_story.html

- a. What is the company discussed in the article? What do they produce? Where are they located? What is the primary input to their production process? Where is that input produced? Why are Trump’s tariffs relevant to this U.S. based company?
- b. Drawing on the article, sketch two models of supply and demand for nails, one for each of the following events described in the article.
- The construction industry booms
 - The cost of steel, an input in the production of nails, increases 25 percent
- Based on your sketches, what is the combined effect of these two events on the price of nails? On the quantity of nails sold?

Aha! One of those last two questions is unanswerable without additional information. Which question has an ambiguous answer? Now look back at the article and find the factual answer to the question you can’t definitively answer. According to the article, what is the combined effect of these two events on the price of nails? On the quantity of nails sold? What can you now say about which of the two effects above had a larger effect on Mid Continent Nail Corp?

- c. The article was published in Summer 2018, before the November 2018 midterm elections and before the Summer 2019 threats of tariffs against Mexico and China. Based on this article and the previous article, what are strengths and weaknesses of using tariffs to try to boost the U.S. economy? Be sure you consider who benefits or is hurt, and whether you are thinking about employment effects or price effects.

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- 7a. "In Praise of Price Gouging," by John Stossel. Posted at *Townhall.com*, September 7, 2005.
http://www.townhall.com/columnists/JohnStossel/2005/09/07/in_praise_of_price_gouging
- 7b. "Dear Harvard Prof: Your \$2,500 Ticket for 'Hamilton' Doesn't Mean Price-gouging Is a Good Thing," by Michael Hiltzik. *Los Angeles Times*, October 24, 2016.
<http://www.latimes.com/business/hiltzik/la-fi-hiltzik-price-gouging-20161024-snap-story.html>

Note the date of the Stossel article: it was written in 2005, one week after Hurricane Katrina hit. If you are unfamiliar with the history of Hurricane Katrina – the worst natural disaster in U.S. history – check out this article:

<https://www.thebalance.com/hurricane-katrina-facts-damage-and-economic-effects-3306023>

- a. Stossel begins with a (hypothetical) story of someone paying \$20 for a bottle of water. Use a supply and demand graph to illustrate how the equilibrium price of a bottle of water might have risen, post-Katrina in New Orleans, from \$1 to \$20 a bottle. Is the increase in price of a bottle of water a result of a change in demand, change in supply, or both? In the case of the Hamilton tickets, is the increase in the price of a ticket to \$2,500 the result of a change in demand, change in supply, or both?
- b. When the price of a bottle of water rises to \$20, Stossel claims "water goes to those who really need it." Do you agree? Use economic terms and concepts to explain why you think water does (or does not) therefore go to those who really need it.

Would your analysis be any different if you were analyzing the \$2,500 ticket to Hamilton instead of bottles of water following a hurricane?

- c. Laws against price gouging in the wake of a natural disaster might create a market disequilibrium. What non-price mechanism to allocate the desired goods would you and your group members argue in favor of? What is your argument?

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8. Swan, Rachel. "Bart Fare Increase Isn't a Done Deal," *San Francisco Chronicle*, June 4, 2019.
<https://www.sfchronicle.com/bayarea/article/Crusade-for-riders-or-risky-gambit-BART-director-13926542.php>

The article predates the passage of the Bart fare increase at the June 13, 2019 meeting. If you are interested in information about that meeting, see Swan's follow up article at <https://www.sfchronicle.com/bayarea/article/BART-eyes-fare-hikes-of-roughly-16-percent-over-13884816.php#>

- a. Which Bart director opposed the fare increase? What is her argument (bottom of first page) for why Bart should not increase fares? Is her argument capturing simply "Demand curves slope down" or "Price elasticity tells us *by how much* quantity demanded changes in response to a change in price"?
- b. Based on the three factors that affect price elasticity of demand, what would you argue are the likely short-run and long-run effects of an increase in Bart fares? The Bart Board's goal is to maximize total revenue. In what case(s) should the Bart increase fares?

The Washington DC Metro system is very similar to Bart, but it has higher "peak" (commute time) and lower "off-peak" (mid-day, evenings, weekend) fares. If Bart implemented a similar peak versus off-peak fare system, how would having "peak" and "off-peak" times and fares impact your analysis?

- c. You are hired to analyze the effect on total revenue of a proposed increase in fares at Bart. With your group, make a list of what data you would gather and over what time period in order to determine the effect on total revenue.

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9. "Under Pressure from Uber, Taxi Medallion Prices are Plummeting," by Josh Barro, *New York Times: The Upshot*, November 27, 2014. <http://nyti.ms/1Fx7ook>
- a. What is Uber? How do you get an Uber ride? How do you pay for it? What is a taxi medallion? What has happened to prices of taxi medallions in New York and in Boston?
- b. Use the model of supply and demand to illustrate (separately) the markets for Uber rides and for taxi rides. Distinguish between a run-of-the-mill weekday and a time (such as Halloween) when demand is very high. What is the effect of Uber on profit for taxi drivers? Do your results help explain what is happening to prices of taxi medallions?

Draw graphs that show the market for taxi rides and the cost and revenue curves for a typical taxi driver. Suppose the market begins in long-run equilibrium. Now show the effect on the taxi ride market and on a typical taxi driver of the introduction of Uber into that locale. What is the short-run effect on the typical taxi driver? What is the short-run effect on the price of taxi rides? What are the long-run effects on the taxi market and on the typical taxi driver?

- c. Some localities ban Uber and Lyft. (See <https://www.cntraveler.com/story/where-uber-is-banned-around-the-world> for a recent list.) Others allow the services to operate. With your group members, construct a list of the reasons for and against allowing Uber and Lyft to operate in an area, keeping in mind economic principles. Under what (if any) circumstances does your group recommend banning Uber and Lyft?

For additional articles on the effect of Uber/Lyft on taxi drivers & public transit, see for instance these articles by economists:

Chang, Hung-Hao, "The Economic Effects of Uber on Taxi Drivers in Taiwan," *Journal of Competition Law and Economics* (May 2017). <https://doi.org/10.1093/joclec/nhx017>

Berger, Thor, Chinchih Chen, and Carl B. Frey, "Drivers of Disruption? Estimating the Uber Effect," *European Economic Review* 110 (November 2018): 197-210. <https://doi.org/10.1016/j.euroecorev.2018.05.006>

Hall, Jonathan D., Craig Palsson, Joseph Price, "Is Uber a Substitute or Complement for Public Transit?," *Journal of Urban Economics* 108 (November 2018): 36-50. <https://doi.org/10.1016/j.jue.2018.09.003>

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10. Do, Quy-Toan. "Asymmetric Information."

https://siteresources.worldbank.org/DEC/Resources/84797-1114437274304/Asymmetric_Info_Sep2003.pdf

This article is provided as background because there is no coverage of asymmetric information in the textbook.

There are no specific questions for discussion for this article.

You want to know, understand, and be able to apply the concepts of adverse selection and moral hazard.

Particularly as we talk about financial markets in the macro part of the course, these concepts are crucial. They are also essential for understanding (or beginning to understand) why health care and health insurance markets are so very complicated.

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11a. "Is It Time To Ban Computers From Classrooms?," by Tania Lombrozo, *NPR.org*, July 11, 2016.

<http://www.npr.org/sections/13.7/2016/07/11/485490818/is-it-time-to-ban-computers-from-classrooms>

11b. "Even Just the Presence of a Phone or Laptop in Class Can Push Down Grades, Study Finds," by David Nield. *Science Alert*, July 28, 2018.

<https://www.sciencealert.com/phones-in-lectures-can-hurt-grades-even-when-not-used>

- a. As cited in the two articles, what are the problems with the use of electronic gadgets (laptops, smart phones, etc.) in class? What did Professors Mueller and Oppenheimer find in their research comparing taking notes by hand with taking notes on a laptop? What did the Rutgers University researchers find when comparing performance on final exams on material covered with versus without student classroom access to gadgets?
- b. In the language of economics, describe the negative externality created when a student uses the laptop, cell phone, or other electronic gadget during class. Draw a graph that depicts the market-equilibrium and social optimal quantity of laptops in class.
- c. Is it possible to institute a policy that brings the use of laptops, phones, and other electronic gadgets to the social optimum? Does the banning of all electronic gadgets produce the socially optimal quantity of electronic gadgets in class? Discuss with your group members.

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- 12a. Bradsher, Keith and Lisa Friedman, "China Unveils an Ambitious Plan to Curb Climate Change Emissions," *New York Times*, December 19, 2017. <https://nyti.ms/2D05V0G>
- 12b. Plumer, Brad and Nadja Popovich, "These Countries Have Prices on Carbon. Are They Working?" *New York Times*, April 2, 2019. <https://nyti.ms/2K13geS>
- a. According to article 12b, which countries currently have prices on carbon emissions? For each, are they taxing carbon, or using a cap-and-trade program? In many places, the benefits so far have been minor. According to the article, why?
 - b. Use a supply and demand model to illustrate how a cap-and-trade program works. Assume the marginal cost of reducing emissions is not constant but increases as emissions are decreased. Show how decreasing the number of carbon-pollution permits affects the price of each permit. Why does this create an incentive for firms to reduce their emissions?
 - c. You are a policy maker charged with reducing carbon emissions. You have a public speaking gig coming up to a general audience of people, something like a politician's town hall. Together with your group members, outline how you will convincingly explain how an unregulated market fails to address carbon emissions and what are the best approach(es) to using policy to reduce emissions. Remember: with your speech, you want to have convinced everyone to be on your team to fight climate change!

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13a. "Striking it Richer: The Evolution of Top Incomes in the United States (updated with 2017 final estimates)," by Emmanuel Saez, March 2019.

<https://eml.berkeley.edu/~saez/saez-UStopincomes-2017.pdf>

13b. Boushey, Heather. "A New Economic Paradigm," *Democracy: A Journal of Ideas* 53 (Summer 2019).

<https://democracyjournal.org/magazine/53/a-new-economic-paradigm/>

a. Use the article by Prof. Saez to answer these questions. For each answer, cite the page or figure # where you found the answer. (Note that the pagination is odd with the first page as page 0.)

- What is the source of Professor Saez's data?
- How much did real average income per family increase in 2017? What was the rate of change for the top 1%? For the bottom 99%? Did inequality increase or decrease in 2017 relative to 2016?
- From 2009-2017, by how much did average income per family grow? What was the percentage increase for the top 1%? For the bottom 99%?
- From 2007-2009, by how much did average income per family decrease? What was the percentage decrease for the top 1%? For the bottom 99%?
- Using the figure, approximately what % of income did the top 1% receive in 1998? In 2007? In 2017?
- What was the dollar cutoff in 2017 for the top 1%? The top 5%? The top 10%?

Based on that last set of answers, would you say a family in the U.S. earning \$130,000 per year is earning a "middle class" income?

b. The second article (by Boushey) both critiques the part of the course we just finished and looks ahead to the next part of the course. (Note that of the economists mentioned in the article, Saez, Zucman, and Card are faculty in the Economics Department, and Suresh Naidu (Columbia) received his Ph.D. here.) According to the article, what are the 20th century paradigm, the unraveling, and the new vision?

c. Zucman is quoted as saying "Good-bye representative agent." In what ways was our study of microeconomics based on the implicit assumption of a representative agent? With your group, choose one topic we covered in the first half of the course in which we implicitly assumed a representative agent. For that topic, come up with at least 2 ways (preferably more) in which our conclusions might have been different if we had instead taken inequality explicitly into account.

For more readings, go to Prof. Saez's website, <https://eml.berkeley.edu/~saez/>. And once you become an econ major (hint hint), watch the class schedules for Econ 131 with Saez, Econ 133 with Zucman, and any undergrad course (often C142) offered by Card!

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14. Hunter Clark, Maxim Pinkovskiy, Xavier Sala-i-Martin, “On the measuring and mis-measuring of Chinese growth,” *Vox CEPR Policy Portal voxeu.org* (July 2017), <https://voxeu.org/article/measuring-and-mis-measuring-chinese-growth>
 - a. What do Clark, Pinkovskiy, and Sala-i-Martin use as a proxy for measuring GDP growth in China? What do they say are the advantages to their proxy? Does their measurement confirm or refute the official Chinese government statistics?
 - b. Clark, Pinkovskiy, and Sala-i-Martin use the information from the nighttime light intensity to propose weights to use in calculating a weighted average of the economic indicators used in the Li Keqiang index. What are the three components of the Li Keqiang index? Why does a change in the weights used in calculating a weighted average matter? (Think about weighted averages generally.)
 - c. Create a large enough group so there are at least 2 people in the group who have flown at night and looked out the window. What have you seen? Does it match up with what Clark, Pinkovskiy, and Sala-i-Martin are proposing here as the correlation between nighttime light intensity and economic activity? Would you want to think about rural and urban areas differently (or is nighttime light intensity what defines the difference between rural and urban areas)? Would you want to want to think about the measurements from one country (say, the US) differently than another country (say, China)? Ask your GSI to explain what it means to include “fixed effects” in a regression analysis.

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15. "5 Ways GDP Gets it Totally Wrong as a Measure of our Success," by David Pilling. *World Economic Forum*, January 17, 2018.
<https://www.weforum.org/agenda/2018/01/gdp-frog-matchbox-david-pilling-growth-delusion/>
- a. What is the definition of GDP? What does it mean to say "GDP is a measure of income, not of wealth"? What does the author think are the problems with using GDP as the sole indicator of economic conditions?
 - b. Describe two events from the past (for any country, actual, not made up) that have impacted living standards but are not well measured by GDP. Try to come up with one event for which living standards rose more than GDP would indicate, and one event for which living standards rose less than GDP would indicate.
 - c. In the United States, it can seem that every policy is judged against one standard: does it increase GDP? How might economic policy change if policymakers used a different standard, or additional standards? What do you think those additional or different standards should be? Discuss with members of your group. Be explicit about what assumptions you are making.

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16. Crisp, John M., "Stop Bragging about the Black and Hispanic Unemployment Rates," Tribune New Service (February 2019). <https://www.ohio.com/opinion/20190218/john-m-crisp-stop-bragging-about-black-and-hispanic-unemployment-rates>

- a. Based on the article (which was based on the January 2019 jobs report), what were the unemployment rates for Hispanics, blacks, and whites in January 2019? In what sense are these results good news? In what sense are they more of the same?

What are the median 2017 incomes for each group? What was the 2016 median household wealth for each group?

- b. Go to <http://www.bls.gov>, and then click on "unemployment rate" in the "latest numbers" box on the lower right. Are the unemployment rate ratios by race any different today than they were in the article? What about the gender ratio of unemployment rates? And the gender ratios within race category, and the race ratios within gender category? (You'll find this easiest if someone in your group creates a google sheet and shares it with all of you. You can each take responsibility for filling in different parts of the sheet. Once you create one formula, copy and paste the formula to other cells.)
- c. Policy makers often talk about having a specific goal or a goal range for the unemployment rate: "We would like to see the national unemployment rate be about 4 percent," for instance. If there is something good about an unemployment rate of 4 percent (or whatever the goal number happens to be), but that national unemployment rate masks persistent differences in the experience of unemployment by race, ethnicity, gender, educational attainment, and more, what does it mean to have a goal for the national unemployment rate?

For more information, see also

"Black unemployment is at least twice as high as white unemployment at the national level and in 14 states and the District of Columbia," by Valerie Wilson, *Economic Policy Institute* (April 4, 2019),

<https://www.epi.org/publication/valerie-figures-state-unemployment-by-race/>

"Dreams Deferred: How Enriching the 1 Percent Widens the Racial Wealth Divide," by Chuck Collins, Dedrick Asante-Muhammed, Josh Hoxie, and Sabrina Terry, *Institute for Policy Studies* (January 2019),

<https://ips-dc.org/racial-wealth-divide-2019/> or

https://ips-dc.org/wp-content/uploads/2019/01/IPS_RWD-Report_FINAL-1.15.19.pdf

Darrick Hamilton's TED Talk, "How 'Baby Bonds' Could Help Close the Wealth Gap," (September 2018),

https://www.ted.com/talks/darrick_hamilton_how_baby_bonds_could_help_close_the_wealth_gap

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17. "Wealth Inequality and the Marginal Propensity to Consume," by Nick Bunker, *Washington Center for Equitable Growth*, December 17, 2014.

<http://equitablegrowth.org/news/wealth-inequality-marginal-propensity-consume/>

- a. What is the definition of "marginal propensity to consume"? Express the definition in words and in mathematical terms. Be sure everyone in your group agrees on the mathematical expression. Be sure you are defining the marginal and not the average propensity to consume. Know the difference. Check with the group next to you to be sure they agree with your definition and also your understanding of the difference between mpc and apc.
- b. According to the study by Chris Carroll et al cited in the article by Bunker, does the value of the mpc depend upon the amount of wealth a family has? Does it depend on the type of wealth the family has? Be specific.

The concepts in the article can be expressed with the slope of the consumption function. Draw a graph that illustrates the concept in the article.

- c. You are an economist advising policy makers. They want to implement an income tax cut that will have the largest possible effect on GDP. Based on the Bunker article, whose taxes should be cut and why?

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18. "More Services Means Longer Recoveries," by Martha L. Olney and Aaron Pacitti, *The Berkeley Blog*, May 2, 2013. <http://blogs.berkeley.edu/2013/05/02/more-services-means-longer-recoveries/> Full paper available at <http://onlinelibrary.wiley.com/doi/10.1111/ecin.12467/full>
- a. Economies produce, broadly, goods, services, and structures (buildings). What has happened to the share of output that is services over the last several decades? What has happened to the length of business cycles over that same period?
 - b. According to Olney and Pacitti, why does a rise in the service share of an economy lead to longer recoveries? Can you think of other reasons why a rise in services might be correlated with longer economic recoveries?
 - c. If the longer recoveries are the consequence of the rise of services, are there public policies we can propose that would hasten economic recovery? Are there costs to imposing those policies? Should we propose and enact such policies?

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19. "Loss of Steel Jobs Lingers in Fairfield," (Transcript) *NPR Weekend Edition Saturday*, June 10, 2017.
<http://www.npr.org/2017/06/10/532350843/loss-of-steel-jobs-lingers-in-fairfield>

- a. Beyond the layoffs of U.S. Steel workers, what other sectors of the economy were affected by the closing of U.S. Steel? Highlight each mention of other affected sector(s) in the article. Draw a diagram that shows each sector that was affected and how they are linked to each other.
- b. Define the concept of the multiplier. Connect your diagram in part (a) with the concept. If the article had continued with each and every job loss experienced in the Fairfield, Alabama area, what industries do you think would have been represented in the additional rounds of the multiplier process?
- c. When people are laid off and their disposable income falls, they have two choices:
 - continue to spend the same amount, paying for goods and services by draining their assets (withdrawing savings, for instance) or accumulating liabilities (charging credit cards, for instance), or
 - cut spending, perhaps as much as dollar for dollar with the loss of income

The more laid-off families borrow, the smaller is the multiplier. The more laid-off families cut spending, the larger is the multiplier and thus the greater the damage of "one layoff" to a whole town. Is it good for laid-off people to borrow and maintain their spending? Discuss with your group members. (It's a normative question. Start by stating a goal.)

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20. "Headwinds Loom for Trucking and Construction," by Anthony Smith, *Freight Waves*, June 11, 2019.
<https://www.freightwaves.com/news/headwinds-loom-for-trucking-and-construction>

- a. The article is written for professionals in the trucking industry to help them form their forecasts of trucking demand. According to the article, what is happening to housing starts? What is the effect on the demand for lumber? What is the effect on flatbed truck movement of building materials? On the shipments of furniture and appliances?
- b. Who does investment spending: households, businesses, or governments? What are the three types of spending included in investment spending (I)? In our standard model of investment spending, a decrease in interest rates *ceteris paribus* will increase spending on investment. Explain why.

The article suggests that a decline in interest rates will not help the housing construction industry and thus the trucking industry. What are the factors other than interest rates that are limiting investment in residential construction?

- c. The four of you in your group are co-owners of a trucking company. Based on this article, would you invest in new flatbed trucks? When the Fed lowered interest rates in summer 2019, would that have made you more likely to buy a new flatbed truck? Be sure you come to consensus with all of your co-owners!

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21. “Why Everybody’s Worried About a Recession Again” by Emily Stewart. Vox.com (August 15, 2019). <https://www.vox.com/policy-and-politics/2019/8/15/20806882/recession-warning-yield-curve-stock-market-dow>
- a. What does the author cite as the three reasons people are increasingly nervous about a recession? Explain each so that every member of your group is 100% clear on the explanation.
- b. Economies go through cycles. Draw a graph that shows the cycles of the economy, labeling each of the following:
- recession
 - recovery
 - peak
 - trough
 - expansion

Be sure you have labeled your axes. On your graph, where is the US economy today? What is the author suggesting the graph will look like over the next year or two?

- c. When the next recession starts, some member of your family (for some reason, it often seems to be an uncle!) will say to you, “You took economics at Berkeley. Why is this recession happening? How can we get out of this?” What will you say?

QUESTIONS FOR DISCUSSION

22. "How Powerful are Fiscal Multipliers in Recessions?," by Alan Auerbach and Yuriy Gorodnichenko, *NBER Reporter 2015 Number 2: Research Summary*, 2015.

<http://www.nber.org/reporter/2015number2/auerbach.html>

- a. According to the article, what happens to the size of the government spending multiplier over the course of the business cycle? When is it large? When is it small?
- b. There are two possible reasons that the size of the government spending multiplier may vary over the course of the business cycle.
 - Consumer spending responds more to changes in income in a downturn than in an expansion
 - In a downturn, monetary authorities do not raise interest rates which would otherwise cause investment spending to fall just as government spending was increasing

Let's consider the first of those two possibilities. If consumer spending responds more to changes in income in a downturn than in an expansion, why and how does this impact the size of the multiplier? Explain your answer in words and with mathematical terms.

- c. Use the production possibilities frontier model, with the types of output divided into [1] government goods and services and [2] all other goods and services. Show the effect of increasing the production of government goods and services. Does it matter whether or not you begin on, versus inside, the production possibilities frontier? Relate this analysis to this article.

QUESTIONS FOR DISCUSSION

23. Wolla, Scott A. "A New Frontier: Monetary Policy with Ample Reserves," FRB-St. Louis Page One Economics, May 2019. <https://research.stlouisfed.org/publications/page1-econ/2019/05/03/a-new-frontier-monetary-policy-with-ample-reserves>

a. Define each of the following:

- FFR
- IOER
- FOMC
- ON RRP

When did the Fed start paying interest on reserves?

b. When there are scarce reserves, how does the central bank change the FFR? To answer this question, replicate the graph in Figure 2 in the article. Why does the graph of demand become flat (perfectly elastic) when the $FFR=0$? Why does demand also become flat at the discount rate? Be sure everyone in your group can draw and explain the graph.

c. Now consider what happens when there are ample reserves. Why does the demand curve go flat in the range between the IOER and the ON RRP rates? If the central bank changes reserves, does this change the FFR? How does the central bank instead change the FFR?

See also

Wolla, Scott A. "Fixing the 'Textbook Lag' with FRED (Part I)," The FRED Blog of FRB-St. Louis, June 2019. <https://fredblog.stlouisfed.org/2019/06/fixing-the-textbook-lag-with-fred-part-i/>

Wolla, Scott A. "Fixing the 'Textbook Lag' with FRED (Part II)," The FRED Blog of FRB-St. Louis, June 2019. <https://fredblog.stlouisfed.org/2019/06/fixing-the-textbook-lag-with-fred-part-ii/>

QUESTIONS FOR DISCUSSION

24. Sellers, Bob. "The Famous 'Phillips Curve' to Predict Inflation Isn't Working Like It Should," *Fortune* (June 2019). <http://fortune.com/2019/06/14/phillips-curve-unemployment-inflation/>
- a. The author does a decent job of summarizing the basics about the Phillips Curve. What is the basic relationship captured with the Phillips Curve? What relationship did A.W. Phillips actually study, and over what time period? What events have led people to say the Phillips curve "isn't working" today?
 - b. Like any relationship between two economic variables, the inverse relationship between unemployment and inflation relies on an assumption of *ceteris paribus*. What are factors that can shift the Phillips curve, resulting in observations of unemployment and inflation over some time period that do not match the inverse relationship between unemployment and inflation? Are any of these factors mentioned in the article?
 - c. Why is knowing whether the Phillips curve relationship is "not working" or is "shifting" so important to Federal Reserve policy makers?

An additional recent article on the Phillips curve you might be interested in reading is

"Yes, There Is a Trade-Off Between Inflation and Unemployment," by N. Gregory Mankiw. *New York Times*, August 8, 2019. <https://nyti.ms/2YPFYyJ>

QUESTIONS FOR DISCUSSION

25. "Recession Watch: What Is an 'Inverted Yield Curve' and Why Does it Matter?" by Jonnelle Marte, *Washington Post*, August 14, 2019.

<https://www.washingtonpost.com/business/2019/08/14/recession-watch-what-is-an-inverted-yield-curve-why-does-it-matter/>

- A. What is a "yield curve"? What does it mean for the yield curve to be "inverted"? What happened to the U.S. Treasuries yield curve in mid-August 2019? Was this the first inversion of 2019 for the U.S. Treasuries yield curve? How many months (approximately) have typically followed a yield curve inversion in the U.S. before a recession has begun?

- B. In general, there are two reasons why a yield curve might invert:

- short-term rates rise above long-term rates
- long-term rates fall below short-term rates

In which case would you expect a recession would more likely and more quickly follow an inversion of the yield curve? Why?

- C. (This prompt was written in August. You're answering it in November. A lot may have happened in three months.) Do you think the August 2019 inversion of the 10-year and 2-year Treasury bonds signaled a coming recession? With your group members, debate why and whether this particular inversion may or may not have signaled a coming recession.

QUESTIONS FOR DISCUSSION

- 26a. "Fed Cuts Interest Rates for First Time Since 2008 Crisis," by Jeanna Smialek, *New York Times*, July 31, 2019. <https://nyti.ms/31aU2jZ>
- 26b. "Federal Reserve Press Release: FOMC July 30-31, 2019 Meeting." *Board of Governors of the Federal Reserve*. July 31, 2019.
<https://www.federalreserve.gov/monetarypolicy/files/monetary20190731a1.pdf>
- a. What decision did the FOMC make at its July 30-31 meeting? What was their rationale? Go online to find the statement from the October 29-30, 2019 FOMC meeting. (<http://www.federalreserve.gov/monetarypolicy/fomccalendars.htm>) What are the differences between the FOMC statements of July 2019 and October 2019?
- b. The Fed is guided by a "dual mandate." What does that mean? Use the concept of the Phillips curve to illustrate the tension the Fed faces between addressing unemployment and inflation.
- c. Do you think the Fed should be aggressive in lowering interest rates? Or should the Fed move slowly? What do you think the Fed will do at their December 10-11 meeting? With your group members, discuss your answers.