**Case Study Questions**

Our study focuses on Labor Force Participation Rates (LFPR).

Instructions:

1) Click on the following link to access some data from the Current Population Survey (CPS) that will be useful in completing the case study. Before you begin, carefully review the codebook file, which provides definitions for the variables in the dataset. To download both files, please click the blue button in the top right hand corner.

<https://www.dropbox.com/sh/dkznvws39mp2vda/AABU2dxwbpTSZf0MT6Gu-6wua?dl=0>

2) Answer the six questions below by typing your answers into the space provided, including pasting / creating any required tables or figures. You can insert pages as you feel is needed.

3) Email this *filled-out document* and your *code* to Elise Fisher ([elisef](mailto:marikop@wharton.upenn.edu)@wharton.upenn.edu) with the Subject line of “Completed Research Data Analyst Case Study”, by the due date in the email sent to you.

1. The LFPR is defined as theadult civilian share of the population that is in the labor force, expressed as a percentage. Create graphs showing LFPR age profiles (the LFPR at each age) in 1995 and 2015. Please create three separate graphs: one for men, one for women, and one for the full population.

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2. The figures from Question 1 show a consistent pattern in the relationship between age and LFPR. What explains the shape of this age profile? In two or three sentences, describe the most important factors.

The data appears to show a curvilinear relationship between the variable age and the variable labor force. As age begins to increase so does the labor force but in their 40s labor force begins to decline and we see a steep decline in their 60s. This can be explained by people starting to join the labor force as they become adults and then leaving the labor force as they approach retirement. Another interesting note is that it appears people are staying in the labor force longer in 2015 when compared to 1995.

3. Calculate the aggregate LFPRs of persons aged 15 and over in 1995 and 2015. Please calculate the value separately for men, for women, and for the full population.

1995 Aggregate Total: 131,559,896.84

2015 Aggregate Total: 156,721,796.85

1995 Aggregate Male Total: 70,793,350.15

2015 Aggregate Male Total: 83,238,834.48

1995 Aggregate Female Total: 60,766,546.69

2015 Aggregate Female Total: 73,482,962.37

4. Calculate the effect of population aging on the aggregate (full population) LFPR. Specifically, what would the aggregate participation rate of persons aged 15 and over have been in 2015 if the age distribution of the population were the same as it was in 1995?

2015 Aggregate Total with 1995 Age Distribution: 128,430,332.90000002

2015 Aggregate Total with Normal Age Distribution: 156,721,796.85000002

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5. From Question 4, it is clear that changes in the population’s age structure account for some of the changes in LFPR. Write a paragraph or two describing some of the other major factors that might have contributed to changes in LFPR. Note: The answer to this question is not found in the data that we provided but involves doing some quick online research to understand the drivers of labor force participation.

Labor force percentage rates can be affected by economic, social, and demographic trends. From this data I notice some distinct age trends. Young people in 1995 joined the Labor Force in greater numbers when compared to young people in 2015. This could be the result of a couple of things. The United States average real income has gone up increasingly over the years and the number of children per family has gone down. This means that families have more money and there is less pressure on young people to get jobs while they are still living at home. Another factor is the increase in the importance of education. The percentage of people who go to college has risen and that means fewer young people in the labor force and more in school.

Another noticeable trend is that people in 2015 are working later in their lives than people in 1995. This could also be due to several factors. Health strikes me as the biggest one as the average life expectancy in the United States has risen year by year. This means that people are in better physical and mental shape and are more willing to continue working. Another factor is that social benefits have changed. The retirement age for social security has increased, retirement packages have decreased, healthcare costs have increased, and spending power of social benefits has decreased. This means that people must work to older ages to ensure their financial security. The final factor is the dynamic of the modern family. People have become more mobilized and are living farther and farther away from their families. This results in a decrease in three-generational households. This means older people will have to take care of themselves rather than move in with their children.

6. Based on your answers to the previous questions, describe in two or three sentences how you would approach forecasting the LFPR in 2025. What data and variables would you use to make a projection?

There is a lot of economic unrest right now in the world. Covid has affected the labor force participation rate and while I am optimistic it will be over with by 2025, I am worried about its long-lasting financial effects. Covid and geopolitical unrest have caused a lot of disturbance in the economy. Inflation is rapidly growing, and commodity prices are also skyrocketing. Historically these are indicators of an oncoming recession. A recession would also mean a decrease in LFPR. My main variables to look at would be inflation, GDP, CPI, and population age. The worse these numbers look, the lower my projection for LFPR would be.