

## Handout for November 2020 Newsletter

### Travel Economics in FRED®

#### Purpose.

1. Create a plot of traveled miles by rail, airplane, and roadway vehicles.
2. Customize the format of the graph by changing the Y-axis position of a series.
3. Describe and discuss patterns in the evolution of traveled miles over time.

**Pedagogical Rationale.** This assignment requires that you first look for data and plot them into a graph. Next, you will add more series to the graph. Next, you will change the format of the graph. Lastly, you will describe and discuss patterns in the evolution of the data series. These tasks will develop your proficiency in searching for, transforming, and interpreting data.

**Grading.** Your grade will be determined by (a) how precisely you complete the search and transformation data tasks and (b) how accurately you interpret the data.

#### Steps to Search for and Transform the Data.

1. Access <https://fred.stlouisfed.org/> and search for “Rail Passenger Miles (RAILPMD11).”
2. Select “Number of Miles, Monthly, Seasonally Adjusted.”
3. Click on EDIT GRAPH and select ADD LINE.
4. Search for “Air Revenue Passenger Miles, Thousands, Monthly, Seasonally Adjusted (AIRRPMTSID11)” and click on “Add.”
5. Click on ADD LINE.
6. Search for “Vehicle Miles Traveled, Millions, Monthly, Seasonally Adjusted (VMTD11)” and click on “Add.”
7. Click on EDIT LINE and select EDIT LINE 1
8. Customize the data by typing the formula “a/10” and clicking on “Apply.”
9. Click on EDIT GRAPH and select FORMAT.
10. Under “Line 3: Vehicle Miles Traveled,” select “Y-Axis position: Right.”

**Writing Prompts.** Answer the following questions:

1. As of February 2020, which means of travel was most frequently used? (Hint: Pay attention to the Y-axis position of each series).
2. Consider the impact of the COVID-19 pandemic on travel. Which means of travel decreased the most between February and March, 2020. (Hint: Pay attention to the units of each series).
3. Describe the likely impact of reduced travel on the demand and price of complementary goods such as fuel and hotel stays.
4. Describe the likely impact of social distancing on the use of trains and planes. Next, describe how roadway travel can substitute for some rail and air travel