

Sen Zhu (working as an individual)

Project description

Econ 612

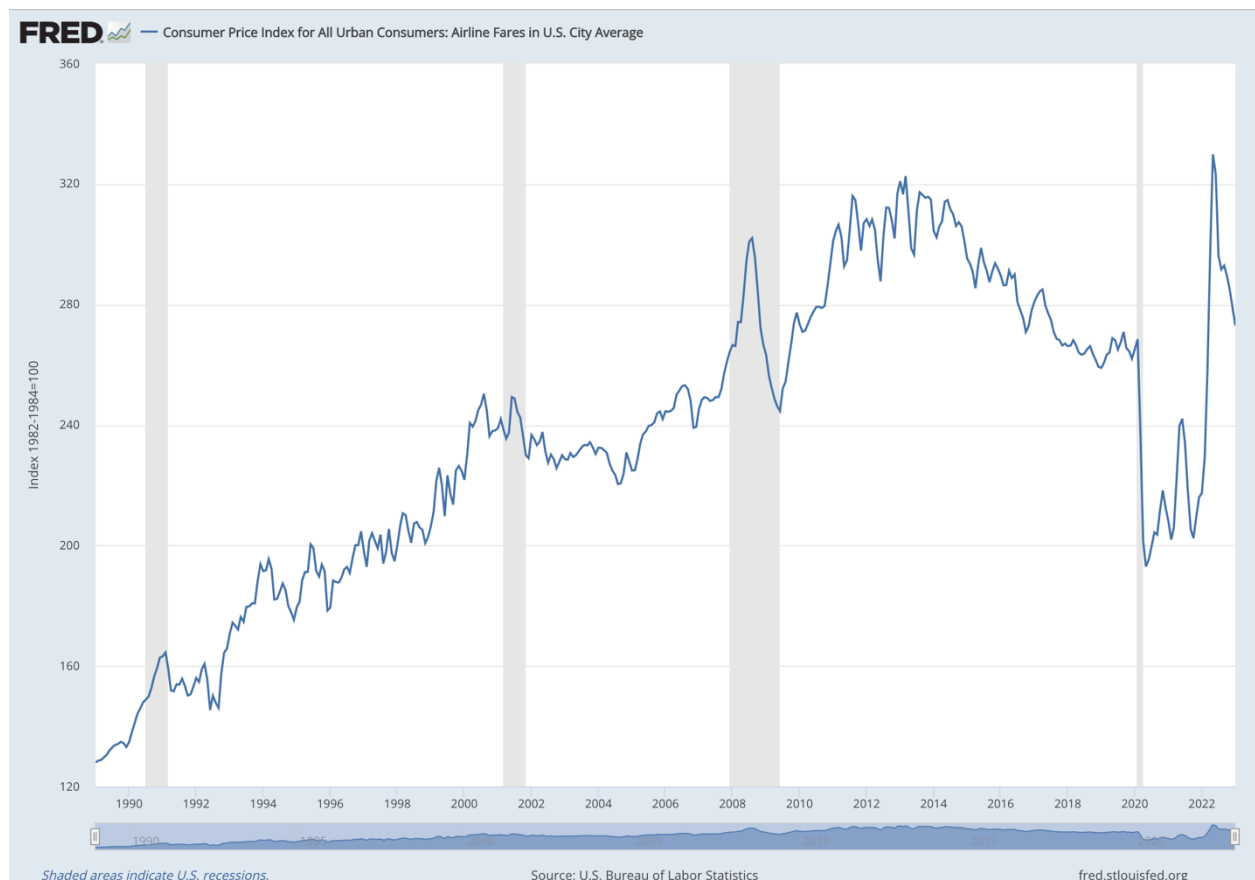
Mar 6, 2023

In this project, the economic variable I will investigate, and forecast is the consumer price index (CPI) for all urban consumers: Airline fares in U.S. city average. A number of different versions of CPI data designed to cover different scopes of the economy are available from BLS. The one that I select for my forecasting topic is the CPI for airline fares under the subject of transportation category of CPI. What CPI captures is essentially the average monthly changes in prices of all selected goods and services in a basket purchased by typical urban households between two time periods. So, the index measures price changes as a percent change from a predetermined reference date. I also choose the seasonally adjusted index which, compared to the original unadjusted version of index that accounts for all factors that influence price changes, removes the effects of seasonal changes including weather, school year, production cycles, and holidays. Only in this way can we maximize the predictability of our variable and increase the odds of accurately forecasting future values by removing possible noise in our data. Based on percent changes in prices that is preliminarily measured by CPI, the most widely use of it is to measure inflation and deflation both of which are important economic indicators that show us the performance of the economy.

The data of Consumer Price Index for All Urban Consumers: Airline fares in U.S. city average is collected and released monthly by BLS. According to BLS, prices for the goods and services used to calculate the CPI are collected in 75 urban areas throughout the country and from about

23,000 retail and service establishments. In addition, data on rents are collected from about 50,000 landlords or tenants. When it comes to the weight of each component in the typical basket consumers purchase, the Consumer Expenditure Survey is employed to estimate the weight for an item derived from reported expenditures on that item.

Once again, the CPI data is released monthly by BLS, and March 2023 CPI data are scheduled to be released on April 12, 2023, at 8:30 A.M. Eastern Time. So, the CPI of airline fares for March 2023 is going to be my forecast subject. Historical data which can be traced back to Jan 1989 will be obtained from FRED and used in MATLAB for time-series analysis.



*U.S. Bureau of Labor Statistics, Consumer Price Index for All Urban Consumers: Airline Fares in U.S. City Average*