Assignment 2
Applied Econometrics
ECON 5645 \ 6645

Due: February 7th, 2022 (by midnight)

Please use the provided subset of data from the 2016 American National Election Study to answer the following questions.

Question 1 [2 marks]
Using midpoints and the quantile method illustrated by Quandt (1966), derive a continuous income variable. Further, adjust this household income value to reflect economies of scale - i.e., divide it by the square root of household size. Note: the computed value is known as "equivalent household income". Present a set of summary statistics and interpret.

Question 2 [1 mark]
Economic insecurity may be defined in egotropic or sociotropic terms. The former consists of a set of views concerning one's personal economic situation. The latter reflects their views of the economy around them. Using principal component analysis, derive an egotropic insecurity index using the following variables: $job\_insecurity$, $worse\_next\_yr$, and $worse\_last\_yr$. Do the same for a sociotropic index using: $poor\_economy$, $last\_yr$, and $next\_yr$. Explain why using only job insecurity, or views on the current economy, are insufficient proxies for the concepts under consideration.

Question 3 [7 marks]
It is entirely possible that low-levels of income and high degrees of economic insecurity promote authoritative feelings. The scale ($authority$) ranges from 0-8, increasing in acceptance of authoritarian principles. However, regressing this scale on a host of explanatory variables will not yield overly intuitive results. Therefore, derive a standardized authoritarian variable which has a mean of 0 and standard deviation of 1.

Using the variables you have derived above, regress the standardized authoritarianism variable on equivalent household income (in natural log terms), sociotropic insecurity, and egotropic insecurity. Additionally include controls for being a visible minority, education level (using 5 categories), being "born-again", and age. Apply population weights and run separate regressions for men and women. Present these results in a professional looking table and interpret.