Replicating Simulations Results from the Paper "DOES BRITAIN OR THE UNITED STATES HAVE THE RIGHT GASOLINE TAX?" by Ian Parry and Ken Small

Instructions for using the Spreadsheet "Optimal gasoline tax calculations"

The two worksheets in the spreadsheet "Optimal Tax Calculations" named US and UK show calculations for the United States and United Kingdom, respectively.

The column labeled "net effect" (column H) in each worksheet shows the difference between a given gasoline tax rate (shown in column A) and the optimum tax computed using equation (9a) from the paper. The tax is optimized when this difference is zero. Scrolling down until the entry in column H (labeled "net effect") is (approximately) zero, yields an optimal gasoline tax for the United States of 101 cents per gallon (row 110 in the US worksheet) and 134 cents per gallon for the United Kingdom (row 143 in the UK worksheet).

Sensitivity analyses on the optimal taxes are easily performed by plugging in alternative values for parameters in row 3 and scrolling down until the entry in column H is zero.

Total welfare effects from adjusting the gasoline tax from its initial level (40 cents per gallon for the US and 280 cents per gallon for the UK) are shown in column Q, labeled "delta W".

Instructions for using the Spreadsheet "Optimal VMT tax calculations"

The instructions are the same as above. The optimal VMT tax is given in column I, or its gasoline tax equivalent in column A.