% Remove all files in the current directory

delete('\*');

% The following code opens a dialog for selecting a single file for uploading

[fileName1, filePath1] = uigetfile('.xlsx;.csv', 'Upload Share 1%');

[fileName2, filePath2] = uigetfile('.xlsx;.csv', 'Upload Rate');

% Get the full path of the two uploaded files

file1 = fullfile(filePath1, fileName1);

file2 = fullfile(filePath2, fileName2);

% Read the content of the first uploaded file as a data frame

if endsWith(fileName1, '.xlsx')

data1 = readtable(file1, 'Sheet', 'Sheet1');

elseif endsWith(fileName1, '.csv')

data1 = readtable(file1);

end

% Get the values of the second column of the first data frame

data\_sh = table2array(data1(:,2));

% Read the content of the second uploaded file as a data frame

if endsWith(fileName2, '.xlsx')

data2 = readtable(file2, 'Sheet', 'Sheet1');

elseif endsWith(fileName2, '.csv')

data2 = readtable(file2);

end

% Get the values of the second column of the second data frame

rs = table2array(data2(:,2));

% Download the estimated\_share1.xlsx file

url = 'https://docs.google.com/spreadsheets/d/1\_bpH7cIN2ZV2z-m5ExcL34DLTVxeNqrJv5fLmgx8Jak/export?format=xlsx';

websave('estimated\_share1.xlsx', url);

% Read the content of the estimated\_share1.xlsx file as a data frame

estimated\_share\_data = readtable('estimated\_share1.xlsx');

%We need to remove the first row from this file because MatLab doesn't like

%non numerical things in matrixes. This should be done for any other excel

%files.

% Get the values of the first column of the estimated\_share\_data data frame

vec\_rate\_min = table2array(estimated\_share\_data(:,1));

% Get the values of the absolute difference between the third column and the first value of the data\_sh array

vec\_share\_min = abs(table2array(estimated\_share\_data(:,3)) - data\_sh(1));

% Get the location of the minimum value in vec\_share\_min

sigma\_share\_locs = find(vec\_share\_min == min(vec\_share\_min));

% Get the values of the third column of the estimated\_share\_data data frame

xx = table2array(estimated\_share\_data(:,3));

% Get the value of the third column at the location where vec\_share\_min is minimum

sig0 = xx(sigma\_share\_locs);

% Get the minimum and maximum years from the first data frame

start\_year = min(data1.year);

end\_year = max(data1.year);