UNIVERSITY OF TORONTO MISSISSAUGA

ECO220Y5: Introduction to Data Analysis & Applied Econometrics

Data Project - Winter 2023

1 Has pandemic inflation run out of control? Will inflation cause real impacts on the Canadian economy?

1.1 Project Overview

Your goal is to use the historical data on inflation in Canada to put the period during and following the pandemic in context. You should comment on the articles which discuss the severity and expectations of inflation in Canada. You will do this using the 'project_FW2023.xlsx' file provided. **You can include descriptive statistics but you must also include and discuss results using multivariate regression techniques**, for example: output tables, interpretation of coefficients, goodness of fit statistics, plots of residuals, etc. You should consider carefully the best specification and provide evidence (formal testing or analysis of plots) to support your model selection. You should consider creating indicator variables that might be used to impact the intercept or as interaction terms. You should look for common violations of the OLS assumptions in your regressions such as heteroskedasticity, serial correlation and non-normality. You should conclude using your model to determine whether post-pandemic inflation looks like it is, and will continue to be, a serious issue for Canada. You should also forecast what you believe will happen in the near to longer term based on what you have observed in the past and your model.

The data is a set of variables downloaded and combined mainly from the Federal Reserve database (https://fred.stlouisfed.org/) and Statistics Canada (https://www150.statcan.gc.ca/). It comprises monthly time series data for Canada. A brief description of the available variables is available in the excel file under the description tab (further description is available on the corresponding websites). Using suitable quantitative techniques from ECO220 describe some interesting characteristics of the variables you decide to focus on. In interpreting, explaining and assessing the validity of your output, you should read the articles provided. Try to pick out variables that might be related in some way to the question and discuss these. You can also search out your own literature to guide your discussion but be sure to include any other sources in a bibliography.. Avoid using any outside data as the goal of the project is to make your case using data analysis on the data you have been provided.

1.2 Project Submission

The project will not be marked based on length but rather how well you addressed the question. Your submission should not exceed 1200 words of text and 4 pages of graphs and tables. If it is written in a clear and concise style, and you have a good handle on generating useful graphs, this limit will be sufficient for a full mark. Write an assessment that is smart, not long. Highlight the findings that are puzzling, practically useful, thought provoking or seem to be counter-intuitive. The final report should be submitted as a single written document in .pdf format and you must also include your DO file for Stata or code file in R/Python.