

Project Proposal: The Effects of the Pandemic on the Global Economy

Abstract: The goal of our study is to analyze the effects of the exogenous shock COVID-19 pandemic and its effect on endogenous economic variables in fiscal and monetary policy at both the individual and legislative level to gain a holistic overview of the global economy. We examine and forecast consequences of economic policies during COVID-19 by sampling the OECD (Organisation for Economic Co-operation and Development) international data of the top 5 economies of the world based on GDP compared to developing countries in the continents of Asia, South America, Africa, and Europe, throughout the course the pandemic. We collected data from the past 24 months of various countries, comparing the development of their economies and preparing to analyze our data using regression techniques including multivariable regression analysis, LASSO, relaxed LASSO, and random forests.

Top 5 economies: US, China, Japan, Germany, India, UK, France

Developing countries from different continents:

Asia: Afghanistan, Indonesia

South America: Brazil, Chile

Africa: Ghana, Nicaragua

Europe: Serbia, Turkey

Spring of 2020: characterized by economic decline, surge in unemployment and collapse of SMEs (Small Medium Enterprises) CARES Act, stimulus- 2021 - economy inflation

Important Events: Socioeconomic policy movement, lockdown/isolation policy moment, stimulus bills

Introduction:

In late 2020 and 2021, as some developed economies have started recovering. The Congressional Research survey cites that “central banks and national governments are considering the impact of tapering off monetary and fiscal support as a result of concerns over potential inflationary pressures, weighed against the prospect of slowing the pace of the recovery.”¹

In the 1st half of 2020, developed and developing countries alike suffered in their respective economies. However, in early 2021, data has shown that developing countries have experienced faster recovery than developed countries.

<https://fas.org/sgp/crs/row/R46270.pdf>

Significance: The COVID-19 pandemic is a highly personal and individual experience that is also a globally shared phenomena with a huge number of repercussions. This pandemic has come as a shock to many people, communities and countries causing a negative effect on the economic growth in 2020.

Data sources: McKinsey, Fed, CBO, WHO, International Monetary Fund, OECD mostly

Factors to consider: Unemployment rate, GDP, personal income spending, trade data, FDI, lockdown policy, stimulus policy

We can do a heatmap for the whole world from the data we have here. We can use this as an example, it shows us how to do a heat map for the whole world.

We could do this for every variable we are using.

<https://www.kaggle.com/benwatson/worldwide-unemployment>

¹ "Global Economic Effects of COVID-19." Congressional Research Service. Last modified July 9, 2021. Accessed July 25, 2021. <https://fas.org/sgp/crs/row/R46270.pdf>.

<https://ourworldindata.org/coronavirus>

<https://github.com/owid/covid-19-data/tree/master/public/data>

Downloadable code from ourworldindata

Excellent source and heatmaps

Interest rates, Trade balance of payment current count (imports - exports), Lockdown policy,

Stimulus, Population

<https://stats.oecd.org/Index.aspx?QueryId=38902>