

# Comparative Macroeconomic Data Project

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## Abstract

To get students actively using the economics toolkit and to understand the U.S. macroeconomics experience within an international context we have developed a semester-long data-intensive Comparative Macroeconomics Data Project. For the U.S. and five other countries students produce graphs and tables, and explain the differences and similarities between the countries over time. Each week's data assignment mirrors the topic of the week in class and constitutes a section of their paper. Thus, week-by-week students build a paper during the semester. In the last week of the semester students only need to write an introduction and a conclusion to complete their paper.

## Project Goals

- Economic data literacy:** discover sources of macroeconomic data and then analyze and compare data over time



CIA World Factbook

- Doing economics:** actively use economics toolkit
- Habit of thinking about economics:** a new topic each week
- Comparative economics:** Comparing the U.S. macroeconomic data with that of five other developed and developing countries
- Discipline-specific writing skills.**
- Updated Data:** especially after the Great Shutdown of 2020 observe how out-of-date the textbook is and how dramatically past patterns can change

## The Project

We provide students with a paper outline in which each weekly assignment constitutes one section of their paper. The six countries include the U.S., Mexico, China, and three other countries selected by the student for a mix of developed, developing, and underdeveloped countries with representation from Africa and Latin America.

Debt/GDP    Inflation    Growth rate    Imports  
Civil Liberty    Exports    Unemployment    Press Freedom  
Real GDP/capita    Political Rights  
Human Development Index

Besides creating the graph, students provide a short interpretation for each of the variables and make observations when comparing different countries and utilize scholarly and/or news articles to explain the differences when appropriate. As an example, for the unemployment assignment, students prepare three graphs: (1) U.S. and Chinese unemployment over time, (2) unemployment data for all six countries over time. Students learn about different unemployment measures and measurement and the differences between countries. This data work runs side by side with the topic assigned during the semester, students also write brief summaries of countries' political and economic histories in recent decades to better understand the relation between institutions and macroeconomic outcomes.

## Student's Time Commitment

Students experience a learning curve of searching for data, learning to create graphs with six variables, exporting those graphs, inserting those graphs into a word document., and on a weekly basis describing patterns and differences of data among the six countries; data that students were introduced to the prior week. By the third week, all students have mastered new sets of skills.

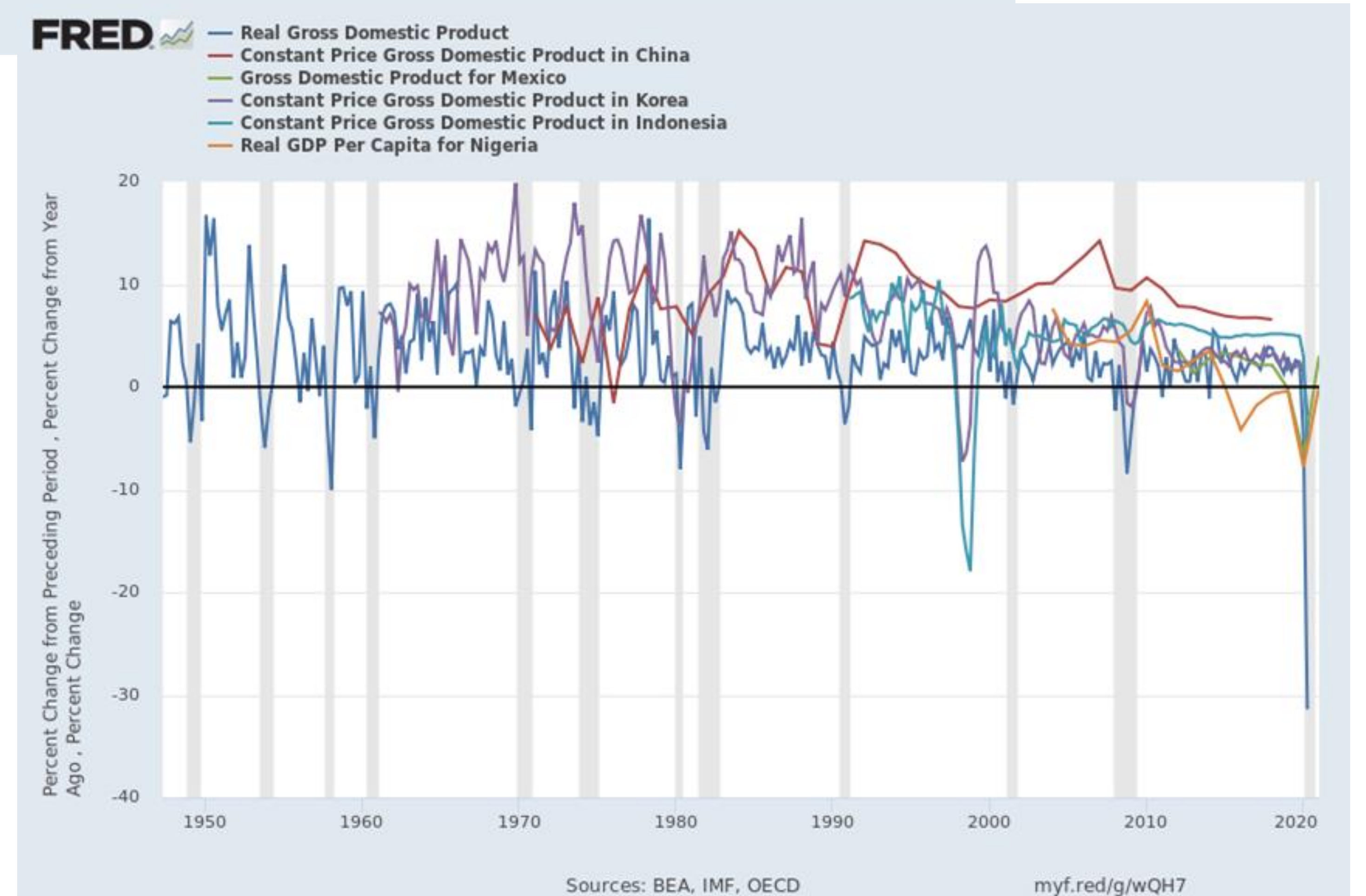
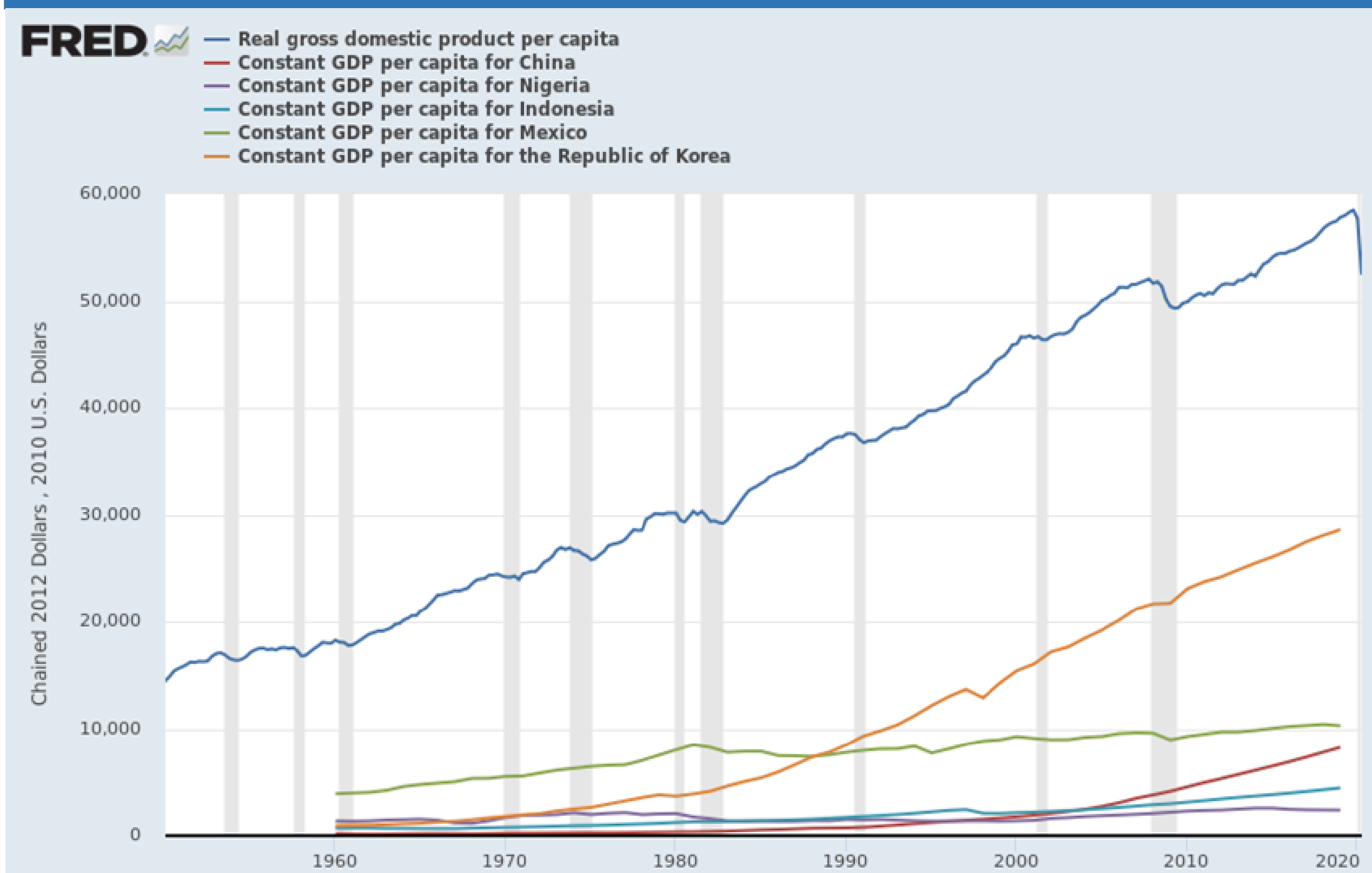
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## Instructor's Time Commitment

We have set up the project to minimize instructors' time commitment on the three primary tasks.

- Creating the assignment:** Instructors establish the criteria for choosing countries, provide instructions on how to access and use FRED and other data sources, and provide links or "search terms" for the data source, and instructions on how to complete the project.
- Discussing the assignment:** After the first week's assignment, we carefully read the assignments in Canvas and provide comments in the feedback boxes available there. Thereafter, after each assignment is due, in class we pull up a couple of the assignments posted in Canvas. For each of them in class we carefully discuss the data, graphs, and interpretation. When students realize that they made errors, they can edit that section of their paper and upload those correction when they add the next week's assignment. Thus, each week students produce new sections and edit the previous week's submission.
- Evaluating the assignment:** Rather than weekly grades, weekly submissions are required and the final paper grade is based upon the final version submitted.

## Student Project Examples



## Discussion

For us, learning always has aspects of the miraculous. This project is the closest we've come to systematically yielding student learning and empowerment. An entire semester of weekly assignment that entail searching for, graphing or organizing into tables and interpreting data adds up to a significant improvement in all of our students' economic data literacy – the primary goal of the project. Beside the stated goals, students develop new perspectives and discover some facts that they find surprising after the completion of this project. For example, many our students think the U.S. and China have comparable real GDP/capita, almost none realize that some countries have higher average GDP per person than the U.S., and almost all are astonished to learn how China's compares to, say, Mexico's. Freedom House indicators of political rights and civil liberties provide some quantification of the institutional foundations that can account for variations in levels of real GDP/capita and growth. U.S. students routinely find those data to be eye-opening, namely that the U.S. doesn't have the strongest democratic institutions in the world and the gap between China's growth and democratic institutions.