

EC 103–003

Problem Set 1

Prof. Santetti

Spring 2023

INSTRUCTIONS: Carefully read all problems.

Your answers (except for Problem 4) must be **handwritten**, scanned (you may use a phone app such as *CamScanner*), and submitted in a single PDF file with your *first name* (mine would be *marcio.pdf*). You can convert images to PDF format [here](#). Also, you can merge different PDF files [here](#).

Submit your files via [theSpring](#). In case you experience any issues, email them to msantetti@skidmore.edu.

Assignment due March 1, before class.

Points Possible: 60

PLEASE WRITE SO I CAN READ IT.

- You have 2 weeks to complete this assignment. See our [course syllabus](#) for late submissions policies.
- Be honest. Don't cheat.
- As a Skidmore student, always recall your votes of academic integrity, and the [Honor Code](#) you have abided by:

"I hereby accept membership in the Skidmore College community and, with full realization of the responsibilities inherent in membership, do agree to adhere to honesty and integrity in all relationships, to be considerate of the rights of others, and to abide by the college regulations."

Have fun!

Problem 1

In-class discussion on GDP and its limitations. (20 points)

OBS: In case you were not present in the discussion, carefully read the [instructions](#) and write a 2-page essay addressing the question.

Problem 2

Consider the following transactions:

- (a) A dealer sells US\$500 worth of illegal heroine.
- (b) Subaru builds a new plant in Detroit.
- (c) You buy an used copy of *Lord of the Rings*.
- (d) Apple issues new shares of stock to finance the construction of a new plant.
- (e) Your grandfather wins US\$5 million in the lottery.
- (f) You buy a new issue of Joy Division's *Unknown Pleasures* LP.
- (g) A pizzeria buys 30 pounds of pepperoni, holds it in inventory for 2 weeks, and then uses it to make pizza (which it sells).
- (h) You spend the weekend mowing your lawn.
- (i) A US company located in Prague sells US\$80 thousand worth of its product in the local market.
- (j) You buy a ticket to a concert in NYC, but you are not able to make it.

Which of these transactions will **not** be counted in the US's Gross Domestic Product (GDP)? Explain why for each case. (10 points)

Problem 3

Consider the following economic data for country YYZ for a given year:

Category	Value (\$ millions)
Nondurable goods	500.00
Residential investment	150.70
Structures (private)	275.60
Public healthcare	400.00
Imports	380.00
Services	560.80
Exports	420.00
Illegal drug trafficking	15.45

- (a) Calculate aggregate consumption and investment for this economy. Show your calculations. (4 points)
- (b) Calculate aggregate government expenditures and the trade balance for this economy. Show your calculations. (4 points)
- (c) What is YYZ's Gross Domestic Product for this year? Show your calculations. (2 points)

Problem 4

As briefly discussed in class, the *Gross Domestic Product* (GDP) is a comprehensive measure of economic performance and size. However, it performs a great job in measuring economic activity, leaving other aspects of human and natural life aside.

The [Human Development Index](#) (make sure to check out this link) emphasizes a more humane assessment of countries' development, and we will explore some of its more recent results.

Download the `hdi.csv` file available on [theSpring](#) and answer the following questions. Save your code and plain text answers in an R script with `hdi` and your first name (mine would be `hdi_marcio.R`) **or** a PDF file with your code and answers saved in the same way (mine would be `hdi_marcio.pdf`).

- (a) What are the 5 countries with the *highest* HDI in 2021? *Hint*: see possible arguments for the `slice_max()` function. (2 points)
- (b) What are the 5 countries with the *lowest* HDI in 2021? *Hint*: see possible arguments for the `slice_min()` function. (2 points)
- (c) What is the most recent HDI for the United States? (2 points)
- (d) What is the most recent HDI for Japan? (2 points)
- (e) What is the most recent HDI for Argentina? (2 points)

Problem 5

For this problem, we will use the [Human Development Report 2021-2022](#), released by the United Nations in September/2022.

For the following parts, carefully read the report's section [Rising insecurity amid unprecedented material prosperity](#)—for some, between pages 31 and 34 of the PDF document that you can see [here](#).

- (a) What method has the report employed to conclude that today's distress levels are unprecedented? (2 points)
- (b) Which group of countries has observed the largest increases in perceived insecurity levels? (2 points)
- (c) Given your answer to part (b), list and discuss possible reasons for this result. Make sure to relate the income level of these countries with higher perceived insecurity in recent times. (2 points)
- (d) What groups have been experiencing the highest levels of negative affect (i.e., stress, sadness, anger or worry) over the past years, based on the text and figure 1.6? (2 points)
- (e) In the report's methodology, what is the threshold level for *extreme poverty*? Also, between 2020 and 2021, how many more people became part of this group? (2 points)