Homework Module 1

This assignment covers material from Core’s “The Economy” units 1 & 2.

I will randomly select 1 question from each part to grade. 50 points for each question.

All assignments must be typed. This assignment is **due on or before Sunday 9/20 at 11:59 pm**.

#### Empirical Analysis

1. Go to the following website <https://jackblun.github.io/Globalinc/> to access the data which you will need to complete this question. Download the data into a spreadsheet. Chose five countries you are interested in.

Marking guidance- correctly calculate and define the 90/10 ratio. Explain the evolution of inequality in the chosen countries. In part b, make an attempt to use historical events to provide an explanation for the observed patterns and trends.

* 1. For each country calculate the 90/10 ratio (divide decile 10 by decile 1) for the following years: 1980, 1990, and 2014. (Hint: It will be easiest if you filter the data to only include the country for which you are performing the calculation.)
	2. Describe the differences between countries and the changes over time.
1. Use what you have learned from this unit to explain your choices. In answering this question, think critically about GDP as an indicator for development and brainstorm alternative indicators (i.e. what other variables might influence your decision).

Marking guidance- make sure to support your statement.

* 1. Suppose you can choose to be born in any time period in any of the countries in [Figure 1.1a](https://core-econ.org/the-economy/book/text/01.html#figure-1-1a), [1.10](https://core-econ.org/the-economy/book/text/01.html#figure-1-10) or [1.11](https://core-econ.org/the-economy/book/text/01.html#figure-1-11), but you know that you would be among the poorest 10% in the population. In which country would you choose to be born? (Tip: Figures can be accessed in tab labeled “Contents” under “List of resources”)
	2. Now suppose, instead, you know you would initially be among the poorest 10% in the population, but you would have a fifty-fifty chance of moving to the top 10% of the population if you work hard. In which country would you now choose to be born?
	3. Now suppose that you can only decide on the country and time period of your birth. You cannot be sure if you would be born in the city or the countryside, would be male or female, rich or poor. In which time and country would you choose to be born?
	4. For the scenario in (c), in which time and country you would least want to be born?

#### Economic Models and Problem Solving

1. For a country (or city) of your choice, look up a map of the railway or public transport network. Much like economic models, maps are simplified representations of reality. They include relevant information, while abstracting from irrelevant details.

Marking guidance- reflect on why we use models and other cognitive simplifications and what are the strengths and weaknesses of these simplifications. Specifically, be sure to elaborate on what information is included in detail, what information is approximated, and what information is excluded.

* 1. How do you think the designer selected which features of reality to include in the map you have selected?
	2. In what way is a map not like an economic model?
1. Suppose you build a model of the market for umbrellas, in which the predicted number of umbrellas sold by a shop depends on their color and price, ceteris paribus.

Marking guidance- reflect on what a ceteris paribus assumption means, when is it safe to make this assumption and when should it be relaxed. Think critically about the assumptions of the model. Specifically, define the ceteris paribus assumption and apply it correctly to the market for umbrellas.

* 1. The color and the price are variables used to predict sales. Which other variables are being held constant?
	2. Which of the following questions do you think this model might be able to answer? In each case, suggest improvements to the model that might help you to answer the question.
		1. Why are annual umbrella sales higher in the capital city than in other towns?
		2. Why are annual umbrella sales higher in some shops in the capital city than others?
		3. Why have weekly umbrella sales in the capital city risen over the last six months?