Health Economics
Demand

26 January 2023

Instructions: You may volunteer to present your answers to any of the questions. If no one volunteers, students will be randomly picked to present answers. All presentations count towards class-participation marks.

You do not need to submit your answers. You may present your answers using MS-Powerpoint/PDF/MS-Excel.

Question 1

1. Recreate the Preston curve with latest data:
   (a) Use 2015-2020 Life-Expectancy data from: `https://population.un.org/wpp/Download/Standard/Mortality/` [Hint: Use Life-Expectancy at Birth (e0) both sexes] or 2019 data from `https://ourworldindata.org/life-expectancy`
   (b) Use 2019 or 2020 GDP per capita data from `https://data.worldbank.org/indicator/NY.GDP.PCAP.CD` . The choice of year will depend upon which year's data you are using for Life-Expectancy.
   (c) Using any software of your choice (MS Excel, Stata, R) Plot Life-Expectancy (Y-axis) by GDP per-capita (X-axis) for all countries [Hint: You can plot a scatter plot and then draw a line of best-fit]. You may not be able to plot all countries as list of countries in UN database is not the same as countries in World Bank database.
2. ADVANCED: Draw a different scatter plot with *change* in life-expectancy by *change* in per-capita GDP
   (a) Using the same data, calculate the change in life-expectancy from 1950 to 2020 and change in GDP per-capita over the same time-period.
   (b) Construct a scatter plot of country-wise data to show change in life-expectancy on Y-axis and change in GDP per-capita on X-axis.
3. Does the relationship observed between LE and GDP still hold true in latest data?
4. Why do you think disparity in health (LE) exists across countries with same level of GDP per-capita?

Question 2

Exhibit 1a: Health behaviours among secondary school students by education level:
`https://data.gov.sg/dataset/students-health-survey?view_id=71036a56-b7c6-43ee-bdd0-c1c3b1afba35&resource_id=8797f146-aee6-4942-928d-b00af556b624`

Exhibit 1b: Health behaviours among secondary school students by gender:
`https://data.gov.sg/dataset/students-health-survey?resource_id=93a05d55-a41b-44f8-9052-94aa7d563d7f`

Exhibit 1c: Common health problems of students examined - Overweight, Annual
`https://data.gov.sg/dataset/common-health-problems-of-students-examined-obesity-annual`

1. You may draw apropriate graphs to explain your answers:
2. Using Exhibits 1a and 1b, describe the role of education level and gender in explaining differences in health *behaviour*.
3. Using Exhibits 1c, describe the role of education level and gender in explaining differences in health *outcomes*.
4. Comment - whether the relationship you observe above are in alignment with or contrasts with the prediction from the Grossman model.

Question 3

1. Why do you agree with Grossman model (maximum 2 arguments/points)
2. Why do you dis-agree with the Grossman model / What would be your critique of the Grossman model (maximum 5 arguments /points)