

Problem set 1

Data analysis part, ØKA201

Bjørnar Karlsen Kivedal

January 12, 2024

Exercise 1

Download and install Gretl, and replicate what we did in class on Thursday (see screen recording in *Panopto video* on Canvas). Data sets are also in the folder *Data sets* on Canvas.

Exercise 2

a)

Open the data set `icecream.gdt` in Gretl. This can be found in the folder *Data sets* on Canvas.

b)

Explain what the four variables measure and what type of data this is. Hint: Go to **Data > Dataset info**.

c)

Use the **Summary statistics** function in Gretl to find the mean and standard deviation of each variable.

d)

Create one time series plot for each variable.

e)

Create a scatterplot between

- i) consumption and price
- ii) consumption and family income
- iii) consumption and average temperature

f)

Create a correlation matrix for all of the four variables. Are the calculated correlation coefficients in line with the scatter plots you generated in e)?

g)

Generate a new variable `tempC` which shows the average temperature measured in degrees Celcius. Hint: $C = \frac{5}{9} \cdot (F - 32)$ where C is degrees celcius and F is degrees Farenheit. Hint 2: **Add > Define new variable** and/or look in the user's manual.