



## **Statistical Methods for Economists – Week 1**

### (Questions and Tasks)

The topic: *Descriptive Statistics*

- 1.) Explain the difference between a *population* and a *sample*.
- 2.) Given the following set of data (considered to be a *sample*): (16, 20, 24, 18, 20, 22, 15, 20, 16, 22), calculate *absolute*, *relative* and *cumulative relative frequency* of each data point.
- 3.) What are *measures of central tendency*, and which measures are the most common?
- 4.) How do you calculate a *median* for odd and even number of data?
- 5.) Calculate an *arithmetic mean*, *modus*, and *median* for the data from Task 2. (Note: for all calculations you can use Excel or another tool).
- 6.) What are *measures of variability*, and which measures are the most common?
- 7.) How can you calculate a *variance* from a *standard deviation*, and vice versa?
- 8.) Calculate *variance*, *standard deviation*, *range* and *coefficient of variation* from the data provided in Task 2.
- 9.) What are *measures of data concentration*, and which measures are the most common?
- 10.) Calculate *kurtosis* and *skewness* for the data set provided in Task 2. (Note: you can use KURT and SKEW function in Excel).