Chapter 3 – Basic calculus and statistics*

QUESTIONS ASKED

- Why rates, and why statistics?
- How to express such quantities in common speech?
- How to present much data in a concise and informative way?
- How to make predictions based on historical trends?

BACKGROUND INFORMATION

- Real statistics: Real statistics using Excel
- Simon Sez: Using simple statistical functions in Excel
- How Tech.Office: Add a trendline in Excel
- A fishery: Enpideguerra – Sea Bites – collecting goose barnacles Galicia

COVERAGE

- Rates
- Measures of tendency and dispersion
- Distributions and histograms
- Diverse trend lines and crude assessment of fit
- XY plots; extrapolation

INFORMATION AND SOFTWARE

The Chapter 3 of FIΣH IT is a refresher course for those that have some previous knowledge of statistics, but can easily be followed by those that do not have it. Emphasis is placed in the utilization of statistics in daily language and reports, in the summarization of large amounts of data, and in the application of trend lines to time-series data. This is a preparation to the next lab. One also deals with the assumptions of time-series analysis and the limits of extrapolation.
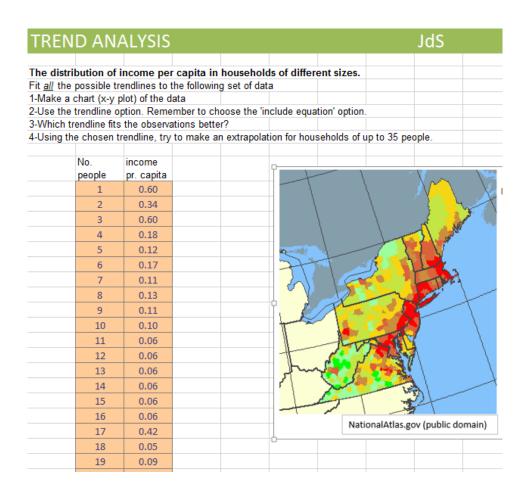

- [Ch3 Statistics JdS.xlsx](#)

SNAPSHOTS

TREND ANALYSIS   JdS

The distribution of income per capita in households of different sizes.
Fit *all* the possible trendlines to the following set of data
1-Make a chart (x-y plot) of the data
2-Use the trendline option. Remember to choose the 'include equation' option.
3-Which trendline fits the observations better?
4-Using the chosen trendline, try to make an extrapolation for households of up to 35 people.

No. people	income pr. capita
1	0.60
2	0.34
3	0.60
4	0.18
5	0.12
6	0.17
7	0.11
8	0.13
9	0.11
10	0.10
11	0.06
12	0.06
13	0.06
14	0.06
15	0.06
16	0.06
17	0.42
18	0.05
19	0.09

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