Guidelines when writing a research report

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Report

This is a good (first) structure:

1. Introduction
   - Introduce the subject (literature and relevance)
2. Theoretical background
   - Discuss the idea (theory?)
3. Data
   - Describe the data and present some first global results (possible to motivate your analysis)
4. Empirical Approach
   - Discuss and motivate your empirical approach
5. Results
   - Present your results
   - (discuss alternative explanations, robustness checks, etc)
6. Conclusion
   - Finish with a brief summary of your main results and a conclusion (research & policy implications?)

Follow this outline unless you have very good reasons to deviate!

Remarks concerning the introduction

- You should address the following in the introduction:
  - Which question do you aim to answer?
  - Why is that question interesting?
  - How do you aim to answer your question?
  - What is your contribution, and how does it compare to the literature?
    - Keep it short
    - Only discuss literature that is directly relevant to your own analysis
  - What are your most important findings?

Remarks concerning the data section

- Mention the name of your dataset, its source and the period it concerns
- Is it a panel, cross-section?
- What is the unit of observation (person, household, firm, etc)?
- How many observations are in the dataset, how many do you use in your analysis, and why are these numbers different?
  - Can someone with the information of this section construct your analysis sample from the raw data?
- What variables are available?
- Any information that is not available but important for your analysis?
- Present and discuss the averages and standard deviations of your data
- Discuss possible problems with the data

Remarks concerning the empirical model

- The base of your analysis is usually an economic model
- a model is a (set of) equation(s) which describe economic relations (structure)
- In your case usually a single linear equations
- Motivate your econometric specification
  - Does it follow from economic theory?
  - Are others using it?
  - Explain why you control for the explanatory variables that you use
  - If you use different specifications, explain why
- Explain how your empirical model answer your research question
  - Pay attention to the difference between correlation and causation (any important assumptions?)
- If you have equations in the text, explain the symbols
- Indicate briefly what you expect to find

Remarks concerning the results section

- Interpret the coefficients that you estimated, for example:
  - a coefficient of b=0.5, means that an increase of x with 1 unit, y increases with 0.5
  - or an elasticity of ...
- Are the estimated effects statistically significant (confidence intervals, lower bound, upper bound)
- Are they economically significant?
- Do the sign and the size of the effects make (economic) sense?
  - If not, do you have an explanation?
- What are potential problems with your analysis?
  - Can you do something about them?
  - Can you implement some checks?
- Try to explain differences between your results and those of others if any

Remarks concerning the conclusion

- Give a brief summary of your findings
- Discuss the limitations of your results and possible extensions
- This is the place to speculate a bit about the implications of your findings
- The conclusion should not contain new results

General remarks

- Substantiate any claim or statement you make
- Write carefully and succinct! (this is not prose and your are not Proust)
- Do not write things you do not understand
- Your paper should be as short as possible
- Use headings sparingly and only if this increases the clarity of (the structure) of your paper
- Details about data, results of alternative specifications, etc should be put in an appendix

Ethical aspects of research

- Do not lie!
  - Do not make up results
  - Do not change, invent or other nasty stuff with your data
  - Do not leave out important results or information
  - etc.
- Do not steal!
  - Do not present other peoples research as your own
- Cite sources
- Offenders will be punished!!

How do I cite?

- Examples:
  - Identification follows the method of Angrist & Lavy (1999) ...
  - ... through a maximum class size rule (e.g. Angrist & Lavy, 1999)
  - "Observational studies are often confounded by a failure to isolate a credible source of exogenous variation in school inputs." (Angrist & Lavy, 1999, p. 570)
- References:
  - Angrist, J.D. and Lavy, V. (1999). Using Maimonides' rule to estimate the effect of class size on scholastic achievement. *Quarterly Journal of Economics*, 114(2):533–575.
  - Karoly, L.A. and Bigelow, J.H. (2005). *The economics of investing in universal preschool education in California*. RAND Corporation, Santa Monica, CA.
- A good LateX style is "apalike" in combination with natbib

Remarks about tables

- Do not copy-paste from Stata, SAS, R etc. !!!
- Describe variables
  - no 'v324b' and 'HHSIZE' etc
  - no 'gender' but 'Female' (or Male)
- Report only results:
  - Coefficients on control variables are often not interesting. Leave out or put in the appendix

  - Report standard errors (and not t statistics)
  - Do not report too many decimals

- What is the explanatory variables, estimation method, sample...
- Informative title!
- Add table note
- CHECK: can I understand the table without reading the text?

NOT THIS!

```
      Source |       SS       df       MS                  Number of obs = 74
-------------+------------------------------                F( 4, 69) = 10.20
Model        |   236016580     4    59004145                Prob > F = 0.0000
Residual     |   399048816    69  5783316.17                R-squared = 0.3716
-------------+------------------------------              Adj R-squared = 0.3352
Total        |   635065396    73  8699525.97                Root MSE = 2404.9
------------------------------------------------------------------------------
price        |      Coef.   Std.Err.    t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
headroom     |  -711.5679   445.0204    -1.60   0.114    -1599.359    176.2236
trunk        |   114.0859   109.9488     1.04   0.303    -105.2559    333.4277
weight       |   4.753066   1.120054     4.24   0.000     2.518619    6.987512
length       |  -101.7092   42.12534    -2.41   0.018     -185.747   -17.67147
_cons        |   11488.47   4543.902     2.53   0.014     2423.638    20553.31
------------------------------------------------------------------------------
```

But this!

Table 1. OLS regression of car prices on model characteristics

	Price (Euro)
Head room (cm)	−711.5
	(445.0)
Size of trunk (m^2)	114.1
	(109.9)
Weight (kg)	4.8
	(1.1)***
Length (m)	−101.7
	(42.1)**
Intercept	11488.5
	(4543.9)**

Note: Standard errors between parentheses. */**/*** significant at the 10/5/1% level. 74 Observations.

Or this

Table 1. OLS regression of car prices on model characteristics

	Price (Euro)	
	coef.	s.e.
Head room (cm)	-711.5	(445.0)
Size of trunk (m^2)	114.1	(109.9)
Weight (kg)	4.8	(1.1)***
Length (m)	-101.7	(42.1)**
Intercept	11488.5	(4543.9)**
N		74

Note: Standard errors between parentheses. */**/*** significant at the 10/5/1% level. 74 Observations.