

Handout for the seminar

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1 Introduction

Content of the module

- Factual knowledge about economics
- Factual knowledge about “doing research”
- Factual knowledge about presentation techniques
- Research question
- Implement experiment
- Present experiment
- Present results

Organisation of the seminar

- Each participant works on own research question.
Please use the discussion board in moodle.
- Each week we will decide which students are in charge of the *presentation* for the subsequent week.
- All participants will contribute (in each week) to the *discussion* of the article.
- All participants will submit (before the end of the term) an essay of about 1500 words (+/- 10%, formulae, tables and bibliography do not count).
- All assignments count for the grade (This includes presentation of own research as well as discussion of the research of the other students).

Ways to communicate

- Written text
 - Essay
 - Article
 - Thesis
 - Book
 - ⋮
- Oral presentation
- Poster

Reading a text

- What question does the author want to answer?
 - Title, abstract, introduction, conclusion, body of the text.
- Is the question interesting? (introduction / conclusion)
- Is the method appropriate? (body of the text)
- Are conclusions supported by results?

Writing – Research questions

- Research question (really a question!)
- What do you know about answers to this question? (literature)
- What possibilities do you have to find an answer to this question? (existing literature / alternatives)
- What are advantages and disadvantages of the method you want to apply?
- Is it possible that your method yields a surprising answer?
- How could one implement the method? Is this the simplest possible approach to answer your question?

Presenting

- **Clarity and simplicity**
- Drop all unnecessary detail
- State your question clearly.
- Motivate your question clearly.
- Be clear about model and assumptions.
- Is your method appropriate and technically sound?
- Provide sufficient detail about your methods and results.
- State your conclusions clearly.
- Are your conclusions supported by your results?

2 Essays

Essays

Writing

- Make one point! You can't explain the world.
- Help your reader to understand your structure.
- Tell a story!
- Who is your reader? (Students from your own level, senior academics)
- Use formulae and diagrams when necessary.
 - Remove trivial elements.
 - Replace too complicated elements.
- If you are not sure you understand what you are writing, then your readers will not understand, either.

Structure of an essay

- Introduction
 - Motivate research question.
 - Relate to literature.

- Theoretical models, benchmarks.
- Empirical framework, hypotheses.
- Results, compare with hypotheses.
- Conclusions, take home message.
- Bibliography.
- Appendix (optional)

Style

- Short sentences.
- Make clear what is your contribution!
 - Avoid: “One can argue...” – who argues here?
 - Avoid: “...some statement ...(A.U. Thor, 2006)” – What is the relation between statement and reference?

Either say:

- “A.U. Thor (2006) claims that...”, or say
- “I claim that...”.
- Defend a clear position.
 - Where do you agree with the literature?
 - Where do you disagree?

Help your reader to understand this position.

- Honour sources of arguments, regardless whether you quote verbatim or not.

3 Oral presentation

Oral presentation

- Less time than for any written format.
- Direct contact to audience (audience can hardly walk away).
- Concentrate even more on essentials.

Practicalities

- If you use a computer to support your presentation, make sure that your presentation works on this computer.
- PDF might be more robust than a “presentation software”.
- Most projectors connect to VGA and HDMI.
- **Clarity and simplicity**
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4 Posters

Some general remarks on posters

Ways to present your research:

- Paper (e.g. essay, working paper,...)
- Oral presentation
- **Poster**
 - Advertise your research
 - More time than an oral presentation
 - Immediate contact to audience
 - Limited space (<500 words)
 - Tough competition

How should a poster look like?

Visual appearance

- Display attracts viewer's attention.
- Words are easy to read from an appropriate distance (1-2 m).
- Poster is well organised and easy to follow.
- The poster can be read in a non-linear way
- Graphics and other visuals enhance presentation.
- The poster is neat and appealing to look at.

Visual appearance

- Landscape A0 (1189mm × 841mm)
- Typeface: Font without hairlines
 - sans serif,
 - dynamic sans serif,
 - old style serif...,
 - modern serif fonts have very fine serifs, great for books, but...)
- Font size:

	face	A4	A0
title	bold	30pt	120pt
authors		18pt	72pt
section heading	bold	18pt	72pt
subsection heading	bold	14pt	56pt
normal text		10pt	40pt
small text		8pt	32pt
very small text		6pt	24pt

serif

an

sans serif

an

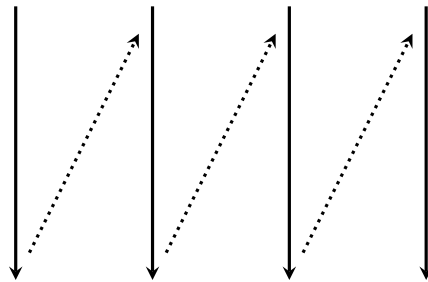
Layout in columns or in rows?

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Sed D. Nonummy (Bonn) and Eirmod T. Invidunt (Berlin)

$\approx 1/8$

textheight



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[illegible]

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The only way to approach a text is to swallow the entire paragraph. Lists can be digested in small chunks.

Colour

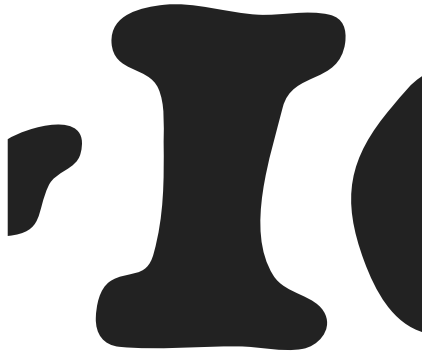
CMYK				RGB			HSB		
A colour:									
87	0	5	62	13	97	92	177	87	38
29	0	1	21	143	201	199	177	29	79
The opposite colour:									
0	87	83	62	97	13	16	357	87	38
0	29	28	21	201	143	146	357	29	79
Two more variants, if you really need lots of colour:									
83	0	87	62	17	97	13	117	87	38
28	0	29	21	146	201	143	117	29	79
87	83	0	62	13	17	97	237	87	38
29	28	0	21	143	146	201	237	29	79



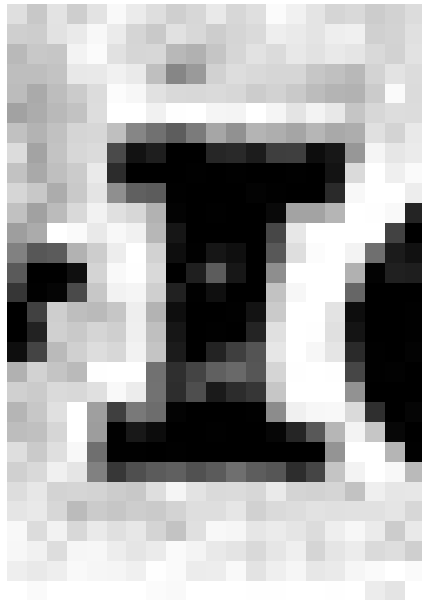
Logos and graphics:



vector graphics:
eps, svg, ...



compressed
raster graphics:
jpeg, png, ...



Layout

Title of the Poster — Authors

One topic:

[illegible]

Several topics on one poster:

Lorem ipsum dolor sit amet, consectetur adipiscing elit

Sed D. Nonummy (Bonn) et Erismod T. Invenitum (Berlin)

Motivation:

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris vitae ipsum eu tortor rhoncus ornare vitae sit amet eros. Aliquam diti tellus, tincidunt vitae mollis quis, tempore vel orci. Proin sit amet augue urna, eget rhoncus nisl.

Mauris mauris elementum libero in mauris. Vivamus ac felis sit amet libero egetas molestie.

Method A

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Method B

Pellentesque nec sapien eu diti ullamcorper blandis in congue tortor. Sed eget nisi in nunc tincidunt pellentesque. Vivamus vitae ligula ac felis sagittis varius non sit amet turpis. Maecenas vel urna nisl, at maleuada massa.

Method C

Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Quisque lora dolor, mattis sed varius a, commodo non felis.



- Nullam quis sem id purus tempor curpus sed eget nisi.
- In hac habitasse platea dictumst.
- Etiam vel odio erat.
- Quisque gravida eleifend est eu hendrit.
- Praesent feugiat egi ac enim lobortis semper.



- Quisque dapibus magna eget mauris sodales mattis.
- Aliquam luctus turpis arcu, id consectetur diti.
- Proin eget diam et tellus facilis tempus.
- Mauris sit amet vulputate arcu.
- Mauris erat diti, semper eu bibendum in, congue vel leo.



- Ut eu est lacus, sed convallis purus.
- Nam quis ligula massa.
- Etiam sit amet odio dolor, ac sollicitudin tellus.
- Nullam tempus eoleserque justo in congue.
- Sed lacinia eidi sed lorem commodo feugiat.
- Nulla hendrit, sem et tempus congue.

Summary:

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- Nulla hendrit tincidunt est vel hendrit.
- Morbi porttitor justo nec neque vehicula ac dignissim nisl pulvinar.
- Suspendisse vel nulla sed eros ultrices vulputate in nec urna.

Contact: Sed D. Nonummy sed@id.nonummy.org; Erismod T. Invenitum t@id@mg.com

Things to keep in mind

- Display attracts viewer's attention.
- Words are easy to read from an appropriate distance (1-2 m).
- Poster is well organised and easy to follow.
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5 Content

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Presenting results: Formulae

$$I_A^1(I_B) = [\kappa_A I_B^\alpha]^{\frac{1}{1-\alpha}} \quad \text{where} \quad \kappa_A = \frac{(1-\rho)\pi + \rho(1-\pi)}{1-\rho}.$$

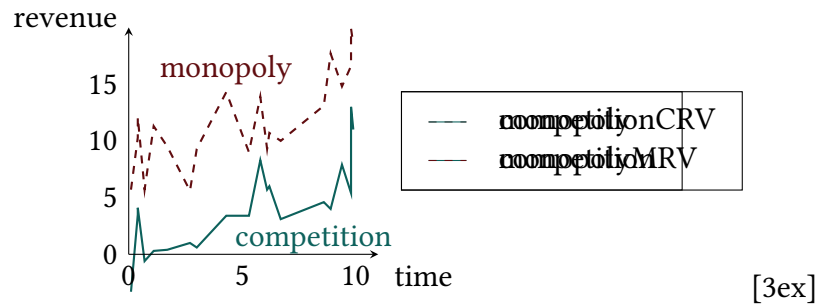
(1)

- Use formulae carefully!
- If you use them, you have to explain them.

Presenting results: Tables

time	revenue	
	competition	monopoly
.4	3.5	12.1
8.9	4	17.7
9.9	11	18.5
9.8	13	16.6
.7	-6	5.7
2.7	1	5.6
4.3	3.4	14.3
6.1	5.7	9.3
9.4	7.9	14.8
1.7	.4	9.5
3	.6	9.3
.4	4.1	10.3
6.2	6	10.7
5.3	3.4	9
8.6	4.6	13.1
9.8	5.4	19.9
6.7	3.1	10
.1	-3.3	5.7
5.8	8.3	13.9
1.1	.3	11.3

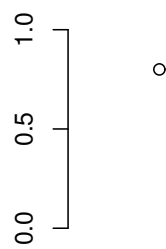
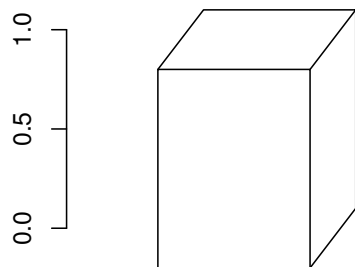
Using graphs — successfullyless successfully



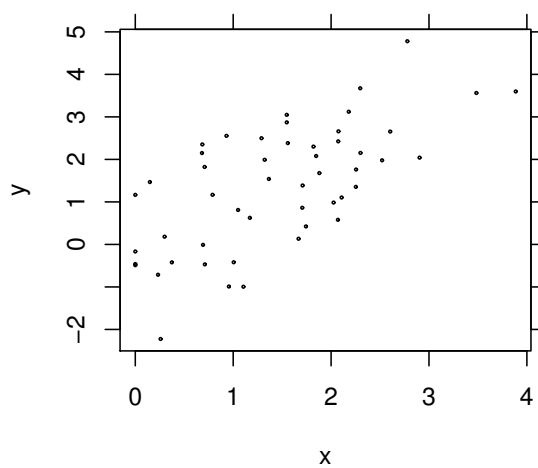
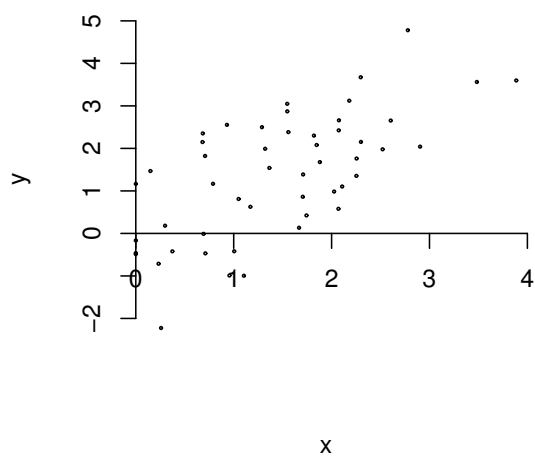
...We call MRV (brown, dashed) the relation between monopoly-revenue and time and CRV (green, solid) the relation between competition-revenue and time...

Axes and data must be labelled.

Unnecessary 3D

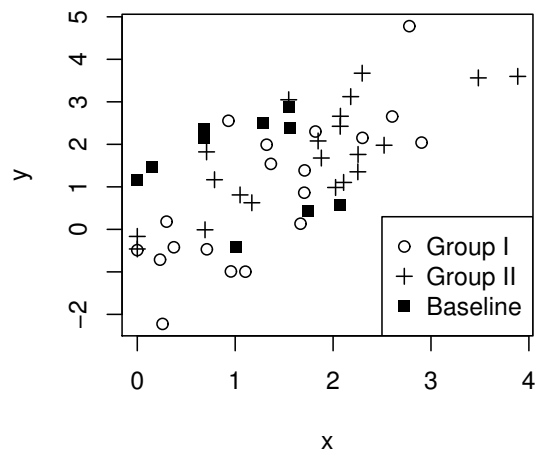
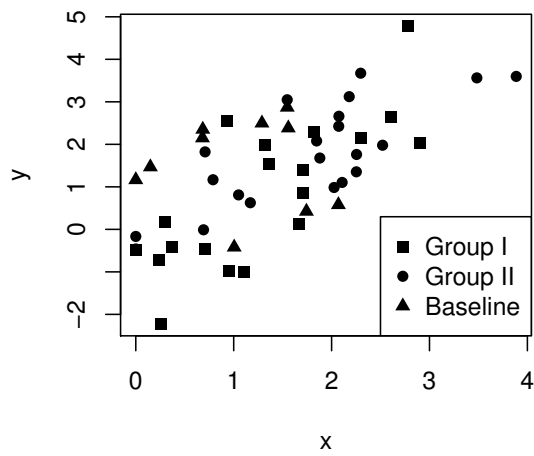


Axes



- Labels and tick marks are separated from the data.
- Ticks on the opposite axis can help.

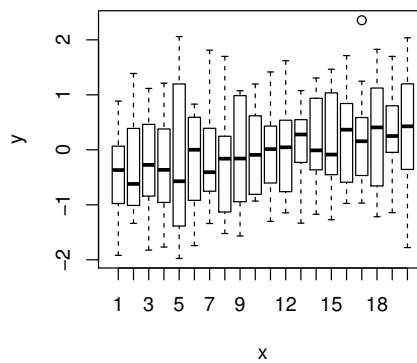
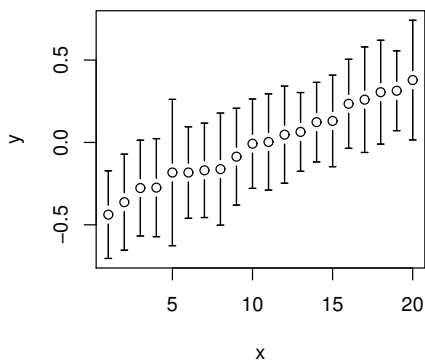
Overlapping points



Error Bars

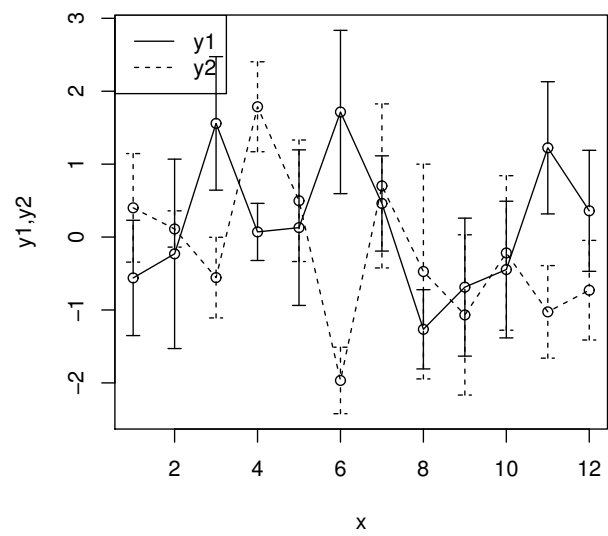
Error bars can refer to several quantities:

- Standard deviation of the sample
- Standard deviation of the estimated mean
- 95% confidence intervals of the estimated mean
- $\vdots$



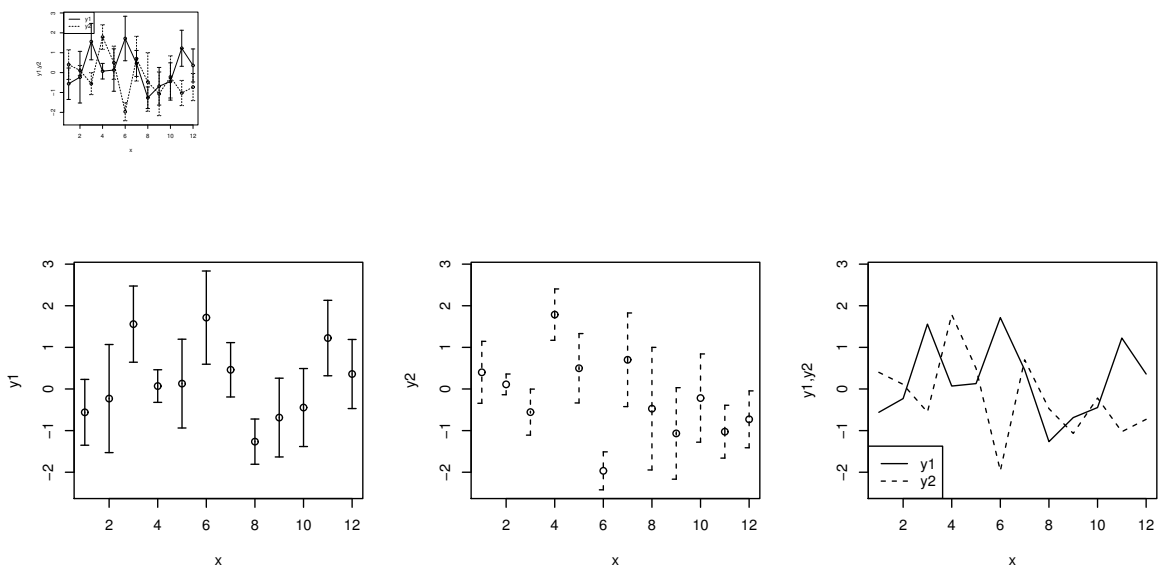
We have to explain clearly in the figure what quantity is shown.
Boxplots are often more informative than error bars.

Clutter

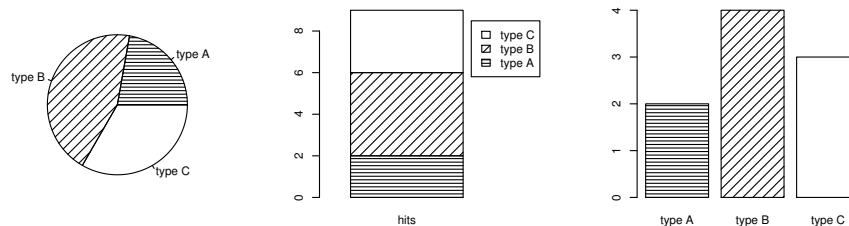


Perhaps splitting the information into several graphs can help:

Clutter



Nominal univariate



Pie chart – The eye is not good at comparing angles. Avoid pie charts.

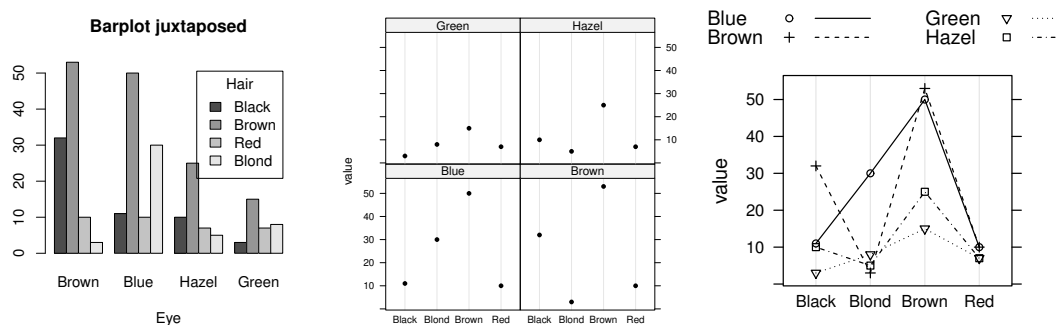
Stacked bar charts + not much space

- + total size easy to assess
- we need a legend to identify categories

Juxtaposed bar charts + even easier comparison of categories

- + size of sub categories easy to assess

Nominal – bivariate



Juxtaposed barplot – hard to see a structure in the sub categories

Dotplot + easy to look up and to compare absolute frequencies

- + easy to see a pattern

6 Bibliography

- William Thomson; A Guide for the Young Economist; Second edition, The MIT Press, 2011.
- William Strunk Jr., E.B. White, Roger Angell; The Elements of Style; Fourth Edition, Longman, 2000.