Notes for Exercises in Session 8

- 9:39,36,38,48,**50**,52; x:**17**; 9:40,**20**,44 (9:**62**; final2013:1; **final2014:1**) — note suggested order!

Outline of lab session:

- Minitab software hint for two-way tables[1]: use menu
  * `Stat-Tables-Cross Tabulation and Chi Square`,
- relatively brief follow-up from lecture (8L−14/15/16),
- midterm returned, with a brief review/discussion,
- summary worksheet (3:30pm): S.8:9, S.11:2 (`jobsatisf`),
- individual work on the exercises.

Notes and questions for specific exercises:

- Don't forget the models and the conclusions! (two-way table analysis is more than computing the X^2-statistic!)
- 9.20: try Fisher's exact test (using software), and compare with the X^2-test,
- 9.36, 9.38: forget about the graphical displays,
- 9.44: on Simpson's paradox (might be fun!),
- x.17: practice of model choice in 2-way tables,
- final 2013.1, final 2014.1: exam problems involving non-parametric methods and statistical reporting, resp.[2]

[1] Stata: `Stat-Summaries-Frequency Tables-Twoway table/Table calculator`; R functions: `xtabs`, `chisq.test`, `fisher.test`.

[2] Rendle et al. (2007) paper accessible from media page.

Notes on Mid-term Exam

- marks generally lower than for home assignments (this is "normal"): mean/median $\approx 10/15$, but with some variation...,
- most trouble in **c,d)**:
  - determining and/or focusing on the question/effect of interest: comparing the groups (**c)**, improvement before $\rightarrow$ after (**d)**,
  - errors in inference: use of z^*, one-sided H_a, wrong t-tests,
- models/assumptions and hypotheses often not stated (no penalty...),
- issues in descriptive analysis (**b)**:
  - mean $\approx$ median $\Rightarrow$ symmetrical? NO,
  - symmetrical $\Rightarrow$ normal? NO,
  - sometimes forgotten features: unimodal, outliers,
- some instances of ineffective exam technique:
  - "forgetting" to provide what was asked for (e.g. an **estimate**), or doing things not asked for,
  - developing new calculations instead of using those provided, or recomputing those provided (unnecessary!),
  - not doing enough questions (i.e., running out of time),

  $\Rightarrow$ what can be learned:
  - read very carefully, perhaps underline questions asked,
  - don't forget the conclusions!,
  - spend some time to understand the Minitab listings,
  - distribute your time more equally on the questions,
- final exam: lots of time/opportunity to prepare yourself.