Qualitative Comparative Analysis (QCA)

Outline for the ICPSR Summer Program 2018
June 4-6, 2018

Qualitative Comparative Analysis (QCA) is a method that became part of the toolbox in disciplines such as political science, sociology, public administration and organization and management studies. QCA can be used to answer any research question if one is interested in analyzing patterns of necessity and sufficiency in a group of cases ranging from a handful to many thousands. The course introduces participants to the principles and techniques of Qualitative Comparative Analysis (QCA) on a methodological and an applied dimension. At the end of the course, participants will be familiar with the key elements of a QCA study and know how read, criticize and implement an empirical analysis.

Prerequisites
Basic knowledge of QCA and set-theoretic thinking is useful, but not necessary for taking the course. We will use R within RStudio that are both freely available. It is recommended that participants be familiar with RStudio and basic commands. Participants who want to acquire R programming skills or need to refresh them can take an introductory R course at the ICPSR Summer Program or access an online tutorial in advance of the course. Before the course starts, I will share basic information on online tutorials and the entire R code I will use for illustrating QCA.

Introductory readings
Participants who want to get a better idea about the basics of set theory, QCA and running it in RStudio may consult the following readings.

- Using the QCA package in R: https://bookdown.org/dusadrian/QCAbook/

Optional: Reproduction study
At the end of the course, participants have the opportunity to reproduce a published QCA study based on the course content and the lab sessions. This is optional and not a formal exam!
Ingo Rohlfing (University of Cologne, i.rohlfing@uni-koeln.de)
ICPSR Summer Program Workshop on QCA

‘Reproduction’ means one uses the original data and attempts to derive the same results based on the
publicly available information. The instructor will offer three studies for reproduction from which a
participant can choose one. The exam involves the attempt to reproduce the original study and
document the process in proper form.

- Voluntary reading on reproduction (in a non-QCA context, but this does not matter): King,

Day-by-day schedule

Day 1
9.00-12.30: Basics of set theory and causal inference in QCA
  the social sciences. A guide to Qualitative Comparative Analysis. Cambridge: Cambridge

14.00-17.00: Choice of conditions and calibration
  selecting independent variables for qualitative comparative analysis. Sociological Methods &
  chap. 4, 5.
- Lab session: Calibration of conditions and understanding consequences of different calibration
decisions

Day 2
9.00-12.30: Construction of the truth table
  chap. 7.
- Schneider, Carsten Q. and Claudius Wagemann (2012): Set-theoretic methods for the social
  sciences. A guide to Qualitative Comparative Analysis. Cambridge: Cambridge University
  Press: chap. 5.
- Lab session: Creating truth tables and understanding consequences of different design decisions

14.00-17.00: Construction of the truth table & minimization
- Schneider, Carsten Q. and Claudius Wagemann (2012): Set-theoretic methods for the social
  sciences. A guide to Qualitative Comparative Analysis. Cambridge: Cambridge University
  Press: chaps. 6-7.
- Baumgartner, Michael and Alrik Thiem (2015): Model ambiguities in configurational
  comparative research. Sociological Methods & Research advance access.
- Lab session: Producing different solution types with Quine-McCluskey algorithm and
  understanding the differences and commonalities between them
Day 3
9.00-12.30: Minimization & producing the solution
- Lab session: Producing solutions based on various decisions about remainders and truth table rows

14.00-17.00: Parameters of fit and interpreting the solution
- Lab session: How consistency and coverage depend on distribution of cases