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Designs: Case Studies and Criteria for Case Selection

- No difference in research criteria between quantitative and qualitative methods: There is only one logic of inference.

- Descriptive inference: inference from observed data to non-observed data + distinction between systematic and non-systematic factors.

- Causal inference: inference from observed data to their causes.

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Consequences for case studies

First condition:

► Case studies have to be designed so that findings are generalizable.

Deductive perspective	Inductive perspective
general theories, models and hypotheses have to be tested	empirical information must be tested that answers general questions

- In both perspectives case studies can be valuable but only if generalization is the key aim

- The aim is not primarily to interpret the case as such in terms of Max Weber's "Verstehen", but to use it to explain something.

► Examine the case's general aspects, not its specifics!

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What is a case? The difference between cases and units of observation

- Case: an area of research with boundaries regarding place and time (country, region, party, time period etc.)

- This area can generate different numbers of units of analysis depending on the research question.

- Usually one case generates a number of units of analysis (If No. of Cases = No. of Units = 1 ► Not a productive design).

- Example: A case study on new parties in Germany could base on 1 unit (federal election), 16/17 units ("Länder" plus federal level) or 85 units (17 units * last 5 elections)

- Even for case studies it may be helpful to report some descriptive statistics (mean, median, mode, maximum/ minimum value, variance/standard deviation)

Second condition:

► Distinguish between systematic and non-systematic effects (see King, Keohane, Verba)

Just one unit of analysis ► causal inference is impossible (fundamental problem of inference)

► We always need at least a few units of analysis to test our explanation against alternative explanations.

► Only when we have at least a few units of analysis at hand, can we reduce measurement errors.

► Finally, only then can we distinguish systematic and non-systematic effects.

How to generate more units of analysis?

(1)   additional units: similar cases, inclusion of other aggregation levels, different time points.

(2)   new measurements of same case (Example: Robert Putnams „Making Democracy Work" with a number of indicators for regional performance)

(3)   A combination of both. This is exactly the research logic behind the process tracing approach. A process is divided into a number of steps which are analysed by employing new indicators.

Case selection

The most important problem of case studies (single-case or small N) is case selection. Why? We need to avoid selection bias which would diminish generalization potential.

Three problems of selection bias:

(a) selection on the dependent variable

If we select cases on the dependent variable, and then ask what explains their performance we may arrive at completely wrong findings. In such a design we are only allowed to analyze differences between the cases.

Two sources of wrong conclusions:

(1) the asumption that everything the cases have in common must have a common cause,

(2) the assumption that systematic relationships found in the selected cases can be generalized for other cases.

- Also present in single case studies.
- We need to test for variance in the universe of cases.
- Even in the universe of cases, there might be a selection bias ("selection by nature")

(b) **selection on the independent variable**:

- Selection bias may also exist when selecting cases on the independent variable because we assume that we can hold all other factors constant.

- The independent variable may not be the relevant or significant one

- Uncontrolled variables may become relevant in the larger sample.

(c) **selection on extreme values**:

- Selection bias may result from selecting cases with extreme values on the variables of interest

- Everything that results in more moderate values will be interpreted as causal although random factors may play a role

- So called „**regression to the mean problem**"

Finally

We also have to take practical problems into regard, such as missing data, lack of financial resources. Thus, we often have to look for second best solutions.