

5th Global Research Conference

Social Innovation and Socio-Digital Transformation

Towards a Comprehensive Innovation Policy

28/29th of October 2019
Dortmund

‘Measuring cases of social innovation using Qualitative Comparative Analysis: moving away from anecdotalism towards sensemaking patterns’

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 8222293.

Parallel Session: 28 October, 13.30-15.30

Measurement of social innovation

Peter Oeij / TNO, Netherlands
 innovation
for life **BEYOND 4.0**

DASA: Working World Exhibition
Friedrich-Henkel-Weg 1-25
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Content of my talk

- 1.The cases of social innovation of SI-DRIVE
- 2.What is Qualitative Comparative Analysis?
- 3.Measuring Social Innovation?
- 4.Results
- 5.Conclusions and future avenues

1. The cases of social innovation of SI DRIVE

SI-DRIVE
Social Innovation: Driving Force of Social Change

COMPILATION OF IN-DEPTH CASE STUDY REPORTS

Mai 2017

| | |
|---------------------------------------|--|
| Project acronym | SI-DRIVE |
| Project title | Social Innovation: Driving Force of Social Change |
| Grand Agreement number | 612870 |
| Coordination | TUDO – Technische Universität Dortmund |
| Funding Scheme | Collaborative project; Large scale integration project |
| Due date of deliverable | 0x/2017 |
| Actual submission date | 05/2017 |
| Start date of the project | 1 st January 2014 |
| Project duration | 48 month |
| Work package | WP 3 European and Global Mapping |
| Lead beneficiary for this deliverable | ZSI |
| Authors | Berenike ECKER, Nicol GRUBER, Wolfgang HAIDER and Ursula HOLTGREWE (ZSI) |
| Dissemination level | Public (PU) |



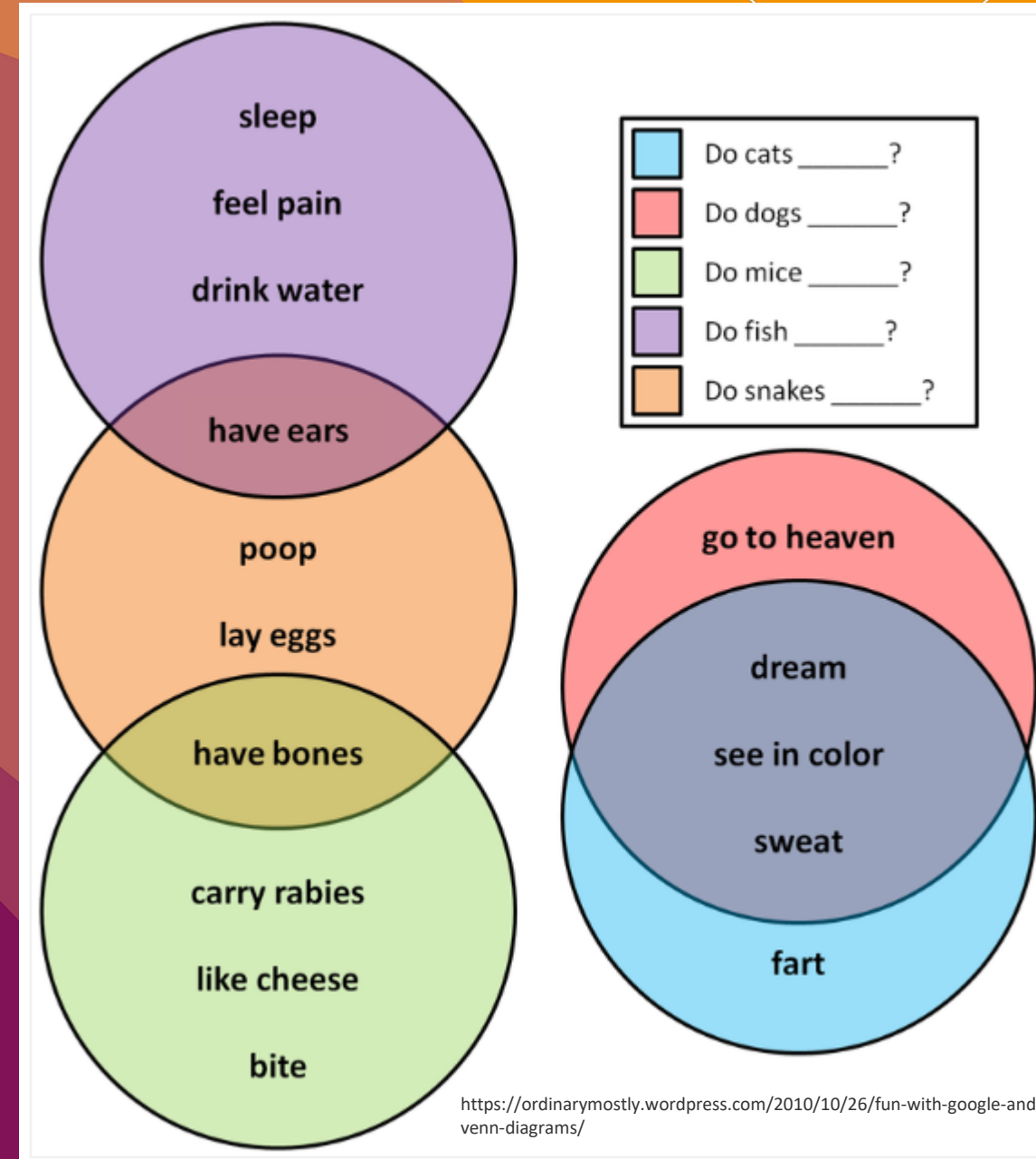
This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 612870.

EDUCATION AND LIFELONG LEARNING
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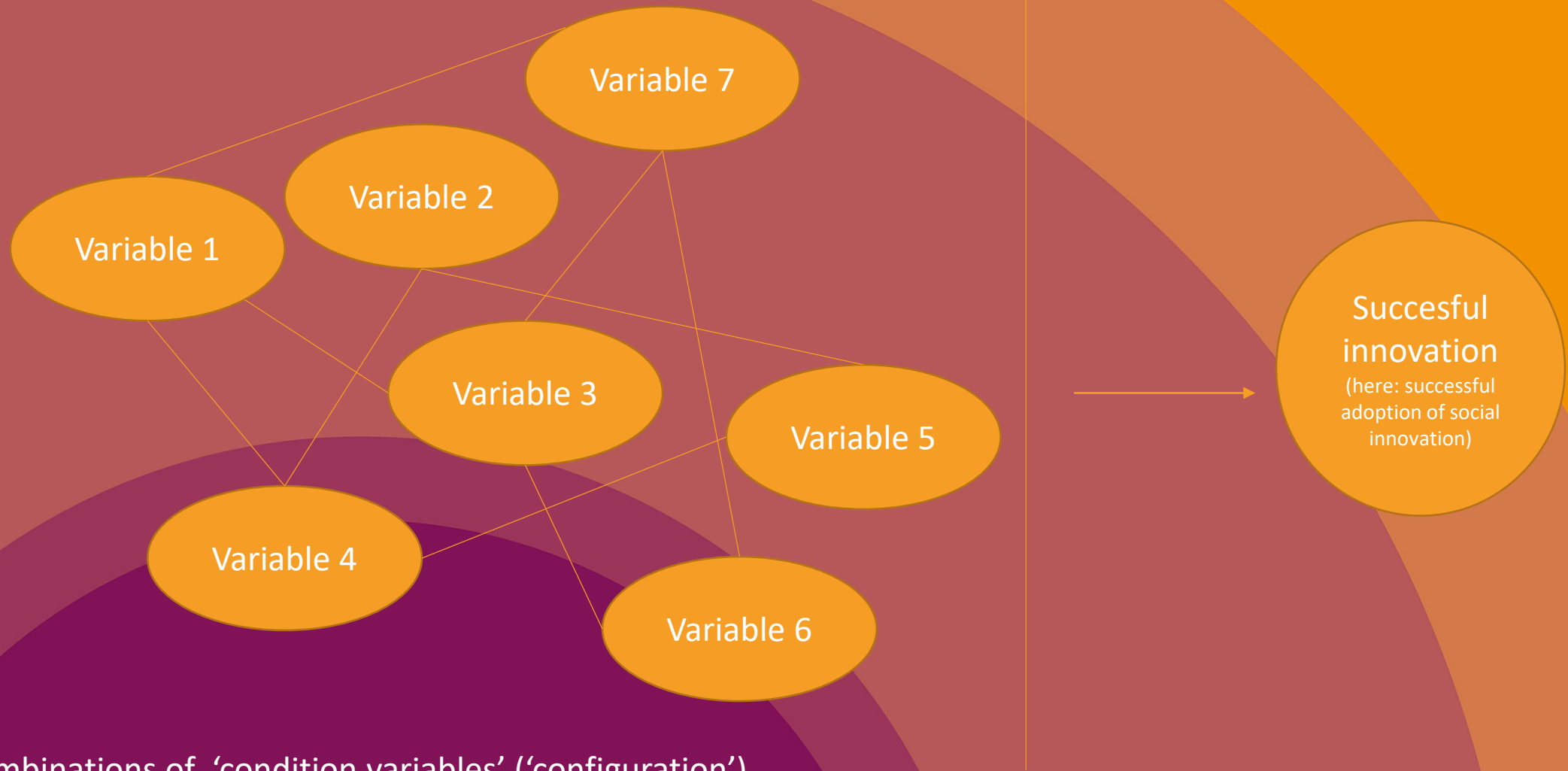
..82 cases out of 22 practice fields from more than 30 countries... taken from the existing database of the 1.005 mapped cases

2. What is Qualitative Comparative Analysis (QCA)?

- “comparative, caseoriented approach and aims to capture the complexity of a case while providing a certain level of generalization” (Rihoux & Ragin, 2008).
- Basic question: what do have case A and B in common, and where do they differ?



Social Innovation Cases: 1,2,3,4..... 82



Which combinations of 'condition variables' ('configuration') will explain successful innovation ('outcome')?

Purpose is to reduce data and make sense of observations

- Theoretical assumption: there is not 'one simple explanation' for successful innovation: from practice we know there are different reasons for failure and success
- In the case of 7 variables there are 128 combinations possible ($2^7 = 128$)
- How to arrive at a meaningful reduction that allows for some generalization?

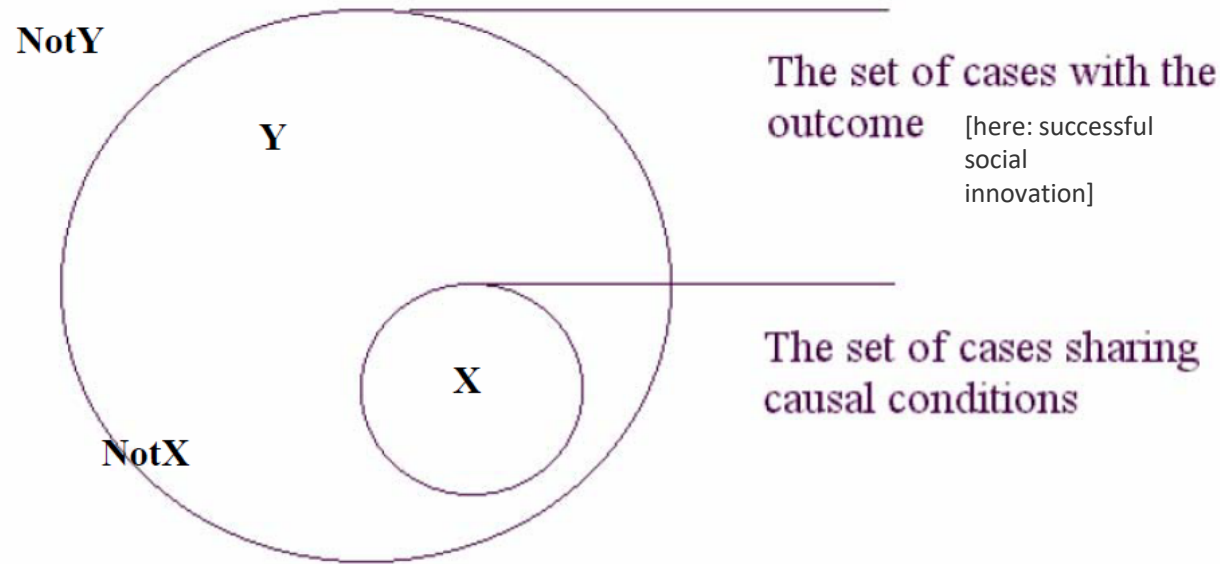
QCA looks for 'combinations of variables' in the empirical world: Sufficiency and Necessity

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Venn Diagram Illustrations

A) X is Sufficient for Y.

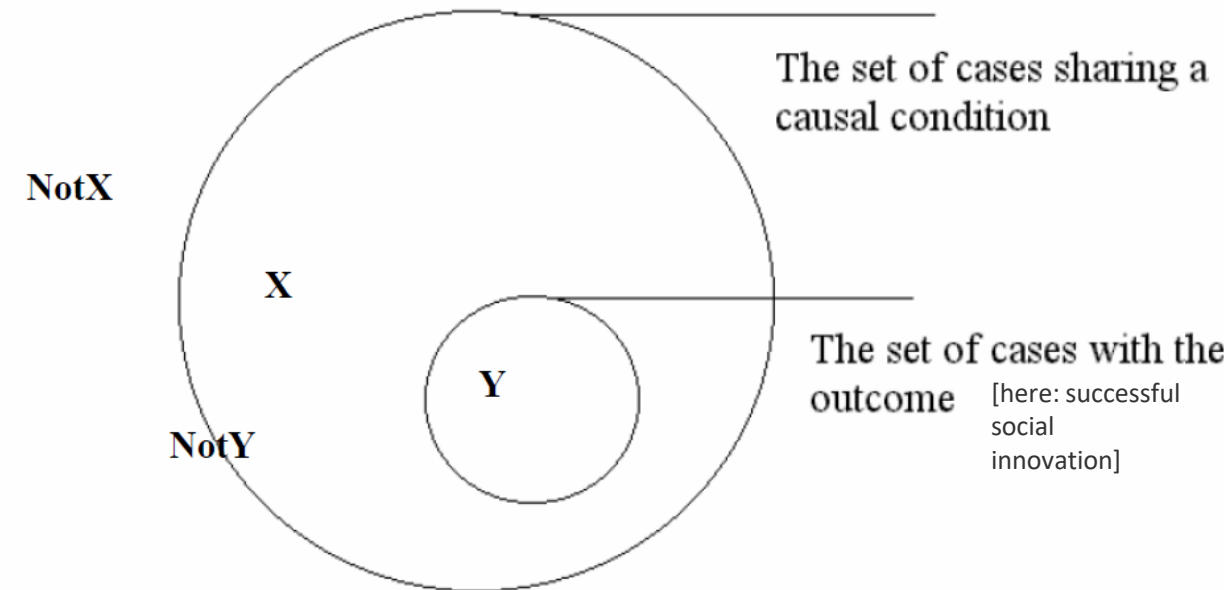
If X then Y and if NotY then NotX.



Venn Diagram Illustrations

B) X is Necessary for Y.

If Y then X and if NotX then NotY.

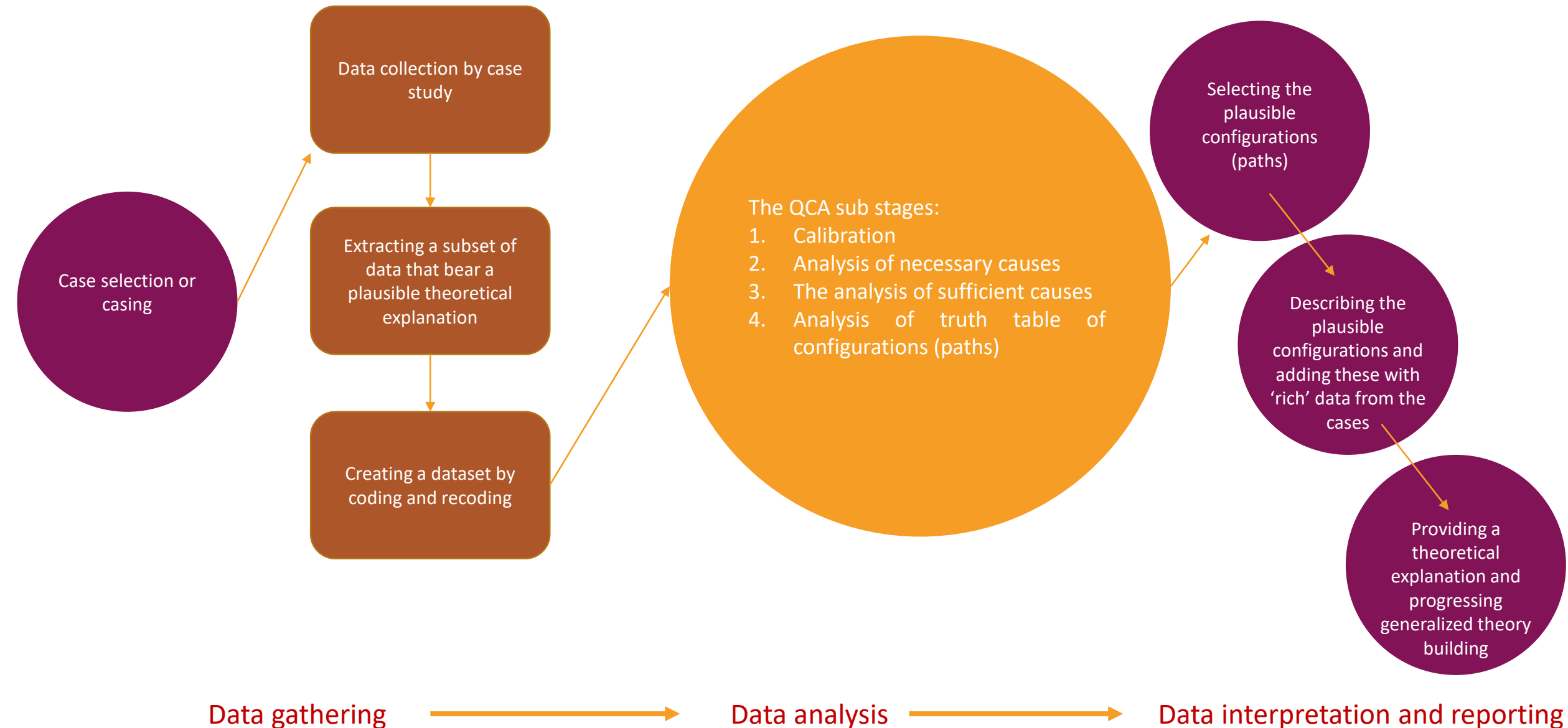


Source: Ragin, *Redesigning Social Inquiry: Fuzzy Sets and Beyond*, 2008, page 11.

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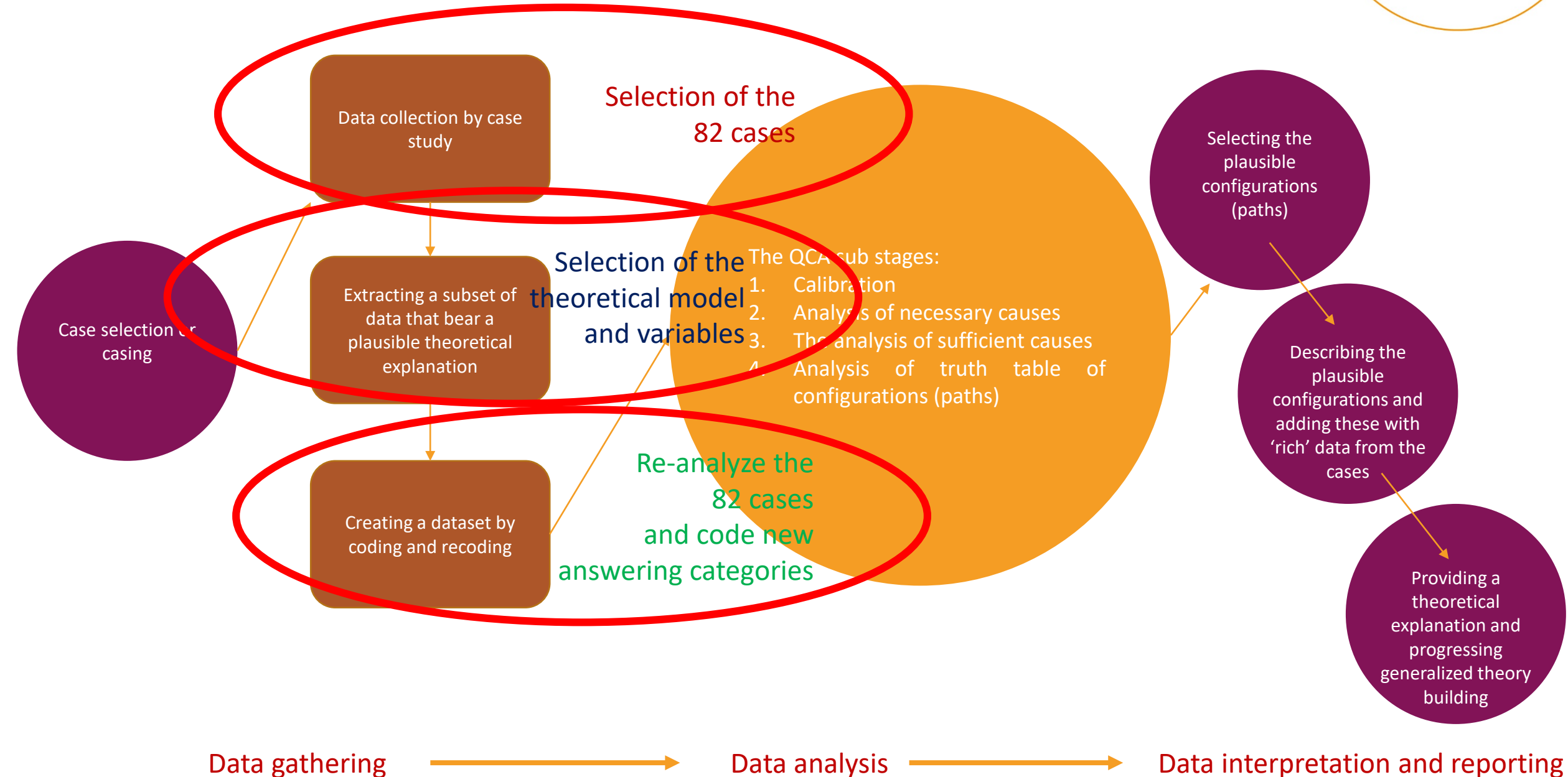
QCA research design

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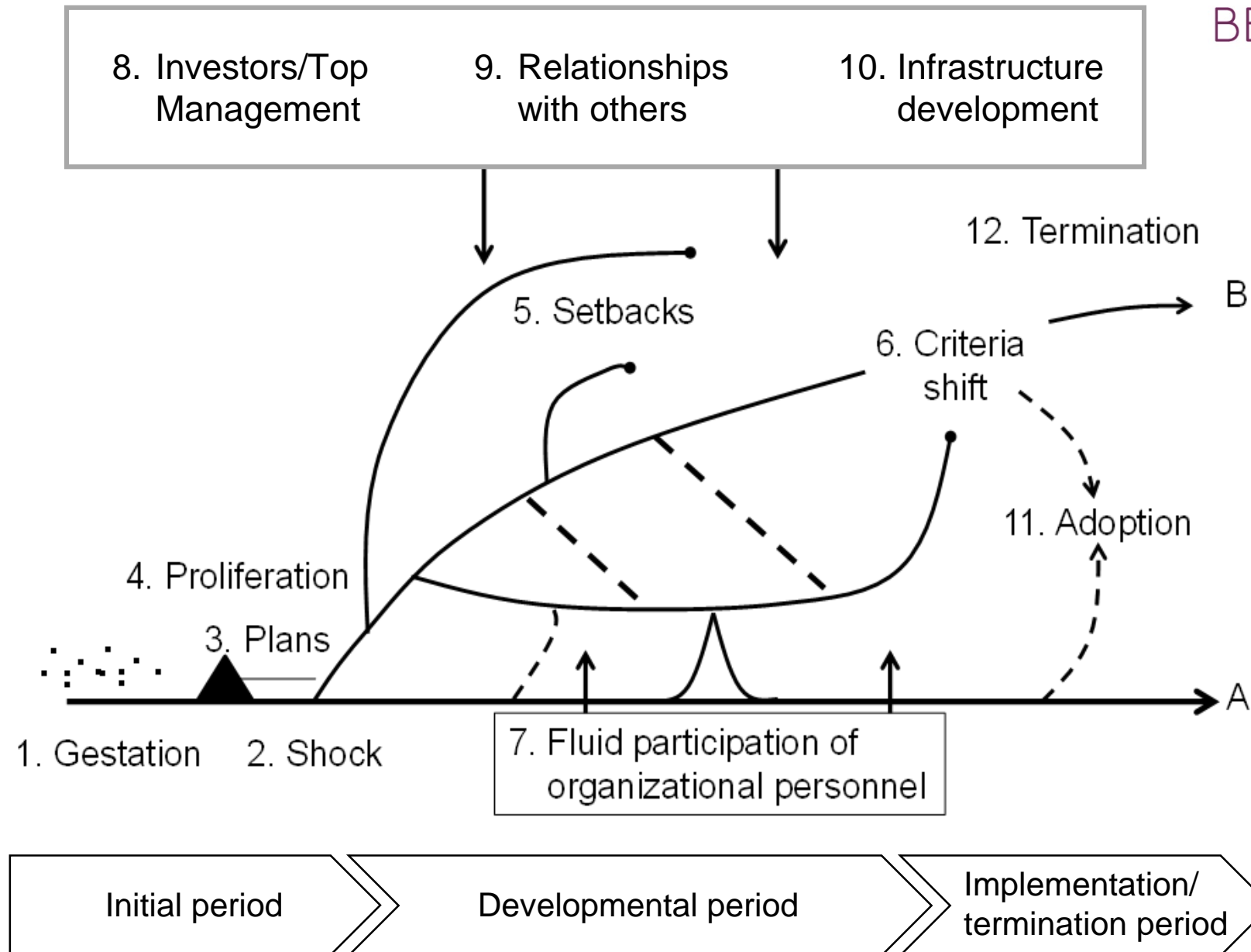


QCA research design

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3. How did we measure social innovation?



| Key element | Business & technological innovation | Operationalization towards social innovation | Questions and answering categories (1–5-point scale) |
|--|--|---|---|
| Initial period | | | |
| 1. Gestation (incubation) | Phase of incubation in which people engage in activities that set the stage for innovation. | 1. (initial) Stakeholder commitment (Agest1) Bringing together the people who start developing a social innovation initiative. Incubation can sometimes be rather lengthy, even years. | A. To what degree were relevant stakeholders involved in the start-up phase? (1-5) |
| 3. Plans | Development of plans and budgets submitted to top management and investors to launch the innovation. | 2. Financial/political support (Bplan2) Developing a concrete approach and a concrete goal coupled to a concrete target group that attracts investors/subsidizers. | B. To what degree was there concrete support for the initiative? (1-5) |
| Developmental period | | | |
| 5. Setbacks | Setbacks occur frequently because initial plans go awry or unanticipated environmental events occur that significantly alter ground assumptions and context. | 3. Overcoming setbacks (Cset3) Setbacks include the ending of initial funding and the absence of follow-up funding; the absence of good-quality personnel; the lack of acknowledgement by policy; the dependency of the project on the initiator or volunteers. | C. To what degree were the project team/members resilient enough to effectively deal with setbacks? (1-5) |
| 6. Criteria shift | The divergent-convergent pattern of outcome criteria held by (internal) innovation managers and (external) resource controllers implies that at the beginning IMs stress input but RCs outcome, while at the end RCs stress input and IMs outcome. | 4. Consensus (Dshift4) Upscaling an initiative requires sustainable organizational structure and institutionalizations, initial successes and a clear focus on the intended results, but with more stakeholders it is difficult to achieve consensus. | D. To what degree is consensus created among the relevant stakeholders? (1-5) |
| 7. Fluid participation | Personnel in innovation teams show part-time work, high turnover rates, and lack of experience due to job mobility and promotion processes. | 5. Availability of staff (Epart5) Volunteers may come and go and the initiator may lack the stamina needed, or the qualifications to guide the project from one phase to another. | E. To what degree are qualified personnel/staff available? (1-5) |
| 8. Intervention investors/top management | Top management involvement and roles differ according to conditions and organizational settings and were most evident when significant setbacks were encountered. | 6. Leadership (Flead6) Stakeholders, partners, investors and policy supporters may complicate the project, or may leave the project; or they can give the project a positive boost and clear direction. | F. To what degree did leadership create synergy? (1-5) |
| 10. Infra-structure development | To implement or commercialize an innovation a community of industry infrastructure needs to be created with financial, educational and research organizations. | 7. Infrastructure (Ginfr7) To become sustainable or to scale up, an infrastructure is needed that bundles a variety of expertise/experts and (supporting) organizations. | G. To what degree was a sustainable infrastructure created? (1-5) |
| Implementation/termination period | | | |
| 11. Adoption | Implementation begins when an innovation is applied and adopted. | 8. Adoption (Hadop0) Adoption and dissemination of social innovation depends on the public/social value experienced by target groups and stakeholders/policymakers. | [Outcome variable] H. To what degree did the social innovation (SI) scale up to achieve growing cooperation and stimulating social change? (1-5) |

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Selected and operationalised condition and outcome variables

Scoring / answering categories:
3 researchers scored all 82 cases
on these 8 variables

4. Results



Source:

Journal of Business Research 101 (2019) 243–254

Contents lists available at ScienceDirect

Journal of Business Research


journal homepage: www.elsevier.com/locate/jbusres

Understanding social innovation as an innovation process: Applying the innovation journey model

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ARTICLE INFO

Keywords:
Social innovation
Innovation process
Adoption
Innovation journey

ABSTRACT

The innovation journey is a process model distinguishing between the initiation, developmental and implementation/termination period of innovations; it looks at drivers and barriers, like innovation managers, investors, setbacks, adaptation, infrastructure. We operationalize this model to apply it to the process of social innovation. Eighty-two cases are re-analysed in a secondary analysis using qualitative comparative analysis to assess how social innovations develop and to investigate if they resemble the 'innovation journey' of innovations in technology/business.

The results show that six combinations of seven elements of the innovation journey model have the highest chance to result in adoption of the social innovation. Yet, while differing paths lead to similar outcomes (equifinality), success is dependent on contingent factors: not 'anything goes'. The implication for practitioners is to study the six successful combinations and steer their social innovation initiatives towards a combination that fits best with their own practice.

Peter R.A. Oeij, Wouter van der Torre, Fietje Vaas, Steven Dhondt (2019). Understanding social innovation as an innovation process: Applying the innovation journey model. *Journal of Business Research*, 101 (August), 243-254, ISSN 0148-2963, <https://doi.org/10.1016/j.jbusres.2019.04.028>. [want a copy? Mail peter.oeij@tno.nl]

QCA analysis

- Step 1 – Calibration: In fsQCA the original data must be transformed into an interval scale
- Step 2 – Analysis of necessary causal conditions: Necessary conditions are variables that should always be present for the outcome to occur. Hence, if the outcome is present in such a situation, so is that particular condition, and if that particular condition is absent, the outcome is absent as well.
- Step 3 – Truth table analysis of sufficient causal conditions: A truth table consists of all the possible combinations of the seven condition variables (128 combinations), but only consistent combinations remain valid.
- Step 4 – Finalizing solutions: The final step in the analysis is to interpret the six paths (combinations or configurations) that lead to outcomes, and to conclude which cases correspond to certain solutions

QCA statistical results

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Configurations explaining Adoption of the social innovation (parsimonious solution).

| Solution | Causal conditions | | | | | | | Descriptives | | | |
|---|--------------------------------|---------------------------------|---------------------|-----------|--------------------|------------|----------------|--------------|-----------------|-------------|-------------------------------|
| | Stakeholder commitment | Financial and political support | Overcoming setbacks | Consensus | Staff availability | Leadership | Infrastructure | Raw coverage | Unique coverage | Consistency | Number cases > 0.5 membership |
| 1 | ● | ○ | | | | | ● | 0.178818 | 0.0140394 | 0.857143 | 4 |
| 2 | ○ | ● | | | | | ● | 0.203448 | 0.0406404 | 0.907692 | 4 |
| 3 | | | ○ | ● | | | ● | 0.414040 | 0.0162561 | 0.922106 | 16 |
| 4 | ● | ● | | ● | | | | 0.468719 | 0.0490147 | 0.865000 | 20 |
| 5 | | | | | ● | ● | ● | 0.425123 | 0.0635467 | 0.900365 | 18 |
| 6 | ● | | ● | | ○ | | ● | 0.122660 | 0.0118226 | 0.849829 | 4 |
| | Total | | | | | | | | | | 66 |
| Model | Solution coverage: 0.741379 | | | | | | | | | | |
| | Solution consistency: 0.855357 | | | | | | | | | | |
| Model: HadopOc = f (Agest1, Bplan2, Csetb3, Dshif4, Epart5, Flead6, Ginfr7). | | | | | | | | | | | |
| Cell: ● = must be present; ○ = must be absent (–); no sign = does not matter (ambiguous). | | | | | | | | | | | |

most consistent path

paths with most cases

‘solution’ means that this combination of condition variables (causal conditions) results in the adoption of social innovation

6 out of 128 paths are shown to be internally consistent

66 empirical cases could be assigned to the six paths

74% of cases is covered by the theoretical model

the 6 solutions are logically consistent

QCA interpretation

Innovation process elements leading to the adoption of social innovation.

| Solutions (paths) | Elements of social innovation as a journey | | Cases |
|-----------------------------------|--|---------------------------------|-------|
| | Present | Must be absent | |
| 1. Filling a gap | Stakeholder commitment Infrastructure | Financial and political support | 4 |
| 2. Self-reliant empowerment | Financial and political support Infrastructure | Stakeholder commitment | 4 |
| 3. Incremental progress | Consensus Infrastructure | Overcoming setbacks | 16 |
| 4. Power-based design | Stakeholder commitment Financial and political support Consensus | | 20 |
| 5. Powerful people and leadership | Availability of staff Leadership Infrastructure | | 18 |
| 6. Resilient goal-getting | Stakeholder commitment Overcoming setbacks Infrastructure | Availability of staff | 4 |

She Taxi exemplifies the path 'Power-based design'. In this case, an influential institution to promote gender equality (Gender Park, GP) that was created by a ministry developed a convincing plan. Right from the beginning, several important stakeholders were committed: the government, the private sector and women entrepreneurs. In addition to this powerful (political) support, GP generated strong publicity with the participation of a well-known film actress. The idea fitted in the present climate concerning more gender equity after the rape and murder of a woman on public transport in the region, which was reflected in a growing consensus over this social innovation initiative.

More examples in: Oeij, P. R. A., Van Der Torre, W., Vaas, S., & Dhondt, S. (2018). *Understanding social innovation as an innovation process*. Report based on data from SI-Drive, Social Innovation: Driving force of social change. Leiden: TNO. (download from www.si-drive.eu)

5. Conclusions and future avenues

Conclusions that can be drawn from applying QCA

- 1] There are different combinations of variables that can lead to adoption of social innovation (equifinality)
- 2] there are no 'necessary' conditions for adoption of social innovation to emerge: there is choice for unique combinations
- 3] there are no 'sufficient' conditions for adoption of social innovation to emerge: there must be more than one condition present in conjunction with others
- 4] some limited generalization is possible: the 6 combinations offer better chances than the 122 others: they are recommendable strategies
- 5] while complex innovation is hard to predict, we found there are patterns, and this is helpful for practitioners as well

Future avenues?



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The Innovation Journey model captures the process of social innovation and can be further refined

The practice of social innovation is better served with good descriptions of cases, which may differ, but that is only realistic (do not favour simplicity for complexity as that is not gonna help us); benefit from the patterns

QCA differs from linear statistics (more realistic) and from qualitative methods (more generalizability) but maintains the 'richness' of cases

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This book focuses on workplace innovation, which is a key element in ensuring that organizations and the people within them can adapt to and engage in healthy, sustainable change. It features a collection of multi-level, multi-disciplinary contributions that combine theory, research and practical perspectives. In addition, the book presents new perspectives from a number of nations on policies with novel theoretical approaches to workplace innovation, as well as international case studies on the subject. These cases highlight the role of leadership, the relation between workplace innovation and well-being, as well as the do's and don'ts of workplace innovation implementation. Whether you are an experienced workplace practitioner, manager, a policy-maker, unionist, or a student of workplace innovation, this book contains a range of tips, tools and international case studies to help the reader understand and implement workplace innovation.

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Thank you for your attention!



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