

Pathways To Change: Evaluating Development Interventions with QCA

Presentation of the EBA Report

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Presentation Outline

- Why are we here, why QCA

Methods: rigorous & appropriate (Ch One)

- Push for rigorous evaluation methods, namely Impact Ev Methods
- Supremacy (?) of counterfactual analysis, namely Randomized Controlled Trials (RCTs)
- List of Internal Validity Threats (Campbell & Stanley 1967)
- Issues of External Validity (Cartwright 2012)
 - What worked here and now
 - You can't generalise unless you know why things work, supporting factors
- Issues of Construct Validity (quantitative variables, indicators)
- Problems with reconstructing the counterfactual situation
 - What would have happened if the intervention had not been implemented?

Causal Questions (Annex A)

- “You cannot establish causality unless you have a counterfactual”
- WRONG!
- Three-Four Models of Causality and Causal Inference (Stern et al 2012)
- Mill’s Methods
 - Difference, Agreement, Concomitant Variation, etc.
- Generative Causality
 - Mechanism-Based
- Configuration Causality
 - Multiple-Conjunctural

Diversity and breadth of methods (Ch One)

- The Design Triangle (Stern et al. 2012)
- Available Methods, Evaluation Questions, Programme Attributes
 - ALIGNMENT
- Methods need to be **appropriate** to
 - Ev Questions, Programme Attributes
- QCA is one of many potentially interesting methods
 - Raising a lot of interests
 - Increasingly being applied, tried and tested in evaluations

Why QCA

- Initially it was seen as the only available method for the “no man’s land” of 5-30 cases
 - Too many for case studies
 - Too few for quantitative, statistical analyses
- It’s much more
- The upper limit doesn’t hold any more: 5-100 cases and beyond
- Qualitative Method: works with qualitative constructs & concepts
- Generalisation and synthesis of multiple cases
- Best of both worlds!

Rooted in Set Theory instead of Calculus

- Mathematical Basis: rigorous, replicable, internally valid
- Set Theory, not Calculus
- Calculus is about co-variation, models are mathematical functions
 - Regression Analysis (Annex B)
 - Real numbers + the four operations: addition, multiplication, subtraction, division
- Set Theory uses sets (collections of objects) + logical functions
 - Union, intersection, negation
 - Disjunction, conjunctions, negation
- It's a completely different world!

Multiple-Conjunctural / Configurational Causality

- *Generative / Mechanism-Based* – we describe in detail the inner workings of a mechanism, focusing on a **single case**
- *Regression Analysis* – we focus on the additional contribution (multiplication, addition) of a **single variable** to an outcome
 - Proportional increase, like topping up something that we're running out of
- *Configurational* – we capture the complex, often unexpected “chemical” reactions that different causal factors undergo when they combine with each other
- The same factor can have completely different consequences depending on what other factors it's combined with

Contextual Causality

- The same causal factor (e.g. an intervention) works differently in different contexts
- What is the “role” of given factors in given contexts?
 - It’s not about concomitant variation, not about the average role, the role can be very different
- What works is not a single factor, at least not in general
- Specific combinations or “**recipes**” work in specific contexts
- Creating **typologies**, a small number of similar situations
 - Middle-range: between the peculiar single case and universal generalisation

Necessity & Sufficiency

- These recipes can be shown to be “sufficient” for the outcome
- Good enough; doesn’t mean required
- Some factors will be necessary but not sufficient
- Required, but not good enough on their own
- Some others are required for a recipe to be effective
 - But not required in general, just for that recipe
- A number of cooking metaphors can be constructed...

Questions answered by QCA

- What works for whom, under what circumstances?
 - What makes the difference for the outcome, where?
 - What conditions are conducive to which outcome?
 - What prevents the outcome from materialising?
 - What conditions are required for the outcome to materialise?
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- Which pathways, combinations, recipes, consistently work?
 - Which don't?

Requirements of QCA

- At least 5 cases
- Comparable cases
 - Possibly the most important requirement, comparability can be tricky
- An expert of the substantive field to “make sense” of the configurations and create the models (hypotheses) to test
 - A “sensemaker”
- Conceptual knowledge and technical skills
 - The ability to understand set theory
 - The ability to use the software platforms (at least 3)

Comparability

- Case-based information in QCA needs to be converted into numerical values
- Not real numbers, but either a 2-point, 4-point or 6-point scale (most often)
- The most popular version is a 2-point scale: presence / absence, 0/1
- This process is known as “**calibration**”
- Not all kinds of information can be described as such... only some types of qualitative and quantitative information
 - More details on the report (chapter 2)

Contents of the Report

- **Chapter One**

- An introduction to the idea of appropriateness and methodological choice
- Basics of QCA: what the dataset looks like, what the steps are

- **Chapter Two**

- A full step-by-step guide to apply QCA to evaluations
 - Model selection, calibration, visual representation of the data, and four procedures to synthesise / extract information from the dataset: necessity analysis, sufficiency analysis, Boolean minimisation, INUS analysis

Contents of the Report

- **Chapter Two**

- Every step is complete with a list of opportunities offered, challenges, pitfalls to be aware of and issues at stake

- **Chapter Three**

- Major issues usually discussed in connection with QCA:
- Generalisation, the dialogue with theory (and theory-based evaluation), bias, and quality assurance

- **Annexes**

- Causality, comparison with regression analysis, case material used

Contents of the Report

- **Generalisation**
- Every step is complete with a list of opportunities offered, challenges, pitfalls to be aware of and issues at stake
- **Quality Assurance**
- Major issues usually discussed in connection with QCA:
- Generalisation, the dialogue with theory (and theory-based evaluation), bias, and quality assurance

Generalisation

- **Statistical** generalisation (“outside-the-dataset”)
 - Is the sample representative of a wider population?
- **Modest** / contingent generalisation (“within-the-dataset”)
 - A synthesis of the empirical dataset, without assumptions on what that means for an possible wider population
- **Conceptual** Generalisation
 - Going up and down the **scale of conceptual abstraction**
 - From abstract to more specific concepts
 - Abstract concepts include more specific ones (set theory relations of logical implication)

Quality Assurance

- Checklist
- Use all 4 procedures described (if not more)
- Use visual representations
 - Use at least three software platforms
- Sensitivity tests
- For each step:
 - Take advantage of opportunities
 - Avoid pitfalls and risks
 - Manage challenges

Thank you!

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