Meta-analysis as a qualitative approach to case comparison

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case study “dilemma” in planning

The good:

Case studies produce rich, in-depth data

Ideal for investigating complex questions—well used method in planning research and practice

The bad:

Case studies often done in isolation

Qualitative research in particular suffers from a lack of “summing up” and synthesis; cases don’t learn from each other

Time-consuming research means replication is unlikely

It’s difficult to generalize from a single-case study, reducing potential for policy direction

Context matters

cross-case techniques

Synthesizing case study findings can be valuable in knowledge development (Sandelowski 1997, Dixon-Woods 2005) and building theories

Cross-case techniques (Miles and Huberman 1994) can be used to enhance generalizability, deepen understanding and explanation, construct larger narratives or general theories

- e.g. Anderson et al. (2002) found that only through systematic comparison was it possible to say anything definitive about the characteristics and types of cases they studied
- e.g. Baaijens and Nijkamp (2000) wrote that meta-analysis “is particularly suitable in cases where research outcomes are to be judged or compared (or even transferred to other situations), when there are no controlled conditions”

Can use completed case studies (a major advantage in planning), reducing time and expense

meta-analysis

Meta-analysis is one approach to case comparison and synthesis that addresses some of the weaknesses of single-case studies, and can integrate different methods

Meta-matrices: identifying commonalities and differences between cases (Miles and Huberman 1994)

Can integrate as few as 5 or as many as 25 cases (can be sub-grouped by type of case)

Can conduct case-oriented or variable-oriented analysis

Easy to use method, spreadsheet software (Excel or equivalent)

Other methods: narrative summary, thematic analysis, qualitative metasynthesis, content analysis (quantitative: rough set analysis, meta-regression, etc.)

TOD definition

TOD can be described as land use and transportation planning that makes walking, cycling, and transit use convenient and desirable, and that maximizes the efficiency of existing transit services by focusing development around transit stations, stops, and exchanges. TOD can be seen as part of a broader approach to urban development. Successful TOD can be defined as implementation of this type of development at a regional scale.

Vancouver

Toronto

Montreal

Amsterdam-
Utrecht

Arnhem-
Nijmegen

Rotterdam-
The Hague

Naples

Copenhagen

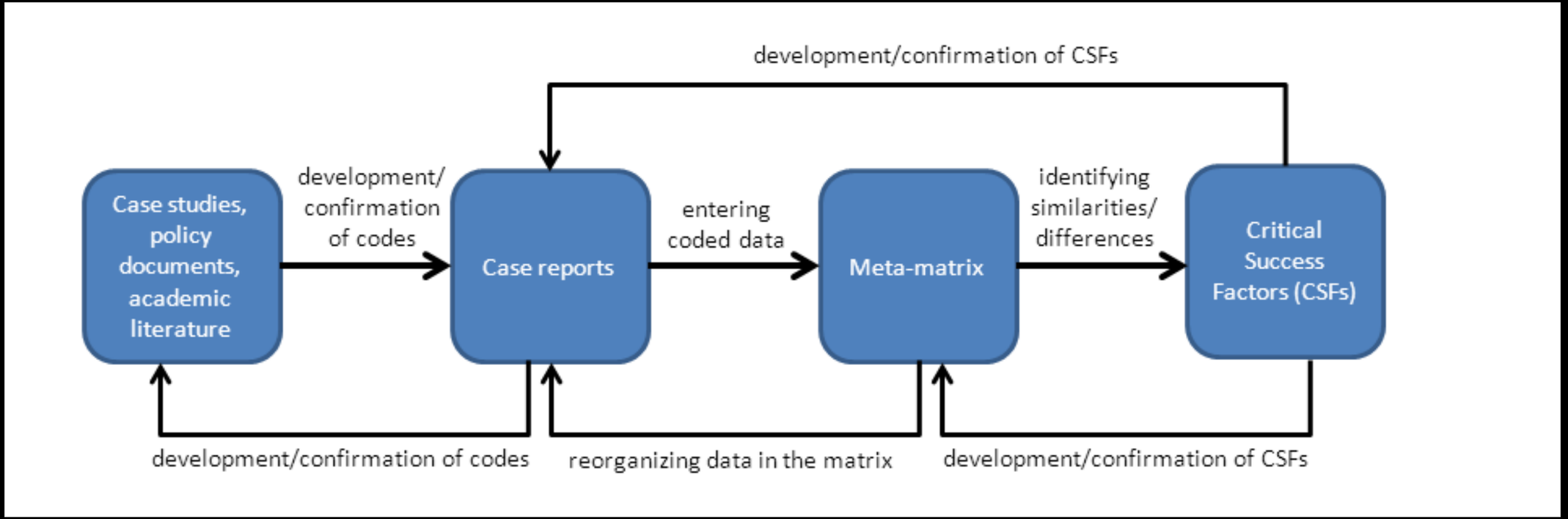
Tokyo

Perth

Melbourne

Phase 1 (2012-2013) meta analysis (meta-matrices, rough set analysis) to determine policies, actors, and institutions influential in implementation

Phase 2 (2013-2014) workshops with planners



Created coded case reports, summarized reports in a meta-matrix, noted within-case and cross-case patterns using 5 codes:

- policy consistency
- actors/roles
- land use-transport connections
- specific tools and policies
- barriers to TOD

Identified possible critical success/failure factors for each case

critical success factors

Plans and Policies

Consistency in planning policy supporting TOD over time
Vision stability
Support of higher levels of government
Political stability: national
Political stability: local

Actors

Relationships between actors
Presence of a regional transport-land use planning body
Level of competition among municipalities
Presence of interdisciplinary teams
Public participation
Public acceptance
Presence of key visionaries

Implementation

Use of site-specific planning tools
Corridor-level planning
Certainty for developers
Willingness to experiment

findings & policy applications

Identification of 16 CSFs or transferable policy lessons: more generalizable results than single-case study

Municipalities can use the policy lessons to determine their own strengths and weaknesses, and as inspiration for policy development, e.g. using workshops or exercises

Meta-matrix findings can be used to inform other methods within a meta-analysis

Discussion

Strengths:

Meta-analysis can be used in many planning contexts, ideal as the first stage of research

- Comparing policies on affordable housing
- Synthesizing studies, e.g. immigrants' experiences with service provision
- Environmental scan/jurisdictional review in a policy context

Allows "decontextualized" policy ideas to be transferred and adapted to different contexts

Weaknesses:

Can only be used with similar cases

Difficult to visualize entire meta-matrix

If multiple researchers are involved, it's critical to decide on case-oriented vs. variable-oriented analysis and clarify coding through an iterative process

questions?

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Thomas, R. and Bertolini, L. (2014) Beyond the case study dilemma in urban planning: Using a meta-matrix to distil critical success factors in transit-oriented development. *Urban Policy and Research.* DOI: 10.1080/08111146.2014.882256

Thomas, R. and Bertolini, L. (under review) Defining critical success factors in TOD implementation using rough set analysis

Thomas, R. and Bertolini, L. (under review) Policy transfer among planners in transit-oriented development.