

# Utilising Theory in Higher Education Research: Why It Matters and How to Do It

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# Objectives of today's seminar

To understand why and how to use theory in (qualitative) research.

# Main topics



WHAT IS THEORY?



WHY USE THEORY IN  
RESEARCH?




HOW TO USE THEORY IN  
RESEARCH?

# What is theory?

# Definitions of theory

- A set of interrelated constructs, definitions, and propositions that present a systematic view of a phenomenon (Bailey, 1994).
- A coherent description or explanation of observed or experienced phenomenon (Schwandt, 1997).
- An organising tool for facts, laws, concepts, constructs, and principles into a meaningful and manageable form (Sklar, 2000).
- A unified, systematic explanation of a diverse range of social phenomena (Weick, 1989).

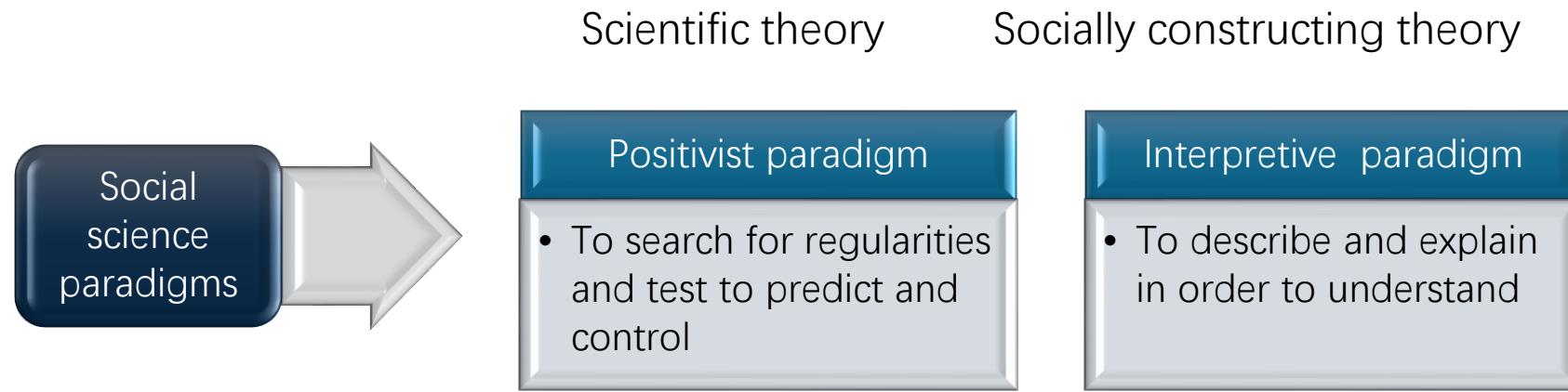


Kezar, A. (2006). To use or not use theory: Is that the question? In J. C. Smart (Ed.), Higher education handbook of theory and research (pp. 283-344). Springer.

Theory is about putting concepts together—ordering, systematising and adding coherence.

Theory is about relationships, connections, and interdependencies.

# Scientific vs. socially constructing theory?



# How individuals behave?

Rational choice

Humans as reasonably similar. People make behavioural choices based on rational calculations, with the central element being a cost-benefit analysis.

Cultural anthropology

Human behaviour is governed by culturally transmitted norms, and these norms contain accumulated wisdom that allows people to behave sensibly, even if they do not fully understand why they do what they do.

Different assumptions in social sciences  
about human behaviour



# The Essential Features of a Theory

- **A clear framework for understanding:** A theory provides a structured set of interrelated concepts that help explain a phenomenon or a set of phenomena.
- **Empirical Validity:** The theory must be supported by evidence and capable of being tested or verified through observation or data collection.
- **Generalisability:** The theory should be applicable across different contexts, making it useful for explaining or predicting a wide range of phenomena.
- **Predictive Power:** A strong theory should be able to predict future events or outcomes accurately, demonstrating its practical utility.
- **Parsimony:** The theory should be as simple as possible, avoiding unnecessary complexity while still capturing the essential elements of the phenomenon.

# Occam's Razor

- When faced with competing explanations for the same phenomenon, the simplest one is usually the best.
- Unnecessary assumptions, complications, or elements should be avoided if a simpler explanation can account for all the observed facts.

# Levels of theory

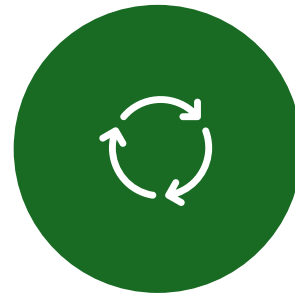
- Meta-theories: Paradigms such as positivism, interpretive and theories like critical theory and participatory theory.
- Grand theory: a unifying theory that helps us understand a vast area of study (such as anthropology) or one that encompasses large-scale topics such as society or organisations. Examples: system theory & (neo-)Marxism.
- Middle-level theories: explaining a broader topic area across a range of settings and contexts. Examples: organisation theories
- Low-level theories: explain a specific phenomenon or case at hand.

(Kezar, 2006)

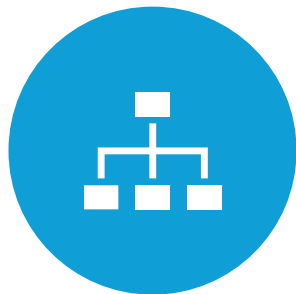
# Common theoretical frameworks in qualitative research



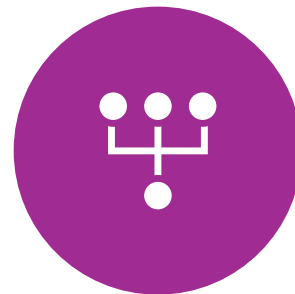
Typology: Quinn & Rohrbaugh, 1981, Culture typology; Becher & Trowler, 2001, Disciplinary typology



Process: Gornitzka, 1999, Policy process



Metaphoric framework: Bolman & Deal, 1997, four metaphors of organizational management and leadership

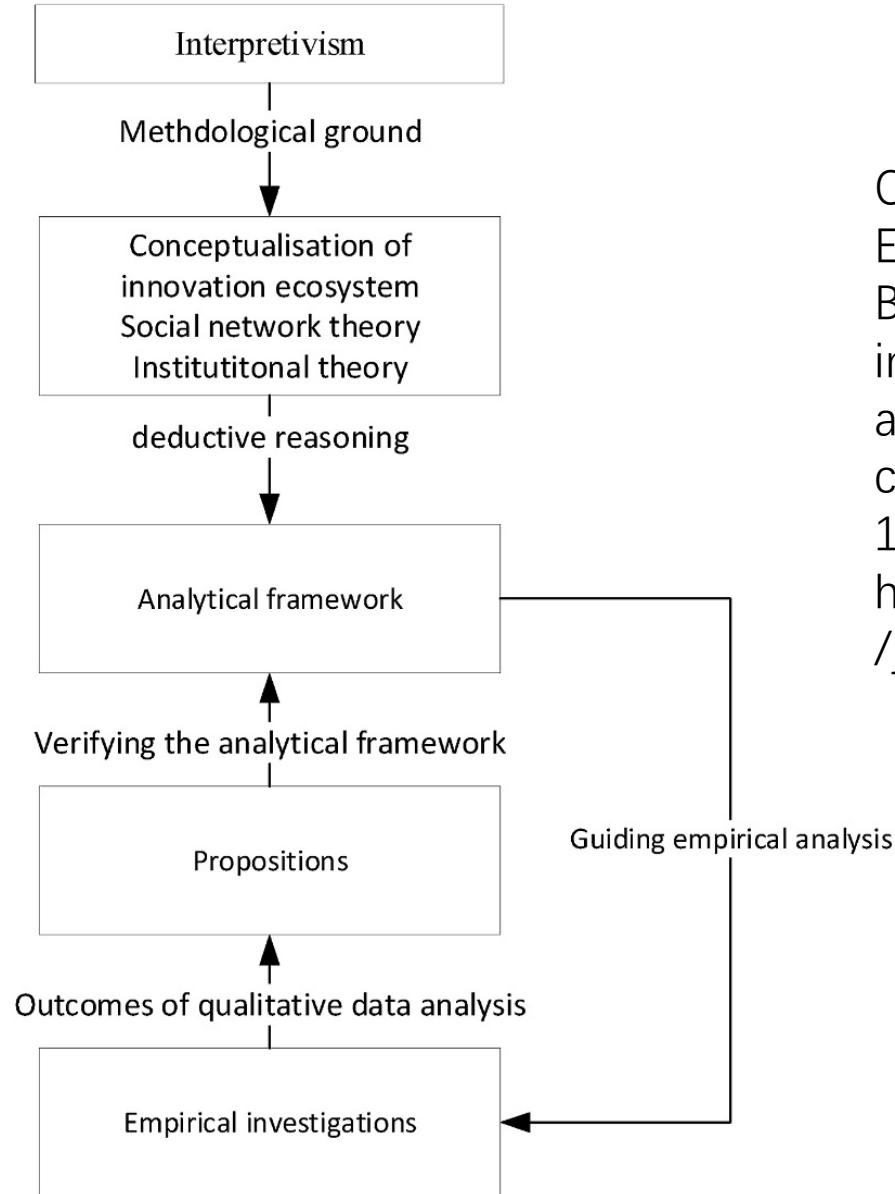


Systematical understanding of phenomenon: institutionalism, resource dependency

### Levels of theory Defined by Kezar

<p><b>Meta-theory</b> Meta-theory refers to a research paradigm.</p>
<p><b>Grand theory</b> Grand theory, often hardly be empirically tested, seeks to explain a large segment of society, organisations and human experiences. It is for understanding a vast area of study, and represents a total range of phenomena.</p>
<p><b>Middle level theory</b> Middle-level theory, which is empirically testable, explains “a broader topic area across a range of settings” (Kezar, 2006, p. 291) and contexts and is a way of connecting grand theory with empirically observable patterns.</p>
<p><b>Local level theory</b> Low-level theory explains “a specific phenomenon or case at hand” (Kezar, 2006, p. 291).</p>

### Reflection of theory levels in the present research



Cai, Y. (2023). Towards a new model of EU-China innovation cooperation: Bridging missing links between international university collaboration and international industry collaboration. *Technovation*, 119, 102553.  
<https://doi.org/https://doi.org/10.1016/j.technovation.2022.102553>

# Why we use theory in research

Theory is often used to generate hypotheses in quantitative research. Then why do we use theory in qualitative research?

# What are the uses of theory?



A theory meets our need to act even when we are uncertain about a phenomenon.



A theory helps guide our research.



A theory provides an easily accessible tool for the layperson.

(Dooley, 1984; Kezar, 2006)

# Why use theory in qualitative research?

- Theory employed as a broad explanation for relations between social factors and social phenomenon to be tested. (Similar to logic of quantitative inquiry).
- Theory used as a theoretical lens or perspective to guide a study particularly for raising research questions to be addressed, identifying important issues to be studied. (Emphasizing the explorative nature).

(Creswell, 2003)



# How to use theory?

The theory should serve the purpose of building an (conceptual) analytical framework, ultimately helping you answer your research questions through analysing data.

# Theoretical framework, conceptual framework, and analytical framework

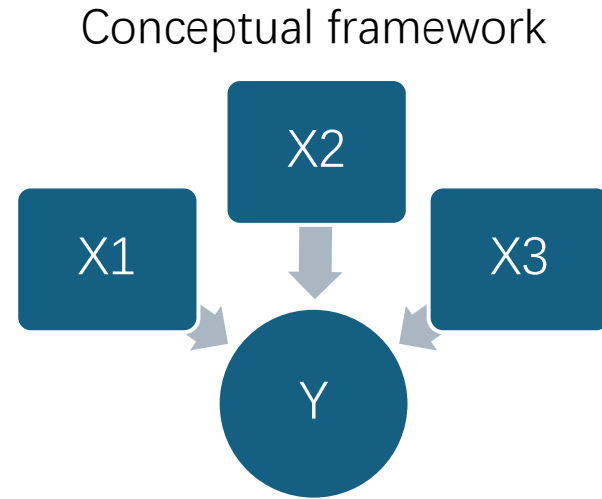
- **Theoretical framework:** A theoretical framework is grounded in existing theories and provides the overarching lens through which the research is viewed. provides the broader theoretical basis that informs the study, based on existing literature and theories.
- **Conceptual framework:** A conceptual framework represents the system of concepts, assumptions, expectations, and beliefs that guide the research. It maps out the relationships between key concepts within the study, often in visual or narrative form.
- **Analytical framework:** The emphasis is on the mechanisms of analysis—how you will process your data and draw conclusions. focuses on how data is processed and analyzed.

# General notes on building an analytical framework

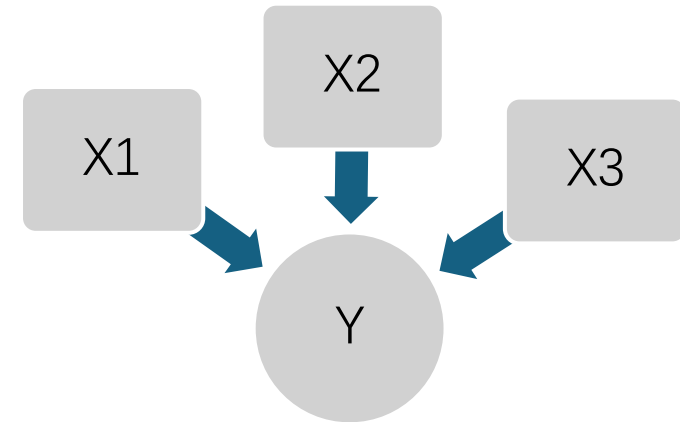
- **Discern the Nature of Your Research Question**
- **Align Theory Level with Research Inquiry**
  - **Explanatory Research:** When theory aligns directly with the research question level, theory serves as the analytical framework.
  - **Explorative Research:** When theory is at a higher level than the research question, a lower level analytical framework is developed based on the theory.
- **Establishing an Analytical Framework:** Allowing for a clear correspondence between the concepts and relationships in your research questions and those in the theoretical framework.

Your eventual goal is to achieve something like this.

Research questions:  
What factors affecting a phenomenon?



Research questions:  
How have certain factors influenced a phenomenon?



Analytical framework

# What theory you can use?

- **The Theory Must Fit Your Research.** In other words, the theory should be well-suited to addressing your specific research questions, providing a coherent framework that helps explain or interpret your findings.
- **Choose a Theory that Resonates with You.** Finding a theory that aligns with your beliefs can make it easier to apply. This means you may naturally use such a theoretical perspective (or philosophical view) to interpret social phenomena in your daily life.
- **For Novice Researchers, Consider These Steps to Find a Suitable Theory:**
  - Review theories you're already familiar with to see if any are relevant.
  - Explore how others have used theories to investigate questions similar to yours, and follow a successful example.
  - Seek guidance from an expert in theoretical frameworks.

# Example: When the theory and the empirical inquiry are at the same level

- Cai, Y., & Lönnqvist, A. (2021). Overcoming the Barriers to Establishing Interdisciplinary Degree Programmes: The Perspective of Managing Organisational Innovation. Higher Education Policy. doi:10.1057/s41307-021-00242-0
- How can the barriers to establishing interdisciplinary degree programmes be overcome through the management activities of academic unit leaders and programme directors?

# Availability of relevant/suitable theories

The nature of the research question is about organisational innovation.

Similar phenomena have been studied using organisational innovation management theory.

The theory of organisational innovation management is closely aligned with the level of research inquiry.

The correspondence between the key concepts in the research question and the key concepts in the theory or theoretical framework is evident.

## Tips on writings about the analytical framework building

To decide on the theory (close to the level of empirical inquires) to be borrowed or applied and justify the choice

To explain the theory's thesis (concepts and relations between the concepts).

To further elaborate on the concepts and relations between the concepts based on the relevant theoretical literature and empirical studies for building an analytical framework

To explicitly show correspondence between key concepts in the research question and key concepts in the analytical framework.



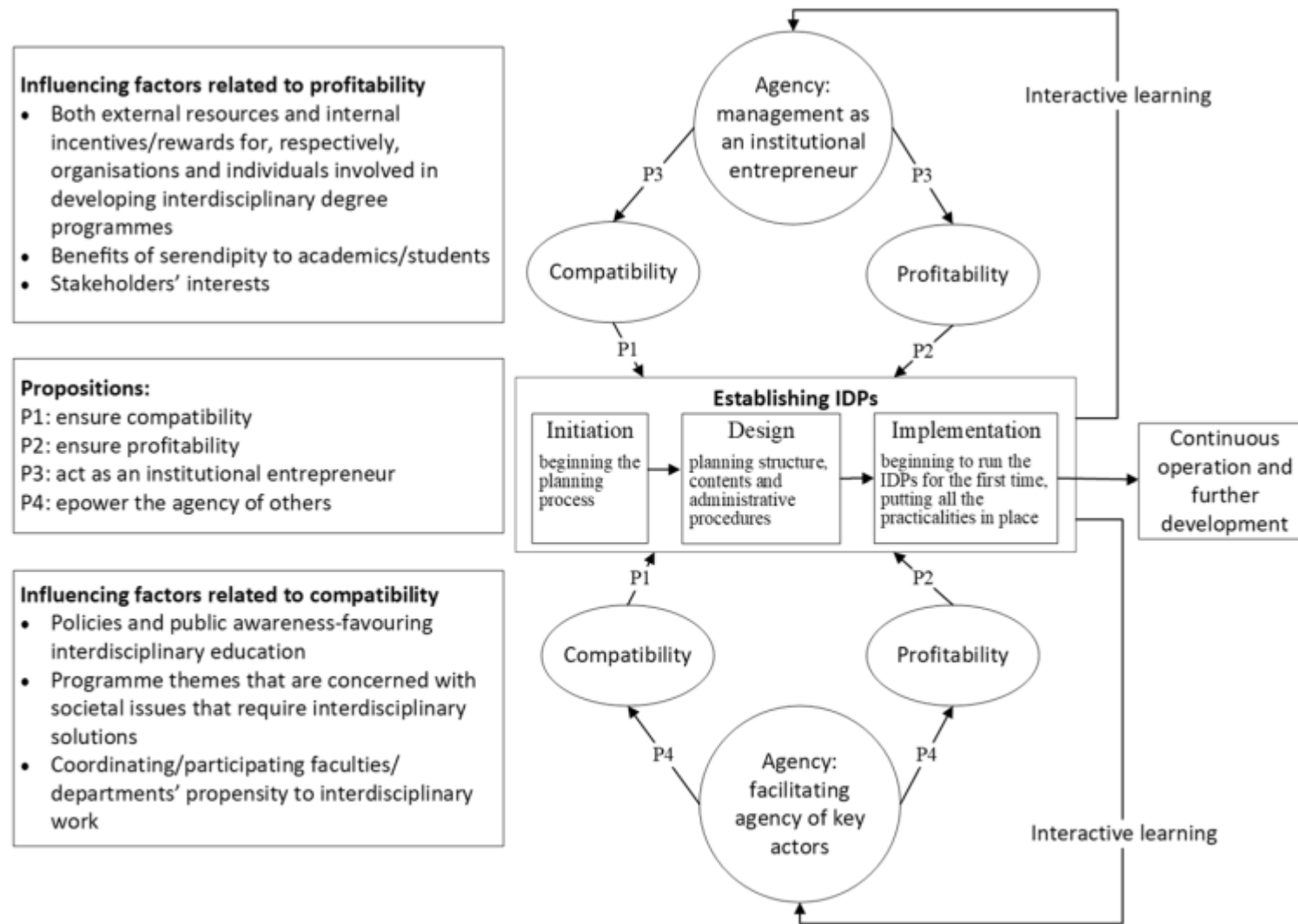
# Conceptualising the Establishment of IDPs Through the Lens of Managing Organisational Innovation

## Innovation Process from a Management Perspective

In order to identify potential ways to overcome the challenges in establishing IDPs, we use the framework of innovation processes in higher education by Cai (2017). According to Cai (2017), the eventual goal of implementing an organisational innovation is to institutionalise it. The innovation process can be generally distinguished between three stages, namely initiation, implementation and institutionalisation (Fullan 1982; Cai 2017). While endless factors influencing the initiation and implementation of innovation could be identified, they could be categorised in three dimensions, namely profitability, compatibility and agency (or institutional entrepreneurs' actions). The institutional entrepreneur concept is a way to introduce actors' agency into the institutional analysis (DiMaggio 1988). The core ideas of Cai's (2017) framework are as follows:

- Innovation is more likely to be successful when the values underlying it are compatible with the organisational environment and social context, and when the participants in the innovation processes perceive tangible and/or intangible benefits from the innovation.
- However, even for innovations with low levels of compatibility and profitability, there are still chances for success if the role of agency is played smartly in an interactive learning process (Ma and Cai 2021).

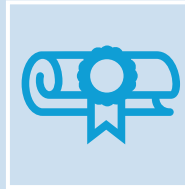
We will further develop Cai's (2017) conceptualisation of an innovation process to an analytical framework of managing organisational innovation by articulating the relations between the three factors as well as their influences on the institutionalisation of innovation. The framework implies that management plays two roles in developing IDPs as organisational innovation: (1) Management helps create optimal conditions (in terms of compatibility and profitability) that foster IDPs, thus to prevent barriers in the first place, and (2) management facilitates the agency for overcoming barriers of innovation through influencing compatibility and profitability. The second role includes two dimensions. First, management is about



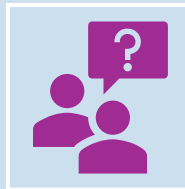
**Fig. 1** Framework for understanding management of the establishment of IDPs as organisational innovation

Example: Bring a higher level theory down to fit the empirical inquiry

Cai, Y. (2012). Understanding employers' perceptions of international graduates: An investigation of the employment prospects of Finnish-educated Chinese graduates in Finnish companies operating in China. Tampere: Tampere University Press.



What are the China-based Finnish employers' beliefs on Finnish educated Chinese graduates as their potential employees?



How have the employer's beliefs or perceptions been developed?

# Availability of relevant/suitable theories

The phenomenon was under-researched.



There are no suitable theory or ready-made analytical framework can be applied to approach the research inquiry.

Some higher-level theories may shed useful insights on the phenomenon or research inquires but the correspondence between key concepts in the research question and key concepts in the theory or theoretical framework is blurred.

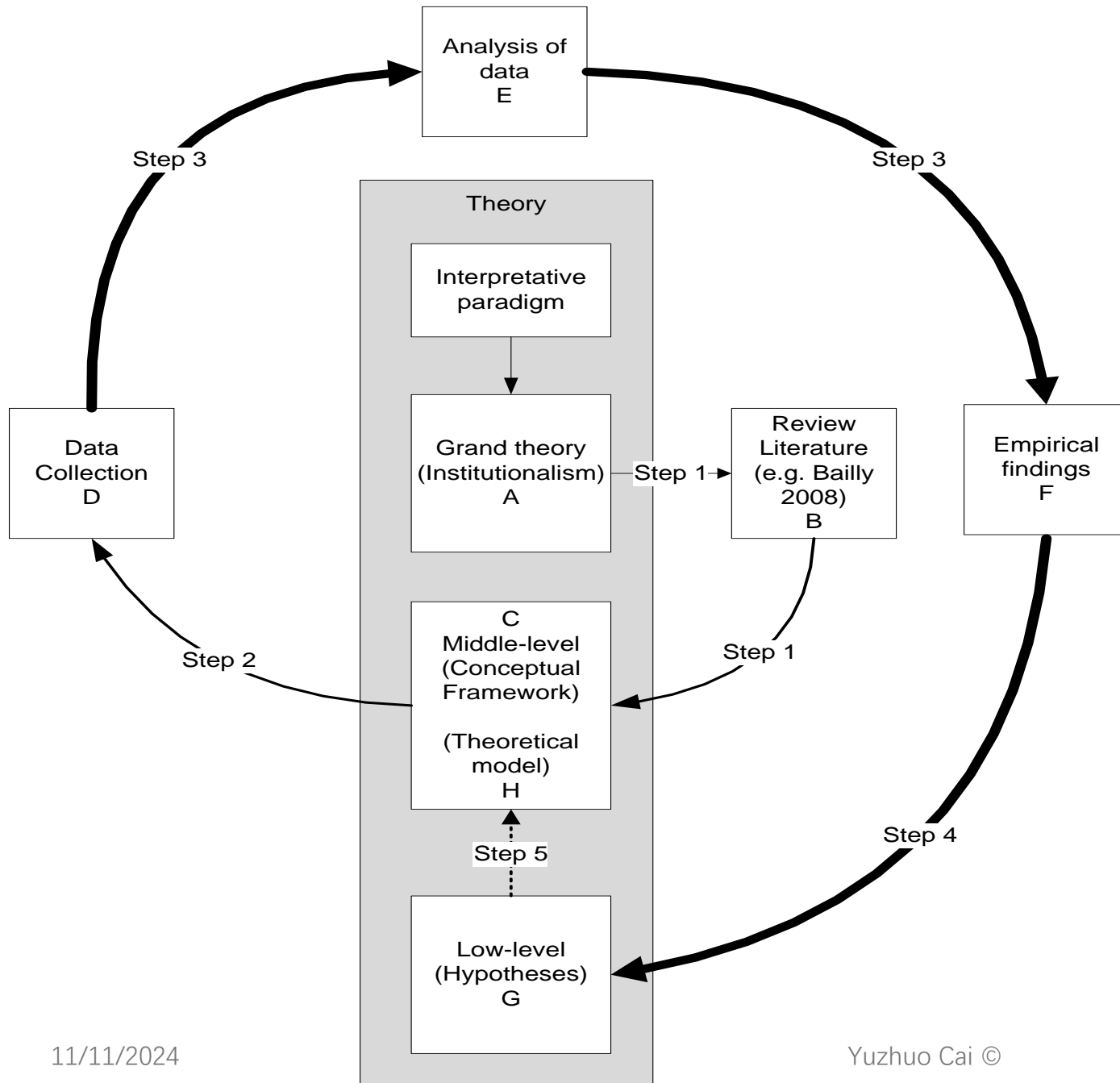
## Tips on writing about the analytical framework building

To decide on higher-level theory (Theory A) to be borrowed or applied and justify the choice.

To explain the theory's thesis.

To adapt the theory to a level closer to your research, integrate insights from a lower-level concept relevant to your research question.

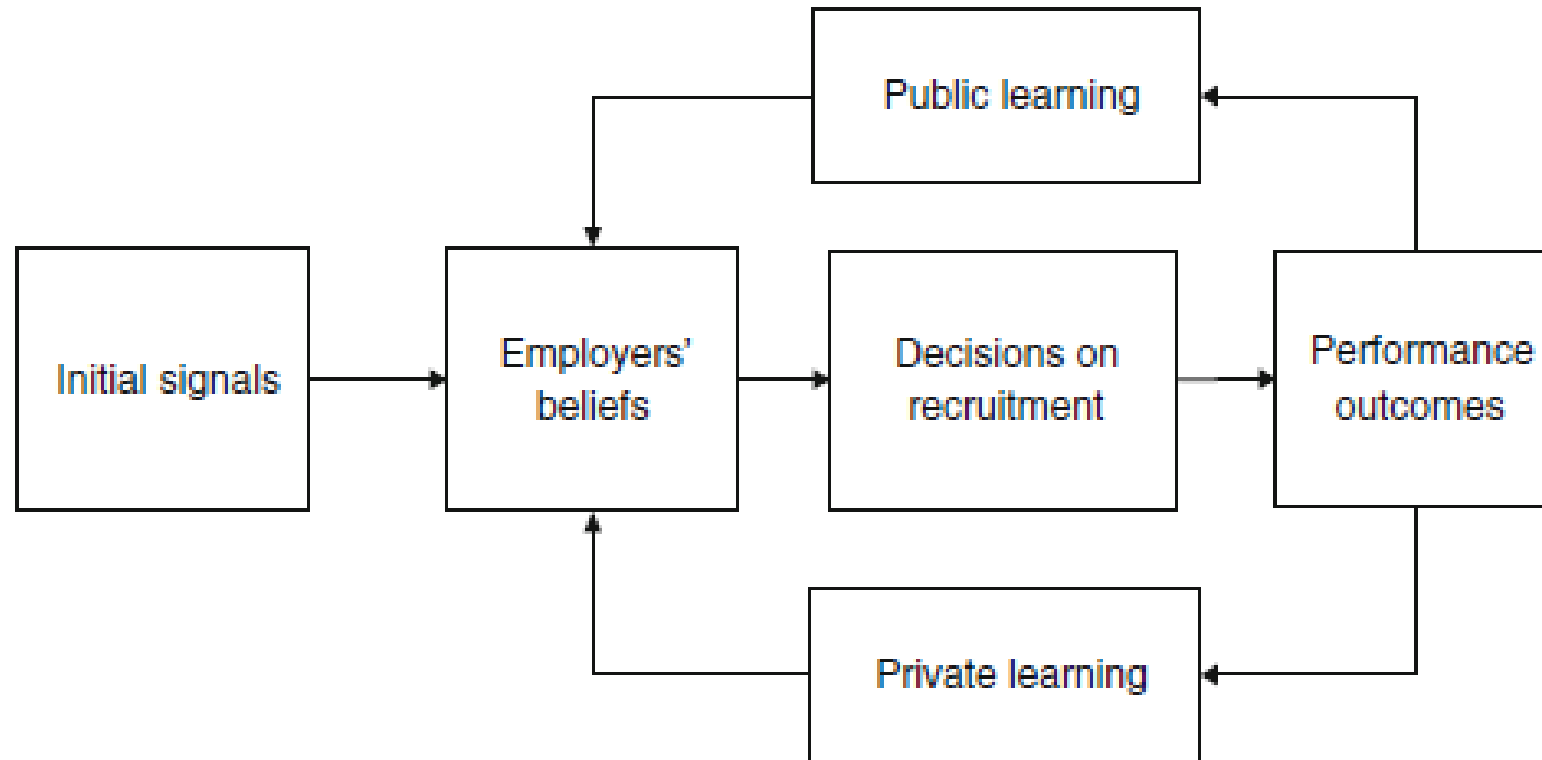
To explicitly show correspondence between key concepts in the research question and key concepts in the analytical framework.



## Analytical framework building as an independent conceptual paper

Cai, Y. (2013). Graduate employability: a conceptual framework for understanding employers' perceptions. *Higher Education*, 65(4), 457-469. doi:10.1007/s10734-012-9556-x

# Bailly (2008)'s framework



Bailly, F. (2008). The role of employers' beliefs in the evaluation of educational output. *Journal of Socio-Economics*, 37(3), 959–968.



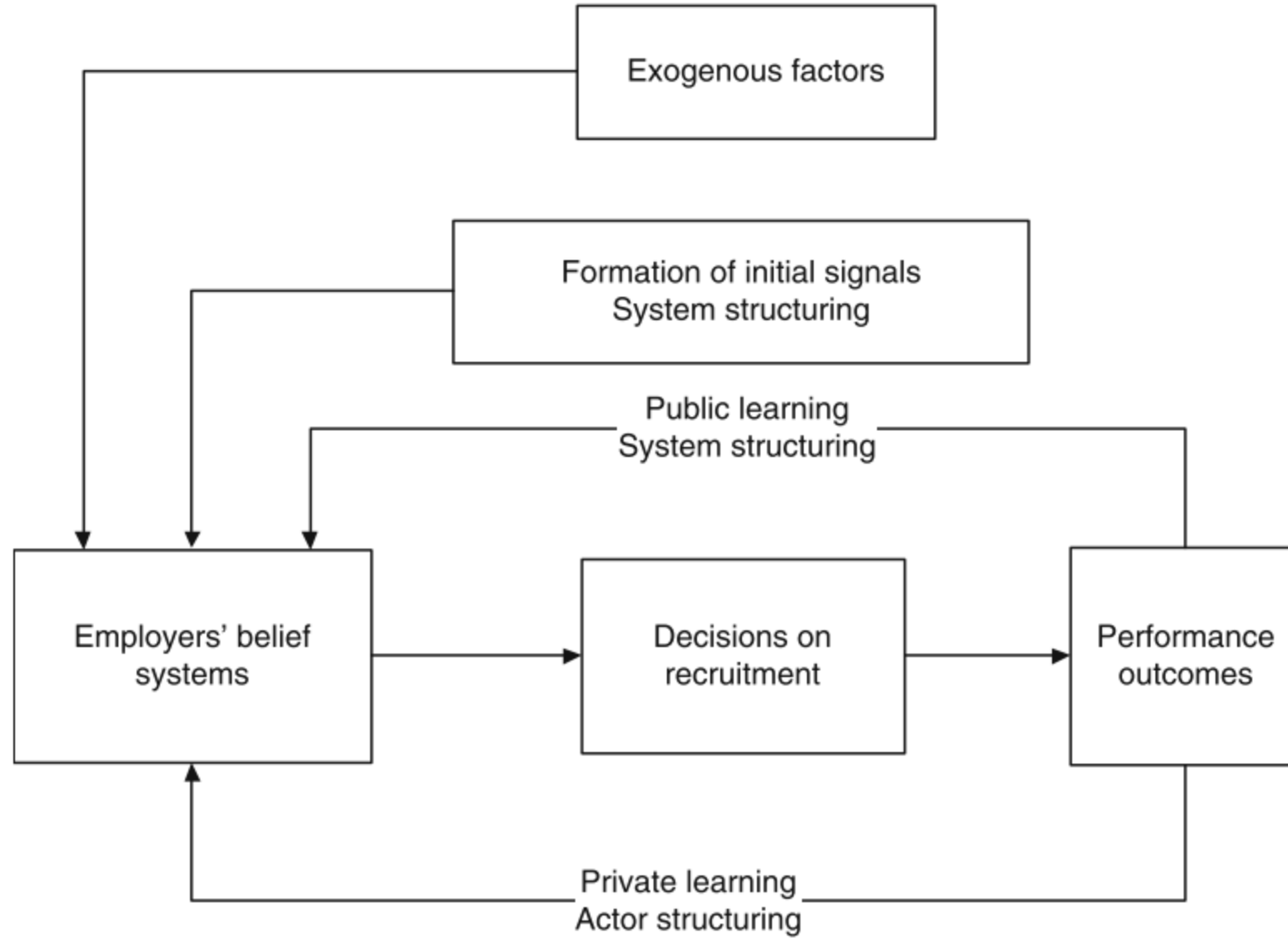
# Weakness of Bailly's framework

First, it remains a 'black box' on how the initial signals are developed and perceived by the employers.

Second, it does not theoretically explain the mechanisms underlying the public learning process.

Third, it is unclear whether there are other factors possibly affecting the employers' beliefs.

These gaps are expected to be filled in with the insights of institutional theory.



# Example: When theories and empirical inquiry are at different levels

- How does European and Chinese university collaboration help European companies turn collaboration challenges with Chinese counterparts into opportunities through developing transnational university-industry co-innovation networks?
- Cai, Y. (2023). Towards a new model of EU-China innovation cooperation: Bridging missing links between international university collaboration and international industry collaboration. *Technovation*, 119, 102553. <https://doi.org/https://doi.org/10.1016/j.technovation.2022.102553>

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There are no suitable theory or ready-made analytical framework can be applied to approach the research inquiry.



Some higher-level theories may shed useful insights on the phenomenon or research inquires but the correspondence between key concepts in the research question and key concepts in the theory or theoretical framework is blurred.

## Tips on writing about the analytical framework building

To decide on higher-level theories (Theory A & Theory B) to be borrowed or applied as well as justify the choice,

To explain the thesis of each theory and discuss their relevance to the research inquiry,

To interpret and integrate the theoretical insights from Theory A and Theory B by referring to the literature that deals with local issues close to the research inquiry for building an analytical framework.

To explicitly show correspondence between key concepts in the research question and key concepts in the analytical framework.

## *2.4. Combining the roles for developing TUICNs*

Structural holes and institutional distance between industrial organisations across national contexts can induce both challenges and opportunities. The roles of international university collaboration in turning international industry collaboration challenges into opportunities are summarised in [Table 3](#) and fall into two categories: 1) bridging structural holes between industrial organisations on both sides through networking and trust building and 2) leveraging institutional arbitrage. By combining both roles, universities in international collaborative partnerships can serve as anchor organisations in developing TUICNs, which may imply a new model of international innovation cooperation.

**Table 3**

The roles of international university collaboration in building TUICNs.

Roles from theoretical perspectives	Specific roles	Combined roles
<b>Bridging structural holes</b>	1. Connecting industrial partners from different countries 2. Building trust between the industry partner organisations bridged through university collaboration	Contributes to building TUICNs
<b>Leveraging institutional arbitrage</b>	3. Giving industrial actors access to new resources 4. Enhancing the reputations of international companies in their cooperation countries. 5. Breaking down taken-for-granted procedures	



THANKS!



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