

Responsible Innovation in a Radical New Technology: Policy and Commercialization Strategies for Synthetic Biology in the UK, USA and China.

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Research Introduction

- **Focus**--Responsible innovation and commercialization strategies of synthetic biology in the US, UK and China
- **Context**--Life changing merging technology, leading countries and rising power
- **How**--Various perspective levels; policy makers and companies
- **Challenge**--No standard definition or delineation of synthetic biology and commonly accepted description overlaps with other biology fields

Literature

Responsible innovation policy debate:

- Precautionary VS. post cautionary debate
- Risk management approach; adopt GMOs approach for the time being before big developments emerge; based on sub-fields and its knowledge of host system

Innovation Commercialization challenge:

- Patenting system challenge; debate on public access to the results of SB
- How to avoid "Tragedy of the commons"
- Few research has been done on company level

Potential ethical problems:

- Biosafety(uncontrolled release), bioterrorism (used by wrong hands), public involvement
- Risks assessment should be report to related authorities both during the process of research and during the process of commercial applications

Research Questions

- How do policy makers match industrial commercialization and innovation development with ethical caution ?

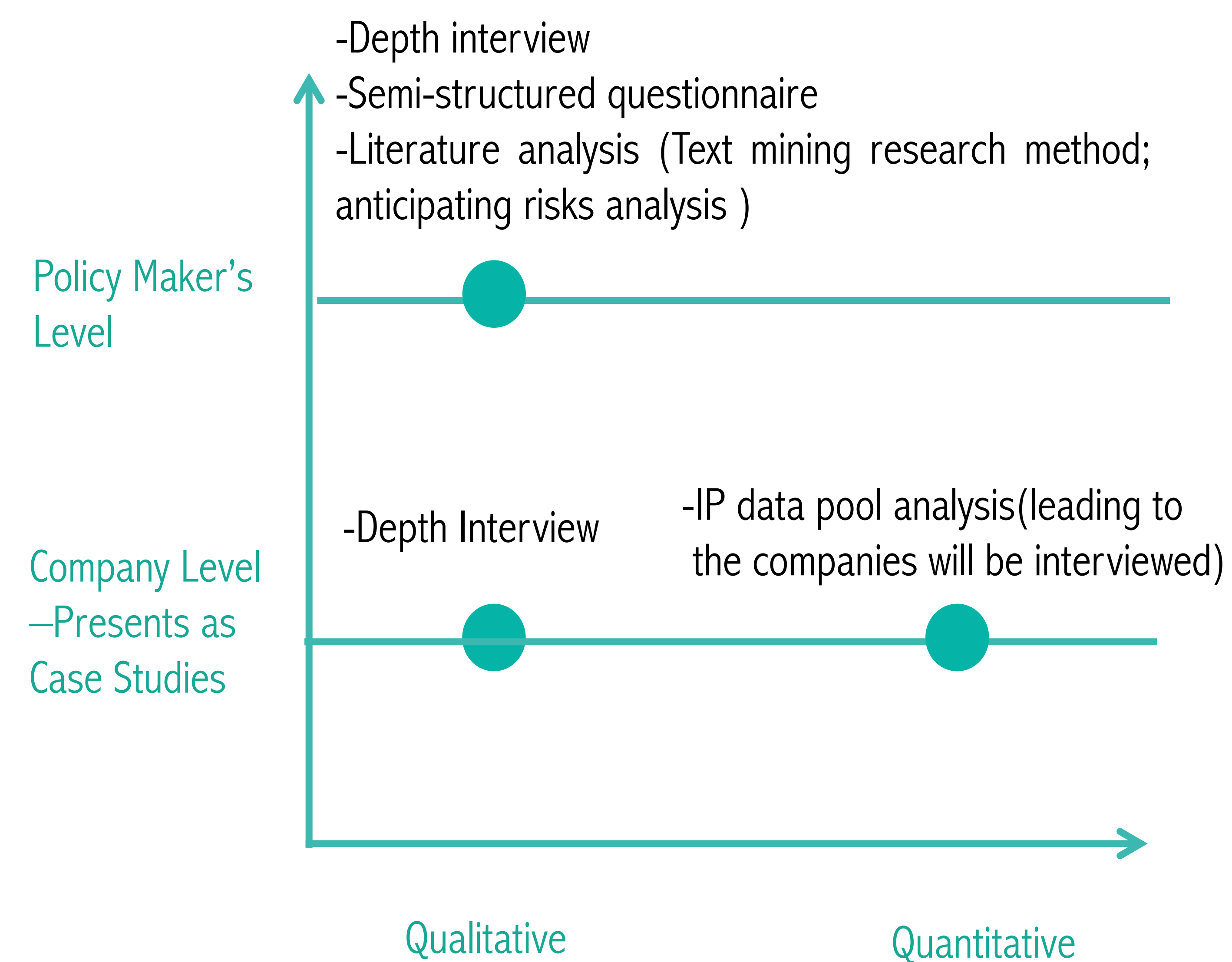


- What business model should companies adopt to be transparent, responsible meanwhile maintain their commercial competitiveness ?

Propositions

- Precautionary innovation policy needs to be matched with synthetic biology research development and its commercialization.
- Public policy plays bigger than commercial entities; ensure public access to research results
- Policy and regulations could bring out new business opportunities
- Synthetic biology firm should not only deliver commercial values to customers but also its company culture and belief of being transparent, open and responsible with innovation

Research Method-Mixed Method



Anticipating Results

-Promotes Industrial commercialization with an ethical caution



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