

How Collaborations may Impact on Innovations as A Sort of Relational Capital: The National Innovation Projects on Carbon Emissions Reductions of China as the Cases (General Design and Pilot Study)



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Introduction and Research Background

Over the last decades, global climate change has become a vital issue of the global environmental. According to a report issued by IPCC in 2014, the greenhouse effects caused by human activity, such as discharging excessive carbon dioxide in productions, has approximately 95% likelihood with global warming. As the world's largest carbon emitter since, China has been continuously contributed one-quarter of global carbon in the recent ten years. Excessive carbon emission is always treated as the price of China's long-period economic success in the last four decades, but China has been expected to change for further developments.

The Proportions of Carbon Emissions of China in the Whole World between 2008 and 2017 (Data from BP, 2018)



Carbon emissions reductions cannot be merely solved by a single enterprise or industry, because this complicated programme integrates many professional fields, such as environmental protection, energy, meteorological disaster reduction (Pan, 2016), and even economics and management studies. Hence, to achieve the innovations on carbon emissions reductions, participants in different areas should work together for this common goal, and it is meaningful to investigate the relationships among all participants when they are collaborating with each other.

Limitations of the Classic Innovation Theories and Research Gap

Either Open Innovation Paradigm (OIP) or National Innovation Systems (NIS) is perfect to push the process of innovations forward:

-Although OIP highlights the significances of integrating both internal and external resources and generally explain how different firms should collaborate for innovations, this mainstream theory does not clearly identify the main bodies or participants of collaborative activities, but merely using 'firms' and 'other firms' to separate the participants in markets.

-As to NIS, it does not clarify how different participants (such as government, industry, universities, research institutions, and other agencies) should collaborate with each other for active innovation activities, in details.

- There are few present papers on how OIP and NIS may practically utilised on the innovations of carbon emissions reductions around the world.

Contributions to Knowledge

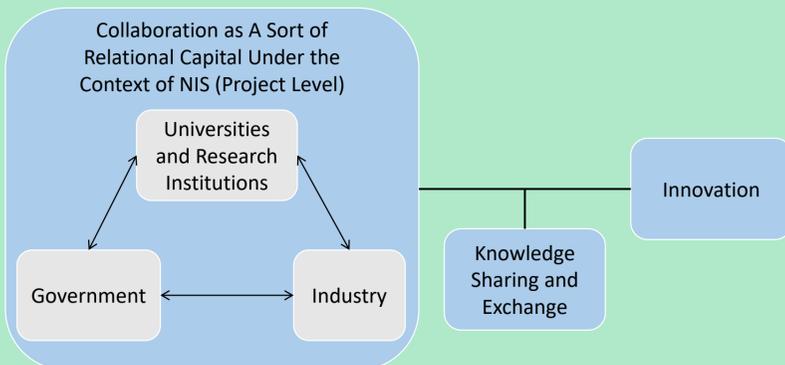
-The findings of my research are expected to enrich the current innovation theories, such as systematically explore how to manage and ameliorate collaborations among participants for more effective innovation activities on a project level, especially national innovation projects.

-This study will also potentially contributes to human resource management since this research will make suggestions on how interpersonal collaborative relationships should be established and maintained for better innovation practices within a project team.

-Furthermore, on organisational behaviour level, this research intends to provide different sorts of institutes with ideas and perceptions on collaborative relationships' built-up and improvements, which is beneficial for collaborative innovation projects for the future.

Conceptual Framework (Under Construction)

- Combining NIS and relevant relational capital concepts to re-define 'relational capital under the context of NIS';
- The mainstream viewpoints on the logics between relational capital and innovations.



-According to the existing studies, a mainstream viewpoint indicates that the accumulations and developments of relational capital may positively impact on innovation through facilitating knowledge sharing and exchange. However, the classic OIP model shows that innovations will be achieved through the integrations of innovative resources, rather than sharing knowledge purely. In this case, what else the mainstream viewpoint is missing, as well?

Research Questions

FOR WHOLE RESEARCH:

-How the mechanisms of collaborations among different participants are operated in the innovation projects on carbon emissions reductions in China?

-How collaborations may act as a type of relational capital to impact on innovations of carbon emissions reductions in the chosen research projects of China, through bringing different consequences?

-What are the problems or issues (both existing and potential) when different participants are collaborating for innovations on carbon emissions reduction on the project level?

-How collaborations among different participants in the innovation projects teams can be further optimised or managed to achieve more effective innovation activities for carbon emissions reductions?

FOR PILOT STUDY:

-On the logic level, what consequences may be brought by enhancing relational capital, except knowledge sharing and exchange, and how the consequences may impact on innovations on carbon emissions reductions of China?

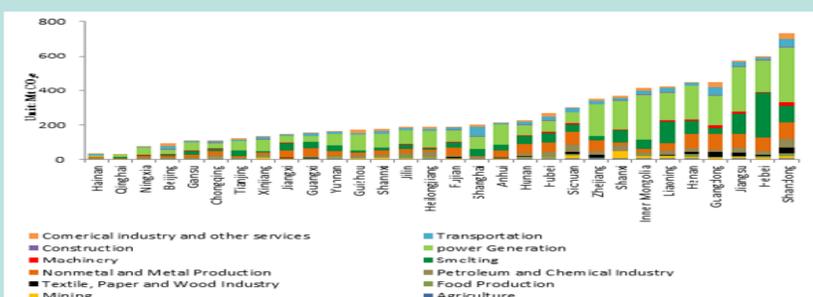
-How collaborations among government, universities and research institutions may impact on innovations on carbon emissions reductions of China, as a type of relational capital?

-To what extent trust and norms may mediate the effects of relational capital on innovations on carbon emissions reductions of China?

Research Methods

-The unit of investigation in this research comprises different participants in project teams (e.g. government, universities and research institutions, and firms) from several research project teams engaging in the areas of innovations on carbon emissions reductions, from two provinces of China. This research is based on case studies, and each project operated by a project team will be treated as a case study.

-Project leaders in each case and representatives from different participants (such as the leaders of different groups of participants in the same innovation projects) will be purposively selected as the research participants. In-depth interview will be used for data collection.



-Thematic analysis will be utilised to analyse the interview data. The viewpoints of all participants will be synthesised and coded. New definitions and propositions will be generated.

Main Findings of Pilot Study

The pilot study finds out that:

-Knowledge sharing and exchange is just one product of closed collaborative relationships, but it may not always positively impact on innovation.

-More closed collaborations will bring other consequences, except knowledge sharing and exchange, and these consequences will also impact on innovations.

-The Chinese government may collaborate or interact with universities and research institutions which engaging in three different approaches: (1) financial support; (2) politically encouragements; (3) monitoring and controlling both process and outcomes.

-Trust and norms may directly and indirectly affect both the establishments of collaborative relationships and outcomes of innovative outcomes of a project. But formal regulation in more effective to manage the process and guarantee the innovative outcomes.

