# Research Design of Empirical Studies:An Application of an Actual Design Method

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Whereas scholarly studies often elaborate on the design of the method for empirical data collection and analysis, surprisingly, the actual use of design principles taken from the domain of design and engineering of products has not come into the picture, yet; the stance of this paper is that the use of design principles taken from this domain may be beneficial for making choices and detailing research design.

[A bit more on the background and current literature on design/research design?]

The application is demonstrated through showcasing the research design process of a doctoral study. The topic explored in this doctoral study concerns the theoretical concepts of exploration and exploitation, especially focused on their implication in managerial practices of managing innovation. In addition, both theoretical and empirical validity of view exploration and exploitation as a dichotomy was questioned; this was done through challenging the domain assumptions sustaining these notions. In order to tackle this rather complex research problem, the study adopted ‘Pugh’s controlled convergence method’ (PuCC) to have a more systematic approach in setting the final research methods. This provides additional guidance to research design comparing to the traditional ‘methodological fit’, for example, ‘research onion’ proposed in Saunders et al. (2016 p. 124).

The principles of PuCC can be described as a process of narrowing down alternatives of a design based on issues to solve and requirements, with efforts of refining and specifying these issues and requirements (Kuppuraju et al., 1985, p. 92; Sturges et al., 1993, p. 94). It is suggested that using this method in the design process can improve the integrity of the final solutions of design (Dekkers, 2017, p. 100). Accordingly, the research design of the doctoral study has been broadly divided into three phases. The first phase identifies the foundation for the design. These include (1) the level of analysis, (2) the core issues that need to be addressed, and (3) the supporting requirements. A consideration of these three will lead to the identification of the general structure of the design. This is a general indication on how questions may be addressed in the empirical investigation. The second stage follows the principle of PuCC, starting from all possible solutions (in this case research methods), and then evaluating and discarding certain methods based on core issues and requirements. After this first evaluation, core issues and requirements are being refined, and the second evaluation took place. This process continues until the research design is finalised. The third phase is design synthesis, where final research methods is presented in a logical manner.

As a result, the research design process developed based on the principle of PuCC enables the doctoral study to systematically arrive at a set of methods suitable for investigating a complex research problem; this would not be possible without the use of design principles such as PuCC. The doctoral study presented in this paper is merely a showcase of the usefulness of such practice, more benefits of adopting design principles in research design should be further explored.

# References

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