Megaproject Management: Complexity, Governance and Organizational Behavior

Due to the rapid growth of global megaproject practices, the development of megaproject management theory and its "tension point" between theory and practice have drawn increasing attentions from both academics and practitioners. Megaprojects are temporary complex organizations composed of a large number of stakeholders, but theoretical research from the organizational perspective is relatively weak and limited.

To address this issue, this project, through multidisciplinary effort, investigated the complex relationships of megaproject organizations, and the forming and evolution mechanisms of organizational networks in and across megaprojects. It is found that the classic texts of megaproject management may emerge for the development of megaproject-management theory. Novel methods that integrate agent-based modeling and nonlinear analytical techniques were proposed for megaproject complexity analysis.

In addition, governance framework and organizational behavior agenda for megaprojects were developed from the organizational perspective. An original dual governance mechanism involving governments and enterprises was initiated under the Chinese context to enrich the theory of megaproject management and governance across cultural and institutional contexts. A systematic theoretical agenda for organizational behavior in megaprojects was formulated for the first time by expanding classical organizational behavior theory to a four-level framework.

Furthermore, a metadata-based structured Chinese megaproject case database was built to conduct multi-case studies by context and project taxonomy, and based on a longitudinal case study, the formation and evolution of long-term cooperative innovation networks across organizations was analyzed from the organizational-field perspective, leading to innovations in the theoretical base and research methods.

This research project has contributed to reconsider and extend the scope and theoretical basis of megaproject management and organization, as well as to enhance the project management profession by identifying new professional abilities and skills. It also has the potential to contribute to the further development of IPMA Standards in the megaproject context.