Governance of institutional complexity in megaproject organizations

KEYWORDS

- Institutional logic
- Institutional complexity
- Macro-level environments
- Megaproject
- Micro-level actors

Article highlight:

This paper examines a very large project (megaproject) in East Asia, spanning three different regions and involving disparate stakeholders with differing agendas and institutional cultures. It explores and formulates the governance structures and practices that evolved to address institutional complexity within the megaproject, looking at how conflicts were resolved at both the 'macro' and the 'micro' level.

What does the paper cover?

The authors seek to answer two questions: where institutional complexity emerges from, and how it relates to governance mechanisms and behaviours in megaprojects. A review of relevant literature shows how institutional complexity arises through the incompatible 'institutional logics' of organizations and how, in megaproject organizations, governance mechanisms play a key role in resolving this, as well as in planning and control.

The researchers consider a particular case study: **the Hong Kong–Zhuhai–Macao Bridge Project (HZMB)**, 2009–17. This was a megaproject to build a bridge, a tunnel and associated roads to link the special administrative regions of Hong Kong and Macao with each other and mainland China. It involved three political administrations and a number

of other stakeholders, creating a situation of institutional complexity with conflicts to be resolved and localized issues to be addressed, such as the need to protect the Chinese dolphin. The authors look at the mechanisms by which this was handled effectively.

Methodology:

The research team, two of whom were consultants on the HZMB megaproject, gathered qualitative data through semi-structured and unstructured interviews with senior managers; they also examined documentary evidence and conducted observations. The data was imported into a database and coded, enabling them to analyse and organise it into a theoretical framework.

Research findings:

Institutional complexity needs to be managed positively, since incompatible demands can cause uncertainty and fragmentation. The researchers found that institutional complexity could usefully be divided into six categories: *regulatory, political, social, cultural, relational* and *evolutionary* complexity. The first three were largely associated with *macro-level environments*, namely decision-making structures, and the others with *micro-level actors*, staff involved in the pragmatic side of the megaproject.

Governance mechanisms to address institutional complexity fell into four types. At macro level were *setting up of system leaders* and *localization of practices*. The first of these involves establishing committees and working groups to take on the necessary leadership responsibilities, in both the decision-making stage and the construction stage. The diagram shows the five main groups and committees, and the channels whereby they interacted.
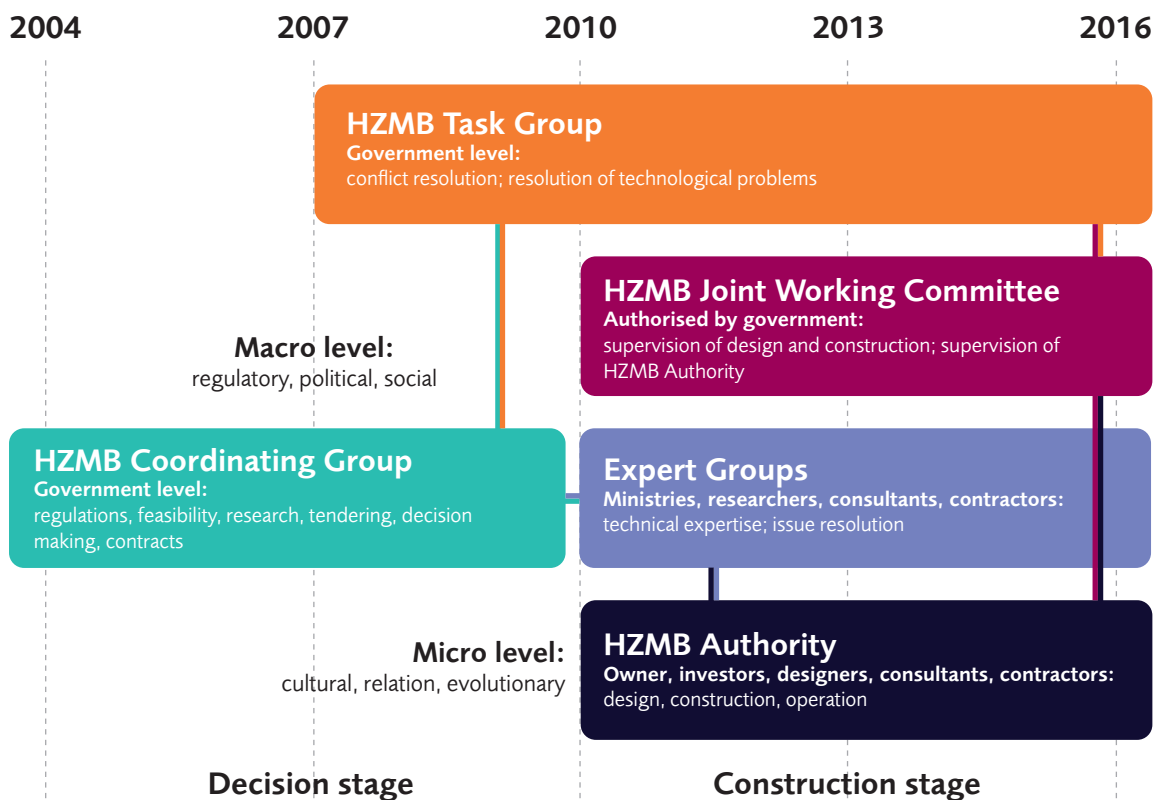
Governance structure of the HZMB megaproject

Localization of practices refers to the different regulations and environmental and design standards that existed in the three political regions and participating organizations. Resolution of these differences was achieved through a levelling-up process, with the most stringent standard being adhered to in each case. This produced both consistency and the necessary rigour to meet all requirements.

At micro level, the two significant governance aspects were **coordination hierarchies** (an organization hierarchy and a task hierarchy) and **flexible project design**. The organization hierarchy related to the groups and committees shown in the illustration but admitted of sufficient flexibility to enable individuals to shape their own roles according to their talents and ideas. The task hierarchy was a way of assigning relative importance to the types of conflict encountered. The more important types related to the overall principles and aims of the project, or to technological decisions. The less important (but still significant) ones related to public perceptions and localized expectations.

The researchers illustrated their formalized findings in figures, showing: the different subsets of institutional complexity; governance structure; the relationship between macro and micro levels; and dynamic interactions between different aspects of institutional complexity.

Conclusions and recommendations:

The four governance mechanisms provided a framework that was effective in conflict resolution, with the help of system leaders who could 'evolve during the different stages of the project's life cycle, adapting to its changing roles and functions'. Flexibility in governance made it easier to resolve clashes of organizational cultures or 'institutional logic'. The researchers found there is not one rigid solution to institutional complexity. Instead, a successful manager will facilitate teams in developing new standards and innovative practices. Conflicts at the macro level can be tackled in three ways: balancing out (finding common ground); innovating new approaches; and levelling up to a common (high) standard. At the micro level, resolution works more organically, with individuals self-adjusting and teams aggregating practices or developing new ones. Time is a factor in some of these adjustments: aggregation may occur earlier than innovation. Good communication mechanisms were found to be crucial.

Areas recommended for future research include how governance mechanisms resolve different types of institutional complexity; how and why individuals respond to that complexity; and how megaproject entrepreneurs can adapt their practices to address it.

Significance of the research:

This is the first research paper to present a theoretical framework showing how institutional logics can be successfully integrated through effective governance mechanisms and hierarchies. The findings suggest that institutional complexity can have a positive impact on the performance of a megaproject.

Complete article

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Glossary:

Megaproject:	A large-scale, complex infrastructure project that takes many years to complete and involves multiple stakeholders and participants.
Institutional logic:	Socially constructed beliefs, rules and practices by which individuals within an institution find meaning, organise their workspace and carry out their work.
Institutional complexity:	Complex structures and practices within an organization, arising from incompatible and conflicting institutional logics.
Macro-level environments:	The forums at government or management level responsible for broad decisions relating to the megaproject.
Micro-level actors:	Agents or participants in the megaproject, e.g. staff of contractor companies, who are involved in doing the work at grassroots level.