

Book Review:

*Megaprojects and Risk: An Anatomy of Ambition* by Bent Flyvbjerg, Nils Bruzelius and Werner Rothengatter

*Mega-projects: The Challenging Politics of Urban Public Investment* by Alan Altshuler and David Luberoff

Two recent books on the development and deployment of large projects have recently been released. Both books tackle Megaprojects, but from somewhat different points-of-view, one European, the other American; one disparaging, the other positive; one largely statistical-empirical, the other political-historical. We consider these books in turn.

In *Megaprojects and Risk*, Flyvbjerg et al. examined the problems with the conventional megaproject development process from the perspective of risk management. Based on in-depth reviews of three large-scale European megaprojects, namely the Channel Tunnel, the Great Belt Link, and the Oresund Link, the book is structured into two major portions: identifying problem and proposing solutions to the problem of interest.

To begin, the book identifies a common feature of the conventional megaprojects development, that is, despite the overwhelming costs overrun, below-projection revenue, and strikingly poor performance records in terms of economy, environment and public support, megaprojects grow continuously in number and scale around the world, forming the so-called megaprojects paradox. Understanding of this problem and its consequences are explored in the first six chapters, which document the costs overrun, demand overforecasts, and viability inflation of major megaprojects.

The book then proceeds to use risk as an analytic frame and identify the main causes of the megaprojects paradox to be inadequate treatment of risk, and more fundamentally, the lack of accountability toward risk. In particular, it is argued that megaprojects normally involved great magnitudes of uncertainties, making risks unavoidable, and decision makers and the public would be deceived about the project outcomes in absence of proper risk analysis. Hence, the book proposes acknowledging and managing project risks as a solution to the megaproject paradox.

The book attributes the problem of optimistic appraisal to the failure of the decision making process to acknowledge and manage risk, that is, decisions are made based on decision makers and the general public's misinformed visions about the outcomes of projects. However, one can explore further the causes of this problem since even if risks information were brought to the decision makers, optimal appraisal would not necessarily be reduced as long as incentives to produce optimistic estimate of viability are stronger than the disincentives. In fact, sensitivity analysis is normally included in feasibility studies, indicating the availability of information about associated risk. Ignorance of risk information in optimistic appraised projects could then be attributed to lack of incentives to treat the risk.

Risk management is not sufficient in order to fundamentally address the megaproject paradox. The concept of risk provides an instrument to analyze the problem. And lack of accountability to manage risk is identified as the key problem that leads to the megaproject paradox. However, the problem of risk management is a representation of an underlying cause: the institutional arrangement of the decision making process, that is, those who make decisions need not necessarily to be responsible for the risk of decisions made. Fundamentally addressing the megaproject paradox hence lies in better institutional arrangements such that decision makers are

also in the position of taking the risks of decisions made, which would create incentives to produce responsible decision making.

Transparency is one instrument of accountability proposed in this book to be employed in project development. An assumption of this approach is to take the role of government as one that represents and protects the public interest, and hence transparency requires the possibility for the public to verify this assumption at all times. While in principal this assumption is true, in practice government's functions deviate greatly from it, especially in the megaproject development process when the initiatives of projects are often a bottom-up process representing localized interests that are narrower than public interests. As a consequence, difficulties might arise when implementing the transparency strategy in terms of verifying government's role of protecting the public interests.

The idea of allocating risks to those best suited to manage them also serves an equity function, in the sense that it reverses the common practices of transferring costs of risks to the ordinary citizens, who are in the weakest positions to protect themselves.

One feature of the book is that it documents in detail the megaproject paradox based on information about hundreds of projects in twenty nations and cross five continents, which makes a rich resource for those who are interested in this topic and issue. The inherent connections between the identified problems and the proposed solutions, however, are not as strong and obvious in this book.

Under the similar title of *Mega-Projects: The Changing Politics of Urban Public Investment*, Alan Altshuler and David Luberoff examine the megaproject phenomenon from the perspective of public investment politics. Concentrating its coverage on three project types of highway, airport, and rail transit systems, the book studies cases of American large public works projects following the presentation of the history of American public investments and the leading theories of urban politics.

In particular, the book starts with narratives and empirical research of large public megaprojects through the history of urban public investment over the past century. This is followed by a review of leading theories of urban and American politics, examining how well theories can explain the facts observed through history. Common themes are drawn from the projects narratives and then most relevant theories are integrated with projects under study to pursue better understanding of the megaproject politics. Based on the review of previous megaproject developments, the book concludes with speculations on the future of urban mega-projects.

One feature of the book is the broad perspective it provides on the topic of megaprojects development in terms of the time span and theoretical scope. The history provides readers with a unique view of the patterns and trends of megaprojects developments at a macro level, integrating that with major policy shifts over time, insights could be drawn about the fundamental forces that drove the trend of project developments. Meanwhile, the wide spectrum of theories provides arrays of perspectives of how decisions are made and public choices are shaped.

Waves of megaprojects developments over the past half-century reflect the back and fourth interplay between the demand for megaprojects and the opposition to such projects from those that tended to be negatively affected. Throughout history and across different types of projects, it seems always true that the systems function in a way that some would benefit from a project while others have to pay for the costs. Hence the problem of balancing conflicting values would persist for megaproject development and "has no solution" as put by Altshuler and Luberoff. A realistic and

meaningful approach to dealing with this situation would be to improve the process design so as to seek the wisest balance among multiple perspectives.

Another interesting point brought up about the federal-local relationship in project development is the notion of “bottom-up Federalism” in chapter seven. Particularly, the book argues against the existence of national goals by federal government when granting funding assistances to local projects. Instead, the federal decision process is described as one dominated by local initiative and pork barrel bargaining. This explains why recent megaprojects normally fail any reasonable benefit-cost analysis and why the benefits-cost analyses of a project development process is, more often than not, at best of minor importance, at worst irrelevant.

These two books tackle one subject, and both are worthwhile contributions to the literature. Altshuler and Luberoff, based in Boston, seem encouraged by the Big Dig (dismissing the cost overruns as a political problem of curiosity as to how it is resolved, rather than a social problem that has significant opportunity costs), which those of us in the rest of the country paying for it may not see as quite as worthwhile. The Big Dig is impressive: both as a piece of engineering and a work of politics, but there is always the risk biographers have of falling in love with their subject. In contrast, Flyvbjerg et al. seem to face the opposite problem, condemning the projects they analyze, denying the benefits that may not appear on the benefit-cost ledger. While tending to lean in favor of B/C analysis, it is clear that some improvements open up new pathways for technologies whose benefits cannot properly be assessed at the present time.

If one thinks of the project (Big Dig or Channel Tunnel) not simply as a project, but as research and development for the future, developing new technologies for things like tunneling, having an apparent Benefit/Cost ratio below 1.0 might be justified. As noted by Altshuler and Luberoff, we have a mature transportation system. The projects described (new transit, new airports, new highways) are largely replacements, not new developments. It remains to be seen whether the technologies pioneered as part of megaprojects will open up new opportunities and enable the deployment of new networks.

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