The Role of Government in Setting an Appropriate Environment for Public Infrastructure Development: A Case Study of Hydropower Development in Lao PDR

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ABSTRACT

The role of government in setting an appropriate environment for public infrastructure development is explored to understand whether there are strong links between infrastructure, development and government. In examining this subject, a number of related issues are also considered, including why infrastructure is important to development, how managing resources well leads to better infrastructure outcomes and why it is essential that infrastructure is managed more effectively. Each of these leads to a better understanding of the roles government should play in infrastructure management.

The methodology is designed to develop a definition for infrastructure and understand what the literature says about the links between government, development and infrastructure. The manner in which infrastructure has been provided historically is also considered and this research supports a system of infrastructure management. The system is then investigated through a hydropower project in Laos that is examined as a qualitative case study.

The links between government, development and infrastructure are found to be strong in this thesis, but governments have had mixed involvement in infrastructure provision through the ages. At the end of the last century government is seen to have increasingly engaged with the private sector in a structured way. The core roles of government that cannot be left to others are found to include planning, procurement and regulation of infrastructure outcomes. These roles should be delivered within an overarching national infrastructure plan that is carried out by a centralised Infrastructure Management Unit.

The case study project highlights some enhancements that can be made to the system proposed in the thesis and helps explain why there are sometimes exceptions to application of the whole system, although exceptions should be limited because case-by-case project development is suboptimal to initiatives that are formed as part of a national infrastructure planning process.
I would like to acknowledge the following people who have made contributions of various kinds to be developments of this thesis. My supervisors at Massey University in New Zealand have provided important guidance to me over the years, encouraging me at times when I might otherwise have given up and, at other times, they have simply put me through the meat grinder! First, I would like to acknowledge my first supervisor, Beth Greener. Beth stuck with me during the period where I was tackling the thesis on and “on again, off again” basis but she was eventually called off to more important things and Professor Regina Scheyvens took up the mantle from there. Regina was a tremendous support and I particularly valued her direct and helpful feedback. I would also like to acknowledge Rochelle Stewart-Withers for providing a helpful pathway toward developing my methodology.

In Laos, I would like to extend thanks to all those who took part in my discussions in Vientiane. Laos is very dear to me and I hope this thesis and its recommendations are helpful to the country and other emerging markets in some small way. Thank you also to Tania, James and Carol, my colleagues at Ridgway Capital Projects. Each of you graciously reduced your hours and time commitment to the business in order for me to focus on my studies. My sincere thanks go to my wife, Sally, and my children: Rebecca, Hamish and Matthew. Thank you for putting up with me saying “this is the year that I will complete my thesis” at the start of each year. Thank you also for the sacrifices that you have made along the way as I have focused on my studies. To Andrew Lavery, who proofed the thesis and helped with the rigour needed for good referencing, my sincere thanks.

Finally, two major earthquakes in Christchurch, where I live, have interrupted the writing of this thesis. The second of these has wreaked massive damage on the city and its infrastructure. I hope that some of what I have written finds its way into Christchurch’s reconstruction.
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LIST OF ABBREVIATIONS

ADB  Asian Development Bank
AfDB African Development Bank
BOT  Build-Operate-Transfer
CA   Concession Agreement
CAREC Central Asia Regional Economic Cooperation
CBA  Cost-Benefit Analysis
CDF  Comprehensive Development Framework
CPI  Committee for Planning and Investment of Lao PDR
DAC  OECD Development Assistance Committee
DSM  Demand Side Management
EBRD European Bank for Reconstruction and Development
ECA  Export Credit Agency
EdL  Electricite du Laos
EGAT Electricity Generating Authority of Thailand
EGCO Electricity Generating PCL
EPD  Energy Promotion Department
G8   Group of Eight
GDP  Gross Domestic Product
GNI  Gross National Income
IADB Inter-American Development Bank
IBRD International Bank for Reconstruction and Development, part of the World Bank Group
ICSID International Committee for the Settlement of Investment Disputes
IDA  International Development Association
IFC  International Finance Corporation
IFRIC International Financial Reporting Interpretations Committee
IMU  Infrastructure Management Unit
IRN  International Rivers Network
IPP  Independent Power Project
ITD  Italian-Thai Development PCL
JBIC Japan Bank for International Cooperation
JICA Japan International Cooperation Agency
LHSE Lao Holding State Enterprise
MDGs Millennium Development Goals
MEM Ministry of Mines and Minerals of Lao PDR
MIGA Multilateral Investment Guarantee Agency
MOF  Ministry of Finance
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>MOU</td>
<td>Memorandum of Understanding</td>
</tr>
<tr>
<td>MW</td>
<td>Megawatt</td>
</tr>
<tr>
<td>NEM</td>
<td>New Economic Mechanism</td>
</tr>
<tr>
<td>NEPAD</td>
<td>New Partnership for Africa’s Development</td>
</tr>
<tr>
<td>NGO</td>
<td>Non Governmental Organisation</td>
</tr>
<tr>
<td>NIMBY</td>
<td>Not In My Back Yard</td>
</tr>
<tr>
<td>NPM</td>
<td>New Public Management</td>
</tr>
<tr>
<td>NPV</td>
<td>Net Present Value</td>
</tr>
<tr>
<td>NTPC</td>
<td>Nam Theun 2 Power Company</td>
</tr>
<tr>
<td>ODA</td>
<td>Official Development Assistance</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>PDA</td>
<td>Project Development Agreement</td>
</tr>
<tr>
<td>PFI</td>
<td>Private Finance Initiative</td>
</tr>
<tr>
<td>PPI</td>
<td>Private Participation in Infrastructure</td>
</tr>
<tr>
<td>PPIAF</td>
<td>Public-Private Infrastructure Advisory Facility</td>
</tr>
<tr>
<td>PPP</td>
<td>Public-Private Partnership</td>
</tr>
<tr>
<td>PRSP</td>
<td>Poverty Reduction Strategy Paper</td>
</tr>
<tr>
<td>PSC</td>
<td>Public Sector Comparator</td>
</tr>
<tr>
<td>PSOD</td>
<td>Private Sector Operations Division of the ADB</td>
</tr>
<tr>
<td>PSSS</td>
<td>Power Sector Policy Statement</td>
</tr>
<tr>
<td>PV</td>
<td>Present Value</td>
</tr>
<tr>
<td>UNCITRAL</td>
<td>United Nations Commission on International Trade Law</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
</tr>
<tr>
<td>UNECA</td>
<td>United Nations Economic Commission for Africa</td>
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<tr>
<td>UNECE</td>
<td>United Nations Economic Commission for Europe</td>
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<tr>
<td>UNESCAP</td>
<td>United Nations Economic and Social Commission for Asia and the Pacific</td>
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<tr>
<td>UNIDO</td>
<td>United Nations Industrial Development Organization</td>
</tr>
<tr>
<td>USD</td>
<td>US Dollars</td>
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<tr>
<td>VfM</td>
<td>Value for Money</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
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