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

A thesis presented in partial fulfilment of the requirements for the degree of Master of Philosophy in Development Studies at Massey University, Palmerston North, New Zealand.

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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 is it 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.

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# TABLE OF CONTENTS

<b>Abstract.....</b>	<b>ii</b>
<b>Acknowledgements .....</b>	<b>iii</b>
<b>List of Figures .....</b>	<b>vii</b>
<b>List of Tables .....</b>	<b>vii</b>
<b>List of Abbreviations.....</b>	<b>viii</b>
<b>Chapter 1 : Introduction .....</b>	<b>1</b>
1.1    Justification for the Research.....	1
1.2    Research Aims and Objectives .....	2
1.3    Outline of the Thesis Structure .....	3
<b>Chapter 2 : Methodology and Positionality of the Research .....</b>	<b>5</b>
2.1    Introduction.....	5
2.2    Positionality .....	6
2.3    Philosophical Underpinnings of the Research .....	7
2.4    Qualitative Case Study Approach.....	8
2.5    Ethical Considerations .....	10
2.6    Fieldwork Methods .....	12
2.7    Data Analysis.....	13
2.8    Conclusions.....	13
<b>Chapter 3 : Linkages Between the State, Infrastructure and Development .....</b>	<b>15</b>
3.1    The Role of the State in Development.....	15
3.2    Defining Development.....	15
3.2.1    Evolution of Development Theory .....	15
3.2.2    Recasting the Role of the State in a Post-Developmentalist World .....	18
3.2.3    Toward a Transformation of State Involvement in Development .....	20
3.3    The Role of Infrastructure in Development .....	21
3.3.1    Infrastructure Defined.....	21
3.3.2    The Relationship between Infrastructure and Development.....	25
3.4    Summary .....	35
<b>Chapter 4 : The Evolution of Infrastructure Provision and Implications for Developing Countries .....</b>	<b>37</b>
4.1    Introduction.....	37
4.2    Historical Provision of Infrastructure .....	37
4.2.1    European Infrastructure .....	37
4.2.2    Infrastructure in the United States .....	39

4.2.3	Social Changes and Development .....	40
4.3	Contemporary Themes in Infrastructure Reform.....	42
4.3.1	Deregulation and Privatisation.....	42
4.3.2	Private Participation in Infrastructure (PPI) .....	45
4.3.3	The Involvement of Public Agencies in the Financing of PPI Projects.....	49
4.3.4	Private Finance Initiative and Public-Private Partnerships.....	59
4.3.5	Evolution of Infrastructure Management Units .....	70
4.3.6	National Infrastructure Planning.....	73
4.4	Summary .....	75
<b>Chapter 5 : Good Practice Considerations For Infrastructure Management.....</b>		<b>76</b>
5.1	Introduction.....	76
5.1.1	Visualising the Infrastructure Needed to Serve Society’s Reasonable Expectations.....	76
5.1.2	Engaging with Society .....	77
5.1.3	Encapsulating Society’s Expectations in the Plan .....	77
5.1.4	Working with Competing Criteria and External Stakeholders .....	79
5.1.5	Establishing a Decision Framework .....	80
5.1.6	Essential Elements of an Infrastructure Management System.....	82
5.1.7	Introduction.....	82
5.1.8	Establishing a National Infrastructure Unit (Step 1) .....	84
5.1.9	Developing a National Infrastructure Plan (Step 2).....	84
5.2	Implementing the National Infrastructure Plan (Step 3).....	90
5.2.1	Listing projects that are consistent with the NDP and Infrastructure Development Objectives (Step 3a).....	91
5.2.2	Applying a prioritisation methodology to ensure the right projects are chosen (Step 3b).....	92
5.2.3	Ranking projects to arrange the order in which development is to take place (Step 3c) .....	93
5.2.4	Analyse the range of forms of cooperation applicable to projects (Step 3d).....	94
5.2.5	Consider risks and Value for Money to decide upon the best form of cooperation (Step 3e).....	96
5.2.6	Determining the degree to which government support is provided (Step 3f).....	99
5.2.7	Procuring providers of services (Step 3g).....	103
5.2.8	Implementing the project and ensuring assets are managed in accordance with expectations (Step 3h).....	106
5.2.9	Managing the assets and outcomes evolving from the National Infrastructure Plan (Step 3i).....	107
5.3	Summary .....	108
<b>Chapter 6 : Comparison of the Good Practice System to a Case Study Project.....</b>		<b>109</b>

6.1	Introduction to the Case Study: The Nam Theun 2 Hydropower Project.....	110
6.1.1	Laos.....	110
6.1.2	Early History of Electricity Generation in Laos .....	111
6.1.3	The Nam Theun 2 Project.....	113
6.2	Good Practice Infrastructure Management System as Applied to Nam Theun 2 .....	117
6.2.1	Policy and Legal Framework Supporting Nam Theun 2 .....	117
6.2.2	Institutional Setting for the Project.....	117
6.2.3	The Process of Identifying and Prioritising the Project.....	119
6.2.4	Designating the Project’s Form of Cooperation and Procurement.....	120
6.2.5	Deciding on the Degree of Government Support for the Project .....	122
6.2.6	Implementation, Monitoring and Evaluation.....	124
6.3	Project Comparison with Holistic Infrastructure Management .....	126
<b>Chapter 7 : Conclusions .....</b>		<b>130</b>
7.1	Thesis Summary.....	130
7.1.1	Purpose of the Research.....	130
7.1.2	Relationships between the State, Infrastructure and Development .....	130
7.1.3	The Evolution of Infrastructure Provision and Implications for Developing Countries.....	132
7.1.4	Good Practice Considerations for an Infrastructure Management System.....	133
7.1.5	Comparison of the System to a Case Study Project.....	134
7.2	Research Conclusions .....	136
7.2.1	Infrastructure is a not a universally defined term .....	136
7.2.2	Historically Governments have Played an Important but Mixed Role in Infrastructure.....	137
7.2.3	Structured Private Sector Involvement in Infrastructure is the Legacy of 20th Century Infrastructure Evolution.....	137
7.2.4	Relationships between Government, Infrastructure, and Development are Strong .....	138
7.2.5	Government has an important role to play as Planner, Procurer and Regulator of Infrastructure, but can often leave other Aspects to the Private Sector .....	139
7.2.6	An Infrastructure Management System for all Projects within a Country is Superior to Case by Case Project Development .....	139
7.3	Recommendations.....	140
<b>Appendix: Information Sheet .....</b>		<b>142</b>
<b>References .....</b>		<b>144</b>

## LIST OF FIGURES

Figure 1 – Categories of Environmental Indicators .....	33
Figure 2 – Links among infrastructure, poverty reduction, and growth.....	34
Figure 3 – Milestones in Infrastructure Reform in the United States, United Kingdom and the European Union .....	45
Figure 4 – Volume of PPI Infrastructure Investment from 1990–2008 .....	47
Figure 5 – Life Cycle Cost Assessment .....	61
Figure 6 – Forms of Public -Private Partnership.....	64
Figure 7 – Functions of an Infrastructure Management Unit.....	72
Figure 8 – Internal and External Planning Linkages between Infrastructure and Development Outcomes	82
Figure 9 – Steps toward an Infrastructure Management System.....	83
Figure 10 – Typical Structure of a Commercially Financed Infrastructure Project.....	87
Figure 12 – Project Feasibility Map Example.....	96
Figure 13 – The Process for Determining the Best Form of Cooperation .....	97
Figure 14– Deciding on Government Financial Support .....	100
Figure 15 – Balance of Financial Relationships in a Project .....	101
Figure 16 – Illustration of Project Economic and Financial Benefits and a “Viability Gap” .....	102
Figure 17 – Typical Infrastructure Procurement Process.....	105
Figure 18 – Map of Laos and Nam Theun 2 Location .....	114
Figure 19- Comparison of Proposed Infrastructure Management System with Nam Theun 2.....	128

## LIST OF TABLES

Table 1 – Infrastructure Categories, Types and Governmental Responsibilities in Australia .....	23
Table 2 – Principal Lao Power Sector Studies .....	112



## 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

MOU	Memorandum of Understanding
MW	Megawatt
NEM	New Economic Mechanism
NEPAD	New Partnership for Africa's Development
NGO	Non Governmental Organisation
NIMBY	Not In My Back Yard
NPM	New Public Management
NPV	Net Present Value
NTPC	Nam Theun 2 Power Company
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PDA	Project Development Agreement
PFI	Private Finance Initiative
PPI	Private Participation in Infrastructure
PPIAF	Public-Private Infrastructure Advisory Facility
PPP	Public-Private Partnership
PRSP	Poverty Reduction Strategy Paper
PSC	Public Sector Comparator
PSOD	Private Sector Operations Division of the ADB
PSSS	Power Sector Policy Statement
PV	Present Value
UNCITRAL	United Nations Commission on International Trade Law
UNDP	United Nations Development Program
UNECA	United Nations Economic Commission for Africa
UNECE	United Nations Economic Commission for Europe
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNIDO	United Nations Industrial Development Organization
USD	US Dollars
VfM	Value for Money
WTO	World Trade Organization