Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

ROADS INVESTMENT AND ECONOMIC GROWTH: SIMILARITY OR DIVERGENCE BETWEEN DEVELOPED AND DEVELOPING COUNTRIES

A thesis presented in partial fulfilment of the requirements for the degree of

Doctor of Philosophy

in

Planning

at Massey University, Manawatū,

New Zealand

Muhammad Babar Chohan 2016

Abstract

This research investigates how arguments for economic growth are perceived and advanced to promote road investment. In particular, it addresses the question of whether there is similarity or divergence between developed and developing countries given their different growth trajectories. In literature, the relationship between building roads and achieving economic growth is heavily reliant on quantitative tools while ignoring the socio-economic and political contextual details of developed and developing countries. Using the Aristotelian concept of phronesis, the research undertakes a comparative case study involving New Zealand and Pakistan. Phronesis is an intellectual virtue capable of incorporating practical problems and contextual issues in everyday life. The concept was operationalized for this thesis by devolving it into three main questions in which the roads policy direction, the associated processes and discursive pragmatism was explored. Detailed analysis of two major roading infrastructure projects, MacKays to Peka Peka (M2PP) in the Wellington region of New Zealand and a Ring Road in Lahore, Pakistan, shows that roads investment is promoted on the basis of national visions and policies without robust evidence of how economic growth will be achieved. The findings indicate that the national visions, related to case study projects, are not based on robust analyses and research but rather on strategic needs that advance the agenda of the powerful. The research found that the discourse of economic growth in each project was based on similar arguments about travel time saving, efficiency and employment growth regardless of public consultations. The research concludes that 'economic growth' is a niche created, advanced, and interpreted by power to achieve its strategic objectives in road development without contextual differences being considered in developed and developing countries.

Dedication

To my loving father Yaseen Chohan (late).

Acknowledgements

Associate Professor Imran Muhammad and Associate Professor Christine Cheyne from the School of People Environment and Planning, College of Humanities and Social Science, are the academic supervisors of this thesis. Their continuous guidance and assistance is deeply acknowledged. The guidance and supervision of Professor Paul Perry was very helpful and is equally acknowledged. Bent Flyvbjerg, Professor of the major programme Management at Oxford University's Saïd Business School, kept uploading his research on Facebook. These updates have provided deep theoretical insights for this thesis. His role is also acknowledged. The support of the Head of School Professor Glenn Banks in academic and administrative matters is also deeply acknowledged. The academic and administrative support of the former Head of School Dr Allanah Ryan is also equally acknowledged. I also acknowledge the support and help of my professors Dr Arjun Singh Bedi, Dr Mansoob Murshed and Dr Lorenzo Pellegrini who taught me various courses during my M.A at the International Institute of Social Studies, Erasmus University, The Netherlands.

The role of Government of Pakistan is acknowledged for providing me scholarship for this project. The administrative support of Dr Mukhtar Ahmad, Chairman, Higher Education Commission (HEC), and Mr Arshad Hayat, Special Assistant to Chairman, Federal Board of Revenue, Government of Pakistan, is acknowledged. I also acknowledge the role of all learning consultants and student advisors, particularly Dr Julia Rayner and Sonya Holm, for their proof reading, editing and other services. The support of non-academic staff of the school was equally inevitable. I acknowledge the support of the entire school staff particularly Mary Roberts, Kevin Butler, Amy Tootell and Rosie McLean. I also acknowledge the love and support of my friends and PhD fellows Jul, Axel, Dorcas, Yuanheng, Dora, Den, Andrew, Virginia, Abdurehman, Murad, Waheed, Hina, Shaan, Saba, Ainee, Amalia, Ross, Lee, Kashif, Akhtar, Tayyab, Weqas, Hashim and Rafaqat. The role of Dr Zulfiqar Butt,

Pakistan Project Administrator at Massey University, is acknowledged for keeping liaison with HEC regarding my scholarship and six monthly progress reports. The role of IT services was vital. IT Assistants Aidan Wood and Yousuf Baig handled various issues of Microsoft word. Their services are acknowledged.

The most important, and above all, is the role of my family members. My mother always prays for my success which I acknowledge from the core of my heart. Her prayers for me are, indeed, my asset. My wife Nuzhat and lovely boys Pasha and Mahatir supported me through thick and thin during this long doctoral journey and kept me motivated. I whole-heartedly acknowledge their love and support. I would have not been unable to write this thesis without their love and support. I also acknowledge the support and love of my siblings Sabar, Humayun, Maham, Allaudin, and Khurram. Finally, I recall a memory from my childhood. I asked my father, "Dad what do you want me to be when I grow up"? "Be whatever you like but always follow excellence" — he replied. His reply remains a guiding principle to which I wish to always adhere.

ABSTRACTI
DEDICATIONII
ACKNOWLEDGEMENTSIII
TABLE OF CONTENTSV
LIST OF FIGURESIX
LIST OF TABLESX
ABBREVIATIONSXI
CHAPTER ONE INTRODUCTION
1.1. A little boy and the experts
1.2. Background2
1.3. The key terms and conceptual framework4
1.4. The research questions and aim4
1.5. The structure of the thesis5
CHAPTER TWO ROADS INVESTMENT AND ECONOMIC GROWTH7
2.1. Introduction7
2.2. The struggling experts8
2.2.1. Roads investment and economic growth – the location theories' perspective . 10
2.2.2. How do regional growth theories connect roads investment and economic growth?
2.2.3. How do local development theories explain the link between roads investment and economic growth?
2.2.4. Road investment and economic growth – an evaluation within the local growth theories framework
2.3. Externalities shape the economic, social, environmental and spatial aspects of road projects
2.3.1. Economic externalities
2.3.2. Social externalities

2.3.3. Environmental externalities	29
2.3.4. Spatial externalities	31
2.4. Handling urban externalities by promoting dialogue and pragplanning	_
2.4.1. Traditional measurability tools	36
2.4.2. Towards better solutions: can communication work?	39
2.4.3. Why economic discourse?	42
2.5. Conclusion	45
CHAPTER THREE PRACTICAL WISDOM – THE MASTER VIRTUE	47
3.1. Introduction	47
3.2. Phronesis, urban planning and decision-making	47
3.2.1. Phronesis in the context of urban planning	49
3.2.2. Power as an inseparable component of phronesis and decisio	n-making51
3.3. Power, context and perception in a theoretical perspective .	58
3.3.1. A critical analysis of relevant theories incorporating power, co	
3.4. Choosing PPR framework	74
3.5. Conclusion	77
CHAPTER FOUR RESEARCH DESIGN AND METHODS	79
4.1. Introduction	79
4.2. The methodological framework and implementation of field	work strategy .80
4.3. Qualitative case study research	83
4.4. The M2PP and the LRR-SL as comparative case studies for dedeveloping countries	·
4.5. Research integrity	90
4.5.1. Ethical considerations	91
4.6. Case study methods	92
4.6.1. Document analysis	92
4.6.2. Semi-structured interviews	94

4.7. Handling the sources of qualitative data9
4.8. Data analysis
4.9. Conclusion
CHAPTER FIVE MACKAYS TO PEKA PEKA EXPRESSWAY: A POLICY ANALYSIS 10
5.1. Introduction
5.2. Land transport policy and planning in New Zealand10
5.2.1. Land transport policy and planning at national level
5.2.2. Land transport policy and planning at the regional level
5.2.3. Land transport policy and planning at the district level
5.3. MacKays to Peka Peka expressway – a policy and investment analysis 11
5.4. Conclusion
CHAPTER SIX PLANNING PROCESS AND PRAGMATISM IN MACKAYS TO PEKA PEKA ROAD OF NATIONAL SIGNIFICANCE
6.1. Introduction
6.2. Part 1: Stakeholder analysis
6.3. Part 2: Pragmatism in M2PP14
6.4. Conclusion
CHAPTER SEVEN LAHORE RING ROAD – SOUTHERN LOOP: A POLICY ANALYSIS 16
7.1. Introduction
7.2. Land transport policy and planning in Pakistan16
7.2.1. Transport policy and planning at the federal level
7.2.2. Transport policy and planning at the provincial level
7.2.3. Transport policy and planning at the district level: an analysis of Lahore Ring Road-Southern Loop
7.3. Conclusion
CHAPTER EIGHT PLANNING PROCESS AND PRAGMATISM IN LAHORE RING ROAD- SOUTHERN LOOP
8.1 Introduction

8.2. Part 1: Stakeholder analysis	196
8.2.1. Planning process at the strategic level	197
8.2.2. Planning process at the implementation level	203
8.3. Part 2: Pragmatism in LRR-SL	213
8.4. Conclusion	226
CHAPTER NINE DISCUSSION	229
9.1. Introduction	229
9.2. Understanding the policy approach towards achieving economic grow through urban roads investment	
9.3. Delineating power and interest in the transport policy processes	236
9.4. Undermining the dubious practices through problematization	239
9.5. Implications for developed and developing countries	241
9.6. Conclusion	250
CHAPTER TEN CONCLUSION	252
10.1. Introduction	252
10.2. Roads investment and economic growth: what is the contribution of thesis?	
10.3. Limitations and future research	255
REFERENCES	258
APPENDIX ONE	302
APPENDIX TWO	303
APPENDIX THREE	307

List of Figures

Serial	Title	Page
Number		Number
Figure 1	A typical Kuznets' Curve	35
Figure 2	Do you see a duck or a rabbit, or both?	60
Figure 3	The Delbeouf's illusion in which subjects were required to rank the disks, in white and black colours, as a function of size	62
Figure 4	The problem of perception	64
Figure 5	A methodological framework of the thesis	81
Figure 6	The land transport policy framework at national, regional and district levels	104
Figure 7	The relation between national and regional land transport documents	114
Figure 8	Seven initial Roads of National Significance	117
Figure 9	The proposed M2PP route	119
Figure 10	The IRS roads investment assessment profile form	129
Figure 11	The steps involved in the consenting process for RONS under the Resource Management Act requirements Source	136
Figure 12	The pre-construction decision-making process in M2PP	137
Figure 13	The weak and strong phases of stakeholders' involvement in the M2PP project	141
Figure 14	A billboard created by some Kapiti residents	146
Figure 15	The land transport policy framework at federal, provincial and district levels	165
Figure 16	Punjab transport policy documents and their comparative relevance	177
Figure 17	Lahore District level transport policy documents and their comparative relevance	185
Figure 18	Various changes in the LRR-SL routes	188
Figure 19	The steps involved in the LRR decision-making process	197
Figure 20	The pre-construction land acquisition process	211
Figure 21	The weak involvement of stakeholders in all four phases of the LRR project	213

List of Tables

Serial Number	Title	Page Number
Table 1	Links between urban roads investment and economic development	33
Table 2	Interview groups in the M2PP	96
Table 3	Interview groups in the LRR-SL	96
Table 4	Research participants interviewed for the M2PP project	97
Table 5	Research participants interviewed for the LRR-SL project	97

Abbreviations

ACF Advocacy Coalition Framework
ADP Annual Development Programme

AMP Asset Management Plan
ANT Actor-Network Theory
AP Assistant Professor
BCR Benefit-Cost Ratio
BGA Business Growth Agenda
BIM Briefing to Incoming Minister

BOI **Board of Inquiry BOT** Build, Operate, Transfer **BRT Bus Rapid Transit** Command and Control C&CC&W Communications and Works CBA Cost-Benefits Analysis CBD Central Business District CE Chief Engineer

CEO Chief Executive Officer

CGE Computable General Equilibrium

CM Chief Minister

CMS Critical Management Studies
CNZ Connecting New Zealand

CPEC China-Pakistan Economic Corridor CRP City and Regional Planning

CSTSL Comprehensive Study on Transportation System of Lahore

DD Deputy Director

DETR Department of the Environment, Transport and the Regions

DHA Defence Housing Authority

DIDR Development-induced Displacement and Resettlement

EAD Economic Affairs Division
EEM Economic Evaluation Manual
EIA Environmental Impact Assessment

EIC Evidence-in-Chief

EIRR Economic Internal Rate of Return
EPA Environmental Protection Authority
EPD Environment Protection Department
ESP Economic Survey of Pakistan

FEG Framework for Economic Growth
FWO Frontier Works Organisation
GHG Green House Gases

GM General Manager
GOPB Government of the Punjab

GPS Government Policy Statement on Land Transport

GWRC Greater Wellington Regional Council

HDI Human Development Index
HEC Higher Education Commission
H+T Housing and Transportation
IBP Incentive-based policies

IMPL Integrated Master Plan for Lahore

IPENZ Institution of Professional Engineers New Zealand

IRS Investment and Revenue Strategy

ISDP Integrated Strategic Development Plan (for Lahore Region)

ITP Integrated Transport Planning
ITS Intelligent Transport Systems
JHB Jobs-housing balance
JHI Jobs-housing imbalance

JICA Japan International Cooperation Agency

JV Joint Venture

KCDC Kapiti Coast District Council

LCCI Lahore Chamber of Commerce and Industry

LDA Lahore Development Authority
LGA Local Government Act
LRN Low Risk Notification
LRRA Lahore Ring Road Authority
LRR-NL Lahore Ring Road – Northern Loop

LRR Lahore Ring Road

LRR-SL Lahore Ring Road – Southern Loop

LTDP Long Term District Plan

LTMA Land Transport Management Act
LUTMP Lahore Urban Transport Master Plan

M2PP MacKays to Peka Peka
M&A Merger and Acquisition
MOT Ministry of Transport
MP Member of Parliament

MPA Member of Provincial Assembly MSSM Making Social Science Matter

MTDF Medium Term Development Framework
NDP National Development Programme

NEC National Economic Council

NESPAK National Engineering Service Pakistan

NIP National Infrastructure Plan
NLC National Logistic Cell
NLTP National Land Transport Plan
NOC No Objection Certificate
NPV Net Present Value

NTRC National Transport Research Centre

NZCID New Zealand Council for Infrastructure Development
NZEECS New Zealand Energy, Efficiency and Conservation Strategy

NZG New Zealand Government

NZRTF or RTF
New Zealand Road Transport Forum
NZTA
New Zealand Transport Agency
NZTS
New Zealand Transport Strategy
ONRC
One Network Road Classification
PAC
Public Accounts Committee
P&D
Planning and Development
PADT
Path Dependence Theory

PDWP Provincial Development Working Party

PGS Punjab Growth Strategy

PIAF Pakistan Industrial and Traders Association

PML (N) Pakistan Muslim League (Nawaz)

PML (Q) Pakistan Muslim League (Quaid-e-Azam)

PMU Project Management Unit
PODT Power Dependence Theory
PPP Pakistan People's Party
PPP Public-Private Partnership
PPR Phronetic Planning Research
PSC Project Steering Committee

PSDP Public Sector Development Programme

PSS Phronetic Social Science

PTI Pakistan Movement for Justice Party (Pakistan Tahreek-e-Insaaf)

PTOM Public Transport Operating Model PTPS Pakistan Transport Plan Study

PV Present Value QE Queen Elizabeth

RDT Resource Dependence Theory

RGNDI Real Gross National Disposable Income

RLTP Regional Land Transport Plan

Abbreviations

RLTS Regional Land Transport Strategy
RMA Resource Management Act
RONS Roads of National Significance
RPC Richard Paling Consulting
RPS Regional Policy Statement
RPTP Regional Public Transport Plan
RTC Regional Transport Committee

RTF Road Transport Forum

SACTRA Standing Advisory Committee on Trunk Road Appraisal

SAHA Saha International (Infrastructure Advisors)

SCMP Stakeholder and Communication Management Plan

SET Social Exchange Theory

SH1 State Highway 1

SID Similarity, Identity and Difference

SJS Safer Journeys Strategy
SOI Statement of Intent
TR Transport Representative

UET University of Engineering and Technology, Lahore

UGS Urban Green Space

UNDP United Nations Development Programme

UOS Urban Open Space
VFM Value for Money
VOC Vehicle Operating Cost
VTT Value of Travel Time
WEB Wider Economic Benefit
WLR Western Link Road

WNC Wellington Northern Corridor WRS Wellington Regional Strategy

