

**PUBLIC INVESTMENT IN NEPAL:
A CASE OF TRANSPORTATION
EXPENDITURE**

A Thesis

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RECOMMENDATION LETTER

This thesis entitled **Public investment in Nepal: A case of transportation expenditure** is submitted by Narayan Prasad Ghimire under my supervision for partial fulfillment of the requirements for the degree of Master of Arts in Economics. I forward it with a recommendation for approval.

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ABSTRACT

The rapid growth in public investment in various sectors are assumed after decades of conflict and unstable political situation. The declaration of Federal Republic nation, Nepal, is going to embark on accelerated economic growth. This has somewhat caused concern among policymakers of its implication for economic growth. And the investment of government on transportation infrastructure is the core strategies and called as the infrastructure of infrastructures. The main aim of this study is therefore, to explain the relationship between economic growth and the public investment on transportation sector in Nepal. Primarily, this study has focused on distinction of expenditures and Five Year plans among three systems (Panchayat, Democratic and Republic) showing the trend and structure of expenditure over these systems. The result shows the trend of investment of Government on public expenditure has increased in Republic System. This study used a time series data collected between 1975 and 2016 for further analysis. The statistical and econometric tools has been used for the study. The tools include the unit root test, lag length selection criteria, Johansen cointegration and VAR Granger Causality/ Block Exogeneity to investigate the relationship between public investment expenditure and economic growth in Nepal. Results revealed that the variables are not stationary in their original form but stationary has been found after first difference that is $I(1)$. The obtained regression model has been found to be satisfactory by diagnostic tests (errors are normally distributed, no serial correlation and homoscedastic). The data explained positively significant influence of Transportation Capital Expenditure on Gross Domestic Product. and hence it is contributing to economic growth. Furthermore, the results showed short run unidirectional causation from Transportation Capital Expenditure to Gross Domestic Product.

Keywords:

VAR Granger Causality/ Block Exogeneity, Johansen Cointegration, Unit Root Test, Lag Length Selection, Public Expenditure Component, Economic Growth, Nepal

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ABBREVIATIONS/ ACRONYMS

ADF	Augmented Dickey Fuller
AIC	Akaike Information Criterion
BOOT	Build Own Operate Transfer
BOT	Build Operate Transfer
CG	Government Consumption
CIT	Citizen Investment Trust
CRTS	Constant Returns to Scale
CTGIC	China Three Gorges International Corporation
DoRW	Department of Railways
DPR	Detail Project Report
ECM	Error Correction Model
EPC	Engineering Procurement and Construction
EPF	Employee Provident Fund
etc.	etcetera
FPE	Final Prediction Error
FV	Future Value
GDP	Gross Domestic Product
GON	Government of Nepal
HD	Harrod-Domar
HDI	Human Development Index
HQIC	Hannan-Quinn Information Criterion
IG	Government Investment
ICAO	International Civil Aviation Organisation
ICOR	Incremental Capital Output Ratio
IP	Private Investment
IRR	Internal Rate of Return

JB	Jarque-Bera
KM	Kilometer
LR	Likelihood Ratio
LN_RGDP	Natural Logarithm of Real GDP
LN_RTC	Natural Logarithm of Real Transportation Capital Expenditure
LN_RTR	Natural Logarithm of Real Transportation Recurrent Expenditure
MEC	Marginal Efficiency of Capital
MI	Miles
MP _L	Marginal Product of Labor
MPPW	Ministry of Physical Planning and Works
MW	Mega Watt
MWSP	Melamchi Water Supply Project
NEA	Nepal Electricity Authority
NPV	Net Present Value
NRs	Nepalese Rupees
NRB	Nepal Rastra Bank
NPC	National Planning Commission
NTC	Nepal Telecom
OLS	Ordinary Least Squares
PADP	Pashupati Area Development Project
PADT	Pashupati Area Development Trust
PFI	Private Finance Initiative
PPP	Public Private Partnership
PSP	Private Sector Participation
PV	Present Value
p-value	Probability Value
RBS	Rastriya Beema Sansthan

RGDP	Real Gross Domestic Product
RTC	Real Transportation Capital
RTR	Real Transportation Recurrent
SBIC	Schwarz Bayesian Information Criterion
SOEs	State Owned Enterprises
SWATEE	South Asia Watch on Trade, Economics and Environment
TFP	Total Factor Productivity
UTKHPL	Upper Tamakoshi Hydropower Limited
UTKHEP	Upper Tamakoshi Hydroelectric Project
VDC	Village Development Committee
VAR	Vector Auto-regressive
VECM	Vector Error Correction Model