

**RELATIONSHIP BETWEEN PUBLIC EXPENDITURE
ON EDUCATION AND ECONOMIC GROWTH OF
NEPAL**

A Thesis

**Submitted to Central Department of Economics
Faculty of Humanities and Social Sciences
Tribhuvan University, Kirtipur, Kathmandu, Nepal
in Partial Fulfillment of the Requirement
for the Degree of
MASTER OF ARTS
in
ECONOMICS**

**Submitted by
SUDIP GHIMIRE
Roll No.17/2071**

**Regd. No. : 7-2-32-176-2010
Central Department of Economics
Tribhuvan University, Kirtipur
Kathmandu, Nepal
March 2018**

**RELATIONSHIP BETWEEN PUBLIC EXPENDITURE
ON EDUCATION AND ECONOMIC GROWTH OF
NEPAL**

A Thesis

**Submitted to Central Department of Economics
Faculty of Humanities and Social Sciences
Tribhuvan University, Kirtipur, Kathmandu, Nepal
in Partial Fulfillment of the Requirement
for the Degree of
MASTER OF ARTS
in
ECONOMICS**

Submitted by

SUDIP GHIMIRE

Roll No.17/2071

Regd. No. : 7-2-32-176-2010

Central Department of Economics

Tribhuvan University, Kirtipur

Kathmandu, Nepal

March 2018

LETTER OF RECOMMENDATION

This thesis entitled **Relationship between Public Expenditure on Education and Economic Growth of Nepal** has been prepared by Sudip Ghimire under my supervision for partial fulfillment of the requirements for the degree of Master of Arts in Economics. I forward it with recommendation for approval.

.....

Tara Prasad Bhusal

Associate Professor

Thesis Supervisor

Central Department of Economics

Tribhuvan University

Kritipur, Kathmandu

Date: 27/02/2018 AD

15/11/2074 BS

APPROVAL LETTER

This thesis entitled **Relationship between Public Expenditure on Education and Economic Growth of Nepal** submitted by Sudip Ghimire has been evaluated and accepted as partial fulfillment of the requirement for the MASTER OF ARTS in ECONOMICS by evaluation committee comprised of:

.....

Prof. Dr. Kushum Shakya
Head of Department

.....

Prof. Dr. Om Sharma
External Examiner

.....

Tara Prasad Bhusal
Associate Professor
Thesis Supervisor

Date: 04/03/2018 AD

20/11/2074 BS

ACKNOWLEDGEMENTS

This thesis entitled **Relationship between Public Expenditure on Education and Economic Growth of Nepal** has been prepared for partial fulfillment of the requirements for the master's degree in Economics.

I would like to pay my sincere thanks and huge admiration to my thesis supervisor Associate Professor Tara Prasad Bhusal, Central Department of Economics, University Campus, Kirtipur, TU for his full guidance, motivation, support, constructive comments and feedback throughout my thesis. I would also like to express my gratitude to Prof. Dr. Kushum Shakya, HOD of Central Department of Economics, University Campus, Kirtipur, TU for her co-operation and suggestion and external examiner Prof. Dr. Om Sharma, for his valuable comments.

I would like to express my sincere appreciations to all my respected lecturers at Central Department of Economics for helping me to understand the concept of Economics and Research during my academic year by which I became able to carry out my thesis. I am also thankful to Tap Prasad Koirala and Siddha Raj Bhatta, Assistant Director of Nepal Rastra Bank for their support and guidance while conducting my thesis.

I am equally indebted to my father Rajendra Prasad Ghimire, mother Radha Ghimire and brothers Sujan Ghimire and Suman Ghimre, sister in law Usha Devkota and Amrita Sharma for their continuous inspiration, motivation and all level of support during this thesis work. I would also like to express special thanks to Kiran Dahal and Mahesh Acharya for their continuous motivation and guidance on this thesis work. Finally I am thankful to my friends Sarita Pokharel, Sagar Khanal, Narayan Ghimire and Bishwa Thapa and for their support and help during my thesis work.

Sudip Ghimire

March, 2018

TABLE OF CONTENTS

	Page No.
LETTER OF RECOMMENDATION	i
APPROVAL LETTER	ii
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vii
LIST OF FIGURES	viii
ABBREVIATIONS/ACRONYMS	ix
CHAPTER–I : INTRODUCTION	1-6
1.1. Background of the Study	1
1.2. Statement of Problem	3
1.3. Objective of the Study	4
1.4. Hypothesis of the Study	4
1.5. Significance of the Study	5
1.6. Limitations of the Study	5
1.7. Organization of the Study	6
CHAPTER–II : REVIEW OF LITERATURE	7-21
2.1. Conceptualization of Public Expenditure on Education and Economic Growth	7
2.1.1. Public Expenditure on Education	7
2.1.2. Economic Growth	7
2.2. Theories of Economic Growth	7
2.2.1. Classical Growth Theory	8
2.2.2. Neoclassical Theory	8
2.2.3. Endogenous Growth Model	8
2.2.4. Growth driven by Human Capital Accumulation	9
2.2.5. Human Capital and Technological Change	9
2.3. Theories of Public Expenditure	9
2.3.1. Classical views on Public Expenditure	10
2.3.2. Keynesian View on Public Expenditure	10

2.3.3. Role of Public expenditure in the Neo-Classical Growth Theory	10
2.3.4. Role of Government Expenditure in the Endogenous Growth Model	11
2.3.5. Wagner’s law of Increasing Public Expenditure	11
2.3.6. Wiseman and Peacock Hypothesis	11
2.3.7. Medium Voter Hypothesis	12
2.3.8. Musgrave and Rostow theory of Public Expenditure	12
2.3.9. Ernest Engel’s Theory of Public Expenditure	13
2.3.10. Pure Theory of Public Expenditure	13
2.4. International Context	14
2.5. National Context	19
2.6 Research Gap	20
CHAPTER–III : RESEARCH METHODOLOGY	22-33
3.1. Research Framework	22
3.2. Research Design	23
3.3. Sources of Data	24
3.4. Explanation of Variables	24
3.5. Model specification	25
3.6. Tools of Data Analysis	26
3.6.1. Unit Root Test	27
3.6.2. Johansen Cointegration test	28
3.6.2.1 Maximum Eigenvalue Test	29
3.6.2.2 Trace Test	29
3.6.3. Vector Error Correction Model	30
3.6.4. CUSUM Test and CUSUMSQ Test	30
3.6.4.1. CUSUM Test	30
3.6.4.2. CUSUMSQ Test	31
3.6.5. Granger Causality Test	32
3.6.6 Residual Diagnostic Test	33
CHAPTER–IV : PRESENTATION AND ANALYSIS OF DATA	34-52
4.1. Nature and trend of Public Expenditure on Education and GDP	34

4.1.1	Trend of Real GDP	34
4.1.2.	Trend of Public Expenditure on Education	35
4.2.	Trend of ratio of government expenditure on Education to GDP	35
4.3.	Trend of Recurrent and Capital Expenditure on Education	36
4.4.	Nature of Public Expenditure on Education	37
4.4.1	Average in Panchayat, Democracy and Republican System	37
4.5.	Nature of Public Expenditure on Education 5 Year Average	38
4.6.	Relationship between Public Expenditure on Education and Economic Growth	39
4.6.1.	Descriptive Statistics	40
4.6.2.	Differenced Data Graph	41
4.7.	Lag Length Test	43
4.8.	Cointegration Analysis	44
4.9.	Estimated Normalized Cointegration Vector	45
4.10.	Vector Error Correction Model	47
4.11	Target Equation	49
4.12.	VEC Granger Causality test Output	49
4.13.	Serial Correlation	50
4.14.	Heteroskedasticity	51
4.15.	Normality Test	51
4.16.	Stability Test	51
CHAPTER-V : SUMMARY CONCLUSION AND RECOMMENDATIONS		53-55
5.1.	Summary	53
5.2.	Conclusions	54
5.3.	Recommendations	55
APPENDICES		56-62
REFERENCES		63-67

LIST OF TABLES

Table No.	Heading	Page No.
4.1	Average under different Regimes	37
4.2	Public expenditure on Education at five year average	38
4.3	Statistical analysis of selected variables	40
4.4	Augmented Dickey Fuller (ADF) test to test Integration Order	42
4.5	The Ordinary last square model	43
4.6	Lag length criterion	44
4.7	Number of Cointegrating vectors	45
4.8	Normalised equation between the variables	46
4.9	Result of vector error correction model	48
4.10	VECM Granger Causality output	49
4.11	Breusch-Godfrey Serial Correlation LM Test	50
4.12	Breush-Pagan Godfrey test	51

LIST OF FIGURES

Figure No.	Heading	Page No.
3.1	A Framework for Public Expenditure on Education and Economic Growth	22
4.1	Trend of Real GDP	34
4.2	Trend of Public Expenditure on Education	35
4.3	Trend of Public Expenditure on Education to GDP ratio	36
4.4	Trend of Recurrent Expenditure and Capital Expenditure on Education	37
4.5	Log of Public Expenditure on Education and Economic Growth	39
4.6	Differenced Graph of Variables	41
4.7	Cusum and Cusum Square Recursive Residual	52

ABBREVIATIONS/ACRONYMS

ADF	Augmented Dickey Fuller
AIC	Akaike Information Criterion
ARDL	Autoregressive Distributed Lag
CEE	Capital Expenditure on Education
CUSUM	Cumulative Sum
CUSUMSQ	Cumulative Sum of Square
ECT	Error Correction Term
GDP	Gross Domestic Product
LM	Lagrange Multiplier
NCPI	National Consumer Price Index
Nrs.	Nepalese Rupees
RCEE	Real Capital Expenditure on Education
REE	Recurrent Expenditure on Education
RGDP	Real Gross Domestic Product
RREE	Real Recurrent Expenditure on Education
RTEE	Real Total Expenditure on Education
SEE	Secondary Education Enrollment
TEE	Total Expenditure on Education
VAR	Vector Auto Regressive
VECM	Vector Error Correction Model