PUBLIC INVESTMENT, PRIVATE INVESTMENT, GOVERNANCE AND TOURISM GROWTH IN FIVE SOUTH ASIAN ASSOCIATION FOR REGIONAL COOPERATION COUNTRIES

MUHAMMAD ATIF NAWAZ

DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA

MARCH 2018

PUBLIC INVESTMENT, PRIVATE INVESTMENT, GOVERNANCE AND TOURISM GROWTH IN FIVE SOUTH ASIAN ASSOCIATION FOR REGIONAL COOPERATION COUNTRIES

By

MUHAMMAD ATIF NAWAZ

(96129)

Thesis Submitted to
School of Economics, Finance and Banking (SEFB),
Universiti Utara Malaysia,
in Fulfilment of the Requirement for the Degree of Doctor of Philosophy

Kolej Perniagaan
(College of Business)
Universiti Utara Malaysia

PERAKUAN KERJA TESIS / DISERTASI
(Certification of thesis / dissertation)

Kami, yang bertandatangan, memperakukan bahawa
(We, the undersigned, certify that)

MUHAMMAD ATIF NAWAZ (96129)

calon untuk Ijazah
(candidate for the degree of) **DOCTOR OF PHILOSOPHY (ECONOMICS)**

telah mengemukakan tesis / disertasi yang bertajuk:
(has presented his/her thesis / dissertation of the following title):

PUBLIC INVESTMENT, PRIVATE INVESTMENT, GOVERNANCE AND TOURISM GROWTH IN FIVE SOUTH ASIAN ASSOCIATION FOR REGIONAL COOPERATION COUNTRIES

seperti yang tercatat di muka surat tajuk dan kulit tesis / disertasi.
(as it appears on the title page and front cover of the thesis / dissertation).

Bahawa tesis/disertasi tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan, sebagaimana yang ditunjukkan oleh calon dalam ujian lisan yang diadakan pada:
30 Oktober 2017.
(That the said thesis/dissertation is acceptable in form and content and displays a satisfactory knowledge of the field of study as demonstrated by the candidate through an oral examination held on:
30 October 2017).

Pengerusi Viva *(Chairman for Viva)*	: **Prof. Dr. Abdul Razak Chik**	Tandatangan *(Signature)*	
Pemeriksa Luar *(External Examiner)*	: **Assoc. Prof. Dr. Saidatulakmal Mohd**	Tandatangan *(Signature)*	
Pemeriksa Dalam *(Internal Examiner)*	: **Assoc. Prof. Dr. Nor 'Aznin Abu Bakar**	Tandatangan *(Signature)*	

Tarikh: 10 Safar 39 / **30 Oktober 2017**
(Date)

Nama Pelajar (Name of Student)	:	**Muhammad Atif Nawaz**
Tajuk Tesis / Disertasi *(Title of the Thesis / Dissertation)*	:	**Public Investment, Private Investment, Governance and Tourism Growth in Five South Asian Association for Regional Cooperation Countries**
Program Pengajian *(Programme of Study)*	:	**Doctor of Philosophy (Economics)**
Nama Penyelia/Penyelia-penyelia *(Name of Supervisor/Supervisors)*	:	**Assoc. Prof. Dr. Sallahuddin Hassan**

Tandatangan

PERMISSION TO USE

In presenting this thesis in fulfillment of the requirements for a postgraduate degree from the Universiti Utara Malaysia, I agree that the library of this university may make it freely available for inspection. I further agree that permission for copying this thesis, in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor or in their absence, by the Dean of School of Economics, Finance and Banking where I did my thesis. It is understood that any copying or publication or use of this thesis or parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the UUM in any scholarly use which may be made of any material in my thesis.

Request for permission to copy or to make other use of materials in this thesis in whole or in part should be addressed to:

Dean of School of Economics, Finance and Banking
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman

ABSTRACT

The present research investigates the effects of public and private investment in Travel and Tourism (T&T), and their interaction effect on tourism growth in five South Asian Association for Regional Cooperation (SAARC) countries. It also examines the interaction effect of public and private investment with governance on tourism growth in the region. The panel data for the five SAARC countries, from 1996 to 2015, is analyzed using Fully Modified Ordinary Least Squares and Pooled Mean Group methods. The study findings reveal that public investment, private investments, and their interaction positively affect tourism growth. The interaction effects of governance with public and private investments produce mixed results for the three indicators of governance. The interaction of political stability and absence of violence with private investment shows positive effect, however, its interaction with public investment illustrates negative effect on tourism growth. In addition, the interaction effect of control of corruption and public investment on tourism growth is positive, while there is an evidence of negative effect of the interaction of control of corruption and private investment. Similarly, the interaction effect of rule of law and public investment on tourism growth is positive, whereas, it is negative in case of the interaction of rule of law and private investment. Therefore, it is recommended that public investment needs to be increased in T&T, in addition to ensure conducive environment for private sector participation in order to reap its full potential. The study also suggests improving the governance, as it enhances the efficiency and productivity of public and private investments in T&T.

Keywords: governance, private investment, public investment, tourism

ABSTRAK

Kajian ini mengkaji kesan pelaburan awam dan pelaburan swasta ke atas sektor pelancongan (T&T) serta kesan interaksinya ke atas pertumbuhan pelancongan di lima negara *South Asian Association for Regional Cooperation* (SAARC). Kajian ini juga mengkaji kesan interaksi antara pelaburan awam dan pelaburan swasta dengan urus tadbir terhadap pertumbuhan pelancongan. Data panel bagi lima negara SAARC, dari tahun 1996 hingga 2015, dianalisis dengan menggunakan *Fully Modified Ordinary Least Squares* dan *Pooled Mean Group*. Hasil kajian menunjukkan bahawa pelaburan awam dan pelaburan swasta dalam T&T serta kesan interaksi secara positif mempengaruhi pertumbuhan pelancongan. Kesan interaksi di antara urus tadbir dengan pelaburan awam dan pelaburan swasta dalam T&T menghasilkan keputusan bercampur bagi tiga penunjuk urus tadbir. Interaksi kestabilan politik dan ketiadaan keganasan dengan pelaburan swasta menunjukkan kesan positif ke atas pertumbuhan pelancongan. Bagaimanapun, kesan interaksi dengan pelaburan awam adalah negatif. Seterusnya, kesan interaksi kawalan rasuah dan pelaburan awam terhadap pertumbuhan pelancongan adalah positif. Manakala, interaksi kawalan rasuah dan pelaburan swasta dalam memberi kesan negatif. Selain itu, kesan interaksi peraturan undang-undang dan pelaburan awam ke atas pertumbuhan pelancongan adalah positif, manakala kesan interaksinya dengan pelaburan swasta adalah negatif. Oleh itu, pelaburan awam dalam T&T perlu ditingkatkan bagi memastikan persekitaran yang kondusif kepada penyertaan sektor swasta untuk meraih potensi penuh. Kajian ini juga mencadangkan urus tadbir perlu diperbaiki bagi meningkatkan kecekapan dan produktiviti pelaburan awam dan pelaburan swasta dalam T&T.

Katakunci: urus tadbir, pelaburan swasta, pelaburan awam, pelancongan

ACKNOWLEDGEMENT

In the name of Allah, the most High, the Beneficent and the Merciful. May Allah's blessings and praises be upon the Prophet Muhammad ﷺ and his companions. First and foremost, my profound gratitude goes to Allah Subhanahu Wa Ta'ala for His infinite mercy, continuous guidance and endless blessings. Indeed, it is understood that the journey of PhD is an unachievable task for me but for the grace of Allah. Alhamdulilah.

I would like to offer my sincerest gratitude to my amiable supervisor, Associate Professor Dr. Sallahuddin Hassan. In fact, I am very fortunate to secure his supervision. The value of inputs I have received during the course of my PhD from him is unquantifiable. He gave me complete and free access to his wealth of knowledge and experience. He painstakingly guided me from onset to the completion of the program despite his tight administrative schedules and numerous academic responsibilities. Without his unconditional support and insightful feedback, none of this would have been possible. Words cannot express how appreciative I am for everything he has done. He gave me the motivation and confidence necessary to complete my doctoral studies. His wisdom, understanding and valuable feedback made this journey possible. May Allah bless him and his family out of his infinite mercy.

I am also greatly indebted to my reviewers in the proposal defense; Professor Dr. Abdul Razak Chik and Associate Professor Dr. Nor' Aznin Abu Bakar for sparing time to read my proposal and give valuable feedback.

I must also extend my sincere gratitude to my loving parents, Rab Nawaz and Shehnaz Begum, for their love and prayers, and the sacrifices that they made in my absence at home. My parents, brothers and sisters always remained a source of inspiration and motivation for me. May Allah bless you all with best of health, success and love. Ameen.

A special appreciation goes to my dearest wife Kiran Shehzadi. Your understanding, patience, encouragement and prayers gave me a very high morale and sense of direction. Your ability, foresight and motivation to stand with me in this difficult journey of PhD is a matter of pride to me. May Allah strengthens you, give you more wisdom and accord you with His grace, peace and protections. Equally, the prayers of my loving daughter, Fatima Bint-e-Atif contributed in this journey of PhD. She sacrificed her time and understood my busy schedules, and allow me to go for work. Baba loves you Fatima.

I must appreciate my all friends, especially, Shittu Waliu Olawale and many to mention, for their stimulating conversations that served as a constant inspiration to conduct research to the best of my abilities. A special acknowledgement is extended to all the staff of School of Economics, Banking and Finance (SEFB), UUM for their service throughout my program at UUM. My profound appreciation goes to my employer, The Islamia University of Bahawalpur, Pakistan, for approving my study leave for the whole period of my PhD. This would have not been possible without the assistance of my university. I am indeed grateful.

Muhammad Atif Nawaz
96129

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

Abbreviation	Full Meaning
2SLS	Two Stage Least Squares
ADF	Augmented Dicky Fuller
AIC	Akaike Information Criterion
ARDL	Autoregressive Distributed Lag
ASEAN	Association of Southeast Asian Nations
BPG	Breusch Pagan Godfrey
COC	Control of Corruption
CUSUM	Cumulative Sum
CUSUMSQ	Cumulative Sum of Squares
ECM	Error Correction Mechanism
ECT	Error Correction Term
EXR	Exchange Rate
FDI	Foreign Direct Investment
FMOLS	Fully Modified Ordinary Least Squares
GDP	Gross Domestic Product
HQ	Hannan Quin
ICT	Information and Communication Technologies
IMF	International Monetary Fund
INF	Inflation Rate
IPA	Integrated Program of Action
IPS	Im, Pesaran and Shin
LCU	Local Currency Unit
LDCs	Less Developed Countries
LLC	Levin, Lin and Chu
LM	Lagrange Multiplier
MPK	Marginal Productivity of Capital
MW	Maddala and Wu
OECD	Organization for Economic Cooperation and Development
OLS	Ordinary Least Squares
PBI	Public Investment in Travel and Tourism
PBI*COC	Interaction of Public Investment in Travel and Tourism and Control of Corruption
PBI*PSAV	Interaction of Public Investment in Travel and Tourism and Political Stability and Absence of Violence and Terrorism
PBI*PVI	Interaction of Public Investment in Travel and Tourism and Private Investment in Travel and Tourism
PBI*ROL	Interaction of Public Investment in Travel and Tourism and Rule of Law
PMG	Pooled Mean Group
POLS	Pooled Ordinary Least Squares
PSAV	Political Stability and Absence of Violence and Terrorism
PVI	Private Investment in Travel and Tourism

PVI*COC	Interaction of Private Investment in Travel and Tourism and Control of Corruption
PVI*PSAV	Interaction of Private Investment in Travel and Tourism and Political Stability and Absence of Violence and Terrorism
PVI*ROL	Interaction of Private Investment in Travel and Tourism and Rule of Law
R&D	Research and Development
RESET	Regression Equation Specification
ROL	Rule of Law
SAARC	South Asian Association for Regional Cooperation
SC	Schwarz Criterion
T&T	Travel & Tourism
TE	Employment in Travel and Tourism
TG	Tourism Growth
UNEP	United Nations Environment Program
UNWTO	United Nations World Tourism Organization
VAR	Vector Autoregressive
WCED	World Commission on Environment and Development
WDI	World Development Indicators
WEF	World Economic Forum
WGI	Worldwide Governance Indicators
WTTC	World Travel and Tourism Council

CHAPTER 1

INTRODUCTION

This chapter presents background of study followed by the statement of the problem. Afterwards, research questions and general and specific objectives of the study are stated. Then, the potential contribution of the study and scope of the research are briefly discussed. The introduction closes with a brief structure of the study.

1.1 Background of the Study

Nowadays, it is a well known that tourism plays a crucial role in bringing countries and individuals together which contributes to mutual understanding and generates sources of revenue and employment. As noted by Pham (2012), tourism is considered as an efficient and effective mean in revitalizing the economy of any tourist destination. This sector is also widely acknowledged among the fastest growing industries globally (Basu, Ghosh, Siddique, & Gabbay, 2003; Ganesh & Chockalingam, 2010; Lanza & Pigliaru, 2000; Newsome, Moore, & Dowling, 2002; Tse, 2001). For many countries, tourism has turned into a main source of earning foreign exchange, employment generation and economic growth (Basu *et al.*, 2003). For developing countries, it is acknowledged as a key source of growth and development (Haller, 2012; Hodur, Leistritz, & Wolfe, 2005). Many scholars such as Archer and Owen (1971), Banskota (2007), Eugenio-Martin, Morales, and Scarpa (2004), Lee and Chang (2008), Sinclair (1998) and Stabler, Papatheodorou, and Sinclair (2009) asserted that tourism can enhance growth and development as it generates income,

foreign exchange earnings and employment having spillover effects on all the sectors of the economy. Williams and Hall (2000) stated that tourism is recognized as a favorable sector to generate employment, thus reducing widespread poverty in South Asia, because various branches of tourism industry like accommodation, transport, beverage and food, catering, recreational and excursion activities has the capacity to generate employment and income for diverse groups of population (Rasul & Manandhar, 2009).

According to United Nations World Tourism Organization (UNWTO) (2016), the growth and extended diversification of tourism has made this sector among fastest growing industries globally. Modern tourism encompasses a large number of existing and new destinations; thus, it is closely associated to the economic development. These dynamic characteristics have turned tourism into a main driver for socio-economic development. The business volume of tourism these days equals or even exceeds the business volume of automobiles, food products and oil exports as nine percent of Gross Domestic Product (GDP); 1 out of 11 direct, indirect and induced jobs; six percent of the world's exports; 1.4 trillion in exports; 30 percent service exports (Robaina-Alves, Moutinho, & Costa, 2016). This sector has turned as a major player in international business, and at the same time, it became as a major source of income for several developing countries. An increased competition and diversification among various tourist destinations came parallel with the tourism growth. The significance of tourism can be realized with the fact that this sector constitutes almost nine percent of world GDP, supports directly and indirectly 9.09 percent of the jobs in the world, shares USD1.4 trillion in world's exports and 30 percent of services exports in the world are from tourism sector (UNWTO, 2015).

As stated by Gautam (2014), as an economic activity, tourism generates numerous direct, and indirect induced effects in the economy as it generates opportunities for employment and enhances the earnings from foreign exchange. Consequently, the generated flows of income being circulation in the economy instigates and encourages numerous other economic activities to take place which stimulates many rounds of employment and income in other economic sectors as well.

1.1.1 Tourism Development in South Asia

South Asia consists of eight countries: Pakistan, Maldives, Sri Lanka, Nepal, India, Bangladesh, Bhutan and Afghanistan. This region is recognized as a distinct region of the world with a massive connecting land mass, assorted physical features from swamplands to deserts, grasslands to forests, coastal areas to mountains, a huge variety of natural resources, scenic beauty and rivers, and diverse climatic conditions which makes this region even more attractive. This region shares common values, culture and history. The Indian Subcontinent constituting the greater part of this region, also inherits common institutions like educational, judicial and administrative institutions and physical infrastructure such as roads, railways and inland waterways (Rasul & Manandhar, 2009).

South Asian countries not only share physical infrastructure, but also share traditions and cultural values. The infrastructure of road and rail, which was built during the British Empire and Mughal regime, is still in its position. A tourist could easily catch a bus from

Karachi in Pakistan to Dhaka in Bangladesh across India or a train from Peshawar in Pakistan to Delhi in India, if the national borders allow such movement. Moreover, the economic and social structures in the said region are also quite similar (Rasul & Manandhar, 2009). They added that this area is among mostly dense regions in the world in terms of population, which contains approximately 20 percent of the world population with only 3.31 percent of land mass. Furthermore, they asserted that South Asian countries remained economically weak despite such great potential of tourism.

Being located close together geographically, with common religious and cultural resources of tourists' interest and shared economic and physical infrastructures, South Asian countries have the capability of generating productive employment opportunities, thus reducing poverty through tourism by making use of existing cultural, economic and human resources (Khan & Khan, 2003; Rasul & Manandhar, 2009; Sharma, 2006; Sobhan, 1999). Economic well-being among South Asian countries can be increased through stronger partnerships and these partnerships can bring stability and peace through enhanced better understanding individuals from different nations (Khan & Khan, 2003; Mehrotra, 1995; Sobhan, 1999).

In the contemporary world, tourism has been considered among the most remarkable social and economic phenomena. The core elements of Travel and Tourism (T&T) industry are recreation, catering, accommodation, transport and services (Petrescu, 2011). According to Timothy (2003), tourism has been a subject of mutual cooperative interest for South Asian Association for Regional Cooperation (SAARC) countries since late 1980s, and a

promotion scheme for organizing tourism in South Asia was introduced in 1986. An agreement was made among SAARC member countries under that scheme member to work together for the promotion of tourism including the adoption a travel voucher system to encourage intra-SAARC tourism. The Integrated Program of Action (IPA) in early 1990s was a major initiative taken by the SAARC to promote the tourism and transport cooperation. In 1991, a tourism committee was established for the promotion of tourism by SAARC. In October 1991, the committee held its very first meeting in Colombo, in which an agreement was made as an action plan for the cooperation regarding information exchange, training programs, investment, marketing and intra-regional tourism (Rasul & Manandhar, 2009). Afterward, the SAARC Tourism Council was established to stimulate the tourism activities in the region.

Figure 1.1 shows the tourism share of South Asia and other regions of the world in terms of international tourist arrivals (overnight visitors). It is clearly shown in Figure 1.1 that the tourism share of South Asia in terms of international tourist arrivals is very less despite the fact that international tourist arrivals hit a record of 1133 million tourists worldwide in 2014, up from 1087 million in 2013 showing a growth of 4.3 percent and South Asia received only 17.1 million tourists (UNWTO, 2015).

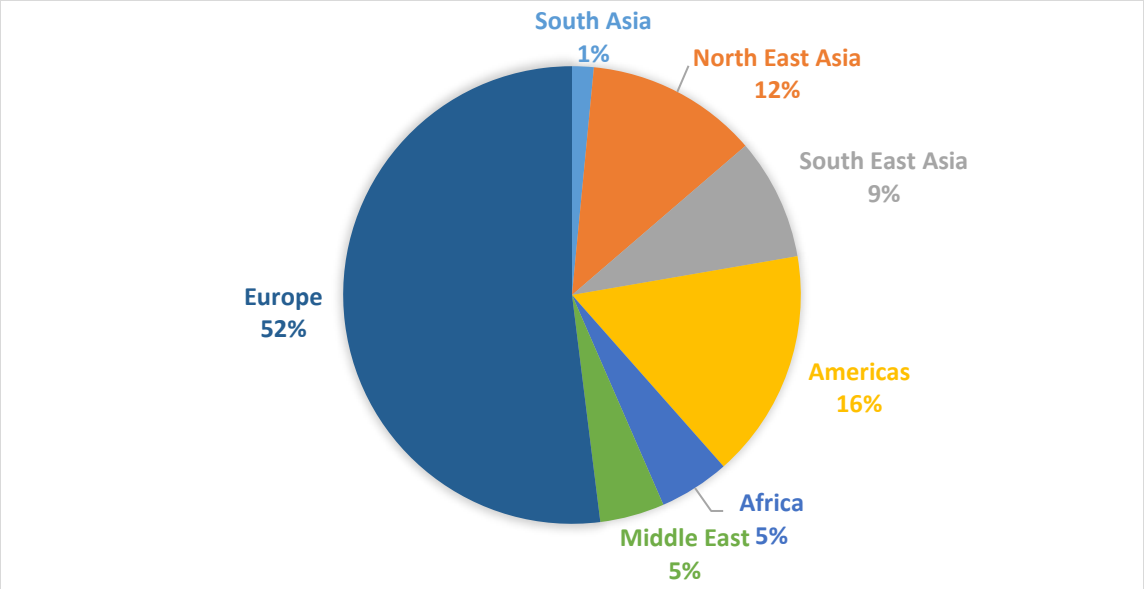


Figure 1.1
International Tourist Arrivals, 2014

Currently, the situation of T&T is not good in South Asia. Table 1.1 illustrates current situation of T&T regarding relative rank of South Asia out of 12 regions and selected five SAARC countries among 184 countries around the globe. Moreover, the direct contribution of T&T to GDP measured as percentage of GDP, total contribution of T&T to GDP measured as percentage of GDP, direct and total contribution of T&T employment out of total employment, visitor exports as percentage of total exports and T&T investments as percentage to total investments is also summarized in this table. The World Travel and Tourism Council (WTTC), (2015, p. 11) defined the direct contribution of T&T to GDP is defined as "the GDP generated by industries that deal directly with tourists, including hotels, travel agents, airlines and other passenger transport services, as well as the activities of restaurants and leisure industries that deal directly with tourists". On the other hand, the total contribution of T&T to GDP is defined as the GDP directly generated by the T&T sector as well as its induced and indirect contributions.

Table 1.1

Situation of Travel & Tourism in South Asia and Selected SAARC Countries, 2014

		South Asia	Pakistan	India	Sri Lanka	Nepal	Maldives
Relative Rank of region/ Country	On the basis of contribution in GDP	12th out of 12 regions**	125 out of 184 countries	130 out of 184 countries	70 out of 184 countries	101 out of 184 countries	4 out of 184 countries
Direct Contribution of T&T to GDP	% of GDP	2.4	2.9	2.2	4.8	4.3	41.5
Total Contribution of T&T to GDP	% of GDP	6.8	6.9	6.7	11.1	8.9	78.1
Direct Contribution of T&T to Employment	% of Employment	4.7	2.4	5.5	4.3	3.5	32.2
Total Contribution of T&T to Employment	% of Employment	7.9	6.0	8.7	10.0	7.5	62.0
Visitor Exports (% of total exports)	% of total exports	4.8	3.0	4.1	21.3	25.2	76.2
T&T investments	% of total investments	5.9	9.2	6.2	4.1	3.6	18.9

Source: World Travel & Tourism Council, 2015

Note: ** *12 regions are North Africa, Sub-Saharan, Caribbean, Latin America, North America, North-East Asia, Oceania, South Asia, South-East Asia, European Union, Other Europe and Middle East.*

Table 1.1 shows that all selected SAARC countries except Maldives are contributing very less in terms of direct and total contribution to GDP, direct and total contribution to employment, visitor exports and T&T investments to their economies. However, all these countries have a lot of potential in their respective tourism sectors as the rank of all selected SAARC countries is very good in price competitiveness as India at 8th, Pakistan at 9th, Nepal at 23rd and Sri Lanka at 68th out of 141 countries showing great potential to attract tourists as shown in Table 1.2. Moreover, Sri Lanka stands at 52nd in terms of business environment and 53rd in safety and security. The rank of these countries is also good in terms of natural and cultural resources and business travel as India stands at 10th position taking a score of 5.09 in cultural resources and business travel and 17th position in natural resources as shown in Table 1.2. Despite all this potential as stated above and evident from various T&T enabling pillars, the tourism sector in these countries is unable to show a significant contribution to GDP and employment as shown in Table 1.1 showing lack of interest by the public and private sector to invest in tourism sector. Therefore, there is a need to investigate the effects of public investment and private investment on tourism growth in selected five SAARC countries.

Table 1.2 also demonstrates the global rank and individual score of top country Spain for the sake of comparison with India, Sri Lanka, Nepal and Pakistan out of 141 countries in enabling environment pillars, T&T policy and enabling conditions pillars, infrastructure pillars and natural and cultural resource pillars. These pillars constitute safety and security, business environment, human resource and labour market, health and hygiene, Information and Communication Technologies (ICT) readiness, prioritization of T&T, price

competitiveness, international openness, environment sustainability, ground and port infrastructure, air transport infrastructure, tourist service infrastructure, cultural and natural resources and business travel. Rank of these countries are given with obtained score out of seven in all above stated constituents of different T&T pillars.

As far as the potential of SAARC countries is concerned, this is obvious from statistics in Table 1.2 that score of Sri Lanka and Pakistan in business environment is better than the top ranked country Spain. Looking at the price competitiveness also gives an evidence of tourism potential of SAARC countries as all the SAARC countries have higher score and better ranking than top ranked country in the world.

Moreover, this is evident from Table 1.2 that the rank and score of selected SAARC countries out of 141 countries in almost all above stated pillars of T&T are low with few exceptions. As the rank and score of India, Pakistan and Nepal in safety and security is very low signifying the lack of safety and security in these areas, thus, providing evidence that the government is not giving proper attention to this sector. The lower ranks of India and Pakistan in prioritization of T&T (96 and 120 out of 141 countries) also provides evidence of lack of interest of public sector in T&T. The score of Nepal is very poor in infrastructure pillars and cultural resources pillars also showing that the public sector is not giving proper attention to T&T sector in Nepal. The air transport and tourist service infrastructure score of Pakistan is also very low providing evidence of lack of public and private sector investments in the sector. The lower score in many of above stated T&T pillars is showing a lack of interest by the public and private investors in T&T industry.

Table 1.2

Global Rank and Score of Selected SAARC Countries and the Spain Top Country in Various Travel & Tourism Pillars, 2015

		Spain	India	Sri Lanka	Nepal	Pakistan
Global Rank Out of 141 Economies		1	52	63	102	125
Enabling Environment Pillars	Business Environment	100 (4.09)	107 (4.02)	52 (4.59)	110 (3.98)	87 (4.19)
	Safety and Security	31 (5.97)	129 (3.82)	53 (5.58)	113 (4.52)	138 (3.04)
	Health and Hygiene	33 (6.11)	106 (4.32)	71 (5.24)	86 (4.90)	102 (4.39)
	Human Resource and Labour Market	34 (4.87)	111 (4.03)	86 (4.33)	96 (4.22)	138 (3.07)
	ICT Readiness	31 (5.26)	114 (2.83)	92 (3.49)	126 (2.36)	121 (2.54)
T&T Policy and Enabling Conditions Pillars	Prioritization of T&T	6 (5.89)	96 (4.14)	30 (5.17)	59 (4.68)	120 (3.72)
	International Openness	41 (3.93)	69 (3.08)	65 (3.21)	81 (2.80)	114 (2.21)
	Price Competitiveness	105 (4.22)	08 (5.59)	68 (4.67)	23 (5.29)	09 (5.59)
	Environmental Sustainability	29 (4.61)	139 (2.89)	103 (3.74)	133 (3.14)	141 (2.82)
Infrastructure Pillars	Air Transport Infrastructure	12 (4.91)	35 (3.88)	71 (2.64)	105 (2.08)	106 (2.09)
	Ground and Port Infrastructure	10 (5.54)	50 (4.02)	41 (4.24)	119 (2.57)	78 (3.27)
	Tourist Service Infrastructure	04 (6.58)	109 (2.90)	74 (4.15)	118 (2.65)	125 (2.57)
Natural and Cultural Resources Pillars	Natural Resources	14 (4.59)	17 (4.42)	35 (3.76)	25 (4.11)	112 (2.25)
	Cultural Resources and Business Travel	01 (6.69)	10 (5.09)	69 (1.60)	123 (1.23)	60 (1.76)

Note: The numbers in parenthesis are score obtained in respective pillars out of total score of 7.

Source: World Economic Forum (WEF), 2016

1.1.2 Tourism Profile of Selected Countries

The tourism profile of the countries under focus is elaborated in this section. Specifically, the infrastructure situation and related information for India, Maldives, Nepal, Pakistan and Sri Lanka are provided in this section.

1.1.2.1 India

India has great potential of becoming a desired tourist destination globally. The delighting backwaters, hill stations and landscapes make India a beautiful country. Historical monuments, forts, beaches, places of religious interests, and hill resorts add to the majesty of the country. India became a member of World Tourism Organization (UNWTO) in 1975.

In India, Ministry of Tourism is responsible for the promotion of tourism in the country with the help of state governments. Currently, Mr K. J. Alphons is the minister of state for tourism. The budget allocation for the Ministry of Tourism, India for the year 2015-16 was INR 15730.7 million which is 33 percent increase as compared to the preceding year. The measures taken by the said ministry in the preceding five years include but not limited to:

- The launch of the Visa on Arrival (VOA) enabled Electronic Travel Authorization (ETA) scheme.
- New schemes launched PRASAD and Swadesh Darshan.

- The launch of Swachh Bharat, Swachh Smarak and clean India campaign.
- Rationalization of taxes, tax holidays, among others.
- Safety of foreign and domestic tourists including women.
- Investment in tourism infrastructure such as hotels and Meetings, Incentives, Conferences and Exhibitions (MICE) centres, etc.

The budget allocation for the ministry of civil aviation for the year 2015–16 was INR 53609.5 million. A total of five Indian and 85 international airlines connecting more than 40 countries in the world under the ministry of civil aviation which supports tourism growth in India. India has more than 460 airstrips and airports across the country. It has been suggested that India will become the 3rd largest aviation market in the world by the year 2020 by handling 337 million domestic and 85 million international passengers, and it will become the largest aviation market by the year 2030.

Besides multiple efforts of Ministry of Tourism to augment tourism in the center, the focus remained on the emerging states which include Rajasthan, Madhya Pradesh, West Bengal and Telnagana. The infrastructure assessment of these states is presented in Table 1.3.

The government of Madhya Pradesh has tourism policy amendment in 2014 that focuses on the promotion of private investment in tourism and on public-private partnership projects (PPP). The policy focuses on employment generation through skill development and youth training, subsidizing regional airlines, identification of 16 special tourism zones

and importantly, establishing the District Tourism Council and State Tourism Council for the promotion of cultural tourism programs. The key projects undertaken by the government include film tourism, setting of convention centers of international level under MICE tourism, tourist destination development such as Indore, Gwalior, Ali Rajpur, Jabua, Khandwa, Chanderi and Ujjain among others, mega circuit developments, and Way Side Amenities (WSA) development on 268 locations. Additionally, this state has introduced cruise tourism on Narmada River and caravan tourism on certain routes.

Table 1.3
Infrastructure Assessment of Indian States

Parameter	West Bengal	Telangana	Rajasthan	Madhya Pradesh
Budget Allocation (2015-16)	INR 2570 million	INR 1000 million		INR 1340 million
Air connectivity	1 International 3 Domestic	1 International 5 Domestic	1 International 4 Domestic	2 International 3 Domestic
Road connectivity	315404 KM	256448 KM	248604 KM	649930 KM
Rail connectivity	4000 KM	1753 KM	5822.28 KM	4954 KM (with 86 trains)
Ports connectivity	2 major and 1 minor			
Accommodation	Over 300 (as in 2011)		Over 1600 with over 200 heritage hotels	Over 1200 as in 2011-12
MICE	4 and 3 convention centers at Kolkata and Rajarghat	10 convention centers, HITEX being the major center	Jaipur Exhibition & Convention Center and Birla Auditorium at Jaipur	Brilliant Convention Center at Indore

Source: Ministry of Tourism, India (2016)

The tourism in West Bengal has flourished with the introduction a new tourism policy since 2015 that focuses on tea tourism, home tourism and eco-tourism. In addition, the state

government is focusing on new MICE centers, developing film cities, introducing Skycity using PPP models. The government has also increased focus on the jungle safaris, eco-tourism and film tourism.

Moreover, the newly established 29th state of India, Telangana is endowed with rich cultural heritage. Temples, forests, forts, waterfalls, monuments and other historical places are cultural assets of this state. The tourism policy of Andhra Pradesh has been followed by Telangana state whom objectives were encouraging for the private investors. The major focus of the policy was on the development of tourism circuits and tourism destinations in the state. Additionally, MICE tourism, rural tourism and the development of cinema city has remained as the focus of the state government.

The deserts of Jaisalmer and Jodhpur, wildlife sanctuaries of Ranthambore and Sariska, and historic cities like Udaipur and Jaipur remained an attraction for the private investors in Rajasthan. The tourism policy of Rajasthan state has encouraged joint ventures with private heritage such as havelis, palaces and forts in addition to the lease agreements. The "Mega Desert Tourist Circuit" has been developed under the state tourism policy. Moreover, international connectivity has been given to Jaipur as a MICE destination in addition to the development of sideway facilities on national highways. The introduction of a new train namely "Royal Rajasthan" is also an important part of tourism policy of the state.

1.1.2.2 Maldives

The Maldive Islands, described eloquently in promotional materials as 'strings of pearls scattered across the Indian Ocean', are a premium tourism destination. They comprise a series of 20 atoll groups with over 1000 tiny islands, only one fifth of which are inhabited by the total population of approximately 400,000 Maldivians, leaving much scope for tourism development on the uninhabited isles. A combination of a tropical climate, beauty, isolation and strategic marketing have contributed to the growth of the tourism sector such that it now dominates the economy, providing more jobs and far more foreign exchange than its closest rival, fisheries. In 2014, the WTTC calculated the direct contribution of T&T in GDP of Maldives which was 41.5 percent which has decreased to 40.9 percent in 2016 (WTTC, 2017). Likewise, the direct contribution of T&T in employment was 32.2 percent of total employment in 2014 and this has also decreased to 19.7 percent of total employment in 2016. The world ranking of Maldives in terms of absolute size for relative importance of T&T contribution to GDP in 2016 is 105 out of 185 countries while in terms of relative size, Maldives stands at 3 out of 185 countries.

However, the development of tourism was neither random nor automatic. It was carefully planned as part of a Quality Tourism Strategy from the 1970s onwards by a government that saw the economic benefits that tourism could bring but, cautious of its potential negative impacts, planned for it to evolve carefully. Maldives became the member of UNWTO in 1981.

Several types of accommodation facilities are provided by the Maldives for catering the needs of the tourists which include safari vessels, resorts/marinas, hotels and guest houses. In 2016, a total of 679 accommodation facilities comprising 37,482 beds have been provided by Maldives which shows a 10 percent increase as compared to 2015.

The tourist arrival growth rate of 4.2 percent was recorded in 2016 which is above the global growth rate of tourist arrivals of 3.9 percent. The leading tourist arrivals came from the Asia and the Pacific with a total share of 46.5 percent of total tourist in 2016 in Maldives while Europe was the second largest tourist arrival destination for Maldives with a share of 44.7 percent. The Maldives is heavily reliant on international tourism revenue. The percentage share of tourism revenue in total government revenue is estimated to be 36.4 percent in 2016 (Ministry of Tourism, 2017). The domestic carriers in Maldives consist of seaplane and airplane transfers. Airplanes are operated by Island Aviation Services, Fly me and Mega Maldives, and sea planes are operated by Trans Maldivian Airways (TMA) and Maldivian Air Taxi (MAT).

Currently, Ministry of Tourism is responsible for taking care of tourism activities and development of tourism in the country which is headed by the minister of tourism Mr. Moosa Zameer. The main functions of the ministry of tourism of Maldives include following:

- Formulation and implementation of laws and regulations for tourism development in the country.

- Leasing of land for tourism and registration of all tourism operators and facilities.
- Formulation and implementation of tourism development policies including preparation and implementation of tourism master plans and short-term plans for tourism development.
- Planning and implementation of human resource development for tourism sector in Maldives.
- Assessment of HRD requirement for tourism sector, facilitation of human resource development and administration of training standards, in coordination with the concerned authorities and increase local participation in the industry.
- Registering, regulating and monitoring of tourist facilities and their service standards.
- Regulating and implementation of sound environmental principles in tourism development and operation.
- Collection, compilation and publication of tourism sector statistics and conduct market research studies.
- Seeking technical expertise, funding and strengthening the bilateral relationships.
- Branding, promotion and marketing of Maldives as a destination.

1.1.2.3 Nepal

Since 1951, Nepal has officially been open for international tourists. In Nepal, the activities of tourism are taken care by the Department of Tourism which was established in 1959. Currently, this department comes under Ministry of Culture, Tourism and Civil Aviation

which is responsible for the development of tourism in the country. The minister for the Ministry of Culture, Tourism and Civil Aviation is Mr. Jitendra Narayan Dev, while the Director General for the Department of Tourism is Mr. Dinesh Bhattarai (Ministry of Culture, Tourism and Civil Aviation, 2018). Nepal got membership of UNWTO in 1975.

Main tourism activities in Nepal include mountain climbing, trekking, bird watching, mountain flight, rock climbing, rafting, hot air ballooning, bungy jumping, paragliding, ultralight aircraft, mountain biking and jungle safari. The mountain climbing is offered on Nepal Himalayan which is an 800 km mountain range with eight peaks above 8000 meters which includes the world highest peak Mount Everest. Nepal has been considered as a paradise for birds lovers due to the fact that it has more than 646 species of birds which is 8 percent of the world total bird species. Among those 646 species, the valley of Kathmandu alone has 500 species. The Taudaha, Bagmati River, Nagarjun, Godavari and Phulchoki are considered as the most popular spots of birds watching.

Moreover, the most popular sports in Kathmandu is the rock climbing which is an attraction for the cliffhangers. The most popular rock climbing places include Budhanil Kantha, Shivapuri, Balaju and Nagarjun. In addition to the rock climbing, an excellent tourist attraction is rafting which is offered by many rivers in Nepal. The popular rivers for rafting include the Trisuli River, the Kali Gandaki River, the Bhote Koshi River with 26 kilometers of white water, the Karnali River, and the Sun Koshi River. Additionally, the very first bungy jumping site of Nepal is located 160 meters over the Bhote Koshi River. The Terai

region Nepal is particularly popular for its national parks. These parks offer elephant back ride, jeep, and dugout canoe. Further, the safari attractions include four-horned antelopes, sloth bear, spotted deer, samburs, wild boars, and the rhinos in addition to the Royal Bengal Tiger. The most popular and tourist attracted religious sites in Nepal include Pashupatinath Temple, Swayambhunath, Lumbini, Muktinath, Gosainkunda, Devghat, Manakamana, Pathibhara, Jaleshwar Mahadev, Dolakha Bhimsen and Swargadwari.

The Ministry of Culture, Tourism and Civil Aviation (2017) provided a report on tourism employment survey (2014) which states that the total number of registered star hotels in Nepal are 105, while the number of tourist standard hotels stands at 625. On the other hand, the number of community and private home stay are 226. Total number of registered trekking and travel agencies in Nepal are 1636 and 2112, respectively. The number of rafting agencies in Nepal are only 49 despite a lot of rafting potential in the country. The number of international and domestic airlines in Nepal are 29 and 15, respectively. However, other industries including paragliding, ultralight aircraft and mountain biking are 22 in numbers. The maximum of all aforementioned industries lie in the capital of Nepal, Kathmandu.

The Ministry of Culture, Tourism and Civil Aviation in Tourism Employment Survey (2014) enlisted perceived problems faced by tourism industries in Nepal which include lack of investment enabling environment, inadequate water and electricity supply, inadequate tourism infrastructure in far- and mid-western regions, inadequate internet

service for tourists, inadequate technical knowledge for tourism diversification, communication gap between tourists and the community due to language barrier, worsening levels of pollution, improper waste management, weaker tourism promotion, and mobilization of tourism police among others. In addition to these, airlines, and travel and trekking agencies face challenges which include lower levels of investment, lack of regional airports, unregistered travel agencies, insufficient hospitality trainings, complex currency exchange system, inadequate communication, electricity, road and water infrastructure, and absence of regulations regarding travel and trekking agencies.

1.1.2.4 Pakistan

Like other South Asian countries, Pakistan has significant potential of growth in tourism. It has a diversified cultural heritage, beautiful lakes, seashores with rugged mountains and very generous individuals in all parts of the country. Pakistan has a significant version of tourism in present days with the variety of landscapes, beaches and countless attraction sites. It has divergent classes of tourism categories like the religious, historical, adventure and ecotourism. The concept of religious tourism entitles sacred places, building or shrines for gratification (Yeoman, 2009). The Pakistan Tourism Development Corporation (PTDC) is responsible for the development of tourism in Pakistan. Mr. Chaudhry Abdul Ghafoor Khan is the managing director for PTDC. Pakistan become member of UNWTO in 1975.

The category of religious tourism in Pakistan includes the religious places for the Islam, Hinduism, Sikhism and Buddhism as well. The country is not only rich in the Islamic culture but also contains the heritage of all these other religions (Arshad, Iqbal, & Shahbaz, 2018). For instance, the shrine of Guru Nanak, founder of Sikhism in Punjab province of Pakistan has provided a significant attraction to some Sikh tourists every year from India and other regions of the world. Besides, the shrine of various Sufis like Data Ganj Baksh, Baba Fariduddin, Shah Hussain, Shah Abdul Latif Bhattai, Lal Shahbaz Qalandar and Bahauddin Zakaria is very much famous at world glance regarding tourism (Rasul, Fatima, & Sohail, 2016).

In addition, historical and ancient places of various civilisations like Buddhists, Indus Valley civilisation such as Mohenjo-Daro and city of Harappa are almost 5000 years old (Fakhar, 2010). Besides, historical places of Mughal empires in the city of Lahore is another attraction for the world tourists to visit Pakistan. All these diversified cultural and historical heritage provides customs, values traditions for the enjoyment of visitors (Arshad et al., 2018). In addition to these historical places, Pakistan is rich with the significant tourism opportunities in the form of ecotourism which is in the form of high mountains like the Himalayas, the Karakoram and the Hindu Kush, cliffs and glaciers and coastlines. As per the findings of (Israr et al., 2009), Pakistan has 10 out of 18 types of mammals in the world. The northern locations of the country offer trekking, mountain biking, and festivals like Kalash and Shandur Polo Festivals. While in the province of Sindh, desert

jeep safaris and camel riding are very much famous to attract the tourists still in present days (Arshad et al., 2018).

As per the findings of Travel and Tourism Competitiveness Index (TTCI), the current position of Pakistan is 124 out of 136 countries. Such alarming and low-level grade of the tourism industry in Pakistan has several reasons. These includes the situation of business environment (119/136 ranking), health and hygiene (101/136 ranking), security and safety in the country (133/136 ranking), situation of labour market and human resource (134/136 ranking), priority of tourism and travelling (122/136 ranking), and cultural resources (59/136 ranking). All these indicators with their present ranking explain the low position of Pakistan because of low focus and divergence attitude from the management for the tourism attractiveness. Both at the federal and provincial level, the tourism industry has given low precedence. In the findings of (WEF, 2015), Pakistan has got a score of 120 out of 136 in prioritising tourism industry which in the recent year 2017 has been dropped to a new ranking of 122 (WEF, 2017).

Among other challenges, after the attack of 9/11, Pakistan has suffered significant losses both in the form of human and financial causalities. The damage of terrorism is both to overall infrastructure and tourism (Henderson, Foo, Lim, & Yip, 2010). Safety of tourists is among prime essential for the sustainability and growth of the industry as both short and long-run causal impact of terrorism on tourism in Pakistan (Raza & Jawaid, 2013). In addition, various other challenges like poor coordination among the department which are

linked with the tourism like wildlife, forestry, environment as these are working with lack of interaction (Arshad et al., 2018). Besides, hotels and restaurants in most of the visited northern, and other areas have not updated standard and certification of the quality set. Implementation of laws and rules for the hotel's regulations is very much necessary which includes Tourist Act 1976, Pakistan hotel and Tourist Act 1976. The absence of criteria and certification in the form of vehicles and transportation is among other challenges. Besides, lack of tourism promotion through information technology IT, lack of active participation in global tourism affairs (125/136 ranking) ineffectiveness of marketing to attract tourists (WEF, 2017). The negative image of the country at world glance (Fan & Shahani, 2016), lack of skilled human resource in the form of tourism and hotel management (Rana, 2015) are among other indicators for the decline of tourism growth in Pakistan.

1.1.2.5 Sri Lanka

The Ministry of Tourism Development and Christian Religious Affairs (MTDCRA) is responsible for the tourism development in Sri Lanka which is headed by the minister Mr. John Amaratunga. The Sri Lanka Tourism Development Authority (SLTDA) was established as for the promotion of tourism in the country. Earlier, SLTDA was known as Sri Lanka Tourist Board / Sri Lanka Tourism Board. Other institutes of MTDCRA include Sri Lanka Tourism Promotion Bureau (SLTPB), and Sri Lanka Institute of Tourism and

Hotel Management (SLITHM) (Ministry of Tourism Development and Christian Religious Affairs, 2017). Sri Lanka became member of UNWTO in 1975.

Sri Lanka has One Stop Unit (OSU) – a unit for national investment in tourism, which is a centralized facilitation and tourism promotion center. OSU has been established for helping the potential investors in tourism in Sri Lanka. The services provided by OSU include the provision of information regarding tourist investment, helping information gathering and the promotion of investment, providing details of available land, helping entrepreneurs of similar investment interest for collaborative investment projects, helping in getting approval from government, and provision of support in visa recommendations. Moreover, SLTDA is committed to ensure the safety and security of both domestic as well as international tourist and ensuring that the tourists avoid any kind of inconvenience, theft, fraud or harassment. The key responsibility of tourist police force is to develop a tourist police stations network in key tourist places (SLTDA, 2017).

Additionally, Sri Lanka is popular for her rich Buddhist culture as it has various tourist attractions of historic and religious significance. These tourist places include Anuradhapura (a main Buddhist city having several stupa and temples), temple of tooth, Kataragama, Adam's peak (a mountain peak having height of 2243 meters), Bogoda bridge and the temple, Buduruwagala, Dowa cave temple, Maligawila, Dambegoda and Pada Yatra. Aside religious tourism attractions, Sri Lanka has world popular botanical gardens, spice gardens, national museum, wildlife parks and zoological garden. Moreover, eco-

tourism in Sri Lanka offers tourist attractions which includes longest beaches, high mountains, wonderful traditions, glorious civilization, landscapes diversity, artistic monuments, bio-diversity, and flora and fauna among others (Sri Lanka Tourism Promotion Bureau, 2017).

As far as the provision of accommodation facilities is concerned, total number of tourist hotels has reached 382 with 22336 rooms in 2016, while the supplementary accommodation has reached 1558 units with a room capacity of 11535 in 2016 (Sri Lanka Annual Statistical Report, 2016). The Katunayake (BIA), Mattala (MRIA), Galle harbor, and Colombo harbor, are the modes of transport and arrival into Sri Lanka. In 2016, 98.7 percent arrivals take place with Katunayake (BIA) (Department of Immigration & Emigration, 2017). In addition, Sri Lanka maintains an excellent transportation network which includes taxi operators, clean city cycle club, expo rail, air taxi, Colombo city tour bus, and luxury train service known as Rajdhani express.

1.1.3 Public Sector Involvement in Travel and Tourism Industry

As public investment increases the economic growth, in the same fashion, the investment in any particular sector such as tourism leads to growth in that sector. The tourism activity is primarily sustained by the private sector and the governments play a fundamental role in the development of tourism infrastructure. It has long been recognized that principally governments are required to play an active role in the development of tourism in

developing countries, not only to establish policies and legislative frameworks but also to manage and invest in the development of tourism industry (Jenkins, 1991; Sharpley & Ussi, 2014). Governments have to embrace an active role as a facilitator to the private investors and a promoter of tourism by offering an appropriate legal and socio-political environment against which the initiatives of the private sector and various stakeholders can take place (Akama, 1997, 2002; Gunn, 1988; Jenkins & Henry, 1982). Governments in developing countries support and encourage tourism investments due to the fact that it will add to economic growth and development of their economies (Hall & Michael, 1991; Reid, 2003). As Petrescu (2011) asserted that the role of the state in supervising and controlling tourism is central, and governments even facilitate this sector in some situations. Moreover, governments play a very important role in upholding the quality standards, restraining undesirable growth and unfair competition and protecting tourists against business malpractice and failures.

Figure 1.2 shows the government spending in T&T sector measured as percentage of total government spending in selected five SAARC countries for the period 1988-2014. The figure shows that the percentage share of government spending in T&T for Pakistan, India and Sri Lanka remained same in almost all the years during the period 1988 to 2014. But, in case of Nepal, the government individual spending increases from 1988 to 1996, but, afterwards till 1998, it decreases sharply and then remained at the same percentage till 2014. Maldives is the only country from selected SAARC countries where government

spending is increasing, but at a slow pace and is highest in terms of percentage share in total government spending.

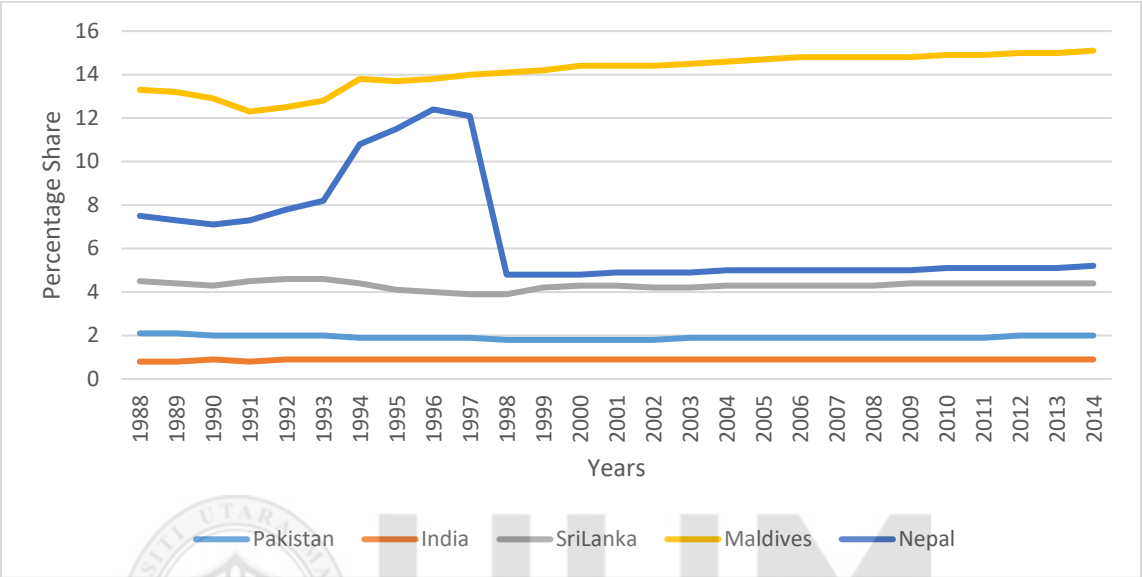


Figure 1.2
Government Spending in T&T as percentage of Total Government Spending for the Selected Five SAARC Countries, 1988 – 2014.

The public sector investment in tourism sector may be in the form of land and buildings, such as museums, leisure centers and parks, in machinery and plant, such as computerized booking systems, apparatus of the playgrounds and canal lock equipment and in infrastructure as well (Petrescu, 2011). The role of the public sector is fundamental in the promotion of tourism as argued by Shamsuddoha and Nedelea (2008) that the involvement of government in tourism is providing the seed money to start an activity initially beyond the capacity of private sector in developing countries to provide a model and motivation to private investors. The state provides a support to the tourism sector and net beneficial

effects may include some political or financial resources (Le & Buck, 2011; Shleifer & Vishny, 2002; Tian & Estrin, 2008).

Furthermore, Petrescu (2011) supported this argument by explaining that the role of a central government in tourism can have diverse forms such as to plan and facilitate the tourism sector that includes the provisions of financial and other support, the control and supervision of the core divisions of the tourism industry, operation of various components in the sector and direct ownership, promotion and marketing of tourism products and services to domestic and foreign markets, and by subsidizing main interests of tourism in times of financial crunch.

1.1.4 The Role of Private Sector in Travel and Tourism Industry

The role of private sector cannot be neglected in the development of a country because private investments help in the creation of jobs, help people to raise their standard of living through enhanced income and lead the economy towards growth. In the same manner, contribution of private sector investments is crucial in developing a sector in the economy such as tourism sector as Wang and Xu (2011) argued that the role of investments in developing an industry as well as an economy is significant. This argument is supported by Banerjee and Cicowiez (2015) who asserted that the private investment has the potential to enhance the overall growth and welfare impact of tourism sector.

According to Petrescu (2011), the core elements of T&T industry are recreation, catering, accommodation, transport and services and the private sector is mostly involved in T&T airlines, hotels and restaurants and travel agencies as the private sector is profit-driven. Moreover, he asserted that the involvement of private sector in the T&T sector can be seen by their support services, such as travelers' insurance and finance related services, guiding services, publications of travel guides, timetables and package promotions, marketing support services, establishment of private training and education hubs, port services as well as development of private ports.

Figure 1.3 shows the level of capital investments measured as percentage of total capital investment by all sectors directly involved in T&T in selected SAARC countries for the period 1988-2014. The figure shows that the percentage share of capital investments in T&T for Pakistan, India and Sri Lanka remained almost same with little variations in all the years from 1988 to 2014. But, in case of Nepal, the capital investments followed an increasing trend from 1991 to 2000, but afterwards till 2008, it decreases and remained almost at the same level till 2014. Maldives is the only country from selected SAARC countries where capital investments followed an increasing trend but between 1996 and 2006, capital investments fell and started increasing afterwards till 2014.

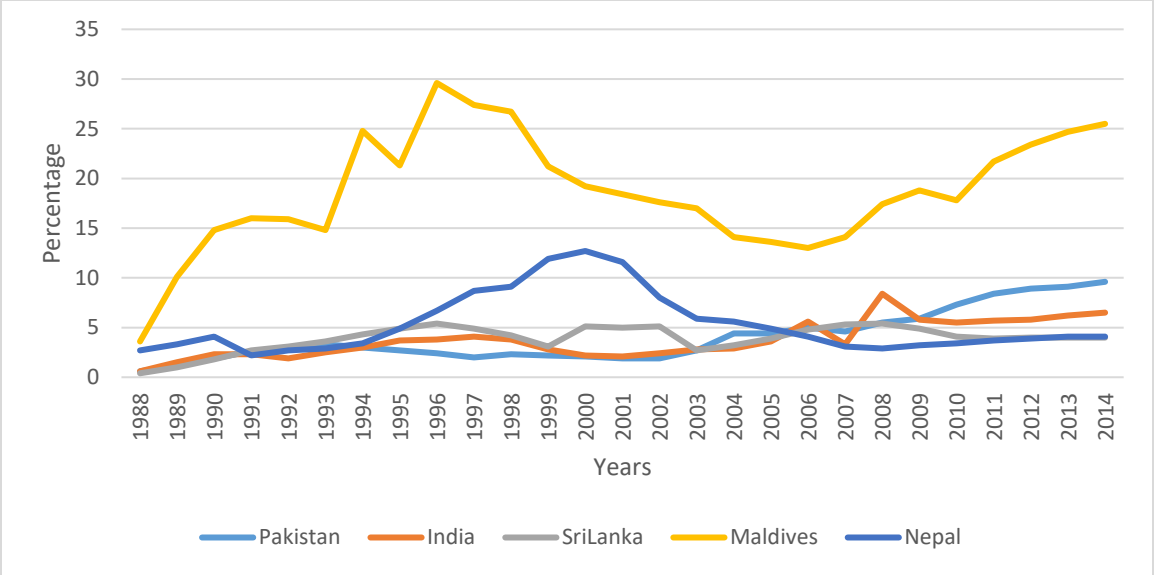


Figure 1.3
Capital Investments in T&T as Percentage of Total Capital Investments for the Selected Five SAARC Countries, 1988 – 2014.

1.1.5 Public and Private Sector Collaboration in Tourism

The involvement of private sector in T&T is primarily profit-driven. In case of higher risks, the leaders from the public sector often open avenues to establish partnerships and collaborations among governments, private sector investors, organizations, and sometimes pension funds for partially paying the cost of a facility provision. The investment made by non-profit partners or partners from the public sector lessen the risks for the private sector and it helps in assuring the profitability of the project. In some cases, the non-profit and the public sector collaborators are required to finance the capital cost of both the tourist facility provision and its related such as hotels and restaurants.

Moreover, this has been shown by Dedeurwaerdere (2005) and Ostrom (1990) that some collaborative actions have become the basis of governance networks in economic development. Such type of networking in the development of tourism can bring certain benefits such as: Firstly, the collaboration networks help in decreasing the transaction costs, thus allowing the exploitation of the economies of scope and scale in several activities (Tremblay, 2000). Secondly, collaboration can potentially facilitate the avoidance of costs which can arise from the conflict resolution among different stakeholders in long term (Healey, 1997), because the ideas sharing among the network participants results in learning and a richer understanding of issues, which in turn leads to more innovative activities (Camagni, 1991; Roberts & Bradley, 1991; Roome, 2001; Tödtling & Kaufmann, 1999). Learning-based networks are vital in increasing the capabilities of the companies through behavior guiding rules that guide the interacting individuals and organizations (Kogut, 2000). Thirdly, as emphasized by Lane (1994), collaborative networks increase the policy coordination and promote consideration of the social, environmental and economic impacts of tourism in developing strategies for development. Finally, networking helps large number of small actors with limited resources to take part in the process of decision-making, which is particularly important for those who cannot pursue sustainable development independently.

Similarly, Hall (1999) argued that the collaboration theories such as Gray (1985); Gray (1989); and Wood and Gray (1991) and network development such as Powell (1990); Freeman (1991); and Cooke and Morgan (1993) highlighted the significance of

collaborative links among various stakeholders in the process of promotion, mediation and development in regional tourism. Likewise, tourism planning based on the collaborative and interactive approach entails interaction and participation between various levels of an organization or governance units (Hall & McArthur, 1998). Moreover, the partially industrialized nature of tourism refers that like environment, tourism should also be considered as a meta-problem which become connected with almost everything (Hall, 1999). Therefore, tourism can be effectively planned and managed by collaboration of public and private sector.

The formal institutionalized relationships among prevailing organizational, individual and interest-based networks are known as coordination, whereas, the cooperation is described as the informal trade-offs, and the creation of reciprocity when rules are lacking (Mulford & Rogers, 1982). In addition, Hall (1999) stated that tourism based coordination occurs both horizontally, such as, between different public and private sector agencies having responsibilities for different activities related to the tourism at the same governance level, and vertically, such as, between different government levels (i.e. national, provincial, regional and local). The public sector usually protects the interest of the stakeholders and the need of partnerships and collaborations is in the interest of the public as opposed to the market or personal interests. The relationship between the public and the private tourism agencies clearly raises the question about the extent and magnitude of the effect of collaboration between both public and private sector on tourism growth.

1.1.6 Role of Governance in Investments and Tourism Growth

Tourism has become a complex and multifaceted industry. The national tourism administrations, on part of administration, must develop coordination among different ministries for designing their policies and strategies, particularly for employment, transport, culture, environment and industries (Göymen, 2000) leading to the need of examining the role of governance in tourism. As defined by The World Bank (2016), governance in a country refers to the institutions and traditions by which the authority is exercised. It also comprises the process of selection, monitoring, and replacement of the governments; the capability of the governments regarding effectively formulation and implementation of better policies; and the respect of the state and the citizens for the institutions governing social and economic interactions among them. There are six composite indicators of broad dimensions of governance as; Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption (Hiwatari, 2014; Kaufmann, Kraay, & Mastruzzi, 2011; Vo, 2015).

The discussions on the sectorial and economic growth have focused on the need for good governance. The effective and tailored governance is a major requirement for achieving a desired growth in tourism. However, the intrinsic value of good governance as a growth and development strategy is now universally accepted, its instrumental value as a means to get higher growth rate and better development performance is still not well understood,

despite the emergence of a considerable and still growing body of literature (Acemoglu & Robinson, 2012; Rodrik, 2008). In the literature pertaining tourism, the use of the term governance is less than the interrelated terms such as tourism policy, tourism politics, planning and policy making and destination management (Dredge & Jenkins, 2007b; Hall, 1994, 2008; Hall & Jenkins, 2004). Though, these terms are different from each other in their concepts and activities associated with each of them, they also share similarities to a high degree. All aforementioned established concepts and activities associated with them are included in the compass of governance.

Governance entails an emphasis on the governing systems and approaches in which the societies are administered, governed, or ruled (Bulkeley, 2005; Stoker, 1998). The systems of governance offer approaches for "allocating resources and exercising control and co-ordination" (Rhodes, 1996, p. 653). The concept of governance entails the regulation approaches and process of mobilizing social actions in order to produce societal order. In addition, the process of governance is described as "whereby some degree of societal order is achieved, goals decided on, policies elaborated and services delivered" (Atkinson, 2003, p. 103). The notion of governance includes in its compass the concept of government, and the concept of former is far broader than the latter, due to the fact that frequently the governance tasks are carried out more than the formal governmental agencies (Goodwin & Painter, 1996). The non-governmental actors such as community and businesses also contribute in governance processes.

As far as the governance processes in tourism are involved, these aim to govern, steer, regulate and mobilize actions, such as rules and regulations followed by the institutions in their decision-making process and practice (Bramwell & Lane, 2011). The governmental hierarchical level, markets actors, businesses and communities are included under the umbrella of tourism governance (Hall, 2011). The role of some power groups in the society is crucial in understanding tourism governance as these power groups have the tendency to affect process of tourism governance (Dredge & Jenkins, 2007a). A conflict of interest among different power groups and stakeholder may lead to major conflicts and challenges on part of tourism governance, because different power groups stakeholders and groups attempt to protect their favored strategies and policies.

The issue of governance in selected five SAARC countries is evident from the facts presented in Table 1.2. The situation of safety and security in a particular country reflects the governance in that country. The ranks (out of 141 countries) and scores (out of 7) of Pakistan, India, Nepal and Sri Lanka in safety and security are 138 (3.04), (129) 3.82 and (113) 4.52, respectively, presenting a bad situation of governance in said countries as rule of law and absence of violence and terrorism are two of the indicators of governance. In Sri Lanka, this situation is somewhat better as shown from its rank, which is 53 out of 141 countries with a score of 5.58 out of 7. The rank of India, Nepal and Sri Lanka is much better in natural resources as presented in Table 1.2, but due to lack of governance, these countries still lacking behind in getting their appropriate share in world tourism pie.

In addition, the corruption, being one of the indicators of governance, also affects the sectoral and overall economic growth. Infact, empirical research found that corruption lowers the economic growth. Mauro (1995) provided some empirical evidence regarding negative effect of corruption both on investment and economic growth, and the observed effects are considerable in magnitude. Moreover, Knack and Keefer (1995) also found that corruption significantly and directly affects growth along with its indirect influence on growth through the channel of investment. In particular relevance to developing countries, Mauro (1997) claimed that corruption reduces the effectiveness of investments and aid projects through the diversion of funds in bribes and corruption. The overall situation of selected SAARC countries in environment enabling pillars, infrastructure pillars T&T enabling conditions pillars is not good representing a picture of lack of good governance.

1.2 Problem Statement

The role of public and private investments in tourism growth is of crucial importance. However, inadequate public and private investments in tourism sector in South Asia are creating serious problems such as inadequate ground, port and air transport infrastructure making tourist destinations difficult to access quickly, poor quality of tourist service, negative image developed from security and safety concerns, and lower global rank in various T&T enabling pillars (WEF, 2016). Aforementioned problems have slowed down the tourism growth in the said region. A variety of indicators stated by Rasul and Manandhar (2009) show the lack of interest by the public and private sectors in tourism

such as the barriers in cross-border travelling including formalities at the borders, restricted visas and special permission letters for internal movements in particular areas, currency use, airline access, and tour operator regulations. These challenges pose a negative impact on tourism in South Asia.

Inadequate investments by the public and the private sector can also be observed by the insufficient number of restaurants, hotels and other tourist facilities in South Asia (WEF, 2016). Moreover, the WTTC has conducted a study among 216 countries, and revealed that the tourist infrastructure, in majority of South Asian countries, is insufficient and that the South Asian countries are not among the most competitive tourist destinations shown in Table 1.2. In terms of tourist amenities provision and price competitiveness, most of the South Asian countries cannot even compete with Southeast Asian countries. Even a country like India is also ranked 109 in tourist service infrastructure in a report by WEF as shown in Table 1.2. The poor facilities and services offered by the tourism sector is a result of the low priority by the public sector given to the tourism by these countries as the rank of these countries is very low in terms of prioritization of T&T as given in Table 1.2 and lack of public and private sector investments in tourism (WEF, 2016). In adequate collaboration between public and private investments has also been observed in South Asia as the public sector investment remained low for the improvement of tourist facilities including inadequate human resource development. The provision and efficient management of tourist amenities has not developed on par with other countries.

The security and safety is the primary concern for tourists and it plays a crucial role in determining competitiveness in T&T sector (Rasul & Manandhar, 2009). In South Asia, the overall safety and security situation has been a main concern, as the global rank of these countries is very poor as given in Table 1.2. The Afghan war, bomb blasts, terrorist attacks, border disputes, frequent strikes, insurgencies and civil unrest, are all prevalent in South Asia, and these issues usually disturb the transport service and civil life as a whole, which in turn, pose a risk to the travelers' security and safety. These consequences show the situation of governance (rule of law, absence of violence and terrorism) in focus area. Moreover, the corruption not only directly affects investments and growth negatively, but, it also affects growth through reducing the productivity of investments. Bad situation of governance negatively affects investments and influence of investments in tourism.

1.3 Research Questions

This research seeks to answers the following questions:

i. What is the effect of public investments on tourism growth in selected SAARC countries?
ii. Does private investment affect tourism growth in selected SAARC countries?
iii. How the public and private investment collaboration affects the tourism growth in selected SAARC countries?
iv. Does the interaction of governance and public investment affect tourism growth in selected SAARC countries?

v. Does the interaction of governance and private investment affect tourism growth in selected SAARC countries?

1.4 Research Objectives

The general objective of the study is to investigate the impact of public and private investments and governance on tourism growth in selected five SAARC countries. Whereas, the specific objectives of the study are as follows:

i. to investigate the effect of public investments on tourism growth in selected SAARC countries.
ii. to estimate the effect of private investments on tourism growth in selected SAARC countries.
iii. to assess the collaborative effect of public and private investments on tourism growth in selected SAARC countries.
iv. to evaluate the interaction effect of governance and public investment on tourism growth in selected SAARC countries, and
v. to assess the interaction effect of governance and private investment on tourism growth in selected SAARC countries.

1.5 Significance of the Study

The present research examines the impact of public investment and private investment on tourism growth and the induced impact of private investment due to public investment on tourism growth in selected five SAARC countries. In addition, the interaction effect of governance with public investment and private investment on tourism growth has been investigated. To the best of author's knowledge, the existing body of literature pertaining tourism research has not focused on the induced impact of private investment due to public investment, and the interaction effect of governance with public investment and private investment on tourism growth has also received less attention. Therefore, this study provides a useful contribution to existing body of literature in said field of study.

Moreover, the contribution of present research for the governments and policy makers of all countries in general, and of SAARC countries in specific, would be that this research will give useful insights regarding policy making related to the public investments in tourism as this sector has potential to generate employment and to contribute in national economies. Hence, this research will help governments to enhance the growth of tourism industry in respective countries for achieving macroeconomic goals.

1.6 Scope of the Study

The scope of the study is limited to the analysis of tourism sectors of selected five SAARC countries i.e. Pakistan, India, Sri Lanka, Maldives and Nepal. Five SAARC countries are

selected out of total eight for analysis due to the limitation of data as the empirical data for Afghanistan, Bangladesh and Bhutan are unavailable. Annual time series analysis and panel analysis are performed for examining the impact of public investment and private investment on tourism growth from 1988 to 2015. Moreover, the study also investigates the short-run and long-run relationships of public investment and private investment with tourism growth in selected countries in time-series setting. In addition, the interaction effects of governance with public investment and private investment on tourism growth has been examined.

1.7 Organization of the Study

This thesis is organized in six chapters. Chapter 1 offers introduction of the study containing background of the research followed by problem statement, research questions, research objectives, significance and scope of the study. Chapter 2 presents detailed review of existing related literature on the selected topic. Chapter 3 elucidates the proposed methodology of the study. Chapter 4 presents all the discussion of results obtained from time-series and panel data analysis of the study. Finally, Chapter 5 explains the conclusion of the research and policy recommendations suggested by the researcher keeping the results of the study in view.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The review of the literature involves the examination and review of the developments in concepts, theory and empirical work in the area related to the focus issue. This chapter is divided into four main sections. First section presents a conceptual review of available literature related to the concept of tourism, public and private investments, and governance. Second section elaborates underpinning theory and the theoretical aspects of existing literature regarding tourism growth, public and private investments and governance. Third section gives an explained insight of the existing empirical literature regarding relationships among tourism growth, public investments, private investments and governance. And, in the last section, literature gap and the theoretical framework of the study is presented. The chapter closes with a conclusion of the chapter.

2.2 Conceptual Review of Literature

Conceptual review of literature involves the definition of the related concepts and variables used by various research studies. This section provides a detailed insight to the concepts of

tourism, tourism growth, various approaches of tourism growth, public investments, private investments and governance.

2.2.1 Tourism Growth

Tourism refers to a cultural, social and economic phenomenon associated with the movement of people usually for the sake of pleasure to places outside their usual residence (Goeldner & Ritchie, 2006). Geographically, tourism is a phenomenon that articulates tensions, differences and contradictions between developed places such as central cities, and peripheral places such as hill stations, seaside resorts, or the countryside landscapes (Antonescu & Stock, 2014). Tourism can be defined as the activities of individuals traveling to and staying in places away from their normal place of residence for the purpose of business, leisure or any other purpose not associated with any type of remunerated activity from the visited place for not more than one consecutive year (Cela, 2007).

Behrens and Carroll (2013, p. 297) defined a visitor as "a traveler taking a trip to a main destination outside his/her usual environment, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited." These trips taken by visitors are referred to the tourism trips. The tourism sector is the largest source of world exports and it helps in collecting significant amount of tax revenues, reducing the burden of domestic tax, and encouraging the infrastructure development, thereby benefiting all citizens (Cela, 2007). Takran and

Ylmaz (2015) defined tourism sector as the group of production units comprising different industries providing goods and services that are demanded and consumed by the tourists. Such industries are known as tourism industries because a significant share of their supply is represented by tourists' acquisition, and the production of these industries would stop or reduce to minimal level without tourists.

Moreover, the basic components of T&T industry are accommodation, transport, recreation, catering, other services for tourists (Petrescu, 2011). The role of private sector in T&T mostly implies airlines, hotels and restaurants and travel agencies and regarding the public sector involvement in T&T, it can be seen at local, regional and national levels (Petrescu, 2011). Moreover, it is argued that the tourism activity is primarily sustained by the private initiatives, the governments, however, play the role of a facilitator in the development of tourism industry. The tourism investment is encouraged by the governments, especially in the developing countries, because of its contribution in the economic development of their countries (Hall & Michael, 1991; Reid, 2003) and tourism has greater spillover and multiplier effects as compared to other economic sectors (Archer & Owen, 1971; Rasul & Manandhar, 2009; Roe, Ashley, Page, & Meyer, 2004). Furthermore, tourism has also been considered as a useful tool for the promotion of peace and enhanced understanding among nations and countries (Butler & Mao, 1996; Hall, 1994; Rasul & Manandhar, 2009; Yu, 1997).

In tourism, there are two pre-conditions of growth; namely, the "necessary condition" and the "sufficient condition" (Auty, 1995; Rostow, 1990). Several factors that pull tourists to a destination are included in necessary pre-condition of tourism growth such as beautiful landscapes and other cultural and natural resources. However, despite having necessary preconditions for tourism growth, several tourist destinations can never achieve their potential growth rates because of the absence of sufficient precondition, i.e. sufficient investment expenditure from the public and the private sector to develop necessary infrastructure, and to provide tourism related services.

Regardless of persistent growth rates of tourism industry and its significant contribution in the economies over the last few decades, and the use of tourism by a number of islands and countries as a strategy of growth, the literature on growth has almost neglected tourism as a growth approach (Gunn, 1988; Sharpley & Telfer, 2014; Sinclair, 1998). However, the governments have utilized the tourism led growth strategy for improving the welfare of their citizens though increased income and employment opportunities. Since, tourism growth is a process of change; therefore, it is essential to examine various approaches to change presented by growth and development intellectuals.

2.2.2 Laissez-Faire Approach

The notion of "laissez faire" proposes that general standard of living can be raised and the production of goods and services can be enhanced with efficient operations of individual

market entrepreneurs along with minimum governmental interference. However, fundamental social values, such as equitable distribution of income, cannot be ensured with this kind of market freedom with zero interference by the government, such as equitable income distribution. Alternatively, this approach allows to accumulate wealth and exercise power for protecting individuals' vested interests, which leads to more social evils such as poverty and injustice for a major percentage of population. In case of tourism, the approach of laissez-faire for tourism growth and development should be avoided, because it can result in negative and harmful effects due to uncontrolled tourism growth on the cultural and environmental resources, thereby, damaging long term image and growth of the destination danger for easy, quick and short-term profits. Many research studies used this model of growth such as Greenfield and Yeager (1983) and Aghion and Howitt (1990).

2.2.3 The Diffusionist Paradigm

The process of diffusion involves spreading out the economic growth from one area to another (Auty, 1995; Rostow, 1990). This process of spreading-out can be better understood and implemented through development. "Development is inevitable, it occurs in development stages, and is diffused from the development core towards peripheral areas" (Oppermann & Chon, 1997, p. 36). The process of innovation in tangible or intangible products is a precondition of diffusion. This innovation does not mean to develop something new, but to introduce something, which may exist somewhere else (Rogers, 2010).

The diffusion process in tourism has two sides. The first side is the demand side, which refers to how the tourists get information about the development of a destination and decide to choose a destination for visit. Generally, the tourism products are not directly supplied to the end-user, but, the distribution of such tourist products are controlled by intermediates. Therefore, the ways of developing a tourism industry in a particular destination comes under supply side, which involves decision-making exogenous or governmental agencies. There are some organizations, institutions or individuals who decide to invest and produce the tourism facilities for the first time in every destination. When some facilities are created by the beginner suppliers that are successfully attracting tourists, the innovation is adopted by more individual and organizational investors located nearby existing suppliers. Hägerstrand (1967) termed it as neighborhood effect on innovation. This process of diffusion gives way to social change with which the functions and structures of the social systems changes, by following and adopting the cultural traits of other countries (Sethna, 1980).

A diffusionist model of tourism space was developed by Miossec (1977), which illustrates the structural development of a destination through time and space. He observed changes in the provision of resorts and transportation facilities, and consequent attitudinal and behavioral changes among host population, decision-makers and more importantly tourists. He maintained that diffusion occurs in five phases beginning from the isolation with zero development, to a pioneer resort establishment equipped with the required transportation

facilities in order to access the resort. This phase is followed by an increase in the number of resorts and sophistication in means of transportation, and to the saturation in the number of resorts with a fair distribution across the country. The behaviors and attitudes of local communities change to a complete acceptance or rejection of tourism, or their participation in the planning (Pearce, 2001).

Furthermore, Miossec (1977) argued that excess growth and development may result in a decline, therefore, it is crucial to set boundaries of the rates of growth and degrees of development to an optimal level, which a country considers favorable. However, this approach may be criticized because tourism cannot develop in an empty space. It needs some supporting structure such as transport networks and natural landscapes (Pearce, 1992).

In addition, tourism has the potential of diffusing the development from the core to the periphery, because modern tourists often demand for new destinations. The chances of greater regional disparity adjustments and interactions of trickle-down effects are implied benefits of tourism growth. The positive outcomes of tourism growth include individual as well as collective socio-economic welfare. As tourism expenditure are linked to other economic sectors such as building, handicrafts and agriculture, thus, it generates higher multiplier effects, thereby, creating employment opportunities for local residents. In addition to that, international tourism has been considered as a vehicle for economic

development, by the governments of peripheral regions, as emphasized by Christaller (1964) and Potter (1999).

However, quite often the process of diffusion results in different outcomes. The diffusion through tourism has widened the inequality gaps and differences among various socio-economic classes instead of improving individuals' welfare benefits and enhancing economic growth in some countries. According to Brown and Sanders (1981, p. 229), "within third world nations, elitist entrenchment prevails and there are still enormous disparities between social and economic classes, as well as among regions, in their level of social welfare and economic development."

Consequently, the diffusion of growth does not appear immediately on the whole island or the entire country. Some areas embrace diffusion early; however, it occurs late in others, and even it never happen in some instances. The answer to these differences in embracing the diffusion is elucidated by Friedmann (1973) who contended that usually diffusion emerges first in core due to its political and socio-economic dominance over the periphery. Alternatively, the periphery is not a homogenous entity, therefore, the potential for development differs among various parts of the periphery. As Brown and Sanders (1981, p. 253) suggested that "periphery areas may be upward transitional because they are located in proximity to development impulses emanating from the core, or because they are located between two core cities and thus constitute a development corridor. Alternatively, there are

periphery areas that are downward transitional because they are located far from the centers of economic activity, or because their social norms are exceptionally traditional."

Another illustration of this diffusion process is proposed by researchers such as , Pearce (1987) and Oppermann (1993) who asserted that majority of tourist resorts are developed in the surroundings of airports, since, international airports are often closer to the capitals of the countries, therefore, more resorts are developed in such areas. In addition, Oppermann (1993) claimed that the development of new airports is the most efficacious approach to attract tourists directly to those areas, and airports should be developed near coastal areas as tourists are attracted towards the sand and the sea.

2.2.4 The Dependency Theory

The diffusionist approach to development was criticized because this approach failed to explain the prevailing structural conditions in contemporary developing and underdeveloped regions and countries (Browett, 1980; Oppermann & Chon, 1997). Consequently, the emergence of dependent development took place in many developing and underdeveloped economies (Auty, 1995; Britton, 1982; Erisman, 1983; Khan, 1997; Wilkinson, 1987, 1997).

The dependent development opines that economic growth in periphery produce some undesirable features that differentiate it from the capitalist development in the core (Hunt,

1989). Lack of adequate capital and investment with reduced productivity cause the periphery to get stuck in the vicious poverty circle, in which tourism in periphery is controlled and exploited by the core industrial regions (Keller, 1987). Consequently, the evolution of tourism in several destinations follows the forms of economic dependency and neo-colonialism, in which the industrial affluent core largely controls the T&T businesses of under-developed or developing tourist destinations through resource exploitation by developing the enclaves of tourism, as reported by Matthews (1977) and Wilkinson (1987) about Caribbean Islands.

Similarly, Britton (1982) illustrated this situation in his enclave model of tourism in developing countries where he indicated that tourism in developing countries is spatially concentrated and organized in the metropolitan economies, usually a capital city, where the headquarters of metropolitan tourism corporations and associated non-tourism companies are located. Since, metropolitan enterprises are actually located within the principal tourist markets, they have direct contact with tourists, they dominate major facets of the industry, such as, technology, marketing, product pricing and design, and thus, they control the link in the tourist flow chain (Britton, 1989; Wilkinson, 1997). Foreign headquarters of the tourism-generating countries organize the package tour which includes transportation, accommodation and excursions, therefore, there is a "capacity of the dominant tourism sectors to control tourist expenditures through the control of tourist movements, to the relative exclusion of the petty producer sectors" (Britton, 1982, p. 346). The only aspect that foreign headquarters cannot control is the consumption patterns of

tourists during their stay at a destination, such as, eating, drinking, entertainment, and other services.

Consequently, the center of control over the local resources and the process of development transfers to the tourism-generating economies from the host community, while leaving ruthless environmental, societal and economic impacts (Hall, 1994). Local people find themselves "enmeshed in a globally integrated system of resource use over which they cannot exercise control" and they become "the targets of top-down decision-making by elitist bodies exogenous to the community" (Brohman, 1996, p. 55).

The dependency theory can be criticized as it neglects the importance of the domestic institutions, especially the local and the national levels of government; however, it is clear that these institutions clearly affects process of development of the industry. It fails to formulate alternative prescriptions for the development of tourism in developing economies (Oppermann & Chon, 1997), and disregards the fact that local firms, in some cases, regulate and govern main aspects of their tourism industry such as major airline of Fiji (Lockhart & Drakakis-Smith, 1997) and establishing accommodations in Jamaica (Wilkinson, 1997). Furthermore, Britton (1982) argued that the domestic tourism aspects are neglected in the dependency paradigm. Britton tried to clarify that this dependency not only exists between the developing countries and the metropolitan, but also between core and peripheral regions within developing countries.

2.2.5 The Sustainable Tourism Development Approach

As it is discussed, how all aforementioned approaches failed to consider the local community needs and the significance of cultural and environmental conservation in sectoral as well as economic development. Consequently, a more contemporary approach of tourism development was originated known as "the sustainable development approach". The main focus of sustainable development is to change the concept of development by towards more greener and idealized future (Woodcock & France, 1994).

The World Commission on Environment and Development (WCED) has proposed the most extensively used and accepted definition of sustainable development in the Brundland Report "Our Common Future", which describes sustainable development as a development that fulfills the needs of present generation without hurting the ability of future generations to fulfill their own needs (Brundtland *et al.*, 1987). The concept of sustainable development refers to a process of change in which the optimal allocation of investment, resource exploitation, institutional change and technological development are all in congruence, and enhance the potential of both current and future generations to fulfill their needs and wants (Brundtland, 1987).

It is evident from the definition of sustainable development that it is also a process of change. However, this approach is different than previous approaches in a way that it gives emphasis on preserving the resources and respecting the needs and wants of future

generations. Aronsson (1994, p. 83) defined "sustainable development as a matter of simultaneously preserving, the richness of species and the multiplicity in a natural area, and striving to develop a community in order to achieve a better life for the people". This definition especially emphasized on satisfying the of human needs, the basic needs in particular. These basic needs include access to adequate food, clean and safe drinking water, clothing, shelter and jobs. In addition to that, the normal aspirations of individuals are also covered in this definition which helps in attaining an improved quality of life, and enhanced security among others. (Brundtland, 1987; Hunter & Green, 1995). A stable rate of economic growth is required by the sustainable development for combating the challenges of poverty and other economic problems, in situations where basic needs of individuals are not fulfilled (Scheyvens & Momsen, 2008).

Earlier, the tourism was considered as an unpolluted and harmless economic activity, which is free of the negative externalities or negative environmental spillover effects to other economic sectors, such as manufacturing, mining and agriculture. However, tourism development was questioned when the physical effects of litter, feet, overbuilding, congestion, and the negative social impacts of massive tourism on indigenous cultures and communities become prominent, and tourism began to be considered as a potential threat to the sustainability of a number of destinations (Burns & Holden, 1995; Butler, 1992; Long, 1993). The principle that "tourism nurtures the goose that lays the golden egg" and the belief that "there is a symbiotic relationship between tourism and the environment" becomes dubious (Wheeller, 1994, p. 652). Nonetheless, tourist destinations in the

contemporary world are dependent upon clean physical environments, safe environment and the idiosyncratic local cultural patterns. It is also observed that tourist destinations not offering environmental quality assurance usually experience a decline in the quantity and quality of their businesses. Therefore, tourism, like any other economic activity, must guarantee a capability to continue.

The profits reaped from the development projects should be used for the recovery of worn-down resources and for supporting environmental conservation for future generations (Griffin & Boele, 1997). However, Owen, Witt, and Gammon (1993, p. 463) maintained that there should not be any conflict in the concepts of economic growth and that of sustainable development because "economic vitality is essential in order to combat poverty, improve the quality of life and drive the process of environmental protection". The tourism benefits must be diffused to all the communities in order to attain sustainability (Lane, 1991). Consequently, the diffusion of development is a precondition of sustainability to attain a parallel diffusion of tourism advantages.

The above-stated insights regarding sustainable tourism goals and encompassing tourism development have been articulated in a number of declarations, such as, the Manila Declaration of the UNWTO (1980), and the Joint Declaration of the UNWTO and United Nations Environment Program (UNEP) (1982), and The Hague Declaration on Tourism, organized jointly by the Inter-Parliamentary Union and the UNWTO (1989), among others. Butler and Mao (1996) integrated the principles stated by international organizations

previously, and has given an all-inclusive definition of sustainable tourism as "tourism which is developed and maintained in an area (community, environment) in such a manner and at such a scale that it remains viable over an indefinite period and does not degrade or alter the physical environment in which it exists to such a degree that it prohibits the successful development and well-being of other activities and processes" (Butler, 1999, p. 12).

The definition of sustainable tourism given by Butler (1999) constitutes several aspects of sustainable development, such as, tourism should contribute to maintenance and development, however, the scale and type used must warrant the long-term development viability. Moreover, the physical and human impacts of tourism on tourist destinations has been recognized in this definition, which should not restrict other economic processes and activities.

A number of diverse explanations of the concept of sustainable tourism development have been proposed according to the degree of environmental concerns towards tourism. These explanations can be categorized into four main sustainable development aspects (Hunter, 1997). The first interpretation "sustainable development through a tourism imperative" is a relatively weaker explanation of sustainable tourism development, which is largely inclined towards tourism fostering, and is mainly concerned with the satisfaction of the needs and wants of visitors. The second interpretation "sustainable development through a product-led tourism" is also considered a quite weaker elucidation of the concept of

sustainable tourism development, where secondary importance is given to the environmental side of tourism. On the other hand, the third interpretation "sustainable development through environment-led tourism" refers to a strong reflection of sustainable tourism development, where decisions are made keeping the environmental concerns in view and are given primary importance in decision-making. Likewise, the fourth interpretation "sustainable development through neotenous tourism" deliberates a very strong position in which the sustainable development is established on such a conviction that tourism should be discouraged if it is in conflict with environmental issues.

Recapitulating, the notion of sustainable tourism development expresses the concept of boundaries, corresponding to the carrying capacity of a tourist destination, which refers to optimal utilization of tourist resources without producing negative spillover effects for current or future generations, decreasing tourists' satisfaction, and exerting negative effects on the culture, society and economy of a destination.

2.2.6 Public Investment, Private Investment and Governance

Governments and the development banks in less developed countries (LDCs) have for years looked toward the tourism industry as a source of income and employment growth. As argued by Baum and Szivas (2008) that the motivation for governmental support towards tourism is the ability of this sector of generating opportunities of employment, thereby, contributing to the overall social and economic growth and development of a

country. Investment can be made either by the public sector or the private sector, and the outcome is often determined by the domestic economic, social and the political policies. From the economic perspective, public investments are rationalized when private sector fails to produce an efficient amount or the case where private sector is hesitant to invest (Sakai, 2006). The investment made by the public sector or nonprofit partners lessen the investment risks to the private sector partners, which in turn, helps to ensure the project profitability (Rosentraub & Joo, 2009). Private sector investments are also crucial for the growth of a particular sector and the economy as a whole.

Governance has been defined from various different aspects by different scholars. As Kooiman (1993) defined governance as "the activities of social, political and administrative actors that can be seen as purposeful efforts to guide, steer and control, or manage various sectors or facets of societies". The participative facet of governance was emphasized in the World Conference on Metropolitan Governance (1993), where it is stated that the concept of governance encompasses a wide array of ideas including inter-governmental relationships. The concept of governance infers the bottom-up decision making approach with the participation of all stakeholder at each level of governmental and non-governmental organizations (Göymen, 2000). Governance refers to the institutions and customs by which the authority is exercised in a country. The process of the selection, monitoring and replacement of governments is included in the concept of governance. Furthermore, the capability of the government in effectively formulating and implementing good policies, and the respect of the citizens and the government for the

institutions governing social and economic interactions among them are also included in governance (The World Bank, 2016).

Moreover, governance is defined using six indicators namely; "Political Stability/Absence of Violence or Terrorism, Control of Corruption, Rule of Law, Government Effectiveness, Voice and Accountability, and Regulatory Quality". According to The World Bank (2016), "control of corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as capture of the state by elites and private interests. Moreover, Political Stability/Absence of Violence or Terrorism measures perceptions of the likelihood of political instability and/or politically motivate violence, including terrorism. Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence" (The World Bank, 2016).

2.3 Theoretical Review

Generally, knowledge begins with theories which ultimately become laws. The present study is also based on some theories, therefore, this part gives insights on theories of public, private investments and tourism growth. Moreover, it also details the theoretical review of existing literature on the topic under discussion.

2.3.1 Theories of Tourism Growth

The interest of the economists has been revitalizing into the issue of long-run economic as well as sectoral growth since the mid-1980s. Basically, there are two categories of growth models; the neoclassical growth model, popularly known as exogenous growth model primarily developed by Solow (1956), and the new growth theory largely known as endogenous growth model, introduced by Romer (1986), Lucas (1988) and Barro (1990). It is an admitted fact that long-run growth is more important than short-run growth fluctuations.

In addition, public and private investments help in stimulating and restructuring economic activities for achieving higher economic growth rates in all economies. Investments, being a part of aggregate demand as well as a source of capital formation, has been given much importance in previous research. In endogenous growth model, investment is condisdered as a crucial factor responsible for long-run growth. Despite the law of diminishing returns, under this theory, the marginal productivity of factors of production can be increased. For example, technical progress enhances productivity if it is backed by the capital investment. In the same fashion, investment in education and skill development of labour leads to increased productivity.

2.3.1.1 Rostow's Stages of Economic Growth

A natural path to economic growth has been identified by Rostow (1960), which all societies should follow in order to achieve growth. This path comprises five stages towards development, which starts with the traditional society and progresses through the stages of preconditions for take-off, the take-off, and the drive to maturity, and finally reaching the final stage of high mass consumption. Rostow (1960) advocated the dynamic role of a free private sector in collaboration with an efficient public sector for achieving a quick and better degree of development.

Although, the growth model presented by Rostow have not addressed tourism growth particularly, but general economic growth from any form of economic activity, therefore, this model can be used as an appropriate tool for explaining tourism growth (sectoral growth). Tourism can also provide a natural path of growth to a destination through various stages. These stages may start from traditional non-tourism destination with zero tourist arrival, to precondition to take off (in which explorers and new visitors visit for the first time), to maturity (in which mass tourism takes place in the destination), to the final stage of mass consumption (characterized mass organized tourism). From this analysis, it is evident that Rostow established the roots for most of the models that attempt to explain sectoral growth. Therefore, several studies have integrated many of Rostow's stages into their evolutionary models, although using tourism-specific terminology.

2.3.1.2 Exogenous Growth Theory

In order to distinguish the individual contributions of capital, labour and technology to economic growth, Solow (1957) proposed a framework which served as a basis of growth accounting exercises practiced by the growth specialists (Denison, 1962, 1967) for deriving key policy implications. The neoclassical model proposed by Solow illustrates how capital accumulation con augment the growth rates in an economy in the medium-term. In addition, it also predicts that growth rate of labour force limits the steady state (long-run) growth rate if the production function follows diminishing returns to scale (the variable factor), constant returns to scale or no technological progress. Hence, the main driving force for long-term economic growth in Solow model is the technical progress.

Following the article of Solow (1957), where he indicated the process of calculating the individual contributions of individual factors of production in output growth, it was revealed that a larger part of measured growth was left unexplained. This unexplained factor is termed as Solow's residual, which represents growth of total factor productivity, which was recognized as a measure of technical progress. Since, technical change was exogenous; it demonstrates that a larger part of economic growth remained unexplained in the neoclassical model. The Solow's residual, calculated using various approaches of growth accounting, was in Abramovitz's words "a measure of our ignorance about the causes of growth" (Abramovitz, 1956; Fagerberg, 1994).

Although, Solow growth model does not address tourism growth particularly, but general economic growth from any sort of economic activity, it can also be used as an appropriate tool to explain tourism growth (sectoral growth). Tourism growth can be explained if, in any country, long-term growth in tourism is determined by the exogenous factors like technology. Solow model can be used as a useful technique to explain tourism long term growth determined by some exogenous factors such as technology.

2.3.1.3 Endogenous Growth Theory

Despite the Solow model of economic growth seems appropriate, nevertheless, this model has atleast one serious limitation as a model of economic growth. According to the Solow model, the growth of productivity is the only source of long-run per capita output growth, which means an explanation of productivity growth is required to explain the long-run economic growth completely.

In response to the limitations of the Solow model, a new branch of growth theory, endogenous growth theory, has evolved in an attempt to explain the economic growth or the sectoral growth such as tourism growth endogenously. The phrase "endogenous growth" includes a varied body of theoretical as well as empirical work that emerged in the 1980s. The distinguishing point of this theory is that it emphasizes on internal factors of production for long-term growth. This theory attempts to handle the shortcomings of Solow growth model by restating the significance of capital accumulation, proposing

numerous approaches to endogenizing the technological change, highlighting the crucial role of human capital, and underlining the importance of research and development (R&D). In addition, endogenous growth theory provides an enhanced understanding of the process of growth, and emphasized on the role of government institutions to overcome market failures associated with various types of investments. Hence, the investment is crucial for the promotion of growth. Moreover, this theory indicates that the technological improvements accessed by investment drives economic growth. Therefore, long-term growth can be attributed to the investment expenditure.

Here, a simple endogenous growth model is presented in which the number of workers remains constant, a condition implying that the growth rate of output per worker is simply equal to the output growth rate. The simple endogenous growth model is based on the aggregate production function, such that; $Y = AK$, where, K is the aggregate capital stock and Y is aggregate output and. The parameter A is a positive constant. According to this production function, each additional capital unit increases output by A units. This production function does not imply diminishing marginal productivity of capital, because the marginal product of capital, equal to A, does not depend on the size of the capital stock K. The assumption that the marginal productivity is constant, rather than diminishing, is a key departure from the Solow growth model.

Endogenous growth theorists have provided a number of reasons to explain the non-diminishing marginal productivity of capital. One possible explanation is the role of human

capital, because as tourism sector or the whole economy accumulates capital, it devotes more resources to invest in people through improved nutrition, education, health care and on-job training, which in turn, improves the human capital in that particular sector or economy as a whole, thereby, enhancing their productivity. Given a fixed amount of human capital, if stock of physical capital increases, it will cause marginal productivity of physical capital to diminish, because each additional unit of physical capital has to work with a reduced amount of human capital. It is argued in endogenous growth theory that stock of human capital increases with increase in stock of physical capital in the same proportion. This helps to maintain the marginal productivity of capital as each additional unit of physical capital can have the same amount of human capital.

The R&D activities of the firms can serve as another explanation of constant marginal productivity of capital. These R&D activities increase the stock of commercially valuable knowledge, which also includes new methods of production and products as well. This rationalization illustrates that technical knowledge increases with increase in capital and output, which offsets the declining capital's marginal productivity with increased productivity. Having examined why a production function like stated above might be a reasonable description of production in a particular sector, once factors such as increased human capital and research and development are taken into account, the implications are discussed here.

The assertion that saving rate influence the long-run output growth rate in contrast with the Solow model, where savings have nothing to do with long-run growth. In endogenous growth model, savings affects long-run output growth rate, because higher saving and capital formation rates encourage increased investments in R&D and human capital. The subsequent productivity increases help in stimulating long-run sectoral as well as economic growth. In conclusion, the endogenous growth model, in contrast to the Solow model, emphasizes on endogenous variables like saving, investments, R&D activities, and human capital formation as sources of long-run sectoral and economic growth.

The focus of this endogenous growth theory, similar to the neoclassical growth theory, is on the behavior of the whole economy, however, this work is complementary to the study of R&D and productivity at the level of a firm or an industry (Romer, 1994). Therefore, this theory can serve as a valuable platform to explain the long-run growth in tourism sector assuming growth to be endogenously determined by the savings and the investments.

2.3.1.4 Public Capital Hypothesis

Generally, economists argue that public investment undertaken by the government can affect private investment in many aspects. The simple theory that explains the effect of public investment on private investment is known as the Public Capital Hypothesis. Generally, this hypothesis postulates that public capital stock has significant positive effect on private capital spending – via output, productivity and capital formation.

The premise is that public capital has two effects, the direct and the indirect effect, on private sector productivity. First, public capital has direct effect on private output. The direct effect of public capital on private output depends on whether public capital provides an important intermediate input in the production function of private sector firms. If so, as positive externality to private production, an increase in public capital would, holding private capital and labour constant, raise private output just as an increase in the use of private capital would raise output. Thus, public capital stock contributes to the productive capacity of private sector.

Second, the indirect effect implies that public capital is assumed to complement or substitute private capital in the private production process. The indirect effect arises when public investment indirectly affects output or growth through its effects on private inputs, particularly private capital. Accordingly, public investment may have a short-run impact on the private sector production decisions, implies that holding the output constant, a change in the stock of public capital may have an impact on the demand for private capital and labour. Private capital can serve as a complement to private capital if a higher availability or larger use of public capital enhances the marginal productivity of capital (MP_k) or raises the rate of return on private capital or labour. Consequently, this effect potentially provides an inventive for firms to increase private investment, and thereby to increase the level of production. This is called a scale effect or crowding-in effect of public investment.

Contrariwise, public and private capital can serve as substitutes rather than compliments, in case if stock of public capital is greatly available, it can reduce the demand for private inputs. An increase in public capital investment results in reduced private investment, thus a lower stock of private capital. This is called a substitution effect or crowing-out effect of public investment.

Lastly, if public and private capitals are independent of each other, ceteris peribus, then an increase in public investment will generate a direct positive effect on output and marginal productivity of labour in the private sector. Moreover, in the long-run public investment also has an impact on firms' production decisions.

Many authors used public capital hypothesis in their research such as Aschauer (1989), Conrad and Seitz (1992), , Hassan and Jajri (2011), Hassan, Othman, and Karim (2011) and Sturm and Kuper (1996) found mixed results in different situations. Public capital may crowd out or crowd in private capital depending upon the situation whether it supports the infrastructure or it competes in the projects respectively. Therefore, this hypothesis can serve as a useful proposition to test the substitution or complementary effect of public and private investments in tourism industry in focus area.

2.3.1.5 Theory of Institutional Quality

Although, detailed research on the effect of institutional quality on growth is recent, the significance of institutional quality was acknowledged centuries ago, as revealed in the following quote taken from one of the lectures of Adam Smith.

"Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism but peace, easy taxes, and a tolerable administration of justice: all the rest being brought about by the natural course of things" (Smith, 1755) in Carlos (2016). This long-acknowledged relationship did not received attention in the literature of economic growth until about 18 years ago, when the association between economic growth and institutional quality turn out to be more obvious as established by Ndulu and O'Connell (1999). They revealed that authoritarianism negatively affects economic performance.

Institutional quality permits the citizens' participation in political process and general running of public affairs is closely related with a feeling of empowerment, thereby, enhancing productivity. In his Nobel Prize lecture, James Buchanan (1986) argued that economists should look at the "constitution of economic policy to examine the rules and the constraints within which political agents act." He implicitly argued that institutions are not developed when their benefits exceed the costs from the view point of the "common good." Several studies have attempted to find out the reason of negative relationship between institutional quality and economic growth.

It is argued that people in power shape up institutions according to their personal benefits (Acemoglu, Johnson, & Robinson 2004; La Porta *et al.* 1999). Acemoglu, Johnson and Robinson (2004) argued that institutions are preferred by different groups based on their personal benefits, and the prevalence of institutions is largely dependent upon the group in political power. The question asked here is to examine how these institutions impact economic outcomes. One of the answers could be the rent-seeking and state capture hypothesis. According to this hypothesis, the politically powerful elite, whose interests might be at odds with that of the general public, engages in rent-seeking activities. As such, they try to change the status quo. It is important to note that rent-seeking and the quest to protect future rents, lead to inefficient allocation of resources from the social welfare perspective.

Furthermore, resources are diverted towards inefficient personal rent-seeking activities instead of productive activities (Kimenyi & Tollison, 1999). Dethier (1999) argued that the "efficiency of the use of public resources depends on incentive schemes of public organizations and that reforms should focus on designing schemes that ensure credible commitment and implementation of policies that maximize social welfare." Institutional quality enhances efficiency in terms of optimal utilization of resources, which in turn, augments economic growth (Dethier, 1999).

Political institutions design the legal system that defines the rules that govern exchange. In a political process, different interest groups compete for political power or economic rents within the framework of the rules defined by the legal system. Without an appropriate incentive structure within political institutions, rules may be designed to benefit particular groups with a political advantage at the expense of society as a whole. Without basic legal protections, private investment tend to decline, thereby, reducing the growth. Private investment discouraged by poor quality bureaucracies that are susceptible to capture by interest groups. This in turn retards economic growth.

In a democratic political process, interest groups pressure policymakers to pursue policies that favor these particular groups. Often at the expense of the general good, if this enhances their chance of retaining power through re-election. On the other hand, dictatorships may pursue policies that favor interest groups that maintain them in power, and thus protect their future rents. Therefore, since no government is insulated from pressure from interest groups, the question of whether political stability fosters the rule of law, control of corruption, is theoretically unclear (Przeworski & Limogi 1993).

2.3.2 Public Investment and Tourism Growth

Although, the relationship of public investment and sectoral or economic growth has experienced a long period of research and voluminous literature can be found, this area is

still inconclusive. A holistic concept has not been provided by all the studies using different empirical approaches and methodologies.

Generally, it has been accepted that public investment is vital for the growth of any sector like tourism and the economy as a whole. The empirical work on this issue began with the seminal works of Abramovitz (1956) and Solow (1957). For the first time, it became possible to investigate the effects of individual factors of production on economic growth. Until that time, the relationships between factors of production were studied using short-run multipliers, capital output ratios and input-output techniques (Drezgić, 2008). The new methodology was supply-side oriented, and it introduced the approach to investigate the long-term impacts of various factors of production on economic growth.

The importance of public investment on economic growth has been highlighted by several studies in the literature that also includes neo-classical and endogenous growth theories such as, Barro (1988), Barro (1989), Barro (1996), Barro and Lee (1993), Buiter (1977), Devarajan, Swaroop, and Zou (1996), Easterly and Rebelo (1993), Fischer (1993), Glomm and Ravikumar (1997), Grier and Tullock (1989), Kormendi and Meguire (1985), Levine and Renelt (1992), Mankiw, Romer, and Weil (1992), Romer (1994) and Sala-i-Martin, Doppelhofer, and Miller (2004). The spillover effects of public investment on growth are largely non-rival and non-excludable, which is emphasized by the endogenous growth models (Romer, 1986). Furthermore, Munnell (1992) asserted that the productive capacity

of an economic sector can be expanded with the public investment, by enhancing the productivity of existing resources as well as by increasing the resources in the sector.

The claim made by Qin, Cagas, Quising, and He (2006) that investment is the main engine of sectoral as well as economic growth is also supported by Ghani and Din (2006) who asserted that level of public investment positively affects economic growth. In addition, they stated that the government has a key role in regulating economic relations. Likewise, these interpretations can be generalized to the sectoral growth analysis such as tourism sector growth. Instead, some research studies raised questions regarding the efficiency of public investment and its relationship with private investment, and argued that public investment may not essentially have a favorable impact on economic growth (Devarajan *et al.*, 1996; Khan & Kemal, 1996).

It is generally argued that the involvement of government is crucial for the tourism development in a country. In many developing economies, the role of governments have remained crucial in the development of tourism industry (Akama, 2002). In this regards, he further argued that in many developing countries, governments have been actively participating in the provision of tourism and hospitality facilities and services in addition to their role of tourism policy formulation and development of national tourism action plans. As tourism sector is highly fragmented and it involves many other sectors and stakeholders from other economic sectors, therefore, the public sector has to play a fundamental role by acting as a promotor and facilitator for the development of tourism in

the country by offering an appropriate legal and socio-political environment in order to attract private investors from domestic and foreign markets (Akama, 1997, 2002; Gunn, 1988; Hughes, 1994; Jenkins & Henry, 1982). Jenkins and Henry (1982) contended that governments, in most of the developing countries, involve in tourism related activities not only to achieve the long-term objectives, but, also in compensation for inadequate private investments and to boost the confidence of private sector investors. Moreover, Jenkins (1991) also asserted that the role of the governments in developing tourism in developing countries is to develop the sector through direct investment in addition to their role in the establishment of legislations and policy frameworks.

Moreover, the planning initiatives and policies of the government regarding the provision and establishment of a better communication network and transport infrastructure, the preservation of heritage sites, the development of museums, and the promotion of arts and crafts directly affects the tourism development in the country (Akama, 2002). Further, the availability of basic tourism infrastructure such as, natural landscapes, beaches and heritage and cultural sites, among others is of crucial importance for developing tourism in a given destination. These tourism infrastructure elements are classified as public goods, which, usually, cannot be provided and supervised by the private sector because the private sector may not have the required capacity, and social and economic motivation to provide and manage public goods on a long-term sustainable basis for the welfare of present and future generations (Akama, 2002; Gunn, 1988; Hughes, 1994; Jenkins, 1991). Consequently,

government involvement is often required to protect and efficiently manage and utilize the base tourism resources.

In the same line of argument, Petrescu (2011) claimed that the supervision of tourism is the state responsibility, and state even has to facilitate tourism sector in some situations. Moreover, they declared that the public sector helps tourism growth by improving infrastructure development, encouraging private investment in hotel construction, maintaining standards of quality and protecting the tourists against any kind of insecurities. The actions taken by the state to create the best environment to stimulate the growth of overall production has a direct effect on tourism as well and government intervention is much needed in tourism industry (Maškarin Ribarić & Ribarić, 2013). Moreover, they asserted that the state has to make strategically oriented investments in order to create conducive environment for better tourism performance. In addition, Tisdell and Wen (1991) maintained that the major challenge in the development of tourism in China was the inadequate number of hotels that can be addressed with increased investments.

The tourism investment from public sector can be made from different levels of governments such as the supranational level such as European Union (EU) or SAARC, the national level such as country central governments or the local governments of the cities and town (Petrescu, 2011). In addition, they explained that the public sector investment can be made in building museums, leisure centers and parks, in the installation of new machinery such as playground accessories, computerized booking system and in

infrastructure. Public investment in tourism is not only necessary and beneficial for the tourism sector but it also brings fruitful economic outcomes at the national level in the form of improved foreign exchange earnings, increased national income and economic growth, employment generation and improvement in balance of payments.

However, the economic inability of public sector to appropriately measure and respond to market demand and changes is a factor that generated the impression among classical economists and development experts that public sector should not involve in business activities. They advocated that the private sector should be responsible for the tourism related entrepreneurial activities. Likewise, the International Monetary Fund (IMF) and the World Bank who are the promoters of free-market economy, maintained that the governments should detach themselves from economic activities as much as possible. They argue that the prime concern of the government should be the policy formulation and implementation of the laws supportive to tourism development (Jenkins, 1994; Sinclair, 1990).

On the other hand, the developing countries, where tourism has evolved and develops as a major economic sector such as India, Jamaica, Mexico, Bahamas, Kenya, Morocco, Tunisia, Egypt and Indonesia, governments directly contributed in the form of investment in the development of tourism industries (Akama, 1997, 2002; Bennett, 1994; Dieke, 1991). Therefore, particularly, during the evolution and emerging stage of tourism development, governments, in developing countries, have focused on tourism sector and

initiated investment projects for the development of this sector (Akama, 2002). The financial incentives and collaborative networks are the key strategies used by governments in developing countries for the development of tourism sector.

In this regard, Akama (2002) further contended that due to high-risk nature of the tourism sector, usually private investors are reluctant to invest in infant or new tourist destinations or the destination which do not guarantee good returns on investments. Consequently, in such tourist destinations, it is the government who establishes the required initial infrastructure where the tourism industry can flourish (Akama, 2002; Sinclair, 1990).

2.3.3 Private Investment and Tourism Growth

It is an admitted fact that private investments enhance sectoral as well as economic growth in an economy. As Wang and Xu (2011) also highlighted the importance of private investment in developing an industry and a country as a whole. Likewise, Erenburg (1993) also maintain that the activities related to the private investment stimulates future growth of real income. Moreover, Tisdell and Wen (1991) maintained that the major challenge in the development of tourism in China was the inadequate number of hotels that can be addressed with increased investments.

Generally, the involvement of private sector in T&T is mainly profit-driven and as argued by Tribe (1999) that private investments affect travel and tourism demand. As also stated

by Petrescu (2011) that the tourism is an activity primarily sustained by the private initiatives, while the governments should focus on providing the enabling environment to the private sector to flourish. The support services offered by the private sector in T&T include but not limited to the financial services like insurance, guiding services, press and publication services such as publishing time tables and guidebooks, marketing support services, training and development of human resource, port services as well as development of private ports.

2.3.4 Relationship between Public and Private Investments

Generally, it has been argued that public investment facilitates and stimulates private investment through the infrastructural support, thereby, increasing the productivity of the capital. One strand of literature takes a positive view of public investment and maintains that public investment enhances the productivity of private sector, which in turn, stimulates the economic growth. The research studies include and , among others. These scholars are of the view that public investment generates positive externalities in the economy by providing support through physical infrastructure, basic scientific research, health and education. In addition, public investment may also crowds in private investment, which in turn, stimulates economic growth.

In the same line of argument, Nazmi and Ramirez (1997) argued that the government plays a vital role in increasing in productive investment, which provides a socially optimal

direction for economic growth. Thus, changes in government expenditure composition have a significant impact on private investment behavior. Similarly, Ghani and Din (2006) stated that level of public investment enhances private investment.

Conversly, Phetsavong and Ichihashi (2012) argued that public investment may crowd out private investment, in situations where an increase in public investment increases the domestic rate of interest and taxes, and where the products and services offered by the public sector directly compete with goods and services offered by the private sector. Moreover, it can also crowd out private investment when public sector utilizes the physical and financial resources which would otherwise be available to the private sector (Aschauer, 1989; Blejer & Khan, 1984). Phetsavong and Ichihashi (2012) further added that the size of crowding out effect could be higher if public sector distortion is very high and for financing the increased investment, domestic interest rates are increased, thereby, reducing the private sector access to money market. Therefore, the growth slows down because of the crowding out effect of an increase public investment on private investment.

As argued by Bennett (1983) , government spending for roads, public housing, airports etc. can stimulate, retard, or have no effect on private investment spending. If increase in the public capital stock stimulate or retard private investment, the marginal productivity of private capital will be increased or reduced by public investments. In the same line of thought, Erenburg (1993) asserted that ceteris paribus, if both public and private sectors compete for the same available resources for the implementation of private/public

investment projects, it produces crowding out effect of current public investment on current private investment, whereas, existing public capital stock may crowd in private investment. Clear-cut answers to this issue is, however, hard to find as economic theory as well as empirical evidence leads to sharp contradictions.

As stated by Hassan *et al.* (2011), public investment expenditure provide public intermediate goods like transport and water infrastructure. These inputs are essential for private sector investments and private sector production. These type of public intermediate goods generate positive spill-over effects for the private sector by enhancing the productivity of private sector.

The concept of public-private collaboration refers to the collaboration among individuals and organizations from both sectors to achieve specific objectives (Cetinski, Peric, & Sugar, 2009). Moreover, they asserted that collaboration is a universally proven and practiced approach for achieving sustainable development. The ultimate purpose of this collaboration is to stimulate the overall societal welfare impacts of society. Moreover, it brings together the interests of various stakeholder from different sectors of the economy to achieve overall welfare goals. Furthermore, collaboration is an effective approach of resolving the conflicts among different stakeholder and the problems, which cannot be solved individually by public, private or civil sectors.

The absence of capital investments inGarcia-Mila, McGuire, and Porter (1996) valuable facilities of tourism offerings is the consequence of lack of interest by the public sector in tourism sector as stated by Maškarin Ribarić and Ribarić (2013). Moreover, Petrescu (2011) argued that when the risks are too great in any investment project in any sector specifically tourism, private investors and leaders from the public sector initiate efforts to structure collaborations with private sector for ensuring the security to private investors.

On the other hand, the collaboration is easy to advocate than to achieve. International experience indicates that the outcomes of experimenting decentralization and arrangements of partnership are mixed in different countries. For example, as stated in Göymen (2000), Thomas and Thomas (1996) reported that since 1980, the tourism industry could not receive any benefit despite revolutionary transformation in the local governance of British. Moreover, they asserted that these are the stakes of the status quo and organizational inertia, which have created barriers in the way of materializing the anticipated benefits of collaboration and governance through networking and flexibility. In addition, Selin and Chavez (1995) and Long, Sinclair, and Stabler (1991) underlined the fragile nature of tourism collaborations and suggested that special facilitative measures are constantly needed to nurture and sustain the tourism collaborations for the development of the sector (Göymen, 2000).

2.3.5 Role of Governance in Tourism Growth

The institutional environment plays a critical role in the process of development especially in transition or developing economies (Cheng, Xia, & Yu, 2008; Guthrie, 1997; Li & Wong, 2003). Public sector intervention through governance is a classic approach in developing countries where the government gets involved in the investment policies formulation as well as their implementation (Chen & Huang, 2007; Cheng *et al.*, 2008; Hongbo, 2008; Song, 2008; Wang & Xu, 2011).

Göymen (2000) interrelated the patterns of tourism development with governance dynamics in Turkey. He claimed that in developing countries, where democracy has not been fully institutionalized, a supportive democratic political culture may be only in the formative stage and have poor governance, investments in tourism by public or private sector and their collaborative schemes may face additional difficulties and may not be effective. Tanzi (1998) claimed that corruption affects public expenditure as public investment projects give room to public officials of high-level corruption. Moreover, he argued that public capital projects have been initiated particularly for the provision of opportunities to some political groups and individuals for getting bribes and money, which decreases the investment productivity of such investment projects. Contrarily, Leff (1964) and Samuel (1989) supported the view that corruption enhances efficiency as oil the wheel by removing the rigidities that hinder investments and create barriers in other economic decisions. Thus, corruption “oils the mechanism” or “greases the wheel”. In the same line

of argument, Tullock (1996) and Becker and Stigler (1974) contended that corruption allows the governments to sustain a lower tax rate that favors growth. On the other hand, Lui (1996) argued that the corruption offers opportunities of getting bribes to few individuals which leads to inefficient allocation of investment projects to inefficient groups or organizations which reduces the sectoral and economic growth

2.4 Empirical Review of Tourism Growth, Public Investment, Private Investment and Governance

There has been a number of empirical research studies that investigate the effect of public and private investments on sectoral as well as on economic growth. Likewise, the induced effect of public investments on private investments is also studied in many studies and the effect of governance, corruption and political stability on economic growth also remained a matter of interest among researchers. Following section presents detailed review of the existing empirical literature regarding the effect of public investments and private investments and the effect of governance on economic as well as sectoral growth such as tourism growth.

2.4.1 Public Investments and Tourism Growth

The effect of public investment on tourism growth has been the subject matter of an emerging empirical as well as theoretical literature. Both strands of literature are of the

view that policies of the government considerably influence sectoral as well as overall economic growth.

As part of the seminal work, Mera (1973) investigated the effect of public capital investment on Japanese regional productivity and discovered a significant positive relationship between both variables. A number of methodologies have been used in empirical research to determine the effect of public investment on general economic growth, and particularly, tourism growth. In line of aforementioned studies, Costa, Ellson, and Martin (1987) and Deno (1988) utilized production function approach, and discovered that public investment significantly contribute as an input in the production process.

Petrescu (2011) found public investment as significant determinant in growth of tourism demand, hence, the growth of tourism sector. Similarly, the tourism and hospitality industry of Kenya has developed with the direct involvement of its government. Moreover, this rapid expansion and development of Kenya's tourism industry was because of the enabling political and socio-economic environment created by the government especially, in the evolutionary stages.

Empirical evidence also suggests that the small island such as such as Zanzibar in Tanzania, where the government has not adopted an active role in investment besides policy formulation and monitoring has not developed (Sharpley & Ussi, 2014). According to a survey conducted by UNWTO (1996), which included case studies from various developed

and developing countries, stated that, in early stages of tourism development of the countries, governments played pioneering role. This is because in the initial stage, the provision of basic tourism infrastructure and related amenities require large investments for opening the new avenues for country's tourism, which can be possible with the direct involvement of the government. In the evolutionary stages, the private sector does not tend to take risks until they become confident enough regarding the full potential of this sector.

During the early stages of development, it is the responsibility of public sector tourism management agencies to plan and promote tourism, and its efficient functioning as well. For said purpose, the services of tour operators, travel agents and hoteliers are offered by the public sector (Botterill *et al.*, 1997; Clancy, 1999; Göymen, 2000; Hall, 1992; Jenkins & Henry, 1982; Korzay, 1994; Tosun & Jenkins, 1998). In addition to that, the public sector in Turkey has played a pioneering role in the tourism development of the country (Göymen, 2000).

However, the role of the public sector is restricted to a facilitator and coordinator in the later stages of tourism development. The government facilitates and assists the private sector and make efforts for filling the gaps left by the private sector, conditional on her viability and scope (Göymen, 2000; Jenkins, 1994; Mckercher & Ritchie, 1997; Smeral, 1999; Weaver & Elliott, 1996). The public sector is responsible for the image building and promotion of tourism industry of the country abroad, the provision of basic infrastructure, training and development of the human resource employed in the industry and the

environmental protection which private sector usually overlooks, in Turkey (Göymen, 2000).

2.4.2 Private Investment and Tourism Growth

The policymakers and economists largely consider that the efficiency and productivity, in terms of per dollar contribution to growth, of private investment is higher than that of public investment. However, the empirical evidence supporting this conviction is scant. Among those who support this assertion are, Khan and Reinhart (1990) who investigated the growth differences between public investment and private investment using a sample of 24 developing economies. Nevertheless, their analysis revealed statistically indistinguishable differences between the marginal growth impacts of public investment and private investment.

In support of above-mentioned assertion, Khan and Kemal (1996) also attempted to investigate the comparative significance of private investment and public investment in stimulating economic growth using a large sample of developing economies. Their study findings revealed that the impact of private investment on growth is significantly higher than that of public investment. In addition to that, the impact of public and private investment varies in different regions. Similarly, Navy (2002) also found a significant positive relationship between private investments and economic growth using VAR methodology. A study by Mallick (2002) revealed that private investments indirectly affect

growth in India and M'Amanja and Morrissey (2006) also found that investment had a strong impact on growth in Kenya.

Petrescu (2011) found private capital investment as significant determinant of tourism demand, hence, the tourism growth. Likewise, Sharpley and Telfer (2014) stated that capital investments are imperative for the sustainability and long-term growth of tourism sector, thereby, helping to stimulate economic growth.

Additionally, Banerjee, Cicowiez, and Cotta (2016) assessed the impact of tourism investment using autoregressive integrated and quasi-contingent valuation methods in Belize. Their study revealed that tourism related investments could enhance tourism growth by 3 percent. Similarly, Alam and Paramati (2017) empirically investigated the effect of tourism related investments on the development of tourism and reduction in CO_2 emissions in a sample of top ten tourist countries. They selected the sample countries based on the percentage share of tourism in their respective GDPs. Using fully modified ordinary least squares method of estimation, they found that a 1 percent increase in tourism related investments enhances the tourism development by 0.982 percent in sample countries. Moreover, they found that 1 percent increase in tourism related investments helps to reduce the CO_2 emissions by 0.098 percent. They proposed that the effect of tourism investment should be further investigated in the context of developing economies.

2.4.3 Relationship between Public Investment and Private Investment

The relationship between public investment and private investment remained as matter of controversy in various research studies. The controversy revolves around two views; the crowding-in and crowding-out effects of public investment. The advocates of crowding-in postulate that public investment support private sector and helps in enhancing private investment while the scholars supporting the view of crowding-out view assert that the public investment perform as a substitute of private investment and hence, in case of increased public investment, private investment declines i.e. crowds out.

Reviewing the view point of crowding-in advocates, the findings of Blejer and Khan (1984) stated that public investment and private investment are complimentary when public investment is made in infrastructure. Similar results are found by Costa *et al.* (1987) and Deno (1988) who reported that private investment and public investment are complementary, rather than substitutes, thereby, supporting the view of crowding-in effect. Likewise, Morrison and Schwartz (1992) observed that infrastructure investment tends to lower business cost. They found that public investment expenditure enhances the capacity utilization of the private investment. Argimon, Gonzalez-Paramo, and Roldan (1997) reached the same conclusion of crowding in effect of public infrastructure investment on private investment using panel data of 14 industrialized economies over the period 1979-1988. Public investment is stated as an essential component for private investment by Mourmouras and Lee (1999).

Likewise, Zugasti, García, and Maldonado (2001) is also an advocate of crowding in effect view based on their study conducted on a panel data set of 14 Spanish industries selected from six sectors of the economy namely; communication, construction, financial services, manufacturing, restaurants and hotels, and transportation over the period 1980-1991. Similarly, Pereira (2001) investigated the effects of public investment on private investment in the United States based on impulse response analysis using VAR and reached on a conclusion of crowding in effect. In the same way, Erden and Holcombe (2005) found crowding in effect as they found positive association between public investment and private investment using a sample of 19 developing economies from 1980 to 1997. Hassan *et al.* (2011), in their study argued that public investment tends to stimulate the productivity of private investment, thereby, enhancing the level of private investment.

Similarly, the study by Erden and Holcombe (2005) investigated the effects of public investment spending using a sample of 19 developing economies. They applied four methods as pooled ordinary least squares (POLS), fixed effects, random effects, and two stage least squares (2SLS) for the analysis of data over the period 1980 – 1997, and found that public investment expenditure complements private investment expenditure.

On the other hand, public investment can also crowd out private investment in product, input and financial markets as a result of the impact of taxes on savings. The issue of crowding out has long been debated by economists. In some research studies public

investments completely crowds out private investment (Keran, 1969, 1970). However, Lombra and Torto (1974) found partial crowding out. Likewise, Abrams and Schitz (1978), Zahn (1978), Arestis and Karakitsos (1982) and Cebula, Carlos, and Koch (1981) also proved in their empirical studies that he crowding out effect is partial. As pointed out by Blejer and Khan (1984) that the public investment other than infrastructure crowds out private investment, while Shafik (1990) found no crowding out effect. Moreover, Evans and Karras (1994) also supported this argument using a sample of Organization for Economic Cooperation and Development (OECD) countries, they found a negative effect of public capital expenditure on private capital expenditure.

In the same line of argument, using partial correlation analysis of public investment spending and private investment spending on a sample of 63 developing economies from 1970 to 2000, Everhart and Sumlinski (2001) found negative correlation between public and private investments, thus supporting the crowding out effect. Similarly, Bende-Nabende and Slater (2003) used panel cointegration approach to investigate the factors affecting private investments in the Association of Southeast Asian Nations (ASEAN) over the period 1965 – 1999, and found public investment as a significant determinant but, it negatively affects or crowds out private investment. Vu Le and Suruga (2005) as one of the advocates of crowding-out view reported crowding-out effect of public investment on foreign direct investment (FDI) when public investment exceeds eight to nine percent.

The findings of Aschauer (1989) support both the crowding in and crowding out effects as he found that public investment decreases private investment for a given rate of return, however, beyond that the productivity of private investment increases due to the fact that private sector exploits the spillover benefits from public investment spending. Similarly, Munnell (1990) also concluded that public capital spending affects both positively and negatively private capital spending. The productivity of private investment is enhanced with an increase in rate of return on one hand; however, on the other hand, public investment crowds out private investment when it substitutes the private investment by competing for the resources and the market.

In the same line of argument, Greene and Villanueva (1991), Ahmed and Miller (2000), Ghura and Goodwin (2000), Bende-Nabende and Slater (2003), and Erden and Holcombe (2005) used panel data analysis for developing economies; Ramirez (2000) for Latin American economies, Blejer and Khan (1984), Oshikoya (1994) for African economies and Odedokun (1997) for 48 developing economies to examine the validation of public capital hypothesis. The conclusion of aforementioned studies is that public investment stimulates private investment when public investment is made in infrastructure or other facilitative measures, while public investment impedes private investment if it acts like a substitute.

2.4.4 The Collaboration of Public Investment and Private Investment in Tourism Growth

The public sector helps in creating favorable socio-economic and political environment for the private investment in order to achieve sustainable development in tourism industry. This is evident from the case study conducted by Akama (2002) regarding the government role in tourism development in Kenya. He claimed that the role of government is crucial in the development of Kenya's tourism by stating the functions of tourism ministry of Kenya. These functions include the initiation and promotion of foreign and domestic investments in tourism industry, the establishment, efficient management of restaurants, hotels, and other tourism based businesses, the training and development of tourism based human resource, and the promotion and marketing of tourism products of Kenya in international and domestic markets. In a nutshell, the government has the responsibility to enhance the direct and total contribution of tourism in national income of the country via increased foreign exchange earnings (Akama, 2002).

Bakan and Bosnic (2012) claimed low size of investment in tourist infrastructure as an important reason of slow tourism development in Croatia in a study on public-private partnerships in sustainable tourism development in Croatia. Moreover, they suggested that sustainable tourism development can be planned and based only on the continued cooperation between public and private sectors. These were the collaborative efforts of private entrepreneurs, investing in tourism, and the public sector players that helped

Turkish tourism to develop, but, in some cases, public partners still dominate the scene (Göymen, 2000).

2.4.5 Role of Governance in Tourism Growth

Poor governance may exacerbate existing problems in the sector and impedes the socio-economic development of the country in general, and tourism sector in specific, either by failing to provide adequate support or through inability to deliver public goods that have positive spillover effect (Sharpley & Ussi, 2014; Torres & Anderson, 2004). The ways of governing institutions in a country and the means of exercising power in managing the financial and social resources of a country for development are of crucial importance in successfully executing the development policies in a country. Therefore, effective and tailored governance of tourism resources is a prerequisite in achieving the development goals in a country, given that the tourism industry is among the dynamic industries through which economic, social, human, environmental and cultural resources in a country can be exploited efficiently.

In this regard, Göymen (2000) revealed mixed findings about the practices of governance and tourism development in Turkey. Despite achieving a record average growth rate of 13 percent over the period 1985 – 1997, accomplishing a good rank in terms of tourism revenues and tourist arrivals, it experienced an enlarged spatial socioeconomic polarization in the society, deterioration of the environment and cultural estrangement, which were the

outcomes of collaborations without effective governance. Wei (2000) studied the effects of corruption on Foreign Direct Investment (FDI) and found a negative relationship between both stated variables. The effects of corruption on economic growth and other economic indicators have been documented by numerous studies using various indices of corruption and cross-sectional data. The results from these studies have shown a negative effect of corruption on economic growth through reduction in level of investments in the country (Mauro, 1995). Such type of decline in level of investments is due to increases cost of capital and uncertainty caused by the corruption. The analysis of Mauro (1995) have revealed that the decline in growth rate is directly due to fall in investments because his analysis was based on production function approach where growth is a function of investment. Furthermore, the debilitative effect of corruption on public investment is also found in a study conducted by Tanzi and Davoodi (1998).

Being one of the indicators of governance, the control of corruption has also been studied by a limited number of scholars. The traditional economic writers (Huntington, 1968; Leff, 1964) have argued in favour of corruption as an enhancing factor of economic exchange, as they claimed that it helps to overcome some cumbersome regulations. This, in their arguments, explains that corruption positively influences economic growth as the productivity of labour is assumed to rise with illegal incentives to economic agents in order to speed up their activities. Similar to the above coefficient of corruption estimates, (Coupet Jr, 2011) obtained a positive and significant relationship between corruption and economic growth, using the Ordinary Least Squares (OLS) technique in the case of the OECD

countries between 1960 and 1989. An explanation given for the positive coefficient, according to (Coupet Jr, 2011), is that the eradication of corruption carries an opportunity cost, such that as a developing country deploys its resources from productive activities to the detection and prevention of corrupt ones, there are positive, but diminishing returns.

This proposition is, however, in contrast to the studies conducted by (Lambsdorff, 2005a) on corruption and economic development, wherein he used the OLS and 2SLS techniques to establish the empirical relationship between corruption and growth of the economy between 1970 and 1995. Their results explain that a one point increase in the level of corruption by one point on a scale of 0 (highly corrupt) to 10 (highly clean) decreases investment productivity by two to four percent; while decreasing the annual net inflow of capital by 0.5 per cent of GDP. Also, in a study for non-oil and non-OECD countries, it is found that corruption negates the society's welfare standard through reduction in investments and growth (Coupet Jr, 2011). This is because of the negative and significant relationship obtained between corruption and economic growth using both the linear and non-linear OLS estimation techniques. In addition, it is discovered that the square of corruption negatively and significantly affects economic growth (the coefficient of the square of corruption is found to be –6.33), which suggests a strong negative non-linear relationship between corruption and output per worker for the OECD countries.

The results of corruption obtained by (Lambsdorff, 2005a) may also be used to explain the effect of control of corruption on economic growth and external debt. This result is

explained as “Absence of Corruption”, wherein a significant positive relationship is found between absence of corruption and the average net annual capital inflows (to GDP ratio), for all the country categories (OECD, non-OECD, Oil, non-Oil), between 1970 and 1995 with the employment of OLS and 2SLS estimation techniques. The same coefficient is obtained for government stability in relation to the net annual capital inflows (to GDP ratio), using the 2SLS technique. This implies that a support for the government, strong legislative power and government unity are crucial to productivity.

2.5 Literature Gap

After reviewing the available literature so far, empirical studies capturing the effect of public investment on private investment have produced mixed evidence and are far from being unanimous or conclusive on the issue. This means it is not clear if there exists crowding-in or crowding-out effect of public investment on private investment. In the same line, there arises a question of positive or negative effect of public investment and private investment on economic growth.

Moreover, to the best of author’s knowledge, the impact of collaboration of public and private investment on tourism growth is rarely studied and the literature on said issue is negligible. Similarly, the role of governance has received less attention in the literature of tourism, wherever it is studied, gave mixed results showing its influence on the public and private sector investments. But, the author could not find any study investigating the effect

of governance on the relationship of public investment and private investment with tourism growth.

As current study focuses on the effect of public investment and private investments on tourism growth, and the effect of governance on the relationship of public investment and private investment with tourism growth in SAARC countries. Hence, to the best knowledge of scholar, there lies another gap in the literature of tourism regarding SAARC countries, which means the effect of public investment and private investment on the tourism growth in SAARC countries is rarely focused in existing literature. Furthermore, the current study is examining the effects of public and private investments on tourism growth individually for selected five SAARC countries in time series analysis using Autoregressive Distributed Lag (ARDL) technique and together in panel setting as well using Fully Modified Ordinary Least Squares (FMOLS) and Pooled Mean Group (PMG) methods of analysis.

2.6 Conclusion

This chapter was categorized into four main sections. First section presented a conceptual review of available literature related to the concept of tourism, approaches of tourism growth, public and private investments, and governance. Second section elaborated the underpinning theory and the theoretical aspects of existing literature regarding tourism growth, public and private investments, and governance. Third section offered explained insights of the existing empirical literature regarding relationships among tourism growth,

public investments, private investments and governance. And, in the last section, literature gap is given.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter elucidates the research methodology for the present study. It starts with presenting the conceptual framework of this study, which is followed by the elaboration of model specification based on Endogenous growth theory in time series and panel settings followed by the justification of variables with operational definitions. Data sources and measurement of variables are also detailed afterward. In the end, techniques of data analysis for time-series and panel data are expounded that includes unit root testing, the cointegration tests, the analysis of time series data using ARDL method, and the analysis of panel data using FMOLS and PMG are discussed. The chapter closes with a conclusion.

3.2 Conceptual Framework

As this study attempts to investigate the effects of public investment, private investment, interaction of public and private investments, and the interaction governance on tourism growth in five SAARC countries, thus, the conceptual framework of present research is presented in Figure 3.1.

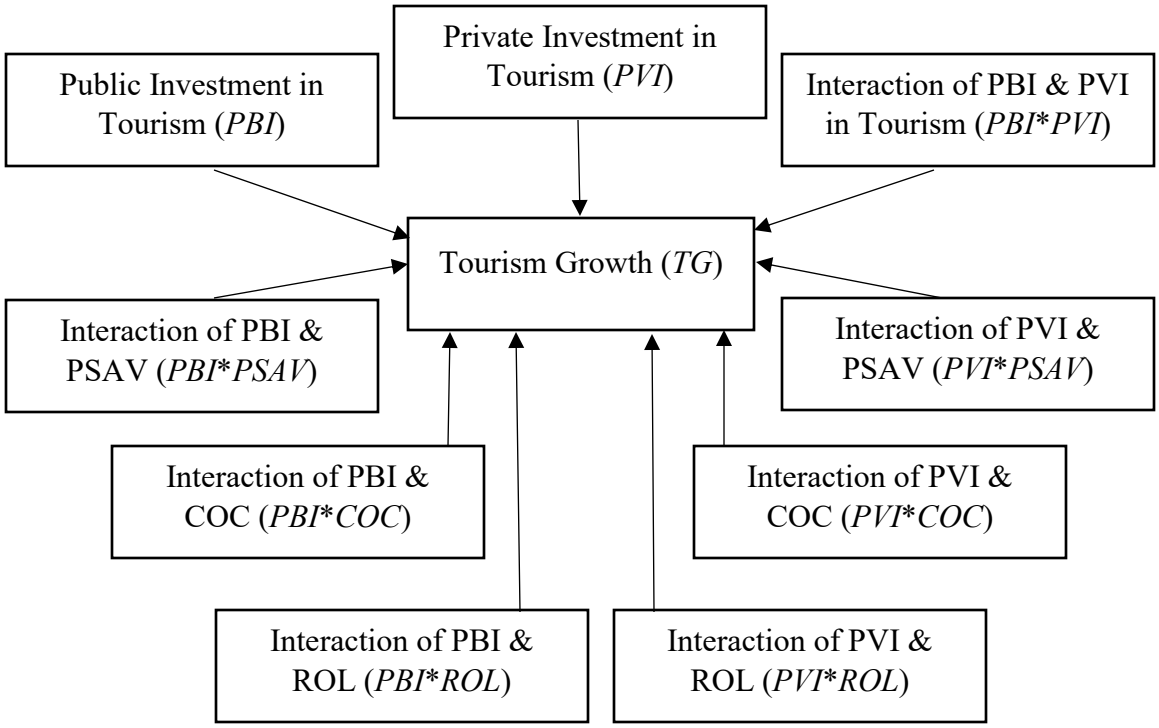


Figure 3.1
Conceptual Framework of Study

3.3 Model Specification for Time Series Analysis

The main objective of this study is to investigate the effect of public and private investment on tourism growth in selected SAARC countries. In this regard, the study formulates regression model based on endogenous growth theory. In regression model for time series analysis, public investment, private investment and the interaction of public investment and private investment is regressed on tourism growth. In addition, three control variables as labour in tourism, exchange rate and inflation rate are also included in the model in order to avoid the model specification bias and to control the effects of exchange rate and inflation. This model is estimated for selected five SAARC countries individually.

The basic functional form of the model taken from the endogenous growth theory is shown in Equation [3.1]:

[3.1] $$Y_t = f(K_t L_t)$$

where, Y_t is the economic growth, K_t is the capital and L_t shows the labour. This functional form can be presented in the mathematical model as presented in Equation [3.2]:

[3.2] $$Y_t = \beta_0 + \beta_1 K_t + \beta_2 L_t$$

where, β_0, β_1, and β_2, are the coefficients in regression model. This mathematical form of regression model shows the effect of capital, K_t, and labour, L_t on growth. In order to develop an econometric model, an error term is included in Equation [3.2] and this model takes the form as presented in Equation [3.3]:

[3.3] $$Y_t = \beta_0 + \beta_1 K_t + \beta_2 L_t + \varepsilon_t$$

where, ε_t is a white noise error term, which is means that $\varepsilon_t \sim$ iid $(0, \sigma_\varepsilon^2)$.

Substituting Tourism Growth (*TG*) into Y_t as the dependent variable, model presented in Equation [3.3] will take the form as shown in Equation [3.4]:

[3.4] $$TG_t = \beta_0 + \beta_1 K_t + \beta_2 L_t + \varepsilon_t$$

where,

TG_t	=	Tourism growth in time period t
L_t	=	Labour in time period t
K_t	=	Capital in time period t
β_i	=	Coefficients, $i = 0, 1, 2$
ε	=	Error term
t	=	Time period measured in years

As capital is the accumulated form of investment and can be decomposed into public and private investment here in this function for separate analysis of the effect of public investment in T&T (*PBI*) and private investment in T&T (*PVI*) on *TG*, and labour as Employment in T&T (*TE*), the resultant is presented in Equation [3.5].

[3.5] $$TG_t = \beta_0 + \beta_1 PBI_t + \beta_2 PVI_t + \beta_3 TE_t + \varepsilon_t$$

The exchange rate (*EXR*) (Chadeeand & Mieczkowski, 1987; Petrescu, 2011; Webber, 2001) and inflation rate (*INF*) (Petrescu, 2011; Turner & Witt, 2001; Webber, 2001) affects the decisions of the tourists to visit or not in a specific tourist destination. Moreover, exchange rate is included in the model to control the effects of the fluctuations in exchange rate. Therefore, we need to control the effect of *EXR* and *INF* in our model and adding

these two variables as control variables in Equation [3.5], the resultant Equation [3.6] is developed as:

[3.6] $$TG_t = \beta_0 + \beta_1 PBI_t + \beta_2 PVI_t + \beta_3 TE_t + \beta_4 INF_t + \beta_5 EXR_t + \varepsilon_t$$

In order to examine the collaborative effects of public investment and private investment on tourism growth, an interaction term of public and private investments (*PBI*PVI*) is included in Equation [3.6], the resultant model is presented in Equation [3.7]:

[3.7] $$TG_t = \beta_0 + \beta_1 PBI_t + \beta_2 PVI_t + \beta_3 TE_t + \beta_4 INF_t + \beta_5 EXR_t + \beta_6 (PBI_t * PVI_t) + \varepsilon_t$$

The regression model shown in Equation [3.7] refers to Model I, which explains the effect of public and private investments and their interaction on tourism growth. This study ran this model individually in separate regressions for selected five SAARC countries for investigating the effects of public investment and private investment and their interaction effect on tourism growth in five SAARC countries in time series setting.

3.4 Model Specification for Panel Analysis

After conducting time series analysis, a panel estimation is conducted to estimate the effects of public investment and private investment on tourism growth in selected five

SAARC countries in panel setting. In addition to the interaction effect of public investment and private investment, the interaction effect of public investment and private investment with selected three indicators of governance (political stability/absence of violence and terrorism, control of corruption and rule of law) on tourism growth is also modelled in panel data analysis.

Four models are developed for panel estimation, as Model I comprises the interaction effect of public investment and private investment along with their individual effects on tourism growth in selected SAARC countries. Whereas, Model II is developed in an attempt to capture the interaction effect of first indicator of governance, Political Stability/Absence of Violence and Terrorism (*PSAV*), with public and private investment together with their individual effects on tourism growth in focus area. Successively, Model III includes the interaction effect of second indicator of governance, Control of Corruption (*COC*), with public investment and private investment together with their individual effects on tourism growth in focus area. Lastly, the interaction effect of third indicator of governance, Rule of Law (*ROL*), with public investment and private investment and their individual effects on tourism growth in focus area is demonstrated in Model IV. The effect of public investment and private investment and their interaction effect on tourism growth with tourism employment, inflation rate and exchange rate as control variables in panel setting is explicated in Model I, and Equation [3.7] takes the form as expressed in Equation [3.8].

[3.8] $$TG_{it} = \beta_0 + \beta_1 PBI_{it} + \beta_2 PVI_{it} + \beta_3 TE_{it} + \beta_4 INF_{it} + \beta_5 EXR_{it} + \beta_6 (PBI_{it} * PVI_{it}) + \varepsilon_{it}$$

In order to explain the separate effect of selected three indicators of governance and their interaction effects with public and private investments on tourism growth, three different models are developed. Model II demonstrates the effect of public and private investments, *PSAV*, and the interaction of *PBI* with *PSAV* (*PBI*PSAV*), and *PVI* with *PSAV* (*PVI*PSAV*) on tourism growth, and it is structured in Equation [3.9].

[3.9] $$TG_{it} = \beta_0 + \beta_1 PBI_{it} + \beta_2 PVI_{it} + \beta_3 TE_{it} + \beta_4 INF_{it} + \beta_5 EXR_{it} + \beta_6 PSAV_{it} + \beta_7 (PBI_{it} * PSAV_{it}) + \beta_8 (PVI_{it} * PSAV_{it}) + \varepsilon_{it}$$

Model III determines the effect of public and private investments, control of corruption, and the interaction of *PBI* with *COC* (*PBI*COC*), and *PVI* with *COC* (*PVI*COC*) on tourism growth and it is arranged in Equation [3.10]:

[3.10] $$TG_{it} = \beta_0 + \beta_1 PBI_{it} + \beta_2 PVI_{it} + \beta_3 TE_{it} + \beta_4 INF_{it} + \beta_5 EXR_{it} + \beta_6 COC_{it} + \beta_7 (PBI_{it} * COC_{it}) + \beta_8 (PVI_{it} * COC_{it}) + \varepsilon_{it}$$

Model IV elaborates the effect of public and private investments, rule of law (*ROL*) and the interaction of *PBI* with *ROL* (*PBI*ROL*), and *PVI* with *ROL* (*PVI*ROL*) on tourism growth and it is modelled in Equation [3.11]:

[3.11]
$$TG_{it} = \beta_0 + \beta_1 PBI_{it} + \beta_2 PVI_{it} + \beta_3 TE_{it} + \beta_4 INF_{it} + \beta_5 EXR_{it} + \beta_6 ROL_{it} + \beta_7 (PBI_{it} * ROL_{it}) + \beta_8 (PVI_{it} * ROL_{it}) + \varepsilon_{it}$$

On the basis of Models I, Model II, Model III and Model IV developed in Equation [3.8], Equation [3.9], Equation [3.10], and Equation [3.11], panel data analysis is carried out for selected five SAARC countries.

3.5 Justification of Variables

The major objective of present research is to examine the effects of public investment and private investment on tourism growth in selected five SAARC countries and to investigate the interaction effect of governance and public investment, and governance and private investment on tourism growth in focus area. In this regard, variables such as public investment, private investment and governance are taken as independent variables with tourism growth as dependent variable in all models for panel analysis. The following section justifies above stated explanatory variables affecting tourism growth and how these variables are defined and measured.

3.5.1 Tourism Growth

Tourism growth is taken as the dependent variable in present research. Since decades, tourism has been experiencing persistence growth and excavating expansion and it has been included among the fastest growing economic sectors in the world. According to

UNWTO (2016), contemporary tourism is closely associated to economic growth and development, and a growing number of new tourist destinations are included in its study. This dynamic nature of tourism has augmented its significance for achieving socio-economic development. These days, the volume of tourism business equates or even exceeds the business volume of automobiles, food items, or even oil exports. Moreover, tourism has turned out as a leading player in international business and has developed as a primary source of income generation for several developing economies. This rapid growth of tourism brings increased diversity in tourism products as well as greater competition among various tourist destinations. Globally, this massive growth of tourism has brought a number of economic benefits in several sectors in developing and developed countries. Therefore, tourism growth is taken as dependent variable in present study. Tourism growth is measured as the direct contribution of T&T in GDP measured in local currency units (LCU) billions.

3.5.2 Public Investment

The investment, either public or private, is among fundamental drivers of output and play a crucial role in the growth of a particular sector or industry as well as in economic growth as a whole. The public sector investment is vital to long-term growth either by directly affecting the output or by complementing other factors of production. The public investment in tourism can be defined as the government spending on travel and tourism services, such as, recreational (e.g. parks) or cultural (e.g. museums) services. On the other

hand, the private investment include capital investment spending by all sectors directly involved in T&T. It also includes investment from other sectors on specific tourism assets, such as, transport equipment for passengers, new accommodations for tourists, restaurants, hotels, and leisure amenities particularly for tourism use.

The Harrod-Domar growth theory sanctioned the preponderant significance of capital accumulation from public investment in the quest for enhanced growth. As they explained that domestic savings could be substituted with budgetary surpluses, fiscal policy is recognized as the main instrument of growth, thus the role of the government is crucial. In addition, Lewis (1954), Lewis (1958), Rostow (1960) and Fei and Ranis (1964) had identified increases in savings ratio and investment as a fundamental strategy to understand the development process, and the take-off into sustained growth. While in traditional neo-classical growth model, especially in the contributions of Solow (1956) and Swan (1956), capital accumulation is given secondary importance and population expansion and technological improvement is given primary importance. Solow established from United States time series from 1909 to 1949 that gross output per worker had doubled with 12.5 percent stemming from the increased use of capital coming from the investment. In a case study, Akama (2002) investigated the role of government in tourism growth in Kenya. Moreover, Khan and Kemal (1996), Mallick (2002), M'Amanja and Morrissey (2006) Bakan and Bosnic (2012), and Ribarić and Ribarić (2013) used public investment as a significant factor in affecting tourism growth. Both public and private investments are expected to positively affect the tourism growth in focus area in present research.

3.5.3 Private Investment

The private investment also holds key importance in the growth process of tourism sector and the economy as a whole. Like public investment, private investment also complement other factors of production and directly contribute to the growth of tourism sector as well. The private investment in tourism can be defined as the capital investment spending by all industries directly involved in T&T except government. This also includes investment expenditure from other industries on particular tourism products and services such as accommodation and equipment for transportation of new tourists, and tourism related leisure centers, parks, and restaurants. Studies such as Khan and Reinhart (1990), Mallick (2002), and Bakan and Bosnic (2012) used private investment as a significant determinant of growth. Private investment in T&T is expected to affect tourism growth positively.

3.5.4 Governance

Governance refers to the institutions and customs by which the authority is exercised in a country. The process of the selection, monitoring and replacement of governments is included in the concept of governance. Furthermore, the government's capacity to formulate and implement good policies effectively, and the respect of the citizens and the government for the institutions governing social and economic interactions among them are also included in governance (The World Bank, 2016). Moreover, governance is defined by six indicators namely; "Political Stability/Absence of Violence or Terrorism, Control of

Corruption, Rule of Law, Government Effectiveness, Voice and Accountability, and Regulatory Quality". According to World Bank (2016), control of corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as capture of the state by elites and private interests. Moreover, Political Stability and Absence of violence/Terrorism measures perceptions of the likelihood of political instability and/or politically motivate violence, including terrorism. Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence (The World Bank, 2016).

The present study uses first three indicators of governance as a proxy of governance out of six aforementioned indicators. There are two rationales behind taking *PSAV*, *COC* and *ROL* as the proxy of governance; the empirical evidence of these governance indicators with growth, and the logical relation of these governance indicators with tourism growth.

As *PSAV* in a country increases or terrorism decreases, it gives confidence to the domestic as well as international tourists to visit that country or tourist destination in that country, thus, increasing the productivity of both public and private investments. As a result, the tourism growth in focus area will be increased. In the same line of argument, if the *COC* increases in a country, it will lead of enhance the productivity of public and private investment because public investment projects will be taken by the most efficient investors,

thereby, increasing the tourism growth. Likewise, if the *ROL* in a country increases, it gives confidence to the domestic and foreign visitors to visit tourist destinations in that country which will result in an increased efficiency of the investments or posing a positive influence on the tourism growth.

As far as empirical evidence is concerned, Göymen (2000) interrelated the patterns of tourism growth in Turkey with the dynamics of governance. Wei (2000) studied the effects of corruption on FDI and found a negative relationship between both stated variables. Tanzi (1998) claimed that corruption affects public expenditure as public investment projects give room to public officials of high-level corruption. Moreover, he argued that public capital projects have been launched for providing opportunities to some political groups or individuals to receive bribes, thus, reducing the productivity of such investment expenditure. In addition, corruption also affects growth of countries negatively by reducing the size and productivity of the investments (Mauro, 1995).

Therefore, the present research expects a positive effect of selected three governance indicators on the relationship of public investment and private investment with tourism growth. This means that as *PSAV*, *COC* and *ROL* increases, it stimulates the effects of public investment and private investment on tourism growth in five SAARC countries.

3.5.5 Interaction Terms

The present study attempts to determine the interaction effect of public investment and private investment, governance and public investment, and governance and private investment. Therefore, in order to estimate the interaction term *PBI*PVI*, this study follows the approach given by Aiken and West (1991), by running an auxiliary regressions specified in Equation [3.12] is estimated.

[3.12] $$(PBI_t * PVI_t) = \beta_0 + \beta_1 PBI_t + \beta_2 PVI_t + v_t$$

where, v_t is a white noise error term, which is means that $v_t \sim$ iid $(0, \sigma_v^2)$.

The product of two variables (public investment and private investment) is regressed on the same variables (public investment and private investment) individually, and the estimated values of error term ε_t is calculated. These estimated values of error term are used as the interaction term in main models for modelling the interaction effects between public investment and private investment in present study.

Similarly, the interaction of governance and public investment in tourism is estimated, and used in estimating Models II, Model III and Model IV. As the governance is measured using three indicators, *PSAV*, *COC* and *ROL*, therefore, the interaction of governance and

public investment in tourism is modelled in Equation [3.13], Equation [3.14] and Equation [3.15] using *PSAV*, *COC* and *ROL* respectively.

[3.13] $$(PSAV_t * PBI_t) = \beta_0 + \beta_1 PSAV_t + \beta_2 PBI_t + \mu_t$$

[3.14] $$(COC_t * PBI_t) = \beta_0 + \beta_1 COC_t + \beta_2 PBI_t + \omega_t$$

[3.15] $$(ROL_t * PBI_t) = \beta_0 + \beta_1 ROL_t + \beta_2 PBI_t + \zeta_t$$

where, μ_t, ω_t and ζ_t are the white noise error terms which means that $\mu_t \sim$ iid $(0, \sigma_\mu^2)$, $\omega_t \sim$ iid $(0, \sigma_\omega^2)$ and $\zeta_t \sim$ iid $(0, \sigma_\zeta^2)$.

Likewise, the interaction of governance and private investment in tourism is estimated, and used in estimating Models II, Model III and Model IV. The interaction of governance and public investment in tourism is modelled in Equation [3.16], Equation [3.17] and Equation [3.18] using *PSAV*, *COC* and *ROL* respectively.

[3.16] $$(PSAV_t * PVI_t) = \beta_0 + \beta_1 PSAV_t + \beta_2 PVI_t + \gamma_t$$

[3.17] $$(COC_t * PVI_t) = \beta_0 + \beta_1 COC_t + \beta_2 PVI_t + \psi_t$$

[3.18] $$(ROL_t * PVI_t) = \beta_0 + \beta_1 ROL_t + \beta_2 PVI_t + \theta_t$$

where, γ_t, ψ_t and θ_t are the white noise error terms which means that $\gamma_t \sim$ iid $(0, \sigma_\gamma^2)$, $\psi_t \sim$ iid $(0, \sigma_\psi^2)$ and $\theta_t \sim$ iid $(0, \sigma_\theta^2)$.

3.6 Types and Sources of Data

The collected data for the present research is of two types; annual time series and panel data. Annual time series data is used for time series analysis of the Model I specified in Equation [3.7]. On the other hand, panel data is used for the analyses of the Model I, Model II, Model III and Model IV, specified in Equation [3.8], Equation [3.9], Equation [3.10] and Equation [3.11], respectively.

Annual time series data of all proposed variables except governance is collected over the time period 1988 – 2015 from different sources. The data for *TG*, *PBI*, *PVI* and *TE* are taken from the WTTC. While, the data for control variables *EXR* and *INF* are taken from the World Development Indicator (WDI) for selected five SAARC countries. Tourism growth is measured by the direct contribution of travel and tourism in GDP measured in LCU billions. The public and private investments in travel and tourism are also measured in LCU billion. Moreover, the data for *TE* is measured in thousands of jobs. However, the data for governance is measured using three indicators of governance as *PSAV*, *COC* and *ROL*. All these indicators of governance are measured on an index having value between -2.5 and +2.5. The data for the governance is taken form Worldwide Governance Indicators (WGI) of the World Bank.

3.7 Methods of Analysis

The core objective of present research study is to examine the effect of public and private investments on tourism growth in selected five SAARC countries in five different models; one model for time-series analysis for selected five SAARC countries and four models for panel estimations; one showing interaction effect of public and private investment along with their individual effects and remaining three models show the effects of three selected indicators of governance on tourism growth and their interaction with public and private investment on tourism growth in selected five SAARC countries. Therefore, methods of estimation and analysis are categorized into time-series and panel analysis. First, methods involved in time series analysis are discussed followed by the methods of panel data analysis.

3.7.1 Methods of Time Series Data Analysis

This section details the statistical properties of the variables involved in the model for time series analysis. This involves testing the stationarity property of all the variables in order to examine the presence of unit root in the data, exogeneity test, and ARDL method of estimation. The time series analysis is conducted using the ARDL method of estimation. ARDLs are standard least square regressions that include the lagged terms of both the explained and the explanatory variables. The ARDL cointegration technique is introduced

by Pesaran, Shin, and Smith (1999) and Pesaran, Shin, and Smith (2001). The ARDL estimator have several advantages which make it popular among researchers. For example, it does not impose the restriction that all under consideration data series have the same order of integrations and it is applicable irrespective of whether the regressors are integrated at I(0) or I(1) order of cointegration (Pesaran & Pesaran, 1997). Moreover, Pesaran *et al*., (1999) noted that ARDL estimators produce the true parameters as compared to Johansen and Juselius's cointegration technique in the case of small sample and coefficients from the ARDL estimators are super consistent in small sample sizes.

Therefore, ARDL model is more relevant in the case of present study as this research used time series data having 28 annual observations. Furthermore, the endogeneity is less a problem in ARDL framework, because it is free of residual correlation. Pesaran and Shin (1999) have shown that the ARDL method can distinguish between dependent and explanatory variables and the estimation is possible even when the explanatory variables are endogenous (Pesaran, 1997; Pesaran *et al*., 2001).

3.7.1.1 Unit Root Tests

Recent development in the econometrics of time series stresses the importance of testing the presence of the unit roots in the series since classical regression properties only hold for cases where variables are stationary at level (i.e. integrated of order zero). Brooks (2014) defined a stationary series as one having its mean, variance and autocovariances

constant for each given lag. However, most economic variables do not satisfy these assumptions and have their mean, variance or both varying with time. They are in any case integrated at order 1 or higher after differencing. Two forms of non-stationarity can be described by two models which have been commonly employed to indicate the non-stationarity. One is the random walk model with drift (if the mean and variance increase over time) and without drift (if the value of dependent variable Y_t not different from Y_{t-1} plus a random shock). Two is the trend stationarity process (if the mean of dependent variable is not constant but the variance is constant) (Gujarati, 2009). Therefore, it is important to examine whether a series is stationary or not because of the following reasons:

First, the properties and behavior of a series can highly be influenced by the stationarity or non-stationarity of a series in which case, 'shocks' to the system will wipe away gradually from one period to another in the case of a stationary series as compared to non-stationary series where the shocks will be continuous indefinitely (Brooks, 2014).

Second, Granger and Newbold (1974) and Phillips (1986) argued that such combination of variables that are non-stationary leads to spurious regression results. In this case, if the application of a standard method of regression is carried out on non-stationary data, the results will appear good with respect to significance of parameter estimates and a high R-square where in actual fact it is valueless. Sometimes, there is problem of autocorrelation due to the non-stationarity of the time series data. Such a regression is known as spurious regression.

Third, the standard assumption for asymptotic analysis will be invalid in a case where the variables used in a regression model are non-stationary. This implies that the *t*-statistic and *F*-statistic, for example, will not follow the student's *t*-distribution and the *F*-distribution respectively. This indicates that it will be impossible to conduct valid hypothesis testing of the estimated coefficient in a case where the data are not stationary.

Therefore, it is crucial to conduct the stationarity test in order to avoid the problem of spurious regressions and one important test among unit root tests is the Augmented Dicky Fuller (1981) known as ADF, which was developed by Dickey and Fuller (1981). In ADF test, if a time series is defined by the first order autoregressive process (AR (1)) given as:

[3.19] $$y_t = a + \rho y_{t-1} + \varepsilon_t$$

where, the errors are identically and independently distributed with a mean of zero and a constant variance or $\varepsilon \sim$ iid $(0, \sigma^2)$. By subtracting (y_{t-1}) form both sides of Equation [3.19], we get the following expression:

[3.20] $$\Delta y_t = a + f\, y_{t-1} + \varepsilon_t$$

where, Δ refers to the difference between y_t and y_{t-1}, and f represents $\rho - 1$. Moreover, in order to capture any deterministic trends in the data, the expression presented in Equation [3.20] is modified, with t as time trend, and expressed in Equation [3.21]:

[3.21] $$\Delta y_t = a + f\, y_{t-1} + \beta_t + \varepsilon_t$$

For the computation of ADF, the Equation [3.22] is used:

[3.22] $$\Delta y_t = a + f\, y_{t-1} + f_t + \sum_{j=1}^{k} d_j \Delta y_{t-j} + \varepsilon_t$$

The pair of hypothesis are specified below as:

H_0: $f = 0$ ($\rho = 1$, implies that y_t series is integrated of order 1 or non-stationary)

H_1: $f < 0$ ($\rho < 1$, implies that y_t series is integrated of order 0 or stationary)

If the value of calculated t-statistic is greater than its critical value, the null hypothesis that a series has unit root is rejected. Alternatively, the null hypothesis of non-stationarity of a series is rejected if the p-value is less than 5 percent. In order to correct for the presence of unit root, any data series found to be non-stationary are transformed through differencing to make it stationary.

3.7.1.2 Exogeneity Test

Exogeneity, also knowns as homogeneity test, refers to an illustration of Wu-Hausman specification test modified by the Davidson and Mackinnon. It is usually employed when an explanatory variable is assumed jointly dependent or endogenous. It can be tested by adding the residuals for the suspected variable of the reduced form equation to the relevant structural equation, while also testing its significance.

The exogeneity of regressor is observed by testing the null hypothesis of exogeneity against the alternative hypothesis of joint dependence; wherein the decision is based on the significance of the residuals. The exogeneity can be categorized into weak exogeneity, strong exogeneity and super exogeneity. The super exogeneity is employed in policy analysis, strong exogeneity is used for forecasting, and weak exogeneity is good for estimation and hypothesis testing.

This study used ARDL approach to estimate the coefficients of the models. The estimation of ARDL model involves following six steps.

3.7.1.3 Lag Length Selection and Optimal Model

The ARDL approach is a least square regression that contains lags of the explanatory as well as explained variables. ARDLs are usually denoted with the notation ARDL ($p, q_1, \ldots,$

q_k), where p is the number of lags of the dependent variable, q_1 is the number of lags of the first explanatory variable, and q_k is the number of lags of the k[th] explanatory variable. An ARDL model can be written as given in Equation [3.23]:

[3.23] $$y_t = b + \sum_{i=1}^{p} \gamma_i y_{t-i} + \sum_{j=1}^{k} \sum_{i=0}^{q_j} \beta_{j,i} X_{j,t-i} + \varepsilon_t$$

The explanatory variables, X_j, which may not have any lagged terms in the model ($q_j = 0$) are known as fixed or static regressors. However, the explanatory variables, which have at least one lagged term in the model, are known as dynamic regressors. Equation [3.24] specifies the ARDL model for present study:

[3.24] $$\begin{aligned} \Delta TG_t = {} & \gamma_0 + \sum_{i=1}^{k} \gamma_1 \Delta PBI_{t-i} + \sum_{i=1}^{j} \gamma_2 \Delta PVI_{t-i} + \sum_{i=1}^{m} \gamma_3 \Delta TE_{t-i} + \sum_{i=1}^{n} \gamma_4 \Delta INF_{t-i} \\ & + \sum_{i=1}^{r} \gamma_5 \Delta EXR_{t-i} + \sum_{i=1}^{s} \gamma_6 \Delta (PBI_t * PVI_t) + \beta_1 PBI_{t-1} + \beta_2 PVI_{t-1} \\ & + \beta_3 TE_{t-1} + \beta_4 INF_{t-1} + \beta_5 EXR_{t-1} + \beta_6 (PBI_t * PVI_t) + \varepsilon_t \end{aligned}$$

where, Δ is the first difference operator and k is the optimum number of lags selected which are automatically selected.

In order to specify an ARDL model, it is crucial to determine the maximum number of optimal lags each variable should include in the model (i.e. specify p and $q_1, \ldots, q_k$). Fortunately, simple procedures of model selection are available for determining these

optimum lag lengths for all variables. Since, an ARDL model can be estimated via least squares regression, the standard Akaike Information Criterion (AIC), Schwarz Criterion (SC), Hannan Quinn (HQ) Criterion or adjusted R^2 criterion are available for optimal lag length selection. However, this research has used SC for the selection of optimal lag length of endogenous variable and exogenous variables.

3.7.1.4 The ARDL Bound Test

After successful selection of the optimal lag length, the next step is to investigate the likelihood of cointegration of dependent and explanatory variables using the ARDL bound test (Pesaran, Shin, & Smith, 1999; Pesaran *et al*., 2001) using Equation [3.24]. The ARDL bound test is applicable irrespective of the level of integration of the series given that none of the series is I(2). Pesaran *et al*. (2001) bound test procedure relies on Wald statistic or *F*-statistic. The bounds test procedure gives following representation:

[3.25] $$\Delta y_t = -\sum_{i=1}^{p-1} \gamma_i^* \, \Delta y_{t-1} + \sum_{j=1}^{k} \sum_{i=0}^{q_j-1} \Delta X_{j,t-i}' \beta_{j,i} * - \rho y_{t-1} - \alpha - \sum_{j=1}^{k} X_{j,t-1}' \delta_j + \varepsilon_t$$

The test for the existence of level relationships conducted using the following hypotheses:

$H_0 : \rho = 0$

$H_1 : \delta_1 = \delta_2 = \ldots \ \ldots = \delta_k = 0$

Equation [3.23] can be used to estimate the coefficients used in the test, or these can directly be estimated from a regression estimation using Equation [3.25]. Based on the order of integration of regressors i.e. I(0) or I(1), the test statistics under the null hypothesis of no level relationships has a different probability distribution for estimating Equation [3.25]. In addition, it follows non-standard distribution in both cases. The critical values for both the cases i.e. all regressors are I(0) or all are I(1), are provided by Pesaran *et al*. (2001). Moreover, they suggested to use proposed critical values as bounds for a mix of I(1) and I(0).

The *F*-statistic tests the joint significance of the parameters estimates. The *F*-test has been employed in the bound test. Pesaran *et al*. (2001) have two levels of critical value as lower and upper bounds with respect to the chosen level of significance. The calculated value of *F*-statistic is compared to the lower and upper bound. As a decision rule, if the calculated value of *F*-statistic is greater than the upper critical bound at chosen level of significance, reject the null hypothesis of the absence of cointegration and conclude that cointegration is present in the model.

On the other hand, if the calculated value of *F*-statistic is less than lower critical bound at chosen level of significance, accept the null hypothesis and conclude that there is no cointegration in the model. The *F*-test leads to no conclusion if the calculated value of *F*-statistic lies in between the lower and upper critical bound.

3.7.1.5 The Long-Run Relationship Test

Since, an ARDL model estimates the dynamic relationship between a dependent variable and the included explanatory variables, it is possible to transform the model into a long-run representation, showing the long run response of the dependent variable to a change in the explanatory variables. Traditional methods of estimating cointegration relationship, such as Engle and Granger (1987) or Johansen (1991, 1995) methods, or single equation methods such as Fully Modified OLS, or Dynamic OLS either require all variables to be I(1), or require prior knowledge and specification of which variables I(0) and which are I(1).

In order to handle this problem, Pesaran, Shin and Smith (1999) showed that cointegration systems can be estimated as ARDL models, with the advantage that the variables in the cointegrating relationship can be either I(0) or I(1), without needing to pre-specify which are I(0) or I(1). Moreover, they also noted that unlike other methods of estimating cointegrating relationships, the ARDL representation does not require symmetry of lag lengths; each variable can have a different number of lag terms.

Equation [3.24] offers the opportunity to examine the long-run relationship among variables in the model. For this purpose, the long-run relationship has been estimated using Equation [3.24].

3.7.1.6 Short-Run Relationship Test

Following the establishment of the existence of long-run relationships, short-run estimates are estimated. The equation for short run coefficient estimation is as follows:

$$\Delta TG_t = \alpha_{1i} + \sum_{p=1}^{j} \alpha_{11} \Delta TG_{t-p} + \sum_{p=1}^{k} \alpha_{12} \Delta PBI_{t-p} + \sum_{p=1}^{m} \alpha_{13} \Delta PVI_{t-p} + \sum_{p=1}^{n} \alpha_{14} \Delta TE_{t-p} + \sum_{p=1}^{r} \alpha_{15} \Delta INF_{t-p} + \sum_{p=1}^{s} \alpha_{16} \Delta EXR_{t-p} + \phi_{1i} ECT_{t-p} + \varepsilon_t \quad [3.26]$$

3.7.1.7 Diagnostic Testing

A number of diagnostic tests have been carried out for ensuring the goodness of fit of the model. These tests examined the existence of serial correlation, problems in functional form, and heteroscedasticity related to the specified model. Furthermore, Pesaran and Pesaran (1997) suggested stability test in order to check the stability of the coefficient of the regression model. This technique is known as the cumulative sum (CUSUM) and cumulative sum of squares (CUSUMSQ). The CUSUM and CUSUMSQ statistics are updated recursively and plotted against the break points. If the plots of CUSUM and CUSUMSQ statistics stay within the critical bounds of chosen (usually 5 percent) level of significance, the null hypothesis of all coefficients in the given regression which is stable cannot be rejected.

3.7.2 Methods of Panel Data Analysis

The methods for the analysis of the four models based on panel data structured in Section 3.3 are elaborated in this section. Model I specified in Equation [3.8] investigates the effect of public and private investments and their collaboration on the tourism growth in a panel of selected five SAARC countries. Whereas, Model II, Model III, and Model IV specified in Equation [3.9], Equation [3.10] and Equation [3.11], respectively examine the effects of three indicators of governance (*PSAV*, *COC* and *ROL*) along with public and private investments on tourism growth in a panel of selected five SAARC countries. In addition, these models also investigate the interaction between public and private investments with selected three indicators of governance on tourism growth in focus area. These three indicators of governance are modelled separately in three different models in order to observe their separate effect on tourism growth. The panel analysis started by testing the unit root followed by cointegration test. After that, the coefficients has been estimated using FMOLS and PMG methods of estimation.

3.7.2.1 Panel Unit Root Tests

The first step in model estimation is the unit root test, which is a formal test of stationarity of the variables usually carried out to avoid obtaining spurious and misleading results (Asteriou & Hall, 2007). There are several panel unit root tests such as Im, Pesaran, and

Shin (2003) known as IPS test, Levin, Lin, and Chu (2002) called LLC test, and Maddala and Wu (1999) shortly known as MW test to examine the stationarity properties of the variables involved in the model. These tests are applied to a balanced panel. The MW panel unit root test is a non-parametric test, IPS is known as heterogeneous panel unit root test and the LLC test is considered as a pooled panel unit root test. Therefore, the present study used IPS unit root test to examine the presence of unit root in the variables.

The approach for testing the presence of unit root in the series, proposed by Im *et al.* (2003), which is based on the Dickey-Fuller procedure, has been adopted. This method is an advancement of the Levin *et al.* (2002) test of stationarity as it permits for heterogeneity on the coefficient of the variable, Y_{it}; and suggests a fundamental testing procedure according to the mean-average of the individual unit-root statistics. The IPS statistic offers different estimations for each of the cross-sections, and permits different specifications in terms of the residual variance, lag lengths, and parametric values. The model of IPS-unit root test is:

[3.27] $$\Delta Y_{it} = \alpha_i + \rho_i Y_{i,t-1} + \sum_{k=1}^{n} \phi_{ik} \Delta Y_{i,t-k} + \delta_i t + \varepsilon_{it}$$

where, Y denotes each of *TG, PBI, PVI, PSAV, COC, ROL, INF* and *EXR* for which stationarity testing is required in order to determine the presence of unit root.

The formulated model of the IPS (1997, 2003) presupposes that *T* is the equal across cross-sections. Economic researchers that have adopted IPS include, but not limited to Abdullahi, Hassan, and Bakar (2016), Chou and Suk-Yee Lee (2003), and Sarantis and Stewart (1999).

The IPS *t*-statistic and mean of the *t*-statistic used in testing for unit roots in panel analysis is given by:

$$[3.28] \qquad t_{IPS} = \frac{\sqrt{N}\left(\bar{t} - \frac{1}{N}\sum_{i=1}^{N} E\left[t_{iT}|\rho_i = 0\right]\right)}{\sqrt{\frac{1}{N}\sum_{i=1}^{N} Var\left[t_{iT}|\rho_i = 0\right]}} \Rightarrow N(0,1) \qquad \bar{t} = \frac{1}{N}\sum_{i=1}^{N} t_{\rho_i}$$

The reduced cross-sectional version of the *t*-statistic and *t*-bar test may be employed where the residuals have a time-specific component; and the mean of *t* ($\bar{t}$) may be standardized since the standardized $\bar{t}$ statistic converges to the standard normal distribution as $N, T \rightarrow \infty$ such that $\bar{t}$ gives a better estimate when *N and T* are small.

3.7.2.2 Panel Cointegration Tests

After testing the presence of unit root in each variable, the present study tests for the existence of cointegration among variables. There are several tests available for testing the panel cointegration such as, Kao (1999), Maddala and Wu (1999), Pedroni (1999) and Pedroni (2004). The present study used the popular cointegration tests proposed by Kao

(1999) and Pedroni (1999) for testing the cointegration among variables because of advantages of these tests.

Pedroni (1999) proposed various statistics on the basis of the residuals of Engle and Granger (1987) cointegration regressions, for testing the null hypothesis of no cointegration in the panel. The first group of tests is termed "Within" dimension. It includes the panel-*v* statistic (Zv), panel rho-statistic ($Z\rho$), panel *PP*-statistic (Z_{PP}) and panel *ADF*-statistic (Z_{ADF}). The second group of tests is based on the "Between" dimension, which includes three tests: group rho-statistics ($Z^{'}_{p}$), group *PP* -statistic ($Z^{'}_{pp}$) and group *ADF*-statistics ($Z^{'}_{ADF}$). In general, these statistics are based on averages of the individual autoregressive coefficients associated with the unit root tests of the residuals for each cross-sectional unit. The null hypothesis of no cointegration is tested in both groups of tests. However, the difference comes from the specification of the alternative hypothesis.

The seven tests are based on the estimated residuals derived from the following long run model:

[3.29] $$Y_{it} = \alpha_i + \lambda_i t + \sum_{j=1}^{m} \beta_{ji} X_{jit} + \varepsilon_{it}$$

where, *Y* and *X* denote the endogenous and exogenous variables in equations, and *N*, *T*, and *m* denote the number of cross-sectional units, the number of observations, and the

number of regressors, respectively. In addition, Y and X are assumed to be integrated of order one in levels. The structure of estimated residuals are given in Equation [3.30].

[3.30] $$\varepsilon_{it} = \rho_i \varepsilon_{it-1} + \mu_{it}$$

Under the null hypothesis, all seven tests indicate the absence of cointegration $H_0 : \rho_i = 1$ whereas, the alternative hypothesis is stated as $H_1 : \rho_i \leq 1$. The seven statistics are normally distributed. The statistics can be compared to appropriate critical values, and if critical values are exceeding then the null hypothesis of no cointegration is rejected implying that a long run relationship between the variables does exist.

Similarly, Kao's (1999) test is developed on the same approach as the Pedroni (1999) test, but the former specifies cross-section intercepts and homogenous coefficients on the first stage regression. The test assumes running the first stage regression as specified in Equation [3.29] requiring the intercept to be heterogeneous, and the slope coefficients to be homogenous across cross-sections, and setting all trend coefficients to zero. The null and alternative hypotheses are similar to those of in the test given by Pedroni (1999).

3.7.2.3 Estimation of Coefficients using Fully Modified OLS

After testing the stationarity and the cointegration among variables, the process of estimation of four panel models elaborated in Equation [3.8], Equation [3.9], Equation

[3.10], and Equation [3.11] are initiated. Since OLS estimation is inconsistent in the cointegration time series data, bias could be reduced by the magnitude of the cross section (Dreger & Reimers, 2005). The solution is to use FMOLS as the estimation techniques. FMOLS is a non-parametric estimation that is able to handle the problem of serial correlation. The main advantage of this method is that it corrects for both serial correlation and simultaneity bias. Another reason why OLS is not appropriate is that its estimation produces biased results since the regressors are endogenously determined in the *I*(1) case.

Pedroni (2001) considers the following cointegrated system for panel data:

[3.31] $$Y_{it} = \alpha_i + \beta X_{it} + \varepsilon_{it}$$

where, *Y* and *X* are cointegrated. Pedroni (2001) proposed another equation that augments the cointegrating regression with lead and lagged differences of the regressors to control the endogenous feedback effect. Hence, Equation [3.32] is specified as follows:

[3.32] $$Y_{it} = \alpha_i + \beta X_{it} + \sum_{k=-ki}^{Ki} \gamma_{ik} \Delta X_{it-k} + \varepsilon_{it}$$

Pedroni (2001) also defined $\varsigma_{it} = (\varepsilon_{it}, \Delta X_{it})$ and let $\Omega_{it} = \lim E[1/T(\sum_{t=1}^{T} \varsigma_{it})(\sum_{t=1}^{T} \varsigma_{it})']$ be the long run covariance for this process. This long run covariance matrix can be decomposed as $\Omega_i = \Omega_i^0 + \Gamma_i + \Gamma_i'$ where Ω_i^0 is the contemporaneous covariance and Γ_i is

a weighted sum of auto covariance. Hence, the panel FMOLS estimator is specified in Equation [3.33]:

[3.33] $$\beta^{*}_{FMOLS} = \frac{1}{N}\sum_{i=1}^{N} [(\sum_{t=1}^{T}(X_{it} - \overline{X}_i)^2)^{-1}(\sum_{t=1}^{T} (X_{it} - \overline{X}_i)Y^{*}_{it} - T\gamma_i)]$$

where, $Y^{*}_{it} = Y_{it} - \overline{Y}(\hat{\Omega}_{2,1,i} / \hat{\Omega}_{2,2,i})\Delta X_{it}$ and $\hat{\gamma}_i = \hat{\Gamma}_{2,1,i} + \hat{\Omega}^{0}_{2,1,i} - (\hat{\Omega}_{2,1,i} / \hat{\Omega}_{2,2,i})(\hat{\Gamma}_{2,2,i} + \hat{\Omega}_{2,2,i})$

For estimating the long-run coefficients in Model I, Model II and Model IV, FMOLS estimation technique is used in present research.

3.7.2.4 Estimation of Coefficients using Pooled Mean Group

The dynamic panel model has recently largely focused on models with large cross-sections (*N*) and time-series (*T*) dimensions. The asymptotic features of these panels are different from the traditional large *N* and *T* assumptions, with homogeneous slope parameters, which are largely inappropriate, inconsistent and lead to misleading results. The inappropriateness of these features prompted (Pesaran *et al.*, 1999) to advance the dynamic panel model with large *N* and *T*, whose slope parameters are assumed heterogeneous across groups (Pesaran & Smith, 1995). The PMG estimator developed by Pesaran *et al.* (1999), however, constrains the long-run equilibrium coefficients to be equal across groups.

Given the non-stationarity assumption of series with large N and T dynamic panels, Pesaran, Shin, and Smith (1997, 1999) developed the mean group (MG) and PMG estimators. While, the MG estimator estimates the N-time-series regressions with average coefficient, the PMG assumes the combination of both pooling and averaging of the coefficients. In this respect, therefore, the intercept and slope parameters, and the error correction variances may all be different across groups.

These new estimation techniques have been adopted by researchers such as Blackburne and Frank (2007). Given a dynamic panel ARDL of the form:

[3.34] $$y_{it} = \sum_{j=1}^{p} \lambda_{ij} y_{i,t-j} + \sum_{j=0}^{q} \delta_{ij}^{'} X_{i,t-j} + \mu_i + \varepsilon_{it}$$

where, $i = 1, 2, 3, \ldots, N$; $t = 1, 2, 3, \ldots, T$; X_{it} is a k x 1 vector of the independent variables; δ_{it} are k x 1 vectors of the coefficients; λ_{ij} are the scalars; and μ_i is the group-specific effect. T is assumed to be large enough to enhance model fitness for each of the separate groups; while the time-trends as well as other fixed regressors may equally be included.

One characteristic of the cointegrated variables is that they are responsive to any deviation from the path of convergence. This implies an error correction model for which the short-run system variable dynamics are being influenced by the level of divergence from

equilibrium. Hence, the re-parameterization of the above equation into the error correction equation becomes necessary.

[3.35] $$\Delta y_{it} = \phi_i (y_{i,t-1} - \theta_i^{'} X_{it}) + \sum_{j=1}^{p-1} \lambda_{ij}^{*} \Delta y_{i,t-1} + \sum_{j=0}^{q-1} \delta_{ij}^{'} * \Delta X_{i,t-j} + \mu_i + \varepsilon_{it} \; ;$$

where;
$$\phi_i = -(1 - \sum_{j=1}^{p} \lambda_{ij}), \; \theta_i = \sum_{j=0}^{q} \delta_{ij} / (1 - \sum_{k} \lambda_{ik}), \lambda_{ij}^{*} = -\sum_{m=j+1}^{p} \lambda_{im}$$
$$j = 1,2,..., p-1, \quad and \quad \delta_{ij}^{*} = -\sum_{m=j+1}^{q} \delta_{im} \;\; j = 1,2,..., q-1$$

From the equations, ϕ_i is the error correction term (*ECT*), which indicates the speed of convergence to equilibrium. Hence, there would be no evidence of stable, long-run relationship if ϕ_i is zero. This implies that the parameter has to be negative and significant, thus indicating a return to equilibrium.

The dynamic heterogeneous panel estimation technique, where *N* and *T* are large opines various techniques in the estimation of the re-parameterized model. In this regard, the fixed-effects technique whereby the time-series data for each of the groups is pooled, with just the intercept parameter allowed to change across the groups. However, the results obtained through the fixed-effects technique tends to be misleading and inconclusive if the coefficients of the slope are not identical; the model could equally be separately fitted for each of the groups while a simple average of the coefficients are estimated. This is the

hallmark of the MG estimators, developed by Pesaran and Smith (1995); where the slope and intercept parameters, as well as the error variances, differ across groups.

In more recent times, Pesaran *et al.* (1999) advanced the PMG estimator. This combines both the pooling and average characteristics of the coefficients; and the intermediate estimator permits that the intercept and short-run coefficients, as well as the error variances, differ across groups (as in the mean group estimator), while constraining the long-run coefficients to be equal across groups (as in the fixed-effects estimator). To estimate the parameters of the re-parameterized model, the maximum likelihood estimator was developed by Pesaran *et al.* (1999), since it is a form of non-linear model.

By expressing the likelihood as a multiplicative function of each of the cross-section's likelihood, and taking the log, the function becomes:

[3.36] $$l_T(\theta^{'},\varphi^{'},\sigma^{'}) = -\frac{T}{2}\sum_{i=1}^{N}\ln(2\Pi\sigma_i^2) - \frac{1}{2}\sum_{i=1}^{N}\frac{1}{\sigma_i^2}\{\Delta y_i - \phi_i\xi_i(\theta)\}^{'} H_i\{\Delta y_i - \phi_i\xi_i(\theta)\},$$

where:

$i = 1,\ldots,N$; $\xi_i(\theta) = y_{i,t-1} - X_i\theta_i$, $H_i = I_T - W_i(W_i^{'}W_i)W_i$, I_T is an identity matrix of order T; and $W_i = (\Delta y_{i,t-1},\ldots,\Delta y_{i,t-p+1},\Delta X_i,\Delta X_{i,t-1},\ldots,\Delta X_{i,t-1+1}$.

The MG parameters are the unweighted averages of the individual coefficients, such that the MG estimates of the coefficients of the error-correction term (ϕ) is given by:

[3.37] $$\hat{\phi} = N^{-1}\sum_{i=1}^{N}\hat{\phi}_i \ ,$$

While, the variance is given by $\hat{\Delta}_{\hat{\phi}} = \frac{1}{N(N-1)}\sum_{i=1}^{N}(\hat{\phi}_i - \hat{\phi})^2$; and the mean and variance of other short-run coefficients are similarly estimated.

Given that the MG/PMG is a form of dynamic model, as a result of the importance of time-series properties in macro panel analysis, the error correction model (*ECM*), as a representation of the equation of interest, is employed. The advantages of this *ECM* over the static model are that the short-run behavior of a model can be easily distinguished from that of its long-run, the speed of convergence of the economy to the long-run equilibrium can be easily understood, and the cointegration test in the *ECM* can be carried out by observing the statistical significance of the ECT.

3.8 Conclusion

This chapter elaborated the methodology applied in present research. The model specification is done separately for time series and panel analysis. In addition, all the variables have been justified with respect to research framework and literature along with

expected sign. Similarly, time duration, data collection sources and types of data have been discussed in the subsequent section. Afterwards, methods of estimation for time series analysis is detailed which includes unit root testing and ARDL model. Second part of the analysis elucidates the methods of analysis for panel data analysis that includes panel unit root test, panel cointegration tests, estimation of coefficients of regression models using FMOLS and PMG. The chapter closes with a conclusion.

CHAPTER 4

DISCUSSION OF RESULTS

4.1 Introduction

This chapter presents the results of the data analysis and discussion of the results. This chapter is arranged as follows: Section 4.2 details the descriptive analysis of the time series data for all countries in order to examine the data characteristics. The correlation analysis for the time series and the panel data is presented in Section 4.3. The time series analysis for all the countries is presented in Section 4.4 while Section 4.5 offers panel data analysis for all the panel models.

4.2 Descriptive Analysis

This section presents the descriptive analysis of the time series as well as the panel data for selected five SAARC countries in order to examine the statistical characteristics of the data such as mean, standard deviation, maximum and minimum. The descriptive statistics for all the variables for time series data are presented in Table 4.1. Whereas, the descriptive statistics for all the variables for the panel data are presented in Table 4.2.

Table 4.1
Descriptive Statistics for Time Series Data

	Mean	Maximum	Minimum	Standard Deviation
India				
TG	833.581	2668.310	98.089	742.605
PBI	5.499	18.813	0.720	5.455
PVI	605.135	2264.100	5.676	746.299
TE	19534.730	23676.500	12162.300	3359.960
INF	6.756	13.752	0.995	2.859
EXR	40.414	64.152	13.917	12.897
Maldives				
TG	5.965	23.096	0.175	7.385
PBI	0.076	0.238	0.010	0.075
PVI	0.787	1.955	0.020	0.651
TE	23.151	49.826	4.883	15.697
INF	4.460	20.134	-23.822	8.121
EXR	12.317	15.380	8.785	1.795
Nepal				
TG	28.553	98.378	2.366	25.612
PBI	0.503	1.782	0.090	0.469
PVI	5.056	12.702	2.290	3.073
TE	324.704	452.048	156.742	82.828
INF	8.025	17.150	2.479	3.410
EXR	64.845	102.405	23.289	20.278
Pakistan				
TG	255.220	844.465	18.695	253.701
PBI	2.331	9.238	0.372	2.585
PVI	87.042	400.520	0.991	114.723
TE	1027.174	1445.780	510.455	312.031
INF	10.247	24.892	2.463	5.432
EXR	55.913	102.769	18.003	26.616
Sri Lanka				
TG	125.768	510.890	4.657	146.324
PBI	2.466	8.466	0.170	2.675
PVI	36.748	136.304	0.217	41.271
TE	223.368	346.079	103.481	64.235
INF	9.908	22.799	2.143	4.540
EXR	83.438	135.857	31.807	33.257

As can be observed from the Table 4.1 that the mean and the standard deviation are close to each other for *TG*, *PBI* and *PVI* for the selected countries showing that the deviation of individual values from their mean is closer to the mean. However, for *TE*, *INF* and *EXR*, the control variables, the deviation of individual values from their respective means is much lower than the mean values. The minimum and maximum values for all the variables is also presented in Table 4.1.

The descriptive statistics for the panel data for all the variables are presented in Table 4.2. Table 4.2 presents the descriptive statistics of all the variables included in the panel analysis for all the models.

Table 4.2
Descriptive Statistics for Panel Data

Variables	Mean	Median	Maximum	Minimum	Standard Deviation
TG	265.238	52.319	3069.580	0.175275	516.134
PBI	2.293	0.689	22.631	0.010	3.851
PVI	160.593	10.763	2548.030	0.020	446.600
TE	4258.781	344.852	24197.40	4.883	7898.462
EXR	51.386	46.928	135.857	8.785	32.319
INF	8.381	7.871	24.891	0.324	4.546
PSAV	-1.067	-1.183	1.114	-2.806	0.974
COC	-0.509	-0.497	0.443	-1.153	0.304
ROL	-0.293	-0.15	0.527	-1.008	0.436

The included variables are *TG*, the dependent variable in all four models, whereas, *PBI*, *PVI*, *PSAV*, *COC*, *ROL* are the independent variables in the model, and *TE*, *INF* and *EXR*, the control variables. A higher dispersion is found for the variables *TG*, *PVI* and *TE*, as

their standard deviations are much higher than their respective means for however, for other variables the standard deviation is closer to the mean showing less dispersion of individual values from their means. The maximum and minimum values for each of the variable is also presented in Table 4.2.

4.3 Correlation Analysis

The correlation analysis is performed among variables of interest for the time series data for the selected SAARC countries in order to observe the mutual association among variables and the results are presented in Table 4.3.

Table 4.3
Correlation Analysis for Time Series Data

Correlation	*TG*	*PBI*	*PVI*	*TE*	*INF*	*EXR*
India						
TG	1.000					
PBI	0.994*	1.000				
PVI	0.967*	0.969	1.000			
TE	0.752*	0.693	0.693	1.000		
INF	-0.489*	-0.451	-0.328	-0.562	1.000	
EXR	0.835*	0.798	0.733	0.898	-0.715	1.000
Maldives						
TG	1.000					
PBI	0.974*	1.000				
PVI	0.942*	0.957	1.000			
TE	0.873*	0.871	0.881	1.000		
INF	0.088	0.058	0.140	0.117	1.000	
EXR	0.853*	0.867	0.899	0.769	0.144	1.000
Nepal						
TG	1.000					
PBI	0.975*	1.000				
PVI	-0.285	-0.359	1.000			

Table 4.3 (Continued)

TE	0.761*	0.688	0.091	1.000		
INF	0.003	0.064	-0.565	-0.187	1.000	
EXR	0.836*	0.758	0.135	0.829	-0.307	1.000
Pakistan						
TG	1.000					
PBI	0.989*	1.000				
PVI	0.989*	0.998	1.000			
TE	0.874*	0.807	0.809	1.000		
INF	-0.075	-0.109	-0.100	0.053	1.000	
EXR	0.942*	0.896	0.888	0.942	-0.045	1.000
Sri Lanka						
TG	1.000					
PBI	0.963*	1.000				
PVI	0.978*	0.987	1.000			
TE	0.771*	0.700	0.706	1.000		
INF	-0.355*	-0.243	-0.280	-0.362	1.000	
EXR	0.845*	0.874	0.857	0.891	-0.204	1.000

Note: * indicates the rejection of null hypothesis at 5% level of significance.

It can be observed from Table 4.3 that the correlation between *TG* and *PBI* is positive and significant at 5 percent level of significance. The magnitude of the coefficient of correlation shows that the correlation between *TG* and *PBI* is strong since its value is above 0.90, which is closer to 1, for all countries. Likewise, the correlation between *TG* and *PVI* is also positive and significant for all countries except Nepal and the values of the coefficients confirm the presence of a strong correlation between *TG* and *PVI* as the values of correlation coefficient are greater than 0.90. However, in the case of Nepal, the correlation coefficient shows a negative but statistically insignificant correlation between *TG* and *PVI*. The correlation between *TG* and *TE*, for all the countries, is positive, significant at 5 percent significance level and strong as indicated by the magnitude of the correlation coefficient.

On the other hand, the coefficient of correlation between *TG* and *INF* shows that there exists insignificant positive correlation for Maldives and Nepal and insignificant negative correlation for Pakistan. However, the correlation between *TG* and *INF*, for India and Sri Lanka, is negative and significant at 5 percent level of significance. As far as the correlation between *TG* and *EXR* is concerned, the correlation analysis reveals that there exists positive, significant at 5 percent significance level, and strong (correlation coefficient greater than 0.80) for the selected SAARC countries.

The correlation analysis for the panel data is presented in Table 4.4. It can be observed from the table that the correlation between *TG* and *PBI* is positive and strong since the value of the coefficient of correlation is 0.950, which is closer to 1.

Table 4.4
Correlation Analysis for Panel Data

Correlation	*TG*	*PBI*	*PVI*	*TE*	*INF*	*EXR*	*PSAV*	*COC*	*ROL*
TG	1.000								
PBI	0.950*	1.000							
PVI	0.961*	0.896	1.000						
TE	0.808*	0.656	0.763	1.000					
INF	0.088	0.109	0.099	0.026	1.000				
EXR	0.040	0.273	-0.046	-0.198	0.270	1.000			
PSAV	-0.185**	-0.203	-0.091	-0.077	-0.499	-0.552	1.000		
COC	-0.054	-0.026	0.008	0.089	-0.213	-0.082	0.559	1.000	
ROL	0.163	0.145	0.191	0.371	-0.158	-0.193	0.530	0.765	1.000

Note: * & **shows the rejection of null hypothesis at 5 percent and 10 percent level of significance, respectively.

Likewise, a strong positive correlation is evidenced between *TG* and *PVI* as the value of correlation coefficient is also 0.961. However, there exists weak correlation between *TG*

and *INF, EXR, PSAV, COC* and *ROL* as it can be observed by the value of correlation coefficient which are 0.088, 0.040, 0.185, 0.054 and 0.163 respectively. The correlation between *TG* and *TE* is also strong with the correlation coefficient value equal to 0.808.

4.4 Time Series Analysis

The time series analysis for Model I for the selected SAARC countries is conducted and is presented in this section, which includes test of stationarity, exogeneity test and the ARDL model estimation.

4.4.1 Test of Stationarity

The test of stationarity is conducted to examine the presence of unit root in the variables of interest. The results of the unit root test for all the variables for the selected SAARC countries is presented in Table 4.5. It can be observed from Table 4.5 that null hypothesis of the presence of unit root cannot be rejected at level, with the assumption that there is no time trend at various lag lengths which were automatically selected by SIC for *TG*, *PBI*, *PVI* for all five countries. This is because the coefficients of each variable is insignificant at any of the permissible critical values i.e. 5 percent and 10 percent. Thus, these variables are non-stationary at level. The stationarity test at first difference is also presented in the table and it is found that these three variables show the evidence of stationarity at first difference i.e. I (1), since the *t*-statistic is greater than the critical values at permissible level of significance.

Table 4.5
Unit Root Test

India	Level		First Order Difference	
	Constant	Constant & Trend	Constant	Constant & Trend
TG	-0.707	-2.177	-5.971*	-5.962*
	(0.829)	(0.483)	(0.000)	(0.000)
PBI	7.436	2.715	0.693	-3.879*
	(1.000)	(1.000)	(0.989)	(0.027)
PVI	2.653	-0.304	-8.436*	-10.681*
	(1.000)	(0.986)	(0.000)	(0.000)
TE	-2.087	-3.387**	-8.356*	-8.541*
	(0.2511)	(0.074)	(0.000)	(0.000)
INF	-1.708	-2.489	-7.341*	-7.324*
	(0.416)	(0.331)	(0.000)	(0.000)
EXR	-0.981	-2.239	-4.039*	-3.958*
	(0.746)	(0.448)	(0.005)	(0.024)
Maldives				
TG	2.031	-0.462	-4.408*	-5.609*
	(0.999)	(0.979)	(0.002)	(0.000)
PBI	3.547	0.807	-4.372*	-5.401*
	(1.000)	(0.999)	(0.002)	(0.001)
PVI	0.011	-2.084	-5.791*	-5.822*
	(0.952)	(0.532)	(0.000)	(0.000)
TE	-1.211	-3.518**	-5.482*	-5.387*
	(0.655)	(0.057)	(0.000)	(0.001)
INF	-5.263*	-5.231*	-5.931*	-5.635*
	(0.000)	(0.001)	(0.000)	(0.000)
EXR	-1.065	-3.085	-3.590*	-3.536
	(0.715)	(0.130)	(0.013)	(0.056)
Nepal				
TG	4.773	1.977	-2.438	-3.710*
	(1.000)	(1.000)	(0.141)	(0.039)
PVI	-1.853	-1.946	-2.969*	-2.938
	(0.348)	(0.603)	(0.050)	(0.167)
TE	-1.761	-2.574	-4.689*	-4.674*
	(0.391)	(0.293)	(0.001)	(0.005)
INF	-2.980*	-2.962	-6.559*	-6.423
	(0.050)	(0.161)	(0.000)	(0.000)
EXR	-0.946	-2.256	-4.003*	-3.917*
	(0.757)	(0.440)	(0.005)	(0.026)

Table 4.5 (Continued)

Pakistan				
TG	5.670	1.248	-1.996	-5.578*
	(1.000)	(0.999)	(0.287)	(0.001)
PBI	10.019	4.622	-1.616	-4.929*
	(1.000)	(1.000)	(0.461)	(0.003)
PVI	11.425	5.320	0.526	-3.281**
	(1.000)	(1.000)	(0.985)	(0.091)
TE	-1.067	-1.952	-5.567*	-5.490*
	(0.715)	(0.601)	(0.000)	(0.001)
INF	-5.074*	-4.954*	-19.308*	-24.035*
	(0.000)	(0.002)	(0.000)	(0.000)
EXR	0.462	-1.758	-3.489*	-3.436**
	(0.982)	(0.696)	(0.017)	(0.068)
Sri Lanka				
TG	3.844	1.861	-1.613	-3.948*
	(1.000)	(1.000)	(0.463)	(0.026)
PBI	5.474	0.148	-0.994	-4.151*
	(1.000)	(0.996)	(0.740)	(0.015)
PVI	3.922	1.545	-2.776	-4.765*
	(1.000)	(1.000)	(0.075)	(0.004)
TE	-1.280	-2.608	-3.778*	-3.697*
	(0.620)	(0.280)	(0.008)	(0.040)
INF	-5.108*	-2.258	-11.251*	-11.184*
	(0.000)	(0.440)	(0.000)	(0.000)
EXR	-1.047	-3.331	-2.358	-4.178*
	(0.716)	(0.087)	(0.165)	(0.015)

Note: * & ** indicate the rejection of null hypothesis at 5 percent and 10 percent level of significance, respectively.
p-values are presented in parenthesis ( )

However, *TE* for India and Maldives, *INF* for Maldives, Nepal, Pakistan and Sri Lanka, and *EXR* for Sri Lanka, show the evidence of stationarity at level i.e. I(0) at 5 percent and 10 percent level of significance. Therefore, it is observed from Table 4.5 that all the variables in selected SAARC countries have a mix of stationarity at I(0) and I(1) leading to the selection of ARDL method of long-run and short-run coefficient estimations.

4.4.2 Exogeneity Test

The exogeneity test is conducted for the selected five SAARC countries in order to examine if the variables under consideration are exogenous. The results are presented in Table 4.6. It can be observed from the table that all the variables are found to be exogenous as the *p*-values are greater than the critical level at 5 percent level of significance.

Table 4.6
Exogeneity Test

Dependent variable: *TG*			
Excluded	Chi-sq (χ^2)	df	*Prob.*
India			
PBI	2.841	2	0.242
PVI	3.816	2	0.148
*PBI*PVI*	2.312	2	0.309
TE	1.374	2	0.497
INF	1.607	2	0.448
EXR	1.340	2	0.512
Maldives			
PBI	0.306	2	0.858
PVI	2.642	2	0.251
*PBI*PVI*	3.543	2	0.170
TE	3.714	2	0.153
INF	2.572	2	0.276
EXR	2.649	2	0.266
Nepal			
PBI	4.399	2	0.111
PVI	1.259	2	0.533
*PBI*PVI*	2.213	2	0.331
TE	1.432	2	0.489
INF	0.023	2	0.988
EXR	3.457	2	0.178
Pakistan			
PBI	0.991	2	0.609
PVI	0.610	2	0.737
*PBI*PVI*	26.109	2	0.000
TE	3.079	2	0.215
INF	5.878	2	0.053
EXR	4.378	2	0.112

Table 4.6 (Continued)

Sri Lanka			
PBI	5.041	2	0.080
PVI	1.352	2	0.509
*PBI*PVI*	0.941	2	0.625
TE	1.812	2	0.404
INF	2.807	2	0.246
EXR	2.189	2	0.335

4.4.3 The Optimal ARDL Model

Having observed that the series are integrated at both level and first difference, the mix order of integration suggests that the appropriate estimation technique is ARDL. The first step is the estimation of the optimal ARDL model, which suggest the appropriate lag for the dependent variable and the independent variables to be included in the final model. The optimal ARDL models are automatically specified based on the Akaike Information Criterion (AIC) and SIC, as presented in Table 4.7 to Table 4.11 for India, Maldives, Nepal, Pakistan and Sri Lanka. The optimal lags for the models in each country have been selected on the basis of aforementioned criteria, and the selected lags are: ARDL (2, 1, 0, 0, 0, 1, 1), ARDL (1, 2, 0, 1, 1, 1, 2), ARDL (4, 3, 3, 4), ARDL (1, 0, 2, 1, 2, 0, 2), ARDL (2, 1, 2, 1, 0, 1, 2), for India, Maldives, Nepal, Pakistan and Sri Lanka, respectively.

Table 4.7
The Optimal ARDL Model for India

Selected Model: ARDL(2, 1, 0, 0, 0, 1, 1)				
Variable	Coefficient	Std. Error	*t*-Statistic	*Prob.**
TG(-1)	0.831	0.150	5.554	0.000
TG(-2)	-0.475	0.145	-3.280	0.006
PBI	-22.814	22.816	-0.999	0.334
PBI(-1)	77.686	24.486	3.173	0.007

Table 4.7 (Continued)

PVI	0.232	0.057	4.083	0.001
*PBI*PVI*	-0.015	0.005	-3.146	0.007
INF	13.111	4.251	3.084	0.008
EXR	-2.854	2.594	-1.100	0.290
EXR(-1)	13.245	2.954	4.483	0.001
TE	0.011	0.006	1.993	0.066
TE(-1)	-0.031	0.006	-4.809	0.000
C	6.612	127.482	0.052	0.959
R-squared	0.999	Mean dependent var		889.781
Adjusted R-squared	0.999	S.D. dependent var		741.343
S.E. of regression	25.766	Akaike info criterion		9.640
Sum squared resid	9294.334	Schwarz criterion		10.221
Log likelihood	-113.320	Hannan-Quinn criter.		9.807
F-statistic	1880.187	Durbin-Watson stat		2.096
Prob(F-statistic)	0.000			

Note: * *p*-values and any subsequent tests do not account for model selection.

Table 4.8

The Optimal ARDL Model for Maldives

Selected Model: ARDL(1, 2, 0, 1, 1, 1, 2)				
Variable	Coefficient	Std. Error	*t*-Statistic	*Prob.**
TG(-1)	0.551	0.162	3.412	0.006
PBI	15.768	6.430	2.452	0.032
PBI(-1)	-3.364	6.663	-0.505	0.624
PBI(-2)	15.563	7.333	2.122	0.057
PVI	2.203	0.562	3.919	0.002
TE	0.152	0.007	21.556	0.000
TE(-1)	-0.125	0.019	-6.676	0.000
EXR	1.304	0.188	6.949	0.000
EXR(-1)	-1.104	0.167	-6.597	0.000
INF	0.027	0.011	2.328	0.040
INF(-1)	-0.016	0.007	-2.162	0.054
*PBI*PVI*	-1.245	7.219	-0.172	0.866
*PBI*PVI(-1)*	10.900	4.115	2.649	0.023
*PBI*PVI(-2)*	17.351	3.558	4.877	0.001
C	-4.206	1.497	-2.809	0.017
R-squared	0.999	Mean dependent var		5.751
Adjusted R-squared	0.999	S.D. dependent var		6.828
S.E. of regression	0.190	Akaike info criterion		-0.191
Sum squared resid	0.397	Schwarz criterion		0.534
Log likelihood	17.488	Hannan-Quinn criter.		0.018
F-statistic	2308.985	Durbin-Watson stat		2.628

Table 4.8 (Continued)

Prob(F-statistic)	0.000

Note: * *p*-values and any subsequent tests do not account for model selection.

Table 4.9

The Optimal ARDL Model for Nepal

Selected Model: ARDL(4, 3, 3, 4)

Variable	Coefficient	Std. Error	*t*-Statistic	*Prob.**
TG(-1)	-0.366	0.293	-1.248	0.252
TG(-2)	0.181	0.293	0.617	0.557
TG(-3)	-0.185	0.274	-0.678	0.520
TG(-4)	0.501	0.255	1.963	0.090
PBI	82.539	19.696	4.191	0.004
PBI(-1)	70.106	22.504	3.115	0.017
PBI(-2)	-22.995	16.239	-1.416	0.200
PBI(-3)	-107.670	30.239	-3.561	0.009
PVI	1.892	1.140	1.659	0.141
PVI(-1)	-1.740	1.247	-1.396	0.205
PVI(-2)	0.985	0.914	1.077	0.317
PVI(-3)	1.275	0.637	2.002	0.085
*PBI*PVI*	-14.922	4.462	-3.344	0.012
*PBI*PVI(-1)*	-1.693	3.925	-0.431	0.679
*PBI*PVI(-2)*	8.386	4.001	2.096	0.074
*PBI*PVI(-3)*	18.479	4.935	3.744	0.007
*PBI*PVI(-4)*	4.135	3.726	1.110	0.304
C	-10.139	3.165	-3.204	0.015
R-squared	0.998	Mean dependent var		32.618
Adjusted R-squared	0.992	S.D. dependent var		25.307
S.E. of regression	2.253	Akaike info criterion		4.629
Sum squared resid	35.530	Schwarz criterion		5.507
Log likelihood	-39.867	Hannan-Quinn criter.		4.873
F-statistic	177.729	Durbin-Watson stat		3.233
Prob(F-statistic)	0.000			

Note: * *p*-values and any subsequent tests do not account for model selection.

Table 4.10

The Optimal ARDL Model for Pakistan

Selected Model: ARDL(1, 0, 2, 1, 2, 0, 2)

Variable	Coefficient	Std. Error	*t*-Statistic	*Prob.**
TG(-1)	-0.484	0.221	-2.187	0.051
PBI	-8.214	15.57	-0.527	0.608
PVI	2.347	0.573	4.095	0.002
PVI(-1)	1.382	0.432	3.198	0.009

Table 4.10 (Continued)

PVI(-2)	-1.282	0.489	-2.620	0.024
*PBI*PVI*	-0.015	0.071	-0.216	0.833
*PBI*PVI(-1)*	-0.127	0.084	-1.514	0.158
TE	-0.034	0.032	-1.068	0.309
TE(-1)	-0.001	0.042	-0.024	0.981
TE(-2)	-0.129	0.038	-3.393	0.006
INF	0.348	0.321	1.082	0.302
EXR	1.660	0.551	3.012	0.012
EXR(-1)	1.583	1.004	1.577	0.143
EXR(-2)	1.565	0.807	1.940	0.078
C	48.882	18.538	2.637	0.023
R-squared	0.999	Mean dependent var		250.555
Adjusted R-squared	0.999	S.D. dependent var		231.941
S.E. of regression	6.358	Akaike info criterion		6.831
Sum squared resid	444.733	Schwarz criterion		7.557
Log likelihood	-73.804	Hannan-Quinn criter.		7.040
F-statistic	2375.294	Durbin-Watson stat		1.934
Prob(F-statistic)	0.000			

Note: * *p*-values and any subsequent tests do not account for model selection.

Table 4.11
The Optimal ARDL Model for Sri Lanka

Selected Model: ARDL(2, 1, 2, 1, 0, 1, 2)				
Variable	Coefficient	Std. Error	*t*-Statistic	*Prob.**
TG(-1)	-0.086	0.138	-0.625	0.546
TG(-2)	0.457	0.138	3.319	0.008
PBI	-69.548	8.064	-8.625	0.000
PBI(-1)	29.167	5.456	5.346	0.000
PVI	5.371	0.517	10.386	0.000
PVI(-1)	-0.411	0.312	-1.319	0.217
PVI(-2)	-0.653	0.239	-2.739	0.021
TE	0.288	0.079	3.655	0.004
TE(-1)	-0.181	0.065	-2.784	0.019
*PBI*PVI*	0.425	0.054	7.911	0.000
INF	0.221	0.196	1.128	0.286
INF(-1)	0.573	0.247	2.325	0.042
EXR	-0.385	0.193	-1.989	0.075
EXR(-1)	0.437	0.237	1.841	0.095
EXR(-2)	1.209	0.222	5.456	0.000
C	-93.577	11.445	-8.176	0.000
R-squared	0.999	Mean dependent var		120.237
Adjusted R-squared	0.999	S.D. dependent var		129.810

Table 4.11 (Continued)

S.E. of regression	2.515	Akaike info criterion	4.958
Sum squared resid	63.265	Schwarz criterion	5.732
Log likelihood	-48.452	Hannan-Quinn criter.	5.181
F-statistic	4438.526	Durbin-Watson stat	3.119
Prob(F-statistic)	0.000		

Note: * *p*-values and any subsequent tests do not account for model selection.

4.4.4 The ARDL Bounds Test

Having examined that the series of the model are integrated of different orders i.e. I(0) and I(1), the usual Johansen and Julius (1990) cointegration test does not apply. In this regard, the ARDL Bounds test is adopted in order to examine the presence (or absence) of the long-run relationship among variables of interest.

Given the results of the Bounds test in Table 4.12, the values of *F*-statistic, when compared with the I_1 Bound values, is greater than the bounds critical values at each of the significant levels (10 percent, 5 percent, 2.5 percent and 1 percent). This is an evidence of the existence of cointegration among variables.

Hence, it can be concluded that there exists a long-run, stable relationship among the series of the model. Therefore, ARDL cointegration and long-run coefficients are estimated in the following section, in order to examine the sign, magnitude, and significance of the relationship among the series.

Table 4.12
The ARDL Bound Test

India			Critical Value Bounds		
Test Statistic	Value	K	Significance	I_0 Bound	I_1 Bound
F-Statistic	7.463	6	10%	2.12	3.23
			5%	2.45	3.61
			2.5%	2.75	3.99
			1%	3.15	4.43
Maldives					
F-Statistic	22.170	6	10%	2.12	3.23
			5%	2.45	3.61
			2.5%	2.75	3.99
			1%	3.15	4.43
Nepal					
F-Statistic	5.734	3	10%	2.72	3.77
			5%	3.23	4.35
			2.5%	3.69	4.89
			1%	4.29	5.61
Pakistan					
F-Statistic	9.805	6	10%	2.12	3.23
			5%	2.45	3.61
			2.5%	2.75	3.99
			1%	3.15	4.43
Sri Lanka					
F-Statistic	6.021	6	10%	2.12	3.23
			5%	2.45	3.61
			2.5%	2.75	3.99
			1%	3.15	4.43

4.4.5 The Long-Run Estimates

Given that the series of the models for all the selected countries are found to be cointegrated as evident from the results of the Bound test presented in previous section, the long-run coefficient estimates of the ARDL technique are hereby presented in Table 4.13.

Table 4.13

The Long-Run Coefficient Estimates

Variable	Coefficient	Total Effect	Std. Error	*t*-Statistic	*Prob.*
Selected Model for India: ARDL (2, 1, 0, 0, 0, 1, 1)					
PBI	85.229	*TG* = 85.229 – 0.022 *PVI*	10.732	7.942	0.000*
PVI	0.361	*TG* = 0.361 – 0.022 *PBI*	0.102	3.551	0.003*
*PBI*PVI*	-0.022		0.009	-2.676	0.018*
TE	-0.030		0.017	-1.772	0.098**
INF	20.365		9.190	2.216	0.044*
EXR	16.140		4.937	3.269	0.006*
C	10.270		198.618	0.052	0.960
Selected Model for Maldives: ARDL (1, 2, 0, 1, 1, 1, 2)					
PBI	62.321	*TG* = 63.321 + 60.178 *PVI*	11.455	5.440	0.000*
PVI	4.909	*TG* = 4.909 + 60.178 *PBI*	2.413	2.034	0.067**
*PBI*PVI*	60.178		6.172	9.750	0.000*
TE	0.061		0.029	2.114	0.058**
INF	0.025		0.021	1.185	0.261
EXR	0.445		0.213	2.084	0.061**
C	-9.374		2.772	-3.382	0.006*
Selected Model for Nepal: ARDL (4, 3, 3, 4)					
PBI	25.281	*TG* = 25.281 + 16.545 *PVI*	11.172	2.263	0.058**
PVI	2.775	*TG* = 2.775 + 16.545 *PBI*	0.958	2.894	0.023*
*PBI*PVI*	16.545		8.100	2.043	0.080**
C	-11.662		4.652	-2.507	0.041*
Selected Model for Pakistan: ARDL (1, 0, 2, 1, 2, 0, 2)					
PBI	-5.535	*TG* = – 5.535 – 0.096 *PVI*	10.272	-0.539	0.601
PVI	1.649	*TG* = 1.649 – 0.096 *PBI*	0.306	5.387	0.000*
*PBI*PVI*	-0.096		0.018	-5.196	0.000*
TE	-0.111		0.022	-4.971	0.000*
INF	0.234		0.229	1.025	0.327
EXR	3.240		0.230	14.116	0.000*
C	32.943		12.416	2.653	0.023**
Selected Model for Sri Lanka: ARDL (2, 1, 2, 0, 1, 1, 2)					
PBI	-64.176	*TG* = -64.176 + 0.675 *PVI*	10.184	-6.302	0.000*
PVI	6.844	*TG* = 6.844 + 0.675 *PBI*	0.609	11.235	0.000*
*PBI*PVI*	0.675		0.086	7.867	0.000*
TE	0.169		0.157	1.076	0.307
INF	1.262		0.604	2.089	0.063**
EXR	2.004		0.525	3.814	0.003*
C	-148.716		16.478	-9.025	0.000

Note: * & ** indicate the rejection of null hypothesis at 5% & 10% level of significance, respectively.

The negative coefficient of the interaction term, in case of India, shows that increase in *PVI* and *PBI* will reduce the positive effect of *PBI* and *PVI* respectively. The total effect of an increase in *PBI* on *TG* will be (85.229 – 0.022*PVI*) and a private investment of one billion will reduce the total effect of *PBI* on *TG* to 85.21 billion. Moreover, the total effect of an increase in *PVI* on *TG* will be (0.361 – 0.022*PBI*) and a public investment of one billion will reduce the positive effect of *PVI* on *TG* to 0.34 billion.

Similarly, in case of Pakistan, the negative coefficient of the interaction term demonstrates that increase in *PVI* further increases the negative effect of *PBI* on *TG*. In addition, it also shows that increase in *PBI* diminishes the positive effect of *PVI* on *TG*. The total effect of an increase in *PBI* on *TG* will be (–5.535 – 0.096*PVI*) and a private investment of one billion will increase the negative effect of *PBI* on *TG* to 5.63 billion. Also, the total effect of an increase in *PVI* on *TG* will be (1.649 – 0.096 *PBI*) and a public investment of one billion will shrink the positive effect of *PVI* on *TG* to 1.553 billion.

On the other hand, the coefficient of the interaction term is positive in case of Maldives, Nepal and Sri Lanka which demonstrates that an increase in *PVI* will further increases the positive effect of *PBI* on *TG* for Maldives and Nepal, and decreases the negative effect of *PBI* on *TG* in Sri Lanka. Likewise, an increase in *PBI* further enhances the positive effect of *PVI* on *TG* for all these countries.

The total effect of an increase in *PBI* on *TG* for Maldives is (63.321 + 60.178*PVI*) which means an increase of one billion in *PVI* will result in an increase the positive effect of *PBI* on *TG* to 123.50 billion. Similarly, the total effect of an increase in *PBI* on *TG* for Nepal is (25.281 + 16.545*PVI*) which means an increase of one billion in *PVI* will stimulate the positive effect of *PBI* on *TG* to 41.83 billion. However, the total effect of an increase in *PBI* on *TG* for Sri Lanka is (– 64.176 + 0.675*PVI*) which demonstrates that an increase of 10 billion in *PVI* will result in the elimination of the negative effect of *PBI* on *TG*.

Similarly, the total effect of an increase in *PVI* on *TG* for Maldives, Nepal and Sri Lanka will be (4.909 + 60.178*PBI*), (2.775 + 16.545*PBI*) and (6.844 + 0.675*PBI*), respectively. This demonstrates that an increase in *PBI* by one billion in each of above-mentioned countries will stimulate the positive effect of *PVI* on *TG* to 65.09 billion, 19.32 billion and 7.52 billion for Maldives, Nepal and Sri Lanka, respectively.

The interaction effect of *PBI* and *PVI* is positive for Maldives, Nepal and Sri Lanka. This positive interaction effect can be explained by the crowding-in effect which means increase in public investment encourages private investment, thereby, increasing the overall size of investment and its productivity in the economy. These findings are in line with the studies conducted by Erden and Holcombe (2005), Afonso and Aubyn (2009), Marattin and Salotti (2011), and Pereira and Andraz (2013) who supported the crowding-in effect of public investment. However, these findings are in contrast with Bende-Nabende and Slater

(2003), and Phetsavong and Ichihashi (2012) who are the advocates of crowding-out hypothesis.

On the other hand, the coefficients of the *PBI*PVI* are negative for India and Pakistan which can be explained in terms of crowding-out effect, where the increase in public investment reduces private investment due to the fear of competition by the public sector. The direct engagement of public sector in tourism services provision discourages private investment due to the fact that private investors do not have sufficient resources to compete with the public sector. This is in line with the findings of Everhart and Sumlinski (2001), Bende-Nabende and Slater (2003), and Phetsavong and Ichihashi (2012) who also supported the crowding-out effect hypothesis. However, these findings are contrary to the findings of Hassan *et al.* (2011) and Pereira and Andraz (2013) who supported crowding-in effect.

Moreover, Vu Le and Suruga (2005), Petrescu (2011), and (Abd & Furceri, 2016) found that *PBI* positively affects growth through the provision of infrastructure and other facilities. The negative coefficient of *PBI* in case of Sri Lanka is in line with the studies conducted by Pritchett (2000) and Caselli (2005), who contended that inefficiencies in the public investment process such as poor project selection, implementation and monitoring, can result in only a fraction of public investment translating into productive infrastructure, thereby, limiting the long-term growth. In addition, the negative coefficient can also be due to the extent to which public investment is diverted into private pockets through corruption.

These findings of positive effect of *PVI* on *TG* are in line with the studies conducted by Wang and Xu (2011), and Sharpley and Telfer (2014) who argued that private investment is imperative for the tourism growth.

For India and Pakistan, the effect of *TE* on *TG* is negative, whereas, it is positive in Maldives. However, the effect of *TE* is insignificant in explaining *TG* in case of Pakistan. Similarly, the effect of *INF* is found to be positive on *TG* in India and Sri Lanka, while it is insignificant in case of Maldives and Pakistan. The effect of *EXR* is found to be positive and significant on *TG* in all selected countries.

4.4.6 The ARDL Short Run Estimates

The estimates of the short-run coefficients are presented in Table 4.14. In the examination of the short-run coefficients, the first thing to observe is the convergence (or divergence) of the model to the long-run equilibrium. To this end, the conditions on ECT for the existence of convergence towards equilibrium are that the coefficient of the cointegrating equation (the ECT) must be negative, significant and less than one. It can be observed that the coefficient of ECT is negative, significant at 5 percent level and less than one for all the countries. The ECT explains that the rate of convergence or the rate of adjustment back to long-run equilibrium in one year is 64.4 percent, 44.9 percent, 86.9 percent, 48.4 percent and 62.9 percent for India, Maldives, Nepal, Pakistan and Sri Lanka, respectively. The

highest convergence rate is found in Nepal which is 86.9 percent in one year, while the slowest convergence rate is found in Maldives which is 44.9 percent in a year.

Table 4.14
The ARDL Short-Run Estimates

Variable	Coefficient	Std. Error	*t*-Statistic	*Prob.*
India				
D(TG(-1))	0.475	0.145	3.280	0.006*
D(PBI)	-22.814	22.816	-0.999	0.334
D(PVI)	0.232	0.057	4.083	0.001*
*D(PBI*PVI)*	-0.015	0.005	-3.146	0.007*
D(TE)	0.011	0.006	1.993	0.066**
D(INF)	13.111	4.251	3.084	0.008*
D(EXR)	-2.854	2.594	-1.100	0.290
ECT	-0.644	0.161	-4.006	0.001*
Maldives				
D(PBI)	15.768	6.430	2.452	0.032*
D(PBI(-1))	-15.563	7.333	-2.122	0.057**
D(PVI)	2.203	0.562	3.919	0.002*
D(TE)	0.152	0.007	21.556	0.000*
D(INF)	0.027	0.011	2.328	0.040*
D(EXR)	1.304	0.188	6.949	0.000*
*D(PBI*PVI)*	-1.245	7.219	-0.172	0.866
*D(PBI*PVI(-1))*	-17.351	3.558	-4.877	0.001*
ECT	-0.449	0.162	-2.777	0.018*
Nepal				
D(TG(-1))	-0.497	0.282	-1.760	0.122
D(TG(-2))	-0.318	0.274	-1.153	0.287
D(TG(-3))	-0.501	0.255	-1.963	0.090**
D(PBI)	82.539	19.696	4.191	0.004*
D(PBI(-1))	22.995	16.239	1.416	0.199
D(PBI(-2))	107.670	30.239	3.561	0.009*
D(PVI)	1.892	1.140	1.659	0.141
D(PVI(-1))	-0.985	0.914	-1.077	0.317
D(PVI(-2))	-1.275	0.637	-2.002	0.085**
*D(PBI*PVI)*	-14.922	4.462	-3.344	0.012*
*D(PBI*PVI(-1))*	-8.386	4.001	-2.096	0.074**
*D(PBI*PVI(-2))*	-18.479	4.935	-3.744	0.007*
*D(PBI*PVI(-3))*	-4.135	3.726	-1.110	0.304
ECT	-0.869	0.262	-3.322	0.013*
Pakistan				
D(PBI)	-8.214	15.575	-0.527	0.608

Table 4.14 (Continued)

D(PVI)	2.347	0.573	4.095	0.002*
D(PVI(-1))	1.282	0.489	2.620	0.024*
*D(PBI*PVI)*	-0.015	0.071	-0.216	0.833
D(TE)	-0.034	0.032	-1.068	0.309
D(TE(-1))	0.129	0.038	3.392	0.006*
D(INF)	0.348	0.321	1.082	0.302
D(EXR)	1.660	0.551	3.012	0.012*
D(EXR(-1))	-1.565	0.807	-1.940	0.078**
ECT	-0.484	0.221	-2.190	0.014*
Sri Lanka				
D(TG(-1))	-0.457	0.138	-3.318	0.008*
D(PBI)	-69.548	8.064	-8.625	0.000*
D(PVI)	5.371	0.517	10.386	0.000*
D(PVI(-1))	0.653	0.239	2.739	0.021*
*D(PBI*PVI)*	0.425	0.054	7.911	0.000*
D(TE)	0.288	0.079	3.655	0.004*
D(INF)	0.221	0.196	1.128	0.286
D(EXR)	-0.385	0.193	-1.989	0.075**
D(EXR(-1))	-1.209	0.222	-5.456	0.000*
ECT	-0.629	0.086	-7.275	0.000*

Note: * & ** represent the rejection of null hypothesis at 5 percent and 10 percent level of significance, respectively.

For India, the coefficient of TG_{t-1} explains that current value of *TG* is significantly explained by one year lagged *TG*. The value of the coefficient is 0.475, which means current value of *TG* increases by INR0.48 billion for INR1 billion increase in TG_{t-1}. The negative value of the coefficient of interaction term explains that an increase in *PVI* will further increase the negative effect of *PBI* on *TG*, and an increase in *PBI* will reduce the positive effect of *PVI* on *TG*. While the effect of *TE* and *INF* are each positive and significant on *TG*, the coefficient of *EXR* is negative but insignificant.

However, the coefficient of the interaction term is insignificant in case of Maldives while lagged value of this interaction coefficient is negative and significant which explains that

an increase in *PVI* eliminates the positive effect of *PBI* on *TG*, and an increase in *PBI* also eliminates the positive effect of *PVI* on *TG*. Moreover, each of *TE*, *INF* and *EXR* positively and significantly influences *TG* in the short-run. In case of Nepal, the coefficient of the interaction term is negative and significant which means that an increase in *PVI* lessens the positive effect of *PBI* on *TG*, and likewise, an increase in *PBI* eliminates the positive effect of *PVI* on *TG* in the short-run.

Similarly in case of Pakistan, the negative value of the coefficient of interaction term demonstrates that an increase in *PVI* further increases the negative effect of *PBI*, and an increase in *PBI* also decreases the positive effect of *PVI* on *TG*. However, the coefficient of *TE* is insignificant with negative sign, while TE_{t-1} positively and significantly affects *TG*. The effect of *INF* on *TG* is also insignificant in the short-run. The coefficients of *EXR* and EXR_{t-1} are positive and negative respectively, and have significant effect on *TG* in the short-run. The coefficients explain that one unit change in current and one year lagged *EXR* will increase and decrease *TG* by PKR1.66 billion and PKR1.57 billion, respectively.

On the other hand, the coefficient of the interaction term is positive and significant at 5 percent for Sri Lanka which implies that an increase in *PBI* enhances the effect of *PVI* on *TG*, and an increase in *PVI* also reduces the negative effect of *PBI* on *TG*. The negative effect of *PBI* on *TG* is due to the fact that, in short-run, the government invests in infrastructure such as construction of roads and hotels, development of resorts etc. that causes disturbance in the roads and congestion due to construction activity, thereby reducing the tourism activities in that area. However, the effect of *INF* on *TG* is

insignificant in Sri Lanka. While the effect of *INF* and *EXR* on *TG* is positive and negative and significant at 5 percent significance level.

4.4.7 The ARDL Diagnostics

In order to confirm the validity of the results explained above, various post-estimation diagnostic analyses are performed including Ramsey Regression Equation Specification (RESET) for model specification, Breusch-Godfrey Serial Correlation Lagrange Multiplier (LM) test for testing the presence of autocorrelation in the model, and Breusch-Pagan-Godfrey (BPG) test for testing the heteroscedasticity in the model. The tests results are summarized in Table 4.15.

Table 4.15
The ARDL Diagnostic Tests

Countries	Ramsey RESET Test		Serial Correlation Test	Heteroscedasticity Tests		
	t-statistic	*F*-statistic	*F*-statistic	*F*-statistic	χ^2-statistic	Scaled ESS
India	0.099	0.010	0.218	1.716	14.927	3.073
	(0.922)	(0.922)	(0.807)	(0.170)	(0.186)	(0.990)
Maldives	0.492	0.242	1.656	1.956	18.549	2.555
	(0.634)	(0.634)	(0.244)	(0.134)	(0.183)	(0.999)
Nepal	0.656	0.430	2.851	0.684	15.602	2.665
	(0.536)	(0.536)	(0.169)	(0.755)	(0.552)	(1.000)
Pakistan	1.481	2.195	0.297	0.590	11.150	1.943
	(0.169)	(0.169)	(0.750)	(0.825)	(0.674)	(0.999)
Sri Lanka	1.038	1.078	0.452	1.341	17.364	2.774
	(0.326)	(0.326)	(0.522)	(0.325)	(0.298)	(0.999)

Note: *p*-values are given in parentheses.

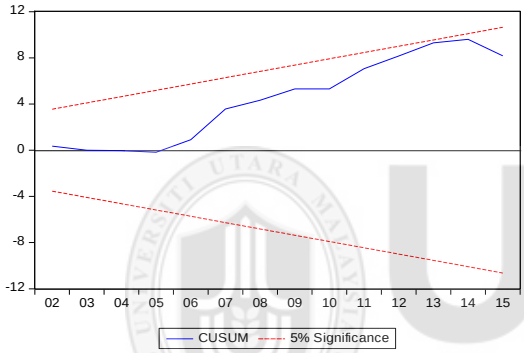
Given that both the probability values of the *t*-statistic and *F*-statistic, in Ramsey RESET test, are insignificant at 5 percent level of significance, for the selected countries, the null hypothesis (that the model is correctly specified) cannot be rejected. Hence, it can be concluded on the basis of Ramsey RESET test that the selected model is correctly specified.

Likewise, the test for serial correlation is carried out using Breusch-Godfrey Serial Correlation LM test. Given that the probability value of the *F*-statistic is insignificant at 5 percent level, the null hypothesis (that the model is free from serial correlation) cannot be rejected. Hence, it can be concluded, on the basis of Breusch-Godfrey Serial Correlation LM test, that the residuals of the model has serial independence, free from autocorrelation; error terms in each period are not correlated.

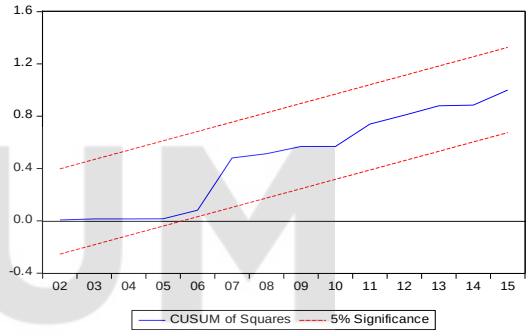
Similarly, in order to detect heteroskedasticity, the BPG test is employed. The probability values of both the *F*-statistic and the Chi-Square (χ^2) are insignificant at 5 percent significance level implying that the null hypothesis (the variance of the residuals are constant over time and observations) of homoskedasticity cannot be rejected. Therefore, based on the Breusch-Pagan-Godfrey heteroskedasticity test, it can be concluded that there is constancy of variance of the residuals in the model, and therefore, free from heteroskedasticity.

4.4.8 Stability Test of the Model

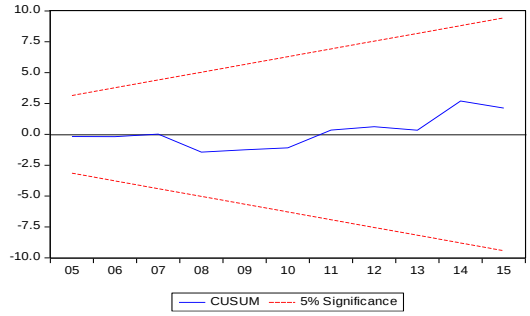
In order to examine the stability of the selected model, CUSUM and CUSUMSQ tests for model stability are performed and the graphic presentation of these tests is presented in Figure 4.1. Since the stability lines in each of the CUSUM and CUSUMSQ fall in-between the line-bounds, therefore, the model is considered stable at 5 percent level of significance for each of the countries.



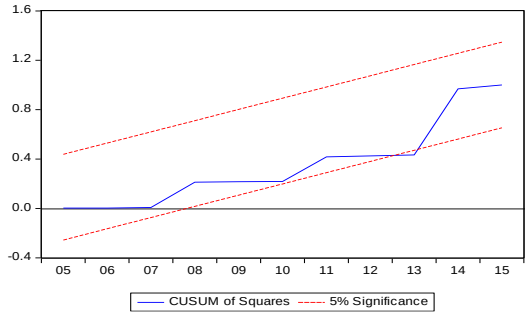
India



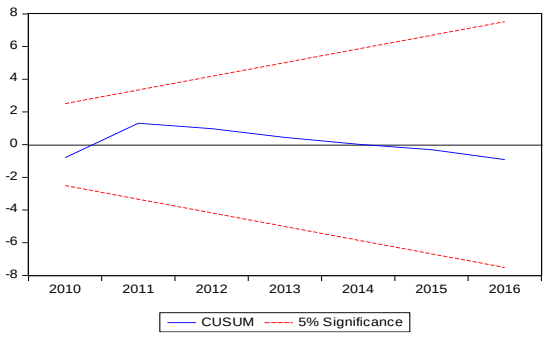
India



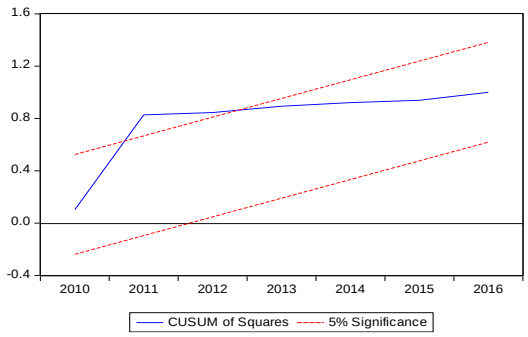
Maldives



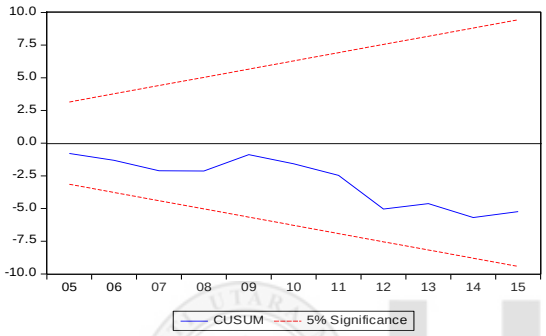
Maldives



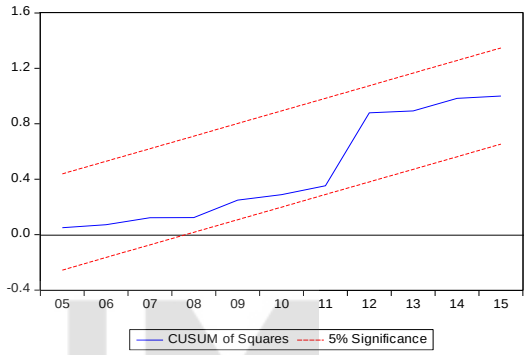
Nepal



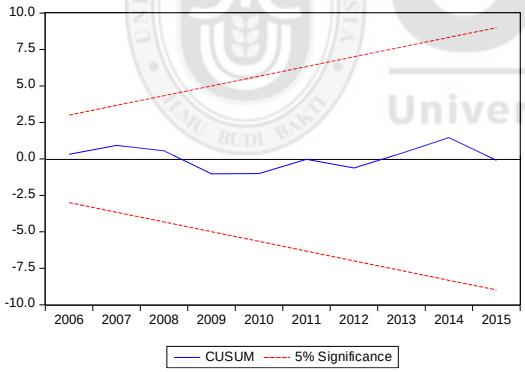
Nepal



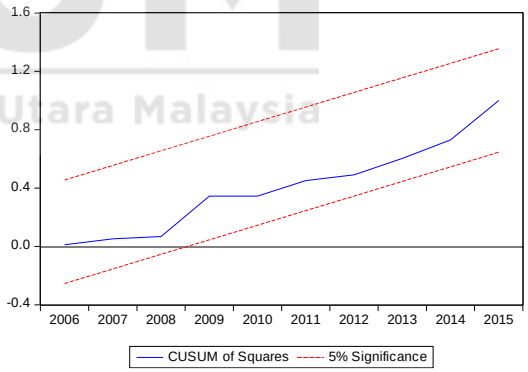
Pakistan



Pakistan



Sri Lanka



Sri Lanka

Figure 4.1
The CUSUM and CUSUMSQ for Model Stability Test

4.5 Panel Data Analysis

This section provides the panel data analysis that includes panel unit root test and panel cointegration tests for all the variables included in all four models in panel data analysis on the panel of five SAARC countries namely; India, Maldives, Nepal, Pakistan and Sri Lanka. The long-run coefficients are estimated using FMOLS and PMG methods of estimation for all the models.

4.5.1 Panel Unit Root Test

In order to examine the presence of unit root in the series, the stationarity test is conducted. Table 4.16 presents the results of unit root test using IPS test both at level and at first difference.

It is evident from Table 4.16 that the null hypothesis of the presence of unit root cannot be rejected at level for all variables except *INF* and *COC*, with the assumption that there is no time trend at various lag lengths which were automatically selected by *AIC*. This is because the coefficients of each variable are insignificant at any of the permissible critical values (5 percent and 10 percent). Thus, all the included variables except two aforementioned variables are non-stationary at level. The stationarity test at first difference, both at constant, and constant and time trend conditions are also presented in Table 4.16. All the series show the evidence of stationarity at first difference because the *W*-statistic is greater than the critical values at 5 percent level of significance.

Table 4.16
The IPS Unit Root Test

Variables	Level		First Difference	
	W-Stat	*Prob.*	W-Stat	*Prob.*
Intercept				
TG	11.132	1.000	0.457	0.676
PBI	12.493	1.000	0.299	0.618
PVI	9.761	1.000	-1.187	0.118
TE	0.322	0.626	-7.273	0.000*
EXR	2.117	0.983	-5.062	0.000*
INF	-2.363	0.009*	-8.677	0.000*
PSAV	-0.331	0.370	-2.066	0.019*
COC	-2.941	0.002*	-3.354	0.000*
ROL	-1.099	0.136	-2.226	0.013*
Intercept and Trend				
TG	8.364	1.000	-1.756	0.040*
PBI	9.287	1.000	-2.671	0.004*
PVI	6.104	1.000	-2.863	0.002*
TE	-1.126	0.130	-6.028	0.000*
EXR	-0.297	0.383	-3.576	0.000*
INF	-1.180	0.119	-7.159	0.000*
PSAV	-0.145	0.442	-1.501	0.067**
COC	-0.543	0.294	-1.842	0.033*
ROL	-0.168	0.433	-0.684	0.247

Note: * & ** indicate the rejection of null hypothesis at 5 percent and 10 percent level of significance, respectively.

4.5.2 Panel Cointegration Test

Having examined that the series are integrated of first order while testing for the presence of unit root, the Kao (1999) and Pedroni (1999) tests of cointegration are employed for testing the long-run relationship among the series for Model I, Model II and Model IV. The evidence of long-run stable relationship or cointegration, for Model I, Model II and Model IV, is evident from Table 4.17 as the *t*-statistic in Kao (1999) test is significant at 5 percent level of significance for all models.

Table 4.17

The Panel Cointegration Test

Model I		
Kao Residual Cointegration Test		
	t-statistic	*Prob.*
ADF	-2.736	0.000*
Residual variance	907.832	
HAC variance	872.350	
Pedroni Residual Cointegration Test for Model I		
Statistics	Statistics Value	*Prob.*
Alternative hypothesis: common AR coefficients (within-dimension)		
Panel *v*-Statistic	1.925	0.027*
Panel *rho*-Statistic	1.158	0.877
Panel *PP*-Statistic	-3.632	0.000*
Panel *ADF*-Statistic	-3.368	0.000*
Alternative hypothesis: individual AR coefficients (between-dimension)		
Group *rho*-Statistic	1.877	0.970
Group *PP*-Statistic	-0.974	0.165
Group *ADF*-Statistic	-0.890455	0.015*
Model II		
Kao Residual Cointegration Test		
	t-statistic	*Prob.*
ADF	-3.609	0.000*
Residual variance	1589.834	
HAC variance	1119.090	
Pedroni Residual Cointegration Test		
Statistics	Statistics Value	*Prob.*
Alternative hypothesis: common AR coefficients (within-dimension)		
Panel *v*-Statistic	1.124	0.131
Panel *rho*-Statistic	2.539	0.994
Panel *PP*-Statistic	-6.375	0.000*
Panel *ADF*-Statistic	-8.386	0.000*
Alternative hypothesis: individual AR coefficients (between-dimension)		
Group *rho*-Statistic	2.838	0.998
Group *PP*-Statistic	-2.669	0.004*
Group *ADF*-Statistic	-2.706	0.003*
Model IV		
Kao Residual Cointegration Test		
	t-statistic	*Prob.*
ADF	-2.884	0.002*
Residual variance	1702.330	
HAC variance	1382.363	
Pedroni Residual Cointegration Test		
Statistics	Statistics Value	*Prob.*
Alternative hypothesis: common AR coefficients (within-dimension)		

Table 4.17 (Continued)

Panel *v*-Statistic	-0.115	0.546
Panel *rho*-Statistic	1.223	0.889
Panel *PP*-Statistic	-1.334	0.091*
Panel *ADF*-Statistic	-1.992	0.023*
Alternative hypothesis: individual AR coefficients (between-dimension)		
Group *rho*-Statistic	2.138	0.984
Group *PP*-Statistic	-2.379	0.009*
Group *ADF*-Statistic	-2.527	0.005*

Note: * indicates the rejection of null hypothesis at 5 percent level of significance.

This evidence of long-run relationship is also observed using Pedroni (1999) test of cointegration which decides on the basis of majority out of a group of seven statistics (four panel and three group statistics). A total of four out of seven statistics, in case of all models, are significant at 5 percent significance level leading to the conclusion that there exists cointegration among variables of interest.

4.5.3 Long-Run Coefficients Estimation

The evidence of stationarity of all the series at first difference and the evidence of cointegration for Model I, Model II and Model IV lead us to use FMOLS for the estimation of the long-run coefficients. However, while some of the variables in Model III are found to be integrated at level and others are integrated at first difference, the long-run coefficient are estimated using PMG.

4.5.3.1 Long-Run Coefficients Estimation using Fully Modified OLS

This section provides the estimation of long-run coefficients using FMOLS method selected on the basis of unit root and cointegration test results for Model I, Model II and

Model IV. Table 4.18 presents the results of FMOLS estimation of Model I for the panel of five SAARC countries.

Table 4.18
The Long-Run Coefficients of Model I

Variable	Coefficient	Std. Error	*t*-Statistic	*Prob.*
PBI	62.747	7.460	8.411	0.000*
PVI	0.390	0.056	7.024	0.000*
*PBI*PVI*	0.016	0.004	4.210	0.000*
TE	0.046	0.007	6.876	0.000*
INF	-1.302	1.541	-0.845	0.400
EXR	0.146	0.519	0.281	0.779
R-squared	0.991			
Adjusted R-squared	0.990			

Note: * indicates the rejection of null hypothesis at 5 percent level of significance.

The coefficient of the interaction term is positive and significant at 5 percent level of significance, which demonstrates that an increase in *PVI* stimulates the positives effect of *PBI* on *TG*. Likewise, an increase in *PBI* enhances the positive effect of *PVI* on *TG*. The total effect of *PBI* on *TG* is (62.747 + 0.016*PVI*) which means 1 billion increase in *PVI* will stimulate the positive effect of *PBI* on *TG* to 62.76 billion. Similarly, the total effect of *PVI* on *TG* is (0.390 + 0.016*PBI*) which demonstrates that 1 billion increase in *PBI* will enhance the positive effect of *PVI* on *TG* to 0.451 billion.

The positive value of the coefficient of the interaction of *PBI* and *PVI* can be explained using crowding-in effect that if public investment is done in infrastructure and other facilities, it helps in boosting private investment by providing a favorable environment and confidence to private investment. This result is in line with the studies of Ghani and Din (2006), Hassan *et al.* (2011) and Dreger and Reimers (2016) who also advocated the

crowding-in effect. The positive effect of *PBI* is also advocated by Petrescu (2011) and Abd and Furceri (2016) who claimed that *PBI* positively affects growth through the provision of infrastructure and other facilities. Likewise, Wang and Xu (2011), and Sharpley and Telfer (2014) who argued that private investment is imperative for the tourism growth.

The effect of *TE* on *TG* is positive and significant and the coefficient value shows that one thousand increase in *TE* results in 0.046 billion increase in *TG* in selected SAARC countries. However, *INF* and *EXR* are insignificant in explaining the variations in *TG* in selected SAARC countries.

Table 4.19 presents the long-run estimates of the coefficients of Model II. It can be observed from Table 4.19 that the coefficients of all the independent and control variables are all significant at 5 percent level of significance.

Table 4.19
The Long-Run Coefficients of Model II

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PBI	86.258	0.055	1570.811	0.000*
PVI	0.917	0.139	6.617	0.000*
PSAV	-11.051	0.087	-127.050	0.000*
*PBI*PSAV*	-15.396	0.116	-132.307	0.000*
*PVI*PSAV*	0.540	0.101	5.331	0.000*
TE	-0.520	0.131	-3.965	0.000*
INF	-1.795	0.118	-15.235	0.000*
EXR	-1.771	0.058	-30.721	0.000*
R-squared	0.919			
Adjusted R-squared	0.900			

Note: * indicates the rejection of null hypothesis at 5 percent level of significance.

The coefficient attached to the interaction of *PBI* and *PSAV* is negative and significant which demonstrates that an increase in *PSAV* will reduce the positive effect of *PBI* on *TG* and the total effect of *PBI* on *TG* is (86.258 – 15.396*PSAV*) which shows that one point increase in *PSAV* will shrink the positive effect of *PBI* on *TG* by 15.37 billion.

However, the coefficient of the interaction of *PVI* and *PSAV* is positive and significant signifying that an increase in *PSAV* will increase the positive effect of *PVI* on *TG* and the total effect of *PVI* on *TG* is (0.917 + 0.540*PSAV*) which illustrates that one point increase in *PSAV* will enhance the positive effect of *PVI* on *TG* by 0.54 billion.

This can be explained as improved political stability and absence of violence helps increasing the productivity of *PVI* in *TG* by reinstating the private investors' confidence in the domestic environment. However, the its negative effect on the relationship between *PBI* and *TG* can be due to the fact that in order to improve the political stability and reduce the violence, the public sector resources and attention may shift towards governance from tourism sector leading to a decrease in the productivity of *PBI* in tourism. Similarly, the total effect of *PSAV* on *TG* is (–11.051 – 15.396*PBI* + 0.540*PVI*) which can be explained as an increase in *PBI* and *PVI* will increases and decreases the negative effect of *PSAV* on TG by 15.40 and 0.54 billion, respectively.

These findings are in line with the studies conducted by Lambsdorff (2005b) who contended that stability in political environment enhances the implementation of the

governments' declared programs which stimulates investment. Moreover, studies such as Akama (2002), Petrescu (2011), Ribaric and Ribaric (2013) also found that *PBI* helps to increase *TG*. The positive effect of *PVI* on growth is also advocated by the studies of Khan and Kemal (1996), Wang and Xu (2011), and Sharpley and Telfer (2014). The effect of governance on tourism growth has been modelled by a limited number of studies and scholars such as Tanzi (1998) and Wei (2000) are of the view that improved governance leads to a decrease in growth.

On the other hand, the effects of *TE*, *EXR* and *INF* on *TG* are negative and significant. As the *INF* and *EXR* increases, it becomes expensive for the tourists to spend in the host countries. This suppresses the tourist arrivals in host country, which in turn reduces *TG*. Moreover, the increased employment through expansionary public sector policies in countries where tourism sector is not yet well nurtured may not be translated in increased output due to decreased productivity. The R^2 shows the goodness of fit of a regression model, therefore, in present model, the value of R^2 is 0.919 which shows a very good fit of the regression model and almost 91.9 percent of the variations in dependent variable are explained by included explanatory variables in the model.

Table 4.20 presents the long-run coefficient estimates for Model IV. It is evident from the table that the coefficients of all the explanatory and control variables except *EXR* are significant at 5 percent level of significance. The coefficient attached to the interaction of *PBI* and *ROL* is positive and significant which can be explained as an increase in *ROL* stimulates the positive effect of *PBI* on *TG* and the total effect of *PBI* on *TG* is

(59.831+74.549*ROL*) which shows that a one point increase in *ROL* will help to increase the positive effect of *PBI* on *TG* by 74.55 billion.

Table 4.20
The Long-Run Coefficients of Model IV

Variable	Coefficient	Std. Error	*t*-Statistic	*Prob.*
PBI	59.831	0.070	853.526	0.000*
PVI	0.308	0.149	2.074	0.043*
ROL	15.371	0.137	112.580	0.000*
*PBI*ROL*	74.549	0.076	980.580	0.000*
*PVI*ROL*	-2.241	0.093	-24.092	0.000*
TE	0.459	0.126	3.633	0.001*
INF	-0.989	0.112	-8.834	0.000*
EXR	0.009	0.108	0.089	0.930
R-squared	0.967			
Adjusted R-squared	0.959			

Note: * indicates the rejection of null hypothesis at 5 percent level of significance.

However, the significant negative coefficient of the interaction of *PVI* and *ROL* shows that an increase in *ROL* impedes or even eliminates the positive effect of *PVI* on *TG* and the total effect of *PVI* on *TG* is (0.308 – 2.241*ROL*). This means better rule of law leads to increase the productivity of *PBI* in *TG*, however, it can have opposite effect on the relationship of *PVI* and *TG* due to the imposition of too much restrictions from the law enforcement agencies for the safety and security of general public. The total effect of *ROL* on *TG* can be presented as (15.371 + 74.549*PBI* – 2.241*PVI*). The total effect of *ROL* on *TG* is (15.371 + 74.549*PBI* – 2.241*PVI*) which demonstrates that an increase in *PBI* and *PVI* results in an increase and decrease in the positive effect of *ROL* on *TG*, respectively.

These findings are in line with Lambsdorff (2005b), who stated that a country with sound and accepted political institutions, including strong court system and provision for orderly succession of powers, enhance the growth of investment, and therefore, economic growth. Studies such as Göymen (2000) and Torres and Anderson (2004) also supported the positive effect of governance on tourism growth. In addition, studies such as Petrescu (2011) and Ribaric and Ribaric (2013) also found positive effect of *PBI* on *TG*. Likewise, Wang and Xu (2011) and Sharpley and Telfer (2014) also found positive effect of *PVI* on *TG*. The coefficient of *TE* explains that one thousand increase in *TE* will cause an increase of 0.459 units in *TG*. However, the effect on *INF* on *TG* is negative explaining that one unit increase in *INF* reduces the *TG* by 0.989 units. The value of R^2 is 0.967 which shows a very good fit of the regression model implying that 96.7 percent of the variations in dependent variable are explained by included explanatory variables in the model.

4.5.3.2 Long-Run and Short-Run Coefficient Estimation using Pooled Mean Group

Given the mix order of integration as identified in the panel unit roots results, the long-run coefficients are estimated using PMG method and are presented herein Table 4.21.

Table 4.21
The Long-Run coefficients Estimates of Model III

Variable	Coefficient	Std. Error	t-Statistic	*Prob.*
PBI	46.194	3.610	12.795	0.000*
PVI	0.690	0.0795	8.672	0.000*
COC	-57.917	10.687	-5.419	0.000*
*PBI*COC*	59.207	14.200	4.170	0.000*
*PVI*COC*	-2.107	0.290	-7.262	0.000*
INF	2.059	0.357	5.770	0.000*

Note: * indicates the rejection of null hypothesis at 5 percent level of significance.

Since the PMG is primarily a long-run analysis, more attention is shifted towards the long-run coefficients. In this regard, in the long-run estimates, the coefficient of the interaction term *PBI*COC* is positive which shows that a one point increase in *COC* stimulates the positive effect of *PBI* on *TG* and the total effect of *PBI* on *TG* is (46.194 + 59.207*COC*) which elucidates that one unit increase in *COC* tends to increase the positive effect of *PBI* on *TG* by 59.21 billion.

However, the negative sign attached to the coefficient of the interaction term *PVI*COC* demonstrates that an increase in *COC* eliminates the positive effect of *PVI* on *TG* and the total effect of *PVI* on *TG* is (0.690 – 2.107*COC*) which means that one point increase in *COC* tends to eliminate the positive effect of *PVI* on *TG* in selected SAARC countries. An increase in *PBI* and *PVI* result in eliminating and further stimulating, respectively, the negative effect of *COC* on *TG*. The total effect of *COC* on *TG* is (–57.917 + 59.207*PBI* – 2.107*PVI*) which demonstrates that one billion increase in *PBI* will eliminate the negative effect of *COC* on *TG*. However, one billion increase in *PVI* will further increase the negative effect of *COC* on *TG*.

The reason for the positive sign of *COC*PBI* is that the productivity of *PBI* increases with the control of corruption through the availability of more resources channeled into productive activities. However, it may reduce the productivity of *PVI* in *TG* due to the fact that the negative image due to corruption may shift resources away from tourism sector. As argued by Leff (1964) and Huntington (1968), as cited in Tanzi (1998), corruption

increases the growth by increasing the efficiency of the resources through the reduction in the rigidities that impede investment. Thus, corruption "oils the mechanism" and a control in corruption will have an opposite effect by reducing the investment efficiency.

Table 4.22 presents the short-run estimates of the coefficients of Model III. The coefficient of the cointegrating equation goes with the usual underlying assumptions to validate the convergence to long-run equilibrium. The *ECT* is negative, significant at 5 percent level of significance and less than one.

Table 4.22
The Short-Run coefficients Estimates of Model III

ECT	-0.667	0.288	-2.320	0.026*
D(PBI)	-40.750	27.412	-1.487	0.145
D(PVI)	0.698	1.460	0.478	0.636
D(COC)	-239.074	319.433	-0.748	0.459
*D(PBI*COC)*	23.622	46.562	0.507	0.615
*D(PVI*COC)*	-1.268	4.906	-0.258	0.797
D(INF)	-2.123	1.175	-1.806	0.079**
C	73.916	59.128	1.250	0.219

Note: * indicates the rejection of null hypothesis at 5 percent level of significance.

The coefficient attached with this term explains that, the rate of convergence towards long-run stable equilibrium is 66.7 percent in the period of one year which a considered a good speed of adjustment towards equilibrium. Moreover, all the coefficients of all the variables and the interaction terms are insignificant at any of the permissible levels of significance except *INF* which is significant at 10 percent level of significance.

4.6 Conclusion

The results of the study are in conformity with both the endogenous growth theory and the public capital hypothesis. The positive coefficient obtained for *PBI* and *PVI* in all the models, respectively explain that public and private investment in tourism enhance the growth of tourism sector in the selected five SAARC countries; while the positive coefficient of the interaction of *PBI* and *PVI* explains that both the public and private investment jointly stimulate the tourism growth. In measuring the effect of governance indicators on the relationship between *PBI*, *PVI* and *TG*, some results reveal that the effect of governance stimulates the effect of *PBI* and *PVI* on *TG* such that tourism growth increases, while others show evidence that governance shrinks the effect of *PBI* and *PVI* on *TG* such that tourism growth increases.

CHAPTER 5

CONCLUSION AND POLICY RECOMMENDATIONS

5.1 Introduction

This chapter is broadly categorized into four main sections. Section 5.2 offers insights into the summary of the research findings of present research. This is followed by the policy implications in line with the research findings in Section 5.3. In addition, the limitations of present research and recommendations for further research in this area of research keeping in view the limitations are presented in Section 5.4. While the conclusion of the study is presented in Section 5.5.

5.2 Summary of Findings

This study, on one hand, investigates the effect of public and private investment on tourism growth, and the effect of governance on the relationship of public and private investment in tourism with tourism growth, on the other hand, in selected five SAARC countries. This section provides a summary of the results estimated in Chapter Four.

The first objective of this research is to investigate the effect of public investment in tourism (*PBI*) on tourism growth (*TG*) in selected five SAARC countries. The effect of *PBI* on *TG* is positive in all four panel models; Model I, Model II, Model III and Model IV

modelled in Equation [3.8] to Equation [3.11], thereby, confirming the underpinning theory, the endogenous growth theory which states that internal factors of production are responsible for long-term growth. Yet, the time-series data analysis of Model I provided somehow different results. The effect of *PBI* on *TG* is positive in India, Maldives and Nepal, however, *PBI* negatively affects *TG* in Pakistan and Sri Lanka.

The second objective of the study is to examine the effect of private investment in tourism, *PVI* on TG in selected five SAARC countries. It is found that the *PVI* positively influences *TG* in all four panel models, which is, also, in conformity with endogenous growth theory. Moreover, the same results are found in the time-series data analysis of Model I. The *PVI* positively affects *TG* in all selected SAARC countries.

The third objective of the research is to determine the interaction effect of public and private investment, *PBI*PVI*, on tourism growth. The results show the evidence of positive relationship between the interaction of public and private investment in tourism and tourism growth in panel data analysis, thereby, confirming the public capital hypothesis. However, three of the five SAARC countries (Maldives, Nepal and Sri Lanka) show evidence of positive relationship in the time-series analysis, as in the panel analysis, while the remaining two countries (India and Pakistan) show evidence of negative relationship.

The fourth objective of this research is to examine the interaction effect of governance and *PBI* on *TG*. The effect of governance on the relationship of *PBI* and *TG* is modelled in panel data analysis in three models having three different indicators of governance. Three

indicators of governance reveal different results regarding their interaction effect with PBI. For political stability and absence of violence (*PSAV*), it impedes (negatively moderates) the effect of *PBI* on *TG*. In other words, *PSAV* diminishes the effect of *PBI* on *TG*. On the other hand, control of corruption, *COC*, and rule of law, *ROL*, stimulates or enhances the effect of *PBI* on *TG*.

As far as the effect of governance on the relationship between *PVI* and *TG* is concerned, the selected three indicators of governance (*PSAV, COC, ROL*) have shown the evidence of mixed findings. The first governance indicator, *PSAV*, has demonstrated the positive interaction effect, which means it enhances the relationship of *PVI* and *TG*. On the other hand, second and third indicator of governance, *COC* and *ROL*, weaken the effect *PVI* on *TG*.

5.3 Policy Implications

After summarizing the findings of present research, policy recommendations are proposed based on the findings of the study.

Considering the positive relationship between public investment in tourism, and tourism growth, it is evident that various efforts on part of governments towards increasing the direct contribution of tourism to GDP has so far yielded desired results. The public sector has to play a leading role in the development of tourism in SAARC countries through direct investment in various tourism services. However, based on the global rank in various T&T

pillars as reported by the WEF, the selected countries are lagging behind in the areas of business environment, air, ground and port transport infrastructure. Appropriate policies, therefore, suggest the sustenance of such programs, which have the tendency to boost the growth of tourism sector. Such policies may include increased provisions of enabling environment that attract tourists into these countries, such as public investment to build and upgrade the existing airports (especially, airport in tourist destinations in order to make access of tourist easy and comfortable) and good road infrastructure direct to major tourist destinations.

In addition to that, due to power shortage and electricity shortfall, these countries have a challenge of load shedding which is a huge barrier in the development of tourism. Therefore, sufficient and uninterrupted power supply to tourism service providers such as hotels and restaurants, and entertainment zones, by the public sector is of crucial importance to facilitate tourism and stimulate the growth of this sector. Furthermore, increased budgetary allocations to this sector as well as the implementation of other facilitative programs tend to increase efficiency in tourism service delivery, thereby, ensuring increased investment into the sector.

Similarly, the positive relationship between private investment in tourism and tourism growth indicates some levels of private sector participation in the tourism development of SAARC countries. In order to sustain and enhance this participation and improve their global ranking in T&T pillar, the governments should encourage more participation of private sector in tourism development through such policies that tend to enhance the

incentives for private investors. In addition to the provision of the enabling environment by the government, offering of special tax rebates on the provision of tourism services to existing private investors, and to attract new investment from both domestic and foreign markets is of utmost importance for the survival and growth of tourism sector in focus area.

As the interaction effect of public and private investment in tourism is found to be positive, it is evident that effective collaboration between private and public sectors stimulate the contribution of each of them, hence, the multiplier effect of public-private investment on tourism growth is large. Therefore, public sector should take initiatives in the form of public-private partnerships for the projects that have potential, where private sector is hesitant to invest due to higher risk. These PPP can open avenues for new investment projects and attract new investors from other sectors, which in turn, helps to enhance the competitiveness of tourist destinations, thereby, stimulating the growth of the sector. Such collaborative actions may include, but not limited to, the offerings of tourism products and services such as, infrastructure development projects (monorails, entertainment zones, parks, museums businesses clustering, among others); collaborative marketing strategies (offering collaborative promotional packages); involvement of international tourism agencies in destination development megaprojects (which is rare without government support), and specialized trainings to develop tourism human resource, among others.

This research found a mixed effect of various indicators of governance on the relationship between *PBI* and *TG* in selected SAARC countries. As the effect of control of corruption and rule of law stimulates the effect of *PBI* on *TG*, therefore, governments in these

countries have to ensure transparency in the investment in order to enhance the positive effect of *PBI* on *TG*. As control of corruption increases, or corruption decreases, the optimal investment allocation will take place, thereby, enhancing its effect on growth of the sector. The corruption can be reduced by introducing online systems that minimize the interference of individuals, thereby, reducing the chances of corruption. In addition, the rule of law also stimulates the positive effect of *PBI* on *TG*. The government should assure the rule of law in the country in order to enhance the productivity of their investment, thereby, enhancing the growth of tourism sector. This involves the legislation development by the government regarding investment in order to encourage investment in the tourism sector.

Furthermore, the widely spread news about violence and political instability cause severe damages to the image of the country, and this is evident particularly in SAARC countries. As political stability and absence of violence stimulates the impact of private investment in tourism on the growth of tourism in selected countries, governments in selected countries have to improve the image of their countries regarding violence in order to enhance the productivity of investment as well as to attract new investors into this industry. As violence decreases, it give confidence to the investors through an environment of safety and security, thereby, enhancing the growth of tourism sector. Additionally, the SAARC countries can learn from European countries for the issuance of a common visa for SAARC countries (such as Schengen visa for 26 European countries) in order to enhance their share from world tourism pie.

In addition to that, governments have to play a role in image building of the country in terms of reduced terrorism and violence through local and international media help to create such an environment that may enhance the productivity of existing investments and to attract new investors. Furthermore, it is proposed that a tourism body under the SAARC umbrella should be developed which should be responsible of promoting mutual tourism in the region.

5.4 Limitations of Research and Recommendations for Future Research

Although, the research questions are answered and the research objectives are achieved, there are some unavoidable limitations. First, only five out of total eight SAARC countries are selected for this study. This is due to the fact that the data for Afghanistan, Bangladesh and Bhutan are not available for the variables and the period under consideration. Similarly, the data for governance indicators are only available for the period 1996 to 2016. Future research should, therefore, extend the time period in order to analyze the issue under consideration in time-series setting.

In addition to the limited data availability on governance indicators, only three out of six indicators are considered in this research. These include Political Stability and Absence of Violence, Control of Corruption and Rule of Law; while Voice and Accountability, Government Effectiveness and Regulatory Quality are left to be considered for future research in this field of knowledge.

The variables of choice in this study are largely premised on the endogenous growth theory. Further research should be conducted to incorporate other variables that may significantly affect tourism in focus area. These variables may be other economic, socio-cultural, technological or environmental, such as foreign direct investment, modern technology, pollution, among others.

Another limitation to this study is the inadequate availability of relevant literature, especially, in the area of public and private investment on tourism growth. However, this study is believed to be a significant contribution in this regard, therefore, further research should be extended to this area.

5.5 Conclusion

In conclusion, the present research investigates the effect of public and private investment in tourism on tourism growth in selected five SAARC countries. In addition, it also examined the interaction effect of public and private investment in tourism on tourism growth. Moreover, the effect of governance on the relationship of public and private investment in tourism with tourism growth is also determined in this research. This chapter is conclusive in nature as it provided a summary of the research findings, policy implications, limitations of present research with recommendations for further research in this area.

REFERENCES

Abd, A. A., & Furceri, D. (2016). The macroeconomic effects of public investment: Evidence from advanced economies. *Journal of Macroeconomics, 50*, 224-240.

Abdullahi, M. M., Hassan, S. B., & Bakar, N. A. B. A. (2016). Analyzing the impact of external debt on capital formation in Nigeria: An autoregressive distributed lag approach. *Mediterranean Journal of Social Sciences, 7*(1), 173-183.

Abramovitz, M. (1956). Resource and output trends in the United States since 1870. *Resource and Output Trends in the United States Since 1870* (pp. 1-23): NBER.

Abrams, B. A., & Schitz, M. D. (1978). The 'crowding-out'effect of governmental transfers on private charitable contributions. *Public Choice, 33*(1), 29-39.

Acemoglu, D., & Robinson, J. (2012). *Why Nations fail: The Origins of Power, Prosperity, and Poverty*: Random House Digital, Inc.

Afonso, A., & Aubyn, M. (2009). Macroeconomic rates of return of public and private investment: Crowding-in and crowding-out effects. *The Manchester School, 77*(s1), 21-39.

Aghion, P., & Howitt, P. (1990). A model of growth through creative destruction. *National Bureau of Economic Research*, Working Paper No. 3223.

Ahmed, H., & Miller, S. M. (2000). Crowding-out and crowding-in effects of the components of government expenditure. *Contemporary Economic Policy, 18*(1), 124-133.

Aiken, L. S., & West, S. G. (1991). *Multiple Regression: Testing and interpreting Interactions*. Newbury Park, CA: Sage.

Akama, J. S. (1997). Tourism development in Kenya: Problems and policy alternatives. *Progress in Tourism and Hospitality Research, 3*(2), 95-105.

Akama, J. S. (2002). The role of government in the development of tourism in Kenya. *International Journal of Tourism Research, 4*(1), 1-14.

Antonescu, A., & Stock, M. (2014). Reconstructing the globalisation of tourism: A geo-historical perspective. *Annals of Tourism Research, 45*, 77-88.

Archer, B. H., & Owen, C. B. (1971). Towards a tourist regional multiplier. *Regional Studies, 5*(4), 289-294.

Arestis, P., & Karakitsos, E. (1982). Crowding out in the UK within an Optimal Control Framework. *Journal of Public Policy, 2*(1), 31-51.

Argimon, I., Gonzalez-Paramo, J. M., & Roldan, J. M. (1997). Evidence of public spending crowding-out from a panel of OECD countries. *Applied Economics, 29*(8), 1001-1010.

Aronsson, L. (1994). Sustainable tourism systems: The example of sustainable rural tourism in Sweden. *Journal of Sustainable Tourism, 2*(1-2), 77-92.

Arrow Kenneth, J., & Kurz, M. (1970). *Public Investment, the Rate of Return, and Optimal Fiscal Policy*. Routledge, Taylor & Francis.

Aschauer, D. A. (1989). Does public capital crowd out private capital? *Journal of Monetary Economics, 24*(2), 171-188.

Asteriou, D., & Hall, S. G. (2007). *Applied Econometrics: A modern approach.* Hampshire: Palgrave Macmillan.

Atkinson, R. (2003). Addressing urban social exclusion through community involvement in urban regeneration. In R. IMRIE and M. RACO (Eds.) *Urban Renaissance?*

New Labour, Community and Urban Policy, (pp. 101–119). Bristol: The Policy Press.

Auty, R. M. (1995). *Patterns of development: resources, policy and economic growth*. London and New York: Edward Arnold.

Bakan, R., & Bosnic, I. (2012). Public-private partnership: A model for sustainable tourism development in regional park Mura-Drava – the possibilty of tourist valorisation of abandoned army barracks. *Economy of Eastern Croatia Yesterday, Today, Tommorow, 1*, 201-206.

Banerjee, O., & Cicowiez, M. (2015). A Quantitative Framework for Assessing Public Investment in Tourism-An Application to Haiti: CEDLAS, Universidad Nacional de La Plata.

Banerjee, O., Cicowiez, M., & Cotta, J. (2016). Economics of tourism investment in data scarce countries. *Annals of Tourism Research, 60,* 115-138.

Banskota, K. (2007). Overview of Tourism. *Facilitating Sustainable Mountain Tourism, 1*, 19-29.

Barro, R. J. (1988). Government spending in a simple model of endogenous growth: National Bureau of Economic Research Cambridge, Mass., USA.

Barro, R. J. (1989). Economic growth in a cross section of countries. *National Bureau of Economic Research*.

Barro, R. J. (1990). Economic growth and convergence across the United States. *National Bureau of Economic Research*.

Barro, R. J. (1996). *Health, human capital and economic growth.* Paper for the Program on Public Policy and Health, Pan American Health Organization and World Health Organizaiton.

Barro, R. J., & Lee, J.-W. (1993). Losers and winners in economic growth. *The World Bank Economic Review, 7* (1), 267-298.

Basu, P. K., Ghosh, R., Siddique, M., & Gabbay, R. (2003). Is sustainable tourism development possible? Broad issues concerning Australia and Papua New Guinea. *Tourism and Economic Development: Case Studies from the Indian Ocean Region*, 140-149.

Baum, T., & Szivas, E. (2008). HRD in tourism: A role for government? *Tourism Management, 29*(4), 783-794.

Becker, G. S., & Stigler, G. J. (1974). Law enforcement, malfeasance, and compensation of enforcers. *The Journal of Legal Studies, 3*(1), 1-18.

Behrens, R. H., & Carroll, B. (2013). The challenges of disease risk ascertainment using accessible data sources for numbers of travelers. *Journal of Travel Medicine, 20*(5), 296-302.

Bende-Nabende, A., & Slater, J. (2003). Private capital formation: Short-and long-run crowding-in (out) effects in ASEAN, 1971-99. *Economics Bulletin, 3*(28), 1-16.

Bennett, J. T. (1983). The impact of the composition of government spending on private consumption and investment: Some impirical evidence. *Journal of Economics and Business, 35*(2), 213-220.

Bennett, O. (1994). Financing for tourism projects in developing countries. *Tourism: The State of the Art.* New York: John Wiley and Sons.

Blackburne, E. F., & Frank, M. W. (2007). Estimation of nonstationary heterogeneous panels. *Stata Journal, 7*(2), 197.

Blejer, M. I., & Khan, M. S. (1984). Government Policy and Private Investment in Developing Countries. *Staff Papers-International Monetary Fund*, 379-403.

Botterill, D., Owen, R., Emanuel, L., Foster, N., Gale, T., Nelson, C., & Selby, M. (1997). *Perceptions from the periphery: The experience of Wales.* Paper presented at the peripheral Area Tourism: International Tourism Research Conference, Bornholm.

Bramwell, B., & Lane, B. (2011). Critical research on the governance of tourism and sustainability. *Journal of Sustainable Tourism, 19*(4-5), 411-421.

Britton, S. (1989). Tourism, dependency and development: A mode of analysis. *Europäische Hochschulschriften 10*(11), 93-116.

Britton, S. G. (1982). The political economy of tourism in the Third World. *Annals of Tourism Research, 9*(3), 331-358.

Brohman, J. (1996). New directions in tourism for third world development. *Annals of Tourism Research, 23*(1), 48-70.

Brooks, C. (2014). *Introductory Econometrics for Finance*. Cambridge, UK. Cambridge University Press.

Browett, J. (1980). Development, the diffusionist paradigm and geography. *Progress in Human Geography, 4*(1), 57-79.

Brown, L. A., & Sanders, R. L. (1981). Toward a development paradigm of migration with particular reference to Third World settings. In G.F. Delong and R.W. Gardner (eds.), Mirgration decision making: Multidisciplinary approaches to micro level studies in developed and developing countries. Pergamon Press, New York.

Brundtland, G. (1987). Our common future: Report of the 1987 World Commission on Environment and Development. *United Nations, Oslo*, 1-59.

Brundtland, G., Khalid, M., Agnelli, S., Al-Athel, S., Chidzero, B., Fadika, L., . . . de Botero, M. M. (1987). Our Common Future (\'Brundtland report\').

Buiter, W. H. (1977). 'Crowding out'and the effectiveness of fiscal policy. *Journal of Public Economics, 7*(3), 309-328.

Bulkeley, H. (2005). Reconfiguring environmental governance: Towards a politics of scales and networks. *Political Geography, 24*(8), 875-902.

Burns, P. M., & Holden, A. (1995). *Tourism: A new perspective*: Prentice Hall.

Butler, R. (1992). Alternative tourism: The thin edge of the wedge. In Tourism Alternatives: Potential and Problems in the Development of Tourism, V. Smith and W. Eadington, (eds.), (31-46). Philadelphia: Univesity of Pensylvania State.

Butler, R. W. (1999). Sustainable tourism: A state-of-the-art review. *Tourism Geographies, 1*(1), 7-25.

Butler, R. W., & Mao, B. (1996). Conceptual and theoretical implications of tourism between partitioned states. *Asia Pacific Journal of Tourism Research, 1*(1), 25-34.

Camagni, R. (1991). Local milieu, uncertainty and innovation networks: Towards a dynamic theory of economic space. *Innovation Networks: Spatial Perspectives*, 121-144.

Caselli, F. (2005). Accounting for cross-country income differences. *Handbook of Economic Growth, 1*, 679-741.

Cebula, R. J., Carlos, C., & Koch, J. V. (1981). The 'crowding out'effect of federal government outlay decisions: An empirical note. *Public Choice, 36*(2), 329-336.

Cela, A. (2007). *Estimating the economic impact of tourism: A comparative analysis of Albania, Croatia, the Former Yugoslav Republic of Macedonia and Greece*: ProQuest.

Cetinski, V., Peric, M., & Sugar, V. (2009). The European dimension of public-private partnership and experiences in tourism of the Republic of Croatia. *Tourism and Hospitality Management, 15*(1), 85-100.

Chadeeand, D., & Mieczkowski, Z. (1987). An empirical analysis of the effects of the exchange rate on Canadian tourism. *Journal of Travel Research, 26*(1), 13-17.

Chen, X., & Huang, J. (2007). Government interaction, diversification and corporate performance. *Management World, 1*, 92-97.

Cheng, Z., Xia, X., & Yu, M. (2008). Government intervention, pyramid structure and investment of local SOEs. *Management World, 9*, 37-47.

Chou, W. L., & Suk-Yee Lee, D. (2003). Cointegration analysis of audit pricing model: A panel unit root test approach. *Journal of Business Finance & Accounting, 30*(7-8), 1141-1164.

Christaller, W. (1964). Some considerations of tourism location in Europe: the peripheral regions-underdeveloped countries-recreation areas. *Papers in Regional Science, 12*(1), 95-105.

Clancy, M. J. (1999). Tourism and development: Evidence from Mexico. *Annals of Tourism Research, 26*(1), 1-20.

Conrad, K., & Seitz, H. (1992). The public capital hypothesis: The case of Germany. *Recherches Économiques de Louvain/Louvain Economic Review*, 309-327.

Cooke, P., & Morgan, K. (1993). The network paradigm: new departures in corporate and regional development. *Environment and Planning D: Society and space, 11*(5), 543-564.

Costa, J. d. S., Ellson, R. W., & Martin, R. C. (1987). Public capital, regional output, and development: Some empirical evidence. *Journal of Regional Science, 27*(3), 419-437.

Coupet Jr, E. (2011). Corruption, investment and economic growth: Theory and international evidence. *Journal of Business & Economics Research, 1*(1), 93-107.

Dedeurwaerdere, T. (2005). The contribution of network governance to sustainable development. *Les seminaires de l'Iddri, Universite catholique de Louvain, Fonds national de la recherche scientifique, Belgium, 13*, 1-15.

Denison, E. F. (1962). Sources of economic growth in the United States and the alternatives before us, Committee for Economic Development, New York.

Denison, E. F. (1967). *European Economic Growth and the US Postwar Record: Highlights of Why Growth Rates Differ: Postwar Experience in Nine Western Countries*: Brookings Institution.

Deno, K. T. (1988). The effect of public capital on US manufacturing activity: 1970 to 1978. *Southern Economic Journal*, *55*(2), 400-411.

Devarajan, S., Swaroop, V., & Zou, H.-f. (1996). The composition of public expenditure and economic growth. *Journal of Monetary Economics, 37*(2), 313-344.

Dickey, D. A., & Fuller, W. A. (1981). Likelihood ratio statistics for autoregressive time series with a unit root. *Econometrica: Journal of the Econometric Society*, *49*(4), 1057-1072.

Dieke, P. U. (1991). Policies for tourism development in Kenya. *Annals of Tourism Research, 18*(2), 269-294.

Dietz, T., & Rosa, E. A. (1994). Rethinking the environmental impacts of population, affluence and technology. *Human Ecology Review, 1*(2), 277-300.

Dredge, D., & Jenkins, J. M. (2007). *Tourism Planning and Policy.* John Wiley & Sons, Milton.

Dreger, C., & Reimers, H.E. (2005). Health care expenditures in OECD countries: a panel unit root and cointegration analysis. *Social Science Research Network.* IZA Discussion Paper No. 1469. Available at SSRN: https://ssrn.com/abstract=651985.

Dreger, C., & Reimers, H.-E. (2016). Does public investment stimulate private investment? Evidence for the euro area. *Economic Modelling, 58*, 154-158.

Drezgić, S. (2008). *The effects of public sector investments on economic growth of Croatia.* Paper presented at the Young Economists' Seminar to 14th Dubrovnik Economic Conference: Proceedings Zagreb: Croatian National Bank.

Easterly, W., & Rebelo, S. (1993). Fiscal policy and economic growth. *Journal of Monetary Economics, 32*(3), 417-458.

Engle, R. F., & Granger, C. W. (1987). Co-integration and error correction: representation, estimation, and testing. *Econometrica: Journal of the Econometric Society*, *55*(2), 251-276.

Erden, L., & Holcombe, R. G. (2005). The effects of public investment on private investment in developing economies. *Public Finance Review, 33*(5), 575-602.

Erenburg, S. J. (1993). The relationship between public and private investment. *The Jerome Levy Economics Institute,* Working Paper No. 85.

Erisman, H. M. (1983). Tourism and cultural dependency in the West Indies. *Annals of Tourism Research, 10*(3), 337-361.

Eugenio-Martin, J. L., Morales, N., & Scarpa, R. (2004). Tourism and economic growth in Latin American countries: A panel data approach. *National Bureau of Economic Research*, FEEM Working Paper No. 26.

Evans, P., & Karras, G. (1994). Is government capital productive? Evidence from a panel of seven countries. *Journal of Macroeconomics, 16*(2), 271-279.

Everhart, S. S., & Sumlinski, M. A. (2001). *Trends in Private Investment in Developing Countries: Statistics for 1970-2000 and the Impact on Private Investment of Corruption and the Quality of Public Investment* (44), World Bank Publications.

Fagerberg, J. (1994). Technology and international differences in growth rates. *Journal of Economic Literature, 32*(3), 1147-1175.

Fei, J.C.H. and Ranis, G. (1964) Development of the Labour Surplus Economy, Theory and Policy. New Haven, CT: Yale University Press.

Fischer, S. (1993). The role of macroeconomic factors in growth. *Journal of Monetary Economics, 32*(3), 485-512.

Freeman, C. (1991). Networks of innovators: A synthesis of research issues. *Research Policy, 20*(5), 499-514.

Friedmann, J. (1973). *Urbanization, planning, and national development*. Beverly Hills, Cal.: Sage publications.

Ganesh, A. A., & Chockalingam, M. (2010). Problems encountered by tourists. *Business and Economic Horizons 3*(3), 68-72.

Garcia-Mila, T., McGuire, T. J., & Porter, R. H. (1996). The effect of public capital in state-level production functions reconsidered. *The Review of Economics and Statistics, 78*(1), 177-180.

Gautam, B. P. (2014). Economic Dynamics of Tourism in Nepal: A VECM Approach. *Nepalese Economic Review, 5*(4), pp. 1-17.

Ghani, E., & Din, M.-u. (2006). The impact of public investment on economic growth in Pakistan. *The Pakistan Development Review, 45*(1), 87-98.

Ghura, D., & Goodwin, B. (2000). Determinants of private investment: A cross-regional empirical investigation. *Applied Economics, 32*(14), 1819-1829.

Glomm, G., & Ravikumar, B. (1997). Productive government expenditures and long-run growth. *Journal of Economic Dynamics and Control, 21*(1), 183-204.

Goeldner, C. R., & Ritchie, J. B. (2006). *Tourism: Principles, Practices, Philosophies*: John Wiley & Sons. New York.

Goodwin, M., & Painter, J. (1996). Local governance, the crises of Fordism and the changing geographies of regulation. *Transactions of the Institute of British Geographers*, *21*(4), 635-648.

Göymen, K. (2000). Tourism and governance in Turkey. *Annals of Tourism Research, 27*(4), 1025-1048.

Granger, C. W., & Newbold, P. (1974). Spurious regressions in econometrics. *Journal of Econometrics, 2*(2), 111-120.

Gray, B. (1985). Conditions facilitating interorganizational collaboration. *Human Relations, 38*(10), 911-936.

Gray, B. (1989). *Collaborating: Finding Common Ground for Multiparty Problems.* San Francisco, USA: Jossey Bass Publishers.

Greene, J., & Villanueva, D. (1991). Private investment in developing countries: An empirical analysis. *Staff Papers-International Monetary Fund*, *38* (1), 33-58.

Greenfield, R. L., & Yeager, L. B. (1983). A laissez-faire approach to monetary stability. *Journal of Money, Credit and Banking, 15*(3), 302-315.

Grier, K. B., & Tullock, G. (1989). An empirical analysis of cross-national economic growth, 1951–1980. *Journal of Monetary Economics, 24*(2), 259-276.

Griffin, T., & Boele, N. (1997). Alternative paths to sustainable tourism: problems, prospects, panaceas and pipe-dreams. *FM Go and C. Jenkins (eds., pp. 321-333). Tourism and economic development in Asia and Australia. London: Cassell*.

Gujarati, D. N. (2009). *Basic Econometrics, Internaitonal Edition*: McGraw-Hill, Singapore.

Gunn, C. A. (1988). *Tourism planning 2nd Edition*: Taylor & Francis, New York.

Guthrie, D. (1997). Between markets and politics: Organizational responses to reform in China 1. *American Journal of Sociology, 102*(5), 1258-1304.

Hägerstrand, T. (1967). On Monte Carlo simulation of diffusion. *European Journal of Sociology, 6*(1), 43-67.

Hall. (1994). *Tourism and Politics: Policy, Power and Place*: John Wiley & Sons. Chichester, UK.

Hall. (1999). Rethinking collaboration and partnership: A public policy perspective. *Journal of Sustainable Tourism, 7*(3-4), 274-289.

Hall. (2008). *Tourism Planning: Policies, Processes and Relationships*. UK: Prentice Hall.

Hall. (2011). A typology of governance and its implications for tourism policy analysis. *Journal of Sustainable Tourism, 19*(4-5), 437-457.

Hall, & Jenkins, J. (2004). Tourism and public policy. In Lew, Hall and Williams, (1st Eds.), *A Companion to Tourism*, (525-540). Malden MA, USA: Blackwell Publishing.

Hall, & McArthur, S. (1998). *Integrated Heritage Management: Principles and Practice*. London: Stationery Office.

Hall, & Michael, C. (1991). *Introduction to Tourism in Australia: Impacts, Planning and Development*. Melbourne, Australia: Longman Cheshire.

Hall, B. H. (1992). Investment and research and development at the firm level: does the source of financing matter? *National Bureau of Economic Research*. Working Paper No. 4096.

Haller, A. (2012). Growth and development through tourism in conditions of liberalization. Theories and concepts. Paper presented at the 14th International Conference on Romanian rural tourism in the context of sustainable development: present and prospects, Vatra Dornei, Romania, 25-26 May 2012.

Hassan, S., & Jajri, I. (2011). The Impact of Public Capital Expenditure on the Performance of Private Capital Expenditure in the Selected Economic Sectors in Malaysia. Paper presented at the Society of Interdisciplinary Business Research (SIBR) 2011 Conference on Interdisciplinary Business Research.

Hassan, S., Othman, Z., & Karim, M. Z. A. (2011). Private and public investment in Malaysia: A panel time-series analysis. *International Journal of Economics and Financial Issues, 1*(4), 199.

Healey, P. (1997). *Collaborative Planning: Shaping Places in Fragmented Societies*. Vancouver, Canada: UBC Press.

Hiwatari, N. (2014). *Research Report prepared for Case Study 5140143: International Political Economy.* The University of Tokyo.

Hodur, N. M., Leistritz, F. L., & Wolfe, K. L. (2005). Assessing the economic development potential of nature tourism. *Great Plains Research*, *15*(2), 279-296.

Holtz-Eakin, D. (1988). Private output, government capital, and the infrastructure crisis. Discussion Paper No. 394, Columbia.

Hongbo, Y. M. P. (2008). Government Intervention, Legal Enforcement, Financial Development and Bank Loans to State-owned Enterprises. *Journal of Financial Research, 9*, 004.

Hughes, H. L. (1994). Tourism multiplier studies: a more judicious approach. *Tourism Management, 15*(6), 403-406.

Hunt, D. (1989). *Economic Theories of Development*. London: Rowman & Littlefield Publishers.

Hunter, C. (1997). Sustainable tourism as an adaptive paradigm. *Annals of Tourism Research, 24*(4), 850-867.

Hunter, C., & Green, H. (1995). *Tourism and the Environment: A sustainable relationship?* London: Routledge.

Huntington, S. P. (1968). Modernization and corruption. *Political Order in Changing Societies*, 59-71.

Im, K. S., Pesaran, M. H., & Shin, Y. (2003). Testing for unit roots in heterogeneous panels. *Journal of Econometrics, 115*(1), 53-74.

Jenkins, C. L. (1991) Tourism development strategies. In: L. J. Lickorich, in association with A. Jefferson, J. Bodlender and C. L. Jenkins, *Developing Tourism Destination: Policies and Perspectives,* (61-78). London: Longman.

Jenkins, C. L. (1994). Tourism in developing countries: the privatisation issue. *Tourism: The State of the Art, AV Seaton* (3-9)*, CL Jenkins, RC Wood, PU C.* Dieke, MM Bennett and R. Smith (eds), Chichester: John Wiley.

Jenkins, C. L., & Henry, B. (1982). Government involvement in tourism in developing countries. *Annals of Tourism Research, 9*(4), 499-521.

Johansen, S. (1991). Estimation and hypothesis testing of cointegration vectors in Gaussian vector autoregressive models. *Econometrica: Journal of the Econometric Society, 59*(6)1551-1580.

Johansen, S. (1995). Identifying restrictions of linear equations with applications to simultaneous equations and cointegration. *Journal of Econometrics, 69*(1), 111-132.

Kao, C. (1999). Spurious regression and residual-based tests for cointegration in panel data. *Journal of Econometrics, 90*(1), 1-44.

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2011). The worldwide governance indicators: methodology and analytical issues. *Hague Journal on the Rule of Law, 3*(02), 220-246.

Keller, C. P. (1987). Stages of peripheral tourism development—Canada's Northwest Territories. *Tourism Management, 8*(1), 20-32.

Keran, M. W. (1969). Monetary and fiscal influences on economic activity--the historical evidence. *Federal Reserve Bank of St. Louis Review* (Nov), 5-24.

Keran, M. W. (1970). *Monetary and Fical Influences on Economic Activity: The Foreign Experience*: Federal Reserve Bank, Research Department.

Khan, M. M. (1997). Tourism development and dependency theory: Mass tourism vs. ecotourism. *Annals of Tourism Research, 24*(4), 988-991.

Khan, M. S., & Kemal, A. (1996). Government Investment and Economic Growth in the Developing World [with Comments]. *The Pakistan Development Review, 35*(4), 419-439.

Khan, M. S., & Reinhart, C. M. (1990). Private investment and economic growth in developing countries. *World Development, 18*(1), 19-27.

Khan, S. M., & Khan, Z. S. (2003). Asian economic integration: A perspective on South Asia. *Journal of Asian Economics, 13*(6), 767-785.

Kim, H., & Chen, J. S. (2015). Destination image formation process: A holistic model. *Journal of Vacation Marketing*, *22*(2), 1-13.

Knack, S., & Keefer, P. (1995). Institutions and economic performance: cross-country tests using alternative institutional measures. *Economics & Politics, 7*(3), 207-227.

Kogut, B. (2000). The network as knowledge: Generative rules and the emergence of structure. *Strategic Management Journal, 21*(3), 405-425.

Kooiman, J. (1993). *Modern governance: new government-society interactions*: London: Sage.

Kormendi, R. C., & Meguire, P. G. (1985). Macroeconomic determinants of growth: Cross-country evidence. *Journal of Monetary Economics, 16*(2), 141-163.

Korzay, M. (1994). Turkish Tourism Development. In *Tourism: The State of the Art,* AV Seaton, et al., eds, (85-99). Chichester: Wiley.

Lambsdorff, J. G. (2005a). How corruption affects economic development. *Transparency International: Global Corruption Report*, 310-312.

Lambsdorff, J. G. (2005b). The methodology of the 2005 corruption perceptions index. *Transparency International and the University of Passau (Germany), at http://ww1. transparency. org/cpi/2005/dnld/methodology. pdf*.

Lane, B. (1991). Sustainable tourism: A new concept for the interpreter. *Interpretation Journal, 49*(2-4), 1-4.

Lane, B. (1994). Sustainable rural tourism strategies: A tool for development and conservation. *Journal of Sustainable Tourism, 2*(1-2), 102-111.

Lanza, A., & Pigliaru, F. (2000). Why are tourism countries small and fast-growing? In: Fossati A., Panella G. (eds.) *Tourism and Sustainable Economic Development*. Springer, Boston, MA (57-69), Boston, MA: Springer.

Le, T. V., & Buck, T. (2011). State ownership and listed firm performance: A universally negative governance relationship? *Journal of Management & Governance, 15*(2), 227-248.

Lee, C. C., & Chang, C. P. (2008). Tourism development and economic growth: A closer look at panels. *Tourism Management, 29*(1), 180-192.

Lee, S., & Bai, B. (2016). Influence of popular culture on special interest tourists' destination image. *Tourism Management, 52*, 161-169.

Leff, N. H. (1964). Economic development through bureaucratic corruption. *American Behavioral Scientist, 8*(3), 8-14.

Levin, A., Lin, C.-F., & Chu, C.-S. J. (2002). Unit root tests in panel data: Asymptotic and finite-sample properties. *Journal of Econometrics, 108*(1), 1-24.

Levine, R., & Renelt, D. (1992). A sensitivity analysis of cross-country growth regressions. *The American Economic Review*, *82*(4), 942-963.

Lewis, W. A. (1954). Economic development with unlimited supplies of labour. *The Manchester School, 22*(2), 139-191.

Lewis, W. A. (1958). Unlimited labour: Further notes. *The Manchester School, 26*(1), 1-32.

Li, M., & Wong, Y.-Y. (2003). Diversification and economic performance: An empirical assessment of Chinese firms. *Asia Pacific Journal of Management, 20*(2), 243-265.

Lockhart, D., & Drakakis-Smith, D. W. (1997). *Island tourism: Trends and prospects*: Thomson Learning, London: Pinter.

Lombra, R. E., & Torto, R. G. (1974). Measuring the impact of monetary and fiscal actions: A new look at the specification problem. *The Review of Economics and Statistics*, *56*(1), 104-107.

Long, V. H. (1993). Techniques for socially sustainable tourism development: Lessons from Mexico. *In* Tourism and Sustainable Development: Monitoring, Planning, Managing, J.G. Nelson, R.W. Butler, and G. Wall, (eds.), (201-218). Waterloo on: Department of Geography, University of Waterloo.

Long, V. H. (1991). Government-industry-community interaction in tourism development in Mexico. In *The Tourism Industry: An International Analysis*, M. Sinclair, & M. Stabler, (eds.), (205-222). Wallingford, Oxon, UK: CAB International.

Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics, 22*(1), 3-42.

Lui, F. T. (1996). Three aspects of corruption. *Contemporary Economic Policy, 14*(3), 26-29.

M'Amanja, D., & Morrissey, O. (2006). Foreign aid, investment and economic growth in Kenya: A time series approach: CREDIT Research Paper No. 06/05.

Maddala, G. S., & Wu, S. (1999). A comparative study of unit root tests with panel data and a new simple test. *Oxford Bulletin of Economics and statistics, 61*(S1), 631-652.

Mallick, S. K. (2002). Determinants of long-term growth in India: A Keynesian approach. *Progress in Development Studies, 2*(4), 306-324.

Mankiw, G. N., Romer, D., & Weil, D. N. (1992). A contribution to the empirics of economic growth. *Quarterly Journal of Economics, 107*(2), 407-437.

Marattin, L., & Salotti, S. (2011). On the usefulness of government spending in the EU area. *The Journal of Socio-Economics, 40*(6), 780-795.

Ribarić, M. H., & Ribarić, I. (2013). *Government Intervention in Driving the Development of Sustainable Tourism.* Paper presented at the 2nd International Scientific Conference Tourism in South East Europe.

Matthews, H. G. (1977). Radicals and third world tourism: A Caribbean focus. *Annals of Tourism Research, 5*(1), 20-29.

Mauro, P. (1995). Corruption and growth. *The Quarterly Journal of Economics*, *110*(3), 681-712.

Mauro, P. (1997). The effects of corruption on growth, investment, and government expenditure: A cross-country analysis. Corruption and The Global Economy. *Journal of Public Economics, 69*(2), 126-159.

Mckercher, B., & Ritchie, M. (1997). The third tier of public sector tourism: A profile of local government tourism officers in Australia. *Journal of Travel Research, 36*(1), 66-72.

Mehrotra, L. (1995). The Security Environment in South Asia. *South Asian Survey, 2*(2), 173-184.

Mera, K. (1973). Regional production functions and social overhead capital: An analysis of the Japanese case. *Regional and Urban Economics, 3*(2), 157-185.

Miossec, J.M. (1977). Un modèle de l'espace touristique. *Espace Géographique, 6*(1), 41-48.

Morrison, C. J., & Schwartz, A. E. (1992). State infrastructure and productive performance: *National Bureau of Economic Research*, Working Paper No. 3981.

Mourmouras, I. A., & Lee, J. E. (1999). Government spending on infrastructure in an endogenous growth model with finite horizons. *Journal of Economics and Business, 51*(5), 395-407.

Mulford, C. L., & Rogers, D. L. (1982). Definitions and models. In D. L. Rogers & D. A. Whetten (Eds.), *Interorganizational Coordination: Theory, Research and Implementation*, (9-31). Des Moines: Iowa University Press.

Munnell, A. H. (1990). Why has productivity growth declined? Productivity and public investment. *New England Economic Review* (Jan), 3-22.

Munnell, A. H. (1992). Policy watch: Infrastructure investment and economic growth. *The journal of Economic Perspectives, 6*(4), 189-198.

Nazmi, N., & Ramirez, M. D. (1997). Public and private investment and economic growth in Mexico. *Contemporary Economic Policy, 15*(1), 65-75.

Newsome, D., Moore, S. A., & Dowling, R. K. (2002). *Natural Area Tourism: Ecology, Impacts and Management* (2nd eds.). Bristol: Channel View Publications.

Odedokun, M. O. (1997). Relative effects of public versus private investment spending on economic efficiency and growth in developing countries. *Applied Economics, 29*(10), 1325-1336.

Oppermann, M. (1993). Tourism space in developing countries. *Annals of Tourism Research, 20*(3), 535-556.

Oppermann, M., & Chong, K.S. (1997). *Tourism in developing countries*. London: International Thomson Business Press.

Oshikoya, T. W. (1994). Macroeconomic determinants of domestic private investment in Africa: An empirical analysis. *Economic Development and Cultural Change, 42*(3), 573-596.

Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge university press.

Owen, R. E., Witt, S. F., & Gammon, S. (1993). Sustainable tourism development in Wales: From theory to practice. *Tourism Management, 14*(6), 463-474.

Pearce, D. G. (1987). Spatial patterns of package tourism in Europe. *Annals of Tourism Research, 14*(2), 183-201.

Pearce, D. G. (1992). Alternative tourism: Concepts, classifications, and questions. In Smith, V. L. and Eadington, E. A. (eds.). *Tourism Alternatives: Potentials and Problems in the Development of Tourism*, (15-30). Philadelphia: University of Pennsylvania Press.

Pearce, D. G. (2001). An integrative framework for urban tourism research. *Annals of Tourism Research, 28*(4), 926-946.

Pedroni, P. (1999). Critical values for cointegration tests in heterogeneous panels with multiple regressors. *Oxford Bulletin of Economics and statistics, 61*(s 1), 653-670.

Pedroni, P. (2001). Purchasing power parity tests in cointegrated panels. *Review of Economics and Statistics, 83*(4), 727-731.

Pedroni, P. (2004). Panel cointegration: Asymptotic and finite sample properties of pooled time series tests with an application to the PPP hypothesis. *Econometric Theory, 20*(03), 597-625.

Pereira, A. M. (2001). On the effects of public investment on private investment: What crowds in what? *Public Finance Review, 29*(1), 3-25.

Pereira, A. M., & Andraz, J. M. (2013). On the economic effects of public infrastructure investment: A survey of the international evidence. *Journal of Economic Development, 38*(4), 1-37.

Pesaran, & Pesaran, B. (1997). *Working with Microfit 4.0: Interactive Econometric Analysis;[Windows Version]*. Oxford: Oxford University Press.

Pesaran, M. H. (1997). The role of economic theory in modelling the long run. *The Economic Journal, 107*(440), 178-191.

Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics, 16*(3), 289-326.

Pesaran, M. H., Shin, Y., & Smith, R. P. (1999). Pooled mean group estimation of dynamic heterogeneous panels. *Journal of the American Statistical Association, 94*(446), 621-634.

Pesaran, M. H., & Smith, R. (1995). Estimating long-run relationships from dynamic heterogeneous panels. *Journal of Econometrics, 68*(1), 79-113.

Petrescu, R. M. (2011). The involvement of the public and private sector–Elements with influence on travel & tourism demand during the crisis period. *Tourism and Hospitality Management, 17*(2), 217-230.

Pham, L. H. (2012). Tourism impacts and support for tourism development in Ha Long Bay, Vietnam: an examination of residents' perceptions. *Asia Social Science, 8*(8).

Phetsavong, K., & Ichihashi, M. (2012). The Impact of Public and Private Investment on Economic Growth: Evidence from Developing Asian Countries: IDEC Discussion Paper Hiroshima University.

Phillips, P. C. (1986). Understanding spurious regressions in econometrics. *Journal of Econometrics, 33*(3), 311-340.

Potter, K. K. (1999). James Houston, Armchair Tourism, and the Marketing of Inuit Art. In *Native American Art in the Twentieth Century*, Rushing, W. J. (eds.) (39-56). Madison Avenue, New York: Routledge.

Pritchett, L. (2000). Understanding patterns of economic growth: searching for hills among plateaus, mountains, and plains. *The World Bank Economic Review, 14*(2), 221-250.

Qin, D., Cagas, M. A., Quising, P., & He, X.-H. (2006). How much does investment drive economic growth in China? *Journal of Policy Modeling, 28*(7), 751-774.

Ramirez, M. D. (2000). The impact of public investment on private investment spending in Latin America: 1980–95. *Atlantic Economic Journal, 28*(2), 210-225.

Rasul, G., & Manandhar, P. (2009). Prospects and Problems in Promoting Tourism in South Asia A Regional Perspective. *South Asia Economic Journal, 10*(1), 187-207.

Reid, D. G. (2003). *Tourism, globalization and development: Responsible tourism planning*. London: Pluto Press.

Rhodes, R. A. W. (1996). The new governance: governing without government1. *Political Studies, 44*(4), 652-667.

Ribarić, H., & Ribarić, I. (2013). *Government Intervention in Driving the Development of Sustainable Tourism.* Paper presented at the 2nd International Scientific Conference Tourism in South East Europe.

Robaina-Alves, M., Moutinho, V., & Costa, R. (2016). Change in energy-related CO_2 (carbon dioxide) emissions in Portuguese tourism: a decomposition analysis from 2000 to 2008. *Journal of Cleaner Production, 111*(Part B), 520-528.

Roberts, N. C., & Bradley, R. T. (1991). Stakeholder collaboration and innovation: A study of public policy initiation at the state level. *The Journal of Applied Behavioral Science, 27*(2), 209-227.

Rodrik, D. (2008). Thinking about governance. *Governance, Growth, and Development Decision-Making – Reflections by Douglass North, Daron Acemoglu, Francis Fukuyama and Dani Rodrik*, (17-24). Washington, DC: World Bank.

Roe, D., Ashley, C., Page, S., & Meyer, D. (2004). Tourism and the poor analysing and interpreting tourism statistics from a poverty perspective. PPT Working Paper No. 16. London.

Rogers, E. M. (2010). *Diffusion of innovations*: Simon and Schuster. New York: The Free Press.

Romer, P. M. (1986). Increasing returns and long-run growth. *The Journal of Political Economy, 94*(5), 1002-1037.

Romer, P. M. (1994). The origins of endogenous growth. *The Journal of Economic Perspectives, 8*(1), 3-22.

Roome, N. (2001). Conceptualizing and studying the contribution of networks in environmental management and sustainable development. *Business Strategy and the Environment, 10*(2), 69.

Rosentraub, M. S., & Joo, M. (2009). Tourism and economic development: Which investments produce gains for regions? *Tourism Management, 30*(5), 759-770.

Rostow, W. W. (1960). *The Process of Economic Growth.* Oxford: Clarendon Press.

Rostow, W. W. (1990). *The Stages of Economic Growth: A Non-Communist Manifesto*. Cambridge: Cambridge University Press.

Sakai, M. (2006). Public sector investment in tourism infrastructure. In *International Handbook on the Economics of Tourism*, Dwyer, L. and Forsyth, P. (eds.) (266-279). Glensanda Hourse, Montpellier Parade, Cheltenhem: Edward Elgar Publishing Inc.

Sala-i-Martin, X., Doppelhofer, G., & Miller, R. I. (2004). Determinants of long-term growth: A Bayesian averaging of classical estimates (BACE) approach. *American Economic Review*, *3,* 813-835.

Samuel, P. (1989). *Political Order in Changing Societies*. New Heaven: Yale University Press.

Sarantis, N., & Stewart, C. (1999). Is the consumption–income ratio stationary? Evidence from panel unit root tests. *Economics Letters, 64*(3), 309-314.

Scheyvens, R., & Momsen, J. H. (2008). Tourism and poverty reduction: Issues for small island states. *Tourism Geographies, 10*(1), 22-41.

Selin, S., & Chavez, D. (1995). Developing an evolutionary tourism partnership model. *Annals of Tourism Research, 22*(4), 844-856.

Sethna, R.J. (1980). Social impact of tourism in selected Caribbean countries. In: Hawkins, D.E., Shafer, E.L. and Rovelstad, J.M. (eds.) Tourism Planning and Development Issues. (239-249). Washington, DC: George Washington University Press.

Shafik, N. (1990). Modeling Investment Behavior in Developing Countries. *Internaitonal Economic Analysis and Prospectis Working Paper Series*. Working Paper No. 452.

Shamsuddoha, M., & Nedelea, M.O. (2008). Exploring Tourist Spots for Promoting Investments in Tourism Industry of Bangladesh. *Revista de Turism Studii si Cercetari in Turism* (6), 5-9.

Sharma, S. (2006). Focusing on regional tourism markets: Prospects and challenge for Nepal. *Economic Policy Network, Policy Paper, 28*.

Sharpley, R., & Telfer, D. J. (2014). *Tourism and Development: Concepts and Issues* (Vol. 63). Bristol, UK: Channel View Publications.

Sharpley, R., & Ussi, M. (2014). Tourism and governance in small island developing states (SIDS): The Case of Zanzibar. *International Journal of Tourism Research, 16*(1), 87-96.

Shleifer, A., & Vishny, R. W. (2002). *The Grabbing Hand: Government Pathologies and their Cures*. Massachusetts: Harvard University Press.

Sinclair, M. (1990). Tourism development in Kenya. *World Bank, Washington DC*.

Sinclair, M. T. (1998). Tourism and economic development: A survey. *The Journal of Development Studies, 34*(5), 1-51.

Smeral, E. (1999). *Euro–implications for tourism.* Paper presented at the 34th Meeting of the Tourist Research Centre, Vienna.

Sobhan, R. (1999). *Transforming Eastern South Asia: Building Growth Zones for Economic Cooperation*. Dhaka: Center for Policy Dialogye and the University Press Limited.

Solow, R. M. (1956). A contribution to the theory of economic growth. *The Quarterly Journal of Economics*, *70*(1), 65-94.

Solow, R. M. (1957). Technical change and the aggregate production function. *The Review of Economics and Statistics*, *39*(3), 312-320.

Song, Y. (2008). Legality, local government intervention and financial development. *Shanghai Finance, 7*, 25-30.

Stabler, M. J., Papatheodorou, A., & Sinclair, M. T. (2009). *The Economics of Tourism*. New York: Routledge.

Stoker, G. (1998). Governance as theory: Five propositions. *International Social Science Journal, 50*(155), 17-28.

Sturm, J.E., & Kuper, G. H. (1996). The dual approach to the public capital hypothesis: The case of The Netherlands. *Center for Economic Research, University of Groningen and University of Twente Working Paper Series,* Working Paper No. 26.

Swan, T. W. (1956). Economic growth and capital accumulation. *Economic Record, 32*(2), 334-361.

Takran, N. Ö., & Ylmaz, R. (2015). *Handbook of Research on Effective Advertising Strategies in the Social Media Age.* Hershey, PA, USA: IGI Publishing.

Tanzi, V. (1998). Corruption around the world: Causes, consequences, scope, and cures. *Staff Papers International Monetary Fund*, *45*(4), 559-594.

Tanzi, V., & Davoodi, H. (1998). *Corruption, Public Investment and Growth.* In Shibata H. and Ihori T. (eds) The Welfare State, Public Investment, and Growth. Tokyo: Springer.

Tatom, J. (1991). Public capital and private sector performance. *Federal Reserve Bank of St. Louis Review* (May), 3-15.

Tian, L., & Estrin, S. (2008). Retained state shareholding in Chinese PLCs: Does government ownership always reduce corporate value? *Journal of Comparative Economics, 36*(1), 74-89.

Timothy, D. J. (2003). Supranationalist alliances and tourism: Insights from ASEAN and SAARC. *Current Issues in Tourism, 6*(3), 250-266.

Tisdell, C., & Wen, J. (1991). Investment in China's tourism industry: Its scale, nature, and policy issues. *China Economic Review, 2*(2), 175-193.

Tödtling, F., & Kaufmann, A. (1999). Innovation systems in regions of Europe – A comparative perspective. *European Planning Studies, 7*(6), 699-717.

Torres, M. M., & Anderson, M. (2004). Fragile states: Defining difficult environments for poverty reduction. Poverty Reduction in Difficult Environments Team Policy Division, UK Department for International Development. Working Paper No. 1.

Tosun, C., & Jenkins, C. L. (1998). The evolution of tourism planning in third-world countries: A critique. *Progress in Tourism and Hospitality Research, 4*(2), 101.

Tremblay, P. (2000). An Evolutionary lnterpretation of the Role of Collaborative Partnerships in Sustainable Tourism. In Bramwell, B. and Lane, B. *Tourism Collaboration and Partnerships: Politics, practice and sustainability,* (314 – 330). Tonawanda, New York: Channel View Publications.

Tribe, J. (1999). The concept of tourism: Framing a wide tourism world and broad tourism society. *Tourism Recreation Research, 24*(2), 75-81.

Tse, R. Y. (2001). Estimating the impact of economic factors on tourism: Evidence from Hong Kong. *Tourism Economics, 7*(3), 277-293.

Tullock, G. (1996). Corruption theory and practice. *Contemporary Economic Policy, 14*(3), 6-13.

Turner, L. W., & Witt, S. F. (2001). Factors influencing demand for international tourism: Tourism demand analysis using structural equation modelling, revisited. *Tourism Economics, 7*(1), 21-38.

Vo, T. T. A. (2015). Corporate Governance and Financial Crises. *Available at SSRN 2565609*.

Vu Le, M., & Suruga, T. (2005). Foreign direct investment, public expenditure and economic growth: the empirical evidence for the period 1970–2001. *Applied Economics Letters, 12*(1), 45-49.

Wang, C., & Xu, H. (2011). Government intervention in investment by Chinese listed companies that have diversified into tourism. *Tourism Management, 32*(6), 1371-1380.

Weaver, D., & Elliott, K. (1996). Spatial patterns and problems in contemporary Namibian tourism. *Geographical Journal*, *162* (2), 205-217.

Webber, A. G. (2001). Exchange rate volatility and cointegration in tourism demand. *Journal of Travel Research, 39*(4), 398-405.

Wei, S.J. (2000). Natural openness and good governance. *World Bank Policy Research Paper, 2411*.

Wheeller, B. (1994). Egotourism, Sustainable tourism and the environment – A symbiotic, symbolic or shambolic relationship. In Seaton, A. V. *Tourism: The state of the Art*. (647-654). Chichester: Wiley.

Wilkinson, P. F. (1987). Tourism in small island nations: A fragile dependence. *Leisure Studies, 6*(2), 127-146.

Wilkinson, P. F. (1997). *Tourism policy and planning: case studies from the Commonwealth Caribbean*. In Elmsford, USA: Cognizant Communication Corporation.

Williams, A. M., & Hall, C. M. (2000). Tourism and migration: New relationships between production and consumption. *Tourism Geographies, 2*(1), 5-27.

Wood, D. J., & Gray, B. (1991). Toward a comprehensive theory of collaboration. *The Journal of Applied Behavioral Science, 27*(2), 139-162.

Woodcock, K., & France, L. (1994). Development theory applied to tourism in Jamaica. In Seaton, A. V. (eds.), *Tourism: The State of Art.* (110-119). Chichester: Wiley.

World Tourism Organization (2016). Tourism Highlights: 2015 Edition. UNWTO, Madrid. Spain.

World Tourism Organization (2015). *UNWTO Annual Report 2014.* UNWTO, Madrid. Spain.

World Travel and Tourism Council (2015). *Travel and Tourism Economic Impact 2015, South Asia.* World Travel and Tourism Council. London. UK.

World Economic Forum (2016). *The Travel & Tourism Competitiveness Report, 2015*. sWorld Economic Forum, Geneva.

Yu, L. (1997). Travel between politically divided China and Taiwan. *Asia Pacific Journal of Tourism Research, 2*(1), 19-30.

Zahn, F. (1978). A flow of funds analysis of crowding out. *Southern Economic Journal*, *45* (1), 136-153.

Zugasti, C. A. A., García, R. G., & Maldonado, J. S. (2001). The effects of public infrastructure on the cost structure of Spanish industries. *Spanish Economic Review, 3*(2), 131-150.