An Empirical Study of South Asian Migration and Remittances Impact on Poverty and Inequality as well as Economic Development.

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Preface

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Published Articles in this Thesis

This doctoral thesis incorporates three articles that address various aspects of migrations & remittances in South Asian countries. Three articles are already published in refereed journals and one is presented at an international conference. However, I have formatted these articles for the purpose of maintaining coherence in this thesis.

Chapter 3

➢ Mahmud MUHAMMAD AL, Yoshihiro KAMEYAMA, Education and Economic Growth in South Asia, International Journal of Development and Economic Sustainability (IJDES), Vol-7, No-4, pp.49-59, June 2019.

Chapter 4

➢ Mahmud MUHAMMAD AL, Yoshihiro KAMEYAMA, Effects of FDI & Remittances on the International Migration and Tourism from Asian Countries to Japan. Japan Social Innovation Journal, Vol-9, Issue-1, pp.1-19 October, 2019

Chapter 5

➢ Mahmud MUHAMMAD AL & Yoshihiro KAMEYAMA, The Relationship between International Migration, Remittances, Education and Poverty in South Asia Journal of Economics and Development Studies, Published by American Research Institute for Policy Development, Vol. 7, No. 3, pp. 26-36, September 2019.

Abstract

The thesis aims to review the impact of migration on social and economic development in South Asia. Thus, the research provides a critical analysis of the impact of remittances from the migrants on poverty, inequality, and social-economic development in South Asia. There is no clearly defined answer on the correlation between migrant remittances and development. Hence, many researchers and policymakers do not agree on whether migrant remittances affect development in society. To date, many researchers continue to try to evaluate the indicators of migration independent of migration's impact and vice versa. Therefore, the implication of migration to socio-economic development and the direct necessity to bring about and maintain in-migration have been seen as relevant to South Asia. This research study focuses on the economic impact of immigration and the remittances that the country of origin for migrants receives taking the countries in South Asia as a case study.

The study is guided by specific goals, objectives, and a valid hypothesis. Further, there a literature review is provided to set a theoretical foundation and establish potential research gaps. The literature review discusses the migration and remittance issues in South Asia and their impact on poverty, growth, and stability. To provide a better understanding of the connection between remittances and migration, the underlying mechanisms are explored. Thus, income structures, incentives, and the cost of living of the people in developing economies are evaluated. Moreover, a cross-country panel data is used to examine the effects of remittances on migration on economic, poverty, and inequality. The use of this dimension is integral to the reliability and efficacy of the findings. Moreover, the endogeneity of the remittances is taken into consideration.

This dissertation consists of six chapters and each chapter is further divided into sections and subsections. The first chapter, which is the introductory section, gives economic perspectives of the 7 South Asian countries and general overview of the whole study. The remaining chapters subsequently flow from the macro to micro level.

Chapter two provides a comprehensive reviews existing theories related to the topic. At the same time, an empirical review of the studies on the impact of migrants and their remittances on poverty and inequality is conducted.

Issues on education and economic growth of the South Asian countries are covered in chapter three. Other elements covered in this chapter include the impact of the role of education on economic growth and the relationship between migrants' remittances on development. Moreover, this chapter discuss the investment in education leads to the formation of human capital, comparable to physical capital and social capital, and that makes a significant contribution to economic growth.

Chapter four provides a discussion on the behavior of remittances in comparison to the inflows as foreign direct investments (FDI). The chapter also analyses the impact of the FDI and remittances on migration in the South Asian countries to Japan.

In chapter five, a connection between international migration, remittances, education and poverty in South Asia is evaluated. At the same time, the challenge of poverty is assessed and how it is connected to migration from South Asia and more specifically its impact on education and poverty.

Finally, the chapter six also encompasses a discussion on the policy implications and conclusions that would better future global migration and their impact to the economies of both the origin and the recipient countries. Based on the existing studies, remittances have a significant impact on the South Asian economic and social development. Some of the positive outcomes of migration in the region include reduction of poverty, an increase of the household income and expenditure, improvement of the quality of life, and gender equality. Therefore, this research provides final reflections on the significance of further studies on international migration and development in South Asian economies. Thus, policymakers and planners need to foster international migration as a strategy to enhance economic development in the South Asia region.

CHAPTER 1 INTRODUCTION

1.1 Introduction

The relationship between migration, development and social change remains less understood. This is especially the case when it comes to less developed economies. This is an area that many researchers have not fully explored or established reliable and concrete findings. However, the few research conducted on the topic illustrates that most migrants gain from their migration. One of the core reasons why people move from one country to another is the expectation of attaining economic benefits. The skilled and unskilled migrate to regions they perceive as having opportunities that they can exploit and earn revenues to support their families. According to the World Bank, about 215 million people migrate across the world and their recorded remittances were estimated to be $440 billion in 2010. Since 1990, remittances from migrants have been increasing steadily and this is largely linked to the number of migrants over the past two decades (World Bank, 2011).

Although existing studies show that there is a positive connection between migration and economic development, there are no definitive findings on this topic. Therefore, the focus of this thesis is to review the impact of migration on social and economic development in South Asia. At the same time, it explores the influence of migration on poverty and inequality in the region.

There is an assumption that migration reduces poverty since people move from low-income parts to high-income ones and this translates to remittances from the high-income regions to the low-income ones. Hence, the established analogy is that low-income countries are able to get the income they deserve to attain their development goals and expectations. At the same time, while abroad, migrants learn important skills and acquire knowledge that may be beneficial to their countries. In lieu of this, developing economies benefit in terms of remittance flow and acquisition of new skills and knowledge. However, there is a counter-theory adopted by some researchers. The pessimistic view is that rich people migrate more often as compared to the poor. Thus, these people will migrate and settle in their new home and abandon their original countries. In this

1

regard, migration is thought to lead to brain drain[1]. Also, remittances are likely to curtail an economy by making it more dependent and prone to inflation and exchange rate fluctuations.

The below Map1 show the geographical situations of seven South Asian countries.

Map 1: A model for defining the South Asian region in migration

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[1] The term brain drain is the cross-border movement of highly skilled persons who stay abroad for a longer period of time. Highly skilled persons are defined as having studied or currently studying for a university degree or possessing equivalent experience in a given academic field (IOM, 2003).

Recent studies have shown a temporary international migration will lead to a win-win situation for all nations. However, the structure of the migration policies of the developed economies is likely to de-franchise the needs of the developing nations. Developed economies are more willing to accept qualified and highly skilled workers as opposed to taking in the unskilled and semi-skilled persons. So far, there is a labor surplus in the smaller and medium economies and a labor shortage in the developed markets and this is due to differences in population growth patterns – developed economies have a large aging population as compared to the developing nations. This means that if developed nations are willing to take rely on labor from the developing countries, the growth of the smaller economies will be facilitated and the living standards of the people improved. The migration patterns in the South Asia region appear to have paused in 2016 after years of growth. The changes may have been caused by several factors and among them the decline in the global oil prices in 2015 leading to a disruption of the economic activities across the world. Moreover, there is a change in migration policies in such countries as Saudi Arabia and Malaysia. In 2015 alone, about five million workers migrated from the seven South Asian countries due to poverty-related challenges in 2016. This corresponds to an 8% decrease compared to the previous year (Figure 1.1).
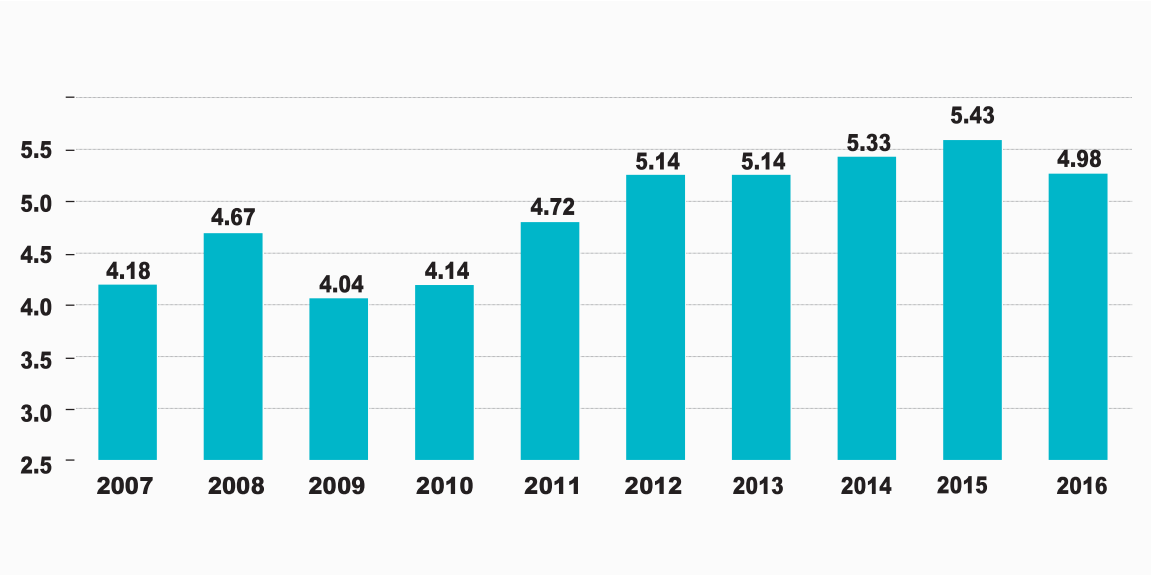
Source: United Nations Department for Economic and Social Affairs. International migrant stock 2015. http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml (Accessed3 November 2019).

Figure 1.1: Total Outflows of Workers from Selected South Asian Countries, 2007–2016 (million)

For decades, the region has grappled with high poverty rates. Between 1990 and 2013, there was an increase in the poverty levels from 27.3% to 33.4%. The highest poverty levels have been reported in Sub-Saharan Africa at 50.7%. Although South Asia has a high poverty prevalence rate, the number of poor people has declined by almost 248.8 million people between 1990 and 2013. However, inequality characterized by an increase in the population remains to be critical challenges in the region. As the population increased by 29%, the GDP increased by 50% between 2000 and 2017. Below table 1.1 shows the 7 South Asian countries GDP growth (annual %) and Poverty gap at $1.90 a day (2011 PPP) (%).

Table 1.1: 7 South Asian countries GDP growth (annual %)and Poverty gap at $1.90 a day (2011 PPP) (%)

Country	GDP growth (annual %)			Poverty gap at $1.90 a day (2011 PPP) (%)		
	2000	2010	2015	2000	2010	2015
Bangladesh	5.3	5.6	6.6	8	3.6	2.9
India	3.8	8.5	8.0	6.8	6.4	3.8
Pakistan	4.3	1.6	4.7	4.1	1.2	0.5
Sri Lanka	6.0	8.0	5.0	1.5	0.4	0.2
Myanmar	13.7	9.6	7.0	0.5	1.2	1.5
Maldives	3.8	7.3	2.9	2.4	4	16.3
Nepal	6.2	4.8	3.3	1.7	3.1	2.2

In 2018, South Asia recorded an unemployment rate of 2.75% which was a decline of 0.02% from the previous period. The growth was partially influenced by migration and the resultant effects. Similarly, the migrants constituted 3.1% of the South Asian population. In 1990, the region had a total population of 1.13 billion and the migrants were approximately 15 million. In 2017, the region's population increased to 1.79 billion and the migrants constituted 0.61% of the population (UNDESA, 2008; UNDESA, 2017a).

To illustrate the impact of migration, figure 1.2 below provides an overview of the annual outflows of national with employment abroad in selected South Asian countries.

Bangladesh (2008–17)

Year	Value
2008	875055
2009	475 278
2010	390 702
2011	568 062
2012	607 798
2013	409 253
2014	425 684
2015	555881
2016	757 731
2017	1008525
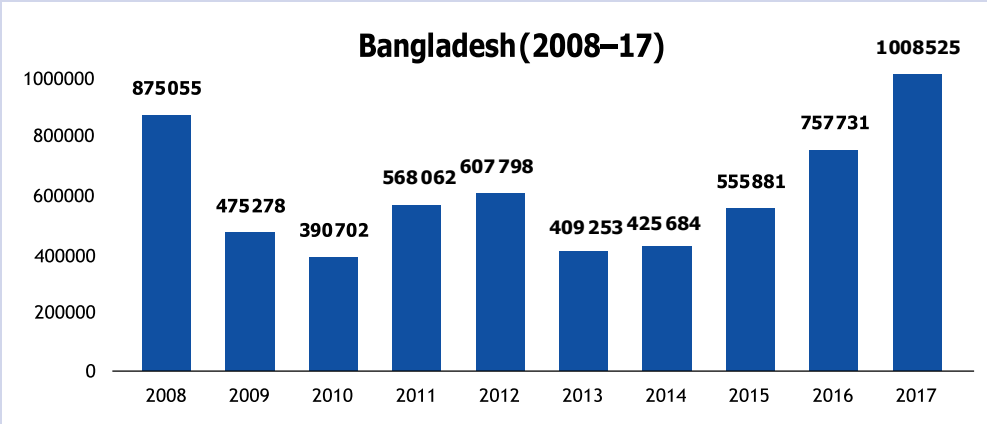
Source: Bureau of Manpower, Employment and Training,
'Overseas Employment and Remittances from 1997 to 2018' (BMET, 2018).

Sri Lanka (2008–17)

Year	Value
2008	250 449
2009	247 126
2010	267 507
2011	262 961
2012	282 447
2013	293 218
2014	300 703
2015	263443
2016	242930
2017	212162
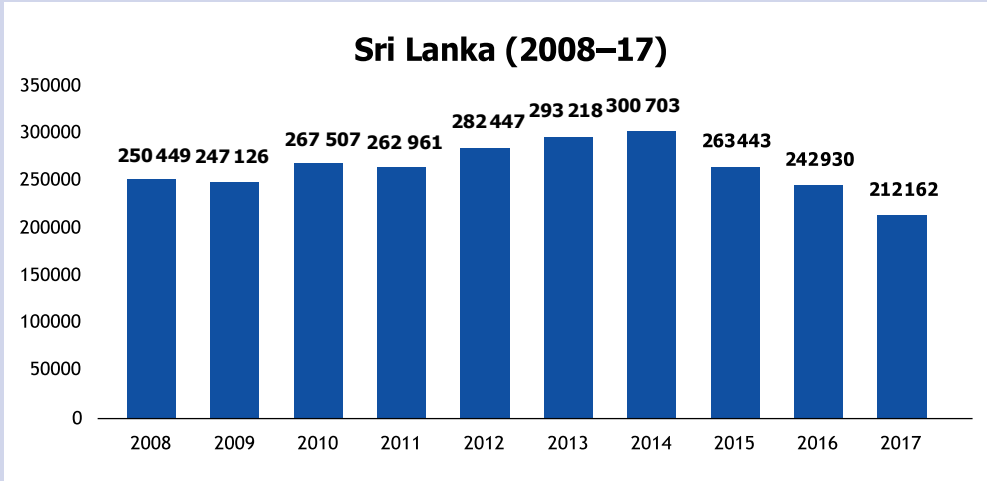
India (2008–17)
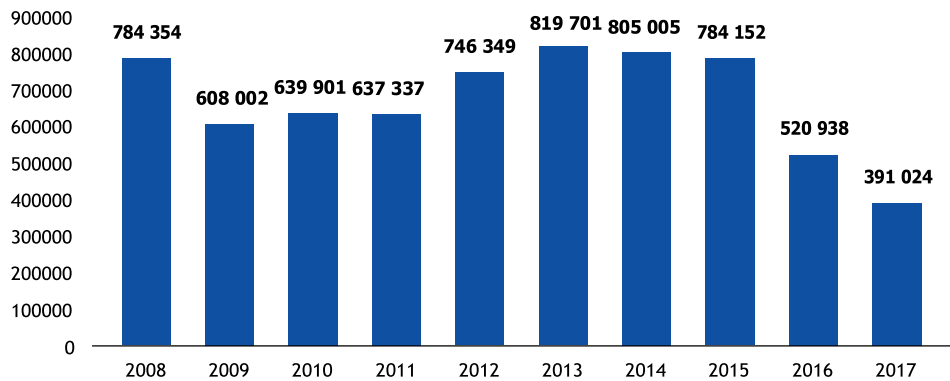
Source: Indian Ministry of External Affairs and Overseas Employment Division, 'Month-wise POE Emigration (EC) Report', 2007-2018 (MEA, n.d.b.).

Note: Data only capture those nationals who are leaving abroad for employment and who are identified as 'Emigration Clearance Required' per Indian regulations. Data include only those departing to work in ECR countries. Data comprise emigration clearances recorded by recruitment agencies, project exporters, as well as through direct recruitment by foreign employers.

Pakistan (2008–17)
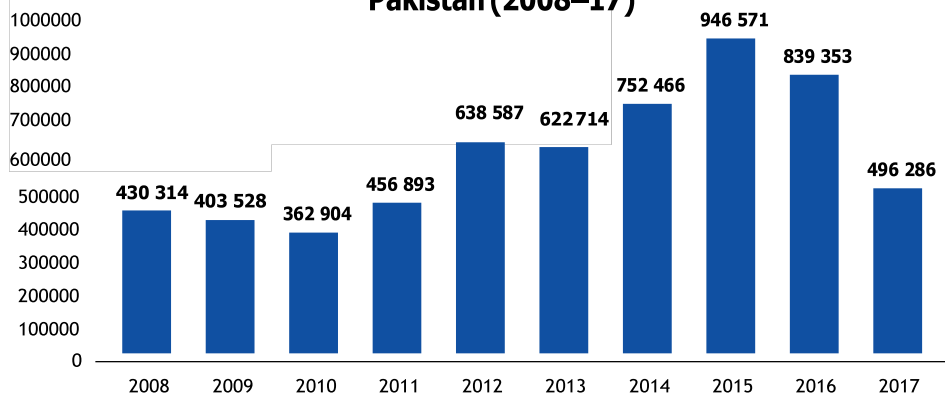
Source: Pakistan Bureau of Emigration and Overseas Employment, 'Statement showing number of Pakistani workers registered for overseas employment through Bureau of Emigration and Overseas Employment during the period 1971 - 2018 (up to May), country wise emigrations' (BE&OE, n.d.a.).

Note: Data for outflows to particular destination countries exclude persons processed for employment abroad by the Pakistan Overseas Employment Corporation, which represents a very limited number of nationals registering for employment abroad. BE&OE data do not represent individual migrants, as a person will be counted each time they register with the agency (e.g. repeat migrants will be counted). Data may likely exclude highly skilled persons migrating who are less likely to register prior to departure.
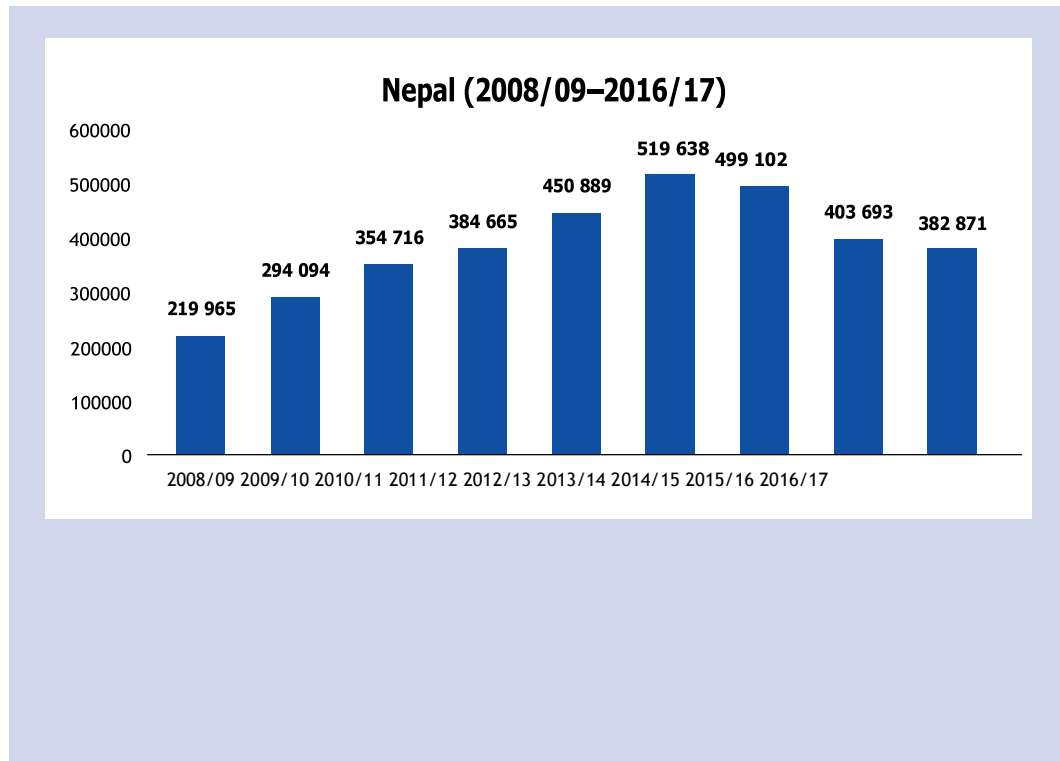
Figure 1.2: Annual outflows (thousand) of nationals registering for employment abroad, selected South Asian countries

Remittance is now the backbone of the South Asian economy. A recent study shows that with an increase of about 12 percent in remittances will have a direct impact on the GDP with a 2 percent decrease in poverty levels in south Asia between 2000 and 2015 but impact on inequality, is positive and very small (Mahmud &. Kameyama 2019).

Over the past two decades, the total remittance inflows in the region have increased exponentially. As shown in figure 1.3, India receives the largest inflows of remittances. In 2016, international remittances to India grew to $62.7 billion from as low as $10.3 billion in 1997. The second-largest beneficiary is Pakistan which registered nearly $20 billion in 2016. Other beneficiaries include Bangladesh ($13.5 billion), Sri-Lanka ($7.3 billion), and Nepal ($6.6 billion) (World Bank, n.d., a). The top three beneficiaries have the largest number of people living and working abroad.
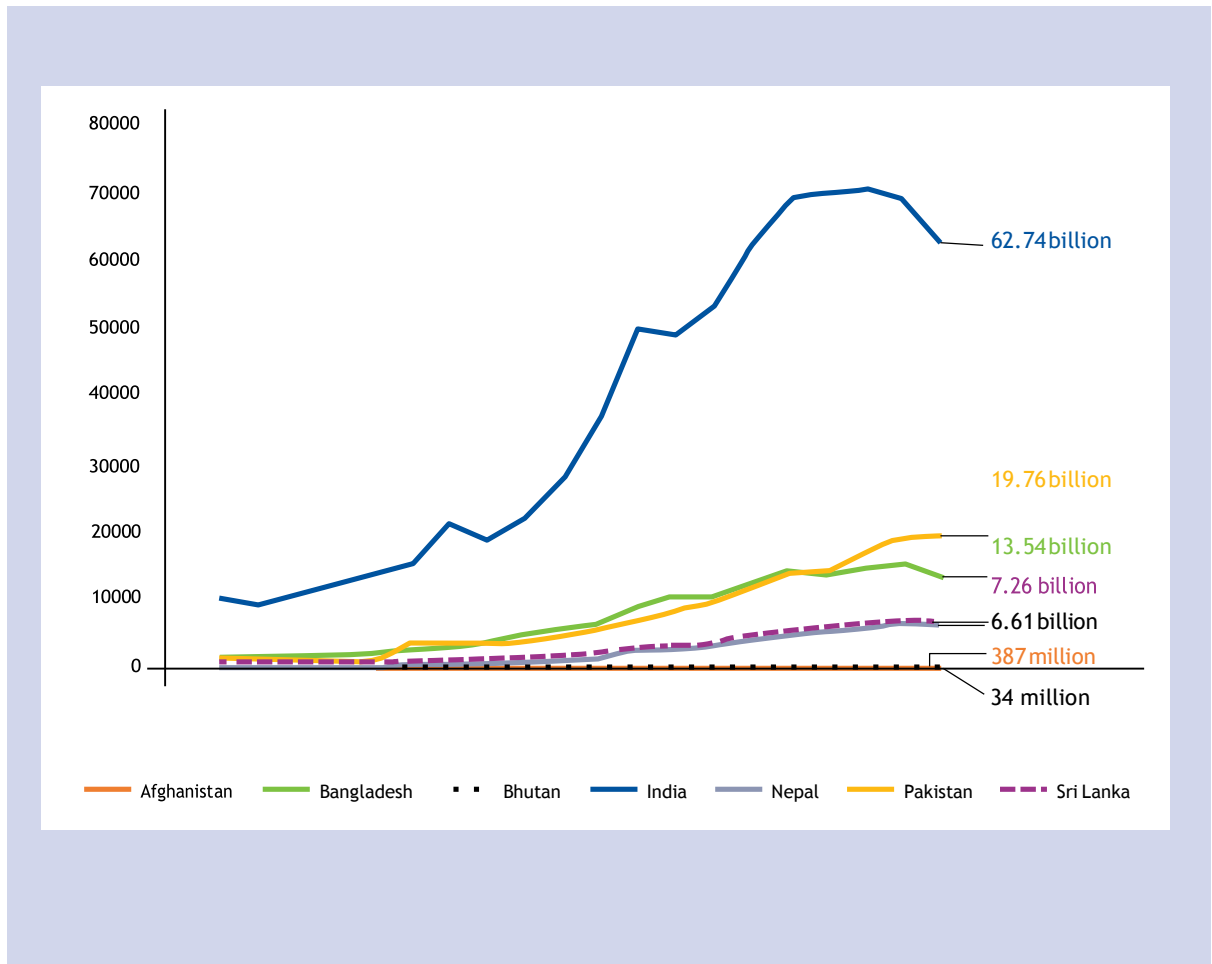
Note: At the time this publication was written only provisional data for 2017 were available. As such, they have not been included in the report.

Source: World Bank Remittance Outflows and Inflows Data: https://www.worldbank.org/en/topic/migrationremittancesdiasporaissues/brief/migration-remittances-data [accessed 28 October 2019] (World Bank, n.d.a).

Figure 1.3: Personal remittance inflows (US$ billions), South Asian countries, 1997 – 2016

In addition, the author argues that poor and less-educated South Asian cannot go to developed countries due to expensive migration costs. Although migration is applauded as a means to economic development in developing nations, the cost of moving from one country to another or from the rural to urban areas is out of reach for most poor people. Hence, middle and high-income persons are the primary beneficiaries. This means that remittances can contribute to inequalities in a country. However, future researchers need to explore more on the connection between poverty reduction and inequalities due to international migration and remittances.

Income allocation is a critical issue to consider when it comes to the management of remittances. Research has shown that there are numerous unexhausted resources in the South Asia region, and through remittances, economic growth can be attained. However, the patterns of investments are a bit worrying with the migrants often choosing to invest in small or medium-size business enterprises. This helps to create jobs in the local community which is very important to decrease poverty in the long-run. The consequence of the spending habits of the migrants is that they create a generation of dependents who also have to migrate abroad to improving their welfare. Therefore, the research issue on foreign remittances and income allocation behavior that needs to be explored further in South Asia. At the same time, there is a need to review how migrants contribute to job creation in their home countries.

1.2 Significance and Motivation of the Study

According to the World Bank (n.d.a.), approximately 3% of the world's population lives outside their original countries of birth. Therefore, remittance has increased significantly over the years when compared to other forms of investments like foreign direct investment (FDI) and foreign aid. The World Bank estimates that South Asia received about $110 billion in remittances in 2016 alone. Also, foreign remittances in relation to the GDP are high in the region: Nepal (31.3% of GDP), Sri Lanka (8.9%), Pakistan (7.1%) and Bangladesh (6.1%) in 2016 (World Bank, n.d.a.). According to the World Bank (2005) & Ratha (2005), remittances to the South Asia region have become less volatile and more reliable in enhancing economic growth and improving the welfare of the people.

Owing to the increasing significance of remittances and international relations, bilateral and regional agreements have become integral and necessary global issues. Today, international agencies like the United Nations (UN), the International Organization for Migration (IOM), and the World Bank have emphasized the significance of maintaining migration to foster the global economy. In 2006, the UN commenced a High-Level Dialogue on International Migration and Development, published the Human Development Report (HDR) in 2009, and will give migration a priority in its future development agendas. On the other hand, the World Bank has intensified its research on migration since 2004. The aim is to ensure that the global community appreciates and acknowledges the significance of migration to economic development and the attainment of the

country-specific and global goals.

As a step towards enhancing international and regional collaboration, a number of partners have included commitments to improve data and understanding of thematic areas linked to labor migration – specifically remittances. So far, South Asia is the second-highest recipient of international remittances in the world. The second highest beneficiary is East Asia and the Pacific (World Bank, n.d., a). Statistics show that remittances have had a positive impact on economic development, reduction of poverty, and improvement of health and education outcomes. At the same time, remittances are valuable resources as foreign exchange-earners. Taking into consideration the role of remittances in the South Asian economy, it is important to further explore the topic and provide a clearer understanding of how migrants can play a role in regional economic and social development.

With a large population and limited resources, lack of employment is a major challenge in the South Asia region. Migrants can play a phenomenal role in the reduction of the unemployment rates and poverty levels if they dedicate their resources to entrepreneurial activities. At the same time, their investments in more productive ventures will reduce the risk of future generations depending on foreign aid and remittances. However, this is an area that needs more research to assess and determine the behavior of migrants and how they choose to use their incomes back at home.

The proposed study seeks to analyze the migration processes and offers a comparative analysis of the developing countries in South Asia. Further, a cost-benefit analysis is conducted to determine the impact of migration of people on the social and economic development agendas in the region. The research also provides recommendations on the potential ways of preventing the negative consequences of migration as a step towards sustainable development. At the same time, the research considers some of the possible ways of enhancing family investment as a way of using remittances to create sustainable income for future generations and reduce dependence on moving migration. The findings of the study will be essential to the South Asian countries in improving their labor migration policies and resources. Furthermore, international agencies like the IOM, ILO, World Bank, and ADB will rely on the findings to spearhead policy development, research, investment decision making, and management and control of migration frameworks in the South Asia region. Establishing regional growth policies is largely informed by the existing evidence and

research; hence, using the findings of this research, decision-makers will be in a better position to come forth with concrete and dependable solutions to regional growth and sustainability.

1.3 Objectives of the Study

The general objective of this research study is to explore the socio-economic effects of migration to both the country of origin and the destination nation. However, it is equally not possible to investigate a general objective of the study without analyzing the key components that form the social and economic pillar of the society. Therefore, the specific goals and purposes of this research will include:

1. To identify the effects of remittances from immigration to the economic development of the country of origin.
2. To analyze the social as well as economic development of the country of migrants in regard to their education level, professional level as well as demographic pattern distribution as a result of migration.
3. To analyze migrants' remittance trends in the global, regional and South Asian economy.
4. To calculate the impact of migrants' remittances on poverty and inequality in south Asia.
5. To see the significance of return migrants' remittances on job creation and poverty reduction in the South Asia.
6. To provide policy recommendations for effective migration and remittance management in South Asia.

1.4 Research Questions

To tackle the issues outlined in the study and to fulfill the objectives, the following
five questions are raised:

1. How do migration and remittance help the development of developing countries?
2. Is remittance a stable income source for developing countries, including South Asia?
3. What is the impact of migrants' remittances on poverty and inequality in South Asia?
4. What are the factors to increase the probability of return migrants becoming entrepreneurs in South Asia?
5. How are return entrepreneurs contributing to create jobs and reduce poverty in South Asia in the long -run?

1.5 Research Hypotheses

A hypothesis is a statement of statistical investigation or a theory that the researcher beliefs to be try or false and is subject to scientific investigation. A research has both null and alternative hypotheses that the researcher seeks to quantify their validity based on the presumptions of the study as well as scientific investigation. Therefore, this research seeks to evaluate a hypothesis that states that; H0- Migration of the people of South Asia does not significantly impact the social and economic pillar of their country of origin. H1- Migration of the people of South Asia significantly impacts the social and economic pillar of their country of origin.

As well as based on primary researches, practical experience on the situation, literature review and analysis, the following will be research hypotheses:

Hypothesis 1

Creating different opportunities for potential migrants to establish their entrepreneurial activity or small businesses in localities, could contribute more to local social and economic development than does the incoming flow of remittances sent by labor migrants.

Hypothesis 2

Special local initiatives (projects, programs, etc.) on guiding the recipients of remittances, how these resources could be used more rational in order to generate sustainable income for their families in the future, is crucial.

1.6 Organization of the Study

This dissertation consists of Six chapters and each chapter is further divided into sections and subsections. The first chapter, which is the introductory section, gives economic perspectives of the 7 South Asian countries and general overview of the whole study. The remaining chapters subsequently flow from the macro to micro level.

Chapter two provides a comprehensive reviews existing theories related to education, migration, remittance and development. Moreover, this chapter reviews empirical studies about the impact of migrants 'remittance on poverty and inequality and also the use of remittances.

In chapter three we have reviewed some issues of education & economic growth in South Asia. Moreover, this chapter the discussion has covered the issues like the the impact of the role of education in economic growth and their inter-relationship. Moreover, this chapter discus the investment in education leads to the formation of human capital, comparable to physical capital and social capital, and that makes a significant contribution to economic growth.

In chapter four discussed the behavior of remittances in comparison with other inflows as foreign direct investment (FDI) and analyzed the effects of FDI and Remittances on the International Migration from Asian Countries to Japan.

In chapter five explored to find the connection between international migration, remittances, education and poverty in South Asia. This chapter is oblivious of any study that has developed a relationship between international migration remittances in South Asia and more specifically its impact on education and poverty. Finally, chapter six concludes the study with a summary and provides policy recommendations.

1.7 Conclusion:

In the recent decades' migration and remittance flow has been gradually increasing in scale. Remittance flow to developing countries has a profound effect on various economic and social sectors, but there are limited studies of this sector. Recent studies indicate the importance of migration for development, but some policy barrier do not allow for easy cross border temporary labor migration. In recent, South Asia`s economic growth has been impressive, where remittance contributes about one-fifth of the total GDP. However, there is no study using new data to analyze the impact of remittance on poverty and inequality. Micro level primary data analysis towards the productive use of remittances is also an important research area for the eight South Asian countries: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. This dissertation will fill these gaps.

CHAPTER 2: Literature review

2.1 Introduction:

Due to globalization and economic interdependence it has been easy to move people, goods, services and technology throughout the world. The world economy is dynamic, so existing thought in economics or particular industries cannot explain the overall determinants for economic growth and development. In the last two decades, the movement of people and flow of remittance is increasing in scale, so policy makers, researchers and development actomaniacs are paying greater attention to whether migrants' remittance can play an important role for development or not. In this chapter I will discuss the existing studies of migration and empirical findings related to the impacts of remittances on poverty, inequality and investment (entrepreneurship).

2.2 Literature review about education and economic growth

The studies that associate education with economic growth suggest some reasons to clarify the issue. The role of education in economic growth and their inter-relationship are increasing focus of public debate since the era of Plato. Investment in education leads to the formation of human capital, comparable to physical capital and social capital, and that makes a significant contribution to economic growth. Education as an investment secures returns in the form of skilled manpower that gears the needs of development, both for accelerating economic development and for improving the quality of the society.

Mistry *et al*. (2016) used the conceptual framework presented in his article based on the core assumption that develop-mental contexts, and outcomes are culturally situated and mutually constitutive. Investment in education leads to the formation of human capital, comparable to physical capital and social capital, and that makes a significant contribution to economic growth.

Irshad (2015) argued that the South Asian region as a whole invests 2.6% of the aggregate gross regional product on education, which is substantially less than the proportion in most developed and some other countries. For example, the developed countries invest more than 6% of GNP on education (more than 10% in the oil-rich Saudi Arabia, more than 8% in Canada and the Netherlands) and the developing Sodeyfi & Katircioglu (2016). Countries invest 4.1% of GNP on education (it is. however, 5.5% for Kenya and 7.7% for Madagascar). However, several African countries invest less than 1% of GNP on education (UNESCO, 1981).

Denison (1967) is one of the first to lay importance on investing in education, which is thought to have impact on growth and development. Hakim *et al*. (2016) examines the causal relationship between air transport and economic growth in the South Asian context. Using panel data over a period of 42years (1973–2014), they applied Pedroni/Johansen cointegration test methods, followed by Granger long-run & Wald short-run causality tests. To allow for spatial heterogeneity then apply Time Series Cross Section (TSCS) Granger causality tests for each of the eight analysed countries separately. And find that Investment in education can enhance growth and development by encouraging activities that can help catch up with foreign technological progress. Benhabib and Spiegel (1994) found that improved level of education positively affected growth in Chinese Taipei while Berthelmy (1996) came out with a different result.

Francis & Iyare (2006) used cointegration and vector error-correction models to analyse the causal relationship between education and development in Barbados, Jamaica, and Trinidad and Tobago using annual time series data from 1964 to 1998. Expenditure on education per capita is used as the proxy for education, while gross national income (GNI) per capita is the proxy for development. The empirical results provide some evidence of bi-directional causality in the short in Jamaica.

So, it can be said that empirical results on causality between education and growth have been mixed but more results, based on improved methodology (Augmented Dickey-Fuller test, Phillips-Peron tests for unit root problem, Co- integration) test can help to clear the issue.

Narayan *et al*. (2010) investigated the relationship between health and economic growth through including investment, exports, imports and research and development (R & D) in South Asia for the period 1974-2007 using panel Co- integration. They found that health, investment, exports, interaction between education and R & D have contributed positively to economic growth, imports have a statistically significant negative effect while education has had an insignificant effect on economic growth. Parida and Sahoo (2007) examined the export-led and manufacturing-led growth hypothesis for four South Asian countries; namely, India, Pakistan, Bangladesh and Sri Lanka for the period 1980-2002 using panel co-integration technique (Reitz 2018). They found support for export-led growth hypothesis and find that exports, fixed capital formation and expenditure on health and education to have statistically significant coefficients re-emphasizing the importance of these variables for higher economic growth. On the other hand, educated people

are less likely to engage in crimes towards the welfare of country and citizens. Education provides strong citizens to a country.

Pelinescu (2015) Using a panel methodology, the paper tried to reveal the role of human capital as a factor of the growth and to argue that the slow investment in human capital should influence the sustainable development of the EU's countries. The model revealed a positive relationship, statistically significant between GDP per capita and innovative capacity of human capital (evidenced by the number of patents) and qualification of employees (secondary education) as expected according to economic theory. Unexpected is the negative relationship between education expenditure in GDP and GDP per capita, a possible explanation being the heterogeneity of countries considered.

Stevens & Weale (2003) provides a survey of work on the link between education and economic growth. It shows that data from the early 20th century are coherent with conclusions about education and economic growth derived from the much more recent past. The basic model is that output is a function of factor inputs as described by Solow (1956). Results which suggested much higher or much lower returns would lack credibility, there has probably been an element of selection bias in the findings which are published.

Teles & Andrade (2004) sought to investigate the relation between public spending on basic education and economic growth. In this paper, five complementary theoretical models were constructed. And the findings are that basic education affects agents' decisions over their lifetime, and that the significance of the relation between public spending on education and economic growth is altered by changes in the composition of government spending with regard to basic and higher education, and this relation may be insignificant when higher education is not promoted and an increase in government spending on basic education implicates a decline in private human capital investment.

Loening (2005) investigates the impact of human capital on economic growth in Guatemala during 1951-2002 using an error- correction methodology. The results indicate a better educated labour force having a positive and significant impact on economic growth.

Babatunde (2005) investigated the long run relationship between education and economic growth in Nigeria between 1970 to 2003 through the application of Johansen Co- integration technique and Vector Error Correction Methodology in Nigeria.

According to the Lucas (1988) growth theorists such as the human capital accumulation can sustain growth for long time period (Stokey1988; Azariadis & Drazen1990). These theories have achieved support from macroeconomic regression analysis which emphasized on the positive effect of education on growth and development according to the economic historians work such as (Fogel, 1990; Mankiw *et al*. 1992; Barro & Sala-i-Martin 1995). Expenditure on education is an investment in human capital and plays an equally important role in economic development. It is social infrastructure for economic development.

Adam Smith, a famous classical economist treats human resources as part of the fixed capital. Marshall called it a national investment. According to him, capital invested in a human being is most valuable of all investment.

Jager & Schmidt (2016) demonstrate for a panel of 19 OECD countries between 1971 and 2007 that the share of elderly people and public investment rates are cointegrated, indicating a long-run relationship between them. Estimating this cointegration relationship via dynamic OLS (DOLS) and find a negative and significant effect of population aging on public investment. Moreover, the estimation of an error correction model reveals long-run Granger causality running exclusively from aging to investment. It is only in recent years Shield and other economists have reintroduced the importance of human resources development in economic analysis.

Eggoh *et al*. (2015) provides new empirical evidence concerning the relationship between human capital (measured by education and health related variables) and economic growth for a large sample of 49 African countries over the period from 1996 to 2010. Using traditional cross-section and dynamic panel techniques, find that public expenditures on education and health have a negative impact on economic growth, whereas human capital stock indicators have a slight positive effect.

2.3 Literature review about FDI & Remittances on the international migration and Tourism

Balasubramanyam, Salisu & Sapsford (1996) examines, within a new growth theory framework, the role which foreign direct investment (FDI) plays in the growth process in the context of developing countries characterised by differing trade policy regimes. The paper tests (using cross-section data relating to a sample of forty-six developing countries).

Despite the fact that FDI is one of the most significant indicators of growth in international production, it accounts for less than 20% of the total investment in any foreign investment. However, the volume and efficiency of FDI is usually dependent on whether a country is keen on export promotion or import substitution policies.

According to Lall and Narula (2004), the role of multinational enterprises (MNEs) in industrial development in a 'learning system' perspective. They also analyse the policy tools available for using FDI for economic development in a liberalising, post-World Trade Organisation and the constraints to doing this they find that the quality of FDI differs due to cross-border operations, leeway in the proficiency and scope of FCFs, strategies and scope of MNE operations and nature of firm-specific assets accessed/possessed by the FCFs.

Since time in memorial, FDI has been considered to propel economic growth of countries facing huge gaps of resources such as Japan and Asia countries. This is because they lead to productivity, market competition and innovation through exchange of skills, expertise, resources and technology.

Japan is among the most densely populated countries in the world. In fact, it is the 10th populous nation in the world covering an approximate area of 377,973 kilometer square (GSI 2018). Recently, Japan has risen to be one of the major economic powers in the world. This has been attributed to the large working labor force, supportive government, highly skilled and educated labor force and advanced technology. Due to the rising economic growth, the living standards of the Japanese citizens has increased to almost the same level as those of the United States of America.

The Japanese FDI in Asia started to increase rapidly in the late 1960s.This could perhaps be explained by both internal factors in Japan such as a reduction in the marketability of Japanese products and external factors in Asia. In 1970, Japan shifted their concentration to Asia newly industrializing economies (NIEs) to secure an export base following the NIEs export promotion policies. In 1981, a number of direct investments related to natural resources were assumed in the developing countries in Asia resulting to a significant increase in the Japanese economy. The portion of manufacturing of Japanese FDI in Asia has been diminishing over time but it is still larger than the corresponding shares for Japanese FDI in other parts of the world.

The geographical location of Japan does not allow them to practice agriculture. However, the amount of farmland that is available is too small to feed its large and growing population. Additionally, Japan lacks a significant amount of raw materials with are important for its industries and energy. It is for this reason that Japan is less competitive in energy intensive industries and agricultural products. To solve this problem of insufficiency, Japan has been importing most of its food products as well as food products from Asia an effect of the FDI. Japan then uses its trade surpluses obtained from the import of manufactured goods such as electronic equipment and automobiles to pay for its trade deficits with Asia (Paul, James & Fortmann 2005). It is for this reason that Japan upholds international trade with Asian countries.

According to Fontagne (1999), From OECD working paper series, globalization has proven to be an important trend in the global economy. The connection between FDI and trade are said to be the main significant characteristic of globalization. This relationship between FDI and international trade can be analyzed at microeconomic, macroeconomic and industry levels. For Japan and Asia, the effect of trade and FDI on economy is more significant. Japan's rapid economic growth is characterized by high degree of dependence on international trade and high flows of inward FDI. According to World Bank (2018), Japan is considered the world's 4th largest exporter and importer.

According to Glass (2008), multinational activities are divided into two: Horizontal and vertical FDI. Horizontal FDI is when a firm invests in the same business in an overseas that it operates in its home country. Vertical FDI on the other hand, is when a company in a totally different business abroad as compared to its operations at home. This two types of FDI have distinctive impact on international trade. It is important to note that japan has been classified as one of the nations with equal income among its citizens as a result of FDI and MNCs.

Other than effects such as employment, transfer of skilled labor and exports, the most significant effect of FDI on the international trade between Japan and Asia is that FDI have helped maintain or capture local and regional markets. Additionally, Japanese FDI in Asia is the leading cause of regionalization of foreign trade in Asia which has resulted to economic development of Asian countries.

Migration is the movement of people from one region to another, in this case from Asia to Japan Thapan (2008). However, in the case of Asia and Japan, international labor migration (ILM) is of economic origin. In that, it was as a result of the "push" and "pull" forces trying to create a balance

between capital and labor. Often, scholars suggest that this movement from Asia to Japan ("flock of flying geese") is a world economic development pattern (Freeman & Mo 1996). The ILM from Asia to Japan began in the 1960s and 1970s.The first wave of the Japanese FDI hit majority of the Asian NIEs in the early 1980s. Japan was experiencing a shortage of labor and hence a large number of illegal workers moved in to meet the needs of firms as well as fill the vacancies of the tangent workers. Majority of these workers were uneducated and unskilled. In the years 1992, Japan started importing contract workers from Southeast Asia. According to Vernon (1966), developed countries tend to be the source of FDI in third world countries. This could perhaps explain the ILM effect of Japanese FDI in Asia.

Sauvant *et al*. (1993) explores the impact of macro-level processes of the global economy on international migration. The authors utilize a cross-national panel regression analysis to examine the effect of foreign direct investment on the level of emigration from 25 less-developed countries between 1985 and 2000. The findings indicate that the stock of foreign direct investment increases net emigration over time, while trade integration lessens these movements. The level of economic development exerts no independent effect on out-migration once other factors are controlled. The results are discussed in the context of contemporary development and migration theories. Main reason behind the short term effect of the FDI on ILM is the fact that, it reduces financial constraints by providing better employment opportunities thus prompting poverty driven workers to move abroad (to Japan).

According to Dunning and Narula (1996), the relationship between FDI, ILM and economic development can be explained by the investment-migration-development path (IMDP) which is shown in figure 1 below where the NOI is the FDI and NOM is the ILM.

Lee & Brahmasrene (2013) investigates the influence of tourism on economic growth and CO2 emissions. In the empirical analysis, unit root and cointegration tests using panel data of European Union countries from 1988 to 2009 are performed to examine the long-run equilibrium relationship among tourism, CO2 emissions, economic growth and foreign direct investment (FDI). Results from panel cointegration techniques and fixed-effects models indicate that a long-run equilibrium relationship exists among these variables. Furthermore, tourism, CO2 emissions and FDI have high significant positive effect on economic growth. Economic growth, in turn, shows a high significant positive impact on CO2 emissions while tourism and FDI incur a high significant negative impact on CO2 emissions.

Annually, Japan accommodates more than 30 million tourists from different countries including Asia. Recently, Japan and Asia as a whole have been experiencing a tourism boom owing to the many tourist destinations. This increasing number of tourist arrivals has resulted into an increase in the demand for food and accommodation.

Samimi *et al*. (2013) investigates the existence of Granger causality and cointegrated relationships between tourism related Foreign Direct Investment (FDI) and tourism development in developing countries using panel VECM techniques from 1995 to 2008. The results confirm the existence of a co-integrated relationship between variables in the long run. In addition, there is a bilateral long-run causality between tourism related FDI and tourism development, while there is no short-run causality between variables. It is for this reason that they have partnered with Trip Advisor to help advertise and control the massive number of tourists.

Rappaport (2000) argued that an average adjustment cost to capital formation which is increasing and convex with respect to the rate of gross investment successfully calibrates the Ramsey-Cass-Koopmans neoclassical growth model.

These studies have drawn that FDI has only positive impact on the tourism industry. Indirectly, through the FDI, workers originating from Asian countries to Japan tour the country and increase the percentage of local tourists significantly.

Remittances are the amount of funds sent by foreign workers to friends and families in their home country (World Bank, 2012). Remittances have been considered to be very vital in the economic development of countries all around the globe, especially since they are responsible for poverty eradication and foreign exchange reserves (Adams *et al*. 2005). The amount of global remittances in 2018 was estimated to be $642 billion.

Citizens from different countries in Asia travel to Japan in search of better employment and security annually (ILO 2014) as a result of the FDI. Majority of them leave their families behind with the promise that once they are employed they will help with the family burden of poverty. The Japanese FDI create a favorable policy for these workers to send to their loved ones in their home country.

2.4: Literature review about the relationship between international migration, education and poverty

Most literature papers reviewed had scanty information on the impact of international immigration to the poverty levels and education from the remittances sent. There is however keen interest in the revamped economy from South Asia countries which has led to heightened international migration. South Asia is becoming an increasing area of interest due to the high number if population movements experienced especially after the formation of the ASEAN Economic Community that has eliminated trade barriers.

Hugo (2017) summarises recent changes in patterns of immigration and emigration in ASEAN countries. These data, however, do not detect the complexity of South-east Asia's migration system, and this is demonstrated by focusing on the ASEAN-Australia migration corridor. ASEAN migration relationships with other countries are complex, multi-directional and reciprocal, although this is not evident in traditional data. There are significant opportunities for international movement to play a role in economic development and poverty reduction in South-east Asia.

According to Hugo (2017), the number of people that lived outside their country of birth was 232 million in 2013 a report that was conducted by the United Nations. Hugo (2017) elucidated that the ASEAN countries had 4.1 percent of this population which indicate that the South Asia counties represent the fastest growing region in international migration.

Wright-St Clair & Nayar (2017) presents the findings of the cross-cultural substantive theory of how older Chinese, Indian, and Korean immigrants' participation contributes to civic society, with particular emphasis on the process of contributing through co-ethnic community participation.

The study was conducted in Auckland, New Zealand; chosen for its sizeable communities of older Asian immigrants. The Auckland University of Technology Ethics Committee granted approval [number 12/100] for the study. Ethically, the project was designed to, at all times, honour the World Health Organization's (2011) standards for health-related research with human participants. According to Wright-St Clair & Nayar (2017), cultural meaningful occupations are the major hindrances to older immigrant's restatements in a new country. There is a new study that shows that older Asian immigrants add to the social development of the new host country in terms of social capital but there is little evidence towards this narrative.

They also argue that the residents are predominantly critical of the older immigrants in that the residents spend their entire working life struggling to get health and pension entitlements while an immigrant enjoys similar rights despite working for a shorter period. This is an indication that though international immigrants contribute to the welfare of their host nation they are faced with enormous challenges abroad and this could further demoralize then and lead to depression since they are expected to assist their siblings in their host countries.

Canada is considered the bastion of refugees and immigrants, but it is essential to different economic immigrants and immigrants that arrive on humanitarian grounds because their contribution to the economy is different (Lawlor & Tolley 2017). The study established that there is a huge difference in the manner the refugees and immigrants are framed, one is on the basis of economic contribution while the refugee is framed is on the basis of humanitarian support. The preference according to Lawlor & Tolley (2017) is on the international immigrants as opposed to refugees because of their economic contribution. According to Lawlor & Tolley (2017), there is a correlation between media and public opinion regarding refugee and international immigrants since changes in policy on these two groups is relayed to the public through the media which allows the public to make their response which will capture the general mood in the manner in which it is presented.

Chowdhury (2016) examines how remittances can influence economic growth under different levels of financial development. Using a dynamic panel estimation of 33 top remittance-recipient developing countries from 1979 to 2011, the results suggest that financial development neither works as a substitute nor a complement for the remittance–growth nexus. While remittances are effective in promoting economic growth, the influence of financial variables is found to be insignificant. More developed financial systems may attract more remittances; however, the interaction effect of financial development and remittances is not growth enhancing.

Antwi & Koranteng (2017) used time series data from 1990 to 2014 on Ghana and found a positive impact of remittances on the growth rate of real GDP. Engel and Granger Cointegration test and Error Correction Models were used.

Remittances were found to be pro-cyclical. Granger causality tests which corrects for the errors of cointegrated variables found causality running from financial development to remittances and from

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remittances to real GDP. Remittances have been found in other studies to benefit the Ghanaian economy by reducing poverty and sustaining the current account. This study shows a positive impact of remittances on aggregate output.

Bayar (2015) examines the causal relationship among the real GDP per capita growth, personal remittances received and net foreign direct inflows in the transition economies of the European Union including Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Poland, Romania, Slovak Republic and Slovenia during the period 1996-2013 by using Dumitrescu and Hurlin (2012) causality test. We found that there was unidirectional causality from remittances and foreign direct investment inflows to the economic growth.

Meyer & Shera (2017) conduct to explore the impact of worker remittances on economic growth of Albania and five regional countries by employed the annual panel data from 1999–2013. In order to explore the relationship between worker remittances and economic growth multiple regression analysis is utilized. Different diagnostic tests are applied in order to confirm the major assumption of multiple regression analysis like multicollinearity, heteroskedasticity and autocorrelation. After employing all these tests multiple regression analysis is conducted which shows that worker remittances are positively and significantly contribute in the economic growth of six countries.

Simionescu, Ciuiu, Bilan & Strielkowski (2016) explore, some macroeconomic determinants of permanent emigration from Romania were identified using a Bayesian algorithm that solves the problem of small sets of data with some missing values. As expected, the poverty and the small increases in real earnings determined Romanian people to go abroad.

2.5.   Limitation of previous study and motivation of this thesis

2.5.1 How to overcome the limitation of previous studies about education and economic growth

Many previous studies argued that Investment in education leads to the formation of human capital, comparable to physical capital and social capital, and that makes a significant contribution to economic growth. Mistry *et al*. (2016) explain that education is there for a more realistic indicator of development than any other variable. It is the necessary condition for all kinds of development-social, political, cultural, as well as economic. This article addresses the challenge by offering an integrated conceptual framework. The chapter 3 argued that Education thus has a dual role. It is

an input as well as an output. It is a means of development and is development itself. Investment in education plays a key role in economic development.

Narayan *et al*. (2015) revealed that investigate the relationship between health and economic growth through including investment, exports, imports, and research and development (R&D), for 5 Asian countries using panel unit root, panel cointegration with structural breaks and panel long-run estimator for the period 1974-2007. In chapter 3 I will try to use with alternative variables the relationship between Education and economic growth south Asian in panel data analysis. Firstly, we examine the analytical approach on economic development and education based on the gross domestic product (GDP) as the economic indicator and the expenditure, net enrollment (Primary, secondary, tertiary) and human capital indicator based on improved methodology (Levin, Lin & chut and ADF-Fisher chi-square test for unit root problem and (Augmented Dickey-Fuller test, Phillips-Peron tests for Co- integration, can help to clear the issue.

Francis & Iyare (2006) used cointegration and vector error-correction models to analyse the causal relationship between education and development in Barbados, Jamaica, and Trinidad and Tobago using annual time series data from 1964 to 1998. Expenditure on education per capita is used as the proxy for education, while gross national income (GNI) per capita is the proxy for development. The empirical results provide some evidence of bi-directional causality in the short in Jamaica. But There is no evidence of causation running from per capita expenditure on education to per capita gross national income in either the short or long run. In Chapter 3 the methodology consists of the means of estimation and econometric analysis which help to determine the actual quantitative effects of education in economic growth especially in South Asian nations.

Loening (2005) and Pelinescu (2015) using a panel methodology, the paper tried to reveal the role of human capital as a factor of the growth and to argue that the slow investment in human capital should influence the sustainable development of the EU's countries. The model revealed a positive relationship, statistically significant between GDP per capita and innovative capacity of human capital (evidenced by the number of patents) and qualification of employees (secondary education) as expected according to economic theory. Unexpected is the negative relationship between education expenditure in GDP and GDP per capita, a possible explanation being the heterogeneity of countries considered. But in chapter 3, I will use in the model as alternative variables for human

capital, weighted average of the population enrolled in primary education, secondary and tertiary to highlight how the results were influenced by choosing the proxy for human capital.

It has to be remembered that the most appropriate method for research is not easily and directly visible and even as the final choice is made, the never-ending debate over methodology can always arise. These debates have happened even in established sciences such as economics and political science and are as old as these sciences themselves without showing signs of convergence. Indeed, those debates have made science progress. I would argue that in determining which method is more appropriate is to carefully define the problems at hand and to use proper reasoning by applying the basic method available.

Eggoh *et al*. (2015) provides new empirical evidence concerning the relationship between human capital (measured by education and health related variables) and economic growth for a large sample of 49 African countries over the period from 1996 to 2010. Using traditional cross-section and dynamic panel techniques. In chapter 3 I will argue that the relationship between expenditure on education and growth of income, GDP, the rate of return on investment, physical capital formation etc. But when it comes to development planning economist continue to treat education as a residual category. The economic impact on education on development can be viewed as in terms of benefit to an individual and to the economy as a whole. As economic growth is a social phenomenon, we could apply a different framework when we think about and analyze economic growth. The framework proposed in this research is not exhaustive; it just represents an effort to view economic growth from a human-development perspective. The research will also try to view the problems at hand from an area-studies point of view, meaning not to be overly trapped by the strict methodological rigor from the respective discipline.

2.5.2 How to overcome the limitation of previous studies about FDI & Remittances on the international migration and Tourism

According to Lall and Narula (2004), the quality of FDI differs due to cross-border operations, leeway in the proficiency and scope of FCFs, strategies and scope of MNE operations and nature of firm-specific assets accessed/possessed by the FCFs. But chapter 4 will argue that since time in memorial, FDI has been considered to propel economic growth of countries facing huge gaps of resources such as Japan and Asia countries. This is because they lead to productivity, market competition and innovation through exchange of skills, expertise, resources and technology.

According to Glass (2008), multinational activities are divided into two: Horizontal and vertical FDI. Horizontal FDI is when a firm invests in the same business in an overseas that it operates in its home country. Vertical FDI on the other hand, is when a company in a totally different business abroad as compared to its operations at home. This two types of FDI have distinctive impact on international trade. But It is important to note that japan has been classified as one of the nations with equal income among its citizens as a result of FDI and MNCs. Other than effects such as employment, transfer of skilled labor and exports, the most significant effect of FDI on the international trade between Japan and Asia is that FDI have helped maintain or capture local and regional markets. Additionally, Japanese FDI in Asia is the leading cause of regionalization of foreign trade in Asia which has resulted to economic development of Asian countries.

Rappaport (2000) argued that an average adjustment cost to capital formation which is increasing and convex with respect to the rate of gross investment successfully calibrates the Ramsey-Cass-Koopmans neoclassical growth model. In chapter 4 I will argue that, calibrating the Ramsey-Cass-Koopmans model presages that neoclassical growth theory still has much to teach us. While the welfare implications of transitional dynamics may be swamped by those of long run endogenous technological change and productivity growth, demarcating the limits of neoclassical theory helps clarify where endogenous growth theory must begin and so complements efforts to understand long run growth.

But in doing so, it requires a willingness to go beyond the frontiers that the social sciences have imposed upon themselves. Comparing similar problems in relatively similar contexts would enable researchers to dispose of the aspects that obscure the conceptualization process and enable them to get to the essential core of the problems – focusing more on the problems rather than on the method. In additionally, I will use with alternative variables FDI, migration & remittances because they lead to productivity, market competition and innovation through exchange of skills, expertise, resources and technology.

2.5.3 How to overcome the limitation of previous studies about the relationship between international migration, education and poverty

According to Hugo (2017), the number of people that lived outside their country of birth was 232 million in 2013 a report that was conducted by the United Nations. Hugo (2017) elucidated that the ASEAN countries had 4.1 percent of this population which indicate that the South Asia counties represent the fastest growing region in international migration.

But chapter 5 will explain these complex movements have established active linkages, not only between the members of ASEAN but with other countries, especially South Asian nations. Recognizing that these linkages are much more than corridors to channel the brain drain out of the region is important.

Bradford (2016) has developed a global migration model that incorporates a continuum of skills into a one-sector growth model. And argued that it would be more prudent for poor nations to improve their economy through temporary migration and sending remittances to their home countries as an anti-poverty program. While this notion may be true for some countries it is limited to settings and it is a simplistic approach to reducing global poverty by exporting labor rather than growing the economy. The study also uses static data through a partial equilibrium model that fail to account to the effects of allowing people to move from poor countries to rich countries. In chapter 5 will evaluate the influence of international migration, remittances, education expenditure and poverty in South Asia based on a new data set that includes data on international movement for seven middle-income countries in South Asia. Most studies on international migration are still plagued by a lack of data which is a major impediment in estimating poverty elasticity. In determining poverty levels based on migration and remittance variables there are several parameters that are put in consideration such as the headcount index which is set at a dollar per individual per day. The poverty gap index that measures the extent of percentage change between expenditure among the poor and their income. Inequality is measured through Gini coefficient. Data was a major impediment to determine the impact of remittances from immigrants since only official information was considered.

Meyer & Shera (2017) conduct to explore the impact of worker remittances on economic growth of Albania and five regional countries by employed the annual panel data from 1999–2013. In order to explore the relationship between worker remittances and economic growth multiple

regression analysis is utilized. Different diagnostic tests are applied in order to confirm the major assumption of multiple regression analysis like multicollinearity, heteroskedasticity and autocorrelation. After employing all these tests multiple regression analysis is conducted which shows that worker remittances are positively and significantly contribute in the economic growth of six countries. But chapter 5 will focus on relationship between migration, remittances, education and poverty in South Asia. This research attempts to conduct a combination of quantitative and qualitative method in trying to explore the relationship between education and economic growth. In addition, this research attempts on focusing more on the problems, rather than on the method – such that it justifies the application of a multi-disciplinary research.

Simionescu, Ciuiu, Bilan, & Strielkowski (2016) examine some macroeconomic determinants of permanent emigration from Romania were identified using a Bayesian algorithm that solves the problem of small sets of data with some missing values. As expected, the poverty and the small increases in real earnings determined Romanian people to go abroad. This research is limited by the strict consideration of the economic factors in lack of variables that count for social and psychological factors which are not available at national level. On the other hand, data regarding temporary emigration are also important, in chapter 5 it will explain the new data set with improved methodology. It will note that the thesis could provide explanations on how and on what magnitude has education been related to and contributed to economic growth and performance. The links and channels between education and economic growth could happen in many ways. The links also likely involve a two-way rather than a one-way relationship.

2.6: Conclusion:

This chapter provides a comprehensive reviews existing theories related to education, migration, remittance and economic development. Moreover, this chapter reviews empirical studies about the impact of migrants 'remittance on poverty and inequality and also the use of remittances. Its discuss how to overcome the limitation of previous studies and as economic growth includes wide arrays of changes and transformations, its relationship with education, migration, remittance are requiring a clear argumentation outline from the large body of research. Constructing of analysis between education, migration, remittances and growth would provide a clearer understanding about the nature and impact of economic growth.

CHAPTER 3: Education and Economic Growth in South Asia

3.1 Introduction

Education is simply the process by which people seek to advance in command of knowledge at various capacities according to their interests and abilities. The rapid transformation of the world into a highly technological institute has posed a significant challenge on the illiterate class of people in the society today. Most transactions are rapidly being transformed and done through technological means, most of which require some form of education to clearly understand (Lee 2016). Economic growth on the other hand is viewed as an increase in the general GDP of any nation over a given period of specified time. Most developed nations have had an indirect proportional relationship between the two variables of my study. This implies that both education and economic growth have had a significant positive trajectory on the upward crest both affecting the development of each other positively. For this reason, it is important to focus on the effects of acquiring enough knowledge and general economic growth especially in South Asian nations which are part of developing countries in the 21st century.

Education contributes to economic growth by directly having an effect on the state of human capital which is essential in establishing per capita income hence the GDP of any given state (Mistry *et al*. 2016). Human capital refers to a set of assets, which may include knowledge and skills or financial wellbeing, which may help in contributing to the level of income hence economic growth. There exists both theoretical and empirical affirmations of the effect of education on national economic growth. Theoretically, it has been noted that two theories provide a point of view on the relationship between education and economic growth. One is the neo-classical economic growth theory which suggests that a permanent increase in the availability of human capital, which as stated earlier as an effect of education, leads to a corresponding one step increase in the rate of economic growth (Dent 2016). The second theory which is the endogenous theory suggest that a permanent increase in the level of stalking of human capital for any given nation leads to a permanent growth in the economic capability of any given nation. Empirically however, there is an application of macroeconomic publications that point out the variations between the two subject matters. There is an application of both cross-sectional studies and time frame series studies on various nations such as the South Asian

countries in this study. The cross-sectional study which looks into the existing macro-economic literature is harmonized with the data obtained through the time series analysis and the empirical results are discussed to come up with the best findings on the study. This is the idea adopted for this study.

Traditionally, economic development has been evaluated in terms of growth in gross domestic products called GDP, per capita income, industrialization, rural development and so on. During 1970`s it was redefined elimination of poverty, inequalities, unemployment etc. became an essential part of economic development. It was only 1991 The World bank talked about development in terms of improvement in qualities of lives (World bank 1991). Which included education & health as essential components of development instead of just increase & income GDP etc. It changes the social and cultural climates. Education is there for a more realistic indicator of development than any other variable. It is the necessary condition for all kinds of development- social, political, cultural, as well as economic (Mistry *et al..* 2016). Education thus has a dual role. It is an input as well as an output. It is a means of development and is development itself. Investment in education plays a key role in economic development. There are three ways in which education can help economic development. One is, to look at labour as homogenous, and educated and uneducated workers that skilled and unskilled workers as a perfect substitute. The second way in which education can contribute to economic development is, by looking at works imperfect substitute. For example, any number of unskilled uneducated workers cannot replace in an engineer. An enterprise requires a particularly skilled and cannot be set up and run in the absence of education in parting the skilled (Tran 2016). Third, and the most important benefit of education come in times of rapidly changing technology. Education is needed to learn and create technology. Educated labour is better in implementing and adopting new technology. Greatest economic benefit from education comes from the development of technology. A country having good human capital stock can catch up with the latest technology and also become a leader a new technology. Education leads to the development of a globally competitive economy. The effectiveness of physical capital is except dependent on human capital. Technical, professional and administrative people are needed to make use of this capital, mobilize capital, exploit natural resources, create a market and carry on trade. It provides political leaders, lawyers, judges, doctors, nurses, engineers, artist, writers, craftsman and so on to spire development achieve sustainable long-term economic growth.

South Asian countries like Bangladesh, India, Pakistan, Sri Lanka, Bhutan, Maldives and Nepal had failed to sustain their economic growth due to two main reasons. Firstly, Education is always neglected by the higher authorities and secondly, poverty is increased with the passage of time in South Asia (Tilak 2018). Education is initiating economic growth throughout several aspects of improving the employment opportunities & health services, decreasing fertility rate, advanced technology, political stability and reduces the poverty rate (Narayan *et al.*. 2015). This paper has examined the relationship between Education and economic growth south Asian countries based on time series data from 2000 to 2015.There is little research in empirical literature covering education and economic growth relations in the presence of other variables such as expenditure on education in panel data analysis. Considering the importance of education for economic growth and convenience using panel data, this study was designed to analyses the relationship between education and economic growth among selected South Asian countries. Physical capital and labour force are also included in the model because both variables are the very basic components of economic growth models.

To analysis, the nature of the relationship between Education expenditure and economic growth with include of Physical capital and labour force in the selected South Asian developing countries is the primary objectives of this research work. The second main objective of this paper is to suggest some policy alternatives for the development of education to make economic growth dynamic in the selected countries of South Asia (Hayes & Kihl 2016). In this article, firstly we examine the analytical approach on economic development and education based on the gross domestic product (GDP) as the economic indicator and the expenditure, net enrollment (Primary, secondary, tertiary) and human capital indicator based on improved methodology (Levin, Lin & chut and ADF-Fisher chi-square test for unit root problem and (Augmented Dickey-Fuller test, Phillips-Peron tests for Co- integration, can help to clear the issue.

3.2 Literature Review

The role of education in economic growth and their inter-relationship are increasing focus of public debate since the era of Plato. Investment in education leads to the formation of human capital, comparable to physical capital and social capital, and that makes a significant contribution to economic growth (Mistry *et al*. 2016). Education as an investment secures

returns in the form of skilled manpower that gears the needs of development, both for accelerating economic development and for improving the quality of the society.

The South Asian region as a whole invests 2.6% of the aggregate gross regional product on education, which is substantially less than the proportion in most developed and some other countries (Irshad 2015). For example, the developed countries invest more than 6% of GNP on education (more than 10% in the oil-rich Saudi Arabia, more than 8% in Canada and the Netherlands) and the developing (Sodeyfi & Katircioglu 2016). Countries invest 4.1% of GNP on education (it is. however, 5.5% for Kenya and 7.7% for Madagascar). However, several African countries invest less than 1% of GNP on education (UNESCO 1981).

Denison (1967) is one of the first to lay importance on investing in education, which is thought to have impact on growth and development. Investment in education can enhance growth and development by encouraging activities that can help catch up with foreign technological progress (Hakim *et al*. 2016). Benhabib & Spiegel (1994) found that improved level of education positively affected growth in Chinese Taipei while (Berthelmy 1996) came out with a different result. Francis and Iyare (2006) found evidence of bidirectional causality for Jamaica and evidence of causation running from income to education for Barbados and Trinidad and Tobago. So, it can be said that empirical results on causality between education and growth have been mixed but more results, based on improved methodology (Augmented Dickey-Fuller test, Phillips-Peron tests for unit root problem, Co- integration) test can help to clear the issue.

Narayan *et al*. (2010) investigated the relationship between health and economic growth through including investment, exports, imports and research and development (R & D) in South Asia for the period 1974-2007 using panel Co- integration. They found that health, investment, exports, interaction between education and R & D have contributed positively to economic growth, imports have a statistically significant negative effect while education has had an insignificant effect on economic growth. Parida and Sahoo (2007) examined the export-led and manufacturing-led growth hypothesis for four South Asian countries; namely, India, Pakistan, Bangladesh and Sri Lanka for the period 1980-2002 using panel co-integration technique (Reitz 2018). They found support for export-led growth hypothesis and find that exports, fixed capital formation and expenditure on health and education to have statistically significant coefficients re-emphasizing the importance of these variables for higher economic growth.

On the other hand, educated people are less likely to engage in crimes towards the welfare of country and citizens. Education provides strong citizens to a country. Education has a highly positive impact on economic growth (Pelinescu 2015). Stevens & Weale (2003) provide a survey work on the link between education and economic growth. Teles & Andrade (2004) show the main objective of their paper is to visualize the relation between government spending on basic education and the human capital accumulation process, observing the impacts of this spending on individual investments in higher education and on economic growth. Loening (2005) investigates the impact of human capital on economic growth in Guatemala during 1951-2002 using an error- correction methodology. The results indicate a better educated labour force having a positive and significant impact on economic growth. Babatunde (2005) investigated the long run relationship between education and economic growth in Nigeria between 1970 to 2003 through the application of Johansen Co- integration technique and Vector Error Correction Methodology in Nigeria.

According to the Lucas (1988) growth theorists such as the human capital accumulation can sustain growth for long time period (Stokey,1988; Azariadis & Drazen 1990). These theories have achieved support from macroeconomic regression analysis which emphasized on the positive effect of education on growth and development according to the economic historians work such as (Fogel 1990; Mankiw *et al*. 1992; Barro & Sala-i-Martin 1995). Expenditure on education is an investment in human capital and plays an equally important role in economic development It is social infrastructure for economic development (Tupas 2015). Adam Smith, a famous classical economist treats human resources as part of the fixed capital. Marshall called it a national investment. According to him, capital invested in a human being is most valuable of all investment. In the following years, economist paid a very little attention to the role of human resources in economic growth (Jager & Schmidt 2016). Measures of capital formation included physical capital but excluded expenditure in education and research. It is only in recent years Shield and other economists have reintroduced the importance of human resources development in economic analysis (Eggoh *et al*. 2015). The relationship between expenditure on education and growth of income, GDP, the rate of return on investment, physical capital formation etc. But when it comes to development planning economist continue to treat education as a residual category. The economic impact on education on development can be viewed as in terms of benefit to an individual and to the economy as a whole

3.3 Methodology and Data

This paper employed the use of a well-illustrated conceptual framework of economic growth models. It focuses on cross regression to determine the relationship between several dependent variables. These variables include Gross Domestic Product (GDP, y), expenditure on education (k), labor force (L) and education (E). The other variables are net enrollment of primary, secondary and tertiary. The data used here is majorly obtained from the World Bank and is that of seven countries from the southern parts of Asia.

The data represents statistics collected over a period of years from the year 2000 to 2015. Various tests are going to be conducted in addition to regression to come up with the appropriate relationship between the variables.

In reference to Loening (2004), human capital is first considered as an independent factor of production (Apostoloy 2016). This is depicted in the Cobb-Douglas production function with constant return to scale as:

$$Y = A.\, K^{\gamma}.\, H^{\theta}.\, L^{(1-\gamma-\theta)} \ldots \tag{1}$$

Where Y is the output, A represents the total productivity factor, K is the physical capital or expenditure in education, H is human capital and L is labor. The logarithm of equation (1) gives us the structural form of the production function as shown;

$$Ln\ y_t = Ln\ A + \gamma.Ln\ k_t + \theta.Ln\ h_t + u_t \ldots \tag{2}$$

From which y = Y/L = output per worker, k = K/L = capital per worker, h = H/L = average human capital

In its error correction form equation (2) can be represented as:

$$\Delta Ln\ y_t = \beta_0 + \beta_1\Delta Ln\ k_t + \beta_2.\ \Delta Ln\ h_t \ldots \beta_3.\ (Ln\ y_{t-1}\ \gamma.Ln\ k_{t-1} + \theta.Ln\ h_{t-1} - Ln\ A) + u_t \ldots(3)$$

The final structural form of the model in the vector error correction form is given as:

$$\Delta Ln\ y_t = Ln\ A + \beta_1\Delta Ln\ k_t + \beta_2.\ \Delta Ln\ h_t \ldots \beta_3.\ Ln\ y_{t-1} + \beta_4.Ln\ k_{t-1} + \beta_5.Ln\ h_{t-1} + \beta_6.Dummy_t + u_t$$
$$\ldots \tag{4}$$

The coefficient β3 has been used to indicate the measure of the speed of adjustment of the system towards its equilibrium (Kleyn *et al*. 2017). The Cobb-Douglas production function with returns scale is described as;

$$Y = A.\ K^{\alpha}.\ L^{(1-\alpha)} \dots \qquad (5)$$

The logarithmic expression of this after standardization with labor units gives us;

$$Ln\ Y = Ln\ A + \alpha.Ln\ K \dots \qquad (6)$$

This model takes total factor productivity to be the function of such variables as foreign inputs, amount of human capital and government expenditure (Khatun & Afroze 2016). This infers that an educated labor force is essential in the determination of level of productivity rather than acting as a factor in a production function. Expenditure on education is also noted to influence the level of human capital which in turn would favor improvements in the total factor productivity.

3.4 Empirical Results and Discussion

The analysis useful in this study which was the regression analysis explains the reason for adoption of the applied methodology. A set of data representing various countries such as India, Nepal, Bhutan, Maldives, Pakistan, Sri Lanka and Bangladesh and various data sources from the World Bank are critically brought into regression analysis to identify the relationship between them. The initial and foremost test involved was to establish the ability of the variables adopted to assume a stationary position. In macro-economics, it is a rare occurrence to have stationary variables due to the constantly changing hypothetical environment especially in relation to the matters of the economy of any given nation. Most variables in macro-economics are thus integrated in the order of zero. However, should we ever establish a stationary variable then it would be easy to estimate the coefficients since the initial specifications of the variables would be available. The estimation can be taken as an autocorrected model where the series are non-stationary but co-integrated. Variables which are not stationary and co-integrated imply that there is a necessity in specifying the variables as differences.

3.5 Unit Root test

The establishment of the presence of unit roots and determination of the order of integration of the variables was done by the Augmented Dickey-Fuller & Levin, Lin & Chu t* test. In this test, it is evident that the confirmation of a unit root which always indicates non-stationary variables is bound to acceptance if the variables are at the level of 5% and 1%. This is in proper harmony with the initial assumption made in macro-economics that data series of this kind are often non-stationary. The null hypothesis of the non- stationary data is accepted at the 5% level of significance because the statistics of the ADF test at the same level form two variables that are less than their respective critical values. It was also found that it could not be rejected for the level. The results are represented in the table below.

Table 3.1: Unit root test, Source: author's calculations

Variables	Statistics value		Sig.	Conclusion
Δ (Y)	Levin, Lin & Chu t*	-11.7357	0.0000	I(1)
	ADF - Fisher Chi-square	112.182	0.0000	I(1)
Δ (K)	Levin, Lin & Chu t*	-6.48926	0.0000	I(1)
	ADF - Fisher Chi-square	65.4919	0.0000	I(1)
Δ (L)	Levin, Lin & Chu t*	-2.82105	0.0024	I(1)
	ADF - Fisher Chi-square	28.6132	0.0118	I(1)
Δ (NEP)	Levin, Lin & Chu t*	-4.42786	0.0000	I(1)
	ADF - Fisher Chi-square	42.7211	0.0001	I(1)
Δ (NES)	Levin, Lin & Chu t*	-1.83066	0.0336	I(1)
	ADF - Fisher Chi-square	21.6375	0.0864	I(1)
Δ (NET)	Levin, Lin & Chu t*	-3.69257	0.0001	I(1)
	ADF - Fisher Chi-square	28.2399	0.0132	I(1)

Source: author's calculations using E-views.

Table 3.1, an expression of the results for the unit root test. Unit root test is often used when the research aims at the establishment to know whether variables of the study in the data set are stationary or not. In this study, there is an application of unit root test before regression analysis. In most researches where unit root test has been applied, it has had a greater impact which is the

elimination of spurious results produce that is also harmful. This shows the importance of stationary data where the presence of a constant trend, regardless of its positivity or a negativity, helps in elimination of spurious results. I accepted the alternative hypothesis and rejected the null hypothesis for the following reasons. First and foremost, the output file of the results indicate that all the variables are the stationary first difference. This has an implication of the rejection of the null hypothesis and acceptance of the alternative hypothesis because of no significant trend yet availability of stationary data. Now we can further move to explore relationship between GDP(Y), expenditure on education(K), labour forces(A), Education(E) [Net enrolment of primary(NEP), secondary(NES) & tertiary(NET)].

3.6 Co- integration Results

The Pedroni Residual Co- integration technique is applied to explore the possibility of long-run equilibrium. Co- integration test clarifies the existence of long-run equilibrium relationship between the variables. We estimated that the Pedroni (1999) extends the procedure of residual-based panel Co- integration tests model using GDP (Y) (Dependent variable) and the independent variables Expenditure on education(K), Labour force (A), Education (E) [net enrolment of primary(NEP), net enrolment of secondary(NES), net enrolment of Tertiary(NET)] with Individual intercept and individual trend. Here are seven test results (panel v-Statistic, Panel rho-Statistic, Panel PP-Statistic, Panel ADF-Statistic, Group rho-Statistic, Group PP-Statistic, Group ADF-Statistic). In this seven test, there are eleven outcomes. And we shall consider all the outcome. In this outcome 5 result shows that probability value is more than 5%, meaning that we cannot reject the null hypothesis and six result shows that probability value is less than 5% meaning that we can reject the null hypothesis. Our null hypothesis is, there is no co-integration and the alternative hypothesis is there is co-integration. Here out of eleven corresponding probabilities, six can reject the null hypothesis meaning that majority can reject the null hypothesis. So we can take the decision that we should reject the null hypothesis and can accept the alternative hypothesis meaning that our independent variables such as (Y, K, A, E) are co-integrated, meaning that they have long run associations. The results are given below table Table 3.2.

Table 3.2: Pedroni Residual Co- integration Test

Series: logY, logk logA logE
Sample: 2000 2015
Included observations: 112
Cross-sections included: 7
Null Hypothesis: No Co- integration
Trend assumption: No deterministic intercept or trend
Automatic lag length selection based on SIC with a max lag of 2
Newey-West automatic bandwidth selection and Bartlett kernel

Alternative hypothesis: common AR coefs. (within-dimension)

	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	0.131035	0.4479	-0.895842	0.8148
Panel rho-Statistic	-1.135315	0.1281	-0.452301	0.3255
Panel PP-Statistic	-4.884001	0.0000	-4.896388	0.0000
Panel ADF-Statistic	-4.361914	0.0000	-5.942149	0.0000

Alternative hypothesis: individual AR coefs. (between-dimension)

	Statistic	Prob.
Group rho-Statistic	0.404866	0.6572
Group PP-Statistic	-8.006630	0.0000
Group ADF-Statistic	-10.04038	0.0000

Cross section specific results

Phillips-Peron results (non-parametric)

Cross ID	AR(1)	Variance	HAC	Bandwidth	Obs
Bangladesh	0.514	0.004770	0.005784	2.00	15
India	-0.196	0.056099	0.005971	13.00	15
Nepal	-0.204	0.675516	0.217011	8.00	15
Pakistan	0.189	0.502074	0.511682	1.00	15
Maldives	-0.117	0.378289	0.378289	0.00	15
Bhutan	0.022	0.064648	0.011072	10.00	15
Sri Lanka	0.050	0.087864	0.079665	2.00	15

Augmented Dickey-Fuller results (parametric)

Cross ID	AR(1)	Variance	Lag	Max lag	Obs
Bangladesh	0.303	0.001844	1	2	14
India	-0.196	0.056099	0	2	15
Nepal	-0.635	0.039722	2	2	13
Pakistan	0.189	0.502074	0	2	15
Maldives	-0.117	0.378289	0	2	15
Bhutan	-0.704	0.031213	1	2	14
Sri Lanka	-1.276	0.047299	2	2	13

Source: author's calculations using E-views.

3.7 Estimation results of productivity with country dummy

The last bit of analysis involves the use of the dummy variables estimation approach. These variables usually possess the values 0 and 1. The results provided by these estimates is important in estimating or determining the effect of a particular variable on another. The estimates of the dummy variables are shown in the table below for the South Asian countries. The coefficient for the independent variables (K, L, E) statistically significant with the expected positive sign. Because the p-value is less than 5% and all dummy variables coefficient is positive. Meaning that the particular countries policy has a positive impact on our dependent variable.

Estimation results also show that the coefficient of $K(t)$ is positive and p-value is less than 5%, so we can say that the independent variables jointly can influence the dependent variable. And the coefficient of $E(t)$ shows that the positive correlation with the dependent variable where the p-value is less than 5%. Meaning that there is a significant impact on dependent variable GDP(Y).

Table 3.3: Estimation of dummy variables, Source: author's calculations using E-views.

	coefficient	t-statistics	Prob.
c	4.166588	2.658285	0.0090
$K(t)$	0.368671	2.558477	0.0119
$E(t)$	0.281032	7.248381	0.0000
DM1	1.782535	4.197147	0.0001
DM2	1.910870	4.553546	0.0000
DM3	1.257557	2.849635	0.0052
DM4	1.292297	2.934374	0.0041
DM5	2.013810	4.849223	0.0000
DM6	1.972557	4.729617	0.0000
Adjusted R-squared	0.593521		

Source: author's calculations using E-views.

Accordingly, to the studies, it is also evident that a significant relationship exists between the expenditure on education and the productivity level. An expenditure in education simply implies an investment towards bettering the quality of education. The resultant educated labor force is very instrumental in boosting the economic growth of a country. The 7 South Asian countries have also depicted a similar trend over the years with the two variables exhibiting a direct proportionality relationship. The table 3.3 below shows this;
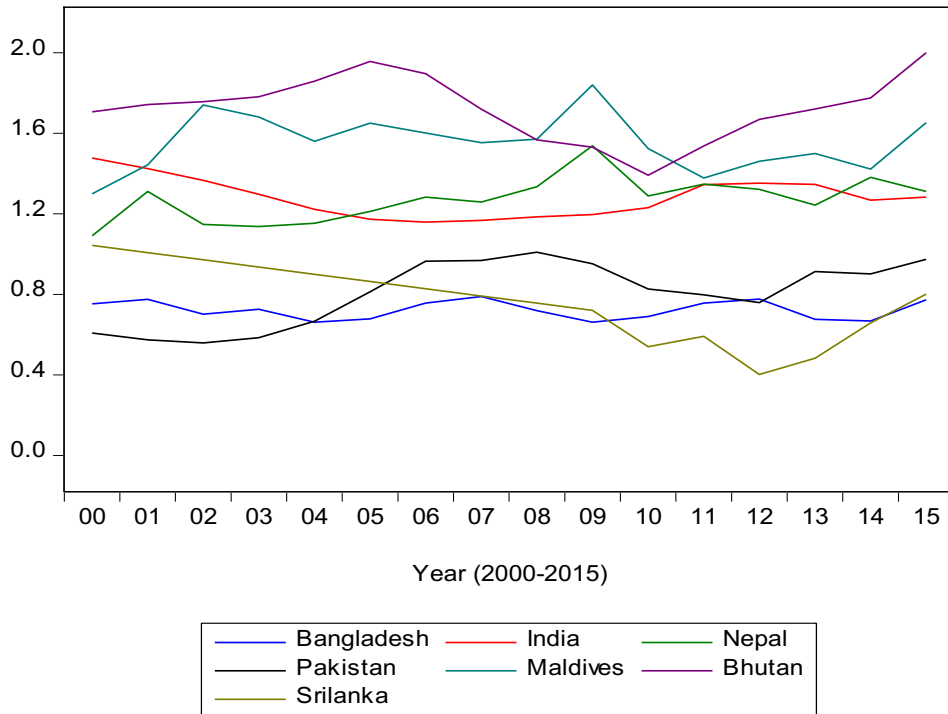
Figure 3.1: Expenditure on education (US$ million K/L) of south Asian countries, 2000-2015

From the figure 3.1, Bhutan have made the largest investment of their GDP in improving education over the years while Sri Lanka have recorded the lowest investment. The relative rates of expenditure in education has had a direct effect on the productivity level of the individual countries. Bhutan for example has enjoyed periods of increased productivity all attributed to their investment in education. Education results in skilled labor who are creative and have the ability to create new ideas of earning income. Possession of such individuals provides a country with diverse options in which they can invest and boost their economy further.

3.8 Conclusion

This paper sought to quantitative analyze the education and economic growth among 7 South Asian countries. The main variables used here were expenditure on education, human capital, labor, net enrollment of primary, net enrolment of secondary and net enrolment of tertiary. It aimed to determine the effect of these variables towards the overall productivity level in terms of economic growth.

Expenditure in education has proven to be an important variable towards the achievement of economic growth and education. Investment in education results in increased quality of services offered hence resulting in skilled personnel. The impact of skilled personnel in a country is beyond doubt a productive one. Increased ways of sourcing income and advancements in technology are all results of quality education and contribute towards the growth of an economy.

CHAPTER 4: Effects of FDI & Remittances on the International Migration and Tourism from Asian Countries to Japan

4.1 Introductions:

Japan and the most of the Asian counties have a long history especially in terms of migration and tourism which has had a significant impact on their economic, social and demographic development. However, recently, this has had unequal impact and diversity on the two regions raising an alarm. Currently, FDI, international migration, tourism and remittances are being known to be the structural features of this particular region. Japan has had a very good relation with majority of the Asian countries which is been characterized by inflows of foreign capital. This coalition between Japan and the ASEAN member states was first initiated in the year 1973. Initially, this coalition was started to settle business disputes arising from the production of synthetic rubber. However, the first significant coalition was the Fukuda Doctrine in 1977 which laid emphasis on the significance of the economic cooperation between Japan and Asia. Since then, Japan has had cooperative relationship with Asia as a whole both economically and politically which has deepened their economic interdependence over time. It is this gradual relationship that motivated this research.

In 2015, the ASC (ASEAN Economic Community) was developed with the aim of enhancing economic integration and the performance of the production network in general. Further, ASC seeks to reduce trade costs hence creating a larger integrated market. In return, this larger and unified market has opened better business opportunities which is likely to attract foreign direct investments (FDI). However, despite its imminent success, like any other organization, ASC has its weaknesses such as insufficient labor movement freedom, poor trade liberalization and unavailability of rules governing the procurement. Studies conducted previously, have suggested that FDI and increase the productivity of the host countries by creating better business opportunities.

The Japan-Asia relationship has been strengthened by FDI, migration, tourism, remittances and government support. These have been said to be the prominent boosters of external source of finance for this coalition. This has resulted to a close relationship between private enterprises and official development assistance (ODA). This relationship is a reflection of the classical

comparative advantage which plays a very paramount role in economic integration between Japan and Asian countries.

In relevance to the viewpoint, this paper empirically investigates the conceptualization of effects of FDI and remittances on the economic integration in terms of international migration and tourism. The research question was: What is the effect of FDI and remittances on international migration and tourism from Asian counties to Japan? This paper tends to utilize the variables population, distance and GDP, FDI and remittances to estimate the gravity models. In general, this paper tends to furnish the concept of FDI, remittances, international migration and tourism in the context of Japan-Asia relationship.

The relationship between FDI and remittances and other explanatory variables were trying to attempt parameters of effect on international migration and tourism from seven Asian countries to Japan. The relationship between these variables were investigated by use of OLS using gravity models. The strength of effect was investigated using panel data analysis.

4.2 Literature review:

Despite the fact that FDI is one of the most significant indicators of growth in international production, it accounts for less than 20% of the total investment in any foreign investment (Balasubramanyam, Salisu & Sapsford, 1996). However, the volume and efficiency of FDI is usually dependent on whether a country is keen on export promotion or import substitution policies. According to Lall and Narula (2004), the quality of FDI differs due to cross-border operations, leeway in the proficiency and scope of FCFs, strategies and scope of MNE operations and nature of firm-specific assets accessed/possessed by the FCFs. Since time in memorial, FDI has been considered to propel economic growth of countries facing huge gaps of resources such as Japan and Asia countries. This is because they lead to productivity, market competition and innovation through exchange of skills, expertise, resources and technology.

Japan is among the most densely populated countries in the world. In fact, it is the 10th populous nation in the world covering an approximate area of 377,973 kilometer square (GSI 2018). Recently, Japan has risen to be one of the major economic powers in the world. This has been attributed to the large working labor force, supportive government, highly skilled and educated labor force and advanced technology. Due to the rising economic growth, the living

standards of the Japanese citizens has increased to almost the same level as those of the United States of America.

The Japanese FDI in Asia started to increase rapidly in the late 1960s.This could perhaps be explained by both internal factors in Japan such as a reduction in the marketability of Japanese products and external factors in Asia. In 1970, Japan shifted their concentration to Asia newly industrializing economies (NIEs) to secure an export base following the NIEs export promotion policies. In 1981, a number of direct investments related to natural resources were assumed in the developing countries in Asia resulting to a significant increase in the Japanese economy. The portion of manufacturing of Japanese FDI in Asia has been diminishing over time but it is still larger than the corresponding shares for Japanese FDI in other parts of the world as it can be seen in the table 4.1 below.

Table 4.1: Japanese FDI in Asia: Cumulative Reported Amount (in million U.S. dollars), 1951-89

	Asia		NIEs		ASEAN		World	
Sector	Amount	Share	Amount	Share	Amount	Share	Amount	Share
Food	1,049	2.6	685	3.4	301	1.7	3,266	1.3
Textiles	1,569	3.9	433	2.2	1,003	5.7	3,203	1.3
Wood & pulp	450	1.1	50	0.3	385	2.2	2,654	1
Chemicals	2,077	5.1	1,307	6.6	712	4.1	8,649	3.4
Metals	2,578	6.4	449	2.3	2,072	11.8	9,261	3.6
General mach	1,387	3.4	774	3.9	543	3.1	6,479	2.6
Electric mach	3,348	8.3	1,637	8.2	1,447	8.3	14,676	5.8
Trans.Mach	1,326	3.3	625	3.1	622	3.5	9,009	3.5
Other manu-fac	1,807	4.5	929	4.7	739	4.2	8,932	3.5
Manufac. Total	15,591	38.5	6,891	34.6	7,824	44.6	66,127	26.9
Agri-forestry	297	0.7	46	0.2	236	1.3	1,205	0.5
Fishing	177	0.4	8	0.04	119	0.7	6,78	0.3
Mining	7,124	17.6	14	0.07	6,997	33.9	15,211	6
Construction	643	1.6	375	1.9	257	1.5	2,089	0.8
Commerce	2,575	6.4	2,077	10.4	439	2.5	25,159	9.9
Finance	3,588	8.9	3,054	15.3	514	2.9	57,271	22.6
Services	4,815	11.9	3,617	18.2	540	3.1	23,375	9.2
Transportation	982	2.4	901	4.5	58	0.3	15,268	6
Real estate	2,351	5.8	1,957	9.8	297	1.7	34,742	13.7
Others	1,632	4	493	2.5	121	0.7	7,515	3
Nonmanufac.	24,184	59.8	12,542	63	9,577	54.6	182,514	71.9
Branches	628	1.6	473	2.4	118	0.7	4,659	1.8
Real estate	37	0.1	14	0.07	13	0.07	5,95	0.2
Total	40,465	100	19,919	100	17531	100	253,896	100

Source: National Bureau of Economic Research, University of Chicago Press, Volume 2,1993, p.280

The geographical location of Japan does not allow them to practice agriculture. However, the amount of farmland that is available is too small to feed its large and growing population. Additionally, Japan lacks a significant amount of raw materials with are important for its industries and energy. It is for this reason that Japan is less competitive in energy intensive industries and agricultural products. To solve this problem of insufficiency, Japan has been importing most of its food products as well as food products from Asia an effect of the FDI. Japan then uses its trade surpluses obtained from the import of manufactured goods such as electronic equipment and automobiles to pay for its trade deficits with Asia (Paul, James & Fortmann 2005). It is for this reason that Japan upholds international trade with Asian countries.

According to Fontagne (1999), globalization has proven to be an important trend in the global economy. The connection between FDI and trade are said to be the main significant characteristic of globalization. This relationship between FDI and international trade can be analyzed at microeconomic, macroeconomic and industry levels. For Japan and Asia, the effect of trade and FDI on economy is more significant. Japan's rapid economic growth is characterized by high degree of dependence on international trade and high flows of inward FDI. According to World Bank (2018), Japan is considered the world's 4th largest exporter and importer.

According to Glass (2008), multinational activities are divided into two: Horizontal and vertical FDI. Horizontal FDI is when a firm invests in the same business in an overseas that it operates in its home country. Vertical FDI on the other hand, is when a company in a totally different business abroad as compared to its operations at home. This two types of FDI have distinctive impact on international trade. It is important to note that japan has been classified as one of the nations with equal income among its citizens as a result of FDI and MNCs.
Other than effects such as employment, transfer of skilled labor and exports, the most significant effect of FDI on the international trade between Japan and Asia is that FDI have helped maintain or capture local and regional markets. Additionally, Japanese FDI in Asia is the leading cause of regionalization of foreign trade in Asia which has resulted to economic development of Asian countries.

Migration is the movement of people from one region to another, in this case from Asia to Japan (Thapan 2008). However, in the case of Asia and Japan, international labor migration (ILM) is of economic origin. In that, it was as a result of the "push" and "pull" forces trying to create a balance between capital and labor. Often, scholars suggest that this movement from Asia to Japan ("flock of flying geese") is a world economic development pattern (Freeman & Mo 1996). The ILM from Asia to Japan began in the 1960s and 1970s.The first wave of the Japanese FDI hit majority of the Asian NIEs in the early 1980s. Japan was experiencing a shortage of labor and hence a large number of illegal workers moved in to meet the needs of firms as well as fill the vacancies of the tangent workers. Majority of these workers were uneducated and unskilled. In the years 1992, Japan started importing contract workers from Southeast Asia. According to Vernon (1966), developed countries tend to be the source of FDI in third world countries. This could perhaps explain the ILM effect of Japanese FDI in Asia.

FDI has direct or indirect impact on ILM. The direct impact is creation of job opportunities while the indirect/long term effect is economic development (Sauvant *et al*. 1993; UN 1996). Main reason behind the short term effect of the FDI on ILM is the fact that, it reduces financial constraints by providing better employment opportunities thus prompting poverty driven workers to move abroad (to Japan). According to Dunning & Narula (1996), the relationship between FDI, ILM and economic development can be explained by the investment-migration-development path (IMDP) which is shown in figure 4.1 below where the NOI is the FDI and NOM is the ILM
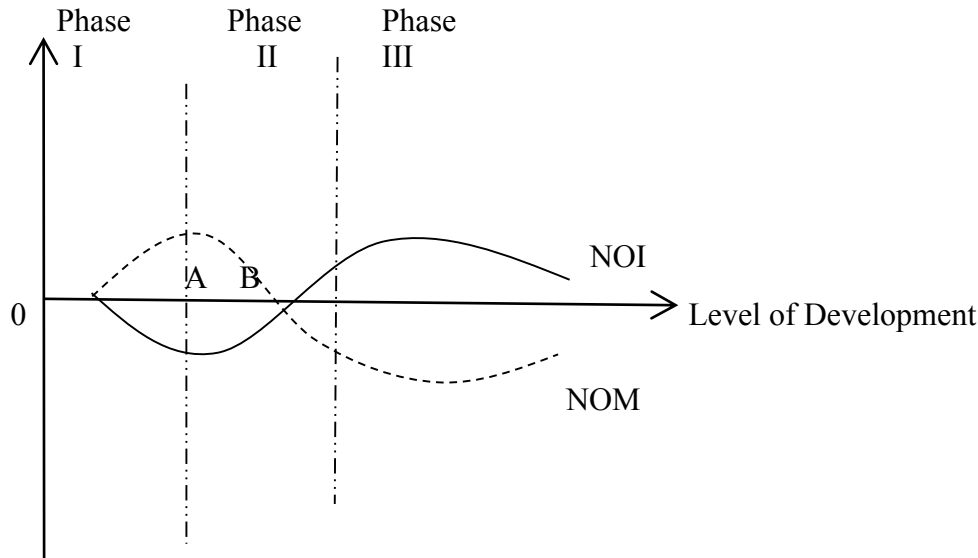
Net Outward Migration million(ILM) (------)
Net Outward Investment US$ million (FDI)   (——)

Figure 4.1: The Investment-Migration-Development Path

Travel and tourism industry is one of the world's largest sectors in the 21st century owing to globalization (Lee & Brahmasrene 2013). Annually, Japan accommodates more than 30 million tourists from different countries including Asia. Recently, Japan and Asia as a whole have been experiencing a tourism boom owing to the many tourist destinations. This increasing number of tourist arrivals has resulted into an increase in the demand for food and accommodation. FDI being a major source of capital, has provided the necessary capital and infrastructure to meet this demand (Samimi *et al*. 2013). It is for this reason that they have partnered with Trip Advisor to help advertise and control the massive number of tourists.

The relationship between FDI and international tourism between Asia and Japan is rather strong. Empirical studies have suggested that FDI has both direct and indirect effects on tourism. Directly, FDI has increased the productivity levels and hence enhancing tourism (Rappaport 2000). These studies have drawn that FDI has only positive impact on the tourism industry. Indirectly, through the FDI, workers originating from Asian countries to Japan tour the country and increase the percentage of local tourists significantly.

Remittances are the amount of funds sent by foreign workers to friends and families in their home country (World Bank 2012). Remittances have been considered to be very vital in the economic

development of countries all around the globe, especially since they are responsible for poverty eradication and foreign exchange reserves (Adams *et al*. 2005). The amount of global remittances in 2018 was estimated to be $642 billion.

Citizens from different countries in Asia travel to Japan in search of better employment and security annually (ILO 2014) as a result of the FDI. Majority of them leave their families behind with the promise that once they are employed they will help with the family burden of poverty. The Japanese FDI create a favorable policy for these workers to send to their loved ones in their home country.

4.3: Research methodology

4.3.1: Data and Sources

The secondary data used in this study was obtained from OECD, World Bank and Statistics of Japan database. The main data variables were Japanese GDP, population index, passengers, distance, migration, FDI and remittances for the countries: Philippines, Vietnam, India, Korea, Indonesia, Thailand, and China for the years 2000 to 2015. These countries were selected because they have a very close interaction with Japan. The dependent variables were migration and passengers while all the rest were explanatory variables.

4.3.2: Variables Used

4.3.2.1 Gross domestic product (GDP)

The values of gross domestic product (GDP) provided are annual estimates. The values are time-variant variables obtained from they were found from reliable sources such as national statistical databases. The estimate values of the GDP represent gross values for the entire country given in US dollars for easy comparison. Gross domestic product is generally a measure of a country's economic size. Consequently, nations having high GDP values are presumably considered to have greater trade flows with one another compared to nations with lower values.

4.3.2.2 Population

Similarly, all the countries' population estimates were obtained from statistics in OECD factbook as well as well as national statistical databases. Similar to GDP, population is also a variable that is time variant and ought to be positively correlated with trade inflows since larger populations have expanded markets that lead to the development of expansive trade flows with one another. Besides, in countries with big populations, large economies produce an extensive variety of trading products, which may result in reduced needs for imports from foreign countries.

4.3.2.3 Distance

As a time invariant variable, distance does not change over the study period hence remains constant unlike other variables. Distance is often used in the gravity model of trade to act as a proxy for values of transaction costs for bilateral trades. As a result, longer distances between two nations tend to reduce the extent of trade existing between the countries, since trade costs are presumably high. However, measurements of distances between countries is often challenging since not all regions from which the measurements are directly taken may have similar economic factors. Data on the distance (in kilometer) between Tokyo International airport i (capital of Japan) and other capital city's airport of country j are obtained from a Website: https://www.distancefromto.net/

4.3.2.4 Migration and remittance

Migration and remittance are also other time variant variables. The estimates for migrations were obtained from national statistics especially from migration administrative departments of each country. This was accessed from online databases of the migration departments of the selected countries under study. Besides, the World Bank in collaboration with various institutions from member states facilitated the access of data on migration and remittance. The estimate values of the remittance for the entire country given in US million dollars for easy comparison. The rising number of diasporas of Japan from the selected thirteen countries has significantly led to higher rates of remittance. It is presumed that this rising number correlates with increased bilateral trade flows that this study explores.

4.3.2.5 passengers & Foreign direct investments (FDI)

Visitor Arrivals to Japan are calculated based on the numbers of travelers of selected 7 foreign nationalities yearly entering Japan provided by the Ministry of Justice. Data collect from Japan National Tourism Organization (JNTO).

Foreign direct investments (FDI) also time variant variables. The data for FDI were obtained from national statistics from the departments of finance and other institutions of finance. Besides, the World Bank in collaboration with other institutions provide data on FDI net flows between countries in their databases. The estimate values of the FDI for the Japan to other countries given in US million dollars for easy comparison. The data the net flows of FDI are often presented on net decreases or net increase bases. With the rise in the spirit of globalization, it is assumed that the rise in FDIs correlates with bilateral trade flows, which the study explores using the gravity model of migration.

Table 4.2 below gives the summary statistics of these variables. From this table it can be observed that the mean of the population for the countries (i) & (jp) involved was 433.07 and 127.54 million respectably. The average GDP for (i) & (jp) between the years 2000 and 2015 was 4811.54 & 38731.07 US$ respectably. The maximum and minimum values of passenger were 4993689 and 9964 persons. On average the distance between the countries was 3790.97 km. The highest value of migration was 687156 while the lowest was 10064. On average, the remittances were 974.31 million with a median of 173.50. The Std. Dev. Of FDI is 2728.96.

Table 4.2: Summary statistics of study variables.

	Pop (i) million	Pop (jp) million	GDP (i) (current US$)	GDP jp (current US$)	Distance(km)	Distance per person (Km)	Number of passenger	Number of Migration	Remittances (US$million)	FDI (US$million)
Mean	433.07	127.54	4811.54	38731.07	3790.97	0.06	538390.40	210223.10	974.31	2296.68
Median	92.35	127.55	2009.81	37899.07	3731.86	0.04	110266.50	42718	173.50	1135.03
Maximum	1371.20	128.10	27811.37	48603.48	5908.62	0.37	4993689	687156	4394	13480.26
Minimum	47.00	126.90	388.27	32289.35	1228.11	0.00	9964	10064	48	85.39

Std. Dev.	525.94	0.30	6718.04	4714.40	1666.62	0.07	880121.80	242030.60	1247.90	2728.96
Observations	112	112	112	112	112	112	112	112	112	112

Source: Author's' Calculation

4.3.3 Empirical models

There are mainly four gravity models that are to be estimated using the panel data collected. These model were as presented below where $M_{i,j}$ – Migration, $D_{i,j}$ – Distance, $P_{i,j}$ – Population, $GDP_{i,j}$ – GDP, $P_{i,j}$ – Passengers, X_i for $i = 1,2,\cdots,n$ are n other economic variables such as FDI and Remittances. The independent variables were FDI, Japanese GDP, population index and distance. All other variables were dependent variables. It is important to note that the gravity models are simply log transformations of multiple regression equations as shown below

Equation for Migration with FDI

$$M_{i,j} = \alpha_{11}\left(\frac{GDP_{ij}*POP_{ij}}{Dist_{ij}^2}\right) + \alpha_{12} * FDI \ldots\ldots\ldots\ldots\ldots\ldots(1)$$
$$Gravity\ model\ 1: Log[M_{i,j}] = \alpha_{1,j}Log[D_{i,j}] + \alpha_{2,j}Log[P_{i,j}] + \alpha_{3,j}Log[GDP_{i,j}] + \sum_{t=0}^{n} X_i \ldots.(2)$$

Equation for Migration with Remittances

$$M_{i,j} = \alpha_{21}\left(\frac{GDP_{ij}*POP_{ij}}{Dist_{ij}^2}\right) + \alpha_{22} * Rem \ldots\ldots\ldots\ldots(3)$$
$$Gravity\ model\ 2: Log[M_{i,j}] = \alpha_{1,j}Log[D_{i,j}] + \alpha_{2,j}Log[P_{i,j}] + \alpha_{3,j}Log[GDP_{i,j}] + \sum_{t=0}^{n} X_i \ldots..(4)$$

Equation for Passenger with FDI

$$P_{ij} = \alpha_{31}\left(\frac{GDP_{ij}*POP_{ij}}{Dist_{ij}^2}\right) + \alpha_{32} * FDI \ldots\ldots\ldots.(5)$$
$$Gravity\ model\ 3: Log[P_{i,j}] = \alpha_{1,j}Log[D_{i,j}] + \alpha_{2,j}Log[P_{i,j}] + \alpha_{3,j}Log[GDP_{i,j}] + \sum_{t=0}^{n} X_i \ldots..(6)$$

Equation for Passenger with Remittances
$$P_{ij} = \alpha_{41}\left(\frac{GDP_{ij}*POP_{ij}}{Dist_{ij}^2}\right) + \alpha_{42} * Rem \ldots\ldots\ldots.(7)$$
$$Gravity\ model\ 4: Log[P_{i,j}] = \alpha_{1,j}Log[D_{i,j}] + \alpha_{2,j}Log[P_{i,j}] + \alpha_{3,j}Log[GDP_{i,j}] + \sum_{t=0}^{n} X_i \ldots(8)$$

4.3.4: Methodology

The panel data analysis on the 4 gravity models above was conducted using the *plm* package in the EViews software. Generally, 3 models were used for estimation for panel data: PEM (Pooled Estimation Model), FEM (Fixed Effects Model) and REM (Random Effects Model). A set of statistical tests that was done for choosing among the three models. That is

- FEM versus PEM where the F test was used to choose between FEM and PEM, i.e., to test if there is fixed effects in data.

- REM versus PEM: The Breusch and Pagan Lagrangian Multiplier Test (LM test) was used to test for random effects.

- REM versus FEM: The Hausman test was be used to choose between FEM and REM.

It is important to note that to know the true value of the coefficients of the models, the exponential of the log value was obtained (e^log value). The initial and foremost test involved was to establish the ability of the variables adopted to assume a stationary position. In macro-economics, it is a rare occurrence to have stationary variables due to the constantly changing hypothetical environment especially in relation to the matters of the economy of any given nation. Most variables in macro-economics are thus integrated in the order of zero. However, should we ever establish a stationary variable then it would be easy to estimate the coefficients since the initial specifications of the variables would be available. The estimation can be taken as an autocorrected model where the series are non-stationary but co-integrated. Variables which are not stationary and co-integrated imply that there is a necessity in specifying the variables as differences.

4.4: Result & discussion:

4.4.1: Unit Root test

The establishment of the presence of unit roots and determination of the order of integration of the variables was done by the Augmented Dickey-Fuller & Levin, Lin & Chu t* test. In this test, it is evident that the confirmation of a unit root which always indicates non-stationary variables is bound to acceptance if the variables are at the level of 5% and 1%. This is in proper harmony with the initial assumption made in macro-economics that data series of this kind are often non-stationary. The null hypothesis of the non- stationary data is accepted at the 5% level of

significance because the statistics of the ADF test at the same level form two variables that are less than their respective critical values. It was also found that it could not be rejected for the level. The results are represented in the table 4.3 below.

Table 4.3: Unit Root test result

Variables	Statistics value		Sig.	Conclusion
Δ (Gdp i)	Levin, Lin & Chu t*	-3.370	0.000	I(1)
	ADF - Fisher Chi-square	29.330	0.009	I(1)
Δ (Gdp jp)	Levin, Lin & Chu t*	-7.401	0.000	I(1)
	ADF - Fisher Chi-square	43.653	0.000	I(1)
Δ (Pop i)	Levin, Lin & Chu t*	-3.352	0.000	I(1)
	ADF - Fisher Chi-square	39.751	0.000	I(1)
Δ (Pop jp)	Levin, Lin & Chu t*	-4.743	0.000	I(1)
	ADF - Fisher Chi-square	26.057	0.026	I(1)
Δ (Dist)	Levin, Lin & Chu t*	-2.882	0.002	I(2)
	ADF - Fisher Chi-square	60.659	0.000	I(2)
Δ (Migration)	Levin, Lin & Chu t*	-1.825	0.034	I(1)
	ADF - Fisher Chi-square	26.074	0.025	I(1)
Δ (FDI)	Levin, Lin & Chu t*	-3.536	0.000	I(1)
	ADF - Fisher Chi-square	45.985	0.000	I(1)
Δ (Remittances)	Levin, Lin & Chu t*	-8.209	0.000	I(1)
	ADF - Fisher Chi-square	58.967	0.000	I(1)

Source: Author's' Calculation

4.4.2: Gravity model 1

The table 4.4 below shoes the results once panel data analysis conducted on the gravity model 1. From this table, it can be observed that, the P values of the FEM gravity model to estimate migration were less than 0.05. Firstly, to decide between PEM and REM, the LM test was used and since the P value of the test was less than 0.05, the REM model was chosen over PEM. In order to choose between FEM and REM, the Hausman test was used and the p value of the test was 0.000. Since it is less than 0.05, the FEM proved to be a better model. According to the FEM results the coefficient of lnFDI, 0.020, was positive hence portraying a positive impact on migration However, the coefficients of lnPopijp (p= 0.000), and lndistance (p=0.000), were statistically significant since their P values were less than 0.05. And the t values of lnGdpijp (0.593) positive. The value of the FEM R^2 was 0.999 which means that the variable FDI accounts

for 99.9% of the variability in the dependent variable, migration. This could perhaps be as a result of the close interaction between FDI, migration, Gdpijp and Popijp.

Table 4.4: Results for PEM, FEM &REM models for migration with FDI

	Pooling model			Fixed model			Random model		
	Coef.	t-value	p-value	Coef.	t-value	p-value	Coef.	t-value	p-value
Intercept	13.207	12.629	0.000	-21.728	-7.989	0.000	9.497	5.020	0.000
lnGdpijp	-0.609	-5.552	0.000	0.010	0.593	0.554	0.087	1.826	0.071
lnPopijp	-0.187	-3.225	0.002	1.887	11.685	0.000	0.005	0.047	0.963
lnDistance	-0.897	-17.410	0.000	-0.215	-19.301	0.000	-0.283	-7.257	0.000
lnFDI	0.083	1.449	0.150	0.020	4.221	0.000	0.041	1.777	0.078
R^2	0.849			0.999			0.580		
Prob (F-statistic)	0.000			0.000			0.000		
n (no. of groups/panel)	7			7			7		
N	112			112			112		

Note: P value of LM test is (0.0000). P value of Hausman test is 0.0000
Source: Author's' Calculation

4.4.3: Gravity model 2.

The second gravity model used the same independent variables as the first to predict their effect on remittances. In the table 4.5 below it is clear that the P values of PEM & REM were less than 0.05 hence the models were statistically significant. The Hausman test whose null hypothesis is that the preferred model is REM, was used to choose between REM and FEM.As it can be observed, the P value of the test was 1.000 which was greater than 0.05 which means that REM was a better model. The LM test (whose null hypothesis is: No panel effect) was used to compare REM to PEM. The P value of the test was (0.000) hence the null hypothesis was rejected. This means that the REM model was considered more appropriate than PEM. In REM The P values of Remittances (0.000) and distance (0.000) are less than 0.05 rendering them statistically significant. And the coefficient of Remittances (0.472) positive impact on migration. And the t-values of lnGdpijp (0.905) and lnPopijp (0.671) was positive hence portraying a positive impact on

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migration. Additionally, the R² of REM was 0.729 which means that Remittances, Gdpijp and Popijp explained only 72.9 % of the total variability in migration.

Table 4.5: Results for PEM, FEM &REM models for migration with Remittances

	Pooling model			Fixed model			Random model		
	Coef.	t-value	p-value	Coef.	t-value	p-value	Coef.	t-value	p-value
Intercept	8.449	15.210	0.000	-19.927	-9.788	0.000	8.247	6.435	0.000
lnGdpijp	-0.035	-0.632	0.529	0.044	2.932	0.004	0.045	0.905	0.367
lnPopijp	-0.113	-4.600	0.000	1.794	14.835	0.000	0.049	0.671	0.504
lnDistance	-0.184	-3.781	0.000	-0.213	-19.903	0.000	-0.251	-4.793	0.000
lnRemittances	0.727	17.213	0.000	-0.039	-1.871	0.064	0.472	6.254	0.000
R²	0.959			0.999			0.729		
Prob(F-statistic)	0.000			0.000			0.000		
n (no. of groups/ panel)	7			7			7		
N	112			112			112		

Note: P value of LM test is (0.0000). P value of Hausman test is 1.0000
Source: Author's' Calculation

4.4.4: Gravity model 3

Now, using the Passenger value as the dependent variable of tourism, the PEM, REM and FEM models were estimated on the gravity model and the results are as presented in table 4.6 below. Since the P values of of PEM & FEM were less than the conventional 0.05, Hausman and LM test were used to decide on the appropriate one. As it can be observed, The P value of the LM test was less than 0.05(0.000). The Hausman test whose null hypothesis is that the preferred model is FEM, was used to choose between REM and FEM.As it can be observed, the P value of the test was 0.000 which was less than 0.05 which means that FEM was a better model. thus the null hypothesis of no panel effect was accepted and FEM was the preferred model. The positive values of the coefficients of lnFDI (0.000), confirm the positive effects of FDI on tourism. The P values of the coefficients of the lndistance (0.000), lnPopijp (0.001), lnGdpijp (0.000), were less than 0.05

which means that they were the variables that can significantly predict the passenger value. The value of the REM R² was 0.999 which means that the variable Distance, Popijp & Gdpijp accounts for 99.9 % of the variability in the dependent variable, tourism.

Table 4.6: Results for PEM, FEM &REM models for Tourism with FDI

	Pooling model			Fixed model			Random model		
	Coef.	t-value	p-value	Coef.	t-value	p-value	Coef.	t-value	p-value
Intercept	6.530	18.067	0.000	7.796	85.142	0.000	6.515	6.585	0.000
lnGdpijp	0.172	4.526	0.000	0.003	4.080	0.000	0.010	0.301	0.764
lnPopijp	0.106	5.292	0.000	0.020	3.560	0.001	0.106	1.819	0.072
lnDistance	-0.665	-37.345	0.000	-0.998	-1381.044	0.000	-0.913	-33.701	0.000
lnFDI	0.046	2.303	0.023	0.000	2.525	0.013	0.012	0.720	0.473
R²	0.984			0.999			0.544		
Prob (F-statistic)	0.000			0.000			0.000		
n (no. of groups/ panel)	7			7			7		
N	112			112			112		

Note: P value of LM test is (0.0000). P value of Hausman test is 0.0000
Source: Author's' Calculation

4.4.5: Gravity model 4

As it can be observed in the table 4.7 below, the P values of PEM & REM were less than 0.05 hence the models were statistically significant. The Hausman test whose null hypothesis is that the preferred model is REM, was used to choose between REM and FEM.As it can be observed, the P value of the test was 1.0000 which was greater than 0.05 which means that REM was a better model. The LM test (whose null hypothesis is: No panel effect) was used to compare REM to PEM. The P value of the test was (0.000) hence the null hypothesis was rejected. This means that the REM model was considered more appropriate than PEM. The coefficient of Remittances -0.110, was negative hence portraying a negative impact on tourism. However, the coefficients of lnRemittances (p=0.004), lnPopijp (p=0.043) & lnDistance (p=0.000) were

statistically significant since their P values were less than 0.05(p=0.0005). And the t-values of lnGdpijp (1.017) & lnPopijp (2.050) are positive. The value of the REM R² was 0.994 which means that the 3 significant variables explained almost (99.4%) the whole variability in the dependent variable tourism.

Table 4.7: Results for PEM, FEM &REM models for Tourism with Remittances

	Pooling model			Fixed model			Random model		
	Coef.	t-value	p-value	Coef.	t-value	p-value	Coef.	t-value	p-value
Intercept	7.121	22.364	0.000	7.897	68.929	0.000	6.695	6.654	0.000
lnGdpijp	0.111	3.477	0.001	-0.001	-1.604	0.112	0.019	1.017	0.312
lnPopijp	0.128	9.099	0.000	0.014	1.988	0.050	0.121	2.050	0.043
lnDistance	-0.814	-29.196	0.000	-1.000	-1705.693	0.000	-0.979	-51.954	0.000
lnRemittances	-0.160	-6.626	0.000	-0.001	-0.946	0.346	-0.110	-2.925	0.004
R²	0.988			0.999			0.994		
Prob(F-statistic)	0.000			0.000			0.000		
n (no. of groups /panel)	7			7			7		
N	112			112			112		

Note: P value of LM test is (0.0000). P value of Hausman test is 1.0000
Source: Author's' Calculation

4.5: Conclusion:

The trends of international migration in Japan have been shaken by external events in the current years. The total number of foreign settlers dropped as well in the wake up of the March 2011 disasters. Global economic crisis particularly the disaster and calamities that happened in 2002 caused in a higher rate of migration in Japan combined with a number of patterns. The main movement being Japan's speedy ageing which one of the fastest rates across the domain. Given the rapid population ageing in Japan, rising foreign community, dynamic government employment of

targeted immigrant sets, and efforts to better incorporate the foreign community already in Japan, it is reasonably assumed that migration will continue to rise.

The objectives of this paper were to analyses effects of FDI & remittances on the international migration and tourism from seven Asian countries to Japan and apply the gravity model to analyses using the panel data estimation technique. In this case, the panel data used ware collected over time and across different countries. However, as earlier stated, panel data analysis was conducted to analyze the gravity models. As it can be observed from the panel data analysis results, FDI & Remittances positively correlated with migration and tourism from Asian countries to Japan. Only remittances negatively correlated with tourism. According to the results of this study, we find a positive effect of the population size of the destination on migration. Distance is negatively correlated to the size of migration movements. Based on the positive and significant effect of GDP per capita at the destination, we conclude that migration & tourism is directed from Asian countries towards more developed region Japan. Developing countries and LCDs could borrow a thing or two from the drastic economic growth of Japan which has been discussed to the letter in this study. Additionally, the findings of this study will redound to the benefit of globalization considering the fact that FDI & Remittances plays such a significant role in economic growth.

CHAPTER 5: The Relationship between International Migration, Remittances, Education and Poverty in South Asia

5.1: Introduction:

International migration is one of the most important factors affecting economic relations between developed and developing countries in the 21st Century. The number of international migrants worldwide has continued to grow over the past seventeen years, reaching 258 million in 2017, up from 248 million in 2015, 220 million in 2010, 191 million in 2005 and 173 million in 2000. Between 2000 and 2005, the international migrant stock grew by an average of 2 per cent per year. It is now widely recognized that remittances are important not only for economic growth, but also for poverty reduction. Migrants" remittances to their country of origin play an important role for development in the case of South Asian developing countries in particular. The internationally flows of remittances show that, in 2016 alone, South Asia received over US$110 billion in remittances (World Bank, n.d.a.) is relatively a very larger beneficiary of the circulation of this global wealth. It represents a key role for alleviating the level of poverty in the underdeveloped countries.

There is scanty information available regarding the impact of international migration on poverty levels in developing countries in South Asia. This chapter considered data set on remittances, poverty, education levels and government expenditure on education from seven countries in South Asia. Its also revealed key findings, first, there was a statistical relationship between international migration and GDP per capita since the income inequality was a major determinant in migration. The distance between labor receiving country and the country of origin for migrants was also a major issue of concern that greatly affected international migration. There was an inverted U shaped curve between the level of a country's international immigrants and GDP per capita. The study also noted that with an increase of about 12 percent in remittances will have a direct impact on the GDP with a 2 percent decrease in poverty levels. Data was a major impediment to determine the impact of remittances from immigrants since only official information was considered. The study also noted a direct effect from international migration on the economy of developing countries since the remittances sent home to have a profound impact on the living standard of people.

This chapter explore to find the connection between international migration, remittances, education and poverty in South Asia. This study is oblivious of any study that has developed a relationship between international migration remittances in South Asia and more specifically its impact on education and poverty. There is a gap in establishing poverty data and this makes it quite difficult to estimate the number of international immigrant's impact on their poor countries through remittances. The nature of data in relation to remittances and international immigration is also difficult to establish in South Asia countries. Most of these countries do not keep proper records of international immigrants and the sum of remittances made back home is also lacking since some funds are transferred through unofficial channels. This lack of critical data in establishing this relationship between migration, remittances, education, and poverty in South Asia raises some fundamental questions. What is the exact impact of remittances from international immigrants in reducing poverty? How does international immigration affect developed countries in terms of crime?

This chapter will endeavor to answer these questions and any other similar questions through data set composed of seven countries in South Asia. This data includes the poverty headcount ratio, poverty gap, migration portion of country population, personal remittances, and transmittals as a share of GDP, government expenditure on education, and school enrollment in primary, secondary and tertiary level. This paper will be organized as follows, the introduction part that elaborates the purpose and motivation of the study, the literature review of previous studies done on the relationship between migration, remittances, education, and poverty in South Asia. The next section will present the data set from the seven South Asia countries and then calculation on pertinent migration, remittances, and poverty variables. Then there will be the determination of econometric findings on the relationships between relocation, remittances, education, and poverty in South Asia. The conclusion will be based on the findings from this study and previous studies.

5.2: Literature Review

Most literature papers reviewed had scanty information on the impact of international immigration to the poverty levels and education from the remittances sent. There is however keen interest in the revamped economy from South Asia countries which has led to heightened international migration. South Asia is becoming an increasing area of interest due to the high

number if population movements experienced especially after the formation of the ASEAN Economic Community that has eliminated trade barriers (Hugo 2017). The relaxed migration rules, as well as the creation of the free trade agreements, have enabled operationalization in these countries. The challenge on the most research paper done has been unraveling the complexities of international migration in ASEAN since data on international migration is limited and little is known about the international migration (Hugo 2017). According to Hugo (2017), the number of people that lived outside their country of birth was 232 million in 2013 a report that was conducted by the United Nations. Hugo (2017) elucidated that the ASEAN countries had 4.1 percent of this population which indicate that the South Asia counties represent the fastest growing region in international migration. Malaysia, Thailand, and Singapore are three countries in the South Asia region that has significant international migrants which is also closely related to the average income levels in these countries.

According to Wright-St Clair and Nayar (2017), cultural meaningful occupations are the major hindrances to older immigrant's restatements in a new country. There is a new study that shows that older Asian immigrants add to the social development of the new host country in terms of social capital but there is little evidence towards this narrative. According to Wright-St Clair and Nayar (2017), resettlement concept is a complex construct that many immigration theories fail to decipher since there are meant value-laden items such as immigration adaptation and assimilation that points to the multidimensionality of the resettlement process. In most countries such as New Zealand, there are dissenting voices on anti-immigrant, often questioning their contribution to the host country economy and social wellbeing. According to Wright-St Clair and Nayar (2017), the residents are predominantly critical of the older immigrants in that the residents spend their entire working life struggling to get health and pension entitlements while an immigrant enjoys similar rights despite working for a shorter period. This is an indication that though international immigrants contribute to the welfare of their host nation they are faced with enormous challenges abroad and this could further demoralize then and lead to depression since they are expected to assist their siblings in their host countries.

Canada is considered the bastion of refugees and immigrants, but it is essential to different economic immigrants and immigrants that arrive on humanitarian grounds because their contribution to the economy is different (Lawlor & Tolley 2017). The study established that there is a huge difference in the manner the refugees and immigrants are framed, one is on the basis of

economic contribution while the refugee is framed is on the basis of humanitarian support. The preference according to Lawlor and Tolley (2017) is on the international immigrants as opposed to refugees because of their economic contribution. According to Lawlor and Tolley (2017), there is a correlation between media and public opinion regarding refugee and international immigrants since changes in policy on these two groups is relayed to the public through the media which allows the public to make their response which will capture the general mood in the manner in which it is presented.

Chowdhury (2016) established that remittances influence financial development in different aspects that promote economic growth. The study also indicated that a stronger remittance nexus can be included through promoting financial literacy and reducing costs of sending remittances. Antwi and Koranteng (2017) noted that international remittances have become a major source of external finance for growing economies which in turn aggregate output. The study also noted a high exodus in Ghana on professionals which the international remittances may not fully compensate. Bayar (2015) demonstrated that remittances impact economic growth positively through capital accumulation and development of the financial sector and also increase demand for imports. The only impediment towards the impact of remittances is that economic growth is driven by information asymmetry.

5.3: International Migration, Remittances, Education and Poverty in South Asia

The five largest countries in terms of immigrants are Cambodia, Myanmar, Malaysia, Indonesia and Laos which account for more than 60 percent of the immigrants in the ASEAN (Hugo 2017). The study further indicated that the largest number of these immigrants' head to Europe, the United Kingdom accounting for over three hundred thousand of them. This migration trend point to the connection to the colonization era but this data from the United Nations indicate gaps since the migrants were only counted during census only (Hugo 2017). Most developed nations still maintain strict restrictions on immigration notwithstanding widespread trade and international inflows since World War II (Bradford 2016). According to Bradford (2016), there can be a two-sided approach to understanding the relationship between international immigration and poverty, one is the understanding of the dynastic model growth where skills of the immigrants are analyzed and their possible contribution to the economy determined, the other approach would

be the understanding the impact of restricting immigrants to host countries, in terms of poverty levels rising from these barriers.

Few studies have examined the connection between poverty and migration where the study by Bradford (2016) noted that it would be more beneficial for a Bangladeshi to work for months in a rich country than work for a lifetime in microcredit. The study argued that it would be more prudent for poor nations to improve their economy through temporary migration and sending remittances to their home countries as an anti-poverty program. While this notion may be true for some countries it is limited to settings and it is a simplistic approach to reducing global poverty by exporting labor rather than growing the economy (Bradford 2016). The study also uses static data through a partial equilibrium model that fail to account to the effects of allowing people to move from poor countries to rich countries.

5.4: A New Data Set on International Migration, Remittances, Education Expenditure, and Poverty

This study evaluated the influence of international migration, remittances, education expenditure and poverty in South Asia based on a new data set that includes data on international movement for seven middle-income countries in South Asia. The reason these countries were selected is that the remittance and international migration data were readily available since 1995, therefore, it was easy to accumulate data and determine the poverty elasticity based on remittances and education expenditure. Most studies on international migration are still plagued by a lack of data which is a major impediment in estimating poverty elasticity. There is a relationship between net migration and GDP when a comparative approach is done as was noted in (Bayesia Simionescu, Ciuiu, Bilan & Strielkowski 2016). The study established that there are attempts to look into immigrants absorption in European nations based on the government's responsibility but there is no clear explanation towards the determinants of international migration. According to Bayesia *et al*. (2016), there are statistical relations between the wage rate, GDP, productivity and unemployment rate which impacted the labor markets on the target countries.

Metcalfe-Hough (2015) noted that international migration has become a highly political issue and is becoming a challenge in most European nations, most refugees and immigrants are left vulnerable by the lack of response from most EU governments. There are very few countries that publish labor exporting records, therefore, making it difficult to estimate the impact of migration flows using the collected data. Migration modeling has been a challenge for a long time not only because there is inadequate data but because emigration increases volume and decreases the volume in another location (Klabunde & Willekens 2016). The study also established that there is a need to understand the behavioral model of migration to overcome the barriers associated with migration. For instance, the appeal of a location can be measured in terms of efficacy or the expectancy model (Klabunde & Willekens 2016). For this paper, the main labor receiving nations are in Europe but unfortunately, there is inadequate data on the number of remittances made to the South Asia countries under consideration. The data considered in this paper is from the official records of International Monetary fund (IMF) which does not include the unofficial records. The new data set in this study include seven south Asian countries.

5.5: Methodology and Data

5.5.1. Calculation of Poverty, Inequality, Migration, Education Expenditure and Remittance Variable

In determining poverty levels based on migration and remittance variables, several parameters are put into consideration, such as the headcount index, which is set at a dollar per individual per day. The poverty gap index that measures the extent of percentage change between expenditure among the poor and their income. Inequality is measured through the Gini coefficient, as demonstrated when distributions are measured through weighted household size. In calculating the migration variable, all the foreign-born individuals are summed together in all the labor exporting countries. There are challenges in determining poverty extent in a country through the remittances and education since there is a high number of international immigrants that have left their countries of birth for better opportunities abroad, they end up settling in these countries and start families which form the foreign-born population. When these fundamental considerations are

put in place, it is inconclusive to conclude that the official remittances from governments are the actual figure.

5.5.2. Migration, Remittances and Poverty Reduction: Econometric Model

There is a relationship between economic growth and remittances hence the need for an econometric analysis (Meyer & Shera 2017). This section will do a cross country data examination to determine the impact of remittances in country growth and how they affect the poverty levels in these countries. This relationship can be written as

$$\text{Log } P\mu = \alpha_i + \beta_i \log\mu_i t + \beta^2 \log (g\mu) + \beta^3 \log (x\mu) + \mathcal{E}\mu \qquad (1)$$
$$(i=1,..,N; t=1,..,T_i)$$

In this equation, P represents poverty in the country represented as *i* and *t* the elasticity is estimated with respect to the income in form of remittances and this is in respect to the income distribution which is given as *g*. The variable x is the international migration, government expenditure on education, education enrollment and remittances and *e* is the error in calculating the poverty measure.

In determining the life expectancy in developing countries, in Asia, the Bayesian model averaging approach is utilized since it has defined final projections making it popular even in areas of science such as climate forecasting (Kontis *et al.*. 2017). Therefore, there are a number of models that are used to estimate income but there is a margin of error since income expenditure is measured from household surveys while income measured from the GDP is derived from national data.

The sustainable development goals will require all nations to strengthen their health systems so as to expand their service provision, this is one way of addressing income inequality since the individuals spending less than a dollar a day spend so much money on health since they do not have insurance (Stenberg *et al.* 2017). Though data challenges are evident in this research, remittance flows can be treated analytically in the future since their poverty reduction impact in terms of increasing the GDP result in changes in the income distribution. The measure of severity and depth are independent poverty reducing items rather than remittances from abroad and doing a head count later. The income variable, in this case, is the only manner in which remittances reduce poverty and the distribution data change with frequency from income and poverty data.

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5.5.3. Determinants of International Migration and Remittances and Education

The mobility of people is initiated by a number of processes such as urbanization, migration is becoming a geographical phenomenon and a necessity in modern day (Behera, Panda, & Daspattanayak 2019). It is evident that people move from one country to the next in search of better opportunities due to poor economic policies or due to political unrest. Therefore, empirical version of migration, remittances & education enrolment can be summarized as follows. In this chapter, there were three empirical models that were used to estimate the panel data. These models are as presented below where $M_{i,j}$ − Migration, $GDP_{i,j}$ − GDP, $R_{i,j}$ − Remittances, $Pg_{i,j}$ − Poverty gap, $E_{i,j}$ − education enrolment, $PH_{i,j}$ − Poverty head count, $Gini_{i,j}$ - Gini coefficient, $PRem_{i,j}$ - personal remittances, $Gexp_{i,j}$ - Government expenditure on education, $ir_{i,j}$ -inflation rate, $Pg_{i,j}$ Poverty gap. Migration, remittances, and Education enrollment were the dependent variables, while other variables are the explanatory variables.

Poverty Elasticity, Estimated Using International Migration Data

$$\ln M_{i,j} = \beta_0 lnRem_{i,j} + \beta_1 lnE_{ij} + \beta_2 lnPH_{i,j} + \beta_3 lnGini_{i,j} + \beta_4 lnPg_{i,j} + \beta_5 lnGdp_{i,j} +$$

$$\beta_6 lnPRem_{i,j} + \beta_7 lnGexp_{i,j} + \beta_8 lnir_{i,j} + \varepsilon \qquad \text{................................(2)}$$

Poverty Elasticity Estimation Using Remittances Data

$$\ln Rem_{i,j} = \beta_0 lnM_{i,j} + \beta_1 lnE_{ij} + \beta_2 lnPH_{i,j} + \beta_3 lnGini_{i,j} + \beta_4 lnPg_{i,j} + \beta_5 lnGdp_{i,j} +$$

$$\beta_6 lnPRem_{i,j} + \beta_7 lnGexp_{i,j} + \beta_8 lnir_{i,j} + \varepsilon \qquad \text{...............................(3)}$$

Poverty Elasticity Estimation Using Education Enrollments

$$\ln E_{i,j} = \beta_0 lnM_{ij} + \beta_1 lnRem_{i,j} + \beta_2 lnPH_{i,j} + \beta_3 lnGini_{i,j} + \beta_4 lnPg_{i,j} + \beta_5 lnGdp_{i,j} +$$

$$\beta_6 lnPRem_{i,j} + \beta_7 lnGexp_{i,j} + \beta_8 lnir_{i,j} + \varepsilon \qquad \text{...............................(4)}$$

5.5.4: Methodology

The panel data analysis on the three models above was conducted using the glm package in the SPSS software. Normally, there are usually three models associated with panel data analysis these are PEM (Pooled Estimation Model), FEM (Fixed Effects Model) and REM (Random Effects Model). However, for this study, only the FEM model was used for the estimation since it was considered better than the others.

5.6: Empirical Results and Discussion

Table 5.1: Elasticity of Poverty, Estimated Using International Migration Data

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intercept	11.871	.927	12.806	.000	10.038	13.703
Log Remittances as Share of GDP	.538	.066	8.145	.000	.407	.668
Log Education enrollment	-2.354	.281	-8.381	.000	-2.910	-1.799
LogPovertyhead countratioat$1.90aday2011PPP of population	-8.431	2.866	-2.942	.004	-14.098	-2.765
Log Gini Coefficient	-4.188	.576	-7.272	.000	-5.327	-3.049
LogPovertygap at$1.90aday2011PPP	.073	.093	.790	.431	-.110	.257
Log GDP	1.013	.109	9.282	.000	.797	1.229
Log Personal Remittances	-.499	.031	-15.868	.000	-.562	-.437
Log Government expenditure on education	.746	.155	4.797	.000	.438	1.053
Log Consumer inflation	9.172	2.880	3.185	.002	3.477	14.866

N	148
F-Statistic	127.814
a. R Squared = 0.892 (Adjusted R Squared = 0.885)	

Source: Author's' Calculation

From table 5.1 above it can be observed that the variables included in this model have significant impacts on migration. All of the variables except Poverty gap at $1.90 a day (2011 PPP) have a statistically significant impact on migration because they have an absolute t-value that is greater than two and a p-value that is less than 0.05. According to the table, the p-value is less than 0.05 (typically ≤ 0.05), which shows there is a statistically significant relationship between the dependent and independent variables. When the dependent variable is migration, the results of the poverty head count variable are negative which will in turn decrease the poverty levels by Increasing in migration by one unit. The value of the R square was 0.892, which means that the independent variables explained 89.2% of the variation in the migration. This model was, therefore, considered a relative success as it had perfect results for the main variables.

Table 5.2: Poverty Estimation Using Remittances Data

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intercept	-7.970	1.279	-6.230	.000	-10.499	-5.440
Log Migration as Share of Country Population	.601	.074	8.145	.000	.455	.747
Log Education enrollment	2.307	.307	7.503	.000	1.699	2.914
LogPovertyheadcoun tratioat$1.90aday201 1PPP of population	8.540	3.038	2.811	.006	2.534	14.546
Log Gini Coefficient	2.096	.693	3.025	.003	.726	3.466
LogPovertygapat$1. 90aday2011PPP	-.030	.098	-.305	.761	-.225	.165
Log GDP	-1.310	.096	-13.632	.000	-1.500	-1.120
Log Personal Remittances	.539	.032	16.833	.000	.475	.602

Log Government expenditure on education	.319	.175	1.819	.071	-.028	.666
Log Consumer inflation	-9.529	3.049	-3.126	.002	-15.557	-3.502
N	148					
F-Statistic	106.049					
a. R Squared = 0.873 (Adjusted R Squared = 0.865)						

Source: Author's' Calculation

From table 5.2 above, it can also be observed that the variables included in this model have a significant impact on Remittances as Share of GDP except Poverty gap at $1.90 a day (2011 PPP) and Government expenditure on education. For instance, the variables have a statistically significant impact on Remittances. According to the table, the p-values (sig) are less than 0.05 (typically ≤ 0.05) while the t-values are greater than two which shows there is a statistically significant relationship between the dependent and independent variables. The value of the R square was 0.873, which means that the independent variables explained 87.3% of the variation in the remittances. This model was, therefore, considered a relative success as it had perfect results for the chosen variables.

Table 5.3: Poverty Elasticity Estimation Using Education Enrollments

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intercept	1.922	.295	6.522	.000	1.339	2.505
Log Migration as Share of Country Population	-.143	.017	-8.381	.000	-.176	-.109
Log Remittances	.125	.017	7.503	.000	.092	.158
LogPovertyheadcountratioat$1.90aday2011PPP of population	-.068	.012	-5.858	.000	-.091	-.045
Log Gini Coefficient	.108	.166	.652	.516	-.220	.437
LogPovertygapat$1.90aday2011PPP	.030	.023	1.299	.196	-.015	.075

Log GDP	.187	.030	6.161	.000	.127	.247
Log Personal Remittances	-1.137	.720	-1.579	.117	-2.562	.287
Log Government expenditure on education	.164	.039	4.208	.000	.087	.241
Log Consumer inflation	1.195	.727	1.644	.102	-.242	2.633
N	148					
F-Statistic	33.249					
a. R Squared = 0.683 (Adjusted R Squared = 0.662)						

Source: Author's' Calculation

Moreover, from table 5.3 above, it can also be observed that substantial number of the variables included in this model have a significant impact on Education Enrollment. From table 21, it is evident that the coefficients of most of other independent variables were statistically significant at 0.05 level of significance. According to the table, the p-values (sig) of the other eight variables are less than 0.05 (typically ≤ 0.05), and the t-values are substantially greater than two, which shows that there is a statistically significant relationship between the dependent and independent variables. As expected, dependent variable enrollment of education has a negative impact on poverty head count which will in turn decrease the poverty levels by increasing in education enrollment by one unit. The coefficient of migration was -.143 which mean that migration has a negative and strong impact on the enrollment in education. The R² was 0.683, which means that the independent variables in this model explain 68.3% of the variation in education. This model was considered a relative success because most of the independent variables have a statistically significant relationship with the dependent variable. In addition, most of the selected variables had perfect results for the model.

From this study, we can conclude that only two economic variables are related to the coefficients international migration in a significant manner that is the Gini coefficient which is represented as income inequality and GDP per capita. The study established that there is a relationship between Gini coefficient and migration in that country with high-income inequality experience a high

number of international migrants. On average an increase in the income inequality share with 15 percent lead to the international migration of between 20 to 30 percent.

According to Vargas-Silva, Markaki & Sumption (2016), while it is true that migration leads to poverty, it is difficult to determine the complexity if poverty itself since there a number of factors that lead to the uncertainty of the nature and size of migration. The study also established that migration in the UK has affected the poverty incidences impacting the labor market and altering the cost of living. There are also effects on employment rates derived from migration since high rates of immigrants lead to decreased wages though there are empirical uncertainties raging this issue (Vargas-Silva, Markaki & Sumption 2016). The results from this study indicate that an inverted U-shaped curve exists between international migration and level of income in a country which can be interpreted as the developing countries with low GDP per capita produce a small share of international immigrants. The results also suggest that the residents from South Asian countries have a higher chance of traveling abroad since they can afford the costs associated with international migration.

Portes & Forte (2017) elucidated that the Brexit impact on migration will depend on the migration system adopted by the UK government if the system will have preferential treatment to European economic area citizen will be something that will be debated. The study also established that the economic determinants on migration will highly depend on the changes in unemployment rates and patterns. According to Backhaus, Martinez-Zarzoso, & Muris (2015), there is an aspect of climate affecting migration patterns, an increase in temperature correlates with high international migration and at the same time, emigration from agricultural dependent countries will be affected by temperature changes. There are a number of studies that focus general socioeconomic aspects as major determinants of migration but Backhaus, Martinez-Zarzoso & Muris (2015) focused on climate changes as a major variable in the migration aspect.

5.7: Conclusion

There are some key issues that emerge from this chapter after considering data set from seven countries in South Asia in determining the impact of remittances on migration, poverty, and education. The first findings are that international migration reduces poverty levels. Secondly, the distance between labor-receiving countries impacts the migration share, on average an increase in 12 percent on the distance between the two countries will have an effect of between 15 to 20 percent. There is also an inverted U-shape relationship between international migration and GDP per capita with people living in low-income countries lacking transport cost to become international migrants.

We developed a significant and positive impact of remittances, migration and GDP per capita on poverty reduction, and we have estimated a significant and positive relationship between GINI coefficient and Poverty. It is a significant channel through which wealth is transferred from rich countries to the poor nations. Our findings support several empirical results on the positive and significant impact of Remittances and Migration on Poverty reduction. The Remittances also provides some necessary support for the effectiveness in increasing growth, development and poverty reduction in South Asian developing countries. Migration from South Asian countries to developed countries is beneficial for both developing and developed countries as migration or labor mobility produces benefits for developing countries and it also generates the incentives for return to host nations.

CHAPTER 6: Concluding Remarks

The global boundaries are slowly vanishing and globalization taking effect. Today, many countries are interlinked by several factors like the economy, social, and environmental elements. Moreover, more countries are moving towards a system of developing trading blocks to enhance their competitive advantage and offer their citizens extensive opportunities within their region of operation. Therefore, international migration and remittance is an important feature of globalization in the 21st century. The impact of migration in the South Asia region is attracting the attention of researchers owing to the phenomenal impact it has had on regional development (social and economic). Although the region remains relatively poor, it has made immense strides over the years and millions of people have moved out of poverty due to international remittances and migration.

There is a general agreement that global migration is essential in economic and social development. However, there are some restrictions that need to be addressed. Many countries still remain controlled by cross-border regulations. Hence, migration, remittances, and cross-border linkages are important issues to be considered. Existing data shows that the growth of the South Asian nations is largely dependent on the remittances of the migrants. However, there are few or no studies showing the impact of the remittances on poverty and inequality. Another issue that remains unaddressed is the usage of the remittances – whether the income generated by the migrants is used for consumption or business investments, and how migrants influence the labor market. These are some of the issues that need to be explored to provide a clear picture and understanding of the role of migrants' remittances in South Asian countries.

While the South Asian nations are labor abundant, they are resource-constrained. Therefore, most people in the region have no option but to move to places with a labor shortage. Moreover, these nations are prone to natural calamities like cyclones, floods, and drought which add to their complications of enhancing growth and development. At the micro-level, migration is largely motivated by economic reasons. On the macro level, migration is government-inspired as a tool to reduce unemployment and improve human and financial capital.

This dissertation is a contribution to these issues from several perspectives. In this study, we first reviewed the literature on remittances with respect to their effect on economic growth, its stability and poverty. Some micro-level studies on remittances were reviewed to better understand the underlying mechanisms through which people in developing countries migrate and remit, with a focus on the income structure of households, their incentives and costs. We then used cross-country panel data to examine, econometrically, the effects of remittances and migration on economic growth, poverty and inequality, after taking into account the endogeneity of remittances. Our conclusions are summarized in the following three points.

Chapter one gave a general overview of the whole study. Chapter two provides a comprehensive reviews existing theories related to education in economic growth, FDI and remittances on the international migration from Asian Countries to Japan, migration, remittance and economic development in South Asia. Moreover, this chapter reviews empirical studies about the impact of migrants 'remittance on poverty and inequality and also the use of remittances.

The 3rd chapter sought to quantitative analyze the education and economic growth among 7 South Asian countries. The main variables used here were expenditure on education, human capital, labor, net enrollment of primary, net enrolment of secondary and net enrolment of tertiary. It aimed to determine the effect of these variables towards the overall productivity level in terms of economic growth. My hypotheses are creating different opportunities for potential migrants to establish their entrepreneurial activity or small businesses in localities, could contribute more to local social and economic development than does the incoming flow of remittances sent by labor migrants. The higher the education level of the migrant, the greater chance s/he will be an entrepreneur after returning. My findings are that, how expenditure in education has proven to be an important variable towards the achievement of economic growth and education. Investment in education results in increased quality of services offered hence resulting in skilled personnel. The impact of skilled personnel in a country is beyond doubt a productive one. Increased ways of sourcing income and advancements in technology are all results of quality education and contribute towards the growth of an economy. And also can create better human capital that may migrate and send remittances. Spending on education can create better human capital which can in return accommodate the use of modern technology in the production process by minimizing huge

adoption cost. So, the nation`s policy have to be prioritized on the improvements of various institutions to have economic development. The countries should make such policies which could boost high-quality education for all, and it would be only successful when the governments upsurge the expenditure on the education sector of their respective nation.

Finally, depending on the stage of development, countries should properly balance investment between general and Expenditure in education, width and depth of human capital, basic and development research, and primary and secondary and tertiary education.

In the fourth chapter, the trends of international migration in Japan have been shaken by external events in the current years. The total number of foreign settlers dropped as well in the wake up of the March 2011 disasters. Global economic crisis particularly the disaster and calamities that happened in 2002 caused in a higher rate of migration in Japan combined with a number of patterns. The main movement being Japan's speedy ageing which one of the fastest rates across the domain. Given the rapid population ageing in Japan, rising foreign community, dynamic government employment of targeted immigrant sets, and efforts to better incorporate the foreign community already in Japan, it is reasonably assumed that migration will continue to rise.

The objectives of this chapter were to analyses effects of FDI & remittances on the international migration and tourism from seven Asian countries to Japan and apply the gravity model to analyses using the panel data estimation technique. In this case, the panel data used ware collected over time and across different countries. However, as earlier stated, panel data analysis was conducted to analyze the gravity models.

My hypothesis is creating different opportunities for potential migrants to establish their entrepreneurial activity or small businesses in localities, could contribute more to local social and economic development than does the incoming flow of remittances sent by labor migrants. Recently the population of Japan has been decreased which will be better opportunity for South Asian countries to migrate and return remittances. Which will be to establish return migrant`s entrepreneurial activity in the origin country.

As it can be observed from the panel data analysis results, FDI & Remittances positively correlated with migration and tourism from Asian countries to Japan. Only remittances negatively correlated with tourism. According to the results of this study, we find a positive effect of the population size of the destination on migration. Distance is negatively correlated to the size of migration

movements. Based on the positive and significant effect of GDP per capita at the destination, we conclude that migration & tourism is directed from Asian countries towards more developed region Japan. Developing countries and LCDs could borrow a thing or two from the drastic economic growth of Japan which has been discussed to the letter in this study. Additionally, the findings of this study will redound to the benefit of globalization considering the fact that FDI & Remittances plays such a significant role in economic growth.

Our empirical analysis points to the fact that remittances along with FDI play an important role in economic growth. Based on the result, we conclude that policy makers should actively attempt to encourage remittances and support to invest in order to create significant economic benefit. Similarly, policy as those created for FDI could generate a higher positive impact of remittances at economic level. This policy should encourage the use of remittances as investment to ensure that remittances contribute to positive economic growth.

In the fifth chapter there are five key issues that emerge from the fifth chapter after considering data set from seven middle-income countries in South Asia in determining the impact of remittances on migration, poverty, and education. My hypothesis is special local initiatives (projects, programs, etc.) on guiding the recipients of remittances, how these resources could be used more rational in order to generate sustainable income for their families in the future and reduces poverty levels, is crucial.

The first findings are that international migration reduces poverty levels. Secondly, the distance between labor-receiving countries impacts the migration share, on average an increase in 12 percent on the distance between the two countries will have an effect of between 15 to 20 percent. There is also an inverted U-shape relationship between international migration and GDP per capita with people living in low-income countries lacking transport cost to become international migrants. The share of international migration was not related statistically with poverty headcount. International remittances are not evidenced to reduce poverty levels or the squared poverty gap.

Based on these findings, the chapter 5 offers a few useful policy implications. I assert this point first, I recommend that migration and remittance data should be updated. Detailed information about migrations or returned migrants should be gathered in the forthcoming survey data and

census data. This leads to in depth econometric analysis. Countries will need to record and publish remittances and international migration data to minimize the unofficial data.

Given that remittances have increased sharply in recent years and are a substantial share of GDP in South Asian countries, governments (additionally Central Bank) should execute the exacting strategy to observe the remittances flow alongside other financial trends, and think about the conceivable macroeconomic effects for the future.

Policymakers should bring down the exchange expenses of remittances. The previous may introduce the mobile phone or online banking method to reduction the transactions cost of remittances. It is considerable, that policymakers support the process of rural transformation (e.g. providing village infrastructure and communication networks) and promoting education because these measures will encourage smooth behavior of remittance.

Finally, as migration or remittances are incongruous to advantage all households in the rural economy, it is essential that governments provide sufficient strategy backing to those that do not have access to the chance for migration or remittances (e.g. poor households, in indigenous minorities, living in remote rural areas).

It is required to more update the migration policy, policy implications with the continues changes of the world economy and demographic change. Inter connections between strategies play an important role in the effective accomplishment of any policy.

In this thesis I analysis, the nature of the relationship between Education expenditure and economic growth with include of Physical capital and labor force in the selected South Asian developing countries. Economic growth is one of the key indicators of the level of national development. And also education Spending on education can create better human capital, which is closely related with countries remittances and development of south Asia. We also argue that the potential of remittances flows to act as a stabilizer during episodes of high macroeconomic volatility. In addition, identify the effects of FDI and remittances on international migration & tourism from Asian countries to Japan. Its noted that with an increase of about 12 percent in remittances will have a direct impact on the GDP with a 2 percent decrease in poverty levels. The study also noted a direct effect from international migration on the economy of developing countries since the

remittances sent home to have a profound impact on the living standard of people. I agreed that migration can play a key role for development, especially for developing countries. Increase in remittance decreases the poverty level by increasing income and smoothening consumption. This also helps to improve health- and education-related indicators and the empowerment of women in the remittance-receiving countries. The migrants' diaspora can also be an important resource for developing countries' development. Hence migration and remittance are to the benefit of developing countries' development. However, pessimistic thought argues that large -scale out-migration, including highly educated and skilled people from developing to developed countries, and the inflow of remittance to developing countries increases dependency on destination countries.

Classical migration theory argues that migrants move from low-income areas to the high-income ones. Data from leading organizations like the UN and World Bank show that migration plays a key role in social and economic development – particularly in developing nations. An increase in remittance influences a decline in poverty rates. Access to income facilitates improved education and healthcare. However, a large scale out-migration especially that involving the skilled and educated people will more likely benefit the developed economies as opposed to the poor nations - such migration lead to brain drain.

Having explored the role of migration and remittances in the economic and social development of the developing nations, I agree that they have a positive outcome if resources are properly managed. Thus, as a policy recommendation, the migration-development agenda should bring the Sustainable Development Goals Framework. According to the ILO, in 2017, 164 million people migrated from the South to the North in search of better opportunities. Moreover, migration has been an integral practice in the region and can be partially linked to the changes attained in the South. In 2018, the World Bank estimated that there was a growth of about 12.7% in remittances in South Asia and this amount to about $132 billion in remittance flows to the South Asian nations. Essentially, remittances have increased over the past two decades and surpassed other forms of foreign investments.

It is worth mentioning that while the following subsection will present some of the data caveats and limitations in international migration data in the South Asia. Data coverage in any country is affected by definitional constraints, by the specific methodologies employed and by the overall quality of data collection. There is still no universally employed statistical definition of a migrant worker, and many countries might conceptualize these populations differently. Often, both origin and destination countries may utilize different criteria for what qualifies as work and what qualifies as a remunerated activity. In general, countries in South Asia and further afield frequently employ different criteria to identify international migrants by, for example, applying different minimum durations of residence for immigrants (IOM 2017) or different minimum durations of absence in the case of emigrants in countries of origin (Poulain and Perrin 2001), which would also affect measurement of international migrant workers. This in turn would hinder comparability of national statistics on international labour migration.

Finally, different countries have different overseas labour administrative functions, including data collection, spread across different divisions in the same ministry, or different ministries altogether, which can make coordination between different units – including statistics producers difficult (Wickramasekara 2011) but they are considered in this study.

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