UNIVERSITETET I AGDER

Migration for Work & Education

A case study of Nepal

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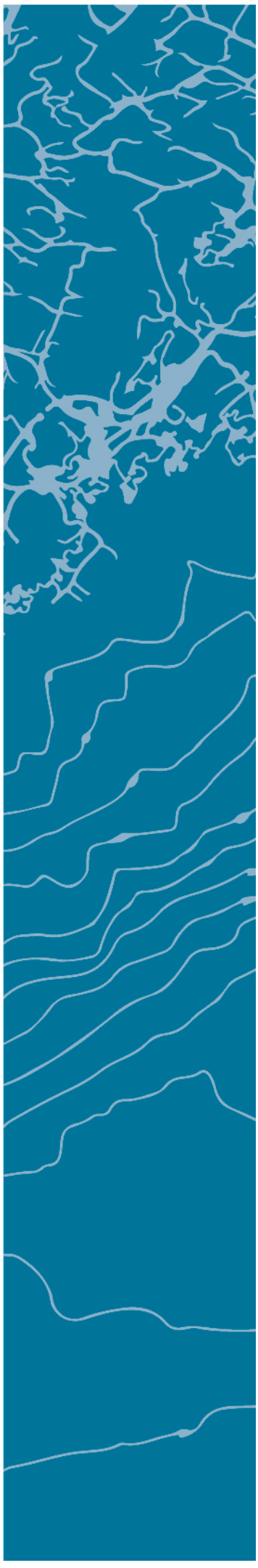

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Sudip Raj Kharel
Kristiansand, November 2018

Forewords

The labors are the pillars of the world economy and the existence of the business. Both active and the passive labors have the direct and proportionate impact on the growth and the development of the people, society, and economy. There have been several studies on the labor and economic growth relation in the past. They have been generalized in the larger scale. **However, there have been very few studies about labor and economic growth in a specific country like Nepal.**

The completion of this thesis will give information about the economic benefits of labor and educational migration especially from Nepal to Australia and GCC (Gulf Cooperation Council) countries. I chose this topic as I am also one of the educational migrants from Nepal studying in Norway. Australia and the GCC countries are central to this study as these countries are the top destination countries for labor and educational migration from Nepal.

Through this study, I wanted to learn about my fellow friends and others young people lining up to leave the home country for the diverse purposes incurring cost and benefits of migration. This master thesis will surely educate the younger generation who are planning to seek education and work in a foreign country, as well as relevant administrators in Nepal.

If not more, at least, this master study will give some information about the economic benefits of labor migration and educational migration from Nepal. After this study, Nepalese youths can take proper judgment and decision about which county to migrate for more economic benefits either for work or education.

Abstract

Migration is the process of crossing the national or international broader for the sake of getting a high paid job, education, better living standard, prosperity, settlement, and other diverse motives. This thesis is focused on the surging growth of Nepalese younger generation people going abroad for higher education and work. The question discussed in this master study is about why they are willing to leave the home country, and what economic benefits they get from it.

The Logistic regression is applied to find the relationship between several independent variables and dependent variables for labor and educational migration from Nepal. Furthermore, factor analysis, Normality test, Reliability test, and descriptive analysis have been conducted. Unemployment, limited fields of studies (one of the factors causing educational migration in Nepal), and a better standard of living have a significant effect on migration.

After Factor analysis, and Reliability test of the variables, The Net Present Value (NPV) method is used to discuss the economic benefits of labor and educational migration from Nepal to Australia and GCC (Gulf Cooperation Council) countries. After computing the Net Present Value for three different conditions ($NPV_{MN}>0$, $NPV_{MAN}>0$, and $NPV_{UGCC}>0$), all three null hypotheses are rejected.

More extensive analysis can be conducted from various cross-country data on labor and educational migration from Nepal using different statistical methods in future.

Keywords: Human Capital, Higher Education, Educational Migration, Labor Migration.

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CHAPTER 1

1.0 Introduction

This section of the first chapter will give information about the origin of this subject of interest, motives/objectives of the study, key terms, and the problem factor regarding this issue particularly in the context of Nepal.

The International Organization for Migration (IMO, 2013), says that 150.3 million people worked outside of their country of origin, and migration contributed USD 429 billion as remittances for developing countries in 2016. A report by Eurasian Development Bank in collaboration with United Nations Development Program (UNDP) shows that about 3% (247 million) of the world's total population migrated in 2013, and it was estimated to increase beyond 250 million in 2015 (Eurasian Development Bank; UNDP, n.d.).

The above numbers indicate how mobility has surged through time. Taking this fact into consideration, the thesis is narrowed down to the specific country Nepal. Nepal is an Asian country having a high rate of educational and labor migration. With about 29 million inhabitants in Nepal (The World Bank, 2018), many of its active labor and younger people are leaving the home country in large numbers every year for the sake of education and work.

Every day in Nepal, more than 1750 Nepali leave the country for foreign employment (Kantipur, 2017). Migration for work has a positive impact on the Nepalese economy since it has contributed to a significant amount of remittances that amount to 31 percent of the national GDP (World Bank Group, 2017). The remittance inflow has grown drastically from 1.5% in the year 1993 to 31.3% in the year 2016. The contribution now has been increasing at a decreasing rate. Both the educational migration and labor migration have skyrocketed in recent time with huge numbers. The out mobility has emerged as one of the prominent topics in recent time in Nepal.

The migration has been one of the vital catalysts for the development of Nepal since it is contributing to the country development by earning a huge sum of money

through remittance. In the fiscal year 2013/14, 0.5 million active youth left the country for foreign employment which excludes migrants to India where there is an open borderland. Therefore, no official data have been recorded yet in the important case of India. The fiscal year 2013/14 has recorded USD 4.1 billion as a remittance (Sijapati, B., Bhattarai, A., & Pathak, D.,2015). The moving of people across the geographic regions depends on economic conditions in both the host and home countries (Borjas, G. J., 2010).

The notable moving is also happening in the educational sector, as well as the labor market. Both the labor/educational migration are rising tremendously. The number of students going abroad for higher education has increased by big numbers. It was recorded 12000 students going abroad in the fiscal year 2010/2011, and logged nearly three times (32000) in the fiscal year 2015/16 (Aryal. B.P., 2017).

It will be exciting to explore more of these two factors, education and labor migration, and their economic benefits. The structures of this thesis are divided into several sections. The labor migration and education are defined and described in the first section. Secondly, a literature review on this topic is presented. The research model, methodology used, collection of data, and the results will be discussed in the later part of this study.

1.1.0 Objectives of the Study

The migration for multiple purposes arises when there are market imbalances (World Bank, 2014). From the same principle of market imperfection and shortcomings, the educational migrants outflow and labor migrants outflow have been increasing during the last decades in Nepal. This thesis will give some insights into the two most notable issues of current labor migration and educational migration from Nepal.

This master thesis focuses on the analysis of the economic returns of Nepalese people who work and study in Nepal and aboard. Nepal, every year exports hundreds of thousands of active persons into the international labor markets. That will have economic implications for Nepalese people, society, and the whole

economy both in the short-run and long run. This master thesis will try to figure out the expected economic returns from working and studying abroad. The wage/cost differential (cost-benefit) analysis will be performed to discuss the research question.

The ministry of education report says, around 40,000 students got the no-objection letter to study abroad in 2016 (Ministry of Education, Educational Information Management Section, 2016). On the other hand, the department of foreign affairs 2014 report states that half a million people left the country for overseas employment in 2014 (Department of foreign affairs, 2014, Nepali Edition). Therefore, my thesis will also analyze the factors causing high educational and labor migrants outflow from Nepal.

The ultimate objective of this master thesis is to analyze the economic returns of Nepalese people studying/working abroad (Australia, Gulf Cooperation Council (GCC) countries) and Nepal. Furthermore, the secondary aim of this master thesis is to analyze the factors causing Nepalese people to fly abroad in search of job and higher education.

In the following section, research questions are presented, and the next chapter talks about the relevance of this study, general information about Nepal and the background of labor migration and educational migration from Nepal.

1.2.0 General Information about Nepal

Nepal is a small landlocked country with an area about 147,181 square kilometers. It has a total population of 26.5 according to population census 2011 (Ministry of Education Nepal, MoE, 2016). Recent data by the World Bank states about 30 million population in Nepal (World Bank Group, 2016). Nepal is divided into five development regions including Eastern, Central, Western, Mid-Western, and Far-Western. The capital city 'Kathmandu' is located in Central Region of Nepal. People in Nepal speak 123 languages, and 125 different Ethnics group celebrate ten different religions. The following table shows the overall overview of Nepal at a glance:

Table 1 Nepal Info at a Glance

Crude Birth Rate	2016	21.8/thousand population
Literacy Rate	**2011**	**59.62%**
Crude Death Rate	2014	7.3/thousand population
Total Fertility Rate	2016	2.5 in person
Life Expectancy at Birth	2014/2016	66.6 Years/72.035
Population Below Poverty Line	**2015**	**USD 2 per day: 55.95%**
Per Capita Income	2015	694 USD
Immigration Rate	2014	0.46 /thousand population
Emigration Rate	**2014**	**10.77/thousand population**
Unemployment Rate	**2010/11**	**8.2%**
Remittance	**2016**	**31.3% of total GDP**

Source: Ministry of Education (2016), Central Bureau of Statistics (2014), OECD (2015), World Bank Group (2011), Khatiwada, P. P. (2014).

From Table 1, much information regarding my master thesis can be observed. Highlighted statistics show how I evolve of to study these areas. The Literacy rate of only 60%, the Poverty rate of 56% of the population indicates the hardships of life in Nepal. My thesis topic "Migration for work and Education," relates to the low literacy rate, the high poverty rate and how people try to improve their lives. Table 1 shows that the immigration rate (0.46/ thousand population) is lower than the emigration rate (10.77/thousand population). Low per capita income, the huge Emigration rate has resulted in 31.3% of total GDP. Notable high unemployment rate (8.2%) is one of the factors causing high immigration (1.9 million absent population, (*Central Bureau of Statistics, 2014*) from Nepal.

1.2.1 Educational Background of Nepal

In 1950, there were very few and limited educational infrastructures and facilities provided to the public in Nepal. After the rise of democracy in 1950, the need for education came out as a necessary element of human life (Ministry of Education, MoE, 1956.). With the establishment of the education board in 1952, it was meant

to control, supervise, expand, and establish further educational facilities throughout the country. Meanwhile, the need of having their university in Nepal, The National Commission for Planning Education suggested to the government of Nepal to appoint as a supervisory body to survey educational facilities and to be ready for the national universal education in Nepal in 1953.

High-quality data about education in Nepal is still not readily available due to the lack of data collection and resourceful studies and scientific research in the past. The first recording of data was done in 1952. However, such data are still incomplete. Availability of education to the masses is very limited due to the limited amount of schools in Nepal. The low number of schools and institutions is not the only reason. What was available, were located in big towns and centers. Though few schools were available for the public, they mostly were occupied by boys as compared to girls.

The limited building, infrastructures, equipment, and the limited number of qualified teachers have implied that the quantity and quality of education in Nepal is at a lower level. The shortage of teaching materials, and books is one of the severe problems. Articles written in Nepalese language is especially hard to access. The Ministry of education further expressed its concern about non-availability of the simplest audio-video aids also for general teaching. Children and teachers used to write on the dust of the floor. Mathematical and other alternative tutorials were not available for use (MoE,1956.).

Facing many difficulties in the past about education in Nepal, Nepal is continuously doing its job to improve the quantity and quality of education. The interim constitution of 2007 has given the right to get free education from the state up to the secondary level. The Higher Secondary Education Act (1993) empowered the Higher Secondary Education Board to implement higher secondary school (grades 11 and 12). **With the implementation of the Ninth National Plan (1997-2002), primary education (from grade 1 to 5) is made free of cost to everyone** (International Bureau of Education, World Data on Education, 7th edition 2010/11).

The latest study conducted by the ministry of education was in 2014. The literacy rate was 66% from compiled data from more than five years of education

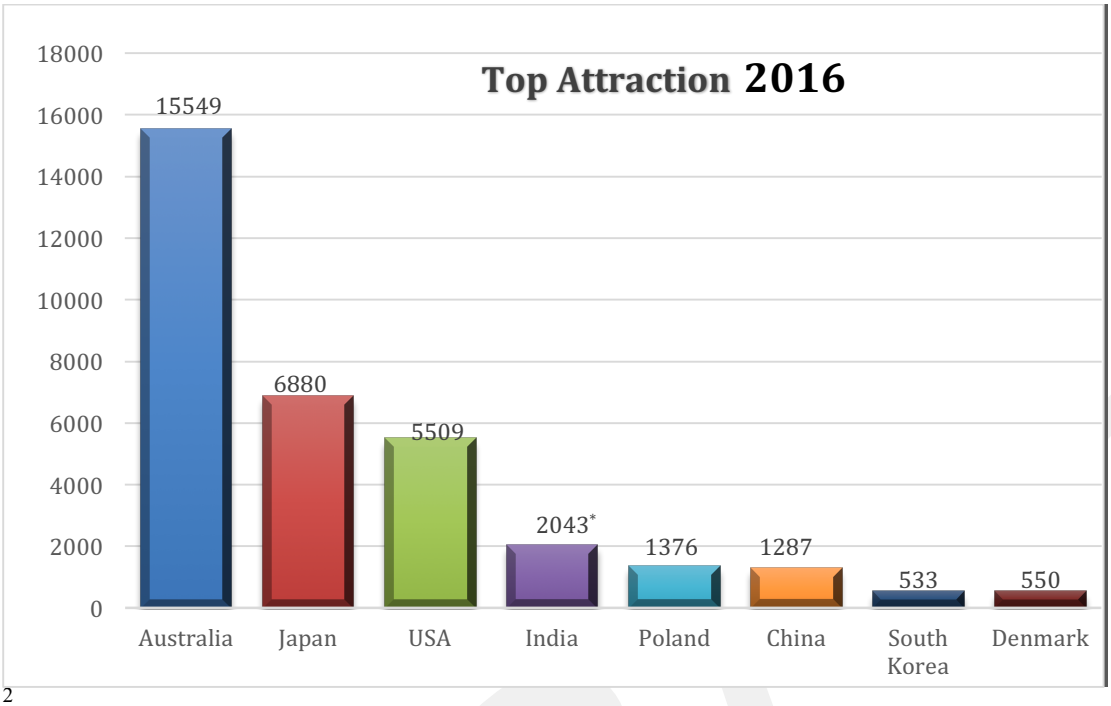
attainment (MoE, 2014). The number of educational institutions is growing and educating people with better access than before. There are 9 universities, 1369 campuses, and 4 medical institutions in Nepal (MoE, 2014). The quality of education is slowly growing in various educational institutions. Some educational institutions who are closely cooperating to upgrade the quality of education are: The Ministry of Education (MoE), The Department of Education (DoE), Regional Education Directories (REDs), District Education Office, The Curriculum Development Center (CDC), Office of the Controller of Examination (OCE), Council for Educational Human Resource Development (CEHRD), Council for Technical Education and Vocational Training (CTEVT), and Higher Secondary Education Board (HSEB), etc.

1.2.2 Educational Migration from Nepal

Although the limitation of facilities and infrastructure in the educational sectors, Nepal has reached a good pace in the development of the educational sectors. Nepal has more than 35,000 schools, 1,369 colleges, and nine universities (MoE, 2014) to offer at all level of education. Offers are still insufficient to the growing numbers of potential students every year. The choice of interest courses (field/subject of studies) are very limited. Limited fields of studies, the rigid nature of the curriculum, theory-based education, and lack of strong standard measures have caused many students to cross the country border seeking higher education abroad.

The latest report issued by the ministry of education shows: about 40,000 students got a 'no-objection' letter to go abroad for higher studies in the first 9 months of 2016 (Ministry of Education, Educational Information Management Section, 2016). The following figure shows top destination countries for the youth from Nepal. Australia is the most attractive destination (15,549) for higher studies followed by Japan (6,880), and USA (5,509). India also counts about 2,000 students for higher studies. The exact official record of students going to India for higher studies is not

available due to the open border and no visa requirements.[1] The number of students from Nepal in India is therefore underrated.



[2]

Source: Compiled from the Ministry of Education: Education in Figures, 2016

Figure 1 Top Destination Countries for Higher Education

This information about the educational outflow of students has developed my interest to look for factors causing educational migration from Nepal. These statistics are only from the 9-month period from 13 April 2016 to 13 January 2016. There is a significant rise in numbers during the last few years.

1.3.0 History of Labor Migration from Nepal

The history of labor migration from Nepal can be traced more than 300 years back (MoE, Department of Foreign Affairs, 2013/2014). Historically labor outflow from

[1] *Nepal and India have special treaties and agreements that allow citizens from both countries to cross the border, reside inside, do business and more without any legal requirements from the state government.*

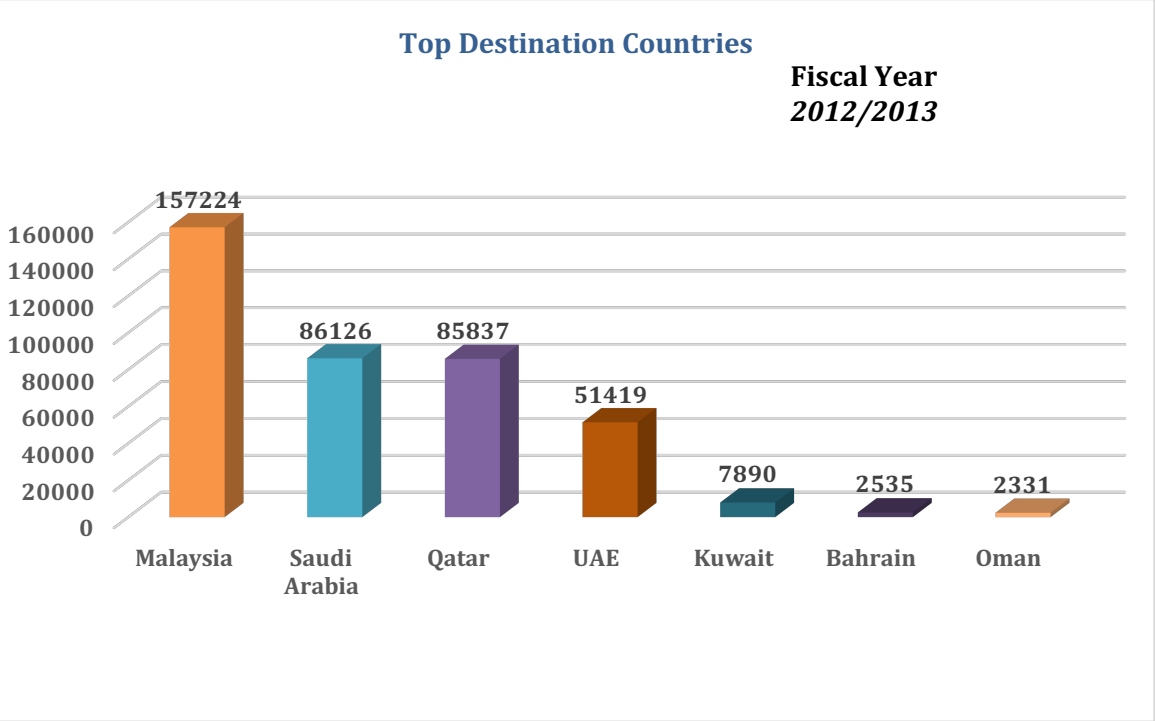
[2] *Statistics for getting higher education in India is very tough to find. It is because of the open border policies that allow people to cross the border without any legal requirements. Moreover, to study in India, it is not necessary to get a no-objection letter from the ministry of education.*

Nepal for foreign employment was to India. Nepal and India share the common border policy that allows both countries to cross the border without any documentation and legal approval. This strange policy (a special treaty between government of Nepal and India) has triggered the most significant flow of people to India looking for better jobs and living standard.

The boom of oil industries in the Middle East in the 1970s opened the ample opportunities. At the same time, the Foreign Employment Act, 1985 encouraged Nepalese citizens to migrate.[3] The first official record kept by the government of Nepal about labor migration beyond India was in 1993/1994. That year 3,605 Nepalese left for foreign employment. The number recorded almost 7 times greater in the year 1999/2000 from the year 1993/1994. From the beginning, the most attractive destinations for Nepalese workers have been Kuwait, Malaysia, Qatar, Saudi Arabia, and United Arab Emirates (UAE). These major countries cover nearly 97% of the total labor migrants from Nepal.

In the year 2014/15, at least 1.2 million jobs were available for Nepalese workers in the international labor market (Ministry of Labor and Employment, 2014/2015). Major destination countries for Nepalese workers are the Gulf Cooperation Council (GCC) countries (Kuwait, Qatar, Saudi Arabia, Oman, Bahrain and United Arab Emirates) and Malaysia. The following figure shows the top destination countries for Nepalese workers:

[3] *Ministry of Education: 'Labor Migration for Employment": A Status Report for Nepal 2013/2014*



Source: Department of Foreign Affairs, Nepal, 2014

Figure 2 Top Destination countries for Nepalese Workers

Figure 2 shows the number of workers who went for foreign employment in the year 2012/2013. The information given in figure 2, are compiled from top countries receiving Nepalese workers. Malaysia has always topped the numbers followed by Saudi Arabia, Qatar, and UAE (United Arab Emirates). Nearly half a million workers left the country for foreign employment in 2014 alone.

CHAPTER 2

Research Questions

2.1 What are the factors causing large numbers of Nepalese youths to go abroad?

The ministry of education report says, around 40,000 students got the no-objection letter to study abroad in 2016 (Ministry of Education, Educational Information Management Section, 2016). On the other hand, the department of foreign affairs 2014 report says that half a million people left the country for overseas employment in 2014 (Department of foreign affairs, 2014, Nepali Edition). Therefore, my thesis will analyze the factors causing high educational and labor migrants outflow from Nepal. For this analysis, people's perception will be collected for the particular factors related to work and educational migration.

2.2 What are the expected economic returns of Nepalese people studying and working abroad?

This master thesis primarily focuses on the analysis of the economic returns of Nepalese people who work and study in Nepal and abroad. Nepal, every year exports hundreds of thousands of active persons into the international labor markets. That will have economic implications for Nepalese people, society, and the country's economy both in the short-run and long run. This master thesis will try to figure out the expected economic returns from working or studying abroad. The wage differentials analysis (NPV) will be conducted to discuss this research question. The primary countries in this analysis are Nepal, Australia, and the Gulf Cooperation Council (GCC) countries.

2.3 Defining Terminologies in the Study

Migration is the today's colossal phenomenon covering significant share in the international market. The migrants towards industrial countries have doubled over the last three decades, and the remittances flow to the developing countries has been more substantial than the foreign aid or foreign direct investment (FDI) (McKenzie, D. J., & Sasin, M. J. 2007).

Understanding the economic returns from migration for education in both home countries and host countries is something that is interesting to consider (Rosenzweig, M. R., 2006). The migration concept is so comprehensive that it can be relevant for multiple sectors, including the political, legal, economic, and social sectors. Returns to investment in education are high, except in some exceptional cases (Cohn. E, Terry G. Geske., 1990).

Migration is an important networking channel when domestic markets cannot completely absorb the increasing amount of educated labor force (World Bank Group, n.d.)**.** Although migration may be a good sign of change and development, the objective of this thesis is to analyze the implication of internal migration and international migration for both educational and work purpose. Labor migration has a tremendous impact on the Nepalese economy since remittances account for 31.3 % of the gross domestic product (GDP) recently.

This study will try to present the relationship between labor/educational migration factors, migration and the economic benefits from it. In other words, it will try to analyze the interrelationship between labor/educational migrants and their cost and wage differences between at home in Nepal and abroad.

In the following section, the concepts of different terminologies are defined. Firstly, the short description of labor migration and its types, gross domestic product, remittances, and the term education are described.

2.4.1 Migration

Pieter Kok (1999) has said that defining the migration is a controversial job. However, he further defined migration as the movement of people over a distance from one usual place of a resident to another site. The International Organization for Migration (IMO) defined the labor migration as a cross-border movement for the motives of employment in a foreign land.

Migration is possibly best defined as the crossing of a spatial boundary by one or more person involved in a change of residence (Kok. P. 1999, PP. 20). Migration is

an outcome of the overall design of a society within which, social, demographic, economic, and other sorts of behavior are enfolded (Sinha. B., 2005).

2.4.2 Type of Migration

- **Internal Migration**

  Internal migration is when people migrate within the same country, region, or territory. For example, movement from Oslo to Kristiansand.

- **International Migration**

  International migration occurs when people migrate from one country to another country. For example, from Nepal to Australia.

- **Migration for Work**

  Migration for work is defined as a process of moving from one place to another particularly in search of a job. It also can be both internal and external migration for work.

- **Migration for Education**

  The migration for education term is defined as a process of moving from one place to another primarily for getting an education. It can be both internal and external migration for education.

- ***Immigration*** is when a person enters a country. If a person X goes to the United States from Nepal, X is the immigrant to the US.

- ***Emigration*** is when a person leaves a country. If a person X goes to the United States from Nepal, X is the Emigrant to Nepal.

All these migrations have social, economic, political, legal, and environmental impacts on the home country as well as on the host countries.

2.5.0 Gross Domestic Product (GDP)

UNICEF defined the gross domestic product (GDP) as the sum of value added by all resident producers (adding any product taxes and subtracting subsidies not included in the valuation of output). GDP per capita is gross domestic product divided by midyear population (UNICEF).

2.6.0 Remittance

Remittances are funds and goods sent by the domestic (internal) or international migrants to their place of origin, families, or community (Garip. F, 2011). Remittances have a positive and significant implication on economic growth and development (Catrinescu, N, Leon-Ledesma, M, Piracha, M., & Quillin, B., 2009). The research done on African countries show that a 10% rise in remittances increases GDP per capita income by 0.3% (Fayissa, B. & Nsiah, C. 2008).

2.7.0 Education

The word "education" is derived from the Latin word "educatus" which mean to rear or educate. According to the Webster's World Dictionary (as cited in Elchanan and Terry G 1990), education is the process of continuous training and development of knowledge, skill, talent, character employing formal schooling. The act of taking education can be both formal and informal. **Formal education is defined as such which is taken under the educational institutions.** Whereas, informal education can be from experience or learning by doing which is usually labeled as training or experience or learning-by-doing.

The actual meaning of education is something that is a harmonic development of moral, mental, physical, and social elements, the four dimension of life (Parankimalil. J, 2012). Education is the transmission of life by the living, to the living, through living, and for the living (Kumar, S., & Ahmad, S., 2008). Mark K. Smith defined education as a process of inviting truth and possibility, of encouraging and giving time to discovery (Smith, M. K. 2015).

There are basically three types of education and learning.

- **Formal education:** Formal education is taken at schools, colleges, and university for academic courses. I am taking Master of Science in Business Administration at the University of Agder, Kristiansand which is an example of formal education.
- **Informal education:** Informal education is a very long process of learning outside of formal educational institutions. For example, learning by reading books in a library, parents teaching children how to cook food or ride a bicycle are some sorts of informal education.

- **Non-Formal education:** Non-formal education is that system where people can learn literacy, other basic skills, and job skills. Home education, distance learning are some of the possible examples of non-formal education.

Chapter 3

3.0 Human Capital

The multifaceted dimensions which influence the productive capacity and earning potential like the measure of skills, education, and attributes of labor are called human capital (Pettinger. T, 2017). Though the human capital topic was not completely covered at the beginning of the time, it got full attention over the time. Today in labor markets, different skills, talents, and abilities are very crucial.

Investment in human capital includes many different activities. Formal education at the primary, secondary, and higher standards; on-the-job training organized by the firms including apprenticeship; the health facilities which broadly include the expenditures directly related to the life expectancy, strength, and stamina; migration of individuals and families to gain various opportunities are considered as prime categories of human capital (Schultz, T. W. 1961). Investment in human capital may be costly at present time due to the loss of wage work during that period. However, the future earning will be higher for those people who have gained some additional human capital investments in their life. As a consequence of acquiring human capital, through the training and development programs, college graduates in their fifties earn twice as much as college graduates in their twenties (Borjas, G. J., & Van Ours, J. C. 2010).

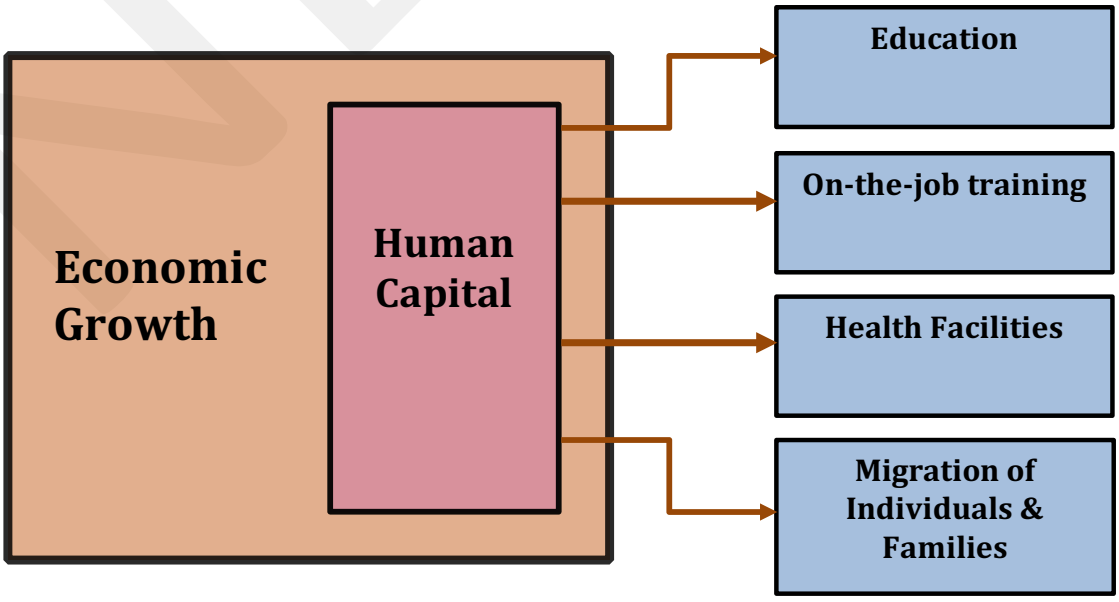


Figure 3: Economic Growth Model including Human Capital

In the word of Di Bartolo (2000), human capital is the estimation of the ability of a person to produce labor income. The investment in human capital to gain knowledge, skills, on-the-job training and other product qualities have direct and proportional relationships with one's productivity growth, as well as the productivity growth and the development of the economy.

Human capital has been the fundamental prerequisite for economic growth (Benhabib, J., & Spiegel, M. M. 1994). All individuals are distinct in how productivities are acquired, for example, inherited abilities and acquired skills (Mincer, J. 1984).

The human capital can be developed into an economic growth model for society. There are primarily five types of capital (natural capital, manufactured capital, financial capital, human capital, and social capital).

3.1 Literature Review

This thesis covers two vast areas: *Migration for work and education*. In the past, dozens of studies have been conducted in labor migration areas. Migration for work is getting big attention in recent time. Gorge J. Borjas has studied about the work and education. In his book "Labor Economics," he talks about why some people opt to work, while other people withdraw from the labor market (Borjas, J.G., 2010).

Education, on-the-job training, health facilities, migration of individuals and families are all part of human capital contributing to economic growth. The growth of total factor productivity is influenced by human capital (Benhabib, J., & Spiegel, M. M. 1994). Investment in human capital has positive results that enhance the qualities of workers as well as the earnings of workers (Schultz, T.W. 1961). Schultz says investment in human capital increases real incomes of the workers, some of the investment in human capital is considered as consumption. He assumes that the expenses to education create a form of consumer capital. David Ashton and Francis Green said that some societies had developed institutional structures that incite employers to follow the high skills route or low skills route (Ashton, D. &

Green, F., 1997). They found the factor behind this is a degree of independence of the education system from the economy. In a society, where the education system is developed with a high degree of autonomy from the economy, there is a tendency to create a relatively low level of educational achievements, and vice-versa.

From the mortality point of view, Robert Tamura says there is a relationship between young adult mortality and young adult human capital (Tamura, R., 2006). Findings from the goodness of fit test suggest that the rate of return to schooling is higher in low mortality environments of developed countries than in high mortality environments. On the contrary, in the words of Jacob Mincer, human capital may not be a prerequisite for the prosperity/growth of the economy (Mincer, J., 1984). However, he agrees that human capital is necessary for sustainable economic growth and development.

Most of the investment incurred in human capital produce visible earnings at adult ages and reduces at younger generations (Becker, G.S., 1962). However, he also argues that some investment in human capital does not affect the earnings as costs are paid, and returns are collected by firms, industries, or countries using capital.

The students gain education abroad to obtain jobs in the host countries to get a highly paid job (Rosenzweig, M. R., 2006). Migration for schooling has multi-facet advantages both for individual and the home countries. International students get not only high degrees but also bring social and economic impacts both to home and host countries (Pociovălişteanu, D.M., 2012). Similar output is found in Eva Wiren's work. She found out that the composition of migrant students is very crucial for today's requirements (Wiren, E., 2013). Factors related to languages, school patterns, social background, teachers have a significant effect on migrants in education. Gender inequality is found in Psacharopoulos work. In his research paper, he has said that primary school continues to be the top investment choice in developing countries, as well as, that educating females is marginally more profitable than teaching males (Psacharopoulos, G., 1994).

People with low skills decide not to emigrate while those with high ability decide to emigrate and remain there permanently (Dustmann, C.; Glitz, A., 2011). When

highly skilled people migrate, it will have a significant impact on home countries. The national income will decrease, and reduce the per capita income when there is a change in the level of the migrated educated labor force (Bhagawati, J.; Hamala, K., 1974). Their work further concludes that for an internalized cost of education, emigration will reduce national income, but it will increase the average productivity of labor. From the work of Rosenzweig and Dustmann, it was found that people with high skills, tend to earn high pay (Rosenzweig, M. R., 2006; Dustmann, C, et al., 2011). But the work of Sari Pekkala Kerr & William R. Kerr found that migrants have lower earnings than natives. The success of immigrants in host country's labor markets is often based on comparisons of immigrant wages and employment wages of natives at the time of entry and over the duration of the stay (Kerr, S.P.; Kerr, W.R., 2011).

From the aspect of education migration and labor migration, we cannot ignore the 'remittances'. Remittances sent by those migrants back to home countries have a significant impact on economic growth and development. A survey done for African countries suggest that remittances have a positive effect on the economic growth of African countries. The empirical findings from the study show that a 10% rise in remittances increases a GDP per capita by 0.3% (Fayissa, B.; Nsiah, C., 2008).

There have been many studies and surveys about migration for work, and remittances in the past. Moreover, it still is one of the hot topics. They have not produced the consistent result over the time. It needs diversification of both research model, variables, and place for extensive research. An extended literature review table is found in **Appendix 1.**

Next chapter includes the human capital aspect regarding both migrations for work and education. It also presents the human capital theories and mathematical models for this master thesis.

CHAPTER 4

4.1.0 Investment in Human Capital

The future earnings of an individual are highly dependent on the level of education and the qualities acquired by them. At a different time, during the working life cycle, we develop, learn, and acquire various skills, knowledge, and experiences through the investment of time and money. The investment cost of human capital can be both direct and indirect. The investment in preschool education can be considered as the very first stage of human capital development. Primary education can be regarded as the minimum qualities acquired by everyone. In developed countries, higher education like college education can be viewed as a real investment in human capital before joining the labor market. **Figure 4** indicates the investment cycle of an individual from an early age to the retirement phase of human life. The economic returns can be calculated based on these investments.

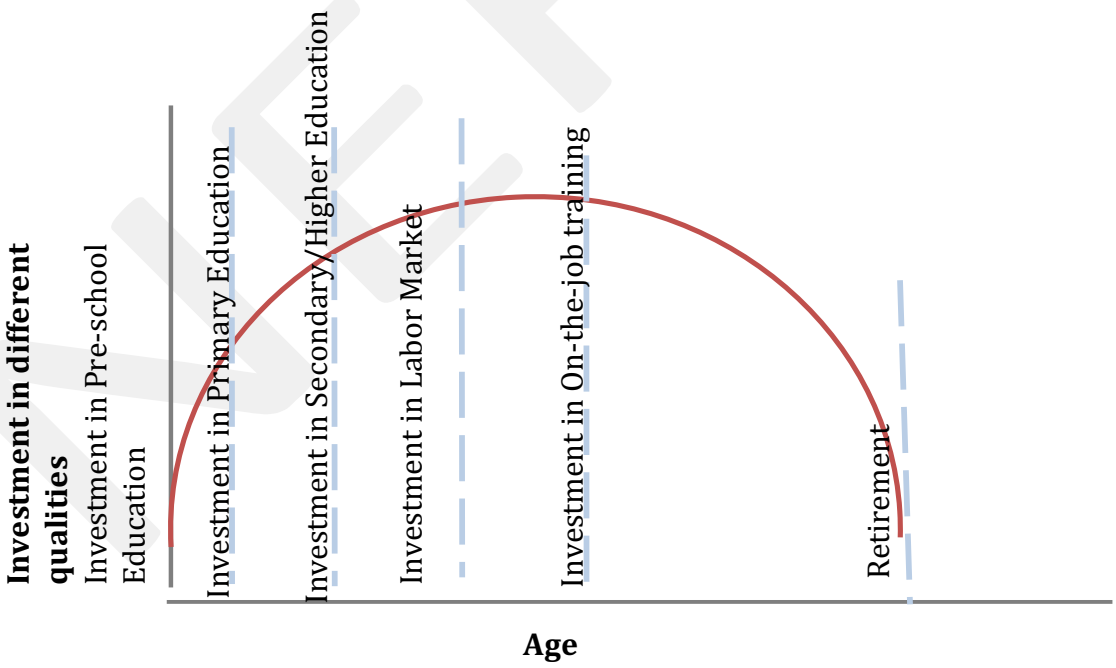


Figure 4 Investment over the years in Human Capital by a person

Figure 4 illustrates that from a cross-section of the labor market, wages can be described by age-earning profiles. It is because some skills can be learned at home

and school before involving in paid work. Every investment, whether it is an investment in physical or in human capital, it is analyzed under the present cost and the future benefits/returns (Borjas, G. J., & Van Ours, J. C. 2010).

4.2.0 Economic return to bachelor education

The workers tend to acquire the skills and qualities that optimize the future utility of earnings and leisure. During this process of obtaining skills, workers incur a direct cost and some opportunity cost. The objective of the workers receiving the additional abilities is to get a better-earning profile later in life. The wage differential gap for workers with high education and low-education in developing countries is higher than the gap in developed countries (Borjas, G. J., 2010). The present value of the earnings can be calculated as shown below if the workers get a bachelor degree education, and immediately join paid work in the labor market. In this case, the workers decide to quit education after a bachelor degree education. This model is adopted from the **Borjas'** Labor Economics, 6th edition, p.p. 248).

$$\boldsymbol{PV_B = W_B + \frac{W_B}{(1+r)} + \frac{W_B}{(1+r)^2} + \cdots + \frac{W_B}{(1+r)^{42}}} \qquad (i)^4$$

In the above model, *r* is the interest rate which is used to calculate the present value of future earnings. W_B is the wages of bachelor graduates. Workers are assumed to retire at the age of 65. Therefore, the earing profiles are drawn from after graduation between the age 23 to age 65.

Alternatively, the future earnings profile can be different for those workers who decide to join the master degree education instead of entering paid work in the labor market. The earning profiles for those workers who decide to attend master degree education upon the graduation from the Bachelor program can be present as below,

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[4] *PV_B = The Present value of a bachelor graduate*
PV_M= The Present value of a master graduate
C= The Cost of tuition and cost of textbook per year
W_M= Wages of master graduate
W_B = Wages of bachelor graduate
r= The discount rate

$$PV_M = -C - \frac{C}{(1+r)} + \frac{W_M}{(1+r)^2} + \frac{W_M}{(1+r)^3} + \cdots + \frac{W_M}{(1+r)^{42}} \qquad (ii)^5$$

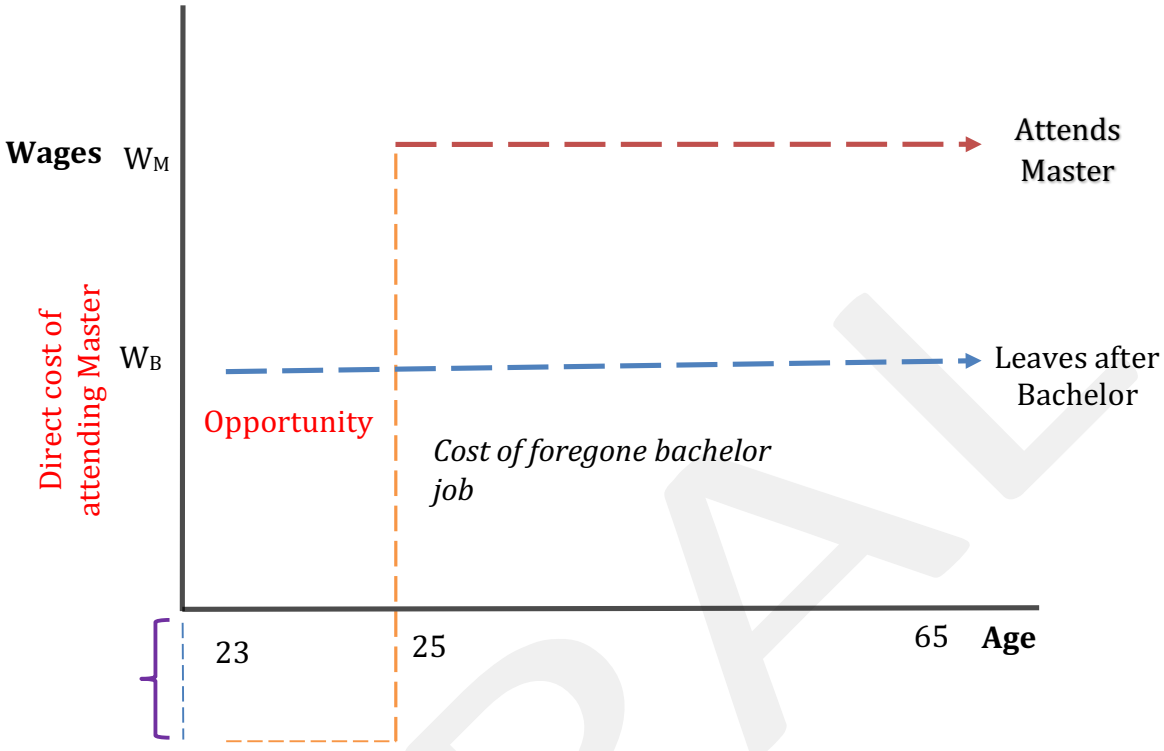

Figure 5 Earnings streams of a master graduate

In this model, the first two years are considered as the direct cost (tuition costs, text book and learning materials) of attending the master degree education. In this two years of attending the master degree, workers not only incur the direct cost of attending the master program, but also the opportunity cost of losing the earnings in first two years of joining master. The lifetime earning is calculated in 40 years as the workers join the paid work after finishing the Master Degree education and may stay in the job for 40 years (65-25 years of age).

Any worker who believes that the net present value of getting a master degree is higher than the current value of getting only a bachelor degree, should aim for the master education. Here, from the above equation (i) and (ii), if $PV_{ME} - PV_{BE} > 0$, workers decide to join the master degree education considering the better future earning profiles.

In the following section, the procedures about the net present value calculation method is explained. The net present value is calculated for those who have migrated to Australia and Gulf Cooperation Council (GCC) countries from Nepal either for work or education. The net earnings of Master graduates from Nepal working in Nepal, the net earnings of Master graduates from Australia working in Nepal, and the net earnings of unskilled Nepalese workers working in GCC countries are calculated using different model developed in following section.

4.3.0 Analyzing earning streams of bachelor & master graduates from Nepal & Australia

In this section, I have tried to analyze three different earning profiles of (1) a bachelor graduate from Nepal and working in Nepal; (2) a master graduate from Nepal and working in Nepal; (3) and a master graduate from Australia and working in Nepal. The objective of this section is to study the earnings differentials of an individual who quit study after bachelor degree and enter paid work in a labor market in Nepal. Secondly, this section explores the earnings differentials of individuals who decide to join the master degree and enter the labor market later in Nepal. Finally, it also examines the earnings differentials of those individuals who get a master degree in Australia and work in Nepal.

4.3.1 Present Value of Bachelor Candidate working in Nepal

$$PV_{BN} = W_{BN} + \frac{W_{BN}}{(1+r)} + \frac{W_{BN}}{(1+r)^2} + \cdots + \frac{W_{BN}}{(1+r)^{42}} \qquad (iii)$$

In this given equation, PV is the present value, BN indicates Bachelor in Nepal, and r is the discount rate of returns. In this given model, the cost of living while studying bachelor is not included [6]. **However, when outmigration is an**

[6] *It is assumed bachelor students while studying in Nepal will not work. It is deemed so because of the inflexibility of a timing of education. Most of the bachelor programs run on daytime. Furthermore, most jobs available*

alternative, cost of living in the respective countries become relevant. The cost of living in Nepal can be expressed as:

$$PV_{CLN} = -C_{LN} - \frac{C_{LN}}{(1+r)} - \frac{C_{LN}}{(1+r)^2} - \cdots - \frac{C_{LN}}{(1+r)^{42}} \quad (iv)$$

Where C_{LN} is the cost of living in Nepal. For the finding of the net present value of living, educating and working in Nepal, we must adjust the cost of living to the earning as well. When we adjust both earning and cost together, it gives the exact net present value of bachelor/master graduates working/studying and living in Nepal.

$$PV_{BN} = W_{BN} - C_{LN} + \frac{W_{BN}}{(1+r)} - \frac{C_{LN}}{(1+r)} + \frac{W_{BN}}{(1+r)^2} - \frac{C_{LN}}{(1+r)^2} + \cdots + \frac{W_{BN}}{(1+r)^{42}} - \frac{C_{LN}}{(1+r)^{42}})$$

(v)

Alternatively,

$$\boldsymbol{PV_{BN} = (W_{BN} - C_{LN}) + \frac{(W_{BN} - C_{LN})}{(1+r)} + \frac{(W_{BN} - C_{LN})}{(1+r)^2} + \cdots + \frac{(W_{BN} - C_{LN})}{(1+r)^{42}}} \quad (vi)$$[7]

in Nepal are between 9 in the morning to18:00 in the evening. So, bachelor students are assumed to join education only.

[7] *W_{BN}= Wage of bachelor graduates in Nepal*

W_{MN}= Wage of master graduates in Nepal

C_{LN}= Cost of living in Nepal

C_{TN}= Cost of tuition in Nepal

4.3.2 Present Value of master graduates studying in Nepal and working in Nepal

Now we calculate the present value of master graduates studying in Nepal and working in Nepal. In this scenario, we have assumed the student is not working while studying in Nepal[8]. The model for this can be expressed as follows:

$$PV_{MN} = -C_{TN} - C_{LN} - \frac{C_{TN}}{(1+r)} - \frac{C_{LN}}{(1+r)} + \frac{W_{MN}}{(1+r)^2} - \frac{C_{LN}}{(1+r)^2} + \cdots + \frac{W_{MN}}{(1+r)^{42}} - \frac{C_{LN}}{(1+r)^{42}} \quad \text{(vii)}$$

Alternatively,

$$\boldsymbol{PV_{MN} = -(C_{TN} + C_{LN}) - \frac{(C_{TN} + C_{LN})}{(1+r)} + \frac{(W_{MN} - C_{LN})}{(1+r)^2} + \cdots + \frac{(W_{MN} - C_{LN})}{(1+r)^{42}}} \quad \boldsymbol{(viii)}$$

4.3.3 Net Present Value of Master Graduates from Nepal Working in Nepal

The net present value is the difference between Present value of Master graduates from Nepal working in Nepal and Present value of Bachelor graduates working in Nepal.

$$\mathbf{NPV_{MN} = PV_{MN} - PV_{BN}}$$

Now we can take the value of PV_{MAN} and PV_{BN}, we get the following combination:

[8] *In Nepal, working part-time job is hardly available. There is no hour basis payment. If someone wishes to work skilled or unskilled, it is a full-time job. So, here in my studies, I have assumed that the master graduates do not work while studying.*

$$[-(C_{TN} + C_{LN}) - \frac{(C_{TN} + C_{LN})}{(1+r)} + \frac{(W_{MN} - C_{LN})}{(1+r)^2} + \cdots + \frac{(W_{MN} - C_{LN})}{(1+r)^{42}}] - [(W_{BN} - C_{LN}) + \frac{(W_{BN} - C_{LN})}{(1+r)} + \frac{(W_{BN} - C_{LN})}{(1+r)^2} + \cdots + \frac{(W_{BN} - C_{LN})}{(1+r)^{42}}] \quad (x)$$

OR,

$$\{-C_{TN} - C_{LN} - \frac{C_{TN}}{(1+r)} - \frac{C_{LN}}{(1+r)} + \frac{W_{MN}}{(1+r)^2} - \frac{C_{LN}}{(1+r)^2} + \cdots + \frac{W_{MN}}{(1+r)^{42}} - \frac{C_{LN}}{(1+r)^{42}}\} - \{W_{BN} - C_{LN} + \frac{W_{BN}}{(1+r)} - \frac{C_{LN}}{(1+r)} + \frac{W_{BN}}{(1+r)^2} - \frac{C_{LN}}{(1+r)^2} + \cdots + \frac{W_{BN}}{(1+r)^{42}} - \frac{C_{LN}}{(1+r)^{42}}\} \quad (xi)$$

From the equation above, we can eliminate the double terms from both the sides. After the elimination of the terms, the equations become;

$$[-C_{TN} - \frac{C_{TN}}{(1+r)} + \frac{W_{MN}}{(1+r)^2} + \cdots + \frac{W_{MN}}{(1+r)^{42}}] - [W_{BN} + \frac{W_{BN}}{(1+r)} + \frac{W_{BN}}{(1+r)^2} + \cdots + \frac{W_{BN}}{(1+r)^{42}}] \quad (xii)$$

OR

$$-C_{TN} - W_{BN} - \frac{C_{TN}}{(1+r)} - \frac{W_{BN}}{(1+r)} + \frac{W_{MN}}{(1+r)^2} - \frac{W_{BN}}{(1+r)^2} + \cdots + \frac{W_{MN}}{(1+r)^{42}} - \frac{W_{BN}}{(1+r)^{42}} \quad (xiii)$$

OR

$$\mathbf{NPV_{MN}} = -(\mathbf{C_{TN}} + \mathbf{W_{BN}}) - \left[\frac{\mathbf{C_{TN}} + \mathbf{W_{BN}}}{(\mathbf{1}+\mathbf{r})}\right] + \frac{\mathbf{W_{MN}} - \mathbf{W_{BN}}}{(\mathbf{1}+\mathbf{r})^2} + \cdots + \frac{\mathbf{W_{MN}} - \mathbf{W_{BN}}}{(\mathbf{1}+\mathbf{r})^{42}} \quad (1)$$

Finally, we have derived the concrete equation to calculate the net present value of a master graduate from Nepal working in Nepal. In equation (1) above, the cost of

living in Nepal is eliminated. It is because there is no alternative to living in Nepal either one works or studies.

However, it is different in case of calculating the net present value of a master graduate from Australia working in Nepal. It is illustrated in the following section.

4.3.3 Present Value of Master graduates from Australia working in Nepal

When an individual from Nepal goes to Australia for a Master degree after completion of a bachelor degree in Nepal, the present value of a master graduate from Australia working in Nepal can be measured using the following model:

$$PV_{MA} = -(C_{TA} - C_{TN}) - C_{LA} + \frac{1}{2}W_{UA} - \left[\frac{C_{TA}}{(1+r)} - \frac{C_{TN}}{(1+r)} - \frac{C_{LA}}{(1+r)}\right] + \frac{1}{2}\frac{W_{UA}}{(1+r)} + \frac{W_{MAN}}{(1+r)^2} - \frac{C_{LN}}{(1+r)^2} + \cdots + \frac{W_{MAN}}{(1+r)^{42}} - \frac{C_{LN}}{(1+r)^{42}} \quad (ix)$$

To calculate the present value of master graduates from Australia working in Nepal, I have following assumptions:

- Person chooses Master Degree from Australia over Master Degree from Nepal which implies paying a higher tuition ($C_{TA} - C_{TN}$)
- Cost of living in Australia is higher than in Nepal ($C_{LA} - C_{LN}$)
- While studying in Australia, the student is expected to work part-time as an unskilled worker
- Back in Nepal the Master graduate from Australia earns W_{MAN}, while forgoing the earning from a bachelor degree from Nepal W_{BN} (W_{MAN}-W_{BN})
- While studying Master in Australia, the wage of Bachelors in Nepal is an opportunity cost
- While working in Nepal, in both cases, there is no cost of living in Nepal

In this model, I have adjusted the living cost in Nepal as candidate studies in Australia. While studying in Australia, the student is expected to work part-time as an unskilled worker. We have assumed the part-time as half of the full-time job. For the exact results, we must adjust that earnings from a part-time unskilled job.

From the given equations (vi, viii, ix) above, now we can calculate the net present value of master graduates from Nepal and Australia. In the following section, net present value model of master graduates from Australia working in Nepal is presented.

4.3.4 Net Present Value of Master Graduates from Australia Working in Nepal

In this model, we calculate the net present value of master graduates from Australia working in Nepal. Here, cost of living in Nepal and cost of tuition in Nepal is subtracted from the cost of living and cost of tuition in Australia.

$$\mathbf{NPV_{MAN} = PV_{MAN} - PV_{BN}}$$

Now we get the following combination:

$$-(\boldsymbol{C_{TA}}-\boldsymbol{C_{TN}}) - \boldsymbol{C_{LA}} + \frac{\mathbf{1}}{\mathbf{2}}\boldsymbol{W_{UA}} - \frac{\boldsymbol{C_{TA}}}{(\mathbf{1}+\boldsymbol{r})} - \frac{\boldsymbol{C_{TN}}}{(\mathbf{1}+\boldsymbol{r})} - \frac{\boldsymbol{C_{LA}}}{(\mathbf{1}+\boldsymbol{r})} + \frac{\mathbf{1}}{\mathbf{2}}\frac{\boldsymbol{W_{UA}}}{(\mathbf{1}+\boldsymbol{r})} + \frac{\boldsymbol{W_{MAN}}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{2}}} - \frac{\boldsymbol{C_{LN}}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{2}}} + \cdots + \frac{\boldsymbol{W_{MAN}}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{42}}} - \frac{\boldsymbol{C_{LN}}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{42}}} - [W_{BN} - C_{LN} + \frac{W_{BN}}{(1+r)} - \frac{C_{LN}}{(1+r)} + \frac{W_{BN}}{(1+r)^2} - \frac{C_{LN}}{(1+r)^2} + \cdots + \frac{W_{BN}}{(1+r)^{42}} - \frac{C_{LN}}{(1+r)^{42}}] \quad \text{(xiv)}$$

OR

$$-(\boldsymbol{C_{TA}}-\boldsymbol{C_{TN}}) - \boldsymbol{C_{LA}} + \tfrac{\mathbf{1}}{\mathbf{2}}\boldsymbol{W_{UA}} - \tfrac{\boldsymbol{C_{TA}}}{(\mathbf{1}+\boldsymbol{r})} - \tfrac{\boldsymbol{C_{TN}}}{(\mathbf{1}+\boldsymbol{r})} - \tfrac{\boldsymbol{C_{LA}}}{(\mathbf{1}+\boldsymbol{r})} + \tfrac{\mathbf{1}}{\mathbf{2}}\tfrac{\boldsymbol{W_{UA}}}{(\mathbf{1}+\boldsymbol{r})} + \tfrac{\boldsymbol{W_{MAN}}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{2}}} - \tfrac{\boldsymbol{C_{LN}}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{2}}} + \cdots + \tfrac{\boldsymbol{W_{MAN}}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{42}}} - \tfrac{\boldsymbol{C_{LN}}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{42}}} - [W_{BN} - C_{LN} + \tfrac{W_{BN}}{(1+r)} - \tfrac{C_{LN}}{(1+r)} + \tfrac{W_{BN}}{(1+r)^2} - \tfrac{C_{LN}}{(1+r)^2} + \cdots + \tfrac{W_{BN}}{(1+r)^{42}} - \tfrac{C_{LN}}{(1+r)^{42}}] \quad (xv)$$

OR

$$-(\boldsymbol{C_{TA}}-\boldsymbol{C_{TN}}+\boldsymbol{C_{LA}}-C_{LN})+\frac{\mathbf{1}}{\mathbf{2}}\boldsymbol{W_{UA}}-W_{BN}-\frac{(\boldsymbol{C_{TA}}-\boldsymbol{C_{TN}}+\boldsymbol{C_{LA}}-C_{LN})}{(\mathbf{1}+\boldsymbol{r})}$$
$$+\frac{\mathbf{1}}{\mathbf{2}}\frac{\boldsymbol{W_{UA}}}{(\mathbf{1}+\boldsymbol{r})}-\frac{W_{BN}}{(1+r)}+\frac{\boldsymbol{W_{MAN}}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{2}}}-\frac{W_{BN}}{(1+r)^{2}}+\cdots+\frac{\boldsymbol{W_{MAN}}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{42}}}$$
$$-\frac{W_{BN}}{(1+r)^{42}}] \quad (xvi)$$

Alternatively,

$$\boldsymbol{NPV_{MAN}}=-[(\boldsymbol{C_{TA}}-\boldsymbol{C_{TN}})+(\boldsymbol{C_{LA}}-C_{LN})]+(\frac{\mathbf{1}}{\mathbf{2}}\boldsymbol{W_{UA}}-W_{BN})$$
$$-[\frac{(\boldsymbol{C_{TA}}-\boldsymbol{C_{TN}})+(\boldsymbol{C_{LA}}-C_{LN})}{(\mathbf{1}+\boldsymbol{r})}]+(\frac{\mathbf{1}}{\mathbf{2}}\frac{\boldsymbol{W_{UA}}}{(\mathbf{1}+\boldsymbol{r})}-\frac{W_{BN}}{(1+r)})$$
$$+\frac{\boldsymbol{W_{MAN}}-W_{BN}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{2}}}+\cdots+\frac{\boldsymbol{W_{MAN}}-W_{BN}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{42}}}] \ldots\ldots\ldots (\mathbf{2})$$

In this equation (2), the first two years of education include the difference in cost of living between Nepal and Australia as an extra cost of studying abroad. The rest of the years excludes the cost of living in Nepal as the master candidate return home to Nepal after the completion of a master in Australia.

Based on the developed mathematical model above, my next job will be to draft the questionnaire to justify the variables included in this model. After the collection of useful data regarding different variable about education and the labor costs and earnings, data analysis will be conducted and, the results will be interpreted in later chapters.

4.6.0 Economic returns of unskilled workers working in Nepal and working in GCC Countries

In this segment, I have developed a model measuring the present value of unskilled workers working in Nepal and GCC Countries. High outflow active labor force from Nepal to international markets has induced me to look at the value of labor migration. I have chosen GCC Countries as it is the top destination for foreign employment from Nepal (nearly 97%). Present values of unskilled workers working in Nepal can be obtained from the information about yearly wage and cost.

Following equation can be applied while computing the present value of unskilled workers working in Nepal:

$$PV_{UN} = W_{UN} - C_{LN} + \frac{W_{UN}}{(1+r)} - \frac{C_{LN}}{(1+r)} + \frac{W_{UN}}{(1+r)^2} - \frac{C_{LN}}{(1+r)^2} + \cdots + \frac{W_{UN}}{(1+r)^{42}} - \frac{C_{LN}}{(1+r)^{42}} \quad (xvii)$$

In the given equation (IV), W_{UN} is the wage of an unskilled worker working in Nepal, r is the discounted rate, and C_{LN} is the cost of living in Nepal.

The present value of unskilled workers working in GCC Countries rather than at home in Nepal can be calculated from the following equations:

$$PV_{GCC} = W_{UGCC} - C_{LGCC} + \frac{W_{UGCC}}{(1+r)} - \frac{C_{LGCC}}{(1+r)} + \frac{W_{UGCC}}{(1+r)^2} - \frac{C_{LGCC}}{(1+r)^2} + \cdots + \frac{W_{UGCC}}{(1+r)^{42}} - \frac{C_{LGCC}}{(1+r)^{42}} \quad (xviii)$$

$$\mathbf{NPV_{UGCC} = PV_{UGCC} - PV_{UN}}$$

Alternatively,

Now we can substitute the value from equation (xviii) and (xvii) in NPV_{UGCC}.

$$NPV_{UGCC} = W_{UGCC} - C_{LGCC} + \frac{W_{UGCC}}{(1+r)} - \frac{C_{LGCC}}{(1+r)} + \frac{W_{UGCC}}{(1+r)^2} - \frac{C_{LGCC}}{(1+r)^2} + \cdots + \frac{W_{UGCC}}{(1+r)^{42}} - \frac{C_{LGCC}}{(1+r)^{42}} - \left[W_{UN} - C_{LN} + \frac{W_{UN}}{(1+r)} - \frac{C_{LN}}{(1+r)} + \frac{W_{UN}}{(1+r)^2} - \frac{C_{LN}}{(1+r)^2} + \cdots + \frac{W_{UN}}{(1+r)^{42}} - \frac{C_{LN}}{(1+r)^{42}}\right]^{9} \quad (xix)$$

[9] *U_{GCC} = Unskilled workers working in GCC Countries*

UN= Unskilled workers working in Nepal

CL_{GCC} = Cost of living in GCC Countries

WU_{GCC} = Wages of unskilled workers working in GCC Countries

W_{UN}= Wages of unskilled workers working in Nepal

OR

$$W_{UGCC}-C_{LGCC}+\frac{W_{UGCC}-C_{LGCC}}{(1+r)}+\frac{W_{U\square CC}-C_{LGCC}}{(1+r)^2}+\cdots+\frac{W_{UGCC}-C_{LGCC}}{(1+r)^{42}}$$
$$-\left[W_{UN}-C_{LN}+\frac{W_{UN}-C_{LN}}{(1+r)}+\frac{W_{UN}-C_{LN}}{(1+r)^2}+\cdots\right.$$
$$\left.+\frac{W_{UN}-C_{LN}}{(1+r)^{42}}\right] \quad (xx)$$

OR

$$NPV_{UGCC}=(W_{UGCC-}W_{UN})-(C_{LGCC}-C_{LN})+\frac{(W_{UGCC}-W_{UN})-(C_{LGCC}-C_{LN})}{(1+r)}+$$
$$\frac{(W_{UGCC}-W_{UN})-(C_{LGCC}-C_{LN})}{(1+r)^2}+\cdots+\frac{(W_{UGCC}-W_{UN})-(C_{LGCC}-C_{LN})}{(1+r)^{42}} \quad \ldots\ldots \quad (3)$$

This equation model states that yearly net income from working abroad in Gulf Cooperation Council (GCC) countries consist of the increased earnings and the extra cost of living in GCC countries compared to Nepal. To obtain lifetime net present income, the yearly amounts should be discounted and added up.

Based on the developed mathematical model above, my next job will be to draft the questionnaire to justify the variables included in this model. After the collection of the useful data regarding different variable from education and labor migration, data analysis will be done and the results will be interpreted in coming chapters.

CHAPTER 5

5.0 Research Model

With all the reviews and discussion from past studies, the researches have been based on the mixed level both micro and macro. Current studies on migration for education seem few compared to human capital literature. Here, human capital is the primary driver of economic growth and development. Analyzing different variables and factors causing labor and education migration can contribute to the understanding of this current problem in Nepal. Also, it may help to discuss this problem with revitalizing new policies and mechanism with the government of Nepal.

In this chapter, I will formulate the hypothesis based on different factors causing labor and educational migration in Nepal. First, let me formulate the hypothesis for labor migration and educational migration from Nepal which are considered for my research question II. The null hypothesis and alternative hypothesis for the Research question I, will be developed later.

5.1 Perceived Higher Earnings 1

The highly expected earnings of an individual matter to the migration process. Especially, in low wage-earning countries like Nepal, an expectation of higher earnings in the international labor market leads to more massive labor outflow. Michael P. Todaro in his research mention the high rewards/earnings as a cause of labor migration. He says urban-rural real income differential and the potentiality of getting an urban job shapes the decision of an individual to migrate (Todaro, M. P. 1969). Regarding higher earnings and migration, I formulate the following hypothesis for my master thesis:

> **H_1**: The higher the expected earnings from migration, the greater the outflow of labor migrants.

5.2 Better Standard of Living 1

Migration is taken positively for higher productivity and standard of living (Taylor, M., 2017). The report published in IMF blogs, it concludes that 1% rise in the

proportion of population migrants (the active labor force), will result in 2% increase in GDP per person in the long run (Jaumotte, F. Koloskova, K.; and Saxena, S., 2016). Considering from this past literature, I formulate the following hypothesis regarding migration and standard of living:

H_2: The higher the perceived value of standard of living by an individual, the higher the outflow of labor migrants.

5.3 Poverty

UNICEF in their discussion paper state that the linkage between migration and poverty is still evolving and has many controversies. In this thesis, it further says migrants are usually not from the poorest regions or household as it may cost high to migrate (De Haan, A., & Yaqub, S. 2010). Similarly, migrants move to a place where friends, family or neighbors or others from their village have moved before. From this mixed review about migration and poverty linkage, I formulate the following hypothesis for my master thesis:

H_3: The higher the level of poverty, the higher the outflow of labor migrants.

5.4 Unemployment Rate

Though there has been contradictory output regarding the relationship between unemployment and migration, it is impossible to disregard the unemployment as a cause of migration. The work of Saben (1964), Lansing and Muller (1967) as cited in Julie DaVanjo (1978), it has shown that unemployed people are more likely to migrate than employed people (DaVanjo, J. 1978).

H_4: The higher the rate of unemployment, the higher the outflow of labor migrants.

5.5 Political Instability

Politics plays an essential role in migration. Conflicts, war, victimization, and hostility, are the prime political factors in migration (Mathews, J. 2018). When the

political environment is hostile, the economic condition becomes poor resulting in migration for economic and political reasons (Mathews, J. 2018).

H_5: The more unstable the political factors, the more the outflow of labor migrants.

5.6 Natural Disasters (Climate change: Earthquake/ Flooding/Drought)

The relationship between natural disasters like earthquake, flooding, drought, or climate change and migration has mixed, complex, and indirect relationship (Mbaye, L. M. 2017). In places where people are already suffered from poverty and low living standards, natural disasters/climate change induces the migration of people (Drabo, A., & Mbaye, L. 2011).

H_6: The higher the impact of natural disasters, the higher the outflow of labor migrants.

5.7 Migration Itself

When a senior member of a family or society migrates, it induces the feelings of fellow junior to relocate as well. Especially, in the case of developing countries like Nepal, migration causes migration. When a low-income family starts to get support from the migrated family members through remittances, people in society begin copying the migration strategy as in the neighborhood. First, one migrates and that results in migration of several others later. For example, A in society recently migrated, after that a friend of A, namely B also migrated. After B migrated, C starts to think that everyone is migrating. Finally, C also migrates not necessarily because of his need, but because of the past migration of A and B.

H_7: The higher the rate of migration, the higher it accelerates the outflow of labor migrants.

By considering these developed hypothesis above, the research model for my master thesis is developed as demonstrated in Figure 6. It has generally considered top factors causing migration of individuals from Nepal to the international market. Factors

considered in this model are, perceived higher earnings, better standard of living, poverty, unemployment, political instability, natural disasters, and migration itself. Some factors for educational migration are common as labor migration including perceived higher earnings, better standard of living, etc. Some more factors causing students to fly abroad for higher education are the expectation of highly recognized job, to accept future challenges, non-recognition of degree, limited fields of studies, lack of practical education are some to name.

Some hypothesis regarding educational migration are described below:

5.8 Perceived higher earnings 2

The research supports the assumption/hypothesis that the students gain education abroad to obtain a job in host countries to earn high skill wage (Rosenzweig, M. R., 2006).

H_8: The higher the expected earnings from the education abroad, the greater the outflow of students for higher studies.

5.9 Better standard of living 2

International students get not only high degrees but also bring significant social and economic impact both on the home country and host country (Pociovălişteanu, D. M. 2012). For this, I develop the hypothesis as:

H_9: The higher the perceived value of standard of living by an individual, the higher the outflow of students for higher studies.

5.10 Expectation of highly recognized job

Many people go to college or university to get higher education expecting a future job. Low academic qualification may result in a low skilled job while highly-educated people tend to get a better job later in life. Therefore, I formulate the following hypothesis:

H_{10}: The higher expectation of highly recognized job by an individual, the higher the outflow of students for higher studies.

5.11 To meet the future challenges

The composition of migrant students is very crucial for today's requirements. Factors related to teachers, languages, school patterns, social background factors also have a significant effect on migrants in education (Wiren, E. 2013). Considering this fact, I develop the following hypothesis:

H_{11}: The more the students perceive future as challenging, the more the outflow of students for higher studies.

5.12 Non-recognition of degree

This factor is taken not necessarily from the past literature. However, I am considering this factor as one of the factors causing students to go abroad for higher studies. I formulate the following hypothesis:

H_{12}: The lower the recognition of the national degree is, the more the outflow of students for better qualities studies.

5.13 Limited fields of studies

As I am also one of the students, who came to Norway for higher studies due to the limited fields of studies in my home country Nepal. Considering my own fact, I formulate the following hypothesis:

H_{13}: Higher the limited fields of studies, higher the outflow of students for higher studies.

5.14 Lack of practical education

Nepal has still implemented its old curriculum structures nowadays. It has failed to update with changing time and today's requirements. Nevertheless, Nepal holds the theory based imagery about the education system. Same thing I realized here in Norway when recognizing the differences in the Nepalese and Norwegian education system. Due to the lack of practical knowledge, many students like me seek a higher education with practical education in an alternative location which leads to the outflow of students.

H_{14}: The higher the lack of practical education, the more it accelerates the educational migration.

All the factors discussed above not necessarily hold the same weight in causing labor and educational migration. The most relevant factors will be considered. Factors associated with labor and educational migrations are combined together in following research model in **Figure 6.**

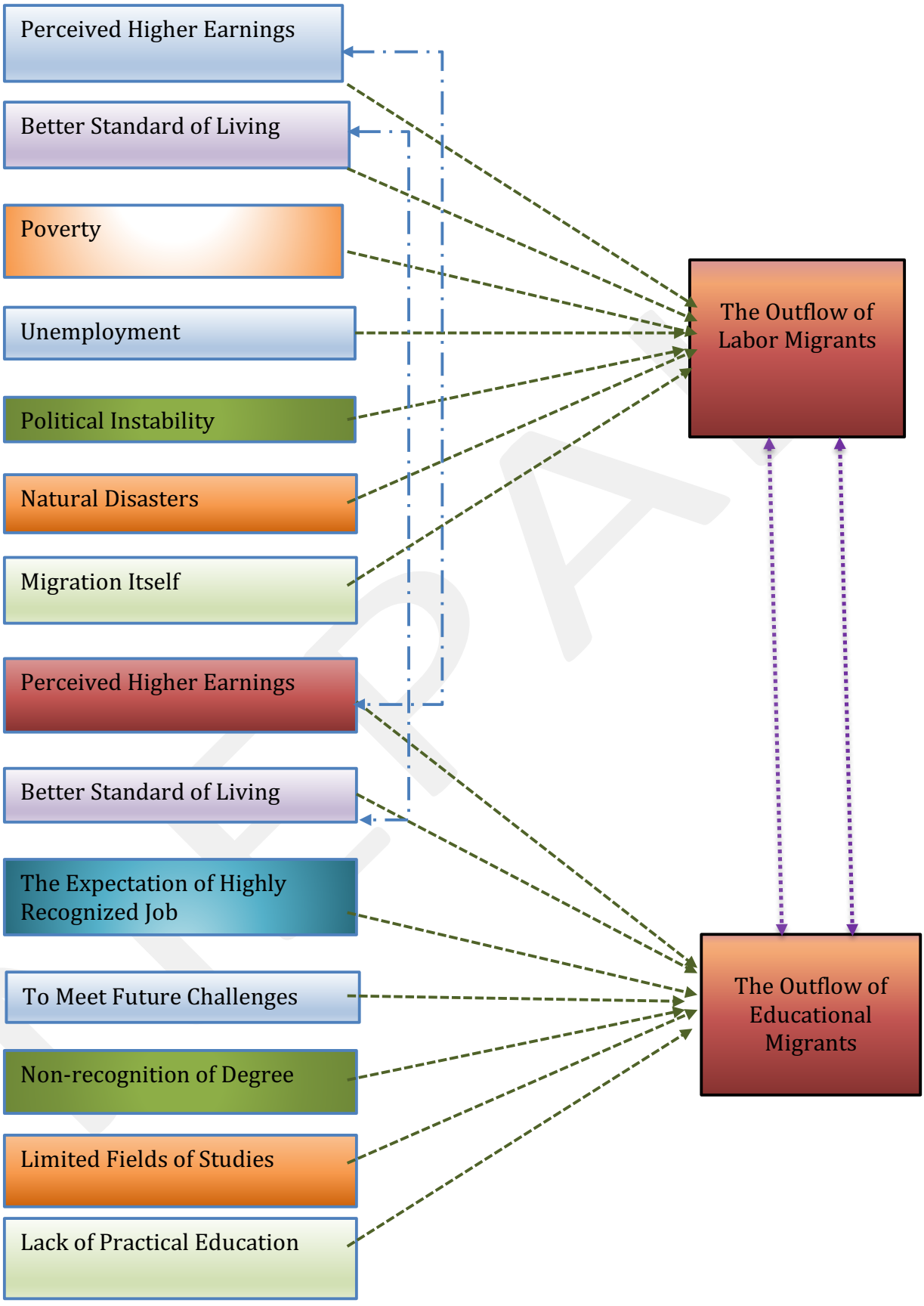

Figure 6 Research Model

Chapter 6

6.0 Defining the variables used in the survey

Besides the main variables mentioned in the research models, some other questions are also asked the respondents. For example their demographics, age, gender, earnings, cost of living, cost of tuitions, country of residents, family members, remittance transfer, etc. In my questionnaire, nearly 90% of the questions asked in the survey are multiple choice questions with preset answer options. The remaining 10% of questions are rating questions in the multiple-choice grid.

All questions are the closed end in nature except two. The last two rating questions are asked in 7 point Likert-Scale where respondents are asked to mark their level of preferences or agreement on an ordinal scale (Dane, B. 2006). The respondents select a numerical score for each statement to indicate the degree of agreement or otherwise (Shreejash et al, 2014, p.137). This scale measures the attitudes of people towards the questions being asked (Shreejash et al. 2014).

To analyze the data collected in an online platform (through google survey form), I downloaded the information in a Microsoft Excel file and entered it into my main tool (SPSS) for statistical analysis. The SPSS software version 24.0 is used to analyze the data.

The questionnaire in the survey form is included in **Appendix 2**

6.1.0 Data collection

This thesis performs the assessments of various factors to see the relationships between the independent variables discussed in the research model above, and the outflow of labor and educational migrants from Nepal. Further, this thesis performs the assessments of cost and income differentials of Nepalese people studying/working abroad and at home in Nepal.

The thesis topic about migration in this study is from popular fields of studies. There are already many studies in this field of studies. However, some of the variables explained above may not be completely covered in past literature for example "Migration Itself" and "Non-recognition of degree". Some factors that I have mentioned above are not necessarily derived from the past literature. I have collected primary data through the preset close-ended questionnaires. Due to the available short time to complete this thesis, an online survey is performed. The purpose of choosing questionnaires method for collecting data is that it is faster and low cost to run compared to other data collection methods (Sreejesh, S., Mohapatra, S., & Anusree, M. R., 2014). **The online form using google account was created with preset questions.** With the help of Gmail/Yahoo/Facebook social platforms, the questionnaire was sent to possible respondents. After the successful completion of a survey, the data were then downloaded to Microsoft Excel to analyze in Excel and interpret the data on SPSS.

6.2.0 Respondents

Respondents to my study are those who have left the home country Nepal to take ups a job or higher education. In this thesis, I have picked Australia as an educational destination and Gulf Cooperation Council (GCC) countries as a work destination. Further, this study also targets the people who have graduated from abroad, and are currently working in Nepal. People working and studying in Nepal are included for comparative analysis alongside those working in GCC countries or studying in Australia. Notably, respondents are those who are doing a bachelor education or master education either abroad (Australia) or at home in Nepal. Furthermore, master graduates from Australia working in Nepal are also the respondents of this thesis. The purpose of doing this is to analyze the wage differential of those people working/studying abroad (GCC/Australia) and home country Nepal.

This thesis is based on the expected economic returns of Nepalese people studying and working abroad. Furthermore, it also analyzes the people's perception on prominent factors causing a large number of labor and educational migrants outflow from Nepal. The factors for example: perceived higher earnings, unemployment, poverty, a better standard of living are some to name. The GCC countries (97% of the total labor

migrants from Nepal) are specially targeted for those who have gone for work from Nepal, and Australia is targeted for those who have gone for higher studies.

6.3.0 Sampling

Due to the nature of potential respondents living in different countries beyond my reach, I have used the snowballing methods to reach my respondents. Snowballing sampling method is a process where one primary respondent invites or nominates another potential primary respondent (Dudovskiy, J. 2016). In other words, snowball sampling is that process where one research respondents refer or recruit another potential research respondents (Stephanie, 2014). Unlike probability sampling, we cannot calculate odds in a non-probability sampling (Stephanie, 2015). I have chosen this sampling method as it is convenient, easy to use and, cost-effective to run (Stephanie, 2015). A snowballing technique was used to increase the number of respondents.

Through the social network (for e.g. Emails in Gmail/Yahoo/Facebook), I asked my friends to respond to my survey questions as well as I asked them to encourage their colleagues, friends, students in college, etc. to answer the online questionnaire that resulted in fast and economical collection of data to my survey.

6.4.0 Steps in collecting data

With my developed questionnaire containing questions with preset answers options, an online survey was done to collect the required data to discuss the research questions. As the online survey is easy to access unique populations, it is faster to get data, and low cost to run (Wright, K. B. 2005). Although the online survey is easy to run, fast to get data and low cost to run, it may create sampling issues; like an online platform, it may be challenging to know the characteristics of people in the online communities (Wright, K. B. 2005). Hence, some of the data received by an online survey can be questionable.

To make the respondents feel comfortable to respond survey questions, and to increase the response rate, at the beginning of the survey, approximate time to complete the

survey was mentioned with the topic, and the purpose of doing a survey (Susan E. DeFranzo, 2014).

Before conducting the large-scale study, the pilot test of the questionnaire was conducted with a small sample group to assess the correctness and a sound understanding of the respondents about the questions being asked (Sincero, S.M. 2012). Doing so reduces the chance of getting unreliable results (Sincero, S.M. 2012).

After several weeks of collecting data, I got a total of 257 responses. Though this was less than expected (300), I had to stop there for further analysis of data due to the time limit to submit my master thesis. After running the missing values analysis in SPSS, seven responses have been deleted to avoid the difficulties in analyzing data later on. Finally, 250 complete responses were taken for further analysis.

6.5.0 Coding

In this section, coding of data is presented. The missing values from the questionnaires are also considered in this chapter. Furthermore, missing values in the data are also resolved to avoid the difficulties while analyzing in SPSS. A total of 7 responses were deleted after the calculation of missing values in SPSS as few data were missing in some of the respondents' responses.

To make the data analysis easier, the responses collected from the questionnaires are coded into numbers (scaling from 0, 1, 2 and so on). From the data collection procedures, I got a total of 257 responses from the different places. Out of 257 responses, 250 respondents had answered all the survey questions, and the complete responses were used for the analysis.

In the coding process, while assigning numerical codes to the Likert Scale questions, the values are reversed to avoid the misunderstanding of the respondents in case of negatively worded statements. For example, the highest rating point of 7 is coded as 1, 6 as 2 and so on. The short glimpse of the codebook is present in the following tables:

Table 2 Codebook example

Variables	Responses
Gender of respondents	Male Female
Age groups of respondents	20-24 25-29 30-34 35 & above
Current country of residence	Nepal Australia GCC Countries USA Japan Norway Canada India

The detailed codebook of the remaining variables has been attached in **Appendix 3.**

6.5.1 Missing Values

Missing values/non-response errors arise when the survey does not cover one or several useful information from a unit that has to be part of the study (Sreejesh, S., Mohapatra, S., & Anusree, M. R. 2014. p.139).

Missing values are often found after collecting the data. To deal with the missing data, listwise deletion technique was used where it removes all data for an observation that has one or more missing values (Swalin, A. 2018). This technique was used due to its simplicity and the comparability of analysis (Humphries, M. 2013). In the case of my data, listwise deletion method was implemented as I had only seven missing data.

Deleting missing values/participants may reduce statistical power as it does not use all information (Humphries, M. 2013). However, from the listwise deletion technique, my data set is lowered to 250 applicable responses from previous 257 responses.

Chapter 7

Statistical Data Analysis

7.1.0 Research Question I

In this master thesis, I have two research questions. Both the research questions are addressed independently. In this section, I have first discussed the research question I.

Question I: What are the factors causing large numbers of Nepalese youths to go abroad?

To discuss this question, I had developed 14 different hypotheses about labor and educational migration from Nepal. I have used the factor analysis and regression analysis methods to find out the significance of different hypotheses developed in research model (**Figure 6**). In the following section, results from factor analysis and regression analysis are presented.

7.2.0 Factor Analysis

Factor analysis is a procedure to operationalize or define the underlying structure among the variables in the analysis (Shreejash et al, 2014. p.207). The objective of running the factor analysis is to reduce the large set of information into the few understandable factors without a loss of information (Shreejash et al. 2014).

To run the factor analysis, SPSS software version 24 is applied. To check whether a factor analysis is appropriate or not, the test of normality has been conducted using the Shapiro-Wilk and Kolmogorov-Smirnov's statistics. Following table shows that all the significance values are lower than 0.05 which justifies the non-normal distribution.

Table 3 Test of Normality for all the variables

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Gender	.403	250	.000	.615	250	.000
Age	.263	250	.000	.867	250	.000
CountryOfResidents	.256	250	.000	.727	250	.000
EducationalLevel	.143	250	.000	.922	250	.000
ActivityToday	.242	250	.000	.871	250	.000
YearlyTuition	.368	250	.000	.628	250	.000
TuitionCostDiff	.387	250	.000	.623	250	.000
SourceOfFinance	.298	250	.000	.759	250	.000
Interest	.394	250	.000	.620	250	.000
SortsOfWork	.185	250	.000	.862	250	.000
YearlyEarnings	.148	250	.000	.850	250	.000
EarningsDiff	.327	250	.000	.706	250	.000
CostOfLiving	.309	250	.000	.730	250	.000
CostsOfLivingDiff	.317	250	.000	.756	250	.000
RemittancesTransferred	.317	250	.000	.803	250	.000
CareerExpectation	.272	250	.000	.830	250	.000
CareerGoalStage	.323	250	.000	.740	250	.000
AbroadLifePrediction	.353	250	.000	.790	250	.000
OtherFamiliesAbroad	.443	250	.000	.575	250	.000
FamiliesNumAbroad	.296	250	.000	.785	250	.000
ResidOfOtherFamilies	.152	250	.000	.884	250	.000
ReturnHome	.430	250	.000	.634	250	.000
PerceivedHigherEarnings1	.245	250	.000	.756	250	.000
BetterLivingStandard1	.223	250	.000	.871	250	.000
Poverty	.205	250	.000	.885	250	.000
Unemployment	.253	250	.000	.843	250	.000
PoliticalInstability	.239	250	.000	.797	250	.000
NaturalDisasters	.190	250	.000	.929	250	.000
MigrationItself	.186	250	.000	.909	250	.000
PerceivedHigherEarnings2	.241	250	.000	.832	250	.000
HighlyRecognizedJob	.277	250	.000	.824	250	.000
BetterLivingStandard2	.202	250	.000	.910	250	.000
AcceptFutureChallenges	.163	250	.000	.925	250	.000
NonRecognitionofDegree	.167	250	.000	.933	250	.000
LimitedFieldsofStudies	.260	250	.000	.838	250	.000
LackofPracticleEducation	.195	250	.000	.881	250	.000

a. Lilliefors Significance Correction

Since all the data are not normally distributed, it allowed me to go further with factor analysis. Furthermore, the Kaiser-Meyer-Olkin (KMO) test is conducted to measure the adequacy of the samples. According to a general rule of thumb, a KMO value greater than 0.5 is satisfactory to continue with the factor analysis (Hinton, P. R., McMurray, I., & Brownlow, C. 2004).

Table 4 KMO and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.750
Bartlett's Test of Sphericity	Approx. Chi-Square	7612.838
	Df	630
	Sig.	.000

Table 4 above shows the KMO value 0.750, which gives the information that our data is suitable for factor analysis. The second output from Bartlett's Test of Sphericity let us examine whether there is a relationship between the variables (Hinton, P et al. 2004). As seen in table 4 above, our significance level is (0.000) which tells us that there is a significant relationship among the variables included in factor analysis. The output from the factor analysis is presented in Table 5 below.

Table 5 Factor Analysis: Total Variance Explained

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulat-ive %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumul-ative %
1	6.410	17.805	17.805	6.410	17.805	17.805	5.464	15.177	15.177
2	4.406	12.238	30.043	4.406	12.238	30.043	3.688	10.245	25.423
3	3.913	10.870	40.913	3.913	10.870	40.913	3.346	9.295	34.718
4	2.723	7.564	48.477	2.723	7.564	48.477	3.332	9.256	43.974
5	2.481	6.891	55.368	2.481	6.891	55.368	2.334	6.483	50.457
6	2.067	5.742	61.110	2.067	5.742	61.110	2.144	5.956	56.413
7	1.646	4.571	65.681	1.646	4.571	65.681	2.003	5.564	61.977
8	1.300	3.612	69.293	1.300	3.612	69.293	1.840	5.112	67.089
9	1.160	3.222	72.515	1.160	3.222	72.515	1.778	4.939	72.028
10	1.130	3.138	75.653	1.130	3.138	75.653	1.305	3.625	75.653
11	.889	2.469	78.122						
12	.829	2.302	80.424						
13	.723	2.009	82.432						
14	.656	1.822	84.255						
15	.612	1.699	85.953						
16	.550	1.527	87.480						
17	.544	1.511	88.991						
18	.451	1.252	90.243						
19	.404	1.121	91.364						
20	.385	1.069	92.434						
21	.355	.987	93.421						
22	.337	.937	94.357						
23	.297	.825	95.183						
24	.282	.784	95.966						
25	.274	.761	96.727						
26	.242	.673	97.401						
27	.208	.578	97.978						
28	.190	.527	98.505						
29	.155	.430	98.936						
30	.113	.314	99.249						
31	.092	.255	99.504						
32	.069	.191	99.695						
33	.051	.143	99.838						
34	.039	.108	99.946						
35	.012	.033	99.979						
36	.007	.021	100.000						

Extraction Method: Principal Component Analysis.

In Table 5 above, I have successfully reduced the large set of data to 10 factors. I have selected the 10 factors with Eigenvalues greater than 1. From the table above, in Initial Eigenvalues Total column, we can see that only the 10 factors have Eigenvalues greater than 1. This tells me to keep these 10 factors for the analysis. These 10 factors cover the cumulative variance of 76%. The first factor covers about 17.81%, the second factor covers 12.23% etc. according to Table 5. The cumulative share of total variance is about 76% from 10 factors, and the remaining 26 factors are insignificant.

Table 6 Rotated Factor Matrix

Pattern Matrix[a]

	Factor									
	1	2	3	4	5	6	7	8	9	10
YearlyTuition	1.079									
Interest	1.073									
TuitionCostDiff	1.056									
CostOfLiving	.798									
ReturnHome										
RemittancesTransferred		1.045								
CountryOfResidents		1.013								
EarningsDiff		.778								
CostsOfLivingDiff		.650								
AcceptFutureChallenges			.833							
BetterLivingStandard1			.778							
BetterLivingStandard2			.774							
Gender										
HighlyRecognizedJob				.771						
PerceivedHigherEarnings1				.697						
PoliticalInstability				.648						
PerceivedHigherEarnings2				.622						
LackofPracticleEducation					.994					
LimitedFieldsofStudies					.837					
NonRecognitionofDegree					.523					
Unemployment						.842				
Poverty						.802				
Age							.928			
CareerGoalStage							.819			
YearlyEarnings							.513			
MigrationItself								.920		
NaturalDisasters								.892		
FamiliesNumAbroad									.856	
ResidOfOtherFamilies									.856	
AbroadLifePrediction										.952

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.
a. Rotation converged in 11 iterations.

In Table 6, from the Rotated factor matrix, 10 factors are left with new factor loadings after suppressing the items loading that is less than absolute value 0.5 in the table. The Rotated Matrix is the process that improves the interpretation by reducing some of the ambiguities, and it helps to achieve more theoretically meaningful factor solutions (Sreejesh, S., Mohapatra, S., & Anusree, M. R. 2014. p.219). From Table 6, the various items are loaded into different factors (from factor 1 to factor 10). In factor 1, 4 variables are included: Yearly Tuition Cost, Interest rates, Differentiation of Tuition cost, and Cost of Living. Remaining variables are concentrated into various other factors. If factor loadings are not sufficient for an item in any factors, the item is not displayed in Table 6. From Table 6, the items Return Home, and Gender are not displayed due to the lack of sufficient factor loadings.

In Table 6, Factor 1 can be labeled Cost of education, Factor 2 can be labeled Migration earnings and cost differences, Factor 3 can be labeled Accepting challenges & for better living standards. According to Table 5 these 3 factors each contribute about 10% of variance explained. Similarly, Factors 5, 6, 7, 8, 9 and 10 can be labeled as shortcomings of home country education, the influence of high unemployment and poverty, lifetime perspective, natural disasters and migration itself, family abroad and, hopes for living abroad respectively.

It is interesting in Table 6 that all the variables needed to discuss my research question (I) and (II) have been included in some factor (from factor 1 to 10). The crucial items related to my research question(II) are included in factor 1. However, variables needed to discuss the research question (I) are concentrated into a few other factors.

From the Rotated Factor Matrix in Table 6, those factors which have sufficient factor loadings are considered for further analysis. After doing this rotated factor analysis, a reliability test is performed to examine the internal consistency of the items. My items are primarily divided into two groups addressing research question (I) and research question (II). In the reliability test of the variables, Cronbach's Alpha technique has been used. Cronbach's Alpha is measured on a scale from 0 to 1. As a rule of thumb, an Alpha value greater than 0.75 is considered as a scale of high reliability (Hinton, P et al. 2004). An Alpha value between 0.5 to 0.75 is considered as moderate reliability.

In my the research model, 14 hypotheses (Research Question I) were developed for both the labor migration and educational migration. The Cronbach's Alpha of different items either in the same factor or different factors are presented in the following table:

Table 7 Reliability of Variables (Question I)

(Question I) Variables [Educational/Labor Migration]
Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.795	**.801**	13

Some other variables besides those related to question I and question II, I have some control variables as well. In the following table, the reliability test of other control variables is presented. These control variables are both correlated with my research question I and question II.

Table 8 Reliability of Other Variables

Other Variables [Control/supporting variables]
Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.804	.736	22

From the two Tables 7 and 8, the reliability statistics of different variables are between 0.801 to 0.912 which indicates that these variables are excellent for further research and analysis.

In the following section, the regression analysis is performed to see the effect of various independent variables on migration for either education or work.

7.3.0 Multiple Regression Analysis

When there are several independent variables and one single dependent variable, the Multiple regression analysis methods is used (Shreejash et al. 2014, p.195). Multiple regression analysis has to meet some assumptions before conducting a real regression analysis. Some of the assumptions are:

a) Linearity
b) Normality
c) Homogeneity of variance
d) Independence
e) No multicollinearity

Source: Shreejash et al. 2014, p.195.

7.3.1 Correlation Matrix to check for Multicollinearity

From the correlation matrix, we can collect a score on two or more variables to see the relationships between them (Hinton, P. R., McMurray, I., & Brownlow, C. 2004). As a rule of thumb, if the correlation between independent variables is higher than 0.9, it is referred to as highly collinear (Shreejash et al, 2014, p.203). Another criterion to check for multicollinearity is Tolerance and VIF (Variance inflating factor) values. Usually, when Tolerance value is closer to zero, and when VIF value is greater than 10, it is said to be highly collinear (Shreejash et al. 2014). The correlation matrix for the independent variables and a binary dependent variable is presented in Table 9.

Table 9 Correlation Matrix

Correlations

		Gender	PerceivedHigherEarnings1	BetterLivingStandard1	Poverty	Unemployment	PoliticalInstability	NaturalDisasters	MigrationItself	HighlyRecognizedJob	AcceptFutureChallenges	NonRecognitionofDegree	LimitedFieldsofStudies	LackofPracticleEducation
Pearson Correlation	Gender	1.000	-.164	.090	-.146	-.207	-.179	-.071	.014	-.135	.046	.192	.205	.064
	PerceivedHigherEarnings1	-.164	1.000	.235	.239	.220	.387	.015	-.091	.467	.240	-.106	-.082	.005
	BetterLivingStandard1	.090	.235	1.000	.325	.183	.232	.266	-.006	.346	.554	.284	.178	.078
	Poverty	-.146	.239	.325	1.000	.584	.321	.209	.024	.204	.293	.122	.080	.050
	Unemployment	-.207	.220	.183	.584	1.000	.483	.157	.050	.139	.128	-.007	.073	.147
	PoliticalInstability	-.179	.387	.232	.321	.483	1.000	.231	.020	.418	.168	-.072	-.111	.131

	NaturalDisasters	-.071	.015	.266	.209	.157	.231	1.000	.584	.187	.228	.345	.135	.174
	MigrationItself	.014	-.091	-.006	.024	.050	.020	.584	1.000	-.005	.048	.378	.215	.219
	HighlyRecognizedJob	-.135	.467	.346	.204	.139	.418	.187	-.005	1.000	.499	.096	-.054	.115
	AcceptFutureChallenges	.046	.240	.554	.293	.128	.168	.228	.048	.499	1.000	.408	.227	.038
	NonRecognitionofDegree	.192	-.106	.284	.122	-.007	-.072	.345	.378	.096	.408	1.000	.539	.455
	LimitedFieldsofStudies	.205	-.082	.178	.080	.073	-.111	.135	.215	-.054	.227	.539	1.000	.548
	LackofPracticleEducation	.064	.005	.078	.050	.147	.131	.174	.219	.115	.038	.455	.548	1.000
Sig. (1-tailed)	Gender	.	.005	.077	.011	.000	.002	.133	.410	.017	.234	.001	.001	.158
	PerceivedHigherEarnings1	.005	.	.000	.000	.000	.000	.407	.077	.000	.000	.048	.099	.470
	BetterLivingStandard1	.077	.000	.	.000	.002	.000	.000	.465	.000	.000	.000	.002	.111
	Poverty	.011	.000	.000	.	.000	.000	.000	.353	.001	.000	.027	.104	.217
	Unemployment	.000	.000	.002	.000	.	.000	.007	.215	.014	.021	.454	.126	.010
	PoliticalInstability	.002	.000	.000	.000	.000	.	.000	.375	.000	.004	.130	.041	.019
	NaturalDisasters	.133	.407	.000	.000	.007	.000	.	.000	.001	.000	.000	.016	.003
	MigrationItself	.410	.077	.465	.353	.215	.375	.000	.	.470	.225	.000	.000	.000
	HighlyRecognizedJob	.017	.000	.000	.001	.014	.000	.001	.470	.	.000	.065	.197	.034
	AcceptFutureChallenges	.234	.000	.000	.000	.021	.004	.000	.225	.000	.	.000	.000	.275
	NonRecognitionofDegree	.001	.048	.000	.027	.454	.130	.000	.000	.065	.000	.	.000	.000
	LimitedFieldsofStudies	.001	.099	.002	.104	.126	.041	.016	.000	.197	.000	.000	.	.000
	LackofPracticleEducation	.158	.470	.111	.217	.010	.019	.003	.000	.034	.275	.000	.000	.
N	Gender	250	250	250	250	250	250	250	250	250	250	250	250	250
	PerceivedHigherEarnings1	250	250	250	250	250	250	250	250	250	250	250	250	250
	BetterLivingStandard1	250	250	250	250	250	250	250	250	250	250	250	250	250
	Poverty	250	250	250	250	250	250	250	250	250	250	250	250	250
	Unemployment	250	250	250	250	250	250	250	250	250	250	250	250	250
	PoliticalInstability	250	250	250	250	250	250	250	250	250	250	250	250	250
	NaturalDisasters	250	250	250	250	250	250	250	250	250	250	250	250	250
	MigrationItself	250	250	250	250	250	250	250	250	250	250	250	250	250
	HighlyRecognizedJob	250	250	250	250	250	250	250	250	250	250	250	250	250
	AcceptFutureChallenges	250	250	250	250	250	250	250	250	250	250	250	250	250
	NonRecognitionofDegree	250	250	250	250	250	250	250	250	250	250	250	250	250
	LimitedFieldsofStudies	250	250	250	250	250	250	250	250	250	250	250	250	250
	LackofPracticleEducation	250	250	250	250	250	250	250	250	250	250	250	250	250

From the above Table 9, none of my independent variables have correlation value higher than 0.900. With this information, we can say there is no serious multicollinearity among my variables. To be assured, we can take the VIF values to check the multicollinearity also.

Table 10 Coefficients Table with VIF values

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.501	.117		4.260	.000					
	PerceivedHigherEarnings1	-.040	.036	-.081	-1.118	.265	-.164	-.072	-.067	.694	1.442
	BetterLivingStandard1	.045	.021	.164	2.140	.033	.090	.138	.129	.614	1.629
	Poverty	-.031	.033	-.074	-.934	.351	-.146	-.061	-.056	.579	1.728
	Unemployment	-.069	.037	-.155	-1.881	.061	-.207	-.121	-.113	.530	1.885
	PoliticalInstability	.004	.028	.012	.148	.883	-.179	.010	.009	.566	1.767
	NaturalDisasters	-.038	.024	-.128	-1.563	.119	-.071	-.101	-.094	.539	1.856
	MigrationItself	.006	.023	.020	.250	.803	.014	.016	.015	.565	1.769
	HighlyRecognizedJob	-.034	.026	-.106	-1.280	.202	-.135	-.083	-.077	.527	1.899
	AcceptFutureChallenges	.005	.029	.014	.160	.873	.046	.010	.010	.461	2.169
	NonRecognitionofDegree	.034	.024	.123	1.399	.163	.192	.091	.084	.465	2.152
	LimitedFieldsofStudies	.042	.025	.140	1.697	.091	.205	.110	.102	.529	1.890
	LackofPracticleEducation	-.007	.022	-.027	-.333	.739	.064	-.022	-.020	.547	1.829

a. Dependent Variable: Gender

From the coefficients in Table 10, if we look at the VIF values at the Collinearity Statistics column, all my variables have VIF value significantly lower than 10 (1.422 to 2.169). The tolerance values are significantly higher than 0.1, which as a rule of thumb (Tolerance value higher than 0.1) indicates that we have met the assumption of no multicollinearity (Hinton, P. R., McMurray, I., & Brownlow, C. 2004).

7.4.0 Results: Research Question I

The research question I is about the prominent factors causing large numbers of Nepalese youths to fly abroad. In this section, descriptive statistics of variables are presented. After descriptive statistics, binary logistic regression analysis is performed. In a binary logistic analysis, it has established the relationship between various independent variables and Nepalese male and female's perception.

Table 11 Descriptive Statistics

Descriptive Statistics

	Mean	Std. Deviation	N
Gender	.38	.486	250
PerceivedHigherEarnings1	1.84	.978	250
BetterLivingStandard1	3.28	1.773	250
Poverty	2.54	1.151	250
Unemployment	2.26	1.090	250
PoliticalInstability	2.18	1.371	250
NaturalDisasters	3.78	1.646	250
MigrationItself	3.23	1.699	250
HighlyRecognizedJob	2.54	1.529	250
AcceptFutureChallenges	2.99	1.460	250
NonRecognitionofDegree	4.01	1.772	250
LimitedFieldsofStudies	2.70	1.616	250
LackofPracticleEducation	3.05	1.822	250

The descriptive Table 11 shows the number of participants, mean scores of all variables, and standard deviation (Spread of scores of each variable) are present. In the following section, the output for binary logistic regression analysis is present.

Table 12 Case Processing Summary

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	250	100.0
	Missing Cases	0	.0
	Total	250	100.0
Unselected Cases		0	.0
Total		250	100.0

a. If weight is in effect, see classification table for the total number of cases.

This case processing summary table shows the information about the total respondents included in the analysis and the information about the missing values. In this case, we have a total of 250 respondents and with no missing values.

Table 13 Model Summary

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	293.562[a]	.191	.255

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

In the given table above, Cox & Snell R Square value is 0.191, and Nagelkerke R Square value is 0.255. This 0.255 value indicates that the effect of independent variables on the dependent variable (gender) is nearly 26%. The decision is taken from the following table about the hypothesis developed about those variables included in the equation. The decision is taken looking at the significance level from the table.

Table 14 Variables in the Equation

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	PerceivedHigherEarnings1	-.150	.174	.752	1	.386	.860
	Poverty	-.169	.166	1.035	1	.309	.844
	Unemployment	-.331	.185	3.205	1	.073*	.719
	PoliticalInstability	.008	.137	.004	1	.952	1.008
	NaturalDisasters	-.198	.121	2.702	1	.100	.820
	MigrationItself	.059	.113	.273	1	.601	1.061
	HighlyRecognizedJob	-.132	.159	.687	1	.407	.876
	AcceptFutureChallenges	.040	.159	.064	1	.800	1.041
	NonRecognitionofDegree	.167	.121	1.905	1	.168	1.182
	LimitedFieldsofStudies	.211	.124	2.895	1	.089*	1.234
	LackofPracticleEducation	-.054	.108	.254	1	.614	.947
	BetterLivingStandard2	.003	.175	.000	1	.986	1.003
	PerceivedHigherEarnings2	-.061	.143	.184	1	.668	.940
	BetterLivingStandard1	.215	.109	3.894	1	.048**	1.240

Variable(s) entered on step 1: PerceivedHigherEarnings1, Poverty, Unemployment, PoliticalInstability, NaturalDisasters, MigrationItself, HighlyRecognizedJob, AcceptFutureChallenges, NonRecognitionofDegree, LimitedFieldsofStudies, LackofPracticleEducation, BetterLivingStandard2, PerceivedHigherEarnings2, BetterLivingStandard1.

** *Variables Significant at p<0.05*

* *Variables Significant at p<0.10*

For the research question I, I had developed 14 independent hypotheses to test against the dependent variable. Those various independents variables are included in the

equation as seen in Table 14. The decisions whether to accept or reject hypotheses are taken from the **Table 14 above**. In the following section, the significance level of all 14 hypotheses are discussed.

H1: The higher the expected earnings from the migration, the greater the outflow of labor migrants is fully rejected. The perceived higher earning was not found to have a significant effect on labor migration at P<0.10 or P<0.05. This finding is opposed to past research where perceived higher earning was found to have a significant impact on migration (Todaro, M P. 1969).

H2: **The higher the perceived value of standard of living by an individual, the higher the outflow of labor migrants is fully accepted at significant level p<0.05.** This finding supports the earlier research by (Taylor, M., 2017) that a better standard of living has an effect on migration.

H3: The higher the level of poverty, the more the outflow of labor migrants is thoroughly rejected and contradictory to previous research (De Haan, A., & Yaqub, S. 2010). The poverty failed to have a significant effect on migration in my studies.

H4: **The higher the rate of unemployment, the higher the outflow of labor migrants is partially accepted at significant level P<0.10.** The results from the data analysis have partly supported the hypothesis that **unemployment and migration have a positive relationship**. It has somehow supported the previous research (DaVanjo, J.1978).

Similarly, hypotheses **H5 (**Political instability**), H6 (**Natural disasters**)** & **H7 (**Migration itself**)** are fully rejected as they do not have a significant effect on migration. The H5 & H6 are contradictory to previous research (DaVanjo, J.1978), (Mathews, J. 2018), (Drabo, A., & Mbaye, L. 2011). The H7 was created as new factors causing migration. However, in my study, it was found not to have a significant effect on migration.

H8: The higher the expected earnings from the education abroad, the greater the outflow of students for higher studies is fully rejected. My studies failed to have a

significant effect of perceived higher incomes on educational migration. This finding is contradictory to the earlier research (Rosenzweig, M. R., 2006) that says students educate abroad to earn high skill price. Similarly, **H9** (Better standard of living2) & **H10** (Expectation of highly recognized job) are also fully rejected. The data analysis in my studies failed to show the significant relationship between both the better standard of living & expectation of highly recognized job and educational migration.

H11: The more the students perceive the future as challenging, the more the outflow of students for higher studies is fully rejected from the data analysis. It failed to show sufficient relationship between accepting future challenges and educational migration. This finding is opposed to previous research (Wiren, E. 2013) that says factors like teachers, languages, school patterns, social background have a significant effect on migrants in education. Similarly, **H12** (Non-recognition of degree) and **H14** (Lack of practical education) are fully rejected as they do not meet the significant level in data analysis to show the effect on educational migration.

H13: The higher the limited fields of studies, the higher the outflow of students for higher studies is partially accepted at significant level $P<0.10$. **The data analysis shows that there is a partial relationship between limited fields of studies and educational migration.** This finding is itself true to my own perception as I am also one of the educational migrants from Nepal studying in Norway as a lack of sufficient fields of studying back home Nepal.

In the following Table 15, findings from research question I are summarized.

Table 15 Research Question I Findings

Research Question I		
Hypothesis		**Decision**
H1		*Fully Rejected*
H2	*Significant at P<0.05*	***Fully Accepted***
H3		*Fully Rejected*
H4	*Significant at P<0.10*	***Partly Accepted***
H5		Fully Rejected
H6		Fully Rejected
H7		Fully Rejected
H8		Fully Rejected
H9		Fully Rejected
H10		Fully Rejected
H11		Fully Rejected
H12		Fully Rejected
H13	*Significant at P<0.10*	***Partly Accepted***
H14		Fully Rejected

After deciding on the research question I, in the following chapter, results for research question II and decision about it is taken.

Chapter 8

8.1 Research Question II

Question II: What are the expected economic returns of Nepalese people studying and working abroad?

In this section, net economic returns from labor or educational migration are computed **using the Net Present Value model developed in chapter 4**. The economic returns are calculated mainly for those who have migrated to Australia and GCC countries from Nepal either for education or work. The net present value is computed for three different conditions as described below:

To discuss the research question II, the following hypotheses are developed:

1. H_0: *The net economic returns of **Master** graduates from **Nepal** working in Nepal is not significantly higher than the bachelor graduates from Nepal working in Nepal.*

   H_A: *The net economic returns of Master graduates from Nepal working in Nepal is significantly higher than the **Bachelor** graduates from Nepal working in **Nepal**.*

To calculate the Net Present Value of taking a Master degree in Nepal, the following model is used.

$$\mathbf{NPV_{MN}} = -(\mathbf{C_{TN}} + \mathbf{W_{BN}}) - \left[\frac{\mathbf{C_{TN}} + \mathbf{w_{BN}}}{(\mathbf{1}+\mathbf{r})}\right] + \frac{\mathbf{W_{MN}} - \mathbf{W_{BN}}}{(\mathbf{1}+\mathbf{r})^{\mathbf{2}}} + \cdots + \frac{\mathbf{W_{MN}} - \mathbf{W_{BN}}}{(\mathbf{1}+\mathbf{r})^{\mathbf{42}}} \quad \ldots\ldots (1)$$

2. H_{01}: *The net economic returns of master graduates from **Australia** working in Nepal is not significantly higher than the Master graduates from Nepal working in **Nepal**.*

H_{A1}: *The net economic returns of master graduates from* ***Australia*** *working in Nepal is significantly higher than the Master graduates from Nepal working in* ***Nepal****.*

To calculate the Net Present Value of taking a Master degree in Australia, the following model is used.

$$NPV_{MAN} = -[(C_{TA} - C_{TN}) + (C_{LA} - C_{LN})] + (\frac{1}{2}W_{UA} - W_{BN}) - [\frac{(C_{TA} - C_{TN}) + (C_{LA} - C_{LN})}{(1+r)}] + (\frac{1}{2}\frac{W_{UA}}{(1+r)} - \frac{W_{BN}}{(1+r)}) + \frac{W_{MAN} - W_{BN}}{(1+r)^2} + \cdots + \frac{W_{MAN} - W_{BN}}{(1+r)^{42}}] \ldots\ldots (2)$$

3. H_{02}: *The net economic returns of unskilled Nepalese workers working in Gulf Cooperation Council (****GCC****)* ***Countries*** *is not significantly higher than the unskilled Nepalese workers working in* ***Nepal.***

   H_{A2}: *The net economic returns of unskilled Nepalese workers working in* ***GCC Countries*** *is significantly higher than the unskilled Nepalese workers working in* ***Nepal.***

   To compute the Net Present Value of migrating to GCC countries for unskilled work, the following model is used.

$$NPV_{UGCC} = (W_{UGCC} - W_{UN}) - (C_{LGCC} - C_{LN}) + \frac{(W_{UGCC} - W_{UN}) - (C_{LGCC} - C_{LN})}{(1+r)} + \frac{(W_{UGCC} - W_{UN}) - (C_{LGCC} - C_{LN})}{(1+r)^2} + \cdots + \frac{(W_{UGCC} - W_{UN}) - (C_{LGCC} - C_{LN})}{(1+r)^{42}} \ldots\ldots (3)$$

This equation shows that yearly net income that consists of the earnings differences from higher wages in GCC courtiers, but this is modified by the potential higher cost of living in these countries. The lifetime effect is represented by the sum of all active years of the discounted yearly net income.

The variables we need to address my research question (II) are country of residence, cost of tuitions, the difference of cost of tuition, cost of living, the difference of cost of living, yearly earnings, the difference of earnings, interest rates, and sort of work. The most important variables needed to discuss my second research question consists of 9 variables.

The data related to Country of residents (Specially, Nepal, Australia, GCC Countries), Cost of tuitions (Australia and Nepal), Cost of Living (Nepal, Australia, GCC Countries), Yearly Earnings (Skilled Full time, skilled part-time, unskilled full time, unskilled part-time) for primary countries (Nepal, Australia, GCC Countries), Nominal Interest Rate are gathered, arranged, categorized, and displayed in the following tables below. I have chosen the median value to put in my model in this study instead of mean value. It is because a mean is sensitive to the outliers while the median is called robust against outliers (Schremmer, D. 2017), and the median represents the so-called 'representative person' as well.

Information about sub-samples of respondents has been produced in crosstabs and customs table using SPSS, such tables are the underlying information for Tables 16, 17, 18 and 19. Out of the many variables, only the required items are selected to fit in the N**et Present Value (NPV) models in NPV_{MN} (1), NPV_{MAN} (2), NPV_{UGCC} (3).**

In the following section, three hypotheses developed above will be tested and the results will be interpreted.

Table 16 Sort of Work, Educational Level, & Earnings in Nepal

				Nepalese currency NPR	Sorts of Work: Skilled full-time	Skilled part-time	Unskilled full-time	Unskilled part-time
Educati-onal Level	**Finished Master in Nepal**	**Working in Nepal**	Yearly Earnings	1-99,000	0	0	0	0
				100,000-199,000	0	0	1	0
				200,000-299,000	1	0	0	0
				300,000-399,000	3	0	2	0
			Median	**400,000-499,000**	**8**	0	0	0
				500,000-599,000	4	0	0	0
				600,000-699,000	1	0	0	0
				700,000-799,000	0	0	0	0
				800,000 & above	0	0	0	0
	Finished Master from Australia	**Working in Nepal**	Yearly Earnings	1-99,000	0	0	0	0
				100,000-199,000	0	0	0	0
				200,000-299,000	0	0	0	0
				300,000-399,000	0	0	0	0
				400,000-499,000	1	0	0	0
				500,000-599,000	3	0	0	0
			Median	**600,000-699,000**	**15**	0	0	0
				700,000-799,000	3	0	0	0
				800,000 & above	4	0	0	0
	Finished Bachelor in Nepal	**Working in Nepal**	Yearly Earnings	1-99,000	0	0	0	0
				100,000-199,000	0	0	1	0
				200,000-299,000	1	0	1	0
			Median	**300,000-399,000**	**2**	0	0	0
				400,000-499,000	2	0	0	0
				500,000-599,000	0	0	0	0
				600,000-699,000	0	0	0	0
				700,000-799,000	0	0	0	0
				800,000 & above	0	0	0	0
		Working in GCC Countries	Yearly Earnings	1-99,000	0	0	0	0
				100,000-199,000	0	0	0	0
				200,000-299,000	0	0	1	0
				300,000-399,000	0	0	4	0
				400,000-499,000	0	0	9	0
			Median	**500,000-599,000**	2	0	**20**	0
				600,000-699,000	4	0	8	0
				700,000-799,000	2	0	1	0
				800,000 & above	0	0	0	0

The highlighted statistics in Table 16 are the median values. For those who have completed a master in Nepal and working in Nepal has median earnings of 400,000-

499,000 NPR. For those who have completed Master from Australia and working in Nepal has median earnings of 600,000-699,000 NPR. For those who have completed Bachelor in Nepal working in Nepal has median earnings of 300,000-399,000 NPR. Table 16 also shows the median earnings (500,000-599,000 NPR) of those working in GCC Countries.

Table 17 Yearly Cost of Tuitions (Nepal, Australia)

	Median	**Yearly Cost of Tuition NPR**							**Median**
	1-99,000	100,000-199,000	200,000-299,000	300,000-399,000	400,000-499,000	500,000-599,000	600,000-699,000	700,000-799,000	**800,000 & above**
Studying Master in (Nepal)	**23**	5	3	2	0	0	0	0	0
Studying Bachelor in (Nepal)	**26**	1	0	1	0	0	0	0	0
Studying Master in (Australia)	0	0	0	0	0	0	0	0	**50**

Table 17 shows the yearly tuitions cost for studying Master degree & Bachelor degree in Nepal and Studying Master degree in Australia. The median yearly cost of tuition for both studying master and bachelor education in Nepal is the same (1-99,000 NPR). In Australia, cost of doing a master degree has a median cost of (800,000 & above NPR).

Table 18 Yearly Cost of Living (Nepal, Australia, GCC Countries)

		Median	**Yearly Cost of Living NPR**						**Median**
	1-99,000	**100,000-199,000**	200,000-299,000	300,000-399,000	400,000-499,000	500,000-599,000	600,000-699,000	700,000-799,000	**800,000 & above**
Nepal	21	**72**	22	5	1	0	0	0	0
Australia	0	0	0	0	0	0	1	10	**50**
GCC Countries	0	**36**	14	1	0	0	0	0	0

Table 18 shows the yearly cost of living in different countries. The cost of living in both Nepal and GCC Countries has the same median value (100,000-199,000). In Australia, the median cost of living is 800,000 NPR & above.

Table 19 Nominal Interest rates

	Interest (%)				Median	
	6% or less	7%	8%	9%	**10%**	11% & more
Source of Finance From bank loan	0	0	0	3	**29**	14

Those students who used the bank loan to finance their cost of living and cost of tuitions are presented in Table 19 above. The source of bank loan was taken by those who were doing master in **Australia**. The median interest rate from the 46 respondents who financed their cost by bank loan is 10%.

All the required data to fill my mathematical model, are presented in Tables number 16, 17, 18, and 19 respectively. These data were collected from 250 respondents. The precise list of variables and corresponding data for the representative person (median value) are presented in Table 20.

Table 20 Variables in the Model

Variables Name	**Short Variables in Equations**	**Numeric Data (Median Value) in NPR**
Cost of Tuition in Nepal (Bachelor Education)	$\mathbf{CT_{BN}}$	50000
Cost of Tuition in Nepal (Master Education)	$\mathbf{CT_{MN}}$	50000
Cost of Tuition in Australia Master Education)	$\mathbf{CT_{A}}$	850000
Cost of Living (Nepal)	$\mathbf{CL_{N}}$	150000
Cost of Living (Australia)	$\mathbf{CL_{A}}$	850000
Cost of Living (GCC Countries)	$\mathbf{C_{LGCC}}$	150000
Wage of Bachelor graduates in Nepal	$\mathbf{W_{BN}}$	350000
Wage of Master graduates in Nepal	$\mathbf{W_{MN}}$	450,000
Wage of Master graduates from Australia working in Nepal	$\mathbf{W_{MAN}}$	650000
Wage of Unskilled Full-time Workers in Nepal	$\mathbf{W_{UN}}$	250000
Wage of Unskilled Full-time Workers in GCC Countries	$\mathbf{W_{UGCC}}$	550000
Wage of Unskilled Part-time in Australia	$\mathbf{W_{UA}}$	850000
Nominal interest rate	**R**	10%
Inflation rate	**IR** *(IMF, 2018)*	4.2%
Real rate of interest	**R**	5.57%

8.2 Results: Research Question II

From all the data above from Tables 16, 17, 18, 19 and the variables in equations Table 20, now we can put them into our mathematical model to see the results, and later interpret them.

First, let us calculate the total present value of bachelor candidates working in Nepal. The following equation is used to calculate the PV_{BN}:

Table 21 Present Value of Bachelor Candidates from Nepal Working in Nepal

$$PV_{BN} = (W_{BN} - C_{LN}) + \frac{(W_{BN} - C_{LN})}{(1+r)} + \frac{(W_{BN} - C_{LN})}{(1+r)^2} + \cdots + \frac{(W_{BN} - C_{LN})}{(1+r)^{42}}$$

					Nominal Interest rate	**10%**
					Inflation	**4.2%**
					Real rate	**5.57%**
Year	**Yearly earnings NPR (W_{BN})**	**PV of earnings NPR**	**Yearly cost of living NPR (C_{LN})**	**PV of cost of living NPR**	**Net earnings NPR**	**Present Value NPR**
0	350,000.00	350,000.00	150,000.00	150,000.00	200,000.00	200,000.00
1	350,000.00	331,533.58	150,000.00	142,085.82	200,000.00	189,447.76
2	350,000.00	314,041.47	150,000.00	134,589.20	200,000.00	179,452.27
3	350,000.00	297,472.26	150,000.00	127,488.11	200,000.00	169,984.15
4	350,000.00	281,777.27	150,000.00	120,761.69	200,000.00	161,015.58
5	350,000.00	266,910.36	150,000.00	114,390.16	200,000.00	152,520.21
6	350,000.00	252,827.85	150,000.00	108,354.79	200,000.00	144,473.06
7	350,000.00	239,488.35	150,000.00	102,637.86	200,000.00	136,850.49
8	350,000.00	226,852.66	150,000.00	97,222.57	200,000.00	129,630.09
9	350,000.00	214,883.64	150,000.00	92,092.99	200,000.00	122,790.65
10	350,000.00	203,546.12	150,000.00	87,234.05	200,000.00	116,312.07
11	350,000.00	192,806.78	150,000.00	82,631.48	200,000.00	110,175.30
12	350,000.00	182,634.07	150,000.00	78,271.74	200,000.00	104,362.32
13	350,000.00	172,998.07	150,000.00	74,142.03	200,000.00	98,856.04
14	350,000.00	163,870.49	150,000.00	70,230.21	200,000.00	93,640.28
15	350,000.00	155,224.48	150,000.00	66,524.78	200,000.00	88,699.70
16	350,000.00	147,034.65	150,000.00	63,014.85	200,000.00	84,019.80
17	350,000.00	139,276.93	150,000.00	59,690.11	200,000.00	79,586.82
18	350,000.00	131,928.51	150,000.00	56,540.79	200,000.00	75,387.72
19	350,000.00	124,967.80	150,000.00	53,557.63	200,000.00	71,410.17
20	350,000.00	118,374.35	150,000.00	50,731.86	200,000.00	67,642.49
21	350,000.00	112,128.78	150,000.00	48,055.19	200,000.00	64,073.59
22	350,000.00	106,212.73	150,000.00	45,519.74	200,000.00	60,692.99
23	350,000.00	100,608.82	150,000.00	43,118.07	200,000.00	57,490.75

24	350,000.00	95,300.58	150,000.00	40,843.10	200,000.00	54,457.47
25	350,000.00	90,272.40	150,000.00	38,688.17	200,000.00	51,584.23
26	350,000.00	85,509.52	150,000.00	36,646.94	200,000.00	48,862.58
27	350,000.00	80,997.94	150,000.00	34,713.40	200,000.00	46,284.54
28	350,000.00	76,724.39	150,000.00	32,881.88	200,000.00	43,842.51
29	350,000.00	72,676.32	150,000.00	31,146.99	200,000.00	41,529.32
30	350,000.00	68,841.83	150,000.00	29,503.64	200,000.00	39,338.19
31	350,000.00	65,209.65	150,000.00	27,946.99	200,000.00	37,262.66
32	350,000.00	61,769.11	150,000.00	26,472.48	200,000.00	35,296.64
33	350,000.00	58,510.10	150,000.00	25,075.76	200,000.00	33,434.34
34	350,000.00	55,423.04	150,000.00	23,752.73	200,000.00	31,670.31
35	350,000.00	52,498.85	150,000.00	22,499.51	200,000.00	29,999.34
36	350,000.00	49,728.95	150,000.00	21,312.41	200,000.00	28,416.54
37	350,000.00	47,105.19	150,000.00	20,187.94	200,000.00	26,917.25
38	350,000.00	44,619.86	150,000.00	19,122.80	200,000.00	25,497.06
39	350,000.00	42,265.66	150,000.00	18,113.86	200,000.00	24,151.81
40	350,000.00	40,035.68	150,000.00	17,158.15	200,000.00	22,877.53
41	350,000.00	37,923.35	150,000.00	16,252.86	200,000.00	21,670.48
42	350,000.00	35,922.47	150,000.00	15,395.34	200,000.00	20,527.12
	Total PV of earnings	**5,988,734.91**	**Total PV of cost of living**	**2,566,600.67**	**Total PV_{BN}**	**3,422,134.23**

$$PV_{BN} = W_{BN} + \frac{W_{BN}}{(1+r)} + \frac{W_{BN}}{(1+r)^2} + \cdots + \frac{W_{BN}}{(1+r)^{42}}$$

$$PV_{BN} = 350000 + \frac{350000}{(1+0.557)} + \frac{350000}{(1+0.557)^2} + \cdots + \frac{350000}{(1+0.557)^{42}}$$

$\boldsymbol{PV_{BN}}$= **NPR 5,988,734.91**

$$PV_{CLN} = -C_{LN} - \frac{C_{LN}}{(1+r)} - \frac{C_{LN}}{(1+r)^2} - \cdots - \frac{C_{LN}}{(1+r)^{42}}$$

$$PV_{CLN} = -150000 - \frac{150000}{(1+0.557)} - \frac{150000}{(1+0.557)^2} - \cdots - \frac{150000}{(1+0.557)^{42}}$$

$\boldsymbol{PV_{CLN}}$= **NPR 2,566,600.67**

Adjusting the cost of living to the PV_{BN}, now we can reformulate the equation as below:

$$\boldsymbol{PV_{BN} = (W_{BN} - C_{LN}) + \frac{(W_{BN} - C_{LN})}{(1+r)} + \frac{(W_{BN} - C_{LN})}{(1+r)^2} + \cdots + \frac{(W_{BN} - C_{LN})}{(1+r)^{42}}}$$

$$PV_{BN} = (350000 - 150000) + \frac{(350000 - 150000)}{(1 + 0.557)} + \frac{(350000 - 150000)}{(1 + 0.557)^2} + \cdots + \frac{(350000 - 150000)}{(1 + 0.557)^{42}}$$

$$TPV_{BN} = 200000 + \frac{200000}{(1 + 0.557)} + \frac{200000}{(1 + 0.557)^2} + \cdots + \frac{200000}{(1 + 0.557)^{42}}$$

TPV_{BN}= NPR 3,422,134.23

After calculating the total present value of bachelor candidates working in Nepal, let us calculate the total present value of master graduates from Nepal working in Nepal.

Table 22 Present Value of Master Candidates from Nepal Working in Nepal

$$PV_{MN} = -(C_{TMN} + C_{LN}) - \frac{(C_{TMN} + C_{LN})}{(1 + r)} + \frac{(W_{MN} - C_{LN})}{(1 + r)^2} + \cdots + \frac{(W_{MN} - C_{LN})}{(1 + r)^{42}}$$

Nominal rate	**10%**
Inflation	**4.2%**
Real Interest rate	**5.57%**

Year	Yearly Earnings NPR (W_{MN})	PV of earnings NPR	Yearly cost of living NPR (C_{LN})	PV of cost of living NPR	Yearly cost of tuition NPR (C_{TMN})	PV of cost of tuition NPR	Net Earnings NPR	PV of Net earnings NPR
0	-	-	150,000	150,000.0	50,000	50,000.00	(200,000)	(200,000)
1	-	-	150,000	142,085.8	50,000	47,361.94	(200,000)	(189,447.8)
2	450,000	403,767.6	150,000	134,589.2	-	-	300,000	269,178.4
3	450,000	382,464.3	150,000	127,488.1	-	-	300,000	254,976.2
4	450,000	362,285.1	150,000	120,761.7	-	-	300,000	241,523.4
5	450,000	343,170.5	150,000	114,390.2	-	-	300,000	228,780.3
6	450,000	325,064.4	150,000	108,354.8	-	-	300,000	216,709.6
7	450,000	307,913.6	150,000	102,637.9	-	-	300,000	205,275.7
8	450,000	291,667.7	150,000	97,222.6	-	-	300,000	194,445.1
9	450,000	276,279.0	150,000	92,093.0	-	-	300,000	184,186.0
10	450,000	261,702.2	150,000	87,234.1	-	-	300,000	174,468.1
11	450,000	247,894.4	150,000	82,631.5	-	-	300,000	165,263.0
12	450,000	234,815.2	150,000	78,271.7	-	-	300,000	156,543.5
13	450,000	222,426.1	150,000	74,142.0	-	-	300,000	148,284.1
14	450,000	210,690.6	150,000	70,230.2	-	-	300,000	140,460.4

15	450,000	199,574.3	150,000	66,524.8	-	-	300,000	133,049.6
16	450,000	189,044.6	150,000	63,014.9	-	-	300,000	126,029.7
17	450,000	179,070.3	150,000	59,690.1	-	-	300,000	119,380.2
18	450,000	169,622.4	150,000	56,540.8	-	-	300,000	113,081.6
19	450,000	160,672.9	150,000	53,557.6	-	-	300,000	107,115.3
20	450,000	152,195.6	150,000	50,731.9	-	-	300,000	101,463.7
21	450,000	144,165.6	150,000	48,055.2	-	-	300,000	96,110.4
22	450,000	136,559.2	150,000	45,519.7	-	-	300,000	91,039.5
23	450,000	129,354.2	150,000	43,118.1	-	-	300,000	86,236.1
24	450,000	122,529.3	150,000	40,843.1	-	-	300,000	81,686.2
25	450,000	116,064.5	150,000	38,688.2	-	-	300,000	77,376.3
26	450,000	109,940.8	150,000	36,646.9	-	-	300,000	73,293.9
27	450,000	104,140.2	150,000	34,713.4	-	-	300,000	69,426.8
28	450,000	98,645.6	150,000	32,881.9	-	-	300,000	65,763.8
29	450,000	93,441.0	150,000	31,147.0	-	-	300,000	62,294.0
30	450,000	88,510.9	150,000	29,503.6	-	-	300,000	59,007.3
31	450,000	83,841.0	150,000	27,947.0	-	-	300,000	55,894.0
32	450,000	79,417.4	150,000	26,472.5	-	-	300,000	52,945.0
33	450,000	75,227.3	150,000	25,075.8	-	-	300,000	50,151.5
34	450,000	71,258.2	150,000	23,752.7	-	-	300,000	47,505.5
35	450,000	67,498.5	150,000	22,499.5	-	-	300,000	44,999.0
36	450,000	63,937.2	150,000	21,312.4	-	-	300,000	42,624.8
37	450,000	60,563.8	150,000	20,187.9	-	-	300,000	40,375.9
38	450,000	57,368.4	150,000	19,122.8	-	-	300,000	38,245.6
39	450,000	54,341.6	150,000	18,113.9	-	-	300,000	36,227.7
40	450,000	51,474.4	150,000	17,158.1	-	-	300,000	34,316.3
41	450,000	48,758.6	150,000	16,252.9	-	-	300,000	32,505.7
42	450,000	46,186.0	150,000	15,395.3	-	-	300,000	30,790.7
Total PV of Earnings 6,823,544.6			**Total PV of Cost of Living 2,566,600.7**		**Total PV of Tuition cost**	**97,361.94**	**Total PV_{MN} 4,159,581.9**	

$$PV_{MN} = -C_{TN} - C_{LN} - \frac{C_{TN}}{(1+r)} - \frac{C_{LN}}{(1+r)} + \frac{W_{MN}}{(1+r)^2} - \frac{C_{LN}}{(1+r)^2} + \cdots + \frac{W_{MN}}{(1+r)^{42}} - \frac{C_{LN}}{(1+r)^{42}}$$

OR

$$\boldsymbol{PV_{MN} = -(C_{TN} + C_{LN}) - \frac{(C_{TN} + C_{LN})}{(1+r)} + \frac{(W_{MN} - C_{LN})}{(1+r)^2} + \cdots + \frac{(W_{MN} - C_{LN})}{(1+r)^{42}}}$$

$$\boldsymbol{PV_{MN} = -(50000 + 150000) - \frac{(50000 + 150000)}{(1 + 0.557)} + \frac{(50000 - 150000)}{(1 + 0.557)^2} + \cdots + \frac{(450000 - 150000)}{(1 + 0.557)^{42}}}$$

$$\boldsymbol{PV_{MN} = -200000 - \frac{200000}{(1 + 0.557)} + \frac{300000}{(1 + 0.557)^2} + \cdots + \frac{300000}{(1 + 0.557)^{42}}}$$

$\boldsymbol{TPV_{MN} =}$ **NPR 4,159,581.95**

Now, we have both calculated the total present value of bachelor graduates (TPV_{BN}) from Nepal working in Nepal and the total present value of master graduates (TPV_{MN}) from Nepal working in Nepal. In the following section, we calculate the net present value of master graduates from Nepal working in Nepal (NPV_{MN}). To calculate the net present value, we have the following equation:

$$\mathbf{NPV_{MN} = TPV_{MN} - TPV_{BN}}$$

OR

$$[-(C_{TN} + C_{LN}) - \frac{(C_{TN} + C_{LN})}{(1 + r)} + \frac{(W_{MN} - C_{LN})}{(1 + r)^2} + \cdots + \frac{(W_{MN} - C_{LN})}{(1 + r)^{42}}] - [(W_{BN} - C_{LN}) + \frac{(W_{BN} - C_{LN})}{(1 + r)} + \frac{(W_{BN} - C_{LN})}{(1 + r)^2} + \cdots + \frac{(W_{BN} - C_{LN})}{(1 + r)^{42}}]$$

OR

$$\mathbf{NPV_{MN} = -C_{TN} - W_{BN} - \left[\frac{C_{TN} + W_{BN}}{(1 + r)}\right] + \frac{W_{MN} - W_{BN}}{(1 + r)^2} + \cdots + \frac{W_{MN} - W_{BN}}{(1 + r)^{42}}}$$

$$\mathrm{NPV_{MN}} = -50000 - 350000 - \left[\frac{50000 + 350000}{(1 + 0.557)}\right] + \frac{(450000 - 350000)}{(1 + 0.557)^2} + \cdots + \frac{(450000 - 350000)}{(1 + 0.557)^{42}}$$

$\mathbf{NPV_{MN} = 737,447.67\ NPR}$

From Table 21 and Table 22 above, we can simply substitute the value in the NPV_{MN} equation to get the NPV value.

$\mathbf{NPV_{MN} = TPV_{MN} - TPV_{BN}}$

$\mathbf{NPV_{MN} = 4,159,581.9 - 3,422,134.23}$

$\mathbf{NPV_{MN} = 737,447.67\ NPR}$

In the following section, the net present value of master graduates from Australia working in Nepal is presented. First, we calculate the present value of master graduates from Australia working in Nepal:

H_0: *The net economic returns of master graduates from* ***Australia*** *working in Nepal is not significantly higher than the Master graduates from Nepal working in* ***Nepal***.

H_A: *The net economic returns of master graduates from* ***Australia*** *working in Nepal is significantly higher than the Master graduates from Nepal working in* ***Nepal***.

$$PV_{MA} = -(C_{TA} - C_{TN}) - C_{LA} + \frac{1}{2}W_{UA} - \left[\frac{C_{TA}}{(1+r)} - \frac{C_{TN}}{(1+r)} - \frac{C_{LA}}{(1+r)}\right] + \frac{1}{2}\frac{W_{UA}}{(1+r)} + \frac{W_{MAN}}{(1+r)^2} - \frac{C_{LN}}{(1+r)^2} + \cdots + \frac{W_{MAN}}{(1+r)^{42}} - \frac{C_{LN}}{(1+r)^{42}}$$

Table 23 Present Value of Master Graduates from Australia Working in Nepal

$$PV_{MA} = -(C_{TA} - C_{TN}) - C_{LA} + \frac{1}{2}W_{UA} - \left[\frac{C_{TA}}{(1+r)} - \frac{C_{TN}}{(1+r)} - \frac{C_{LA}}{(1+r)}\right] + \frac{1}{2}\frac{W_{UA}}{(1+r)} + \frac{W_{MAN}}{(1+r)^2} - \frac{C_{LN}}{(1+r)^2} + \cdots + \frac{W_{MAN}}{(1+r)^{42}} - \frac{C_{LN}}{(1+r)^{42}}$$

Interest rate	**10%**
Inflation rate	**4.20%**
Real rate	**5.57%**

Year	Yearly earnings NPR (W_{MAN})	Yearly living cost in Australia C_{LA}	Yearly cost of tuition C_{TA}	Wage of Unskilled part time in Australia $\frac{1}{2}W_{UA}$	Cost of living in Nepal C_{LN}	Cost of tuition in Nepal CT_{MN}	Net Earnings	PV of Net earnings NPR
0	0	850000	850000	850000	150000	50000	**(800000)**	**(800000)**
1	0	850000	850000	850000	150000	50000	**(800000)**	**(757791.0)**
2	650000	850000	850000	850000	150000	0	500000	448630.7
3	650000	850000	850000	850000	150000	0	500000	424960.4
4	650000	850000	850000	850000	150000	0	500000	402539.0
5	650000	850000	850000	850000	150000	0	500000	381300.5
6	650000	850000	850000	850000	150000	0	500000	361182.6
7	650000	850000	850000	850000	150000	0	500000	342126.2
8	650000	850000	850000	850000	150000	0	500000	324075.2
9	650000	850000	850000	850000	150000	0	500000	306976.6
10	650000	850000	850000	850000	150000	0	500000	290780.2

11	650000	850000	850000	850000	150000	0	500000	275438.3
12	650000	850000	850000	850000	150000	0	500000	260905.8
13	650000	850000	850000	850000	150000	0	500000	247140.1
14	650000	850000	850000	850000	150000	0	500000	234100.7
15	650000	850000	850000	850000	150000	0	500000	221749.3
16	650000	850000	850000	850000	150000	0	500000	210049.5
17	650000	850000	850000	850000	150000	0	500000	198967.0
18	650000	850000	850000	850000	150000	0	500000	188469.3
19	650000	850000	850000	850000	150000	0	500000	178525.4
20	650000	850000	850000	850000	150000	0	500000	169106.2
21	650000	850000	850000	850000	150000	0	500000	160184.0
22	650000	850000	850000	850000	150000	0	500000	151732.5
23	650000	850000	850000	850000	150000	0	500000	143726.9
24	650000	850000	850000	850000	150000	0	500000	136143.7
25	650000	850000	850000	850000	150000	0	500000	128960.6
26	650000	850000	850000	850000	150000	0	500000	122156.5
27	650000	850000	850000	850000	150000	0	500000	115711.3
28	650000	850000	850000	850000	150000	0	500000	109606.3
29	650000	850000	850000	850000	150000	0	500000	103823.3
30	650000	850000	850000	850000	150000	0	500000	98345.5
31	650000	850000	850000	850000	150000	0	500000	93156.6
32	650000	850000	850000	850000	150000	0	500000	88241.6
33	650000	850000	850000	850000	150000	0	500000	83585.9
34	650000	850000	850000	850000	150000	0	500000	79175.8
35	650000	850000	850000	850000	150000	0	500000	74998.4
36	650000	850000	850000	850000	150000	0	500000	71041.4
37	650000	850000	850000	850000	150000	0	500000	67293.1
38	650000	850000	850000	850000	150000	0	500000	63742.7
39	650000	850000	850000	850000	150000	0	500000	60379.5
40	650000	850000	850000	850000	150000	0	500000	57193.8
41	650000	850000	850000	850000	150000	0	500000	54176.2
42	650000	850000	850000	850000	150000	0	500000	51317.8
Total PV_{MAN}								**6023925.1**

After the calculation of total present value (TPV_{MAN}), let us calculate the net present value (NPV_{MAN}). To calculate $NPV_{MAN,}$ we have the following equation:

$$\mathbf{NPV_{MAN} = PV_{MAN} - PV_{BN}}$$

OR

$$\mathbf{NPV_{MAN}} = [-(\boldsymbol{C_{TA}} - \boldsymbol{C_{TN}} + \boldsymbol{C_{LA}} - C_{LN})] + \frac{\mathbf{1}}{\mathbf{2}}\boldsymbol{W_{UA}} - W_{BN} - [\frac{(\boldsymbol{C_{TA}} - \boldsymbol{C_{TN}} + \boldsymbol{C_{LA}} - C_{LN})}{(\mathbf{1}+\boldsymbol{r})}] + \frac{\mathbf{1}}{\mathbf{2}}\frac{\boldsymbol{W_{UA}}}{(\mathbf{1}+\boldsymbol{r})} - \frac{W_{BN}}{(1+r)} + \frac{\boldsymbol{W_{MAN}} - W_{BN}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{2}}} + \cdots + \frac{\boldsymbol{W_{MAN}} - W_{BN}}{(\mathbf{1}+\boldsymbol{r})^{\mathbf{42}}}]$$

Now, we can simply substitute the TPV_{BN} and TPV_{MAN} From Table 21 and Table 23 respectively.

$$\mathbf{NPV_{MAN}} = \mathbf{6023925.1} - \mathbf{3422134.2}$$

$$\mathbf{NPV_{MAN}} = \mathbf{2601790.91\ NPR}$$

Finally, in this section, we are calculating the present value of unskilled workers working in Nepal and working in GCC countries to find the net present value of them. First, let us calculate the present value of unskilled Nepalese workers working in Nepal. To calculate the PV of unskilled Nepalese workers working in Nepal, we have the following equation:

H_0**: The net economic returns of unskilled Nepalese workers working in **GCC Countries** is not significantly higher than the unskilled Nepalese workers working in **Nepal.

H_A**: The net economic returns of unskilled Nepalese workers working in **GCC Countries** is significantly higher than the unskilled Nepalese workers working in **Nepal.

$$PV_{UN} = W_{UN} - C_{LN} + \frac{W_{UN}}{(1+r)} - \frac{C_{LN}}{(1+r)} + \frac{W_{UN}}{(1+r)^2} - \frac{C_{LN}}{(1+r)^2} + \cdots + \frac{W_{UN}}{(1+r)^{42}} - \frac{C_{LN}}{(1+r)^{42}}$$

Table 24 Present Value of Unskilled Nepalese Workers Working in Nepal

$$PV_{UN} = W_{UN} - C_{LN} + \frac{W_{UN}}{(1+r)} - \frac{C_{LN}}{(1+r)} + \frac{W_{UN}}{(1+r)^2} - \frac{C_{LN}}{(1+r)^2} + \cdots + \frac{W_{UN}}{(1+r)^{42}} - \frac{C_{LN}}{(1+r)^{42}}$$

					Interest rate	**10%**
					Inflation rate	**4.20%**
					Real rate	**5.57%**
Year	**Yearly earnings W_{UN}**	**PV of earnings**	**Yearly cost of living C_{LN}**	**PV of cost of living**	**Net earnings**	**Present Value NPR**
0	250000	250000	150000	150000	100000	100000
1	250000	236809.70	150000	142085.82	100000	94723.88
2	250000	224315.34	150000	134589.20	100000	89726.13
3	250000	212480.19	150000	127488.11	100000	84992.08
4	250000	201269.48	150000	120761.69	100000	80507.79
5	250000	190650.26	150000	114390.16	100000	76260.10
6	250000	180591.32	150000	108354.79	100000	72236.53
7	250000	171063.11	150000	102637.86	100000	68425.24
8	250000	162037.61	150000	97222.57	100000	64815.05
9	250000	153488.31	150000	92092.99	100000	61395.33
10	250000	145390.09	150000	87234.05	100000	58156.03
11	250000	137719.13	150000	82631.48	100000	55087.65
12	250000	130452.90	150000	78271.74	100000	52181.16
13	250000	123570.05	150000	74142.03	100000	49428.02
14	250000	117050.35	150000	70230.21	100000	46820.14
15	250000	110874.63	150000	66524.78	100000	44349.85
16	250000	105024.75	150000	63014.85	100000	42009.90
17	250000	99483.52	150000	59690.11	100000	39793.41
18	250000	94234.65	150000	56540.79	100000	37693.86
19	250000	89262.72	150000	53557.63	100000	35705.09
20	250000	84553.11	150000	50731.86	100000	33821.24
21	250000	80091.98	150000	48055.19	100000	32036.79
22	250000	75866.24	150000	45519.74	100000	30346.49
23	250000	71863.44	150000	43118.07	100000	28745.38
24	250000	68071.84	150000	40843.10	100000	27228.74
25	250000	64480.29	150000	38688.17	100000	25792.12
26	250000	61078.23	150000	36646.94	100000	24431.29
27	250000	57855.67	150000	34713.40	100000	23142.27
28	250000	54803.14	150000	32881.88	100000	21921.25
29	250000	51911.66	150000	31146.99	100000	20764.66
30	250000	49172.73	150000	29503.64	100000	19669.09
31	250000	46578.32	150000	27946.99	100000	18631.33
32	250000	44120.79	150000	26472.48	100000	17648.32
33	250000	41792.93	150000	25075.76	100000	16717.17
34	250000	39587.88	150000	23752.73	100000	15835.15

35	250000	37499.18	150000	22499.51	100000	14999.67
36	250000	35520.68	150000	21312.41	100000	14208.27
37	250000	33646.56	150000	20187.94	100000	13458.63
38	250000	31871.33	150000	19122.80	100000	12748.53
39	250000	30189.76	150000	18113.86	100000	12075.90
40	250000	28596.91	150000	17158.15	100000	11438.76
41	250000	27088.11	150000	16252.86	100000	10835.24
42	250000	25658.90	150000	15395.34	100000	10263.56
					Total PV_{UN}	**1711067.12**

In the following table, we calculate the total present value of Nepalese unskilled workers working in GCC countries. To calculate the present value (TPV_{UGCC}), we have the following equation:

$$PV_{UGCC} = W_{UGCC} - C_{LGCC} + \frac{W_{UGCC}}{(1+r)} - \frac{C_{LGCC}}{(1+r)} + \frac{W_{UGCC}}{(1+r)^2} - \frac{C_{LGCC}}{(1+r)^2} + \cdots + \frac{W_{UGCC}}{(1+r)^2} - \frac{C_{LGCC}}{(1+r)^{42}}$$

Table 25 Present Value of Unskilled Nepalese Workers Working in GCC Countries

$$PV_{UGCC} = W_{UGCC} - C_{LGCC} + \frac{W_{UGCC}}{(1+r)} - \frac{C_{LGCC}}{(1+r)} + \frac{W_{UGCC}}{(1+r)^2} - \frac{C_{LGCC}}{(1+r)^2} + \cdots + \frac{W_{UGCC}}{(1+r)^{42}} - \frac{C_{LGCC}}{(1+r)^{42}}$$

					Interest rate	**10%**
					Inflation rate	**4.20%**
					Real rate	**5.57%**
Year	**Yearly earnings W_{UGCC}**	**PV of earnings**	**Yearly cost of living C_{LGCC}**	**PV of cost of living**	**Net earnings**	**Present Value NPR**
0	550000	550000	150000	150000	400000	400000
1	550000	520981.34	150000	142085.82	400000	378895.52
2	550000	493493.74	150000	134589.20	400000	358904.54
3	550000	467456.42	150000	127488.11	400000	339968.30
4	550000	442792.85	150000	120761.69	400000	322031.17
5	550000	419430.57	150000	114390.16	400000	305040.42
6	550000	397300.91	150000	108354.79	400000	288946.12
7	550000	376338.84	150000	102637.86	400000	273700.97
8	550000	356482.75	150000	97222.57	400000	259260.18
9	550000	337674.29	150000	92092.99	400000	245581.30
10	550000	319858.19	150000	87234.05	400000	232624.14
11	550000	302982.09	150000	82631.48	400000	220350.61

12	550000	286996.39	150000	78271.74	400000	208724.65
13	550000	271854.11	150000	74142.03	400000	197712.08
14	550000	257510.76	150000	70230.21	400000	187280.56
15	550000	243924.19	150000	66524.78	400000	177399.41
16	550000	231054.45	150000	63014.85	400000	168039.60
17	550000	218863.74	150000	59690.11	400000	159173.63
18	550000	207316.23	150000	56540.79	400000	150775.44
19	550000	196377.98	150000	53557.63	400000	142820.35
20	550000	186016.84	150000	50731.86	400000	135284.97
21	550000	176202.37	150000	48055.19	400000	128147.18
22	550000	166905.72	150000	45519.74	400000	121385.98
23	550000	158099.57	150000	43118.07	400000	114981.51
24	550000	149758.05	150000	40843.10	400000	108914.94
25	550000	141856.63	150000	38688.17	400000	103168.46
26	550000	134372.11	150000	36646.94	400000	97725.17
27	550000	127282.47	150000	34713.40	400000	92569.07
28	550000	120566.90	150000	32881.88	400000	87685.02
29	550000	114205.64	150000	31146.99	400000	83058.65
30	550000	108180.02	150000	29503.64	400000	78676.38
31	550000	102472.31	150000	27946.99	400000	74525.32
32	550000	97065.75	150000	26472.48	400000	70593.27
33	550000	91944.44	150000	25075.76	400000	66868.68
34	550000	87093.34	150000	23752.73	400000	63340.61
35	550000	82498.19	150000	22499.51	400000	59998.69
36	550000	78145.49	150000	21312.41	400000	56833.08
37	550000	74022.44	150000	20187.94	400000	53834.50
38	550000	70116.93	150000	19122.80	400000	50994.13
39	550000	66417.47	150000	18113.86	400000	48303.62
40	550000	62913.21	150000	17158.15	400000	45755.06
41	550000	59593.83	150000	16252.86	400000	43340.97
42	550000	56449.59	150000	15395.34	400000	41054.25
					TPV_{UGCC}	**6844268.46**

From Table 24 and Table 25 above, now we can calculate the Net present value (NPV_{UGCC}) of Nepalese unskilled workers working in GCC countries. To calculate the net present value, we have the following equation:

$$\boldsymbol{NPV_{UGCC} = PV_{UGCC} - PV_{UN}}$$

OR

$$NPV_{UGCC} = (W_{UGCC} - W_{UN}) - (C_{LGCC} - C_{LN}) + \frac{(W_{UGCC} - W_{UN}) - (C_{LGCC} - C_{LN})}{(1+r)} + \frac{(W_{UGCC} - W_{UN}) - (C_{LGCC} - C_{LN})}{(1+r)^2} + \cdots + \frac{(W_{UGCC} - W_{UN}) - (C_{LGCC} - C_{LN})}{(1+r)^{42}}$$

$$\mathbf{NPV_{UGCC} = 6844268.46 - 1711067.12}$$

$$\mathbf{NPV_{UGCC} = 5133201.34\ NPR}$$

I have successfully computed the NPV values for three different conditions. The derived results for those conditions can be summarized in the following table:

Table 26 Summary of Results (Research Question II)

Summary of Results							
PV_{BN}	**PV_{MN}**	**NPV_{MN} /Sig.**	**PV_{MAN}**	**NPV_{MAN} /Sig.**	**PV_{UGCC}**	**PV_{UN}**	**NPV_{UGCC} /Sig.**
3422134.2	4159581.9	****737447.7**	**6023925.1**	****2601790.9**	6844268.5	1711067.1	****5133201.3**
** NPV Significant at NPV>0.000							

From the summary Table 26 above, the decision whether to accept/reject the null hypothesis or alternative hypothesis about research question II is taken based on the NPV value significant at NPV>0.

Table 27 Research Question II Findings

Research Question II		Decision
Hypothesis 1	H_0: The net economic returns of Master graduates from Nepal working in Nepal is not significantly higher than the bachelor graduates from Nepal working in Nepal. H_A: The net economic returns of Master graduates from Nepal working in Nepal is significantly higher than the Bachelor graduates from Nepal working in Nepal.	**Rejected** **Accepted**
Hypothesis 2	$H_{01:}$ The net economic returns of master graduates from Australia working in Nepal is not significantly higher than the Master graduates from Nepal working in Nepal. H_{A1}: The net economic returns of master graduates from Australia working in Nepal is significantly higher than the Master graduates from Nepal working in Nepal.	**Rejected** **Accepted**
Hypothesis 3	H_{02}: The net economic returns of unskilled Nepalese workers working in GCC Countries is not significantly higher than the unskilled Nepalese workers working in Nepal. H_{A2}: The net economic returns of unskilled Nepalese workers working in GCC Countries is significantly higher than the unskilled Nepalese workers working in Nepal.	**Rejected** **Accepted**

Chapter 9

9.0 Summary of Findings from all Analysis

In this chapter, the findings of this study are discussed for both the research question **I** and research question **II**. The hypotheses for both the questions were developed differently. In research question **I,** fourteen hypotheses were developed concerning factors causing labor and educational migration from Nepal. In research question **II**, three hypotheses were developed with the null and alternative hypothesis to measure the economic benefits of labor and educational migration from Nepal.

Let me recap the significant results obtained for research question I **from Chapter 7**.

Hypotheses		**Decisions**
H2	*Significant at P<0.05*	**Fully Accepted**
H4	*Significant at P<0.10*	**Partly Accepted**
H13	*Significant at P<0.10*	**Partly Accepted**

In the following section, I discuss the findings from research question II. In research question II, I have three hypotheses each with null and alternative hypotheses. The discussion is taken from the results **Tables 21, 22, 23, 24, 25, & 26** above in **Chapter 8.**

1. **The Hypothesis for Net earnings of Master graduates from Nepal working in Nepal.**

H_0*: The net economic returns of Master graduates from Nepal working in Nepal is not significantly higher than the bachelor graduates from Nepal working in Nepal.*
H_A*: The net economic returns of Master graduates from Nepal working in Nepal is significantly higher than the Bachelor graduates from Nepal working in Nepal.*

The null hypothesis $\mathbf{H_0}$ is rejected. The decision is taken from the NPV values. The NPV value is obtained from the PV of master graduates from Nepal working in Nepal and PV of bachelor graduates from Nepal working in Nepal. When subtracted both the

PVs of master and bachelor candidates, if the NPV value is higher than 0 (NPV>0), the null hypothesis (H_0) is rejected.

$\mathbf{NPV_{MN}} = \mathbf{PV_{MN}} - \mathbf{PV_{BN}}$
$\mathbf{NPV_{MN}} = \mathbf{4,159,581.9} - \mathbf{3,422,134.23}$
$\mathbf{NPV_{MN}} = \mathbf{737,447.67\ NPR}$

As NPV of master graduates from Nepal working in Nepal has positive NPV value much greater than zero, the net economic return of master graduates from Nepal working in Nepal is significantly higher than bachelor graduates from Nepal working in Nepal. Here null hypothesis $\mathbf{H_0}$ is rejected ($\mathbf{PV_{MN}} > \mathbf{PV_{BN}}$).

2. **The Hypothesis for Net earnings of Master graduates from Australia working in Nepal.**

H_{01}*: The net economic returns of master graduates from Australia working in Nepal is not significantly higher than the Master graduates from Nepal working in Nepal.*
H_{A1}*: The net economic returns of master graduates from Australia working in Nepal is significantly higher than the Master graduates from Nepal working in Nepal.*

$\mathbf{NPV_{MAN}} = \mathbf{PV_{MAN}} - \mathbf{PV_{BN}}$
$\mathbf{NPV_{MAN}} = \mathbf{6023925.1} - \mathbf{3422134.2}$
$\mathbf{NPV_{MAN}} = \mathbf{2601790.91\ NPR}$

The NPV of master graduates from Australia working in Nepal is much greater than zero. The data analysis shows that the economic benefit of a master graduate from Australia working in Nepal is higher than the economic returns of bachelor graduates from Nepal working in Nepal ($\mathbf{PV_{MAN}} > \mathbf{PV_{BN}}$). Hence, null hypothesis $\mathbf{H_{01}}$ is rejected.

3. **The Hypothesis for Net earnings of unskilled Nepalese workers working in Gulf Cooperation Council (GCC) countries**

***H_{02}**: The net economic returns of unskilled Nepalese workers working in GCC Countries is not significantly higher than the unskilled Nepalese workers working in Nepal.*

***H_{A2}**: The net economic returns of unskilled Nepalese workers working in GCC Countries is significantly higher than the unskilled Nepalese workers working in Nepal.*

$$\mathbf{NPV}_{UGCC} = \mathbf{PV}_{UGCC} - \mathbf{PV}_{UN}$$
$$\mathbf{NPV}_{UGCC} = \mathbf{6844268.46} - \mathbf{1711067.12}$$
$$\mathbf{NPV}_{UGCC} = \mathbf{5133201.34\ NPR}$$

As NPV obtained from data analysis, the net economic returns of unskilled Nepalese workers working in GCC countries is higher than the net economic returns of unskilled Nepalese workers working in Nepal ($\mathbf{PV}_{UGCC} > \mathbf{PV}_{UN}$), the null hypothesis $\mathbf{H_{02}}$ is rejected.

In Table 28, we can find the summarized results for both the research question I & II.

Table 28 Summarized Findings for Research Questions I & II

Hypothesis	Research Question I	Decision
H2	The higher the perceived value of standard of living by an individual, the higher the outflow of labor migrants ***Significant at P<0.05***	***Fully Accepted***
H4	Higher the rate of unemployment, higher the outflow of labor migrants. ***Significant at P<0.10***	***Partly Accepted***
H13	Higher the least diversified fields of studies, higher the outflow of students for higher studies ***Significant at P<0.10***	***Partly Accepted***

Hypotheses	Research Question II	Decision
H1	$\mathbf{H_A}$: The net economic returns of Master graduates from Nepal working in Nepal is significantly higher than the Bachelor graduates from Nepal working in Nepal. ***Significance at NPV_{MN} >0.00***	***Not Rejected***
H2	$\mathbf{H_{A1}}$: The net economic returns of master graduates from Australia working in Nepal is significantly higher than the Master graduates from Nepal working in Nepal. ***Significance at NPV_{MAN} >0.00***	***Not Rejected***
H3	$\mathbf{H_{A2}}$: The net economic returns of unskilled Nepalese workers working in GCC Countries is significantly higher than the unskilled Nepalese workers working in Nepal. ***Significance at NPV_{UGCC} >0.00***	***Not Rejected***

The summary results in Table 28 shows **some similarities between the research questions I & II.** In research question I, from factor analysis and regression analysis, it showed the significant impact of unemployment, better living standards and limited fields studies on labor and educational migration. Similarly, in research question II, educational migrants to Australia from Nepal have higher economic earnings $\mathbf{NPV_{MAN}>NPV_{MN}}$ (limited fields of studies). Moreover, labor migrants to Gulf Cooperation Council (GCC) countries from Nepal have higher economic earnings $\mathbf{NPV_{UGCC}>NPV_{UN}}$ (unemployment & better living standards).

Chapter 10

10.0 Conclusions

This thesis had begun with the two research questions about the factors causing labor and educational migration from Nepal, and economic benefits of Nepalese people working and studying in Nepal as well as abroad.

Even though migration is already a widely-talked subject, this thesis aims to offer some added knowledge and information to this area. Labor migration is already an established and broadly searched topic. In this Master thesis perceived higher earnings and unemployment were found to have a positive relationship on labor migration from Nepal. Furthermore, limited field of studies in Nepal was found to have a positive influence on educational migration from Nepal.

From the data analysis, it was found that the economic return of master graduates from Nepal working in Nepal is higher than the bachelor graduates from Nepal working in Nepal. Master graduate from Australia working in Nepal was also found to have higher net economic benefits compared to bachelor graduates from Nepal working in Nepal. Furthermore, the economic return of unskilled Nepalese workers working in Gulf Cooperation Council (GCC) countries was found to be higher than those of unskilled Nepalese workers working in Nepal.

10.1 Contributions

Though there are many pieces of research on labor migration in the past, educational migration and its economic benefits have not been studied for Nepal. This master thesis contributes to the understanding of economic returns of both labor and educational migration from Nepal, especially to GCC countries and Australia. Furthermore, it will also offer the information to all those young people who are lining up to leave the home country for work or education. It will make them understand and take the right decision about destination countries and economic returns of it.

This study also contributes to the understanding of labor and educational migration as it has collected people's perception of factors causing migration as the basis of

analysis for the research question I. A new term “migration itself” has been mentioned in this thesis as a factor causing migration. However, this term was found to have no impact on migration. In further studies, this term can also be considered.

10.2 Limitations

There were some limitations while doing this study. The first limitation was the time. Due to the limited time frame to finish the master thesis, the survey was stopped after a month of running the online survey. Because of that, the number of respondents I got was less than expected.

Due to the snowball sampling and self-selection technique used in this study, I had limited control over who responded to my questionnaire. As the survey was conducted on an online platform, it had failed to collect data from direct interviews. The target samples were at different places, and due to the limited time and expected cost, it was not possible to do direct interview with respondents. If I had gotten more relevant respondents, it might impact on validity and reliability of the results.

Another limitation was the country of residents. This thesis was especially focused on the Nepalese people and their economic returns from labor/educational migration to Gulf Cooperation Council (GCC) countries and Australia. To get a valid and reliable result, it would have been better to collect more cross-country data.

10.3 Further Studies

This study has tested seventeen different hypotheses about labor migration and educational migration from Nepal and its economic returns. Especially, the respondents were limited to those who were Nepalese living in home country Nepal (with bachelor/master education), GCC countries (unskilled workers), and Australia (doing master degree) to get useful data.

To get more valid and reliable results, it would have been better to collect more cross-country data. Therefore, I would argue that more research on cross-country data about

labor migration and educational migration and their economic returns is recommended.

Furthermore, in new studies, it is recommended to take sufficient time to collect data and analyze it in multiple ways. One can also use different data collection technique to ensure the reliability and the validity of the data (for e.g., direct interviews, open-ended questions, etc). This thesis was only focused on the Nepalese bachelor and master graduates from Australia and Nepal.

Further studies even can be taken with basic schooling model as well. By doing cross-country data analysis on different level of education, their cost, and future earnings on a big scale is recommended. Also, collecting people's perception about the problem would also be a good thing to study.

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www.doe.gov.np

Abbreviation

CBS	Central Bureau of Statistics
CDC	The Curriculum Development Center
CEHRD	Council for Educational Human Resource Development
CSR	Corporate Social Responsibility
CTEVT	Council for Technical Education and Vocational Training
DoE	Department of Education
FDI	Foreign Direct Investment
FY	Fiscal Year
GCC	Gulf Cooperation Council (UNITED ARAB EMIRATES, SAUDI ARABIA, QATAR, KUWAIT, BAHRAIN, OMAN)
GDP	Gross Domestic Product
HSEB	Higher Secondary Education Board
IMO	International Organization for Migration
MoE	Ministry of Education
NPR	Nepalese Rupee
NPV	Net Present Value
OCE	Office of the Controller of Examination
PCI	Per Capital Income
PV	Present Value
RED	Regional Education Directories
TPV	Total Present Value
UAE	United Arab Emirates
UNDP	United Nations Development Program
UNICEF	The United Nations Children's Fund
USA	United States of America

Appendix

Appendix 1: Literature Review Table

Author (Year)	Title	Research Questions	Type of Paper	Data	Outcomes/Results
George J. Borjas-2010	Labor Economics	Why some people opt to work, while others withdraw from the labor market? Why are earnings distributed unequally in most societies?	Theory extension & Regression Analysis *(Quantitative)*	**1980-1990**	A highly-paid worker is likely to stay working and delay their retirement. The best timing of human capital investment over the life cycle shows that the age-earnings profile is upward-sloping and concave in nature. The probability of moving across the geographic regions depends on economic conditions in both the home and host countries.
Elchanan Cohn & Terry G. Geske (1990)	The Economics of Education	What are the measurements of the economic value of education & the allocation of resources in education? How can we reduce the cost of education without losing the quality of education we get?	Simple correlation approach; Residual approach *(Quantitative)*	**1950-1988**	It talks about the comprehensive discussion of benefits that education is expected to produce. Additionally, the book explained the estimation of the direct and indirect cost of education during the period 1950-1988 in the United States. The result was cited that the returns to investment in education are high except in some exceptional cases.

Jess Benhabib, Mark M. Spiegel (1994)	The role of human capital in economic development Evidence from aggregate cross-country data	How does human capital or the educational attainment of the labor force affect the output and the growth of an economy?	Cross-country data analysis/ regression analysis *(Quantitative)*	**1965 - 1985**	Human capital influence the growth of total factor productivity. The human capital levels directly affect the rate of domestically produced technological innovation. Furthermore, the human capital play a role in determining the growth of per capita income rather than their growth rates.
Theodore W. Schultz-1961	Investment in Human Capital: A Theoretical Analysis	Does investment in human capital rise the real earnings of a worker? How to distinguish between investment for consumption and investment for human capital?	*Qualitative*	**--**	Investment in human capital has positive results that enhance the qualities of workers as well as the earnings of workers. Human capital like other capital depreciates, becomes obsolete, and incurs maintenance. Some cost incurred on investment of human capital, are partly considered as consumption assuming that expenses to education create a form of consumer capital.

David Ashton and Francis Green -1997	Human Capital and Economic Growth	Why have some societies developed institutional structures that incite employers to follow the high skills route or low skills route?	*Qualitative*	**---**	The research problem is solved by finding the important factor "Degree of Independence" of the education system from the economy. If the society, where the education system is developed with a high degree of independence from the economy, there is a tendency to create a relatively low level of educational achievements and vice-versa.
Robert Tamura - 2006	Human Capital and Economic Development	Is there a relationship between young adult mortality and young adult human capital? Does infant mortality and young adult mortality affect fertility?	Goodness of Fit Test *(Quantitative)*	**1946-1970**	The rate of return to schooling is higher in low mortality environments than high mortality environments.
Jacob Mincer - 1984	Human Capital and Economic Growth	Does personal human capital create individual prosperity/economic growth as well as national growth? Is there a relationship between human capital as a factor of production and physical capital in the economic growth of individual and nation?	*Qualitative*	**---**	Though the lack of empirical research, it concludes that the human capital may not be a mandatory/prerequisite for the prosperity/growth of the economy. But it agrees that it is necessary for sustainable economic development.

Annamara Di Bartolo -2000	Human Capital Estimation through Structural Equation Models with some Categorical Observed Variables	Is there a relationship between human capital and labor income?	Weighted Least Squares, Polychoric Correlation *(Quantitative)*	**1994-1995**	The research done in the USA, Canada, and Italy shows that the effects of the socio-demographic variables on income are in some way stronger than human capital.
Gary S. Becker - 1962	Investment in Human Capital: A Theoretical Analysis	Do investment in human capital influence the real future income/earning of people?	*Qualitative and Quantitative*	**---**	Most investment in human capital produce visible earnings at older ages and reduce earnings at younger ages. Though the investment in human capital produces visible earning, some investment in human capital does not affect earnings as costs are paid, and returns are collected by the firms, industries, or countries using capital.
Mark R. Rosenzweig (2006)	Higher Education and International Migration in Asia: Brain Circulation	How the emigration of skilled workers affects the returns to educational investments in low-income countries? Do more schooled person always gain more from emigration to a country that provides higher rewards for skills?	*Quantitative*	**1983-2003**	The research supports the hypothesis that the students choose education abroad to obtain a job in host countries to earn a high skill price.
Diana-Mihaela Pociovălişteanu-2012	Migration for Education Nowadays	There is an increase in employment rate and the economic return when there is a high degree of mobility of workers?	*Qualitative*	**---**	International students not only get a high degree but also bring significant social and economic impact on the home countries and the host countries.

Eva Wirén - 2013	Migrants in Education – what factors are important?	Which factors matter for migrant students' overall mathematics ability?	*Quantitative*	**2007**	The composition of migrant students is very crucial for today's requirements. Factors related to teachers, languages, school patterns, social background factors also have a significant effect on migrants in education.
George Psacharopoulos-1994	Returns to Investment in Education: A Global Update	What factors are crucial for the estimation of the rate of returns to investment in education using different methods?	*Quantitative*	**1958-1990**	The primary education perpetuates to be the top investment choice in developing countries. Educating female is marginally more profitable than educating males. The academic school curriculum is a better investment than vocational education.
Christian Dustmann and Albrecht Glitz - 2011	Migration and Education	What factors connects migration and education? Do migrations affect non-migrants and their skills and skills accumulation? Which channels affect the accumulation of skills and education of those countries of origin who do not emigrate?	*Quantitative*	**2000-2008**	Those with the lowest ability decide not to migrate while those with high skill decide to emigrate and remain permanently. Background of immigrants' parents and language spoke at home matter for educational success of the children of immigrants. The migration decisions and the decision about learning and human capital investments are closely related.

Jagdish Bhagwati & Koichi Hamada (1974)	The Brain Drain & International Integration of Markets	What factors cause the brain drain problem among the people especially from less developed countries and effects on their welfare? What happens in the short run when the educated labor force cannot be reduced?	Theoretical Analysis *Qualitative*	---	The national income will decrease, and reduce the per-capita income when there is a change in the level of migrated educated labor force. For the internalized cost of education, emigration will reduce national income. But it also increases the average product of labor.
Sari Pekkala Kerr &William R. Kerr -2011	Economic Impacts of Immigration: A Survey	Do immigrants increase or decrease social benefit usage wit duration of stay? How immigration affects the labor markets and public finances of host countries?	Empirical *Quantitative*	**2001-2007**	Recently migrants have lower earnings than natives. The success of immigrants in the host country's labor markets is often based on comparisons of immigrant wages and employment to natives at the time of entry and throughout the stay.
Shiba Singh Thakuri (n.d.)	Nepal's Foreign Labor Migration and its Effect on Senior Citizen	A relationship between Nepal's foreign labor migration and its effect on senior citizens in economic dependence and their social challenge?	*Qualitative*	---	The output is not clear though it talks about some historical background and implications for senior citizen. However, the migration of individuals from family has impacted to old people of the family. It is because of the feeling of social isolation and lack of family in old help age.
William Kandel & Grace Kao-2001	The Impact of Temporary Labor Migration on Mexican Children's Educational Aspirations and Performance	How the short-term migration of US labor and students affects the educational objectives & performance of same category students growing up in Mexico?	OLS Regression and Logistic Regression *(Quantitative)*	**1995**	There is a negative relationship between US migration and academic performance. US migration within the family is positively correlated with students' grades.

Bichaka Fayissa & Christian Nsiah -2010	The Impact of Remittances on Economic Growth and Development in Africa	What are the effects of remittances relative to other external sources of capital including foreign aid and foreign direct investment (FDI) on economic growth and development?	Fixed & Random Regressions *(Quantitative)*	**1980-2004**	Remittances have a positive impact on the economic growth of African countries. The empirical findings show that a 10 % rise in remittances results to increase GDP per capita income by 0.3 %.
Catrinescu, N, Leon-Ledesma, M, Piracha, M., & Quillin, B. (2009)	Remittances, Institutions, and Economic Growth	Is there a relationship between the remittances and economic growth and development?	*Quantitative*	**1970-2003**	The remittances have a positive and mathematically significant implication on economic growth. The effect of remittances on growth depends on whether countries' institutions are conducive to the productive use of remittances. The institutions play a very significant role in how remittances affect economic growth.
Dietmar Meyer &Adela Shera-2017	The impact of remittances on economic growth: An econometric model	Is there a significant relationship between remittances and economic growth in top six remittance receiving countries?	Econometric model *(Quantitative)*	**1999-2013**	Remittances have a positive impact on growth and this impact increase at higher levels of remittances relative to GDP.
Abu Siddique, E A Selvanathan, and Saroja Selvanathan - 2010	Remittances and Economic Growth: Empirical Evidence from Bangladesh India and Sri Lanka	Per capita remittances and economic growth series are not co-integrated?	*Quantitative*	**1975-2006**	Growth in remittances does not lead to economic growth and development in Bangladesh. Similar results were depicted in the case of India as well. But Sri Lanka's, economic growth influences growth in remittances. It says there is no long-term relationship between remittance and economic growth.

Appendix 2: Survey Form

Survey Questions for my Master Thesis at University of Agder (UiA), Norway

Bellow I have attached my 24 questions form with the number of distribution of answers from 258 respondents.

Please spend a few minutes (takes 8-9 minutes) to answer my survey questions. Your responses count a lot for quality output of my Master thesis about "Migration for Work and Education; A case studies of Nepal." All the information you provide is private. A million thanks to you for your valuable time responding to my research questions.

1 Your gender?
- Male (162)
- Female (96)

2 Your age group?
- 20-24 (44)
- 25-29 (120)
- 30-34 (68)
- 35 & above (26)

3 Your current country of residence?
- Nepal (126)
- Australia (61)
- GCC Countries (Qatar, Saudi Arabia, Bahrain, Kuwait, UAE, Oman) (54)
- Other (17)

4 Your current educational level?
- Finished Master in Nepal (29)
- Finished Master from Australia (31)
- Finished Master from other countries (2)
- Studying Master in Nepal (36)
- Studying Master in Australia (51)
- Studying Master in other countries (8)
- Finished Bachelor in Nepal (27)
- Studying Bachelor in Nepal (28)
- Studying Bachelor in other countries (3)

5 Main activity today?
- Studying Master in Nepal (37)
- Studying Master in Australia (50)
- Studying Master in other countries (10)
- Studying Bachelor in Nepal (28)
- Studying Bachelor in other countries (2)
- Working in Nepal (61)

- Working in GCC Countries (54)
- Working in other countries (16)

6 Average cost of tuition in one year? (In Nepalese rupees)?

- Not a student (130)
- 0 (0)
- 1-99,000 (58)
- 100,000-199,000 (7)
- 200,000-299,000 (3)
- 300,000-399,000 (3)
- 400,000-499,000 (1)
- 500,000-599,000 (1)
- 600,000-699,000 (3)
- 700,000-799,000 (3)
- 800,000 & above (52)

7 If you are studying outside of the home country (Nepal), how your cost of tuitions differs from home country (Nepal)?

- Not a student (126)
- Studying in Nepal (65)
- Less than 25% (4)
- Less than 50% (2)
- Equal (1)
- Double (2)
- Three times higher (1)
- Four times higher (1)
- Five times higher & more (53)

8 How are you financing your cost of tuitions and cost of living?

- Not a student (126)
- From bank loan (47)
- From scholarships (10)
- From family support (59)
- From a private source (10)

9 If you are financing by bank loan, how much interests (%) to the bank are you paying?

- Not a student (127)
- Financing from other sources (81)
- 6 % or less (0)
- 7 % (0)
- 8 % (0)
- 9 % (4)
- 10 % (29)
- 11 % & more (14)

10 What sort of work you do?

- Skilled full-time (67)
- Skilled part-time (11)

- Unskilled full-time (76)
- Unskilled Part-time (56)
- Study only (48)

11 Current yearly earnings on average? (In Nepalese rupees): full-time skilled/unskilled
or part-time skilled/unskilled.

- 0 (47)
- 1-99,000 (1)
- 100,000-199,000 (5)
- 200,000-299,000 (15)
- 300,000-399,000 (17)
- 400,000-499,000 (22)
- 500,000-599,000 (31)
- 600,000-699,000 (33)
- 700,000-799,000 (13)
- 800,000 & above (74)

12 If you are working/studying abroad, how do your earnings differ from Nepal?

- Working/studying in Nepal (125)
- Less than 25% (1)
- Less than 50% (0)
- Equal (1)
- Double (7)
- Three times higher (5)
- Four times higher (49)
- Five times higher & more (70)

13 Current yearly cost of living on average (In Nepalese rupees)?

- 0 (0)
- 1-99,000 (22)
- 100,000-199,000 (115)
- 200,000-299,000 (37)
- 300,000-399,000 (7)
- 400,000-499,000 (3)
- 500,000-599,000 (2)
- 600,000-699,000 (3)
- 700,000-799,000 (14)
- 800,000 & above (55)

14 If you are studying/working abroad, how do your costs of living differ from Nepal?

- Living in Nepal (125)
- Less than 25% (0)
- Less than 50% (0)
- Equal (13)
- Double (28)
- Three times higher (18)
- Four times higher (8)
- Five times higher & more (66)

15 If you are working/studying abroad, how much money (as remittances) you are sending to Nepal on average in one year (Nepalese rupees)?

- Studying in Nepal (61)
- Working in Nepal (62)
- 0 (37)
- 1-99,000 (3)
- 100,000-199,000 (15)
- 200,000-299,000 (37)
- 300,000-399,000 (17)
- 400,000-499,000 (5)
- 500,000-599,000 (6)
- 600,000-699,000 (5)
- 700,000-799,000 (6)
- 800,000 & above (4)

16 What do you expect from your future career?

- Good earnings & steady work (74)
- Good earnings & promotion opportunities (101)
- Challenging work & additional responsibilities (43)
- I have already been promoted to my dream job (13)
- Very good prospects (27)

17 In which stage you think your future career goal is standing based on the principle of the business life cycle?

- Lunch (at investment level) (127)
- Growth (110)
- Maturity (20)
- Decline (0)

18 No matter where you are living now, how do you predict that your situation would be abroad compared to your home country (Nepal)?

- Cannot say (26)
- Difficult (129)
- No change (12)
- Better (64)
- Much better (26)

19 Do your other family members live/work abroad?

- Yes (182)
- No (76)

20 How many of your larger family members do live/work abroad?

- None (75)
- One (147)
- Two (29)
- Three (5)
- Four (2)
- Five & above (0)

21 In which country do your other family members live/work?

- Home country Nepal (75)
- Australia (35)

- GCC countries (41)
- USA (37)
- Japan (35)
- South Korea (EPS) (22)

22 Do you plan to return home to Nepal in the future no matter where you are currently living?

- Yes (180)
- No (2)
- Maybe (41)
- Want to settle abroad (35)

Rating form questions

23. Please rate the following factors causing Nepalese youth to migrate for foreign employment based on your own view.

	Strongly Disagree	Disagree	Some-what Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
Perceived Higher Earnings	1	2	3	4	5	6	7
Better Standard of Living	1	2	3	4	5	6	7
Poverty	1	2	3	4	5	6	7
Unemploy ment	1	2	3	4	5	6	7
Political Instability	1	2	3	4	5	6	7
Natural Disasters	1	2	3	4	5	6	7
Migration Itself	1	2	3	4	5	6	7

24. Please rate the following factors causing Nepalese Students to migrate for Higher studies based on your own view

	Strongly Disagree	Disagree	Some-what Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
Perceived Higher Earnings	1	2	3	4	5	6	7
Expectation of Highly recognized job	1	2	3	4	5	6	7
Better Standard of Living	1	2	3	4	5	6	7
To accept future challenges	1	2	3	4	5	6	7
Non-recognition of degree	1	2	3	4	5	6	7
Limited Fields of studies	1	2	3	4	5	6	7
Lack of practical education	1	2	3	4	5	6	7

Ending

Thank you! Your responses have been recorded. :)

Kind Regards,

Sudip Raj Kharel
Supervisor: Prof. Kristin Dale
University of Agder, Norway

Appendix 3: Codes Book

Variables	Responses
Gender of respondents	○ Male ○ Female
Age groups of respondents	○ 20-24 ○ 25-29 ○ 30-34 ○ 35 & above
Current country of residence	○ Nepal ○ Australia ○ GCC Countries ○ USA ○ Japan ○ Norway ○ Canada ○ India
Current educational level	○ Finished Master in Nepal ○ Finished Master from Australia ○ Finished Master from other countries ○ Studying Master in Nepal ○ Studying Master in Australia ○ Studying Master in other countries ○ Finished Bachelor in Nepal ○ Studying Bachelor in Nepal ○ Studying Bachelor in other countries ○ Below Bachelor education attained
Main activity today	○ Studying Master in Nepal ○ Studying Master in Australia ○ Studying Master in other countries ○ Studying Bachelor in Nepal ○ Studying Bachelor in other countries ○ Working in Nepal ○ Working in GCC Countries ○ Working in other countries
Average cost of tuition	○ Not a student ○ 0 ○ 1-99,000 ○ 100,000-199,000 ○ 200,000-299,000 ○ 300,000-399,000 ○ 400,000-499,000 ○ 500,000-599,000 ○ 600,000-699,000 ○ 700,000-799,000 ○ 800,000 & above

Differentiations of cost of tuitions from home country (Nepal)	○ Not a student ○ Studying in Nepal ○ Less than 25% ○ Less than 50% ○ Equal ○ Double ○ Three times higher ○ Four times higher ○ Five times higher & more
Source of financing cost of tuition/living	○ Not a student ○ From bank loan ○ From scholarships ○ From family support ○ From private source ○ Self-employed
Interest rates paying to the bank	○ Not a student ○ Financing from other sources ○ 6% or less ○ 7 % ○ 8 % ○ 9 % ○ 10 % ○ 11 % & more
Sort of wok	○ Skilled full-time ○ Skilled part-time ○ Unskilled full-time ○ Unskilled part-time ○ Study only
Yearly earnings in average (NPR)	○ 0 ○ 1-99,000 ○ 100,000-199,000 ○ 200,000-299,000 ○ 300,000-399,000 ○ 400,000-499,000 ○ 500,000-599,000 ○ 600,000-699,000 ○ 700,000-799,000 ○ 800,000 & above
Differentiations of earnings from home country (Nepal)	○ Working/studying in Nepal ○ Less than 25% ○ Less than 50% ○ Equal ○ Double ○ Three times higher ○ Four times higher ○ Five times higher & more

Cost of living in average (NPR)	○ 0 ○ 1-99,000 ○ 100,000-199,000 ○ 200,000-299,000 ○ 300,000-399,000 ○ 400,000-499,000 ○ 500,000-599,000 ○ 600,000-699,000 ○ 700,000-799,000 ○ 800,000 & above
Differentiations of cost living from home country (Nepal)	○ Living in Nepal ○ Less than 25% ○ Less than 50% ○ Equal ○ Double ○ Three times higher ○ Four times higher ○ Five times higher & more
Remittance transfer to home country (NPR)	○ Studying in Nepal ○ Working in Nepal ○ 0 ○ 1-99,000 ○ 100,000-199,000 ○ 200,000-299,000 ○ 300,000-399,000 ○ 400,000-499,000 ○ 500,000-599,000 ○ 600,000-699,000 ○ 700,000-799,000 ○ 800,000 & above
Expectation from future career	○ Good earnings & steady work ○ Good earnings & promotion opportunities ○ Challenging work & additional responsibilities ○ I have already promoted to my dream job ○ Very good prospects
Stage of future career goal	○ Lunch (at investment level) ○ Growth ○ Maturity ○ Decline
Prediction of abroad life	○ Cannot say ○ Difficult ○ Worse ○ No change ○ Better ○ Much better
Other families living/working abroad	○ Yes ○ No

Number of other families living/working abroad	○ None ○ One ○ Two ○ Three ○ Four ○ Five & above
Country of residence of other families living /working	○ Home country Nepal ○ Australia ○ GCC Countries ○ USA ○ Japan ○ South Korea (EPS) ○ Norway ○ Canada ○ Singapore ○ England ○ France ○ China
Do you plan to return home	○ Yes ○ No ○ Maybe ○ Want to settle abroad
Factors Causing Labor & Educational Migration	
1. Perceived Higher Earnings 1 2. Better Standard of Living 1 3. Poverty 4. Unemployment 5. Political Instability 6. Natural Disasters 7. Migration Itself 8. Perceived Higher Earnings 2 9. Expectation of highly recognized job 10. Better Standard of Living 2 11. To accept Future challenges 12. Non-recognition of degree 13. Limited fields of studies 14. Lack of practical education	○ Strongly disagree ○ Disagree ○ Somewhat disagree ○ Neither agree nor disagree ○ Somewhat agree ○ Agree ○ Strongly agree

Appendix 4: Data Quality/Reliability

I have two research questions in this master thesis. Both the research questions are addressed independently. The reliability test is conducted differently for research question I and II according to the variables related to the research questions. The Cronbach's Alpha is measured in scale between 0 to 1. The higher the Alpha value closer to 1, the higher the reliability of the data. Table 29 below shows the reliability statistics based on Cronbach's Alpha value for both research questions I & II including control variable.

Table 29 Reliability test of the variables

(Question I) Variables [Educational/Labor Migration] Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.795	**.801**	13
Other Variables [Control/supporting variables] Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.804	.736	22
(Question II) Variables [Expected economic returns] Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.912	**.900**	9

Table 29 shows the reliability test of variables included in my research model. The Cronbach's Alpha value for the research question I is 0.801. The Cronbach's Alpha value for the research question II is 0.912. The Alpha values are between 0.801 to 0.912 that indicate the data collected for those variables are highly reliable and significant.

Appendix 5: Reflection Note

This section deals with the broad concept of internationalization, innovation and responsibility aspects supported by the School of Business and Law at the University of Agder (UiA). These themes are introduced to produce the innovative and responsible professionals from UiA.

I joined "Master of Science in Business Administration" (2 Years program) offered at UiA. In this course, I was able to take several courses that enabled me to write my master thesis with better understanding. Some of the courses I took were, Research Methods in Business, Strategy, Judgement and Decision Making, Innovation through Design and Entrepreneurship, Human Resources Economics, International Marketing, Culture and Ethics, Emerging Markets, Corporate Finance, International Laboratory, Management Control Systems, Corporate Finance, Financial Statement Analysis, and Equity Valuation etc.

This master thesis is about the migration for work and studies from Nepal particularly to Australia and Gulf Cooperation Council (GCC) countries and their economic returns. The topic of migration in this thesis is defined as the movement of people from one place of residence to another location. Nowadays, migration is one of the hot topics on all media platforms. In 2013, 150.3 million people worked outside of their home country (IMO, 2013). From migration, USD 429 billion was transferred as remittances to developing countries in 2016. These statistics indicate that migration is rapidly growing all over.

This study examines the economic returns of master graduates from Nepal working in Nepal, master graduates from Australia working in Nepal, and economic gains of unskilled Nepalese workers working in GCC countries and Nepal. I have gathered people's perception of factors causing labor or educational migration and their cost-benefit statistics. From my study, out of 14 factors, like better living standard (fully significant) and unemployment (partly significant) were found to have an impact on labor migration. On the other sides, the limited field of studies (one of the factors

causing educational migration from Nepal) was found to have a partial impact on educational migration.

Globalization/Internationalization

Migration is of several kinds: especially internal/external to the country or, national or international migration. Migration is a global issue. Every year millions of people migrate from one country to another. In 2013, 247 million (3% of the world's total population) people migrated to third countries (IMO, 2013). This statistic justifies that migration and internationalization is relevant for this study.

Today's competitive world is not possible without internationalization. To reap the economic benefit, mobility has been the essence. Migration can give economic benefits to a person, to society, to a nation or even to the world. As migration itself is a global term, it has significant relationships with the economic returns of the individual, society, country, or the world.

Although, many leaders may perceive internationalization as a negative element to the national sovereignty, economic returns have a significant impact on the individual, society, and the nation. Today, growth begins with national, international, and global cooperation. Migration act on the same principle.

Innovation

Migration can be used as an alternative way to resolve societal issues like poverty, inequality, unemployment, natural disasters, political movements, etc. One can take the migration path to deal with these problems.

In the beginning, India was the only destination for out migration for work and education from Nepal. When the oil industries in the Middle East boomed in the 1970s, this opened ample opportunities for foreign employment. With the evolution of time, there were changes in policies and innovation of new acts and laws. In 1985, the Foreign Employment Act was enacted that encouraged Nepalese citizens to migrate beyond India too.

The first official record of migration beyond India began in the fiscal year 1993/94. That year 3605 people left for foreign employment. In the year 1999/2000, this number was recorded 7 times higher. The innovative rules, labor laws, acts, and new policies have elevated the labor migration at the peak from Nepal. In the fiscal year 2012/2013, nearly half a million people left the country for foreign employment, which is almost 120 times higher than that of 1993/1994.

In the year, 2014/15, at least 1.2 million jobs were available for Nepalese workers in the international labor market. Today, Gulf Cooperation Council (GCC) countries alone account for 97% of labor migrants from Nepal.

Responsibility

Though migration is the innovative way to fill some of the unfulfilled dreams of suppressed people, all the associated body to the migration of people should be responsible for the possible negative output from the migration. In many cases, migration can mislead to human trafficking. The Corporate Social Responsibility (CSR) should be incorporated into the labor institutions.

There are hundreds of manpower company in Nepal that deals with sending people to many countries. The goal of these company should not depend solely on profit motives. They should consider business ethics as well. Every year, there comes news about the deaths of workers working abroad. Therefore, the concerned body should pay attention to the safety and security of the workers.

Many workers have filed a case against the manpower company about wages, type of work offered, work hours differentials and other issues different from written in their job contract. The government and other national or international institutions should be responsible for closely monitoring workers problems and situations not only at home, but also around the globe.

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