CHAPTER I

INTRODUCTION

1.1 Background of the study

The "brain drain" phenomenon has a long history. In 1963, the term brain drain was officially introduced by the British Royal Society to define the scientists and technologists from United Kingdom (UK) who migrated from the UK to North America and Canada (Cervantes & Guellec, 2002). However, this term eventually became widely used to describe the emigration of scholars and professionals from Third World countries. "Brain Drain" refers to the emigration of highly skilled and educated individuals from one country or region to another, typically for better career opportunities, higher salaries, improved living conditions, and access to advanced research and technology. The term is often used in the context of migration and economics. According to literature, brain drain has both positive as well as negative impacts on the countries involved. On the positive side, it can benefit the destination countries or region by attracting talented individuals who can contribute to its economy, innovation, and research capabilities. On the other hand, the source country or region may suffer from a loss of skilled workers and professionals, leading to potential labor shortages and decreased economic growth in certain sectors.

The term "Brain Drain" was originally used by the British Society of London in 1952. The movement of qualified individuals from their countries of origin to the countries that offered better settlement and opportunities for employment was largely responsible for the creation of the term "brain drain". It was recorded in history that there was a certain period when scientists and technical Russian employees came to the United States of America from the former Union of Soviet Socialist Republics (USSR). The United States government created a policy and law in the year 1960 to prevent the best educated human capital from entering the country from other parts of the world since it may cause a variety of issues for the government (1967, 1968a, 1968b). Lack of research and employment prospects, politics as a source of migration, variables related to pure science, better well of parents, the education system, and a lack of jobs are the main causes of brain drain (Ghulam et al., 2019).

The term "brain drain" is originated in the 1960s, when a large number of British scientists and intellectuals migrated to the US in search of a better working environment. Brain drain refers to the migration of highly trained human capital from one nation to another. The interactions of several push and pull variables results in the migration of healthcare professionals, including nurses. Push factors are the circumstances that motivate nurses to leave their own country. On the other hand, pull factors are the characteristics of a certain nation that attract nurses, influencing their movement to that country (Thapa & Shrestha, 2017).

When discussing emerging nations, the phrase "brain drain" typically refers to the prolonged or permanent international emigration of highly qualified individuals who have had significant educational investments made by their home communities. The literature that is now accessible makes clear that, considering the critical role that human resources play in the development of these nations, the indicated transfer of skills and knowledge from the place of origin to the host country represents a significant loss for the source country. More and more recently, the term "highly skilled persons" has been used to describe migration or mobility. This term does not indicate any particular opinion (or "drain") about the effects of the movement, Pen shade et al. 2001; Cornelius, Thomas J.E.; Lowell and Findlay 2002; OECD 2002).

Brain drain is a phenomenon which occurs when highly qualified individuals emigrate from their home nations in search of better economic and living conditions, which may include higher revenue, access to modern technology, and more stable political environments. Human capital flight, often known as brain drain, is a significant problem in many developed and developing countries alike since qualified workers frequently leave their home countries in search of employment elsewhere (Azadi et al., 2020). According to German researcher Claudia Diehl, "brain drain" refers to the one way movement of highly skilled and educated individuals from their home country to another country in search of good employment opportunities, better remuneration, or enhanced living standards. This issue is distinct from "brain exchange," which involves a bi-directional flow of highly skilled individuals between a sending and receiving country, and "brain circulation," which describes the cyclical process of studying or acquiring skills abroad and subsequently returning to work in one's home country.

Traditionally, brain drain refers to the migration of highly skilled individuals, often known as knowledge workers, from their home countries to nations that provide better opportunities in their specialized fields and improved standards of living. However, there is another significant aspect of brain drain, where students who go abroad for education do not return to their native countries. In recent times, knowledge-based and high-technology countries, like the United States, have actively welcomed an increasing number of foreign professionals and students to address their workforce shortages (Tansel & Güngör, 2003).

As developed countries began adopting quality-selective immigration policies to attract skilled migrants, a new theory called the "brain gain theory" or "beneficial brain drain theory" emerged in the literature. This theory proposes that the prospect of migrating to a developed country and earning a higher income motivates people in their home (sending) country to pursue higher education. Since not all highly educated individuals choose to emigrate, the home country may actually end up with a higher number of highly educated individuals compared to what it would have had in the absence of emigration possibilities. Furthermore, brain drain can lead to additional benefits, such as remittances sent back to the home country by migrants, the potential for return migration after gaining additional knowledge and skills abroad, and circulatory migration patterns that facilitate the transfer of knowledge, technology, and capital (Beine et al., 2008).

Brain Drain is the process through which individuals with high levels of competence, education, and skill migrate from their nation to the developed nations. According to the literature, educated Human Capital Migration (HCM) has an impact on two nations. Countries where talented people are moving to the developed world and the nation of origin of the migrant. According to anecdotal evidence, the Brain Drain (BD) has a positive impact on both nations if competent workers sending money to their home countries in the form of remittances (Tina, 2015). However, competent individuals may have a negative impact on the economy of their home nation if they move and settle down permanently to other nations (Ghulam, 2019).

Brain drain refers to the migration of highly skilled individuals from their country of origin to other destinations. In the current context, brain drain is driven by the growing number of people seeking better opportunities to enhance their earning potential and

career prospects. A study conducted by Docquier & Marfouk (2006) highlights the significant magnitude of brain drain flow in recent years. For instance, in 2000, more than 50 percent of skilled migrants from Africa, 41 percent from Asia, and 34 percent from Latin America departure from their countries. Developing countries experience higher brain drain rates compared to developed nations. Brain drain results in the loss of young and skilled professionals who offer their expertise to other countries. When the domestic job market cannot meet the growing demands of educated individuals in society, seeking opportunities in the international market becomes an appealing option. Nepal, known for its rich knowledge heritage dating back to ancient times, faces the unfortunate situation of losing its potential youth continuously (Silwal, 2019).

The global phenomenon of talented workers moving from least developed to more developed nations has helped developed countries become more stable and rich, while least developed countries are losing the pillars that support their countries' development. Most of the people are migrated towards rich and developed countries from poor and least developed countries. Highly educated people are attracted towards developed nations for more incentives, scholarships, better living standard and more job opportunities. It is widely accepted that remittances and brain circulation compensate for this loss. However, this has resulted a shortage of highly educated and competent people in the specific area, which has created a huge gap in the economic development of the nation. Brain drain is the phrase that is used to define the departure of educated and talented workers who have been living insecurely for many years in least developed and emerging nations. Pull and push factors like unemployment, liberalization, geographical challenge, salary and better opportunities are the causes of brain drain. The development of the industrial sector is the basis for development of the country (Kattel & Sapkota, 2018).

Brain Drain in Nepal

Nepal is a landlocked country located in South Asia, bordered by China to the north and India to the south, east, and west. Due to the globalization, brain drain is a worldwide problem particularly for the developing countries. The phenomenon of brain drain poses a significant challenge for all societies, as it involves the substantial departure of talented and skilled individuals. Developed nations consistently prioritize the growth and development of their human capital, while developing countries face the predicament of losing their advanced and highly skilled professionals, such as scientists, doctors, and IT

experts, to countries with more opportunities. Nepal is also victim of this painful and hurting phenomenon. Nepal is a country that suffers from both brain drain as well as labor drain. A large number of Nepalese people became emigrants to the developed countries from Nepal for the search of jobs and for the study particularly to the United state America (USA), Canada, Australia and other some European nations.

Students from Nepal can now easily travel and take advantage of possibilities elsewhere because to rising globalization. Several factors, including a lack of technical capacity and resources, nepotism, favoritism, job market inequalities, and an unfavorable socioeconomic climate, compel numerous students to seek opportunities abroad and settle there. Even those who stay are often on a constant quest for chances to leave. Furthermore, as the country's economy improves, parents find themselves in a better position to afford sending their children abroad. Consequently, the rate of student migration from Nepal is increasing at an alarming rate.

Historically, Nepal has witnessed significant student emigration to India, but the establishment of private universities has the potential to alleviate this trend. Nonetheless, challenges such as poverty, political instability, limited purchasing power, and traffic congestion serve as deterrents for students who might otherwise choose to stay in their homeland. If this trend persists, Nepal could soon confront a critical talent shortage.

According to the United Nations Educational, Scientific and Cultural Organization (UNESCO) shows that the number of students from Nepal traveling abroad to study has more than doubled from 44,255 in 2017 to 95,268 in 2022.Out of the 95,268 Nepali students who pursued studying abroad in 2022, 40,752 (42.77%) students studied in Australia, 18,436 (19.35%) students studied in Japan, 13,574 (14.24%) in India, 12,660 (13.28%) in the USA and rest in other countries. Other popular destinations for students from Nepal include Cyprus, Korea, Germany and the United Kingdom. Nepal is the third-largest sender of students to both Australia and Japan http://uis.unesco.org/en/uis-student-flow.

In Nepal, the demand for universities far surpasses the available supply. Remarkably, Nepal's first university was not established until 1986. While today there are twelve universities in Nepal, but many of these are comparatively small and suffer from

inadequate resources, making it difficult to cater to the high volume of students seeking higher education.

Consequently, Nepal's outbound mobility ratio, which measures the proportion of students from a given country pursuing education abroad in relation to the total tertiary enrollment, stands at a significant 21.6%. This figure is substantially 10 times higher than the ratio of China, which is 2.2%, and 15 times more than the ratio of India (1.4%).Nepali students perceive international universities as better equipped to prepare them for the workforce compared to their counterparts in Nepal. This preference stems from the country's elevated youth unemployment rate, which hovers at approximately 19%. Each year, an estimated 400,000 young individuals join the labor force, intensifying the demand for education that enhances employability.

According to NOC (No Objection Certificate) branch of the Ministry of Education, Science and Technology, 110,217 students obtained their no- objection certificate to study abroad. In the fiscal year 2023/24, more than 100000 students departed from Nepal to pursue higher education abroad. A significant number of students chose to study abroad, with a majority, 33,991, obtaining NOCs to study in Australia. However, during the process, 8,452 NOCs were revoked. Similarly, NOCs were issued to 21,544 students for studying in Canada, 21,658 students for studying in Japan, and 10,527 students for studying in the UK. Additionally, 2,389 NOCs were approved for students going to the United Arab Emirates, and 3,046 students were granted NOCs to study in Korea. Overall, students from 111 different countries received NOCs from the Ministry to pursue their studies abroad.

The Human flight and brain drain indicator considers the economic impact of human displacement (for economic or political reasons) and the consequences this may have on a countries' development (Economy, 2023). According to statistics identified by 'the Global Economy of Nepal from 2008 to 2023, the average value for Nepal throughout that period was 6.2 index points, with a minimum of 5.6 index points in 2012 and a maximum of 7 index points in 2015. The most recent figure is 6.1 index points from 2022. In comparison, the global average in 2023, based on 177 nations, is 5.17 index points (Economy, 2022). With the comparison of world average, Nepal discovered that it had a greater rate of brain drain.
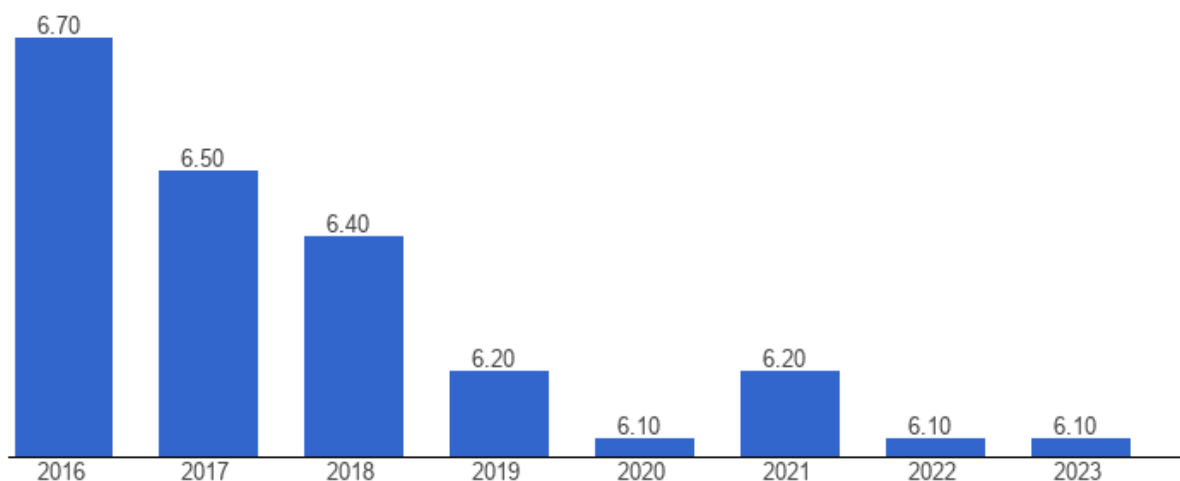
Source:

https://www.theglobaleconomy.com/Nepal/human_flight_brain_drain_index/:/2024/

1.2 Problem statement

In Nepal brain drain is not a new phenomenon Nepal facing this issue since the fall of the communism. The issue of brain drain is one that exists everywhere in the world. The phenomenon of brain drain poses a significant challenge for all societies, as it involves the substantial departure of talented and skilled individuals. Developed nations consistently prioritize the growth and development of their human capital, while developing countries face the predicament of losing their advanced and highly skilled professionals, such as scientists, doctors, and IT experts, to countries with more opportunities. Nepal is no exception to experiencing the negative impacts of this distressing trend. International migration is not a product of modernity in the forms of capitalism and colonialism, nor even of the late 20th century. Since the beginning of human history, there have been migrations. However, since 1950, and especially since the mid-1989s, the number and impact of student migrations have increased. The outlook for the 1990s and the first few years of the new century is that student mobility will probably continue to increase and rank among the major drivers of global change. For further education, students relocate to America, Europe, Oceania, Asia, and Africa. Additionally, emerging countries like Malaysia and Singapore are also becoming hosts for international students. Every year, thousands of Nepalese students travel abroad to further their higher education. According to NOC (No Objection Certificate) of the Ministry of Education, Science and Technology, 110,217 students received their no-objection certificate to study

abroad. In the fiscal year 2023/24, more than 100000 students departed from Nepal to pursue higher education abroad. These statistics indicate that very few foreign students come to Nepal for higher education, leading to a significant outflow of foreign currency to finance education abroad, resulting in an unfavorable trade balance in higher education services. Consequently, the emigration process contributes to Nepal's foreign trade imbalance with other nations, including India (Shrestha 2021).

Migration can be seen as a response to the prevailing socio-economic and political conditions of a nation. It is commonly observed that individuals with creative talents tend to emigrate, which, in the short term, may alleviate unemployment to some degree. However, over time, it makes the issue worse and results in a lack of personnel needed for a country's development initiatives (Gautam, 1999).Due to the lack of official records on returned students, many talented and bright students do not come back to Nepal, contributing to brain drain. It is estimated that only a small percentage of foreign students return home after completing their studies (Goldin & Reinsert, 2007). When a college student migrates, there's a reduced likelihood of them returning to their home nation after graduation. Even if they do return, they are more likely to migrate again (Smith, 2006).

Several academics and research institutions have undertaken several studies on migration. However, the majority of these studies have focused on internal migration, such as from hill areas to the Tarai region, rural to urban migration, and labor movement. But still there has been relatively little research conducted on student migration in Nepal. The initial doctoral dissertation on international student migration in Nepal primarily examined the perpetuation of student migration, with a focus on the push-pull theory. From a sociological perspective, these studies do not depict the beginning of students' movement, the class structure of prospective students, or the discrepancies between the aspirations of future students and the experiences of returning migrants.

The primary motivation for conducting this research is not only the possibility of a large number of migrant students, but also the fact that today's potential migrants will become tomorrow's skilled labor, the rapid increase in student demand for educational restructuring, and the potential impact on the country's foreign trade deficit. Brain drain is a worldwide problem driven by factors such as higher pay, better working conditions, and more rewarding employment. Push and pull factors such as political instability, ethnic and

religious discrimination, and bad governance contribute to brain drain. The phenomenon of brain drain, characterized by the emigration of highly skilled individuals from their home country to seek educational and professional opportunities abroad, poses several challenges to both countries, is a growing concern for Nepal. Among the demographic segments significantly affected by this phenomenon are Nepalese students, who are increasingly opting to pursue their higher education and subsequent careers in foreign countries. This trend has raised critical questions about the underlying factors driving this brain drain among Nepalese students and the resulting implications for the nation's development.

This problem statement highlights the issue of brain drain among Nepalese students, focusing on the factors that lead them to emigrate and the potential consequences on the country's human capital and overall development. The statement calls for an in-depth analysis of the reasons behind the emigration of talented students, its impact on Nepal's skilled workforce, and the challenges it poses for the nation's progress and growth.

This problem statement emphasizes the need to comprehend the issue of brain drain among Nepalese students and its implications on the country. It calls for a comprehensive study that examines the factors driving the emigration of talented students, explores the potential consequences of brain drain on Nepal's education system and workforce, and proposes effective policy interventions to mitigate the negative impacts and retain talent within the country.

Keeping these views into the considerations this study has focused on the following research questions:

    a) What are the factors of brain drain among Nepalese students?

    b) What is the relationship between different influencing factors and brain drain?

    c) What are the factors that influence Nepalese students to pursue higher education abroad?

1.3 Objectives of the study

The overall purpose of this research is to identify the Factors affecting Brain Drain of Nepalese Students. The main objectives of the study are as follows:

    1. To identify the factors of brain drain of Nepalese students.

2. To analyze the relationship among influencing factors of brain drain of Nepalese students.

3. To examine the extent of impact of brain drain factors on Nepalese students pursing higher education in aboard.

1.4 Hypotheses

A hypothesis is a specific and testable statement or prediction that proposes a relationship between two or more variables in a research study. It is a fundamental component of the scientific method and forms the basis for empirical research. Hypotheses are formulated based on existing knowledge, theories, or observations related to the research topic and are used to guide the research process and data analysis. A good hypothesis shows the direction of research and the relationship between variables and helps to find out the solution of the problem (Adhikari & Pandey, 2019).

The research's objectives have been analyzed by formulating the following four hypotheses:

H1: Political stability and governance has a significant impact on the Brain Drain.

H2: Research and development investment has a significant impact on the Brain Drain.

H3: Safety and security has a significant impact on the Brain Drain.

H4: Social network and peer influence has a significant impact on the Brain Drain.

1.5 Rationale of the study

The primary reason for choosing this topic is the researcher's interest. This study aims to enhance knowledge about current trend of Nepalese student migration, which is of significant concern to the country. In Nepalese society, the prevalence of student migration has become a widespread occurrence, with an increasing number of students studying abroad (Shrestha, 2021).

The rationale for studying the factors affecting brain drain among students is to gain a comprehensive understanding of the underlying causes and dynamics that lead to the migration of highly qualified individuals from their home nations to foreign destinations. Brain drain, particularly among students, has significant implications for both the source and destination countries. By identifying the factors contributing to brain drain, policymakers and institutions can develop strategies to retain skilled individuals within

their own country. This can help to bolster the local workforce, promote economic growth, and reduce the loss of valuable human resources. Understanding the factors that influence brain drain allows governments to formulate targeted policies that address the specific issues driving the migration of students. This may involve improving educational opportunities, creating better job prospects, enhancing research and development facilities, and strengthening social support networks. Brain drain can have adverse effects on the economy of the source country. Studying these factors can help estimate the economic losses associated with the emigration of highly educated individuals and highlight the need for policies that mitigate such losses. On the other hand, analyzing the reasons students choose to study abroad can reveal potential opportunities for the home country to attract skilled individuals back through initiatives such as knowledge transfer programs or better working conditions.

Brain drain can result in a depletion of cultural diversity and social capital in the source country. Understanding the factors at play can aid in preserving cultural heritage and promoting social cohesion. By studying factors that attract students to other countries, nations can benchmark their educational and economic policies against those of leading destinations, contributing to the enhancement of their own global competitiveness. Examining factors influencing brain drain can shed light on the weaknesses and shortcomings of the local educational system. This knowledge can lead to reforms that improve the quality and relevance of education, making it more attractive to students. This study will be helpful to provide adequate information related to the situation of brain drain in Nepal. This study will provide guidelines to the planners, and policy makers to make policies, rules and regulations to address the phenomenon of brain drain among Nepalese students. The academic institutions and students who might be interested in conducting related research in the future will benefit from this study. This study will help to know the various factors that affect brain drain of Nepalese students. This study will help to understand the reasons why Nepalese students choose to study abroad and potentially settle there.

Overall, studying the factors affecting brain drain among students enables policymakers, educators, and stakeholders to make informed decisions and implement effective measures that benefit both the source country and the international community. By addressing the root causes, countries can work towards creating an environment that

fosters talent retention and contributes to sustainable development. The paper will analyze the root causes of brain drain and will find that political stability and governance, research and development investment, safety and security, social networks, and peer influence factors will have a huge influence on the issue of brain drain.

1.6 Limitations of the study

Based on the objective of my research, the limitations of the study include:

- The subject of brain drain is influenced by various factors, but due to limitations, this study focuses on specific ones, including political stability and governance, research and development investment, safety and security, social networks, and peer influence.
- Resource constraints due to lack of internationally published research articles and literature in Nepalese context about factors affecting Brain Drain of Nepalese Students.
- Sample size of 290 has been used in collecting primary data may not accurately represent the entire population.
- Primary data are taken through structured questionnaire.
- Reliability and accuracy of data depends on the response of respondents. Some of the respondents were not so responsive.
- Possibility of error in data collection because respondents may have not given actual answer of questionnaire.

CHAPTER II

LITERATURE REVIEW

This chapter provides an in-depth overview of the literature related to brain drain resulting from study abroad and the factors affecting the intent to study and work abroad. It includes conceptual review, theoretical review, empirical review and research gap.

2.1 Conceptual Review

A conceptual review of brain drain involves examining the key concepts, definitions, and components associated with the phenomenon of skilled individuals emigrating from their home countries. It helps provide a foundational understanding of brain drain and its various dimensions. Here's a conceptual review of brain drain:

Brain Drain definition: Brain drain refers to the emigration of highly skilled and educated individuals from one country to another, typically due to better job prospects, higher salaries, improved living conditions, and opportunities for professional growth.

Components:

This definition includes several key elements:

- Highly skilled and educated individuals
- Emigration
- Better opportunities abroad
- Higher salaries

Causes: Brain drain can be caused by several factors, including political instability, lack of economic opportunities, limited access to quality education and healthcare, social network and peer influence, safety and security and the allure of better working conditions and research facilities in more developed countries.

High-Skill Brain Drain: This occurs when professionals with advanced degrees and specialized skills, such as doctors, engineers, and scientists, leave their home countries.

Student Brain Drain: This refers to students who go abroad for higher education and do not return to their home countries after completing their studies.

Technology and Innovation Drain: It involves the loss of innovators, researchers, and technology experts who contribute to scientific advancements in other countries.

Entrepreneurial Brain Drain: This happens when individuals with entrepreneurial ambitions leave their home countries to establish businesses or startups abroad.

Push Factors: These are conditions or circumstances in the home country that compel individuals to leave. According to the Hashish & Ashour (2020), push factors are Economic reasons, Social reasons, Political reasons, and Health system quality and Professional reasons Work-related reason.

Pull Factors: These are attractions in the destination country that draw individuals in. Pull factors may be Social/ family factor, Professional and career development factors, Work environment and job security, Managerial support and Salary and related benefits. According to the Push-Pull theory, pull factors are employment opportunities and better conditions of living, relaxed availability of land to settle therein, political and religious autonomy, better welfare advantage, improved transportation and communication infrastructure, stress-free environment and security-enabled region

Brain Gain: This concept challenges the negative perception of brain drain by suggesting that skilled expatriates can contribute to the development of their home countries through remittances, investments, and knowledge transfer when they return.

Brain Circulation: According to the Laudia Diehl, brain circulation is the cyclical process of studying or acquiring skills abroad and subsequently returning to work in one's home country.

2.2 Theoretical Review

A theoretical review of brain drain encompasses an examination of the various theoretical frameworks and perspectives that help us understand the phenomenon of skilled individuals emigrating from their home countries to seek better opportunities elsewhere. Brain drain is a complex and multifaceted issue with economic, social, and political implications.

The term 'brain drain' was introduced by the British Royal Society to describe about the emigration of scientists and technologists from United Kingdom (UK) to the United States (US) and Canada during the 1950s to 1960s(Gibson & Mckenzie, 2011, p.108). Now it is more typically used to refer to the emigration of a nation's most highly skilled individuals.

According to Beine, Docquier and Rapoport (2008), the term "Brain drain" refers to the global movement of resources in the form of human expertise, primarily involving the migration of individuals with higher education from developing nations to developed ones. Beine et al. concluded that the growing phenomenon of brain drain can be attributed to factors on both the supply and demand sides. On the supply side, as termed by Beine, Docquier, and Rapoport (2008), sending countries are motivated by the globalization of the economy. This globalization has heightened the inclination of human capital to seek better opportunities and mobility, rather than remaining constrained in their home country where economic conditions and opportunities may not be as favorable as in developed nations.

The most widely used theory to know the concept of brain drain is the "push-pull" theory. According to Portes and Borocz (1989), chronic poverty and underdevelopment are the primary causes of skilled people moving from developing nations to developed nations. Advocates of this perspective identify a set of "push factors" – encompassing economic, social, and political challenges in the world's most impoverished regions – and "pull factors" – comprising the advantages offered by more economically advanced nation-states. These factors are typically determined retrospectively, meaning they are compiled after specific migration movements have already begun. The formulation of such lists is typically based on two fundamental assumptions: firstly, the beliefs that the most disadvantaged segments of poorer societies are most likely to engage in labor migration; and secondly, the presumption that these migration flows arise spontaneously due to the existence of global inequalities. Brain drain is often seen as a result of both "push" factors (negative conditions in the home country) and "pull" factors (attractive conditions in the destination country).

The world system theory, which was created by Wallerstein in 1974, looks at how history, society, and economics are connected. It says that history helps us understand why people move from one place to another and how it affects their culture. The theory also talks about how the economic system can be divided into one that takes advantage of others and one that benefits from it. It sees the whole world as a big system of global capitalism, where no single part is more important than the others.

The theory says that a society has rules, groups, and laws that keep it organized. It also talks about how different groups always try to change the system to benefit them. But no one group can be in charge forever because they all depend on each other. They need each other for protection, sharing things, and support.

The theory also says that one group needs many others to work together and create value. This connects to our study because it shows why people move to other countries. They do it for better work conditions, job satisfaction, higher pay, and more. When they move, the country they go to benefits from their skills and experience, and they benefit from better work conditions and pay. It's like a give-and-take relationship between different parts of the world.

Human capital theory posits that individuals invest in education and skills development to increase their future earning potential. When highly skilled individuals emigrate, it represents a loss of human capital for their home country. Brain drain is seen as a significant economic cost for countries losing skilled workers, as the investments made in their education are not fully realized within the country's borders. This theory suggests that individuals migrate in search of better returns on their human capital investments, including education and skills. They move to countries or regions where their skills and expertise are more highly valued and rewarded.

Network theory suggests that the migration of skilled individuals often occurs within established networks of family, friends, and colleagues. These networks can facilitate the movement of talent. Policies that encourage the formation of Diaspora networks can potentially lead to brain gain, where skilled expatriates contribute to the development of their home countries through investments, knowledge transfer, and partnerships.

Brain gain theory challenges the notion that brain drain is exclusively negative. It argues that some level of emigration can lead to a "brain circulation" where skilled individuals return to their home countries with new knowledge and experiences. Brain gain emphasizes the potential benefits of brain circulation and suggests that policies should focus on creating an environment conducive to the return of skilled expatriates.

2.3 Empirical Review

Tansel and Güngör (2003) conducted a research on "Brain Drain" with the aim of investigating the factors influencing nurses' brain drain and measures to alleviate it, as viewed from the perspective of nurses. They used a mixed-methods research design, specifically a concurrent triangulation design. A brain drain questionnaire was administered to a sample of 325 nurses working at an Egyptian university hospital, and a semi-structured interview was conducted with a purposive sampling of 35 nurses to gather exploratory insights into the factors contributing to brain drain and potential strategies for mitigation. The quantitative and qualitative data were analyzed using inferential statistics and thematic data analysis, respectively. Economic and social reasons had the highest mean scores for push factors, while salary and related benefits had the highest mean score for pull factors. They also identified seven themes from the qualitative content analysis, six of which were categorized under 'push-pull' factors, and one theme was identified as 'mitigating factors' with five sub-factors as possible solutions. They found that economic and work environment factors are the primary determinants of nurses' brain drain in Egypt, accounting for approximately 99.6% and 97.5% of the phenomenon, respectively, when considering both push and pull factors. They conclude that economic and work environment reasons are the most influential factors for nurses' brain drain in Egypt. However, there are other factors such as insufficient resources, a deficit in human resources, restricted avenues for skill enhancement and career growth, inadequate technological progress, political challenges, and a negative perception of nursing that also contribute to brain drain. They recommend that policymakers use the identified factors to create a system that would improve nurses' conditions and policies, and prevent brain drain. They also suggest that enhancing the nursing sector's internal support systems by improving working conditions offers a remedy to major issues stemming from nurse shortages and unfavorable conditions. Non-monetary approaches have been proposed as effective means to retain nursing staff. Creating supportive work environments, empowering nurses in decision-making processes, establishing professional nursing governance structures, and implementing ongoing professional development programs are crucial factors to address and alleviate the problem of brain drain in the nursing sector.

Oberoi and Lin (2006) studied on doctors' brain drain from southern Africa and brain gain for Australia. The aim of the study was to understand the primary elements behind

brain drain from the perspective of the migrating doctor, and to consider possible solutions. Primary data were collected from the doctors who have migrated to Australia from southern Africa to explore reasons for brain drain through interview. Qualitative data analysis was used to summarize the data. It was found that push factors play a much greater role than pull factors.

In June 2010, Sahidur Rahaman conducted an open-ended interview, revealing that academics were migrating primarily due to limited research incentives. Unlike U.S. public universities, which allocate a significant portion of their budget to research development, Asian and African countries spend approximately 80% of their budget on personnel and student maintenance costs, leaving minimal resources for research (as reported by the World Bank). This imbalance, coupled with a lack of transparency in the education system and the prevalence of nepotism over meritocracy in Bangladesh, discourages students from returning. Furthermore, universities in developed countries offer more attractive remuneration packages, resulting in a higher standard of living for academics. Conversely, public universities in Bangladesh provide lower pay and less appealing compensation packages. The influence of political parties in the decision-making processes of the education system further dissuades students from pursuing their studies in their home country. Four primary reasons for not returning of the migrants are i) secured life abroad (48%), ii) better career and economic opportunities (28%) , iii) children's future(12%) and healthcare availability (12%). In terms of priorities for returning, respondents listed the following: a) Making a substantial and meaningful contribution to their homeland (40%), b) Reconnecting with parents (24%), c) Ensuring their children's cultural orientation (20%), d) Enhancing their career prospects (12%) and e) Improving their social life (4%). It is noteworthy that the majority of those who do return view it as a temporary arrangement, with plans to go back to developed countries as soon as they secure job opportunities there.

Tahir et al (2011) conducted a research on Brain Drain of doctors. The main objective of the study was to examine the root causes and impact of doctors' brain drain from Pakistan, this study focused on primary data gathered from Mayo Hospital in Lahore. One hundred doctors were interviewed using a systematic random sampling method to gain comprehensive insights into this phenomenon who were emigrating towards developed countries for professional adjustments. The study revealed that a combination of socio-

economic and political factors acted as both push and pull forces driving doctors' brain drain in Pakistan. A significant majority of doctors (83%) cited inadequate salaries and a lack of professional resources in the healthcare sector as primary push factors. Additionally, 81 % attributed their decision to emigrate to the persistent political instability and ongoing threats of terrorism. Additionally, 84% of the respondents identified limited opportunities for advanced studies as a key factor leading to their emigration. The brain drain of doctors was found to significantly affect policies and programs in the healthcare sector, standardized doctor-patient ratios, and the quality of healthcare services in Pakistan. They concluded that the emigration of doctors from Pakistan was linked to poor quality of health services and hindered the implementation of development programs in the health sector, especially in rural areas. The main causes of brain drain were identified as low salary packages, lack of extra financial incentives, political interference in recruitment and promotion processes, security risks from terrorism, limited educational opportunities, absence of research culture, and poor working conditions in the health care sector. They recommended improving existing salary packages, offering financial incentives to doctors with foreign higher qualifications, providing extra financial incentives for doctors working beyond their scheduled duty hours, providing protection to doctors from job insecurity and social security, providing additional allowances and leave to doctors working in rural areas, implementing meritorious recruitment and promotion policies, and providing equal opportunities for advanced medical education within the country and abroad with paid leave.

Lawan & Wana (2013) conducted a study on the factors contributing to brain drain in developing nations. The research aimed to analyze the factors influencing skilled workers' migration to favored destinations. The study utilized cross-sectional data from 102 developing countries to investigate the determinants of skilled workers' migration rates (brain drain) from developing nations to developed nations. The authors used both conceptual discussion and an analytical approach to identify factors that influenced skilled migration to preferred locations among skilled workers. They specified an econometric model that included variables such as wage differentials, population size, public expenditure in education, political stability, government effectiveness, and distance to destination countries. The model was expressed in logarithm. They concluded that attractive salaries in developed countries attracted skilled migration from developing

countries. However, the relationship between skilled migration rates and wage differentials was inverted U-shaped, which meant that as the income disparity between developed and developing countries narrowed, the incentive to migrate reduced, and skilled migration fell. Additionally, their research revealed that the population size of migrants' home countries and the distance to destination countries negatively affected skilled migration, while political instability in the country of origin had a positive impact on such migration. They suggested that emigration policies to retain local professionals, particularly in developing countries, would work effectively if they were designed toward improving local structures. Improvements in factors such as relative wage disparities, political instability, and lack of research facilities in migrants' source countries would effectively discourage skilled migration and attract locally trained experts from abroad. Political instability at the origin had a favorable effect on skilled migration, but an inverted U-shaped link between skilled migration rates and pay differentials, population size in migrants' source countries, and distance to destination countries had a negative effect.

Phuyel (2013) conducted a study on "Doctor's Brain Drain in Nepal". He explores the extent and distribution of the medical exodus from Nepal, attempts to identify the root causes, outlines some of the consequences, and offers workable solutions from the standpoint of the national government. These include adopting a national policy stance on the production of doctors that is either market-oriented or domestic and starting bilateral talks with the United States and the United Kingdom based on international standards of practice for hiring foreign medical professionals in order to create a win-win situation for sending and receiving nations. He examined the secondary data that was accessible using descriptive and qualitative analytical techniques. He discovered that the number of doctors leaving the country has been steadily rising recently, accounting for 9% of the overall stock in 2004; Among the 20 obtaining nations, the USA is the most common recipient nation, followed by the UK. The primary cause of this biased pattern of emigration appears to be the presence of specialist focused selective immigration policies in the USA and UK as pull factors. Despite the significant emigration of doctors, there appears to be no negative impact on health care outcomes; in fact, there has been a recent stagnation in the density of doctors and a significant loss in educational investment. Major solutions that have been proposed include adopting a national policy position regarding doctors' production, either domestically or internationally market-oriented, and

starting bilateral negotiations with the USA and UK based on international codes of practice in hiring foreign doctors.

Bashir et al (2014) conducted a study titled "Key Factors Determining the Rationale for Brain Drain: An Irony Never Recovered". The main objective of the study was to identify the key factors that lead to brain drain from Pakistan. The research utilized a survey administered to students from two general line universities, fifteen medical colleges, and ten engineering universities in the Khyber Pakhtoonkhawa (KPK) province of Pakistan. The sample selection process employed a purposive sampling technique. The data were collected using a close-ended questionnaire. Exploratory factor analysis and principal component analysis, with varimax rotation for validity on students' responses using SPSS version 19. Additionally, the study analyzed the impact of various variables on the students' emigration decisions through a forward stepwise logistic model. The findings of the study indicated that foreign education systems acted as a significant attraction for Pakistani students, underscoring the need for Pakistan to take substantial measures to enhance its education system and curb student migration. The study had found that male students had been more likely to migrate abroad than female students, and the odds of being motivated for emigration had decreased with an increase in the education system's quality and age. The study had also found that female students had been less inclined to emigrate from Pakistan due to social and religious restrictions. A primary incentive for students to study in foreign country has been the perceived quality gap between a foreign degree and a domestic degree.

Gunawardhana and Jayalath (2016) conducted a research on Factors Affecting Brain Drain of Sri Lankan Engineers. To determine the factors influencing the brain drain of engineers who graduated between 2006 and 2016, focusing on 3 areas, holding, leaving and returning factors under endogenous and exogenous sub categorization was the objective of the study. Population size of the study were 12,332 engineers graduated from Sri Lankan government universities from 2006 to 2016 (University Grants Commission - Sri Lanka, 2015). The research was conducted in two parts: part 1 (pilot survey) and part 2(online survey).Among 12332 engineers, a sample of 264 engineers were selected through simple random sampling techniques with a confidence level of 90% and margin of error of 5%. The study encompassed a population size of 12,332 engineers who graduated from Sri Lankan government universities between 2006 and 2016, as reported

by the University Grants Commission of Sri Lanka in 2015. This study consisted of two sections: section 1(pilot survey) and section 2(online survey). From total population of 12,332 engineers, 264 engineers was chosen as sample size using random sampling techniques, ensuring a confidence level of 90% and a margin of error of 5%. It found that 49% of the participants were currently engaged in the migration process. Moreover, within the results, a total of 47 factors were identified across three primary categories that influence migration decisions. In the category of reasons for choosing to stay (holding factors), exogenous factors were found to have a stronger influence compared to endogenous factors. Conversely, for the category of reasons for choosing to leave (leaving factors), endogenous factors were found to exert a greater influence than exogenous factors. Finally, in the category of reasons for choosing to return (returning factors), exogenous factors were observed to comprehensively dominate over endogenous factors.

Thapa and Shrestha (2017) conducted research on the factors influencing brain drain among Nepalese nurses. The objective of the study was to identify push factors and pull factors of brain drain among the Nepalese nurses. The study used a descriptive cross-sectional study design and collected data from 228 Nepalese nurses who were working in five different countries in 2016 by using quota sampling technique. The study had used a descriptive cross-sectional study design and had collected data from 228 Nepalese nurses who were working in five different countries in 2016. They gathered the data using a self-administered questionnaire that consisted of a structured four-point Likert scale. The collected data was analyzed using descriptive and inferential statistics in SPSS version 16.They concluded that Nepalese nurses were forced to migrate abroad due to various factors such as personal ambition, political conflict, low salary, lack of job and career opportunities, and unsatisfactory working environments. The major motivating factors for Nepalese nurses to migrate abroad were better job and career opportunities, future security of family, better working conditions, and higher salary. They found that personal ambition was the most important push factor, while better job and career opportunities were the most important pull factor. It was found that a significant portion of the brain-drained nurses considered personal ambition (72.8%) as a very important push factor, while better job and career opportunities (77.2%) were regarded as the most critical pull factor. On the other hand, the majority of nurses still working in Nepal ranked the lack of job and career opportunities (86.0%) as a very important push factor, while better job and

career opportunities (85.1%) remained the most important pull factor. The study established a significant association between all the identified push and pull factors and the phenomenon of brain drain. She suggested that there would always be a shortage of skilled nurses in Nepal if the government policies could not address these factors. This study was one of the first efforts to identify push and pull factors of brain drain among Nepalese nurses.

Upadhyay (2017) conducted a research on brain drain of Nepalese students. The major objective of this study was to examine the reasons behind and the consequences of brain drain among Nepalese students. Descriptive and analytical research designs were used. Both primary and secondary data were used for the fulfillment of the research's objective. Primary data was collected through structured questionnaire from 250 students and secondary data was collected from various websites and published reports. It was found that Brain drain is a serious problem in Nepal which creates both a positive effect and a negative effect directly or indirectly in the economic development of the country.

Chowdhury (2018) conducted a research on factors affecting student migration from Bangladesh. The paper aimed to explore the push-pull factors behind student migration from Bangladesh. An online survey was conducted to gauge students' intentions regarding graduation and their plans to return or not return to Bangladesh after completing their education. Respondents from local and international universities participated in the survey. Quantitative analysis, including the Pearson Chi-Square test, was utilized to determine the association between migration decisions and socio-economic factors driving migration. The main contributors to brain drain were identified as the lack of research centers, limited programs, and job opportunities. Binomial logit regression was employed to investigate other potential factors (such as gender, educational background, and household income) influencing migration decisions. The paper also proposed certain policies aimed at improving the retention of human resources. In summary, this paper offers an analysis of student migration behavior and suggests strategic policies to mitigate brain drain.

Raji et al (2018), studied at the impact of brain Drain on the economic development of growing countries: evidence from selected African Countries. This research focused on exploring the causes, consequences, and implications of brain drain on the economic

progress of Africa, specifically concentrating on Ethiopia, Kenya, and Nigeria. Secondary data were gathered from the World Bank's databank economic indicators. Dynamic ordinary least squares models were utilized to analyze the effect of brain drain on economic growth of selected African countries. The study revealed a negative correlation was found between brain drain and economic growth. Conversely, a positive correlation was found between human capital development and economic growth in Ethiopia, Kenya, and Nigeria.

Laila and Fiaz (2018) studied at the effect of brain drain on financial growth in Pakistan. This study has reviewed the effects of unemployment, political instability and remittances on the outflow of brain drain phenomenon from Pakistan. To examine the impact of brain drain on economic growth in Pakistan, Johanson co-integration technique was adopted. Secondary data for the time period 1980-2013 were collected from World development indicators (WDI) and Bureau of emigration and overseas employment and polity IV. It was found that all independent variables consisting political instability (PI), unemployment (UNM) and remittance (REM) shave positive and long run relationship with brain drain phenomenon.

Muaremi (2019) studied about the factors influencing brain drain in North Macedonia. The objectives of the study were to give a broad outline of the brain drain issue and highlight the primary 'pull and push' factors contributing to brain drain. The paper used a combination of secondary and primary data sources to analyze the brain drain problem in North Macedonia. Secondary data was collected from various literature sources such as books, reports, articles, scientific and popular journals, reports from international news agencies, websites, magazines, and official government publications and statistical data. Primary data was collected through a questionnaire distributed on social media; with 1026 people responding. The data analysis was conducted using basic statistical features and graphic representation on the platform. The questionnaire included Likert scale statements to assess respondents' opinions on various aspects related to brain drain, such as career prospects and job opportunities, educational offerings, political landscape and other related factors. It found that factors that contribute to brain drain in North Macedonia include corruption, living standards, job opportunities, political instability, limited travel opportunities, environmental conditions, and healthcare standards.

Silwal (2019) examined the brain drain scenario in the context of Nepal and explores the most common causes and impacts on the sending economy. She aimed to examine the factors that lead the experts to leave the country & to analyze the purpose of this study. By surveying 160 respondents, included skilled professionals such as staff nurse, doctors, engineers, managers, or MBA/BBA graduates, who were currently living abroad; she investigated the correlation between brain drain and its impact on the sending economy, specifically focusing on Nepal. She used both primary and secondary sources of data collection. For primary data, a quantitative approach with a descriptive cross-sectional study was conducted in Nepal. A self-administered questionnaire was used for data collection, which She followed a descriptive, co-relational, and causal comparative research design to analyze its purpose. She found that individuals left the country primarily for education, employment, and skill development purposes. However, what made them settle abroad was employment and skills, as both factors had a significant impact on the sending economy at a 5 percent level of significance. As people received better job offers, they started working abroad, and when they realized their skills were being enhanced, their likelihood of settling in a foreign land increased. This study indicated that as long as they experienced personal growth in the form of improved job opportunities and enhanced skills, they did not plan to return.

Mainali (2019) conducted a research on Brain Drain and Higher Education in Nepal. He examined the causes and effects of brain drain in Nepal's higher education system. He used a semi- structured interviews method to gather data from fourteen respondents. The data analysis revealed that the three main reasons for brain drain in Nepal had been the lack of work/education opportunities, political instability, and less competitive wages. Poor quality education, improper working environment, corruption, nepotism, and favoritism in the job recruiting process were identified as other factors contributing to brain drain. He concluded that brain drain had more negative effects than positive effects on Nepalese higher education. He suggested that it had been in the best interest of the country to formulate public policies and offer more attractive professional opportunities for educating individuals within the country.

Ghulamet al, (2019) studied on factors influencing Brain Drain of Citizens of Azad Jammu Kashmir Pakistan. This paper investigates the influence of human capital migration on the social sector of Azad Jammu & Kashmir. The study's population

comprised individuals from Azad Jammu & Kashmir who had migrated abroad after completing their matriculation education in Pakistan. The researchers employed purposive sampling to select participants from the Mirpur Division of AJ&K. Judgmental sampling techniques were utilized during the data collection process. A total of 300 individuals were invited to fill the questionnaire, and data were collected from 225 participants. To enhance the study's robustness, the authors employed a combination of primary and secondary sources for data collection. They also utilized regression and correlation statistics to explore the relationship between predictor and outcome variables. The study identified several factors responsible for brain drain and recommends policies to retain human capital. To analyze the research objective researcher used seven independent variables: Economic Factors, Social Factors, Job Opportunity, Political Factors, Educational System, Pure Science Factors and Technological Factors and one dependent variable that was Brain Drain. They found that economic factors, social factors, job opportunity factors, political factors, education system, pure science factors, and technological factors have a significant impact on the phenomenon of brain drain.

Hashish and Ashour (2020) conducted a research on brain drain of Egyptian nurses. The objective of the study was to explore the factors influencing nurses' brain drain and potential mitigating strategies from the perspective of nurses in Egypt. They used a mixed-methods research design, specifically a concurrent triangulation design. A brain drain questionnaire was administered to a sample of 325 nurses working at an Egyptian university hospital, and a semi-structured interview was conducted with a purposive sample of 35 nurses to elicit exploratory perspectives on factors causing brain drain and mitigation strategies. The quantitative and qualitative data were analyzed using inferential statistics and thematic data analysis, respectively. They found that economic and work environment factors are the primary determinants of nurses' brain drain in Egypt, accounting for approximately 99.6% and 97.5% of the phenomenon, respectively, when considering both push and pull factors. Economic and social reasons had the highest mean scores for push factors, while salary and related benefits had the highest mean score for pull factors. They also identified seven themes from the qualitative content analysis, six of which were categorized under 'push-pull' factors, and one theme was identified as 'mitigating factors' with five sub-factors as possible solutions. They conclude that economic and work environment reasons are the most influential factors for nurses' brain drain in Egypt. However, there are other factors such as insufficient resources, a deficit in

human resources, restricted avenues for skill enhancement and career growth, inadequate technological progress, political challenges, and a negative perception of nursing that also contribute to brain drain.

IRUO (2021) investigated perceived determinants of brain drain among mental health care professionals in specialist health care facilities in Benin City. The objective of the study were to identify the association between condition of service and the intention of mental health care professionals; mental health care professional development and the intention of mental health care personnel and availability of mental health care technology and the intentions of mental health care workers in Benin to emigrate. Cross sectional predictive research design was used. 299 mental health care professional was selected through purposive sampling technique. Data were collected through questionnaire. The data was analyzed using percentages, frequencies and Chi-Square statistics. It was found that there were significant relationship between condition of service and migration intention professional development and migration intention, foreign technology and migration intentions.

Shrestha, (2021) studied on Perception of Students towards foreign Studies. The aims of the study were to investigate the factors causing students to migrate abroad for studies and to understand students' perceptions. She used both qualitative and quantitative approaches of data collection and utilized both primary and secondary sources of data. Structured questionnaire were used to gather quantitative primary data. The questionnaire was distributed to the respondents and collected three days later. On the other hand, the secondary sources of data were collected from published and unpublished materials, published books, journals, reports, mimeographs, documents, unpublished articles, reports, books, thesis and information from Google Scholar (internet). Case study method was used to generate qualitative data. She found that the students exhibited a strong desire to migrate for studying in a foreign country, with earning opportunities and learning prospects.

Akinwale and George (2022), studied about Personnel brain-drain syndrome and quality healthcare delivery among public healthcare workforce in Nigeria. The objective of the study was to investigate the reasons for the brain drain phenomenon among medical workers and its impact on the quality of healthcare delivery in Nigeria's public healthcare

sector. Diagnostic research design was used. Primary data were collected from 450 public healthcare sector employees from four government hospitals. The researchers employed Structural Equation Model (SEM) and Artificial Neural Networks (ANNs) to analyze data gathered from medical personnel working in government hospitals. Poor quality work life, job dissatisfaction, poor remuneration and pay served as deterrents for Nigerian professionals and allied healthcare workers, hindering their productivity and driving them towards the global job market.

Nadir et al (2022) conducted a research on perceptions of medical students regarding brain drain and its effects on Pakistan's socio-medical conditions. The objective of the study was to identify the causes of migration and their impact on healthcare systems, along with potential solutions. 420 undergraduate medical students were selected as a sample size through non- probability sampling method from two different medical colleges of 2021-2022 academic year. The primary data was collected through structured questionnaire. The collected data were analyzed through SPSS software. It was found that out of 420 medical students, 140 (33.3%) students plan to departure from Pakistan after completion of study, while 280 (66.66%) students want to continue their career in Pakistan. Due to insufficient resources and inadequate management in Pakistan, one out of every three medical students intends to seek opportunities abroad following their graduation.

Metin (2023) studied on Brain Drain from Türkiye. The objective of the study was to analyze the brain drain from Türkiye through administrative register evidence of non-return bachelor's degree graduates. The population size of the study was 1,730,955 non-return bachelor's degree graduates and sample size was 55,918 out of total graduates. Descriptive statistics was used. It was found the brain drain rate for bachelor's degree graduates in Türkiye was 3.23% in 2020. The primary destinations for this brain drain were the United States of America (22.4%), Germany (14.3%), and the United Kingdom (11.6%). Regarding gender distribution, males exhibited a brain drain rate of 3.62%, while females had a rate of 2.84%. Importantly, the results revealed that between 2011 and 2020, the brain drain rate for bachelor's degree graduates increased by over 50%.

Table 1

Summary of literature review

Source	Objective	Methodology	Findings
Tansel &Güngör (2003)	To examine the factors influencing nurses' brain drain and mitigating factors	Mixed-methods research design, concurrent triangulation design,	Economic and work environment factors are the primary determinants of nurses' brain drain in Egypt, accounting for approximately 99.6% and 97.5% of the phenomenon, respectively, when considering both push and pull factors.
Oberoi & Lin (2006)	To understand the key factors behind brain drain from the perspective of the migrating doctor and to consider possible solutions.	Thematic and Qualitative data analysis	Push factors (poor remuneration & wages, lack of job satisfaction, lack of further education and career development etc.) play a much greater role than pull factors (better quality of life, better remuneration & wages, career development etc.)
Tahir et al (2011)	To emphasize the reasons behind and the impacts of doctors' brain drain from Pakistan.	Descriptive and analytical research design and used simple random sampling	Socio-economic and political factors act as push and pull forces for doctors' brain drain in Pakistan. This brain drain significantly impacts health sector policies, programs, doctor-patient ratios, and the overall quality of healthcare services in the country.
Lawan &Wana (2013),	To investigate the factors that influence skilled workers' migration to their	Descriptive and analytical research design and used secondary data only	Political instability at the origin had a favorable effect on skilled migration, but an inverted U-shaped link between skilled migration rates and pay differentials, population

			size in migrants' source countries, and distance to destination countries had a negative effect.
Phuyel (2013)	To investigate the intensity and dissemination of doctor's brain drain, specific causes, highlight consequences and suggest practical solutions to address the issue of doctors' brain drain	Descriptive and qualitative analytical methods	Considerable upward trend in doctor's emigration in recent years, with 9% of doctors leaving the workforce overall in 2004 and almost 50% of IoM graduates leaving between 2003 and 2004.
Bashir et al (2014)	To identify the key factors that lead to brain drain from Pakistan	Exploratory factor analysis along with principal component analysis, with varimax rotation as criteria for validity to the responses of students with the help of SPSS 19 version	Male students had been more likely to migrate abroad than female students and female students had been less inclined to emigrate from Pakistan due to social and religious restrictions. One of the main motivations for students to go abroad had been the quality differential between a foreign degree and a domestic degree.
Gunawardhana&Jayalath (2016)	To determine the factors influencing the brain drain of engineers who graduated	Qualitative data analysis techniques, Online survey and pilot survey and simple random	Factors influencing brain drain among Sri Lankan engineers, including holding, leaving, and returning factors. Exogenous factors played a primary role in staying, while endogenous factors

	between 2006 and 2016, focusing on 3 areas, holding, leaving and returning factors under endogenous and exogenous sub categorization.	sampling	were prominent in leaving, exogenous factors overwhelmingly influenced the decision to return.
Thapa & Shresth a (2017)	To identify push and pull factors of brain drain among the Nepalese nurses	Descriptive cross-sectional study design and used Inferential statistics	Nepalese nurses are forced to migrate abroad due to various factors such as personal ambition, political conflict, low salary, lack of job and career opportunities, and unsatisfactory working environments.
Upadh yay (2017)	To examine the reasons behind and the consequences of brain drain among Nepalese students.	Descriptive and analytical research designs	Brain drain poses a significant challenge in Nepal, impacting the country's economic development both positively and negatively, either directly or indirectly.
Chowd hury, F. (2018)	To identify the push and pull factors driving student migration from Bangladesh.	Quantitative analysis like Pearson Chi-Square test has been used	The primary contributors to brain drain are the lack of research centers, limited program offerings, and job opportunities.
Raji et al (2018),	To examine the causes, effects, and implications of brain drain on the economic	Dynamic ordinary least squares models	Negative relationship between brain drain, remittance, and economic growth but positive correlation between human capital development and economic growth

	development of Africa		in Ethiopia, Kenya, and Nigeria.
Laila &Fiaz (2018)	To examine the impact of brain drain on economic growth in Pakistan.	Johanson co-integration technique	All independent variables consisting political instability unemployment and remittance shave positive and long run relationship with brain drain phenomenon.
Silwal (2019)	To examine the factors that lead the experts to leave the country & to analyze the purpose of this study	Descriptive, Co-relational and Causal comparative research design	Individuals left the country primarily for education, employment, and skill development purposes.
Mainali (2019)	To examine the causes and effects of brain drain in Nepal's higher education system	Semi- structured interviews method to gather data from fourteen respondents	The primary causes of brain drain in Nepal are the lack of work or education opportunities, political instability, and comparatively lower wages.
Ghula met al, (2019)	To assess the influence of human capital migration on the social sector of Azad Jammu & Kashmir.	Descriptive Research Design and used Regression and Correlation tools	Economic factors, social factors, job opportunity factors, political factors, education system, pure science factors, and technological factors have a significant impact on the phenomenon of brain drain.
Muaremi (2019)	To give a broad outline of the brain drain issue and highlight the primary 'pull and	Qualitative and qualitative research design, deductive research approach	Factors that contribute to brain drain in North Macedonia include corruption, living standards, job opportunities, political instability, and lack of travel opportunities,

	push' factors contributing to brain drain.		environment, and health.
Hashish and Ashour (2020)	To explore the factors influencing nurses' brain drain and potential mitigating strategies from the perspective of nurses	Mixed-methods research design, concurrent triangulation design	Economic and work environment factors are the primary determinants of nurses' brain drain in Egypt, accounting for approximately 99.6% and 97.5% of the phenomenon, respectively, when considering both push and pull factors.
IRUO (2021)	To investigate the links between service conditions, professional development, availability of technology & the emigration intentions of mental health care professionals	Cross sectional predictive research design; purposive sampling technique; percentages; frequencies and Chi-Square statistics	There was significant relationship between condition of service and migration intention professional development and migration intention, foreign technology and migration intentions.
Shrestha, (2021)	To investigate the factors causing students to migrate abroad for studies and to understand students' perceptions	qualitative and quantitative approaches and case study method	Students exhibited a strong desire to migrate for studying in a foreign country, with earning opportunities and learning prospects.
Akinw	To investigate the	Diagnostic	Poor quality work life, job

ale and George (2022)	reasons for the brain drain phenomenon among medical workers and its impact on the quality of healthcare delivery in Nigeria's public healthcare sector	research design, Structural equation model (SEM) and artificial neural networks (ANNs)	dissatisfaction, insufficient remuneration and pay have discouraged Nigerian professionals and allied healthcare workers from being productive and ultimately pushed towards the global market.
Nadir et al (2022)	To identify the causes of migration and their impact on healthcare systems, along with potential solutions.	Non- probability sampling method; cross sectional	Due to insufficient resources and inadequate management in Pakistan, one out of every three medical students intends to seek opportunities abroad following their graduation.
Metin (2023)	To analyze the brain drain from Türkiye through administrative register evidence of non-return bachelor's degree graduates.	Descriptive statistics	Brain drain rate for bachelor's degree graduates in Türkiye was 3.23% in 2020.

2.4 Research Gap

Research is a never ending process. It is the process of finding out something new again and again. From the above literature review we can conclude that there are various studies on the topic of Brain Drain in different parts of the world. Various studies have been carried out related to the Brain Drain in Nepal. However, there is still lack of research in the field of factors affecting brain drain of Nepalese students. Few studies have analyzed the factors affecting brain drain but there is a need for comprehensive studies that can provide a clear picture of the factors affecting of brain drain of Nepalese students. Existing studies have explored the reasons behind the brain drain from Nepal, but more in-depth research is required to gain a deeper understanding of the motivations of skilled professionals and their decision-making processes. Factors such as economic opportunities, political instability, and social factors should be investigated. Research should explore the factors that attract Nepalese students to specific countries. Many studies on brain drain do not adequately address such area. Addressing such research gap will provide a more comprehensive understanding of the brain drain phenomenon in Nepal and inform policies and strategies to manage and potentially reverse the loss of skilled human capital. Understanding the scale and patterns of emigration of skilled Nepalese workers is crucial for policy planning.

CHAPTER III

RESEARCH METHODOLOGY

Research methodology is the specific procedures or a technique which is used to identify select, process and analyze information about a topic. It is a systematic way to scientifically solve the research problem. In it, we examine the various steps that are generally used by a researcher to analyze his/her research problem. It allows the reader to critically evaluate the overall reliability and validity of a study. This chapter examines the study design, initial investigation, and processes and shows the logical justification for selecting the appropriate methodologies and methods of statistical analysis that were applied in a systematic manner to achieve the research's objectives.

3.1 Research design

A detail plan that is prepared to search the answer of the research problem is known as research design. Research design should be selected based on research objectives, nature of research and availability of resources. Different research designs are used to search the answer of the different research questions (Adhikari & Pandey, 2019).Among them, descriptive and causal comparative research design has been used to analyze the objectives of this study.

3.2 Population and sample, and sampling design,

Population refers to all observations or units that are exist under the scope of the investigation (Adhikari & Pandey, 2019).The population, as defined by De Vos et al. (2005) and Burns and Grove (2003), is all of the participants that a researcher intends to include in the study. Here, total number of Nepalese students who are in search of aboard study has taken as a population of the study. Since the number of such students are unknown hence 290 students were selected using convenience sampling from different colleges and aboard study centers located in Kathmandu valley.

3.3 Nature and sources of data, and the instrument of data collection

Both primary and secondary data are used to meet the specific objective of the study. There are various types of primary data sources such as interview, questionnaire and observation. Among them the primary data are collected through structured

questionnaires and secondary data are collected from published and unpublished materials, including books, journals, reports, mimeographs, documents, unpublished articles, reports, books, thesis, UNESCO report and information from Google Scholar (internet).

The required primary data are collected with the help of a structured questionnaire based on a 5- point likert scale ranging from 1- strongly disagree to 5- strongly agree. The 5-point likert scales are as follow:

1- Strongly Disagree

2- Disagree

3- Neutral

4- Agree

5- Strongly Agree

50 opinion statements were set to measure 5 different variables among them 4 are independent variables and 1 is dependent variable. 32 distinct opinion questions were used to explain independent variables namely "Political Stability and Governance", "Research and Development Investment", "Safety and Security", and " Social Network and Peer Influence". Brain drain is dependent variable which is described by 18 quiet different opinion statements.

3.4 Methods of Analysis

According to Wikipedia, "data analysis is a process of gathering, arranging, classifying, modeling and transforming data with the goal of highlighting useful information, suggestions, conclusions and supporting decision making". After the collection of data, an analysis of the data and the interpretation of the results are necessary because data collected from various sources might be in raw form. So, they cannot be used directly. According to the nature of the data and the requirement of the study, the collected data are arranged in a systematic manner, categorized and tabulated in the appropriate format and analyzed using SPSS program. Demographic analysis, descriptive analysis, correlation, regression analysis and impact analysis tools are used to analyze the data to draw the conclusion. Descriptive statistical tools like mean, standard deviation and frequency and Pearson correlation coefficient analysis, Analysis of Variance are used to analyze the collected data.

3.5. Research framework and definition of variables

Research framework is a conceptual model that shows the relationship among various components that have been determined to be crucial to the research issue. It shows the relationship between dependent, independent, moderating and intervening variables. Such relationships of variables are developed on the basis of literature.
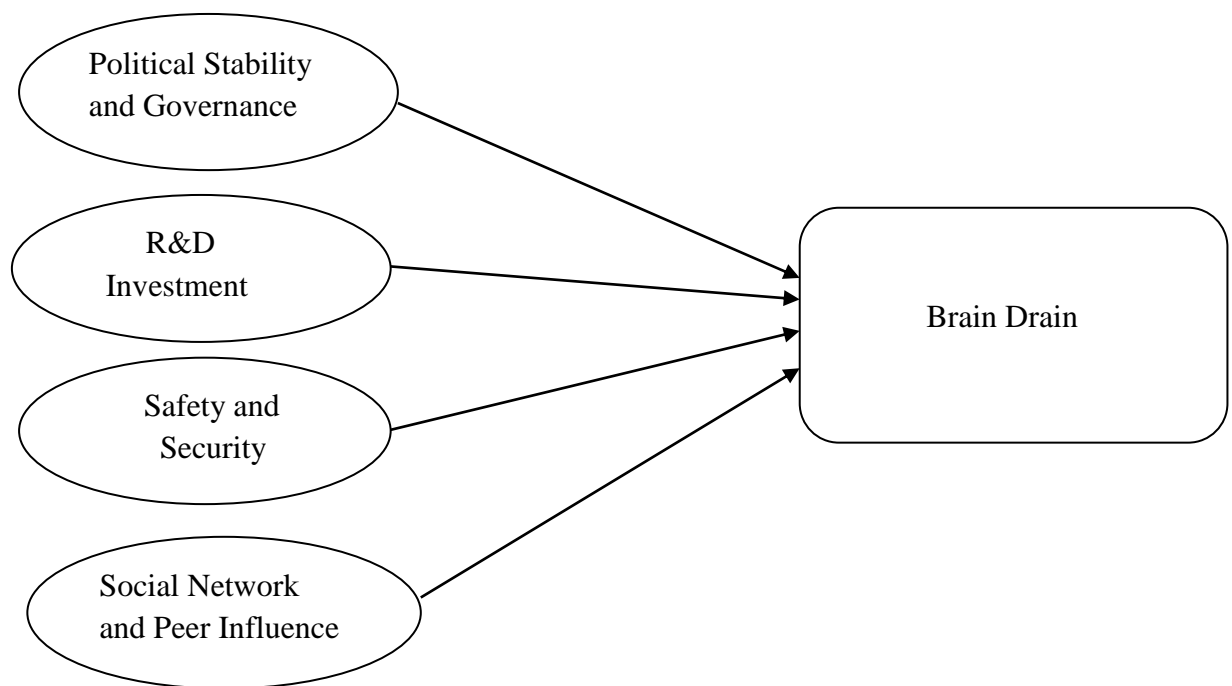
Figure 3.1 Research Framework

Sources: Beine et al. (2001); Tina (2015); Ghulam et al (2019)

This study consist four independent variables; Political Stability and Governance, Research and Development Investment, Safety and Security and Social Network and Peer Influence. Meanwhile, it has one dependent variable which is brain drain. This conceptual framework illustrated by in previous study Beine et al. (2001); Tina (2015); Ghulam et al (2019).

A variable that influences the dependent variable positively or negatively with the change on it is known as independent variable. Independent variables remain unchanged due to change in other variables but change in independent variable changes to dependent variables. In this research there are seven independent variables: Political Stability and Governance, Research and Development Investment, Safety and Security and Social Network and Peer Influence.

Political stability and Governance

Political stability refers to the consistent and peaceful environment in which a government operates. Governance refers to the processes and structures through which authority is exercised, decisions are made, and actions are taken to manage and regulate a society, organization, or country. Political stability and effective governance can influence brain drain both positively and negatively. A stable and well-governed country has a higher likelihood of retaining its talent and attracting skilled individuals from abroad. On the other hand, countries facing political instability and weak governance may experience significant brain drain as skilled professionals seek better opportunities in more stable and prosperous nations. Therefore, investing in political stability, good governance, and initiatives to retain and attract talent are essential for countries to address brain drain effectively.

Research and development investment

Investment in research and development has a significant impact on brain drain. When a country allocates resources and invests in R&D, it creates opportunities for innovation, scientific advancements, and technological breakthroughs which help to attract and retain skilled professionals within the country. However, inadequate R&D investment or limited opportunities for research and innovation may encourage skilled individuals to seek better prospects abroad, leading to brain drain and potential economic and developmental challenges.

Safety and Security

Safety and security play a significant role in the context of brain drain. In many cases, concerns over safety and security in a country can contribute to departure of highly qualified people abroad. When individuals perceive their nation of origin as unsafe due to factors such as political instability, conflict, crime rates or lack of personal safety, they may seek opportunities abroad. So there is strong relationship between safety and security and brain drain.

Social network and peer influence

In the past, research has explored the relationship between social networks, peer influence, and brain drain in the context of higher education. It revealed that social media served as a powerful medium for disseminating information about opportunities abroad,

making it easier for prospective emigrants to connect with peers already residing in foreign destinations. The strong connections individuals have with peers and the influence of social media play pivotal roles in shaping their migration decisions, leading to potential talent loss and negative impacts on the country's development. Understanding these dynamics is crucial in formulating effective policies to mitigate brain drain and harness the potential of skilled graduates for Nepal's overall growth.

Brain Drain

Brain drain refers to the emigration or outflow of highly skilled, educated, and talented individuals from one country or region to another, often to seek better opportunities, higher salaries, or improved living conditions. This phenomenon typically involves professionals such as scientists, researchers, engineers, doctors, and academics relocating to countries or regions that offer more favorable conditions for career advancement, personal development, or quality of life. Brain drain can have significant implications for the country or region experiencing the loss, including reduced innovation and productivity, diminished capacity for economic growth and development, and challenges in addressing workforce shortages in critical sectors such as healthcare, education, and technology.

CHAPTER –IV

RESULT AND DISCUSSION

This chapter aims to analyze and discuss the various factors driving brain drain in Nepalese students. By examining these factors, the chapter seeks to provide insights into the root causes of brain drain among Nepalese students.

4.1. Result

Result refers to the findings obtained from data analysis. It aims to provide a comprehensive analysis of the factors contributing to brain drain among Nepalese Students. The results section begins by presenting demographic analyses, including the distribution of students by gender, age group, education level, religion, and current status of Nepalese students and other various analyses can be presented with the help of following tables.

4.1.1. Demographic Analysis

Demographic analysis involves the examination and interpretation of demographic data to understand the characteristics, distribution, and dynamics of populations. It typically includes studying factors such as age, gender, ethnicity, education, income, marital status, and household composition within a given population or geographic area.

Table 2

Distribution of Students by Gender

	Frequency	Percent
Male	122	42.1
Female	168	57.9
Total	290	100

Gender refers to the social, cultural and psychological attributes and roles associated with being male or female. The categorization of the respondents based on gender is displayed in the table 2 It shows that out of 290 respondents, 122 are male (42.1%) and 168 are female (57.9%).

Table 3

Distribution of Students by Age Group

	Frequency	Percent
Below -20 years	106	36.6
20-30 years	156	53.8
30-40 years	24	8.3
More than 40 years	4	1.4
Total	290	100.0

The table 3 presents the distribution of respondents based on different age groups, offering valuable insights into the demographic composition of the study participants. The age groups are categorized as "Below-20 years", "20-30 years", "30-40 years", and "More than 40 years". It shows that the most of the respondents are between the ages of 20-30 years (53.8%), indicating a predominant participation of young adults in the study. Similarly, with 36.6% below the age of 20 years, 8.3% from the age group of 30-40 years and 1.4% aged more than 40 years Nepalese students are involved in this study.

Table 4

Distribution of students by Education Level

Education Level	Frequency	Percent
Intermediate	62	21.4
Bachelor	160	55.2
Master	64	22.1
PhD	4	1.4
Total	290	100.0

The table 4 presents a comprehensive overview of the education distribution in a sample categorizing students into different educational levels. The majority of respondents, constituting 55.2% hold a Bachelor's degree, reflecting a significant representation of undergraduate education out of 290 students. Additionally, 21.4% have an Intermediate education level, while 22.1% possess a Master's degree, indicating a diverse educational background within the surveyed group. A smaller proportion, 1.4%, holds a PhD degree.

This information is valuable for understanding the educational diversity of the study population, which may influence research outcomes and interpretation.

Table 5

Distribution of Students by Religion

	Frequency	Percent
Hindu	218	75.2
Buddhist	41	14.1
Other	31	10.7
Total	290	100.0

The table 5 presents the distribution of students based on their religious affiliations. Out of 290 students, the majority of students, comprising 75.2% (218 students), declared their affiliation with Hinduism, 14.1% (41 students) indentified as Buddhist and rest 10.7% (31 students) belonged to other religious affiliations. It shows that the comprehensive representation of religious diversity within the surveyed population.

Table 6

Current Status of Respondents

	Frequency	Percent
Student only	149	51.4
Student having part time job	101	34.8
Student having full time job	40	13.8
Total	290	100.0

The table 6 presents the current status of respondents, categorizing respondents based on their students and employment status. Among the respondents, 51.4% (149 students) are exclusively students, 34.8% (101 students) are students with part-time jobs, and 13.8% (40 students) are students with full- time employment. It shows that majority of the respondents are student only.

4.1.2. Descriptive Statistics Analysis

Descriptive statistics analysis involves summarizing and describing the main features of a dataset. It aims to provide a clear and concise overview of the data by using numerical measures and graphical representations. Descriptive statistics commonly include measures such as central tendency (e.g., mean, median, mode), variability (e.g., standard deviation, variance, range), and distribution (e.g., frequency distributions, histograms).

Table 7

Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Pol_Stb_Gov	290	5.17	25.83	20.3086	2.68682
Res_Dev_Invest	290	7.13	35.63	29.5319	4.11150
Saf_Sec	290	13.38	35.63	25.9134	4.00469
Soc_Net_Peer	290	10.13	35.63	27.0345	4.45337
Brain_Drain	290	31.07	70.33	57.3301	8.84815
Valid N (listwise)	290				

The table 7 presents descriptive statistics, including the number of observations (N), minimum and maximum values, mean, and standard deviation for each variable. The variables include "Pol_Stb_Gov", "Res_Dev_Invest", "Saf_Sec", "Soc_Net_Peer" and "Brain Drain". For each variable, the table provides information on the minimum and maximum, values, mean, and standard deviation. In detail, the variable "Pol_Stb_Gov" is based on 290 respondents, ranging from 5.17 to 25.83, with a mean of 20.3086 and a standard deviation of 2.68682. "Res_Dev_Invest" has values ranging from 7.13 to 35.63, with a mean of 29.5319 and a standard deviation of 4.11150, based on 290 respondents. "Saf_Sec" has values ranging from 13.38 to 35.63, with a mean of 25.9134 and a standard deviation of 4.00469, based on 290 respondents. For "Soc_Net_Peer", the values from 10.13 to 35.63, with a mean of 27.0345 and a standard deviation of 4.45337. Lastly, "brain drain" has values ranging from 31.07 to 70.33, with a mean of 57.3301 and a standard deviation of 8.84815, based on 290 respondents. The "Valid N (listwise)" row indicates the total numbers of valid cases with complete data for all variables.

4.1.3. Relationship Analysis

Relationship analysis refers to the examination of associations or connections between variables. This analysis involves exploring the strength and direction of relationships among different factors or variables to understand how they influence each other. In this study, correlations among key factors influencing brain drain among Nepalese students are explored using Pearson correlation coefficient.

Table 8

Correlations

		Pol_Stb_ Gov	Res_Dev_I nvest	Saf_Se c	Soc_Net _Peer	Brain_Drai n
Pol_Stb_Gov	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	290				
Res_Dev_In vest	Pearson Correlation	.634**	1			
	Sig. (2-tailed)	.000				
	N	290	290			
Saf_Sec	Pearson Correlation	.291**	.381**	1		
	Sig. (2-tailed)	.000	.000			
	N	290	290	290		
Soc_Net_Pee r	Pearson Correlation	.229**	.337**	.600**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	290	290	290	290	
Brain_Drain	Pearson Correlation	.199**	.599**	.590**	.553**	1
	Sig. (2-tailed)	.001	.000	.000	.000	
	N	290	290	290	290	290

**. Correlation is significant at the 0.01 level (2-tailed).

The table 8 presents the significant relationships among various variables. Pearson correlation measures the linear relationship between two variables. It ranges from -1 to 1, where -1 indicates a perfect positive linear relationship, 1 indicates a perfect positive linear relationship, and 0 indicates no linear relationship. Sig. (2-tailed) represents the p-value associated with each correlation coefficient and N refers to the total sample size of the study.

Positive and statistically significant Pearson correlations is observed between Political Stability and Government (Pol_Stb_Gov) and Research and Development (Res_ Dev_Invest) (r=.634, p<0.01) indicating a strong positive association. Additionally, moderate positive correlations are observed with Safety and Security (Saf_Sec) (r=.291, p<0.01), Social Network and Peer Influence (Soc_Net_Peer) (r=.299, p<0.01) and Brain Drain (r=.199, p<0.01).Research and Development (Res_ Dev_Invest) shows moderate positive correlations with Safety and Security (Saf_Sec) (r=.381, p<0.01) and Social Network and Peer Influence (Soc_Net_Peer) (r=.337, p<0.01) and shows strong positive correlations with Brain Drain Drain (r=.599, p<0.01).Additionally, significant positive correlations are found between Safety and Security (Saf_Sec) and both Socio- Network and Peer Influence (Soc_Net_Peer) (r=.600, p<.01) and Brain Drain (r=.590, p<.01). It shows that the complex interdependencies among political stability & governance, research and development, safety and security, social network and peer influence and brain drain.

4.1.4. Impact Analysis

Impact analysis is a process used to evaluate the effects or consequences of a particular action, event, policy, or project. It involves assessing how changes in one aspect of a system or environment may affect other related elements.

Table 9
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.784[a]	.615	.610	5.52903	.615	113.781	4	285	.000	1.592

a. Dependent Variable: Brain_Drain

The table 9 presents the regression model. According to Henseler et al. (2009), elaborated R- Square that how much variation caused by independent variable to dependent variable, as evidenced from the table approximately 61.5 percent of the variation in dependent variable of BD (Brain Drain) was explained by independent variables, Pol_Stb_Gov(Political Stability and Government), Res_Dev_Invest (Research and Development Investment), Saf_Sec (Safety and Security) and Soc_Net_Peer (Social Network and Peer Influence). Adjusted R Square is the improved version of the R-Square. The standard error of the estimate is 5.52903, reflecting the average deviation between observed and predicted values. The change statistics indicate that the overall model is statistically significant, with an F-value of 113.781 and a corresponding p-value of 0.000.The Durbin-Watson statistic typically ranges from 0 to 4 (Durbin and Watson, 1951). According to this, value around 2 suggests no autocorrelation, values significantly less than 2 indicate positive autocorrelation, and values significantly greater than 2 indicate negative autocorrelation. In the above table, Durbin-Watson statistic is 1.592 which is less than 2 and shows positive autocorrelation in the residuals.

Table 10
ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13913.252	4	3478.313	113.781	.000[b]
	Residual	8712.496	285	30.570		
	Total	22625.748	289			

a. Dependent Variable: Brain_Drain
b. Predictors: (Constant), Soc_Net_Peer, Pol_Stb_Gov, Saf_Sec, Res_Dev_Invest

The table 10 presents the analysis of variance (ANOVA) which shows the regression model reveals significant overall model performance. The table is divided into two main components: Regression and Residual. The regression shows the sum of squares attributed to the model, which is 13913.252, with 4 degrees of freedom (df). The mean square, calculated by dividing the sum of squares by its degrees of freedom, is 3478.313. The F-statistic, computed as the ratio of the mean square for regression to the mean square for residuals, is 113.781, with a corresponding p-value 0.000, indicating that the regression model is statistically significant. The residual section shows the sum of squares for the residuals (8712.496) and the associated degrees of freedom (285). Overall, the table shows a well-fitted regression model with a significant relationship between the predictor variables and the response variable.

Table 11
Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	10.212	3.021		3.380	.001
Pol_Stb_Gov	-1.100	.157	-.334	-7.011	.000
Res_Dev_Invest	1.317	.107	.612	12.308	.000
Saf_Sec	.689	.105	.312	6.583	.000
Soc_Net_Peer	.470	.092	.236	5.091	.000

a. Dependent Variable: Brain_Drain
b. Predictors: (Constant), Soc_Net_Peer, Pol_Stb_Gov, Saf_Sec, Res_Dev_Invest

The table 11 presents the regression model's coefficients which reveal the relationship between the dependent variable, Brain_Drain, and the independent variables. The constant term is 10.212, with a t-value of 3.380 and a significance level of .001. Among the independent variables Pol_Stb_Gov has negative unstandardized coefficients of -1.100, with unstandardized coefficients (Beta) of -0.334, a t-value of -7.011, and a highly significant p-value of .000. Res_Dev_Invest shows positive unstandardized coefficients of 1.317, a Beta of 0.612, a t-value of 12.308 and a significant p-value of .000. Saf_Sec and Soc_Net_Peer also have positive coefficients (0.689 and 0.470, respectively) and p-values of 0.000, indicating their strong impact on Brain-Drain.

4.2. Discussion

Over the past few decades, the unemployment rate in Nepal has been raising dramatically. Each year, thousands of college and university graduates join the workforce in search of employment opportunities. However there exists a considerable gap between the number of job seekers and the actual available job openings in the market. Similar to the findings reported by Acharya (2013), this study also corroborated that lack of job opportunities in Nepal promoted to the brain drain. The causes of student brain drain can differ from one country to another due to distinct political conditions, geographical circumstances, and social and cultural contexts in each nation. Therefore, it may not be methodologically or scientifically appropriate to compare and contrast the causes and effects of brain drain between countries.

From the analysis and evaluation, it was found that political stability & governance, research and development, safety and security, social network and peer influence has a significant impact on the brain drain which is similar to the previous studies in Azad Jammu & Kashmir of Pakistan. A study conducted by Ghulam et al, (2019) presented that brain drain is a phenomenon significantly influenced by factors such as employment opportunities, politics, education, pure science and technology. Similarly, findings from previous research conducted in African and Asian nations align with my research results. According to a research by Likeupe (2013), there are five primary reasons why people migrate: low pay, a lack of opportunities for professional growth in one's own country, inadequate healthcare and a weak system, and the ease with which employment are available in industrialized nations. According to Okafor and Chimereze (2020), there are two main reasons why Nigerian nurses migrate to developed countries: pull factors (like favorable condition of works and higher remuneration) that are provided by the developed countries, and push factors (like low pay, unfavorable governmental directives, and inadequate condition of works).

CHAPTER V

SUMMARY AND CONCLUSION

This chapter provides a summary and conclusion of entire study. It aims to give readers a quick overview of the entire study, including its objectives, methodology, major findings and conclusions.

5.1 Summary

The study conducted on the factors influencing brain drain among Nepalese students provides a comprehensive overview of the complex dynamics driving skilled individual to emigrate from Nepal. According to this study, brain drain is a phenomenon which occurs when highly qualified individuals emigrate from their home nations in search of better economic and living conditions, which may include higher revenues, access to modern technology, and more stable political environments. It is a global phenomenon. In the initial phase of this study, the statement of problems were identified, and in order to address these issues, objectives were set, research questions were formulated, and hypotheses were developed. Rational of the study and limitations of the study were also discussed. The major purposes of this study are to study about the causes of brain drain of Nepalese students, to identify the various influencing factors of brain drain of Nepalese students and to know the relationship between various influencing factors and brain drain. Both primary and secondary data were used to meet such specific objectives of the study. Data were collected through primary and secondary sources. The primary data were collected through structured questionnaires and secondary data were collected from published and unpublished materials, including books, journals, reports, mimeographs, documents, unpublished articles, reports, books, thesis, UNESCO report and information from Google Scholar (internet). The result and discussion chapter of this research project provides a detailed analysis of the factors contributing to brain drain among Nepalese students.

Different demographic Analysis, descriptive statistics Analysis, relationship Analysis and impact Analysis tools were used to get the result of this study. Demographic analysis revealed the diverse composition of Nepalese students susceptible to brain drain,

highlighting variations in gender, age, educational level, religious affiliation and employment status. Descriptive statistics analysis provided insights into variables such as Political Stability and Governance, Research and Development Investment, Safety and Security, Social Network and Peer Influence, and Brain Drain. These statistics included mean, standard deviation, minimum, and maximum values for each variable. The conclusion underscores the importance of political stability, research and development investment, safety and security, social networks, and brain drain interconnection, highlighting the need for governments to prioritize stability to foster economic and social development, invest in research and development for innovation and economic growth, ensure safety and security to promote social cohesion, strengthen social networks to mitigate brain drain, and implement comprehensive strategies to address brain drain effectively. Impact Analysis, through regression modeling, revealed that a substantial portion of brain drain variation could be explained by factors such as Political Stability and Governance, Research and Development Investment, Safety and Security, Social Network and Peer Influence.

5.2 Conclusion

Brain drain is a global issue that arises when individuals seek out the most rewarding jobs, better compensation, better working conditions, and greater advancement opportunities. In conclusion, this study on the factors affecting brain drain among Nepalese students sheds light on the multifaceted dynamics influencing the migration of talent students from Nepal to other countries. The findings highlight the significant role of economic opportunities, educational systems, political stability and governance, research and development investment, infrastructure and quality of life, safety and security as well as social networks and peer influence in shaping students decisions regarding brain drain. It is evident that addressing brain drain requires a holistic approach encompassing policy interventions to improve economic conditions, enhance educational systems, ensure political stability and transparency, increase research and development investment, develop infrastructure, enhance safety and security measures and address social and peer influences. By understanding and addressing these interconnected factors, Nepal can work towards retaining its skilled human capital and fostering sustainable development in the country.

The conclusion highlights the interconnectedness between political stability, research and development investment, safety and security, social networks, and brain drain. A stable political environment positively influences economic and social development, emphasizing the need for governments to prioritize stability for growth and addressing brain drain. Investing in research and development fosters innovation and knowledge creation, supporting economic growth and mitigating brain drain concerns. Ensuring safety and security contributes to social cohesion and reduces emigration due to security issues, reinforcing the importance of public safety measures. Strengthening social networks can help mitigate brain drain by providing support systems and opportunities for collaboration. Overall, addressing brain drain requires holistic strategies that address various factors, including political stability, research investment, safety enhancement, and social network promotion.

5.3 Implications

Brain drain in Nepal is exacerbated by the widening gap between job seekers and available employment opportunities, echoing findings from previous studies. The causes of brain drain vary across countries due to distinct political, geographical, and socio-cultural factors, making direct comparisons challenging. Factors such as political stability, research and development, safety and security, and social networks significantly influence brain drain in Nepal, aligning with research conducted in other regions. Pull factors such as favorable working conditions and higher salaries in developed countries, along with push factors like low pay and unfavorable governmental policies, drive migration among skilled professionals in Nepal, similar to patterns observed in other countries. Comprehensive policies and strategies are needed to address brain drain in Nepal, focusing on enhancing political stability, investing in research and development, ensuring safety and security, and strengthening social networks to retain skilled professionals and foster economic development domestically.

Policymakers should prioritize the formulation of policies aimed at promoting political stability, increasing investment in research and development, improving safety and security measures, and fostering social networks to mitigate brain drain and foster economic and social development. It is imperative for governments and organizations to allocate resources to initiatives supporting research and development activities, enhancing

safety measures, and facilitating community-building efforts to strengthen social networks and reduce brain drain. Collaboration with international partners can provide valuable insights and resources for addressing brain drain, while community engagement initiatives can empower individuals and promote social cohesion. Ultimately, addressing the underlying factors contributing to brain drain requires long-term planning and sustained efforts encompassing economic, social, and political dimensions to foster sustainable development.

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Appendix

Questionnaire for academic research

Dear Respondent,

I am Dewa Gharti Magar, student of MBS (Master of Business Studies) from Shankar Dev Campus affiliated to Tribhuvan University. In partial fulfillment of the requirement for the degree of Master's of business studies, I am conducting this research on "Factors Affecting brain drain of Nepalese Students". For this purpose, I would like to request to you to give some of your valuable time in answering following questions. I am very pleased to have you as a respondent. Your contribution will be really appreciated and I assure you that all your information will be kept confidential and used for academic research purpose only.

Thank You!

1) Please fill up the following questions by using the symbol (√).

Demographic Profile of Respondents

1. Gender:
   a) Male ☐   b) Female ☐

2. Age Group:
   a) Below -20 years ☐   c) 30-40 years ☐
   b) 20-30 years ☐   d) More than 40 years ☐

3. Educational background
   a) Intermediate ☐   c) Master ☐
   b) Bachelor ☐   d) PhD ☐

4. Religion
   a) Hindu ☐   b) Buddhist ☐   c) Other ☐

5. Province
   a) Koshi Province ☐   e) Madhesh Province ☐
   b) Bagmati province ☐   f) Gandaki province ☐
   c) Lumbini Province ☐   g) Karnali Province ☐

d) Sudurpashchim Province ☐

6. University

a) Nepalese University ☐   b) Foreign University   ☐

7. Current Status

a) Student only   ☐

b) Student having part time job   ☐

c) Student having full time job   ☐

8. Country of Residence

a) Nepal   ☐   b) Abroad   ☐

2) Please carefully read each statement and then marking (√) your right response to each of the following statements to indicate how you feel about it, which reflects your level of agreement or disagreement with it. Here, 1 for strongly agree, 2 for agree, 3 for neutral, 4 for disagree and 5 for strongly disagree.

Political stability and governance (Magar, 2022) and added item 5 and 6 in Nepalese

S. No.	Political Stability and Governance	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
1.	Political instability and high level of corruption in my country has contributed to brain drain.	1	2	3	4	5
2.	Brain drain is a consequence of corruption and the lack of transparency in government institutions.	1	2	3	4	5
3.	Effective governance practices in my country play a significant role in reducing brain drain.	1	2	3	4	5
4.	Political stability in developed countries attracts global talent and skilled immigrants.(.688)	1	2	3	4	5
5.	After graduation, a politically stable country offers better employment opportunities for students.	1	2	3	4	5
6.	Political stable country provides safety and security for international students which increased brain drain.	1	2	3	4	5

7.	The developed country has a transparent and effective governance system that supports the educational aspiration and professional growth of students from underdeveloped countries.(.692)	1	2	3	4	5
8.	There is less level of corruption and not any political uncertainty in abroad which attracts international students.	1	2	3	4	5

S. No.	Research and development investment (.818)	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
1.	To prevent brain drain, current level of Research and Development is not sufficient in my country to tackle brain drain.	1	2	3	4	5
2.	Investment in Research and Development plays a significant role in reducing brain drain.	1	2	3	4	5
3.	Increased Research and Development investment helps to attract and retain highly talented students in my country.	1	2	3	4	5
4.	Adequate investment in Research and Development promotes innovation and creativity, which helps to reduce brain drain.	1	2	3	4	5
5.	Governments should allocate huge amount of fund in Research and Development for addressing brain drain.	1	2	3	4	5
6.	Increased investment in Research and Development can help to reduce brain drain by offering better career opportunities and research prospects.	1	2	3	4	5
7.	Strong relationship between increased investment in research and development and reduction in brain drain.	1	2	3	4	5

8.	Developing countries allocate sufficient financial resources for R & D activities which play a significant role in attracting students to pursue higher education.	1	2	3	4	5

S. No.	Safety and Security(.726)	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
1.	I feel safe and secure in my home country.	1	2	3	4	5
2.	Lack of personal safety and security in my home country contribute to brain drain.	1	2	3	4	5
3.	Life is more beautiful and secured in abroad.	1	2	3	4	5
4.	The perception of safety and security in my home country strongly influences my decision to stay or leave.	1	2	3	4	5
5.	The presence of corruption and lack of accountability in my home country has affected my perception of safety and contributed to brain drain considerations.	1	2	3	4	5
6.	The high level of crime and violence in my home country has contributed to me to seek safe and secure career in abroad.	1	2	3	4	5
7.	The lack of personal safety and security in my home country contributes to brain drain.	1	2	3	4	5
8.	The educational institutions security measures effectively ensure the safety and security of students in abroad.	1	2	3	4	5

S. No.	Social network and peer influence(.843)	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
1.	Social networks play a significant role in influencing individuals to migrate to other countries for better career opportunities	1	2	3	4	5
2.	Social networks have influenced my perception of brain drain as an attractive option for better opportunities.	1	2	3	4	5
3.	The success stories shared on social networks about brain drain have motivated me to pursue study or opportunities abroad.	1	2	3	4	5
4.	My friends and peers consider studying or pursuing opportunities in abroad as a desirable option.	1	2	3	4	5
5.	Peers who migrate to other countries for better opportunities influence my desire to pursue opportunities abroad.	1	2	3	4	5
6.	Discussions and interactions with peers who are currently studying or working in abroad have influenced my decision to consider brain drain as an option.	1	2	3	4	5
7.	Peers who have migrated influence my perception of brain drain as a desirable choice.	1	2	3	4	5
8.	Peer influence within social networks can shape people's perceptions and motivations regarding brain drain.	1	2	3	4	5

S. No.	Brain Drain (.907)	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree
1.	Brain drain is significant issue and problem in my country.	1	2	3	4	5
2.	Brain drain has a significant negative impact on the development of my home country.	1	2	3	4	5
3.	Brain drain has a negative impact on the economic growth and whole economy of the home country.	1	2	3	4	5
4.	Brain drain leads to lose of skilled human capital in my country.	1	2	3	4	5
5.	Brain drain leads to reduced economic growth, limited innovative capacities and lack of skilled manpower.	1	2	3	4	5
6.	Brain drain is primarily driven by better educational and career opportunities and higher living standards in other countries.	1	2	3	4	5
7.	The major causes of brain drain are political instability, poor quality of life, and limited access to health care and economic opportunities.	1	2	3	4	5
8.	Brain drain can contribute to a "brain gain" for the destination countries, as they gain highly skilled manpower.	1	2	3	4	5
9.	Brain drain impedes innovation and technological growth in my home country.	1	2	3	4	5
10.	Brain drain has a negative impact on the innovation, creativity and technological advancement in my country.	1	2	3	4	5
11.	Social network and peer influence play a significant role in decision of students to pursue brain drain.	1	2	3	4	5
12.	Brain drain can lead to increased remittances, which contribute to economic growth and development of home country.	1	2	3	4	5
13.	Brain drain can lead to reverse brain drain, where skilled individuals return to their home countries after gaining experience and expertise	1	2	3	4	5

	abroad.					
14.	Brain drain can have positive economic impacts on both the countries of origin and the receiving countries.	1	2	3	4	5
15.	Brain drain has a positive impact on exchange of knowledge, skills and culture and promotes diversity.	1	2	3	4	5
16.	Brain drain has a significant impact on the quality of education and research in my country.	1	2	3	4	5
17.	The government should invest sufficient amount in research and development to retain intelligent students in my country.	1	2	3	4	5
18.	The government should formulate and implement plan and policies and initiative to reduce brain drain.	1	2	3	4	5