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Brain-Drain: Challenges and Opportunities in Nepal

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Abstract

Brain drain, also referred to as brain gain, represents a global phenomenon and is a highly debated topic in today's world. It exerts adverse effects on developing countries, while yielding beneficial outcomes in developed nations. This article relies on secondary data sources, which have been collected from various published documents, and employs dependency and world system theory, particularly focusing on the unequal core–periphery dynamics. The discussion traces back to the Paleolithic era, elaborating on the out-of-Africa hypothesis, with significant occurrences noted between 1960 and 1970 AD. The primary focus of this article is the dual impacts of brain drain in Nepal. Annually, over seven hundred thousand individuals leave Nepal, with a significantly lower number of brains gain in comparison to the earlier trends. Factors such as inadequate infrastructure, insufficient quality education, limited job opportunities, poverty, corruption, and political instability have led to the migration of a majority of human resources from Nepal, resulting in detrimental effects on the social, economic, and cultural sectors in the country.

***Key words**: Brain-gain, remittances, human capital, technology, dependency theory.*

Introduction

The term "brain drain" describes the movement of highly educated and skilled individuals, including scientists, doctors, engineers, professors, and various professionals, from one region or country to another in search of better opportunities, higher salaries, or standard living conditions (Nepal Database Writer, 2023). This phenomenon signifies the migration of individuals who utilize their intellectual capabilities. Similarly, Young (2025) mentions in Investopedia that brain drain is an unofficial term for the loss of human resources that occurs when talented individuals relocate from one country, sector, or organization to another in pursuit of better opportunities, which may lead to a reduction of human capital in their original locations. This phenomenon resembles capital flight and is often referred to as "human capital flight." Brain drain particularly refers to the emigration of highly skilled individuals from developing nations, primarily to North America (Glavan, 2008). Highly qualified individuals are generally those who have attained higher education, typically corresponding to a university degree in most countries. In some cases, students are also considered as skilled migrants, as they represent a potential source of human capital for the country they depart from (Freitas, Levatino, & Pécoud, 2012:1).

The migration of intellectuals, recognized as a unique social group, has historically been associated with global knowledge exchange, the generation of new ideas, and creative activities. Generally, brain drain occurs when individuals who study abroad and complete their education choose not to return to their home country or when those educated locally leave their native land to seek better job prospects or higher wages (Faini, 2003, cited in Pokharel, Pandey, & Dahal, 2024). It represents a worldwide trend and a contemporary aspect of international migration. In the era of postmodernism, multiculturalism, and a burgeoning cosmopolitan outlook (Goldin et al., 2012), there has been an increase in brain drain from developing countries to developed ones (Gupte and Jadhav, 2014). Currently, the concept of reverse brain drains, or brain

gain, has also emerged as a new approach for both developing and developed nations (Sahay, 2014), which plays a significant role in causing societies to lose some of their most intelligent individuals to other countries (Roudgar, 2014). This article examines the ideas and trends associated with brain drain worldwide and specifically in Nepal, drawing on secondary data sources. It also briefly investigates the reasons, challenges, and potential benefits of brain drain within the Nepali context.

Methods and Data Source

A significant amount of research exists on various dimensions of migration. King and Ruiz□Gelices (2002) advocate for methodological strategies in migration research that incorporate both macro and micro perspectives to acknowledge the dual nature of migration. In relation to this objective, the analytical approach is applied in this article. The study utilized quantitative data, which has been collected from secondary sources such as the National Statistics Office (NSO), the Department of Labour, the Ministry of Labour, Employment and Social Security, the World Bank, the Asian Development Bank, various individual research reports, dissertations, newspapers, and other pertinent documents.

Theory of Brain Drain

Generally, brain drain represents a recent trend in migration. The researcher Ravenstein initially articulated a theoretical framework for migration through his 'Laws of Migration' (Ravenstein, 1885). The concept of brain drain has been discussed through various ways; like demographic imbalances, geography, and political contexts. According to Ravenstein (1889), the main determinants of migration include technology, migration itself, and the prevalence of economic motivations. The change theory, often referred to as the push-pull hypothesis and commonly utilized by economists, was developed by Kurt Lewin in 1947. It posits that two types of factors affect a situation: forces (push factors) and supports (pull factors), which propel and regulate the journey toward an objective (Roudgar, 2014).

Most theories have emerged from the global political economy system. Although migration occurs due to unemployment and promotes growth in the informal sector, this pattern is considered economically rational and utility-maximizing within the framework of the Harris–Todaro model (Todaro, 1969). It has also been explored from socio-cultural viewpoints. Migration as a social phenomenon is defined more as the 'hypothesis of mobility transition,' a notion first introduced by Zelinsky (Zelinsky, 1971). The migration systems theory, developed by Nigerian geographer Akin Mabogunje (1970), represents a significant effort to integrate both endogenous and contextual feedback in migration systems (Mabogunje, 1970), alongside Immanuel Wallerstein's world-systems theory from the 1970s and 1980s (Wallerstein, 2004). An additional migration theory is the theory of reasoned action proposed by Fishbein and Ajzen in 1975. This theory posits that individuals assess their social surroundings as either fulfilling or disappointing, influencing their decision to remain or move. Furthermore, the theory elaborates on the intention to behave driven by two elements: human attitudes and the subjective norms we perceive (Roudgar, 2014). It is also used to explain the brain drain phenomenon.

Brain drain is a consequence of the capitalist global economy. Frank (1980) noted that the concept of brain drain illustrates the unequal power dynamics of dependency between wealthier developed nations and poorer developing ones. Similar to Wallerstein's (1974) world-systems theory, brain drain is seen as a result of the capitalist structure that generates prosperity for some nations while perpetuating underdevelopment in others through various forms of labor control, state mechanisms, and political power distribution (Rizvi, 2005). Wallerstein (1974) categorized the world into three groups: Core, semi-periphery, and periphery, whereas Frank (1980) identified only two categories: the Core and the Periphery. The Core, or center, comprises developed nations, while the Periphery includes developing countries that are dependent on the Core, creating an unequal trade, technology, and investment relationship. The central

premise of international dependence theory posits that underdeveloped nations are ensnared in a dependent and dominant relationship with wealthy countries (Onwuka, 2011). Nepal, as a peripheral nation, relies on the core for its economy, technology, manufactured goods, and even job opportunities. This dependence results from the exploitative character of global capitalism, trapping skilled human resources in a neo-liberal capitalist framework.

History: Brain-drain to Brain gain

Brain drain is not a new phenomenon and has been documented for centuries in different parts of the world. It was as the talented individuals migrate to countries that better appreciate and reward their skill sets. The smaller and underdeveloped countries with poverty-driven populations tend to have fewer local opportunities for education and advancement. Some typical countries to experience brain drain include Africa, Central America, the Caribbean, Korea, the Philippines, Iran, India, Nepal, etc. (Brain Drain Countries, 2025). Although it is a common phenomenon in the world, the proportion of foreign-born people in rich countries has tripled since 1960, and the emigration of high-skilled people from poor countries has accelerated (Docquier, 2014) in the same period.

Mostly, the brain drain phenomenon started after the Second World War, when colonial rule ended and nations gained independence. In the early 1960s, most skilled persons migrated from the South to Western countries. In 1963, the term brain drain was introduced by the British Royal Society. According to the Society, the scientists and technologists migrated from the United Kingdom (UK) to North America and Canada (Cervantes & Guellec, 2002). In the 1970s, the discussion about the negative impact of brain drain arose. Mostly believed that the less developed countries were the losers of this phenomenon because they lack highly educated people to develop their countries (https://repository.umy.ac.id).

In the 1990s, the negative paradigm of brain drain shifted, and people started to think about the other way. The benefits of sending skilled migrants to the developed countries from the developing countries. In fact, there are circular migrations and the advantages for the sending countries. That provides the positive outcome on education, transfer of technology, capitalist value system, modernization, and skill training prospects of the population in the sending countries as well, and the recognized role of diasporas in the economy and political development in home countries (Freitas, Levatino, & Pécoud, 2012). According to the IMF (International Monetary Fund), in UNDP (2011:124), remittances are largely the sum of money that is sent from migrant workers to their family or friends in their origin countries. From this change of paradigm, the dominated notion of 'brain drain' has been changed to 'brain gain'. The notion of the changing paradigm created an impact on societies and countries. Every individual can play an active role in changing the social structures by improving their living conditions. Now, it is thought that migration of skilled people has no longer become a big problem. Besides, it can also be counted as the 'solution' that gives an advantage for the sending countries, the receiving countries, and individuals (Freitas, Levatino, & Pécoud, 2012).

Since 2005, there has been a considerable amount of public debates and policy discussions about the emigration of skilled workers from developing nations to more developed ones. This kinds of debates became particularly heated in 2002, when an article in The Economist examined the phenomenon of "brain drain," questioned that whether developing countries benefit or suffer when "their most talented individuals move overseas." This issue sparked a wide range of reader feedback, which was both diverse and fervent (Rizvi, 2005). Researchers like Hunger (2002) suggest that the brain gain hypothesis predicts a long-term positive impact on third-world countries from the return process of elite migrants from the First World. This new hypothesis attempts to explain how such resource losses ("brain drain") for developing countries

can be converted into long-term resource gains ("brain gain"). It has the following two reasons:

1. Third World elites who migrate to developed countries can play an important role in the development process of their countries, and it is highly relevant for them to contribute to their countries' development process.

2. Even if the migrant elites of developing countries have been living abroad for a long time and have no contact with their country of birth, they should be encouraged to migrate to their country of birth (Hunger, 2002). For this, developing countries should create laws and regulations that attract them.

Marxist thinkers believed that brain gain was a feature of the capitalist world system, aiming to gather global resources and human talent for the exploitation of less developed nations. Other researchers have also critiqued the brain drain concept for its lack of a global viewpoint, arguing that it presumes individuals remain loyal to a single nation-state. This critique is relevant to our understanding of skilled migration, including ideas of brain gain and brain circulation. Kurokawa and Kusakabe identified three groups of individuals inclined to return to their homeland: the “plan to return home” group (P-group), the “contributing from abroad” group (C-group), and the “willing to emigrate” group (W-group). They noted that the W-group embodies negative brain drain; while they lack a definitive return plan, they possess a positive inclination towards contributing to their home country and are mainly driven by personal investment. Thus, the ongoing discussion of brain drain versus brain gain reflects its historical context.

Brain-Drain: A Global Phenomenon

Brain drain is a worldwide issue. Throughout history, people have migrated collectively and individually to escape warfare and conflict, to seek refuge from hunger and poverty, to pursue new economic prospects

and better jobs, to evade religious persecution or political oppression, or simply to engage in trade and explore new regions (Anitha and Pearson, 2013). Cohen (1995) noted a long-standing tradition of human migration, categorizing it into seven distinct groups: Migration within Europe, Africa, and Asia (17th-18th centuries), Permanent settlement in colonies (1500s to mid-19th century), Slavery (1550 to the late 18th century), Indentured labor (1834-1917), Migration to the New World (1800s-1930), Post WWII migration (late 1940s to 1960s), and migration after the 1970s. Many individuals relocated from various regions to meet their needs. Between 1834 and the conclusion of World War I, Britain transported around 2 million Indian indentured workers to 19 different colonies, including Fiji, Mauritius, the Caribbean islands, parts of South America, Sri Lanka, and Southeast Asia (Tinker, 1993). Likewise, it is estimated that close to 48 million individuals departed from Europe between 1800 and 1930 (Massey et al., 1998). In 2005, almost half of the world's migrants were women, with more females than males migrating to Europe, Latin America and the Caribbean, North America, Oceania, and the former USSR (Koser, 2007: 6).

As reported by the UN DESA (2025), in 2024, there were 304 million international migrants, an increase from 275 million in 2020. The proportion of international migrants compared to the global population has remained fairly steady over the years, holding at 3.7 percent, which is only 0.8 percent higher than in 1990. Data indicates that the number of female migrants has shown a consistent rise over the decades, reaching 146 million in 2024, with the percentage of female migrants remaining relatively stable at 48.08% in mid-year 2024, compared to 47.97% in 2020. At mid-year 2024, Asia was home to 92.2 million international migrants, an increase from 84.7 million in mid-year 2020, and 81 percent of all international migrants in Asia came from the same region (UN DESA, 2025).

Table 1:
Migrant Population in the World

Regions	1990	1996	2001	2007	2013	2018	2024
World (In million)	153.9	163.2	174.6	221	250	275.3	304
Asia (In million)	46.7	44.8	47.6	64.3	78.3	84.7	92.2
South Asia (In million)	19.2	15.2	14.9	14.4	13.9	13.9	16.5
Nepal (In thousand)	430	690.2	717.9	581.9	509.5	487.6	470.7

Source: UN DESA, 2025

The leading five countries from which international migrants originate are India (18.5 million), China (11.7 million), Mexico (11.6 million), Ukraine (9.8 million), and the Russian Federation (9.1 million). Likewise, the top five countries that attract international migrants are the United States of America (15.2%), Germany (19.8%), Saudi Arabia (40.3%), the United Kingdom (17.1%), and France (13.8%). Regarding human capital flight or brain drain, Samoa, a Polynesian island, was the country most heavily affected, achieving the highest possible score of 10 on the 'human capital and brain drain' indicator in 2022. It was followed by Jamaica (9.1), Palestine (8.8), and Micronesia (8.7). In contrast to these countries with lower income levels, which experience greater economic challenges and political instability, higher-income nations tend to face significantly lower levels of human capital flight. In 2022, Australia recorded the lowest index score at 0.4, with Sweden (0.6), Norway (0.6), Canada (0.7), and Switzerland (0.8) following closely (Irwin-Hunt, 2023). The Human flight and brain drain indicator assesses the economic repercussions of human displacement for economic or political reasons and the potential effects this has on a nation’s progress. Historically, Nepal's average from 2007 to 2024 stands at 6.19 index points, with a minimum value of 5.6 index points observed in 2012 and a peak of 7 index points recorded in 2015 (The global economy, 2025). The primary destination nations for the majority of migrant workers from South Asia are the six GCC states: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. In 2019, the total number of migrant workers who relocated to

GCC nations from five South Asian countries was 1,790,543, which fell to 564,883 in 2020 due to the effects of the COVID-19 pandemic, and then rose again to 1,130,610 in 2021 (NSO, 2021:49).

Brain Drain in Nepal

Historical data show that early settlers migrated from south to Nepal and from Tibet, and ethnic groups moved north to Nepal and from India between the 5th to 13th centuries. Following the Anglo-Nepali War of 1814-1816, the Treaty of Sugauli was signed, establishing Nepal's borders. The treaty resulted in some Nepali territories being ceded to British India, and, in 1815, Britain began recruiting Nepali Gorkhas to join the East India Company. This started a significant trend of Nepali Gorkhas being recruited into British and Indian armies and, more generally, young Nepali men migrating abroad for work. About 100,000 Nepali men served in the British forces during the First World War, leading to the signing of the British-Nepal Treaty of Friendship in 1923 (Brown, 2017). In 1950, Nepal and India signed the Treaty of Peace and Friendship, acknowledging the ancient ties which have happily existed between the two countries. From the mid-1980s, Nepalis also began migrating to the Gulf States and Malaysia for work. The Gulf States experienced rapid economic growth, while Nepal's agricultural output and economic opportunities declined (NSO, 2021). Countries like Australia, Canada, Japan, and increasingly the UK have intentionally kept their immigration policies somewhat open, issuing student visas to handle temporary labor shortages without a major liberalization of strict immigration laws (Awale, 2022). Nepal is a developing country recognized as an exporter of human capital in the global market. A lack of employment opportunities results in significant human capital flight from Nepal to foreign countries.

Table 2:

In 2022, Studying, Living, and Working

Year	Human Capital Flight	Number of no objection letters
2013/14	527,810	28,126
2014/15	512, 890	30,797
2015/16	418,710	37,148
2016/17	398,970	50,796
2017/18	362,020	58,658
2018/19	243,760	63,417
2019/20	193,940	33,196
2020/2021	166,690	28,883
2021/22	637,110	102,504
2022/23	774,970	110,217
2023/24	741,000	112,968

Source: Department of Foreign Employment, 2023; Kunwar, 2023; Ministry of Education, Science and Technology, 2023

The table mentioned highlights that not only the number of Nepali migrant workers increased each year, but also fatalities. Approximately 700,000 Nepalis pursue foreign employment annually. Last year, 741,000 Nepalis (661,000 men and 80,000 women) sought work permit for abroad, indicating a significant rise in outmigration. Based on reports from the Department of Foreign Employment (DoFE) (2022) & Foreign Employment Information Management System (FEIMS) (2024), around 80 percent of Nepali migrants moved to Saudi Arabia, Qatar, and the UAE during 2021/22, with Saudi Arabia being the primary destination. In 2022/23, Malaysia emerged as the most popular destination, attracting about one-third of Nepali migrants. By 2023/24, roughly one-fourth of Nepali migrants selected the UAE as their destination country. Over these three consecutive years, Saudi Arabia, Qatar, the UAE, Malaysia, and

Kuwait remained the top five preferred countries for Nepali migrant workers.

Table 3:

The Top Ten Destination Countries for Foreign Employment, 2021/22-2023/24

Countries	2021/22 (In percent)	2022/23	2023/24
Saudi Arabia	30	14.6	19.1
Malaysia	5.8	33.7	13.9
UAE	19.5	15.1	26.1
Qatar	29.3	17.3	18.2
Kuwait	5.6	5.6	5.4
Bahrain	1.9	1.0	1.3
Republic of Korea	-	2.9	1.8
Oman	1.1	-	-
Romania	1.2	1.8	2.0
Japan	0.9	1.2	1.9
Croatia	0.9	1.0	2.1
Other	3.8	5.8	8.2
Total Number	630,075	771,320	741,297

Source: DoFE, 2022 & FEIMS, 2024.

Based on data from 2023/2024, approximately 26% of Nepalis selected the UAE as their preferred destination country, with Saudi Arabia at 19%, Qatar at 18.17%, and Malaysia at 13.95%. These people are skilled and semi-skilled human capital.

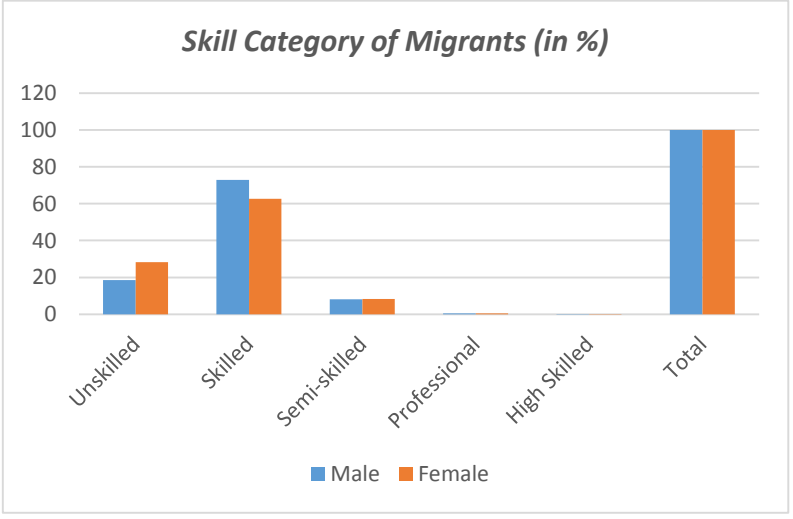
Migration of Skilled Human Capital from Nepal

Data published by the Foreign Employment Information Management System (FEIMS) (2024) mentioned that in 2023/24, about 741,297 people

were migrated from Nepal. Among them, 145,000 unskilled workers and 532,000 skilled workers departed Nepal for overseas jobs, whereas only 60,000 semi-skilled and 732 highly skilled workers went abroad (Bhatta, 2025). In the recent year, over 112,000 students received 'no objection certificates' (NOCs) from the Ministry of Education. The ministry granted more than 34,000 NOCs for Japan, over 15,000 for Canada, more than 14,000 for Australia, over 13,000 for the UK, and just under 11,000 for the US. A recent study from the online platform Study Portals indicates that Nepali students constitute 14.3% of international students globally (The Kathmandu Post (editorial), July 30, 2024). Based on the Foreign Employment Information Management System (FEIMS) 2024, a significant portion of labor approvals (71.78%) was granted for skilled occupations, followed by unskilled (19.63%) and semi-skilled (8.11%). work force. In contrast, very few approvals were provided for professional and high-skilled employment.

Figure 1:

Nepali Migrant Workers by Skill Category, 2023/24



Source: NSO, 2023/24.

Among these migrants, the primary reasons for their absence were identified as earnings and employment (59.7%), dependents (20.4%), job searching (13.8%), education/training (3.1%), trade/business (0.3%), and other reasons (2.7%). A significant portion (59.8%) of the total absentees indicated that their motivation for going abroad was to earn a salary, with around one-fifth (20.4%) being dependents of their guardians, and 14 percent seeking employment opportunities (NSO, 2021).

As reported by the Central Bureau of Statistics (2021), approximately 8.6 million individuals in Nepal are currently unable to find work that matches their qualifications and skills. This indicates that the unemployment rate among the illiterate population (those who are unemployed and uneducated) stands at 18 percent, whereas the unemployment rate among the literate and educated (those without jobs despite holding a college degree) ranges between 8 and 9 percent. The survey highlighted that nearly 70,000 people are unemployed even though they possess a bachelor's or master's degree. About 800,000 youths searching for job opportunities in Gulf countries and elsewhere, 74,000 hold master's degrees, 216,000 are graduates, over 400,000 have intermediate qualifications, and more than 1.5 million have completed their SLC without securing employment in the country (Subedi, 2021). According to the Nepal Labor Force Survey 2018-2019, the unemployment rate in Nepal is approximately 11.4 percent. About 35 percent of young engineers in Nepal have migrated abroad, with 14 percent residing in Gulf countries.

In the fiscal year 2079/80 BS, more than 771,000 youths went abroad for employment. Data shows that 1.5 million Nepali youth have gone abroad for employment during the two years from Shravan 2078 BS to Shravan 2080 BS. Since the people's movement of 2062/63 BS, more than 5.8 million youths have gone abroad with work permits (Parajuli, 2080, Asoj 22). According to the Ministry of Education, the number of students who received no objection letters in the fiscal year 2078/79 BS was 114,429. In this fiscal year, 67.7 billion Nepali currency was spent in the name of

education in abroad. Nepal Rastra Bank has stated that 89.18 billion rupees were sent in 11 months of 2079/80 BS. About 65,000 students graduate every year in Nepal, and out of them, only nine thousand are employed in Nepal (Bhandari, Bhadra 17, 2080). The remaining students are waiting for a study or a job in foreign countries.

According to the Nepal Medical Council, a total of 8,624 new doctors has registered with the organization over the past four years. Out of these, 6,368 doctors have received a good standing certificate from the council to pursue opportunities abroad. Analyzing the data for these four years, around 74 percent of the newly registered doctors have either sought to move abroad or are considering it for employment and further studies. In 2020, 769 doctors received a certificate to travel abroad, which nearly doubled to 1,327 in 2021. The number of doctors securing this certificate rose again to 1,954 in 2022. According to the council, the figure reached 2,318 individuals receiving the certificate in 2023. Recently, the trend of doctors registering abroad has remained steady. The number of new doctors registered was 2,131 in 2022, 1,716 in 2021, and 2,085 in 2022, reaching 2,692 in 2023 (Kaini, 2081). The same trend is evident in the nursing field. Currently, Nepal has 72,550 registered nurses, with 25,000 of them employed overseas (HRM, August 23, 2022). In the engineering field, the situation is even more concerning. There are at least 71,000 engineers registered with the Nepal Engineering Council, and experts suggest that over 55 percent of Nepali engineers have relocated abroad for better job prospects (HRM, August 23, 2022). Similarly, according to the Federation of Computer Associations of Nepal (2023), Nepal produces around 16,000 IT graduates annually, with nearly 10% of them leaving the country each year in search of better opportunities abroad. A report from the Institute for Integrated Development Studies (IIDS) (2023) revealed that 72% of IT firms in Nepal encounter difficulties in finding candidates with the skilled work force, indicating a disparity between the skill sets of graduates and market demands (Dhital, 2024). The main reasons influencing the choice of these countries include low recruitment costs,

connections with friends and family, and the increased availability of lower-skilled job opportunities.

Causes of Brain Drain in Nepal

The main factors contributing to brain drain in Nepal include poverty, lack of job prospects, weaknesses in the education system, political instability, and corruption. Numerous social scientists assert that this issue is shaped by both push and pull factors. According to Lewin's (1947) change theory, push factors usually act as the fundamental reasons that drive individuals to seek change and decide to move, which aligns with pull factors that facilitate the transition from an existing situation to a new behavior or environment. One of the main reasons for departure is the push factors, which include the encompassing economy, politics, education, work conditions, and social elements such as family, cultural norms and values, traditions, etc. Another cause of brain drain is the pull factors, which include the economic scenarios, career advancement, quality of life, and education and specialization, among others, and are among the motivators for relocating to a different country. In the context of Nepal, the following are the main causes of brain drain:

1. Economic Situation: The economic situation of Nepal is considered one of the main reasons for brain drain. Poverty, low employment, low wages, high price growth, high inflation, and economic instability can be considered as its main reasons. Currently, 20.27 percent (58 lakh 63 thousand 194) people in Nepal are below the poverty line (Nepal Living Standards Survey 2079/80), according to the National Statistics Office (2021), a total of 8.6 lakh 18 percent of people in Nepal are currently not getting employment according to their qualifications and skills. Similarly, according to the Nepal Rastra Bank (2024/25), inflation in Nepal is 4.82 percent, while price growth is 8.1 percent (NRB, 2025).

2. Political Instability: Instability in governance, social turmoil, ongoing conflict, and inadequate security can drive talented people to pursue a secure and stable setting. The turnover of 13 prime ministers in Nepal

over the last 15 years, starting from 2064 BS, highlights the political volatility in the country. Key factors contributing to this situation include the behavior of political parties, the constitutional framework, leader-focused politics, outdated mentalities, and poverty, among others.

3. Lack of Quality of Life: Insufficient living conditions, restricted access to healthcare, substandard housing, an inadequate education system, low social awareness, shifts in social dynamics, unfavorable physical conditions, and insufficient infrastructure have compelled individuals to emigrate. The elevated quality of life in nations such as Europe, the United States, Australia, and Canada, among others, appears to significantly contribute to the brain drain.

4. Lack of Professional and Research-oriented Environment: Insufficient professional and academic infrastructure, limited funding for research, absence of career opportunities and resources, inadequate scientific equipment, few chances for career progression, job dissatisfaction, and a scarcity of higher technical institutions are significantly contributing to the brain drain in Nepal.

5. Social Reasons: On one side, individuals who are educated in Nepali society appear to experience a feeling of inadequacy and ineptitude if they do not seek opportunities abroad. Conversely, there are expectations for individuals to attain independence from their community and families. In particular, youth are increasingly rejecting these constraints and advocating for the freedoms typical in Western societies. The restrictions placed on personal and professional freedom and autonomy also appear to fuel the desire to emigrate. Consequently, it seems that the societal context is pressuring young people to pursue opportunities outside the country.

6. Cultural and Psychological Causes: One factor contributing to brain drain is a cultural inferiority complex, where individuals begin to perceive their own cultural values, customs, traditions, and beliefs as less valuable and view other cultures as more esteemed. Additionally, cultural and

psychological influences like a lack of respect for the Nepali language, perceiving their own attire as inferior, and deeming traditional cuisine as undesirable also appear to play a role in this.

7. Extreme Corruption and Lack of Good Governance: In the 2023 report by Transparency International, Nepal received a score of 35 out of 100 regarding good governance. The 2024 report indicates a decline in Nepal's score to just 34 points. Transparency International categorizes countries with scores below 50 as highly corrupt. Among the eight countries in South Asia, Bhutan boasts the highest score at 72 out of 100, while India and the Maldives each have a score of 38 points. Sri Lanka scored 32, Pakistan scored 27, Bangladesh received 23, and Afghanistan scored the lowest at 17. Only those countries scoring above 80 out of 100 include Denmark at 90, Finland at 88, Singapore at 84, New Zealand at 83, and Luxembourg, Norway, and Switzerland all at 81, with Sweden scoring 80 (Egypt, 2081). So, it is also another cause of brain drain in Nepal.

8. Globalization and Technological Connectivity: The primary factor contributing to brain drain today is the global system facilitated by communication technologies such as the internet and email, among others, and the interconnected world it has established. Particularly, individuals pursuing higher education tend to utilize these tools. The rise of globalization and the network of international connections have fostered dynamic relationships among people worldwide, which appears to be a driving force behind brain drain.

The various factors discussed above are the leading causes of brain drain in Nepal. In addition to these, globalization, neo-liberal policies, the influence of global media, increasing intervention from capitalist nations, and social connections also play significant roles in brain drain. Until these issues are addressed, it seems unlikely that the brain drain problem in Nepal will be resolved.

Opportunities and Challenges of Brain Drain in Nepal

Numerous nations are enhancing their strategies to attract and keep international students, which heightens the likelihood of brain drain in the countries of origin. In less affluent nations, this migration can alter the skill composition of the workforce, lead to labor shortages, and influence fiscal policies, yet it can also produce remittances and other advantages from expatriates and those who return (Docquier, 2014). The level of brain drain that maximizes income is typically positive in developing nations, implying that some emigration of highly skilled individuals is advantageous.

Opportunities of Brain-Drain

1. Remittances: Migrants send financial support back to their home nations, which can serve as a vital income source and a means of foreign currency. The money migrants send helps to fund education and businesses, while diaspora networks create new opportunities for trade and investment, fostering local innovation, entrepreneurship, and knowledge sharing. According to NRB (2024/25), remittance flows rose by 11.5 percent to Rs 407.31 billion during the review period, compared to a 25.8 percent increase during the same period the previous year, with 56 percent of households relying on remittances for their basic needs.

2. Knowledge Transfer: Returning migrants can impart their acquired skills, knowledge, and experiences, playing a role in local development and innovation. When skilled individuals come back to their homeland, they bring with them their abilities, skills, technology, and qualifications, which can be utilized for the betterment of their home country.

3. Incentive for Policy Change: The challenges posed by brain drain can encourage governments to create policies that enhance domestic opportunities, such as improving infrastructure, boosting local industries, and offering more competitive salaries. It has also prompted the development of new policies, laws, and regulations, including those related to dual citizenship and transnational citizenship.

4. Better Career Prospects: Opportunities for career growth, specialized positions, and leadership roles are frequently more accessible abroad. Countries seeking to attract their skilled workforce should develop these types of facilities, salaries, and benefits.

5. Higher Earning Potential: Migrants can attain a considerably higher standard of living thanks to superior compensation and benefits in their destination countries. Origin countries, particularly developing nations, should seize these opportunities and learn how to attract their migrant populations

6. Improved Living Standards: Access to better education, healthcare, and overall quality of life can be a major pull factor for professionals and their families. This is an opportunity to develop these facilities to attract them to their birth countries.

7. Access to Resources and Technology: Professionals have the opportunity to access superior research facilities, cutting-edge technologies, and collaborative networks that may not be present in their home nations. The growing phenomenon of brain drain compels policymakers to devise effective strategies and offer these resources to their citizens.

8. Policy Improvement: The impact of emigration as either a brain drain or brain gain largely depends on local resources and policies, especially the capability of education systems to produce skilled graduates and the extent to which business and trade environments facilitate the reintegration of those who return (Mobarak, 2025). This presents an opportunity to enhance existing policies or develop new ones.

9. Strengthen Educational System: To tackle the educational dimensions of brain drain, countries of origin should prioritize improving their education systems. This encompasses investing in high-quality higher education institutions, promoting research opportunities, and fostering an environment that supports the retention of talented individuals after their

studies. Brain drain can invigorate educational systems, encourage remittance flows, lower international transaction costs, and provide advantages to source countries from both returnees and the diaspora overseas (Komala, 2023).

10. Modification of National Policies: Appropriate policy adaptations, which are contingent on the specific characteristics and policy goals of the source country, can aid in maximizing the benefits or minimizing the drawbacks of brain drain (Docquier, 2014). Many developing nations are working to modify their national policies to attract citizens who have emigrated abroad, meeting their needs or seeking better opportunities.

Challenges of Brain Drain

The issue of brain drain presents numerous challenges for Nepal, such as the depletion of its skilled workforce, heightened economic reliance, slowed development, economic instability, inequalities in education and skills, a lack of innovative opportunities, and various social repercussions (Nepal, 2025). One of the most pressing problems is the departure of well-educated and skilled individuals, who are vital for advancement, creativity, and efficiency. Brain drain is a complex issue intimately linked to distrust in institutions, corruption, and instability across both political and economic realms, creating an environment of insecurity that profoundly affects the populace. These structural imbalances not only impede economic advancement but also obstruct progress and innovation in essential sectors like health and education, worsened by weaknesses in institutions, reduced trust in the political system, poverty, and significant social and regional inequalities, among other factors (Vega-Muñoz, Alejandro, González-Gómez-del-Miño, and Contreras-Barraza, 2025). Some of the challenges due to brain Drain are listed in following points:

1. Diminished Tax Income: The migration of well-paid professionals leads to reduced tax contributions, affecting government revenue and public services. This will lower government income and decrease the country's development budget.

2. Lower Economic Engagement: A reduced pool of skilled labor discourages businesses from investing or expanding within the country, potentially initiating a downward spiral of decline. This may lead to a lack of new industry establishment, investment, and diminished other economic activities.

3. Reliance on Remittances: Although remittances can provide certain economic advantages, they do not adequately offset the loss of potential within the local economy. According to the International Organization for Migration (IOM), Nepal received approximately USD 11 billion in remittances in 2023, representing over 26 percent of the nation's gross domestic product, leading to the country's economic dependency.

4. Aging Workforce: The emigration of young, skilled professionals may hasten the aging of the labor force and create a demographic imbalance, as they usually leave behind dependents. According to the NSO (2021), more than three-quarters (75.8%) were reported as absent between the ages of 15-34, followed by 14 percent in the 35–54 age group, and 0.9 percent in the 55 years and older category.

5. Inadequate Development: A shortage of skilled professionals in vital areas such as healthcare and technology can impede infrastructure development and the capacity to fulfill the population's needs. The migration of a significant number of engineers, doctors, master's degree holders, and other technical professionals will affect the nation's long-term growth.

6. Scarcity of Opportunities: Initial issues such as poor job opportunities or unemployment, lack of industries, inadequate educational institutions, and low salaries compel skilled individuals to emigrate. These are common challenges faced by developing countries in competing with the opportunities offered by developed nations.

7. Disincentive to Investment: The lack of competent labor that follows makes it more difficult to attract companies, which exacerbates the

problem for those left behind and perpetuates the cycle. Due to the infrastructure and political interests of the political parties, there are no prospects for investment.

8. Effect on Research and Innovation: Brain drain has a significant impact on research and innovation. Bright minds in source countries are contributing to the progress of other nations, which may lead to a drop in the capacity for cutting-edge research and technological innovation. This restricts the possibilities for sustainable development and global competitiveness in addition to stifling local innovation (Komala, 2023).

9. Social and Cultural Consequences: In addition to financial repercussions, brain drain can result in social and cultural issues in the source nations. The loss of talented individuals frequently leads to a decline in cultural variety and knowledge among societies. This is especially evident in industries like education and healthcare, where a lack of qualified workers might lower the caliber of services offered to the community (Komala, 2023).

10. The Reason for Capital Losses: The real brain drain in the great majority of developing nations, particularly in sub-Saharan Africa, Central America, and smaller nations like Nepal, is greater than the income-maximizing level. The nation's capital or finances, workforce, and active population are lost, resulting in an impoverished state. Additionally, it causes occupational imbalances and diminishes the supply of human capital (Docquier, 2014).

11. Internal Conflict: The poverty, unemployment, corruption, and ultimately the conflict within the nation are all brought on by an economic downturn. The majority of the Latin American, Asian, and African nations are examples of this.

12. Loss of Technological Progress and Innovation: The nation has struggled with several issues as a result of the relocation of qualified labor. It won't foster new industries, move existing ones to other nations,

or diminish the innovation and development potential of local businesses. In addition to halting the development of skilled human resources, it will also have an impact on creativity and technological progress.

Conclusion

Brain Drain refers to the migration of skilled human resources from one region of a country to another or from one part of the world to another. It is a historical phenomenon of this century, influenced by various new factors affecting the movement of skilled workers. The emergence of the digital economy, along with social and environmental considerations, and the concept of brain circulation (K.C., 2023), play significant roles. Brain drain is a worldwide issue that has existed since ancient times, with a notably increased during the Second World War. It significantly affects developing countries such as Nepal, where over 750,000 youths working in abroad in the fiscal year 2079/80 BS alone. This phenomenon shows both advantages and disadvantages for Nepal. It poses numerous challenges, including the loss of skilled labor, increased economic dependency, decelerated development, economic volatility, disparities in education and skills, a scarcity of innovative prospects, and various social consequences. Conversely, the inflow of remittances, the transfer of knowledge and technology, and economic and social modernization represent the potential benefits of brain drain. The Government of Nepal must develop appropriate policies to manage brain drain or brain gain in alignment with the global political landscape.

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