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From Brain Drain to Brain Circulation: Pakistan's Migration Crisis and Pathways to Sustainable Development

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ABSTRACT

This research paper focuses on the issue of brain drain in Pakistan in detail and this issue has continued to exist and even grow. It researches the major destinations of Pakistani professionals, the intricate socio-economic effect on a nation in general, and suggests the choices of the policy framework that is guided by the sustainable migration and brain flow. This paper is a mixed methods study done to analyze the quantitative data collected by Pakistan Bureau of Emigration, World Bank and IMF reports up to the year 2026 and qualitative data obtained through the available literature and policy texts. Highlighted results indicate that the level of remittances reached an impressive value of \$38.5 billion accounting year (FY 2025) and the net economic cost of human capital flight stands at 4.2 billion a year and has dire repercussions on the health care and technology sector. The Gulf states, mainly Saudi Arabia and the UAE remain the key destination and take in almost 70% of emigrants, while a large proportion of highly skilled professionals go to western countries such as the UK, US and Canada. The article asserts that the brain drain of Pakistan is a crucial hindrance in realizing Sustainable Development Goals (SDGs) 8 and 10. It concludes with practical policy recommendations that are supported by evidence and these include diaspora engagement programs, domestic reforms in higher education and bilateral agreements in terms of circular migration with the view of transforming the current brain drain into a sustainable model of brain circulation towards national development.

1. Introduction

The migration of highly skilled individuals, as is popularly known under the title of brain drain, is an important and intricate issue to developing countries in the contemporary world system of international relations (IR). It is an occurrence that exists at the cross point of the international economic inequalities, national development needs, and individual growth and prosperity desires. The concept of sustainable migration attempts to strike a balance to these dynamics and tries to establish a system whereby migration is benefited by the migrant, the country of origin, and the destination country. The paper at hand is devoted to the example of Pakistan, which is a country struggling with a critical and rapidly growing brain drain which inevitably jeopardizes its socio-economic stability and development in the long run. This paper examines the causes, major destinations, and social-economic impacts of such exodus, and comes up with policy suggestions to promote a more sustainable model of brain circulation.

The history of migration in Pakistan is closely attached to the course of the state development including its political and economic history. Migration first surfaced in the post-independence years in 1947, but the brain drain phenomenon picked pace during the 1970s oil boom that generated enormous amount of manual labour in the Gulf states. More recently the combination of economic instability, high unemployment rates ranging between 8-10% in 2025-2026, political unrest and worsening security environment has produced a strong push effect on the skilled practitioners to look out towards opportunities outside of the country. This trend has been further boosted by the economic crises of the early 2020s as well as the disastrous floods of 2022 which resulted in what some are describing as a brain drain economy (The Express Tribune, 2026). In 2025, there was more than 760,000 Pakistani (not to mention the thousands of doctors, engineers, and information technology) who emigrated, and this is a high price to pay in terms of human resource (The News International, 2026).

The research problem of the presented article is that current brain drain in Pakistan is unsustainable. Although the country is enjoying the high amount of remittances flowing in about 38.5 billion of fiscal year 2025 record (Mukhtar, 2025), this paper also contends that the costs of the country in terms of losing the most of its educated and skilled citizens is huge in the long-term scale than the short-term financial incentives. The research questions of the study are thus fourfold, namely, to examine the key factors pushing Pakistani professionals into emigrations; second, to determine the

focal destination countries and the most affected professional groups; third, to critically evaluate the socio-economic implications of this brain drain in Pakistan, including the positive implications of remittances together with the inverse effects of brain drain; and fourth, to suggest a series of action policy guidelines that would encourage the fluidity of the brain drain and migration sustainability.

This research is important in many aspects. It adds to the scholarly literature on migration and development to the discipline of International Relations because it uses the theoretical frameworks of dependency theory and human security to analyze the particular case of Pakistan. Moreover, it directly relates to policy makers, as its findings can be used to develop state policies and foreign policies in Pakistan. The problem is directly connected to the realization of SDGs of the UN, especially SDG 8 (Decent Work and Economic Growth), or SDG 10 (Reduced Inequalities). By the loss of its skilled workforce, Pakistan compromises its ability to be innovative, to grow economically and to deliver the much needed public services, thus making it difficult in its progress towards these goals of the world. The research questions to be answered in this study are the following: What are the major destinations of Pakistani professionals and what is the tendency in their migration? What are the overall socio economic consequences of such brain drain on the development of Pakistan? What would be the best way forward in Pakistan to utilize the diaspora and enact valuable policies in order to change brain drain to a model of brain circulation?

The thesis of this article is that the present system of Pakistani export of human capital is a result of their dependent situation in the world economy and that the paradigm shift towards the policy of the brain circulation is also a key to the sustainable development of the country and its human security in the long run. This needs a delicate perception of the problem, beyond an elementary cost benefit analysis of remittances and loss of human capital. It requires more meaningful involvement with the structural imbalance of the international system, and acknowledges the active role of migrants as individuals, as well as the possibility of the diaspora as an agent of positive change. It will be argued in the paper that the fact that it fails to deal with the root of the brain drain and to actively engage with the diaspora will not only go on to reward Pakistan with its economic vulnerability but with long-term vulnerability of the country in the face of diminished national security and social cohesion. It is hoped that the article will offer a comprehensive and prospective examination that can serve to make an informed and particular reaction to the national issue that

has become a very alarming matter. This study critically examines the existing literature on brain drain, sustainable migration, and diaspora studies in the Pakistani context. It employs a mixed-methods approach to investigate the underlying causes of brain drain, the primary destination countries for skilled migrants, and the associated socio-economic impacts. These findings are then interpreted through the lens of International Relations theory and broader geopolitical dynamics. The research concludes by synthesizing the key insights and offering targeted policy recommendations for the Government of Pakistan and other relevant stakeholders.

2. Literature Reviews

Brain drain has long been a topic of scholarly and political discussion, with many decades of literature examining its origin and effects and possible solutions to the problem. The review is a critical analysis of available literature, which is condensed into four important themes; theoretical approaches to migration, empirical literature on Pakistan, models of brain circulation all around the world, and international policy formulation. Through cumulating this literature, we will be able to realize the gaps that the research will help us to fill.

2.1 Theoretical Perspectives

Migration studies have theoretical assumptions that provide lenses through which brain drain in Pakistan can be analyzed. Among the oldest in theory is that of neoclassical migration, which argues that people make rational decisions to move to countries where there is a difference between wages and employment opportunities wherever they move (Massey et al., 1993). Although this is the source of the economic pull factors, it can be overly simplistic as the motivation can be a rather convoluted web of social, political, and personal drive. Conversely, new economics of labor migration alters the unit of analysis to include a household and relates that migration is a risk-diversification strategy as a means of overcoming home-country market failures such as the inability to access credit or insurance (Stark and Bloom, 1985). This view is especially applicable to Pakistan where remittances can act as an important safety net to the family.

The world-systems theory and dependency theory offer a more critical macro-level analysis, perceiving migration as a byproduct of unequal power relations of the global capitalist system. Dependency theory, specifically, puts forth that the brain drain is a certain act of imperialism today in which the periphery countries in the Global South such as Pakistan lose some of their most prized

human resources to the core countries of the Global North which acts to rekindle a cycle of underdevelopment and dependence (Frank, 1966). This model plays a key role in the interpretation of structural factors that limit the potential of Pakistan to keep its talents. Recently, the idea of human security has become introducible, where the priority is on the person and his/her right to security, well-being and to personal fulfillment. In this sense, one can view migration as the means to flee the sources of insecurity to human security, including political instability or violence or inability to access basic services (UNDP, 1994).

2.2 Empirical Studies on Pakistan

The amount and the extent of the brain drain in Pakistan have been documented by a major amount of empirical research. The high rates of emigration of skilled professionals of South Asian countries have been reported by international organizations like the International Organization for Migration (IOM), the World Bank, and the United Nations Development Programme (UNDP), with Pakistan, being one of the leading countries of origin (IOM, 2022; World Bank, 2023). This is due to numerous studies that the Pakistan Institute of Development Economics (PIDE) has conducted that estimate the economic costs of brain drain, concluding that each year the economy is losing millions of dollars (Mukhtar, 2025). Studies have also addressed the particular industries mainly healthcare, and the researchers have observed the extreme shortages of physicians and nurses in Pakistan, as a result of emigration, to reach an all-time high in 2025. The data collected in these empirical studies is priceless, yet in most cases they are based on the economic aspects of brain drain, with barely any attention paid to the social, cultural, and political effects.

2.3 Global Comparisons and Brain Circulation Models

Compared to the negative account on brain drain, the brain circulation and brain gain literature present a more positive view. This literature discusses the ways in which the nation-states can utilize their diaspora to enhance growth and innovations in the motherland. The Information Technology (IT) sector in India is the example that is regularly mentioned in the discussions of the effective circulation of the brain. It was the coming back of highly-skilled Indian professionals who went back to Silicon Valley, and brought with them capital, knowledge and networks, and it was later on that the India's tech industry was developed into a thriving industry on its own (Saxenian, 2006). Likewise, China has established aggressive and funded initiatives to lure its expatriate talent back to its borders including the so-called Thousand Talent Plan which offers the selected expertises attractive pay, research grants, and other benefits (Modern Diplomacy, 2026). These case studies

indicate that brain drain is not a loss that cannot be recovered, but can be changed to a brain circulation cycle that is full of virtues. The literature is however also warning that such models are not readily replicable and that they rely on a host of factors such as the size and nature of the diaspora, the domestic political and economic environment and even the policies being applied.

2.4 Policy Frameworks

Various policy frameworks have been created by the international community to alleviate the issue of migration. In 2018, the UN adopted the first-ever inter-governmentally negotiated agreement on a common approach to international migration, the Global Compact for Safe, Orderly and regular Migration. It seeks to promote international cooperation and will offer a complete set of policy choices to member states (UN, 2018). The European Union has been involved in migration talks with other countries such as Pakistan, including the conclusion of some agreements such as the EU-Pakistan Readmission Agreement which is basically concerned with returning irregular migrants (EUR-Lex, 2010). There are also frameworks on labor migration cooperation designed by the Organization of Islamic Cooperation (OIC) between its member states (OIC, n.d.). Though these frameworks offer a platform of global collaboration, in most cases, they fail to fulfill their duties owing to the conflicting interests of the sending and receiving states. The gap in the literature relates to the direct use and implication of these frameworks on the brain drain problem in Pakistan, especially how they can be used to spur brain circulation.

Conclusively, the literature here renders a solid framework of understanding of the dynamics of brain drain in Pakistan. However, several gaps remain. A more comprehensive analysis is in the offing that pulls together the perspectives of various theoretical models and takes air of one type, the economy and delves into the political, social, and geopolitical factors. The effects of brain drain on the foreign policy of Pakistan, its soft power, and the relations of the state with other regional states, especially Central Asian states are the issues that demand deeper investigation. Moreover, as much as the literature has been discussing the so called Islamic dimension of Pakistan, there has been no critical engagement with how the Islamic ethical and legal traditions can apply to a fairer and more equitable stand on the migration practice. Lastly, it requires better research on the possibility of so-called brain circulation in the Pakistani context, based on learning the experiences of other developing countries, such as India and China, without overlooking the particular problems and opportunities that Pakistan is facing, including the role of CPEC and the prospect of digital nomadism and remote work to change the migration patterns. This paper aims to fill these gaps by

offering a multi-dimensional discussion on the problem of brain drain in Pakistan and its possible remedies.

3. Methodology

This study will adopt a mixed-methods research design by incorporating quantitative and qualitative data analysis in order to obtain a holistic and well-rounded picture of the brain drain process in Pakistan. This method best fits International Relations research, thus being in a position to triangulate results of various sources, thus leading to increased validity and reliability of the research. The study strategy will comply with the advanced research standards that focus on reflexivity and critical involvement with the data source.

The statistical part of this work is based on the research of the secondary data provided by different, authorized, and reliable sources. The statistics on the total number of workers, their level of skills, and destinations were provided by Pakistan Bureau of Emigration and Overseas Employment (BEOE) as emigration data between 2010 and January 2026 (The News International, 2026). This information constitutes the major source of examining the magnitude and features of brain drain in Pakistan. The sources of economic data, such as statistics on the remittance of funds, GDP rise, and unemployment rates, were the World Bank, the International Monetary Fund (IMF), and the State Bank of Pakistan (SBP) (Mukhtar, 2025; World Bank, n.d.). This information is exploited to evaluate economic effects of brain drain and remittances. Data analysis uses descriptive statistics to determine trends and patterns with developing of tables and charts to visualize the results.

The qualitative aspect of the study will be critical analysis of the existing literature, policy documents and reports by think tanks and non-governmental organizations. This involves an examination of academic papers about migration theory, empirical research about brain drain in Pakistan and case studies of other countries on how they evolve their diaspora. The existing policy space is explored through the analysis of policy documents, including the Vision 2025 Pakistan, the UN Global Compact on Migration, as well as EU-Pakistan agreements (UN, 2018; EUR-Lex, 2010; OIC, n.d.). The diaspora interview and case study literature resources assist in offering a more humanistic approach to the motivation and experiences of Pakistani professionals working overseas. This qualitative study assists in interpreting the quantitative results as well as in establishing a more

comprehensive view of the multifaceted social, political and economic reasons that contribute to brain drain.

This study revolves around ethical concerns. The research solely uses publicly available data regarding secondary data and published literature, thereby not having direct contact with human subjects and the related ethical implications. In quoting the studies that incorporate interviews with the members of the diaspora, the anonymity and secrecy of the subjects as the case of the original studies is upheld. The study also attempts to ensure objectivity and control bias in data selection and interpretation. The study limitations are recognized (possibly, there were gaps/inaccuracy in official information), especially within the framework of the economic decline and the political unrest after the 2022 floods. The principle of triangulation of data sources through cross-referencing and the combination of quantitative and qualitative results makes sure of reliability and validity of the research. Such a mixed-methods method enables conducting a more robust and plausible analysis of the brain drain crisis in Pakistan.

4. Empirical Analysis and Findings

The main findings of the study are presented in the following section and consist of three subsections. It starts with a discussion of the leading causes of brain drain in Pakistan, proceeds to show the most major destinations of its professionals and concludes by discussing the long term socio-economic impacts of this movement on the country.

4.1 Drivers of Pakistan's Brain Drain

The brain drain of skilled professionals in Pakistan is not just a chance event but a very potent blend of push and pull factors. These drivers make a strong argument to people to get a chance to go to another country and in most cases to the disadvantage of their country. The major causes of the impetus are anchored in the Pakistani domestic environment, which is chronic economical unstable, politically unsettled and absence of professional opportunities. In 2025 the national unemployment rate surpassed 21-year-old levels, and was especially bad among the young and educated population (AP7AM, 2026). This has been augmented by poor pay, poor career advancement opportunities, and a general feeling of economic insecurity where the middle class has had the confidence shackled out of it. A survey conducted by Gallup Pakistan in 2023 revealed that an astounding 62 percent of young professionals would accept the opportunity to work in a foreign country provided they had an opportunity, which shows how disillusioned people are with the local job market (Gallup Pakistan, 2023). Moreover, lack of proper investment in research and development (R&D) and the

old infrastructure in vital sectors are a problem of the country that hamper innovation and restrict the possibilities of highly professional to use their skills.

The strong pull factors by destination countries can be found on the opposite side of the equation. The most prominent of them is the temptation of more money and better life standards. The difference in income is enormous; a competent professional may regularly make a lot more income in a foreign country than they are apt to make in Pakistan by at least five to ten times. Other than the financial benefits, destination countries have a more stable political and social environment, higher education programs to their children, and has more social mobility opportunities. The emigration choice is not only an economic or strategic one to many professionals but more of an example of the human security paradigm in action because they want to get a better future to themselves and their families.

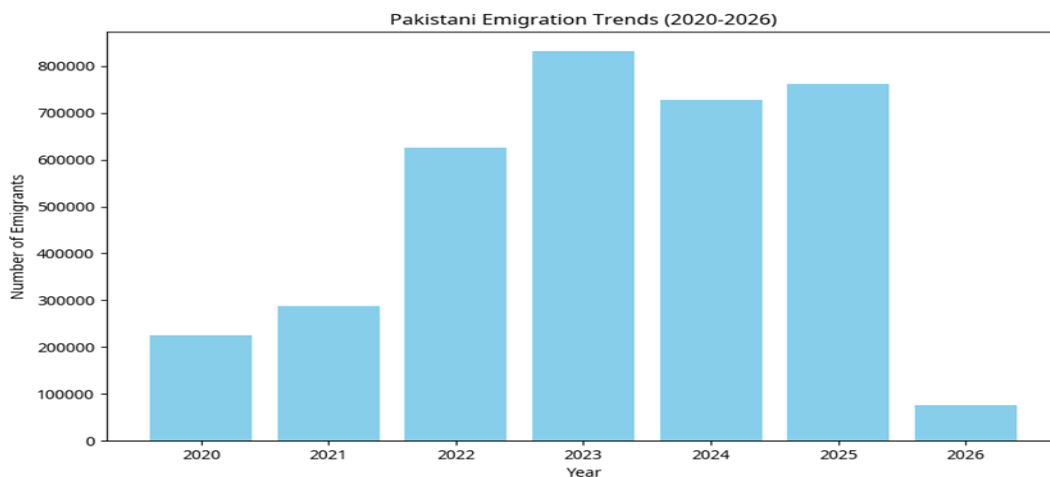


Figure 1: Pakistani Emigration Trends (2020-2026)

Source: Bureau of Emigration & Overseas Employment, Government of Pakistan (The News International, 2026).

4.2 Key Destinations for Pakistani Professionals

The Pakistani emigrants have different destinations but there is one obvious picture that is formed after the data. According to the GCC states, especially Saudi Arabia and the United Arab Emirates (UAE), most Pakistani workers have always been and continue to be the main target of their labor. In 2025, about 70 percent of the Pakistani labor was assimilated by the Gulf states (The News International, 2026). By itself, Saudi Arabia took more than 530,000 workers, which is by far the largest destination ever (Business Recorder, 2026). The necessity to provide low-skilled and semi-skilled labor force in both the construction sector and the services sector is a key engine to this

migration to the Gulf, yet the growth of the need of skilled professionals is also actively encouraged due to the development plans such as the Saudi Arabian Vision 2030.

Although the Gulf is still the most populated with the highest number of people proportions, there is a trend, when considering highly talented and completely educated professionals. Among this group of cohorts, the West is preferred with the countries of the United Kingdom, the United States, Canada, and Australia. Thousands of Pakistani doctors, engineers and IT professionals immigrated to these nations in 2025 on the basis of the high level of research facilities, high salary and career development (The News International, 2026). Considering 2025, the UK and the US also accepted more than 4,300 and 1,000 Pakistani specialists respectively (The News International, 2026). China is a new and emerging destination which is stimulated by the projects within the China-Pakistan Economic Corridor (CPEC) which has provided Pakistani engineers and other technical personnel with opportunities. The table given below will offer a division of the major destinations and the count of Pakistani laborers who migrated to those destinations in 2025.

Table 1: Major destinations and the count of Pakistani laborers who migrated to those destinations in 2025

<i>Destination Country</i>	<i>Number of Pakistani Workers (2025)</i>
Saudi Arabia	530,256
Qatar	68,376
United Arab Emirates	52,664
Bahrain	37,726
United Kingdom	4,355
United States	1,005

Source: Bureau of Emigration & Overseas Employment, Government of Pakistan (The News International, 2026)

Table 2: Breakdown of Pakistani Emigrants by Profession (2025)

Profession	Number of Emigrants
Labourers	465,138
Drivers	163,718
Technicians	12,703
Managers	11,777
Cooks	10,503
Engineers	5,946

Masons	5,700
Accountants	5,659
Doctors	3,795
Plumbers	2,306
Teachers	1,725
Nurses	1,640

Source: Bureau of Emigration & Overseas Employment, Government of Pakistan (The News International, 2026)

4.3 Socio-Economic Effects

The socio-economic implications of the brain drain in Pakistan are not very simple and intuitive but offer both considerable positivity and intensive negativity. The most noticeable characteristic effect is that of remittance inflow, this has now been a savior of the Pakistan economy. Remittances were also at their highest point of 38.5 billion during the fiscal year 2025, which has served as an essential source of foreign exchange and balancing the balance of payments of the country, as well as sustaining the existence of millions of families (Mukhtar, 2025). Such inflows directly affect poverty mitigation and rise in household consumption and investment.

These advantages are, however, very expensive. The loss of human capital is the most important adverse impact of losing such a huge number of employees has a debilitating effect on the future growth of the nation. The financial price of this brain drain is great. As other works estimate, net losses to the Pakistani economy are approximately 4.2 billion every year, including remittances (Mukhtar, 2025). This number is the productivity, innovation and tax revenue they will have dedicated to a country had they not left. The state also forfeits the high amount of money it uses in subsidizing the education and the training of this group of people; the cost of training one doctor is already approximated to be more than 25,000 (Mukhtar, 2025).

This brain drain is experienced more in the most crucial areas like healthcare and technology. Physician and nurse exodus has resulted in a serious healthcare crisis especially in the rural regions where there is already a low accessibility to quality medical care. Various countries were losing almost 4000 doctors in 2025 alone, which worsened the situation of medical professionals and reduced the effectiveness of the country to address the issue of public health. The technology industry that can be a significant source of economic growth is also being crippled by the loss of the skilled IT professionals to the more lucrative markets in the west. Such wastage of talent not

only delays technological progression but also leads to a kind of dependency where Pakistan as a country will become dependent on the expertise and technology of other countries. With Periphery theory, this relationship strengthens Pakistan as a peripheral state in the world economy as it sells the most precious resource its human capital to the core ones resulting in further underdevelopment of the country.

4.4 Discussion

The results in the preceding section indicate serious example of the multiwheeled and conflicting nature of brain drain, as in the case of a developing country such as Pakistan. This discussion will explain these findings as their connection to the theoretical frameworks identified in the literature review, and address the implications these findings out to larger issues of international relations in Pakistan, its geopolitical positioning, and the ethical aspects of migration. The discussion shows that Pakistan brain drain is not only a national concern of labour economical aspect but the burning problem of international political economical vulnerability and human security. The complexity of issues influencing this phenomenon, features of personal ambitions to the lack of global structural inequalities, require a multi-level discourse which cannot be simplified into the sphere of simplified explanations. These migration patterns are shaping the very cloth of the Pakistani socio-economic future and it is important to understand the underlying implications so that they can develop a responsive policy. In its socio-economic impact, in particular, it deserves a more detailed analysis. Although the use of remittances gives the macroeconomic cushion, it could also be encouraging the culture of dependency and the absence of pressure in undertaking domestic reform. The injection of foreign currency may also cause exchange rate appreciation that renders Pakistani exports less competitive which is a phenomenon referred to as Dutch disease. In addition, the social implications of protracted family separation, the difficulty of the reintegration of the returning migrants, and the effects it produces on the social cohesion are also aspects that should be regarded more thoroughly. This is also reflected in the quality of the work of skilled professionals and innovation potential, which leads to a cascading effect on the quality of the public services offered and, consequently, the further motivation to go to the country, creating the feedback loop.

The huge exodus of skilled and unskilled workforce, coupled with the high dependence of the nation on remittance is directly congruent with the main ideas of the dependency theory. The statistics reveal a very evident trend of the presence of the flowing of human capital out of the periphery (Pakistan) to the semi-periphery (the Gulf states) and the core (Western nations) of the global

economic system. Remittances are a significant buffer in financial terms, however, they can and do produce a sense of dependency, and expose the Pakistani economy to any external issues arising in global labour markets and the political will of host nations. This dependence may be referred to as neocolonialism in the form of modernity where the economical sustainability of the sending nation depends on the sale of the most precious resource of the sending country namely its citizens. This is evidenced by the estimated net loss of 4.2 billion per year to the economy, despite including the remittances, to reinforce the unequal society of such an exchange and it is quite contrary to the neoclassical argument that migration is ever a win-win situation (Mukhtar, 2025).

The implications of the findings that apply to the foreign policy process and the soft power of Pakistan are also much substantial. The Pakistani diaspora in general, especially in the West, can be the critical asset as the bridge between Pakistan and their host nations and providing a positive image of the nation to foreign countries. Nonetheless, the brain drain storyline, which is fueled by chaos and one that lacks chances back home, will also hurt the reputation of Pakistan as being a failing state that is incompetent in terms of maintaining its own talent. It is also influenced by dependence on remittances on the country foreign policy. An example is how Pakistan interacts with key host countries such as Saudi Arabia and the UAE, which have a strong dependence on the existence of these funds to carry on with their businesses constraining its foreign policy freedom and flexibility over some geopolitical matters.

Applying human security to the emigrating decision, it is quite reasonable that people want to get rid of financial difficulties, political unstable conditions, and insufficient personal and professional satisfaction. Lack of the state to support basic human security of its citizens is one of the main causes of brain drain. This has resulted into a vicious cycle wherein the weakness of the state causes people to move and their movement of people makes the state further poor to deliver the necessary services especially in the healthcare sector. This has led to a serious public health emergency by leaving thousands of doctors, this has weakened health security of the population and exposed the country to future pandemics and health crises.

Ethical aspects of the phenomenon are severe as well. It raises the basic query of fairness and equality within a situation where a developing nation spends its limited resources training and educating professionals and then watch them leading their expertise and abilities to the expansion of other states already endowed with wealth. This begs the question of whether destination countries

have the duty of compensating the sending countries in this loss of human capital. Islamic tradition of ethical practices where social justice and equitable allocation of resources are key themes also provide a critical viewpoint through which this issue can be viewed. According to the Islamic international law, the migration policies ought to be based on the principles of justice and win win, not on economic considerations.

Lastly, there is a great doubt regarding the sustainability of the existing model of migration. Although not under the study, the environmental effects of large-scale migration flows are becoming an increasing concern. Of more importance, the social and economical sustainability of a development paradigm, which is based on exporting its own youth and talent is actually faulty. It is a paradigm through which the present mortgages the future of the nation in order to get short term financial solutions. Pakistan is faced with the difficulty of getting out of this model that is unsustainable and developing a new paradigm of the circulation of the brain in which the skills, knowledge and capital of the diaspora can be utilised in the national development of these countries. This demands a radical change of policy and a long term investment into the development of a safer, more successful and just society back home.

5. Conclusion and Policy Recommendations

This section presents a set of recommendations based on a thorough analysis of the brain drain crisis in Pakistan on a course of action to internationalize the present unsustainable brain drain into a sustainable pattern of brain circulation. These suggestions are made as they are based on the evidence provided and they are intended to be practical and effective. The section also wraps up by presenting the major findings of the article and recommends future research directions.

5.1 Conclusion

This study has shown that the brain drain in Pakistan is a big development problem that has serious socio-economic, as well as geopolitical consequences. The nation finds itself in an ironical world of being both highly reliant on the economic gains of movement and at the same time being debilitating through the loss of human capital. This conclusion suggests that the existing paradigm of migration is not sustainable and it is creating a dependency culture of underdevelopment. The loss of thousands of talented employees annually is a colossal loss of talent, innovations, and leadership, which weaken the capacity of the country to reach its development targets, and guarantee the success of its citizens.

The evidence in this article is quite convincing of its thesis statement, that Pakistan needs a paradigm shift in the form of policy of brain circulation to achieve sustainable development. The above policy

recommendations offer a blueprint on how the shift can be achieved. Through the promotion of circular migration, targeted involvement of the diaspora, domestic reform, and exploitation of international collaboration, Pakistan will be able to start turning its brain drain into a brain gain. This is not going to be an easy or a fast process but a necessary process should Pakistan be liberated out of the dependency trap and move on to creating a more stable, successful and more self-sufficient state.

In future studies, the researcher needs to explore further on social and cultural consequences of brain drain on Pakistani society into the impacts on family structure, social cohesion, and national identity. More studies about the exact experience and motivation on various groups of Pakistani migrants must also be conducted, such as women and minorities. Last but not least is the need to conduct additional studies on the possible effects of artificial intelligence and other new technologies on the migration pattern and the future of work in relation to Pakistani professionals as the global economy continues to go digital and automated. We can only improve by persisting to learn and comprehend this phenomenon as it is the only way we can be equipped to counter challenges it throws our way as well as use its opportunities to our benefit everyone.

5.2 Policy Recommendations

As a measure to effectively tackle the complex issue of brain drain, Pakistan should implement a multi-faceted policy that is based on the multi-pronged approach that combined will address the factors that led to emigration and that will open new channels of communication with the diaspora. The recommendations that followed are as follows:

- **Encouraging Brain Circulation by Bilateral Agreements:** The Government of Pakistan must actively make bilateral deals with the major destination countries with special focus on the Gulf and Europe countries in order to enable circular migration. Such treaties ought not to just involve the so-called readmission and must contain the temporary working visa, the skill development programs and the transferability of the social security benefits. Such would enable Pakistani professionals to acquire international experience and skills which later on would be passed back to Pakistan resulting in an actual brain circulation effect.
- **Strategic Diaspora Engagement Programs:** Pakistan should stop relying on remittances passively, it should incorporate its diaspora as contributors of development. This may be done in form of a number of undertakings and these include: * Tax Incentives and Investment opportunities: provision of tax incentives, special investment schemes and simplified bureaucracy to overseas Pakistanis who intend to invest or initiate the business

in Pakistan. Knowledge Transfer Platforms: It is possible to design formal platforms, like virtual think tanks, online mentorship programmes, which would enable the Pakistani universities, hospitals and industries to access the knowledge of diaspora professionals without necessarily having to resettle permanently. Examples of Money Managers include: Diaspora Bonds Issuing \$100 million diaspora bonds to finance development projects such as education, health, and infrastructure, instead of squandering the money on sending it back home.

- Comprehensive Domestic Reforms: The best long term solution to brain drain is make the home more favorable and facilitating. This necessitates a strong concerted effort in fulfilling the deep structural reforms which include: Improving Higher Education, Realizing the objectives of Pakistan Vision 2025-through enhanced investment in higher education, research and development, university-industry linkages, and curriculum changes to address the needs of the new economy. This will not only enhance the quality of the graduates but will also give them a lot of opportunities in the Pakistan country. Economic and Governance Reforms: The goals are to seek policies to favor a sustainable economic development, job creation, and political stability and the rule of law. This involves addressing corruption, enhancing ease of doing business and ensuring the environment is much predictable and secure in terms of local as well as foreign investment.
- Taking Advantage of International Cooperation: Pakistan needs to be an active member in and to use international mechanisms in managing migration. This will involve collaborating with IOM and other global collaborators in order to effect the intentions of Global Compact on Migration. It also entails liaising with the OIC to set up a common platform on labor migration between the Muslim countries which safeguards the rights of the migrant workers and encourages them to give back to the society.

Declarations

Not Applicable(N/A)

Reference:

Adams, W. (Ed.). (1968). The brain drain. Macmillan.
https://books.google.com.pk/books/about/The_Brain_Drain.html?id=UbuZAAAAIAAJ&redir_esc=y

- Ain, N. U., & Muzaffar, M. (2025). Push and Pull Factors Driving International Migration: Insights from Pakistan. *Pakistan Social Sciences Review*, 9(1), 1-14.
- AP7AM. (2026, February 10). Unemployment in Pakistan soars to 21-year-high. Retrieved from <https://www.ap7am.com/en/120145/unemployment-in-pakistan-soars-to-21-year-high>
- Beine, M., Docquier, F., & Rapoport, H. (2008). Brain drain and human capital formation in developing countries: winners and losers. *The Economic Journal*, 118(528), 631-652.
- Bhagwati, J., & Hamada, K. (1974). The brain drain, international integration of markets for professionals and unemployment: a theoretical analysis. *Journal of development economics*, 1(1), 19-42.
- Business Recorder. (2026, January 15). Over half a million Pakistanis moved to Saudi Arabia in 2025. Retrieved from <https://www.brecorder.com/news/40402334>
- Carrington, W. J., & Detragiache, E. (1998). How big is the brain drain? (No. 98-102). International Monetary Fund.
- Castles, S. (2009). *The age of migration: International population movements in the modern world*. Palgrave Macmillan.
- Czaika, M., & Parsons, C. R. (2017). The gravity of high-skilled migration policies. *Demography*, 54(2), 603-630.
- Daugeliene, R., & Marcinkeviciene, R. (2009). Brain circulation: theoretical considerations. *Engineering economics*, 62(2), 79-88.
- Docquier, F., & Rapoport, H. (2012). Globalization, brain drain, and development. *Journal of Economic literature*, 50(3), 681-730.
- EUR-Lex. (2010). Agreement with Pakistan on readmission. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=LEGISSUM:jl0057>
- Filipovic, J., Devjak, S., & Ferfila, B. (2012). Diaspora engagement strategies and policies. *Uprava*, 10(4), 105-123.
- Frank, A. G. (1966). The Development of Underdevelopment. *Monthly Review*, 18(4), 17-31.
- Gallup Pakistan. (2023). *Gallup Pakistan Survey on Youth Aspirations*. Islamabad: Gallup Pakistan.
- Gibson, J., & McKenzie, D. (2012). The economic consequences of 'brain drain' of the best and brightest: microeconomic evidence from five countries. *The Economic Journal*, 122(560), 339-375.
- Grubel, H. G., & Scott, A. D. (1966). The international flow of human capital. *The American Economic Review*, 56(1/2), 268-274.

- Iftikhar, H. (2026). Migration and “Brain Drain” from Pakistan: A Barrier to Sustainable Development. *Social Science Review Archives*, 2(1), 1-15.
- International Labour Organization. (2019). International labour migration trends from Pakistan: data from the Bureau of Emigration and Overseas Employment (BE&OE), 2019. ILO Country Office for Pakistan.
- International Organization for Migration. (2022). *World Migration Report 2022*. Geneva: IOM.
- Johnson, H. G. (1965). The economics of the ‘brain drain’: The Canadian case. *Minerva*, 3(3), 299-311.
- Khadria, B. (2015). Trends in brain drain, gain and circulation: Indian experience of knowledge workers. *Journal of the Indian Ocean Region*, 11(2), 168-183.
- Khan, A. M. (2024). The effect of brain drain on the economic growth of developing countries: Evidence from Pakistan. *Annals of Human and Social Sciences*, 5(2), 1-12.
- Lowell, B. L. (2001). Some developmental effects of the international migration of the highly skilled. International Labour Organization.
- Marini, G., & Yang, L. (2021). Globally bred Chinese talents returning home: An analysis of a reverse brain-drain flagship policy. *Science and Public Policy*, 48(4), 541-552.
- Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., & Taylor, J. E. (1993). Theories of International Migration: A Review and Appraisal. *Population and Development Review*, 19(3), 431–466.
- Modern Diplomacy. (2026, January 31). Reverse Brain Drain: How China Is Recruiting the World’s Talents. Retrieved from <https://moderndiplomacy.eu/2026/01/31/reverse-brain-drain-how-china-is-recruiting-the-worlds-talents/>
- Mountford, A. (1997). Can a brain drain be good for growth in the source economy?. *Journal of development economics*, 53(2), 287-303.
- Mukhtar, A. (2025, July 28). Brain drain costs economy \$4.2 billion annually. *The Express Tribune*. Retrieved from <https://tribune.com.pk/story/2558228/brain-drain-costs-economy-42-billion-annually>
- Myint, H. (1968). The underdeveloped countries: a less alarmist view. In *The brain drain* (pp. 233-246). Palgrave Macmillan, London.
- Nadir, M., Rehman, D. A., & Ullah, M. N. (2025). An Empirical Investigation Of Socio-Economic Determinants And Economic Consequences Of Brain Drain In Pakistan. *The Pakistan Journal of Social Issues*, 14(1), 1-18.

- Organisation of Islamic Cooperation. (n.d.). OIC Framework for Cooperation on Labour, Employment and Social Protection. Retrieved from <https://www.oic-oci.org/docdown/?docID=3014&refID=1109>
- Pakistan Institute of Development Economics. (2022). Situation of Brain Drain in Pakistan, with a focus on the Healthcare Sector. PIDE Knowledge Brief, 102.
- Pakistan Institute of Development Economics. (2023). The PIDE Reform Agenda for Accelerated and Sustained Growth. Islamabad: Pakistan Institute of Development Economics.
- Patinkin, D. (1968). A “nationalist” model. In *The brain drain* (pp. 92-108). Palgrave Macmillan, London.
- Qaisrani, A. A. (2022). Reaching out, inviting in: Pakistan's approach to diaspora engagement. *Migration and Development*, 11(3), 836-856.
- Roudgar, I. (2016). The Global Brain drain: Theory and Evidence. *Journal of Economic and Social Thought*, 3(3), 363-376.
- Saxenian, A. (2006). *The New Argonauts: Regional Advantage in a Global Economy*. Harvard University Press.
- Shah, A. H., & Shah, S. S. (2024). Strategy for optimizing human capital export from Pakistan: A game-theoretic approach with a focus on Khyber Pakhtunkhwa. Research Square.
- Stark, O., & Bloom, D. E. (1985). The New Economics of Labor Migration. *The American Economic Review*, 75(2), 173–178.
- Surani, N. H. (2021). *Turning Brain Drain into Brain Gain: Harnessing Pakistan's Skilled Diaspora* (Doctoral dissertation, University of Toronto).
- Teferra, D. (2005). Brain circulation: Unparalleled opportunities, underlying challenges, and outmoded presumptions. *Journal of Studies in International Education*, 9(3), 229-250.
- The Express Tribune. (2026, January 7). Skilled professionals leaving Pakistan in record numbers in search of stability, dignity, and opportunity. India Tribune. Retrieved from <https://www.indiatribune.com/public/index.php/skilled-professionals-leaving-pakistan-in-record-numbers-in-search-of-stability-dignity-and-opportunity>
- The News International. (2026, January 12). No letup in brain drain as thousands leave country. Retrieved from <https://www.thenews.pk/print/1392317-no-letup-in-brain-drain-as-thousands-leave-country>
- Tiwari, S. (2013). Diaspora engagement policy in South Asia. In *Diaspora Engagement and Development in South Asia* (pp. 211-232). Palgrave Macmillan, London.

United Nations. (2018). Global Compact for Safe, Orderly and Regular Migration. Retrieved from <https://refugeesmigrants.un.org/migration-compact>

United Nations Development Programme. (1994). Human Development Report 1994. New York: Oxford University Press.

Wong, L. L., & Guo, S. (2023). Brain drain, brain gain and brain circulation: emerging trends and patterns of Chinese transnational talent mobility. *Journal of Chinese Overseas*, 19(1), 1-25.

World Bank. (2024). Personal remittances, received (% of GDP) - Pakistan. Retrieved from <https://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS?locations=PK>

World Bank. (2023). Migration and Development Brief 37. Washington, DC: World Bank.