

Factors Causing Brain Drain in Pakistan

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Abstract

Brain Drain is a term that highlights as a significant factor in a country's growth and productivity that defines the migration of highly skilled and qualified workforce to developed nations from their native land and country. Similarly, in case of Pakistan Brain Drain has become a grave issue as every year thousands of highly skilled workforce and qualified people migrates to the developed nations because of lack of resources and opportunities which can help them to grow professionally as well as personally. On the other hand, the developed nations have an edge of providing the opportunities and facilities to those individuals who migrate and become brain gain in those countries the reason of that is the attractiveness and better opportunities that the developed nations are providing in their country to the skilled and qualified workforce. This research investigates the complex factors contributing to the phenomenon of brain drain in Pakistan. Despite being a country rich in talent and human capital Pakistan has experienced a significant outflow of skilled professionals in recent years. This abstract outline key factors that how the economic constraints and infrastructure challenges plays an important role in causing brain drain in Pakistan and the lack of research and innovation along with quality educational institutes and opportunities with better training programs are the causes of brain drain issue in Pakistan. Understanding these factors is crucial for policymakers to develop strategies aimed at retaining and attracting skilled individuals, thereby mitigating the adverse effects of brain drain on Pakistan's development.

Keywords: Brain Drain, lack of opportunities, quality education, skilled workforce, and business friendly environment.

Brain drain is the migration of highly qualified and educated personnel from one country to another, often leading to a loss of intellectual capital in the country of origin. This phenomenon has a significant impact on both developed and developing countries, affecting economic, social and technological aspects. The term 'brain drain' gained importance in the 1960s, especially in relation to the migration of scientists and professionals from developing countries to developed countries. The causes of brain drain are diverse and include factors such as economic inequality, lack of employment opportunities, political instability, and improved quality of life in target countries (Docquier & Rapoport, 2012). Push and pull factors play an important role in encouraging individuals to seek opportunities abroad. The main driver is the pursuit of further education and research opportunities. Many talented people seek better academic and research environments abroad and are often attracted to prestigious institutions and state-of-the-art facilities. This academic magnetism is especially evident in fields such as science, technology, engineering, and mathematics (STEM). Economic inequality plays a crucial role in brain drain. Individuals may migrate in search of higher paying jobs, better working conditions, and access to a more competitive labor market. This economic motivation is heightened when career advancement and entrepreneurial opportunities are limited in the home country. Political instability and social factors also contribute to brain drain. Countries facing political instability, discrimination, and lack of personal freedom may experience a brain drain in search of a more stable and inclusive environment.

In addition, social issues such as limited healthcare, education, and infrastructure can lead individuals to seek better living conditions abroad. The effects of brain drain are serious. This migration of talent can have a negative impact on the development of countries of origin as it depletes the pool of skilled professionals needed for economic growth and innovation (Beine, et al., 2013). This loss of human capital can lead to a "skills gap" and hinder the development of key sectors such as healthcare, technology and education. While destination countries benefit from an influx of qualified experts, sending countries experience a loss of human resources that could contribute to their development. This can lead to stagnation in innovation, economic growth, and the overall well-being of lagging societies. However, these dynamics can lead to global inequality, as migration of skilled workers from less developed countries to more developed countries occur frequently. Meanwhile, target countries benefit from brain drain by gaining access to a diverse talent pool, contributing to economic development and competitiveness (Kerr, 2018).

What are the factors causing Brain Drain in Pakistan?

Brain Drain in Pakistan has become a major issue in which the high skilled and high qualified workers move to abroad or to developed nations for better opportunities and better standards of living due to various factors which have a negative impact both on the nation and economy of the country. From past years since 1971 to 2022 around 60, 19,888 high qualified workers and professionals have been migrated from the country because of lack of political stability, terrorism, financial instability, lack of

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education and technological advances, poor infrastructure and economic instability. This research will focus on how lack of space to accommodate the huge amount of skilled labor and lack of opportunities to career progression in Pakistan has caused brain drain among people resulting in a disadvantage for the country. The main objective of this research is to highlight the important factors causing brain drain among the people and to develop accurate and sustainable policies in the country to reduce the migration of the highly skilled and qualified workforce. It will further conclude that how Brain Drain in the country can be converted to Brain Gain by adopting the preventive measures to resolve this issue so that the highly skilled workforce talent could be retained in the country and will further help to attract the global talent around the world.

Efforts to reduce brain drain include implementing policies that foster an enabling environment for professional development, investing in education and research infrastructure, and creating incentives for qualified individuals to stay or return is included. Efforts to stem brain drain include improving domestic conditions, creating incentives for qualified professionals to stay, and promoting international cooperation to ensure a fair exchange of knowledge and talent (Beine, et al., 2016). Finding a balance between global talent mobility and national development needs remains a complex challenge that requires international cooperation and innovative solutions.

Study Objectives

- To understand the factors that are causing Brain Drain in Pakistan.
- To highlight the possible measures that can be taken to prevent this issue.

Research Questions

- What are the factors that are serving as incentives or pull factors for immigration?
- How has the Migration of the Educated and Skilled Impacted the Community?
- Brain drain can be controlled by? Explain briefly.
- What do the effects of brain drain on the functioning of universities in Pakistan?
- What can be done on a local level to retain those young people or encourage some to return?

Contribution to the Study

Many literatures have been documented in the domain of the factors that are causing brain drain in Pakistan, but this research contributes to some of the factors which are as important to highlight like the previous studies. This study highlights the factors like how lack of opportunities for career progression and lack of space to accommodate highly skilled workforce causes Brain Drain in Pakistan and what underlying components are needed to be addressed to solve this issue. Career advancement gives individuals the opportunity to climb the professional ladder, learn new skills, and take on more challenging roles. This path often involves pursuing higher education, gaining experience, and assuming leadership responsibilities. However, what is noteworthy is the relationship between career advancement and brain drain. Often, opportunities for advancement are limited in the home country, so individuals seek better opportunities abroad.

The lure of faster career growth, better infrastructure and higher salaries can lead to an exodus of talent and contribute to brain drain. This phenomenon poses challenges for countries that are losing skilled labor and has a negative impact on economic development. To address this issue, countries are creating an environment that improves domestic career opportunities, fosters innovation, and retains skilled talent, thereby mitigating the negative impact of brain drain on local talent pools. The need for space to accommodate a large and highly skilled workforce is a critical aspect of any country's economic and technological growth. When countries invest in education and skills development, they develop a talented workforce that contributes significantly to innovation and productivity. However, this scenario is often associated with the brain drain phenomenon, where a significant proportion of highly qualified professionals migrate abroad in search of better opportunities. This immigration can leave gaps in the country's workforce, impacting its ability to make the most of investments in education and skills development. To address this issue, nations must strike a balance between retaining talents through improved economic opportunities and creating an environment that attracts global talent and fosters brain gain rather than brain drain.

Appropriate infrastructure, attractive working conditions and supportive policies play a key role in both securing a skilled workforce and curbing concerns of brain drain. This study explores that how business friendly environment, quality educational institutes and training programs, and infrastructure play a significant role in preventing this problem of brain drain in Pakistan. The above-mentioned components are the pull factors for immigration to developed countries. The study focuses on these components to gather valuable perceptions and reasons from respondents to get knowledge about the recent issue. The findings and results of this study will provide the recommendations to address the brain drain problem in Pakistan so that this issue can be prevented in the host country by providing the valuable resources, creating the policies and making possible measures in the country. In addition, the present study provides the evidence to conclude and resolve this issue of Brain Drain that to what extent it can affect the host country in future and how important is to get acknowledged about the reasons that attract the highly skilled workforce to developed countries.

LITERATURE REVIEW

Lack of opportunities for career progression

Migration of highly skilled workforce from Pakistan is due to one factor that it lacks the career progression opportunities in the country due to which many healthcare professionals, educational professional, researchers and scientist migrates to other developed nations for better standards of living. They found the opportunities in those countries more favorable and attractive that can fulfill their satisfaction level and can provide them the opportunity to enhance their career and life goals. This variable in Pakistan has caused a negative impact on the country's economy due to which the country can face a drastic change in the near future. According to a survey from 1971 to 2022 the total number of highly qualified and skilled people including healthcare professionals who migrated from the country is 60, 19,888.

Among them, 251677 (4.18%), were highly qualified, 455097 (7.55%) were highly skilled, and 5313114 (88.27%) were skilled professionals. Lack of professional development opportunities is a major driver of brain drain, as talent seeks opportunities for professional growth and development. Given the limited opportunities for advancement in the home country, the individuals are often forced to seek opportunities abroad where their skills and expertise are likely to be better valued. Research shows that the lack of clear career paths and professional development programs in a country can lead to a loss of skilled workers (Docquier et al., 2018). This phenomenon is further intensifying when talent encounters obstacles such as nepotism, favoritism, and inadequate investment in education and training. According to a World Bank report, countries with rigid labor markets and poor career development structures are more vulnerable to brain drain (World Bank, 2019). Essentially, the lack of advancement opportunities creates a vacuum, causing qualified professionals to look for greener fields where they can fulfill their professional development desires.

Quality educational institutes and training programs

In Pakistan lack of quality educational institutes and lack of training programs that how to progress the career has caused a brain drain issue. Unfortunately, the higher education system and universities focuses more on numbers than quality of the individual due to which the students, workers or employees lost the track to progress in career field also the lack of resources and technological advancement are the other additional push factors that ultimately linked and contribute to this problem. The educational system in Pakistan is more focused on the bookish knowledge rather than the practical framework this has caused a mismanagement factor among the people who are focused to progress in their career field. This factor has developed a perception and misconception in the people that rather than practical knowledge acknowledgment numbers are more favorable to progress the career and due to this reason they are lacking the practical knowledge around the industry and when in this situation the intellectual knowledge gets avoided in some sectors it forces the skilled workers to migrate to developed nations where their work can be acknowledged and where they can be recognized by their true potential which ultimately enhances their satisfaction level and standards of living along with the career growth. (Nadir, et al., 2023) reported that one in three medical students intends to migrate abroad after graduation due to a lack of resources and mismanagement in Pakistan. This has a negative impact on the country in the long run and lack of training programs, quality education, counseling and guidance has deviated the path of Pakistan future which can adversely affect both the people and country. To resolve this issue the higher commission educational authorities, need to revise the policies and needs to conduct the training programs for the people to progress their career so that the quality knowledge should be adapted, and intellectual knowledge should be acknowledged which can reduce brain drain in the country.

Business friendly environment

Business friendly environment plays a vital role in the economy of the country it prospers beneficial investments and business growth

plans and opportunities for the country and its people. These strategies have benefitted the developed and the host countries in the most positive aspects and are the pull factors for the highly skilled workers to migrate. Better standards of living, friendly business environment, career growth opportunities, social openness, political stability, high wages and recognition of the true potential are the factors that attract the global talent due to which the highly skilled workers serve the host countries rather than the native countries as they lack such opportunities in their own country. For the short term this could have a positive aspect for the country in the means of remittances that the overseas Pakistanis pays for their homeland but in the long run it can result in the huge loss of highly skilled workforce in the country. Political stability in this situation plays a great role for the countries to attract the foreign investors and funding for the country but the current political instability in Pakistan unfortunately can have an adverse effect on business environment due to which it's impossible for us to invest in new business ventures and to attract the global talent and highly skilled workforce and expansion of the business programs in the country.

Poor economic structures lead to non-friendly business environment and are the biggest constraints to attract the foreign investors to invest in the country where their business ventures and programs could be collapsed due to the poor economy conditions. On the other hand, Entrepreneurship practices can accelerate the economy growth and the countries that are attracting the global talent are promoting this practice also for the progressive growth of economy. Canada has changed its policy facilitating business immigrant with huge capital (Li, 2003). Even most of the immigrants start business as career in other countries, instead of doing business in country of origin (Wennekers & Thurik, 1999). Many entrepreneurial activities are regulating in Pakistan also and are contributing to the economy growth but still many entrepreneurial businesses failed also due to unstable economic, political, demographic and geographical problems. The unstable business environment and lack of investing and guidance in their business lead to the close-up shutdown of their business plan as they lack the environment and guidance as well as funding which will help them to promote and prosper their business. If the government and regulatory business authorities address these factors and revise and creates the new policies to have a business-friendly environment to prosper and promote business industry and entrepreneurship programs in Pakistan with a great potential it can reverse the effect of brain drain into brain gain in the country.

Lack of space to accommodate huge amount of highly skilled workforce

Economy of Pakistan lack space to accommodate huge amount of highly skilled workforce which is the most significant factor of brain drain in the country. Lack of resources, equitable opportunities, technological advancements, labor laws and imbalance in demand around the industries has raised the concerns for the country to control the brain drain methodology in the country as these push factors are coercive in nature to the people. Major urban centers in Pakistan like Lahore, Karachi, and Islamabad are experiencing rapid population growth in the country which has highlighted the major issues of lack of space of offices

and houses to accommodate the people who are highly skilled and qualified. This has resulted in limited resources, space and opportunities for highly skilled professionals due to which they are compelled to seek better standards of living and opportunities abroad or in developed nations. It has a negative impact on the country's future progress as it is a crucial problem to get resolved in a timely manner.

The brain drain phenomenon is exacerbated by a lack of space for the growing number of highly skilled workers and is a multifaceted problem with serious socio-economic implications. As countries struggle to provide adequate opportunities for their skilled workforce, talent is forced to seek greener fields overseas, resulting in a significant loss of intellectual capital. This migration is often driven by the pursuit of better career prospects, higher salaries, and more favorable research environments. For example, a study by (Docquier & Marfouk, 2006) shows those drivers such as limited employment opportunities and career advancement opportunities play an important role in encouraging the migration of skilled workers. The lack of jobs that match their qualifications and expertise in their home countries is what drives these people to seek opportunities elsewhere. Furthermore, the findings of (Lowell & Findlay, 2001) show that the lack of infrastructure to support research and development further exacerbates brain drain. Countries that cannot invest in cutting-edge technology and innovation have difficulty retaining qualified professionals who seek an environment that contributes to intellectual development and scientific progress. In summary, limited opportunities, poor career prospects, and a lack of overall research infrastructure are combining to create a brain drain as countries struggle to accommodate an emerging, highly skilled workforce. This is a contributing factor. Addressing these issues requires strategic actions aimed at creating an environment that fosters professional development and preserves intellectual capital within the country.

Infrastructure

Infrastructure development plays an important role in the country's development and growth as it has a direct and a long-term relation with the GDP of the country. Infrastructure affects the per capita income due to which highly skilled workforce migrating towards the developed nations like US which is the central hub for the highly skilled workforce due to its strong infrastructure (Canning & Pedroni, 2004). (Li & Li, 2008) explain that investment in infrastructure is very vital to heighten the growth in the case of China from (1997-2006). Developed nations have used this key factor of strong infrastructure to attract the brain gain of the other countries. Although Pakistan has initiated some policies for the infrastructure development but still it lacks the progress to develop a strong infrastructure. Roads, energy generation, schools and hospitals are the basic infrastructure programs that play a vital role in the development.

An infrastructure deficiency is one of the main components that link to lack of space to accommodate huge amount of highly skilled workforce variable. Pakistan infrastructure including transportation and other utilities facilities is facing a biggest challenge to accommodate the skilled population and is struggling to keep the pace with the demands of the rapidly growing workforce which has an adverse effect on the productivity ratio of

the country. Many rural areas can contribute to reduce the brain drain effect in the country, but the major issue is that those rural areas are lacking the basics infrastructure facilities till today which is the constraint factor in the development. Such negligence can hinder the global competitiveness of Pakistan as it will struggle to provide its highly skilled workforce with a productive and positive environment. Also, it will have a negative social and economic effect on the country development. Investment in infrastructure programs is essential to promote and support the economy which will lead to the productive workforce environment and opportunities for the growing and highly skilled workforce and will reverse the impact of brain drain into brain gain for the country.

FRAMEWORK OF THEORY

This is the theoretical framework of the theory, and it is linked with the existing literature about Brain Drain. Brain Drain methodology for developing countries has always been a concern from past years but unfortunately this methodology has not been focused to be addressed properly much in Pakistan also some possible measures are required to resolve the issue timely so that the country do not have to face a huge loss of highly skilled workforce in near future. The base theory of this research is migration theory where the dependent variable is the term Brain Drain independent variables are lack of opportunities for career progression and space to accommodate huge amount of highly skilled labor in Pakistan. The further components of the above-mentioned variables are linked with the term brain drain and result in a relationship which can be positive and negative according to the situations and policies. The brain drains issue has benefited the host countries in a positive aspect a lot whereas it has a negative impact on the hometown or native country of the workers that migrates to developed countries because of some push and pulls factors. This research will highlight some of the significant push and pull factors that force individuals to migrate to developed countries for a better future.

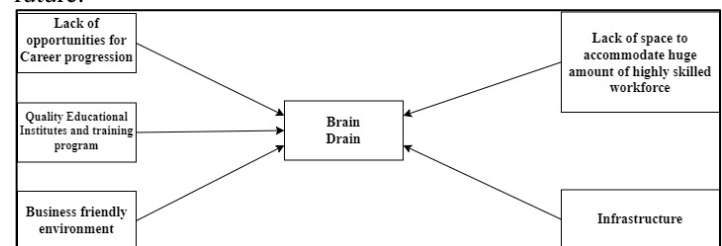


Figure 1: Framework

UNDERPINNING THEORY

Migration theory is an interdisciplinary field that studies the patterns, processes, and outcomes of human migration. This includes a variety of perspectives, including economics, sociology, and anthropological approaches, to understand why people move from one place to another. A popular theory is the push-pull model, which posits that individuals are motivated to migrate by a combination of factors that pull them away from their place of origin (e.g., economic hardship, political instability) and pull them toward their destination (e.g., employment opportunity, better living conditions). In the context of migration theory, brain drain

refers to the migration of highly skilled and educated individuals from their home countries in search of opportunities abroad. This phenomenon affects both the country of origin and the destination. From the country-of-origin perspective, this can lead to a loss of human capital and hinder economic development and innovation. Conversely, destination countries often benefit from an influx of skilled labor, which contributes to economic growth and technological progress. According to (Lowell & Findlay, 2001), brain drain can be viewed from a microeconomic perspective, focusing on individual decision-making, or from a macroeconomic perspective, focusing on broader economic impacts at the national level. It can be analyzed from the push-pull model is often used to explain brain drain, with a lack of job opportunities, political instability, and rising wages abroad acting as push factors, and improved career prospects and educational opportunities acting as pull factors. Migration theory helps us understand the general dynamics of human mobility, but examining brain drain within this framework provides a nuanced look at the impact of skilled migration on global and regional development. To understand the complex nature of migration patterns and their impact on society, it is important to consider the interconnectedness of social, economic, and political factors. In this study, the investigation of push and pull factors associated with brain drain may include the investigation of individuals who migrated for educational or occupational reasons. Insights from such studies have the potential to contribute to a more nuanced understanding of migration dynamics and inform policymakers and stakeholders on strategies to combat brain drain and promote sustainable development.

How this theory linked with the present study

This Push and Pull theory relate to the current study in order to determine the factors that are causing the Brain Drain in Pakistan. These theories will highlight what important factors are the pull factors and ultimately the push factors for highly skilled workforce to migrate. In addition, it will give a detailed view of components that quality educational institutes and training programs in the country including the infrastructure and business friendly environment are the push factors for people to migrate because these components are inversely the pull factors for immigrants to developed countries. It will highlight that why the immigrants found these components and variables more favorable in developed countries and how these components can affect our country in future negatively and adversely if they will not be addressed at the present time.

Migration theory remains highly relevant in contemporary research, especially in the context of brain drain. Brain drain is the migration of highly qualified and educated people from one country to another, often leading to a loss of the intellectual capital of their home country. This study links migration theory to the brain drain phenomenon in examining the diverse impacts on countries of origin and destination. The study considers the causes and consequences of brain drain and investigates the drivers and pulls factors that motivate qualified professionals to change jobs. We also analyze the economic, social, and cultural impacts and reveal how this migration pattern affects the global distribution of human capital and influences national development trajectories.

By linking migration theory with brain drain, this study provides a comprehensive understanding of the complex dynamics involved in the cross-border movement of skilled individuals in today's world.

METHODOLOGY

A comprehensive research design is important to examine the brain drain phenomenon in detail through qualitative research. This study could use a phenomenological approach aimed at understanding the life experiences of people who migrated due to brain drain. Purposive sampling methods allow you to select participants from a variety of backgrounds, including different occupations, education levels, and regions of origin. Semi-structured interviews serve as the primary data collection method, allowing participants to articulate their motivations, challenges, and the impact of migration on their professional and personal lives.

Additionally, researchers can also conduct thematic analysis of relevant documents such as articles, blogs, and social media posts to capture public opinion and narratives about the brain drain. Ethical issues such as confidentiality and informed consent must be carefully considered. By adopting such a research design, this study provides a nuanced understanding of various aspects of brain drain and provides valuable insights for policy makers and stakeholders to address this global problem. The underlying research objective of present study is to understand the role of mentioned variables that how lack of opportunities for career progression and lack of space to accommodate a huge amount of highly skilled workforce are the important factors in causing brain drain in country.

In this research phenomenon the research philosophy includes phenomenology philosophy because of the factors that are going to be addressed in the study. As it involves complex views and situations according to human behavior and experiences which can differ from the other in various circumstances and is particularly based on the observation's strategy of each individual. Results are assured not to be similar every time in this philosophy and can produce different outcomes in some of the cases. The present study adopt inductive approach is used to support this research and study as it involves building a theory by having a specific data and observation of the objectives and factors that are going to be address by creating a pattern or procedure to analyze the data it will ultimately develop a generalized conclusion to the problems of this research.

Based on research objectives, the research strategy is more likely to be qualitative strategy as it will provide deeper and greater insights of the factors that are causing brain drain among the people and what possible measures should be taken to control them. Also, it will help to gather information related to different opinions, experiences and perceptions people have among them to support this research work. So, non-numeric data will be more likely to be linked in this research. Research strategy will be primary strategy. The process of data collection in this research will be Primary data and it will be done through interviews guide questionnaires or surveys which will include open end to end conversations and questions to observe and analyze the perception of people. According to this research the processed information to

support the study was also used so then Secondary data collection method was opted to analyze the details through the government documents, reports, case studies, past research papers along with the information from World Development Indicator (WDI) and Bureau of Emigration and Overseas Employment (BEOE). It will also include some journal articles, websites and various reports data to interpret and support the study methodology.

The time horizon to support this research will be approximately 4 to 5 months and It will include cross sectional time horizon as this approach will help to analyze the current state of the factors at a specific time period which are needed to address in this research and can help us to get a immediate snapshot of the conditions that are prevailing among the youth compelling them to migrate to other countries. Cross sectional approach can help us to develop immediate solutions or policies that can reduce the effect of brain drain and can highlight the existing challenges and disparities in opportunities and accommodations so that a possible clarification can be develop to solve the problem.

Research data collection will be a primary source in case of this study. The process of data collection in this research will be Primary data and it will be done through interviews guide questionnaires or surveys which will include open end to end conversations and questions to observe and analyze the perception of people. According to this research the processed information to support the study was also used so then Secondary data collection method was opted to analyze the details through the government documents, reports, case studies, past research papers along with the information from World Development Indicator (WDI) and Bureau of Emigration and Overseas Employment (BEOE). It will also include some journal articles, websites and various reports data to interpret and support the study methodology.

When the underlying objective is to explore based on opinions, experiences and attitudes qualitative techniques using semi structured interviews is most appropriate. Through this in-depth interview the information can be analyzed, and information can be established to know the factors that can contribute to resolve the issue of Brain Drain. The main purpose of in-depth interview is to collect the information from the respondents according to their experiences, behavior, perceptions and opinions. The questions asked in this interview are open ended questions to have a detailed view and answers of respondents when they have a lot to share related to the issues. It is significant to use in-depth interviews because when the study's underlying objective is to have detailed and exploring information data the interview survey method is most appropriate tool to gather the valuable information.

The present study also focuses on the in-depth interview analysis tools and techniques because it can provide valuable information and opinions related to the Brain Drain issue and how the above-mentioned factors have significant relations to the dependent variable and how it can affect the future conditions of the country. The present study considered the individual employees, undergraduate and post graduate students as a single unit for analysis. In-depth interviews are the foundation of qualitative research because they can provide rich and nuanced data by engaging participants in open conversations. These interviews provide a platform for participants to deeply express their

perspectives, experiences, and emotions, allowing researchers to delve deeper into the complexities of human behavior and cognition (Smith, 2015). Unlike structured surveys, in-depth interviews are flexible and allow researchers to explore unexpected topics that may arise during conversations (Seidman, 2013). Furthermore, the personalized nature of these interviews fosters a relationship and trust between researchers and participants, allowing for more open responses (Rubin & Rubin, 2012).

This interpersonal relationship is important for uncovering deeply held beliefs and sensitive topics that participants may not wish to reveal in an impersonal survey format. Furthermore, in-depth interviews allow researchers to capture the contextual nuances surrounding participants' responses, providing a holistic understanding of the topic being investigated (Patton, 2015). Additionally, the iterative and dynamic nature of in-depth interviews allows researchers to adjust the study based on preliminary findings, leading to a more comprehensive exploration of the research topic (Fontana & Frey, 2005). This iterative process increases the depth and validity of the data collected. In summary, in-depth interviews are a valuable qualitative research method that provides a nuanced understanding of human experience and allows researchers to explore complex topics in a flexible and context-rich manner.

Qualitative research or exploratory research includes some limitations. The study can have certain limitations in the research mostly the research conclusion, findings and results can be influenced by the researcher biasness therefore the literature documented some methods to deal with limitations by conducting two or more interviews when the research reaches at the saturation point. Cross sectional respondents can eliminate this limitation by cross validations interviews responses of the research. Sampling techniques and sample sizes are based on the population. The unit of analysis can be an individual, an organization, or a group, depending on the scope and nature of the study (Skaran & Bogie, 2016). In this study, population-based purposive sampling technique is used, and, in this study, non-probability sampling technique is used.

According to this research study it will use non-probability sampling technique as it involves exploratory research also in nonprobability method it can have more convenient and purposive data collection through the individuals who are selected based on nonrandom criteria. The process of data collection through multiple and nonrandom approach of sample will be easy for this study. The sample size would be approximately 20 to 30 people or respondents as the sampling technique is nonprobability so it will include multiple numbers of people from different areas. The research includes nonprobability techniques, and the responses were collected from multiple people working in different areas. The sample size was approximately 20 to 30 as it was in depth research of the study. Interviews questions open ended were asked from the respondents to collect detailed and valuable information about the issue. Google forms were circulated among the respondents to collect responses because of the limited time frame to get the findings and results of the study.

To understand the findings and direction of association among the constructs it is important to understand the phenomena and concept of that research. However, for the better understanding the current study will explain the operational definition of five variables being used in current study. The operational definition of latent constructs is as follows. Lack of professional development opportunities can be operationally defined as the lack of clear paths or prospects for advancement within an organization, which hinders an individual's professional development. This approach includes limited access to skill development programs, mentoring initiatives, and leadership training (Smith, et al., 2018). Additionally, there is a lack of advancement opportunities, and employees have stagnant job roles without opportunities to advance through the organizational hierarchy (Jones & Brown, 2019).

Quality educational institutions and training programs can be operationally defined as institutions and initiatives that consistently provide excellence in a variety of important dimensions. These include faculty expertise, curriculum relevance, state-of-the-art facilities, and positive learning outcomes (Smith & Johnson, 2019). Faculty expertise is evaluated based on academic background, industry experience, and research contributions (Brown, et al., 2020). The operational definition also considers curriculum relevance and assesses the alignment of course content with industry needs and emerging trends (Jones, 2018). Positive learning outcomes are measured by assessing student performance, retention, and post-graduation success in the professional field (Taylor, 2021). A business-friendly environment can be operationally defined as a set of conditions and policies that promote an atmosphere favorable to entrepreneurial activity and economic growth in a particular region or jurisdiction. This concept includes various factors such as regulatory framework, tax system, ease of doing business, and general support for business (Smith & Jones, 2018). Support for businesses includes access to finance, infrastructure development, and efforts to promote innovation and entrepreneurship (Anderson, 2017).

Lack of space to accommodate a significant number of highly skilled employees is when the physical infrastructure and workspace within an organization is inadequate to adequately accommodate and support many highly skilled employees. It can be operationally defined as a sufficient situation. This concept considers factors such as workplace density, available office space per employee, and the overall ergonomic design of the work environment (Smith, et al., 2018). An important consideration is the ratio of employees to available workspace to avoid overcrowding and ensure an atmosphere that promotes productivity (Jones & Brown, 2019).

Infrastructure can be operationally defined as the basic framework of physical and organizational structures that support and enable the functioning of a society, industry, or system. This includes various components such as transportation networks, energy systems, communication facilities, and public services (Smith & Johnson, 2019). Physical infrastructure includes material assets such as roads, bridges, airports, power grids, and water networks (Brown, et al., 2020). The operational definition extends to social infrastructure and includes institutions such as schools, hospitals,

and public spaces that contribute to the general welfare and development of the community (Jones, 2018). Additionally, organizational infrastructure includes the systems, processes, and policies that facilitate the smooth operation of businesses, governments, and other entities (Taylor, 2021).

FINDINGS AND DISCUSSIONS

The present study discusses that how the below mentioned challenges and issues are causing the Brain Drain problem in Pakistan. Approximately 5-6 questions were asked from the respondents on which they have provided a detailed overview of the situation according to their experiences and opinions. The study finds that better opportunities, living standards, quality education with training programs including friendly business environment and infrastructure plays a significant role in migration of highly skilled workforce. Recent studies have highlighted some important factors, but present study highlights the issues which are not being addressed and are vital components in causing brain drain.

There are several factors that serve as pull factors for immigration, such as economic opportunities, better living conditions, and access to education and healthcare. The chance of a better life abroad where one can gain better medical care, living conditions, better wages, security and infrastructure are factors that serve as pull factors for immigration. Social, educational and economic factors are important to consider availing different opportunities in order to improve the quality of life. These factors are mainly serving as pull for immigration because people are searching for a better job to get a stable life which is hardly possible to gain in Pakistan that's why in order to live a quality life people are going out of Pakistan also to get good educational facilities to their children and also for the safety of their kids because crime rates are also increasing in Pakistan day by day that's why people are preferring to move in those countries that are economically stable and socially safe. Pull factors for immigration include better job offerings, higher wages, improved living standards, political stability, better education, and a perceived higher quality of life.

Informants stated that:

"There are both internal and external factors in regard to why immigration takes place. Some of the external factors that qualify as pull factors are as follows. The chance of a better life abroad where one can gain better medical care, living conditions, better wages, security and such serve as pull factors for immigration".

While another respondent stated that

"Pull factors for immigration include better job offerings, higher wages, improved living standards, political stability, better education, and a perceived higher quality of life. Sometimes it's about family reunion, favorable immigration policies, and social factors such as cultural ties can also contribute to attracting immigrants to a particular destination".

The findings include that better standards of living, political stability, economic and environmental stability, quality education and friendly environment access to the resources and better opportunities are important factors that serve as incentives of pull factors of immigration. The migration of educated and skilled

individuals leads to a “brain drain” effect, where the community loses valuable talent. The migration of the educated and skilled has transformed the local community by robbing it of intellectual and bright minds which would otherwise be the leading forces of change in the future.

Informants stated that:

“The migration of the educated and skilled has transformed the local community by robbing it of intellectual and bright minds which would otherwise be the leading forces of change in the future. This will result in a stubbornness and clinginess to old customs and ways of thinking, stopping new ideas and innovations to be propagated into the community”.

While another respondent stated that

“It brings a major impact on the level of output and development of the community because it leaves both positive and negative impact like if we talk about positive impact skilled and educated people will be a source of economic growth, they will be helpful in transferring knowledge to new learners their mindset will be helpful in the entrepreneurship and cultural diversity of that place while in negative impact when there will be an increase in unskilled and uneducated people it'll be vast competition for jobs due to unemployment in our country, social inequalities will be increased and there will be lack awareness for the people to deal with all the changing situations”.

According to respondents the migration of highly skilled workforce has affected the community negatively and has an adverse effect on the community because the immigration of skilled force has left a huge gap in the progress of the country which has developed phenomena of brain drain and has a stagnant impact on the growth. The contribution of such workforce can have a positive impact on the country progress if they can have all the standards in their host country then the pull factor approach cannot be determined by the migrants.

Brain drain can be managed by implementing laws that encourage talented individuals to stay in their home countries or communities, offering opportunities for professional growth, competitive pay, and attractive employment. This can include creating better job opportunities, improving working conditions, offering competitive salaries, providing access to quality education and research facilities, and fostering a supportive environment for innovation and entrepreneurship. Basically, brain drain can be controlled in our country when it will be economically and politically stable and it's not an easy task to stabilize both of these things in our country but we can try to maintain it mainly economic path if we start professional development programs with entrepreneurship support by doing research and innovation we can control brain drain all is needed hopeful and positive attitude towards success. Controlling brain drain involves implementing measures to retain and attract skilled individuals.

Informants stated that:

“Brain drain can be controlled by implementing policies and initiatives that aim to retain and attract talented individuals. This can include creating better job opportunities, improving working conditions, offering competitive salaries, providing access to quality education and research facilities, and

fostering a supportive environment for innovation and entrepreneurship”.

Another respondent claims

“It can be controlled by making improvements in our education sector on higher level in which, when skills sets are improved, and students gets to experience everything practically they might be able to set a strong foot in the market which may result in less of a brain drain”.

While another stated that

“Brain drain can be managed by implementing laws that encourage talented individuals to stay in their home countries or communities, offering opportunities for professional growth, competitive pay, and attractive employment. Knowledge sharing and investment in educational institutions can also help retain brilliant individuals. Addressing the root causes of brain drain can benefit communities”.

The results of the findings conclude that brain drain can be controlled by promoting and developing the sustainable environment and opportunities in the country. A proper and accurate measure of policies and recommendations is required to solve the problem. This can promote a competitive advantage and enhance the satisfaction of people by motivating them in means of providing better and favorable opportunities and conditions. When highly skilled and educated individuals migrate to other countries, it can lead to a shortage of qualified faculty members and researchers in universities. Brain drain can negatively impact universities in Pakistan by causing a loss of highly qualified faculty and researchers, reducing research output and collaboration opportunities.

Furthermore, the departure of educated individuals may limit the pool of qualified professionals available to mentor students, impacting the overall educational experience. The effects of brain drain on functioning the universities in Pakistan are lack of opportunities, in some cases irresponsible or careless behavior, system instability and many other social and economic factors because most of the skilled and educated Pakistanis are doing work in other countries because of not getting a quality life and universities in Pakistan are facing loss of talent because of low quality teaching and overall academic output and it's also leading to decline in research productivity that leads to shortage of faculty and it affects the reputation of universities because academic history, research work about an institute and the role of the students makes the reputation of a university. The loss of skilled and experienced faculty members to other countries can result in a shortage of qualified educators, affecting the quality of education.

Informants stated that

“Brain drain can adversely impact universities in Pakistan in several ways. The loss of skilled and experienced faculty members to other countries can result in a shortage of qualified educators, affecting the quality of education. This, in turn, may lead to a decline in the global ranking of universities and a diminished reputation for academic excellence”.

Another respondent claims

“Brain drains in Pakistan can impact universities in various ways. The loss of skilled faculty and researchers may lead to

a decline in academic standards and research output. It can also hinder the development of new courses and programs. Furthermore, the departure of educated individuals may limit the pool of qualified professionals available to mentor students, impacting the overall educational experience”.

While another stated that

“Furthermore, the departure of researchers and professionals may hamper ongoing research projects and limit the capacity for innovation within academic institutions. The lack of experienced mentors and role models can also discourage students from pursuing higher education or specific fields of study”.

The present study has highlighted that the effects of brain drain from universities of Pakistan has an adverse effect because of loss and shortage of highly skilled workforce which in turn has reduced the quality of educational institutes. The development and growth of the students at universities has reduced due to shortage of skilled workforce which can have an alarming situation in near future.

communities can take various steps to retain young people or encourage their return. This can include creating job opportunities in emerging industries, providing access to quality education and research facilities, fostering a supportive environment for entrepreneurship, and promoting cultural and recreational activities. Additionally, offering competitive salaries, affordable housing options, and opportunities for career growth can also incentivize young people to stay or come back to their communities. As everyone wants economic stability to live a quality life if we succeed in creating this type of main opportunities in our country then young people can start to come back to their homeland because all we need is peace and stability. Informants stated that:

“Local communities can retain and attract young people by fostering a vibrant environment with job opportunities, affordable housing, recreational spaces, and cultural events. Collaborative efforts between local businesses, educational institutions, and government can create a supportive system for growth and engagement. Encouraging entrepreneurship and providing networking platforms also contribute to a sense of community and economic sustainability”.

Another informant claims that

“There are several things that can be done to retain young people or encourage them to return. One approach is to create attractive job opportunities and provide a supportive environment for entrepreneurship. This can include offering competitive salaries, benefits, and career growth prospects. Additionally, investing in local industries and creating a favorable business environment can help generate employment opportunities”.

Another respondent claims that

“On a local level, communities can implement several strategies to retain young people or encourage their return:

- 1. Career Opportunities: Create and promote job opportunities that align with the skills and aspirations of young professionals. Encourage local businesses to invest in talent development.*
- 2. Entrepreneurial Support: Foster an environment that supports entrepreneurship. Offer resources, mentorship, and financial*

assistance to young individuals looking to start their own businesses

- 3. Education and Skill Development: Enhance local educational institutions to provide quality education and training programs. This can help in developing a skilled workforce and attract students.*

- 4. Infrastructure Development: Improve local infrastructure, including healthcare, transportation, and technology. A well-developed infrastructure can contribute to a higher quality of life.”*

The study finds some factors to retain the local talent in the country that includes a supportive environment and entrepreneurship business practices in the country. Better infrastructure facilities to accommodate the large number of highly skilled workforce with better facilities and options are required to be implemented. By providing the better opportunities for career progression in Pakistan can help the country to retain the local talent and can convert the brain drain in brain gain.

CONCLUSION

The limitations in the present study contain some different constraints due to which the research faces some limitations issues. There are several factors which the researcher faces while conducting the research and those are: Qualitative research on brain drain, focusing on specific variables like lack of career progression opportunities, may offer insights into contexts but may not be easily generalized to broader populations or diverse settings. Variables like career progression opportunities can be challenging to quantify in qualitative research, making it difficult to provide precise measurements or comparisons. Investigating personal reasons for brain drain, such as career opportunities, requires sensitivity. Qualitative data analysis, especially when dealing with nuanced topics like career progression and workforce accommodation, can be time-consuming, potentially limiting the depth of the study. The multifaceted nature of brain drains, including career opportunities and workforce accommodation, introduces complexity. Different researchers may interpret qualitative data on brain drain differently, leading to variations in understanding the relationship between variables like career progression and workforce accommodation. Despite these limitations, qualitative research on brain drain can provide valuable insights into the lived experiences of individuals affected by these variables, contributing to a deeper understanding of the phenomenon.

Implications

Brain drains research in a qualitative context involves examining the reasons behind the emigration of highly skilled individuals. Two critical variables to consider for the implications including *Lack of Opportunities for Career Progression*: Explore the challenges professionals face in their home country, such as limited career growth, stagnant job markets, or inadequate professional development opportunities. *Lack of Space to Accommodate Highly Skilled Workforce*. Investigate how the existing infrastructure and job market fail to absorb and utilize the skills of the highly skilled workforce. Analyze workforce data, government policies, and industry trends to understand the mismatch between skilled professionals and available

opportunities. Identify key sectors where professionals feel limited in career advancement, by examining the correlation with emigration trends.

Evaluate existing policies and their effectiveness in fostering professional development, addressing shortcomings that contribute to brain drain. analyze economic indicators and market demands to identify areas where there is a shortage of opportunities for skilled workers. propose strategies for building the capacity to absorb and effectively utilize the highly skilled workforce, including recommendations for infrastructure development. utilize the research findings to raise awareness and advocate for systemic changes at both governmental and organizational levels to counteract brain drain. through these strategies and recommendations, the impact of brain drain can be converted to brain gain in the means of retaining the talent in the home country and making the home country more productive which will have a positive effect in the near future for the nation of Pakistan. the finding of the study suggests that considering the above-mentioned variables and components of study can contribute to the productivity and in brain gain if they were controlled strategically with renewal policies and can attract the global talent too if all the opportunities and facilities are provided easily and equally to people in the country. Monitoring these variables consistently will boost the economy of the country and will help in controlling brain drain in country.

Future research directions

Future research on brain drain could focus on several key areas to deepen our understanding and developing effective strategies to control Brain Drain. These are investigating demographic shifts and their impact on brain drain, including age, gender, and skill distribution. Observing and assessing the economic consequences of brain drain for both source and destination countries. It also involves investigating the role of technology, especially remote work capabilities, in shaping the dynamics of brain drain. Studying the long-term effects of brain drain on source countries' education systems, research capabilities, and overall development is also included in future research directions. Apart from that identifying the key factors that make a country attractive for skilled professionals is also included to control brain drain. Exploring the strategies to address healthcare brain drain while ensuring global health equity and investigating the potential impact of emerging fields, such as artificial intelligence and biotechnology, on brain drain dynamics by focusing on understanding the role of education and mentorship programs in shaping the future of research talent mobility can control brain drain and are the future research directions. Research in these areas can contribute to a more nuanced understanding of brain drain, guiding policymakers, educators, and global institutions in developing effective strategies to mitigate its negative effects while leveraging the positive aspects of international knowledge exchange. Fostering a conducive research environment in home countries is essential. Establishing partnerships between institutions globally allows researchers to engage in collaborative projects, fostering knowledge exchange and reducing the incentive to migrate permanently. This may involve creating attractive funding opportunities, grants, and career advancement prospects, making

it appealing for highly skilled workforce to return to their home countries. Incentivizing private sector involvement in research and development can also help retain skilled professionals. Collaboration between academia and industry can provide researchers with diverse career opportunities, making it more likely for them to stay in their home countries. Overall, a comprehensive strategy addressing brain drain should combine improvements in local research conditions, international collaboration, repatriation incentives, educational initiatives, and private sector involvement to create an environment that retains and attracts research talent.

CONCLUSION

The above-mentioned findings and results of research paper concludes the major factors and components need to be addressed timely by taking preventive measures to resolve the issue of brain drain. The environment friendly business environment, a better and developed infrastructure including the quality educational institutes and training programs can help Pakistan to resolve this issue of Brain Drain in the country. Moreover, it can help the workforce to enhance their career progression and can help to accommodate the huge amount of highly skilled workforce with better resources and opportunities which can prevent them from immigration to developed countries. These pull factors can be approached by developing strategic policies and recommendations. All these factors and components are interlinked to each other causing a severe issue of Brain Drain among the workforce which can be converted to Brain Gain in near future in Pakistan to promote sustainable practices and growth of country.

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