

# Causes and Solutions to Intellectual Brain Drain in Pakistan

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## Abstract

*Brain drain is the cynosure of all the eyes due to high outflow of qualified and skilled workers from Pakistan. The aim of this paper is to highlight causes and solutions to intellectual brain drain in Pakistan. Primary data was collected from 13 immigration consultancies (40 emigrants), and Head of Higher Education Institutions in University of Peshawar (07) by applying judgmental, purposive and accidental sampling. Two types of questionnaire were prepared each for emigrants and faculty members. Majority of the respondents (71%) declared general job dissatisfaction, professional isolation, and poor economic returns along with lack of proper planning for manpower as a push factor for their move. (48) % emigrants considered less opportunity for further studies, development and research serves as a driving factor to move. (33 %) claimed that continuous political instability and threats to their life as a main factor for their emigration. (23%) regard family consideration and for good living standards they decide to leave the country of origin. As far as solutions put forward are (35%) of the emigrants with the suggestion employments (10%) basic facilities (15%) advocate educational reforms in our country can lead towards stopping brain drain,(38% )considered secure and good working environment as well as research facilities to be provided.(23%) propose fair recruitment ,respect for merit, promotion, keep justice in rules and laws (30%) of the emigrants believe economic problems and better economic returns (29% )respondents judge encouragement, respect , equal opportunities and social behavior towards qualified personnel (5%)of the emigrants put forward awareness campaigns need to be initiated to tackle the issue. (8%) suggest to stop political corruption.*

**Keywords:** Brain Drain, Intellectual Brain Drain, Pakistan

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## Introduction

The migration of intellectual manpower from less developed countries to more developed countries is a global phenomenon. The most prominent migration of intellect is from the poor and developing countries to the rich and advanced countries. The recent trend of globalization has been characterized as the flow and exchange of goods, services, capital, and informative services and at high level qualified skilled labour. According to recent study 59 million migrants in OECD countries alone, 20 million are highly skilled. Most of the OECD countries possessing South Asian countries including Pakistan, Srilanka and Bangladesh. Developed countries attracting qualified skilled workers from developing countries in the form of incentives, scholarships from developing countries. Such programmes include H1-B visa programme in the United States, High skilled programme by United Kingdom and Australia, Green Card Scheme for Technology experts in Germany. Pakistan is a developing country which is confronted with the great loss of highly skilled workers to green pastures and for compensating that government offers high incentives in order to retain a critical number of engineers, scientists, and other professional in their countries. Research work conducted by South Asia Network of Economic Research Institutes identified that the most important cause of immigration of scientists has been identified as a desire to be part of global knowledge. Developed countries specifically Western Europe, USA, and Eastern Asia led by Japan established scientific networks comprising of scientists from developed and developing countries to build scientific capabilities.<sup>1</sup> All these factors lead towards the hiring of foreign faculty members for the attainment of those economic and social loss created by the emigration of highly skilled professional workers. It is generally argued that this outflow is compensated through remittances and brain circulation. In this regard both skilled and semi-skilled workers are encouraged to seek employment abroad to overcome the unemployment, economical problems etc, although it worked for a short span but if we look into depth we come to the conclusion that we are lacking professionals specifically in health and Education fields.

A recent study by World Bank identified that shortage of skilled workers in a country is the main cause of our poor industrial growth and development.<sup>2</sup> It is therefore, a matter of great concern to investigate the causes of migration of qualified persons from Pakistan. In this report an attempt has been made to investigate the reasons of intellectual migration, so called Brain Drain, along with various measures to minimize the effects of migration at government level /International level would be studied in detail to understand the phenomena in depth. In

conclusion all this study would lead towards suggestions and solutions which could be beneficial for future research areas as well as for policy level interventions.

### **Literature Review**

The British Royal Society first coined the expression Brain Drain to describe the outflow of scientists and technologists to the United States and Canada in the 1950s and early 1960s. It is normally used as a synonymous of the movement of Human Capital (HC hereafter), where the net flow of expertise is heavily in one direction.

#### *Phase-1 (1950s to 1960s)*

Grubel and Scott identified that developed and developing country benefit in the field of science and technology.<sup>3</sup> Pierpaolo Giannocolo, found that with heavy outflow of qualified workers the sending country effect socially as well as economically.<sup>4</sup> The outflow of scientists and technologists was focused from Europe (and primarily the UK) to the United States and Canada. For instance reviews of effect of the immigration Act of 1965 on the demographic characteristics of USA.<sup>5</sup>

Kannappan stated heavy outflow of skilled labor from poor countries their economic potentials were losing especially when turning to the productivity levels.<sup>6</sup> According to Portes initially brain drain was considered very harmful for the native countries. They claimed that the situation exists because of the development of North and backwardness of South.<sup>7</sup>

#### *Phase-2 (1970s-1990s)*

Reviews of most of the scholars concluded that the term brain drain is not beneficial for the native country, while host country gain benefits from the inflow of qualified skilled workers. In this connection the solution suggested is to implement migration policies, to create and to fortify the role of the International Organizations and Institutions on the management of the migration flows.<sup>8</sup>

During 1970s the BD was termed as North/South, developing-developed issue. Literature shows that BD is deteriorating factor to the welfare of the countries. As per circumstances Bhagwati proposed a "Brain Drain Tax".<sup>9</sup> This tax should from one side, reduce the high outflow and from the other perspective developed countries pay to the LDCs for draining their scientific and economical elites. Reviews of the researches on Bhagwati's proposal we find debate which culminate in the "Bellagio Conference on the Brain Drain and Income Taxation", in Italy

from 15 to 19 February 1975, where the scientist discussed deeply these arguments.<sup>10</sup>

#### *Phase-3(1990-till date)*

However in mid 1990s a new trend termed as new economics of brain drain emerged with rapid advancement in globalization and growth in information and communications technologies. It argued that under such circumstances, migration of professionals from developing countries may be blessing and the potential gains could be higher than costs. In short BD may have both positive and negative effects on the sending countries. The economists who created harmonized databases of skilled migration rates and the positive effects of brain drain were to some extent verified. The scholars who present the theory argue that the detrimental impacts of skilled outflow on human capital may countervail by positive impacts of migration.<sup>11</sup> Several new phenomena were introduced in this period with a view that migration perspective increases the attractiveness of educational investments in the sending economy, thus contributing to increased accumulation of human capital and faster growth Lucas Effect of induced education by Beine et al. brain effect and Schiff brain gain.<sup>12</sup>

Stark et al, identified that the Diaspora may return to their homelands, bringing social, physical and human capital accumulated abroad, thus contributing to the economic development that is brain migration.<sup>13</sup>

Ghosh, concluded that the migrants transfer part of their income back. These transfers in some cases e.g. Dominican Republic, Jordan constitute a large part of the national income, if properly utilized may help to boost the economic growth.<sup>14</sup>

Kugler and Rapoport acknowledge the diasporas effects-even staying abroad overseas skilled migrants may contribute in the development and progress of country by offering expertise, skills, advice or simply investing their money. This effect may be observed directly-as the FDIs and their companies or indirectly when the Diaspora members encourage other entities to do so.<sup>15</sup>

#### **Terminologies of Brain Drain**

During the years vast terminology concerning brain mobility arose. Lowell and Findlay mention these terms:

*Optimal Brain Drain*

Optimal brain drain theory is based on the hypothesis that some developing countries can benefit from the “right” amount of skilled emigration.

*Brain Waste*

The term brain waste is used in the case when highly skilled is underemployed. Physicians working as taxi drivers are a good example of this phenomenon. This situation occurs both in the sending and receiving country.

*Brain Circulation*

Brain circulation refers to lively return migration of the native born. Returnee’s re-supply the highly educated population in the sending country and boosts source country productivity.

*Brain Exchange*

Brain exchange occurs when the loss of native-born workers is offset by an equivalent Inflow of highly skilled foreign workers. A given source country may exchange highly skilled migrants with one or many foreign countries.

*Brain Globalization*

Some level of skilled mobility is needed to participate in the global economy. Multinational corporations and the forces of globalization necessarily require international mobility.

*Brain Export*

Brain export is defined as a strategy to educate and export highly skilled workers in order to gain economic feedbacks. In a few cases, developing countries choose to educate and export their highly skilled workers, either in bilateral contract programs or in free-agent emigration. The strategy is to improve the national balance sheet through return of earnings and the return of more-experienced workers, or through remittances, technology educated from a given country who emigrated. Applying the data gained, there are two transfer and investment.<sup>16</sup>

**Pakistan Brain Drain**

Literature is reviewed to develop and understand the magnitude of Pakistan Brain Drain. Causes (Push and pull) factors and various measures at national and international level to tackle this issue was reviewed from different resources. Reviewed studies were divided into

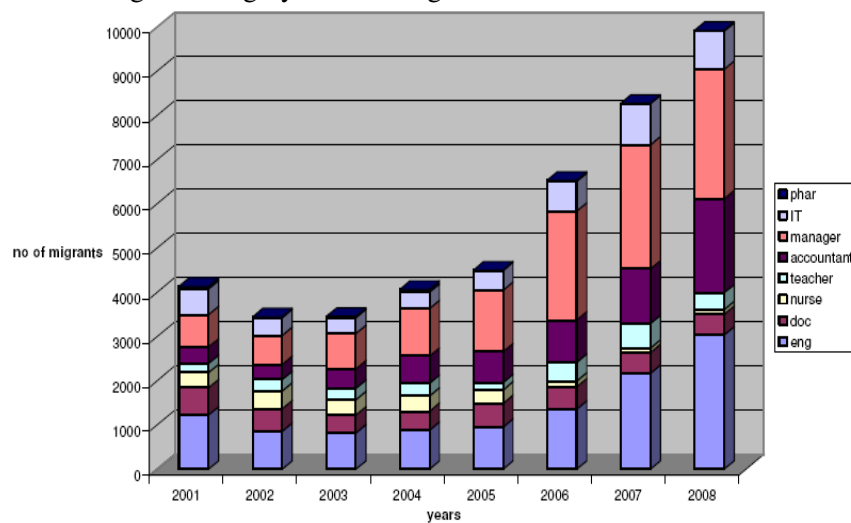
three parts; Magnitude of Pakistan Brain Drain, causes of brain drain, various attempts to stop this issue domestically (in Pakistan context) and internationally.

#### *The Magnitude of the Pakistan Brain Drain*

Several studies have documented the loss of skilled Pakistani qualified through emigration. Although precise numbers of overseas skilled Pakistanis in terms is not identified, the following statement highlights the magnitude and impact of the problem.

UNESCO 127<sup>th</sup> Executive conference discussed about the highly skilled migration rate of Pakistan increased by more than 50% from 6.1 in 1990 to 9.2 in 2000. During the period 1961-1976 the highest number of migrating skilled personnel to the US and UK, Canada came from Asia.

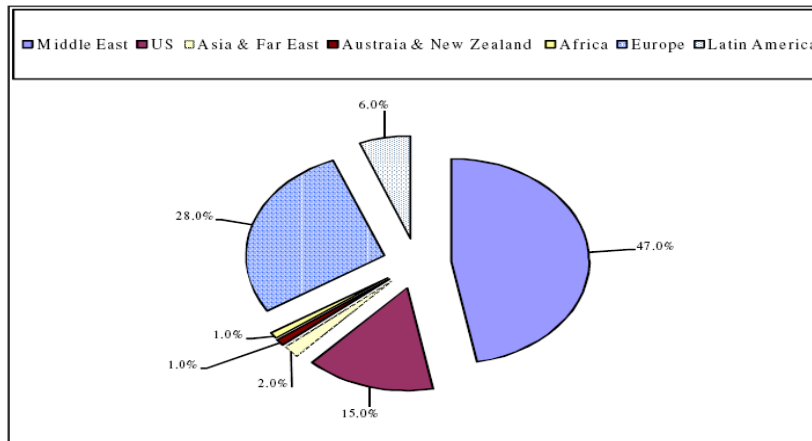
Figure-1 Highly Skilled Migrants from Pakistan



Trends of migration (2002-2008), show the ratio of skilled and unskilled migrants.<sup>17</sup> Since 1971 the qualified migrants comprising of engineers, doctors, IT specialists and other professionals are trained by government financial resources. A very small percentage of the age group is enrolled in institutions of higher learning also there is shortage of institutions providing quality education. With the migration of doctors, engineers, and teachers and other professional's health, education, industrial and constructional fields are badly affected. Migration trends show the failure of the government to provide sufficient opportunities and incentives to retain its qualified workers.

World Bank study of 2007 identified Pakistan Infrastructure Capacity Assessment shows 1971-2000 skilled manpower was 1.236. This number is soared to 1.641 million during 2000-2005. Out of these 23078 were engineers. In 2007 1800 engineers emigrated overseas which is almost the 70% of the numbers trained in 2006.<sup>18</sup>

Figure 2.Migrants by Destination



\* Data collected by 80 Pakistan Missions abroad (2004-05)

Source: Bureau of Emigration and Overseas Employment, Pakistan

Habibullah Khan & M.Shahaidul Islam discussed on the total number of Pakistani skilled workers to OECD countries (age of 25 or more or older), 85668 were immigrated with 6022 Primary level, 22458 Secondary level, and 57188 with tertiary education which shows that majority of the migrants possess tertiary qualifications.<sup>19</sup>

Dr. S. M. Ali stated that according to Bureau of emigration and overseas employment Pakistan the outflow of highly-qualified migrants increased from 1,292 in 1995 to 3,291 in 2004.<sup>20</sup> However, the share of highly-qualified migrants remains low at around 1.9 percent in 2004. Migrants in this category include those with either minimum tertiary education (a bachelor degree) or very high level of tertiary education, such as Master / Ph. D. holders and very specialized education similarly, from 1995 to 2004. The outflow of highly-skilled Pakistanis has been on the rise from 7,681 to 15,557. In 2004, the share of highly-skilled migrants was around 8.9 percent of total migration outflows. These people have tertiary education but may or may not hold very advanced

tertiary education. Migrants in this category include secretaries, mechanics, nurses, etc.

#### *Causes of Brain Drain*

Normally causes of outflow of talented emigrants for developed market economies are covered in general by means of push-pull model. Push and pull factors regarding brain drain appear to be rooted in the unequal economic development of the emigration and immigration countries.

#### *Push Factors*

Agha Khan Medical University conducted study about the brain drain of (doctors) from Pakistan. As per research 95% of the students of AKU and 65% students of BU want to emigrate due to poor salary in Pakistan along with poor quality of training and work environment.

Syed Jafar Askari viewed terrorism and economic crises are the main factors which forced the highly qualified and brilliant people to leave the country.<sup>21</sup>

Raheem stated the following reasons for moving abroad:

- For better jobs.
- Lack of opportunities offered to the highly skilled labour.
- Unemployment ratio among qualified workers is very high and salary levels for skilled workers are often kept low by governments to maintain an egalitarian income policy.
- Lack of respect of the professionals and usually qualified people are answerable to the bosses that have no knowledge about their respective fields.<sup>22</sup>

Mohsin Ali comments on reasons of brain drain as:

(i) Economic reasons

- Job satisfaction.
- Academically progressive environment.
- Better pay and service condition.

(ii) Lack of financial and academic reasons

- Better life and higher education.
- Lack of institutions for research along with doctorate and post doctorate level studies opportunities.
- Political Instability.

(iii) Lack of Higher Education Institutions



Science and technology is the area not fully exploited by the Pakistani resources. Fewer budgets in education sector are the reason in leaking the higher studies contributing to brain drain.

- Natural problems.
- Political and social problems.
- Lack of scientific based study.
- Lack of competition and challenging culture.
- Non-availability of facilities for research and development.
- No merit system.<sup>23</sup>

Annie Gulrukh, views economic survey and statistics have shown that the unemployment ratio is increasing every year.<sup>24</sup> Irum Sarfaraz said that nearly 3,000 (annually) graduates of Pakistan's medical colleges are jobless; most go abroad. The educated see their future not in their home country but in any country but their own".<sup>25</sup>

Nasir Nadeem and Dr Muhammad Ashfaq, found that brain drain occur due to the following reasons:

- Poor economic conditions.
- Slow promotion process.
- Non-availability of opportunities for youth in the existing social set-up.<sup>26</sup>

Syed Jafar Askari, stated that thousands of MBBS graduates are produced annually from different medical colleges and universities in the country, while 50 to 60 per cent of the fresh graduates leave the country to pursue for better professional careers in foreign lands.<sup>27</sup>

Rehmatullah, found terrorism and insecurity compel skilled workers to move, as per Act (8) of Pakistani Constitution every person is free for migration in any areas of world for life security.<sup>28</sup>

Qamar Habib observed lack of secure and respectable environment is a sole reason for their move.<sup>29</sup>

Shah, claimed that general political climate in a given society or country strongly influences the situation of highly qualified personnel. Discrimination in appointments, promotion on the basis of political affiliation or loyalty rather than merit based on political allegiance, can have deep social roots which are hard to pull up, which leads toward outflow of talented workers from the source country. Rest of the factors is:

- Training abroad does not comply with the environment of the source country.

- The student having high grade degree with high competencies did not get job as per qualification due to lack of power, which leads towards working of talented people in irrelevant fields.<sup>30</sup>

#### *Pull Factors*

Nasir Nadeem and Dr. Muhammad Ashfaq, observed the following pull factors regarding emigration of talented Pakistani workers.

- Availability of resources in foreign countries to conduct research.
- Higher salary levels for researchers in recipient countries.
- Life-changing and academic enhancement bright career, economical social, intercultural, personal benefits.
- Better living facilities that is education, housing, etc to their family.
- The differential in salaries and living conditions between the home and recipient countries.<sup>31</sup>

Rehmatullah, showed the following pull factors regarding Pakistan Brain Drain:

- To acquire better knowledge, skills and research based work.
- Employment in well paid jobs in good career opportunity.
- High standards of living, scientific excellence, social democracy and possibility of upward mobility.
- Suitable opportunities and environments for education of children.
- Developed legislation with respect to human rights, social justice, intellectual property and professions.
- High level of skills associated with their specific degrees.
- Opportunities for advancement in careers and in specialization.
- Fair, well-governed environments for HR management attract and retain many skilled professionals.
- Basic comforts during their working life.
- Security after retirement and Pension benefits are important motivation factors.
- Face fewer bureaucratic controls as compared to our home bureaucratic system.
- Better employment opportunities which suit their qualification.
- Good professional working environment, skills utilization at professional and technical proficiency that allows for international recognition.
- Availability of experience/supporting staff.

- Frequent chances of a lucky break in life.
- Intellectual freedom, modern educational system and better opportunity for higher qualifications & prestige of foreign training.
- Availability, latest information and contact with men of experience and expertise are some of the psychological determinants of brain drain.
- One of the most important pull factors is the demand of highly qualified personnel in the receiving countries.<sup>32</sup>

### **Measures to combat brain drain from Pakistan**

#### *Foreign Faculty Hiring Program*

HEC has launched a number of schemes in shape of offering permanent and short term employment to foreign faculty members in different public universities of Pakistan. These programmes are designed with a view to bringing back those competent scholars who gained skills, and expertise and converting Brain Drain into Gain in Pakistan intellectual capacity from teaching and research abroad to transfer their skills to Pakistani teachers and students. In this connection in November 2003, Government of Pakistan under its national Higher Education Policy has initiated policy to recruit highly qualified faculty from abroad for rendering services in graduate research programmes in different public sector universities/institutions in Pakistan. The long term goal is to uplift the graduates' programmes in Pakistani universities and bring them back to international standards. As per programme in 2006 about 250 Ph.D expatriate have returned to Pakistan during past couple of years under the HEC Foreign Faculty Programme They are a source of bringing research environment, quality supervision of graduate students and developing linkages with international educational institutions.

#### *Return of professionals*

Dr. Atta ur Rehman, Chairman HEC, initiated a program under which 250 expatriate professional Pakistanis returned and help government in form of imparting Education, Also under faculty development program 1500 experts expatriate Pakistanis induced in different universities nationwide.

In 2008, HEC hires expatriate Pakistanis who have at least one year post doctorate foreign experience and are likely to come and join Public sector institutions in Pakistan for tenure of at least two months. Special emphasis is given to candidates who are willing to join agricultural and engineering universities in Pakistan. The services of 28

scholars have so far been employed under such arrangements while the program has completed its tenure and is closed now.<sup>33</sup>

### **HEC Policy Initiatives and Educational Reforms regarding Brain Drain**

In 2007, HEC initiates a strict mechanism of monitoring and vigilance against those scholars who refuse to come in form of reimbursing the entire amount in foreign currency plus any penalty as per decision of the National Scholarship Management Committee. The committee comprising of competent members of the Ministry of Education, Science & technology and representative's committee members of Provincial government. Furthermore HEC decided that the case will also be forwarded to the Federal Investigative Agency (FIA).

#### *Reverse Brain Drain (RBD) Program*

HEC has initiated Pakistan Education And Research Networks (PERN) a fiber optic internet system with broad bandwidth connects 60 public sector universities to promote data exchange and collaborative research .It serves as digital library which was launched in 2005.The library provides access to 23000 full-text journals with back volumes to students and faculty free of charge. International collaboration in research and teaching is encouraged through collaborative research programs with the universities of UK, USA, South Korea, Sweden, France, Austria, Germany and China. A country- specific collaborative programme with British Council links 35 British universities with Pakistani Universities. The S&T collaboration Agreement between Pakistan and USA has funded research projects worth US\$ 70 millions in past five years jointly implemented by Pakistan and US scientists. The past five years of targeted reforms in the fields of engineering, information technology, and biological sciences shows a significant impact, as university enrolment increases from 135,123 to 479,800 student's substantial increase in post graduate research students and 160% increase in international publications from higher learning institutions in the country.

#### *National Research Program for Universities (Nrpu)*

To avoid brain drain HEC has initiated a research grant program by which creative researchers are awarded research grants. According to program encouragement and financial support were given to researchers in all disciplines (Social sciences, Humanities, Basic Sciences, Natural Sciences, Medical Sciences, Engineering & Technology and Agricultural Sciences.

*President's Program for Care of Highly Qualified Overseas Pakistanis*

In 2009, President's programme launched a programme for care of highly qualified Pakistanis (PPQP). PPQP provide all relevant information and assistance to potential overseas Pakistani workers, and operate an interactive website through which online registration facility provided to highly qualified Pakistanis throughout the world

The effort was made to provide profitable opportunities for overseas Pakistanis to invest in Pakistan's progress. The main idea of the programme was to benefit from the vast reservoir of business, technological, managerial and entrepreneurial skills represented by overseas Pakistanis.

*Transfer of knowledge through expatriate nationals (TOKTEN)*

This programme for inviting Pakistani professionals for a short period to provide consultancy has been implemented with the collaboration of UNDP. The objectives of the programme are:

- To transfer know how about cutting edge technologies to Pakistan from developed countries.
- To involve Diasporas through short visits to reduce the negative effects of brain drain.
- To get benefit from Diasporas networks (technical assistance).
- More than 700 professionals have been invited to Pakistan in past 23 years to build capacities in public/private sectors.

These experts have been instrumental in building the capacities of private and public institutions through trainings, workshops, symposia, curriculum development, the introduction of new courses and donations of essential books and equipments. The National Talent Pool has prepared a Project Document entitled visits of expatriate Pakistani consultants for short duration assignments in Pakistan line with UNDP funded Programme TOKTEN which has been approved by the Government.

**Attempts at international level***ICTP, Trieste, Italy*

The ICTP in Trieste Italy was a measure of preventing Brain Drain from the developing countries. Its establishment idea was presented in early 1960s by Prof. Dr. Salam, the Nobel Laureate from Pakistan. The Center was established in 1964 in Trieste (Italy) as an administrative part of the International Atomic Energy Agency (IAEA) under the United Nations. Its main purpose was to provide training and research opportunities to scientists of the third world countries.

Scientists from the developing as well as from the developed countries participate in the activities of the centre which provided them an opportunity to interact with world class experts of the advanced countries. Facilitates scientists to attend scientific activities at ICTP and return home with renewed enthusiasm to carry out research and thus attaining the inspiration to prevent their migration from their home countries to advanced countries.

#### *The Six R's*

To stop international at policy level Pademetriou and Martinn, identified three areas (3Rs) as critical for analyzing the development impact of migration; recruitment, remittances and return.<sup>34</sup> Lowell and Findlay in ILO synthesis report has categorized the possible policy responses into six convenient categories "Six Rs"

- 1) Return of migrants to their source country.
- 2) Restriction of international migrants.
- 3) Recruitment of international migrants.
- 4) Reparation of loss of human capital (compensation).
- 5) Resources expatriate.
- 6) Retention through educational sector policies and through economic development.<sup>35</sup>

## **Method**

### *Study Design*

The nature of the study is exploratory, judgmental and convenience which aims to ascertain causes, extent and solutions to brain drain in Pakistan. Research design adopted is qualitative in nature applying judgmental and purposeful techniques for gathering of data through random sampling. Qualitative design is used for collecting pure and inner views of the respondents against structured way. Reason for adopting judgmental and purposeful design is due to taking into account respondents holding different educational disciplines to address this issue in an academically representative way. Two sets of questionnaires were designed for gathering data. Interviews, observation, personal communication as well as web; telephonic tools were also applied for facilitating non-respondents to the questionnaires.

### *Population and Sample*

The population comprising of all the emigrants going abroad through immigration consultancies in Peshawar. Second part of the population comprises of directors/head of the educational institutions of higher studies in university of Peshawar. The reason for taking faculty members

is to address this issue in academic way .Age of the emigrants is (25 – 35) and faculty members (40 - 60).

#### *Investigative Techniques*

Investigative techniques applied for gathering data were interviews, behavior observation and questionnaire holding close ended and open ended items .Both open and close ended questions were used in interviews.

#### *Data collections*

Questionnaire was distributed among 15 immigration consultancies and 07 head of the departments (Higher level) in university of Peshawar. Distribution being made by visiting departments before scheduling time for interview, meeting. As far as immigration consultancies (15) concerned data is collected from (40) immigrants holding the desired academic qualification. For analysis of data descriptive technique applied.

#### *Limitations*

The study mainly focuses on to sort out the reasons of emigration of intellectuals from country .In this regard the study should take into considerations all intellectuals outside Pakistan and identify the reasons of their migration. As the real numbers of students and scholars, studying abroad and returning back stand not available or blank in some years. The formidable barrier is that there is no uniform system of statistics on the number and characteristics of Pakistani students and scholars studying or employed abroad .Brain drain is a vast phenomenon and Pakistani skillful workers that are (IT Professionals, Doctors, Engineer, and Scientists) spread all over the world throughout the world. In this regard the study was delimited to the results of immigration consultancies in Peshawar. 15 immigration consultancies situated on university road and city area was selected applying convenience sampling technique due to non availability of exact figure of immigration consultancies in Peshawar. Most of the difficulties cropped up in analyzing the emigrants behavior, their guesses / personnel views upon causes of brain drain on Pakistan. The analysis of the emigrant behavior was affected by factors discussed below:

- Highly qualified Persons are reluctant in sharing of data.
- The proportion of reliability of information given by the respondents.
- Non cooperative attitude of highly qualified emigrants working on responsible posts.

Most of the findings of the study are based on the information obtained from the primary data and field survey. Time and resource constraint prevented a more thorough probe.

## Results

### *Sample*

The sample consists of 40 respondents (emigrants) male and 07 Head/Directors of Educational Institutions at higher level in University of Peshawar. The reason for having male respondents is that female emigration cases are very low in the selected immigration consultancies. Respondents (emigrants), are in group (25-35) and rest of the respondents (Directors/Head of the Educational; departments) having age (40-60).The advantage of obtaining responses from young is to get a perspective of young highly skilled workers emigrating abroad about their future intentions.

Table-1.Immigration consultancies take as a sample.

S.No.	Immigration Consultancy	Qualified Skilled workers
1	Euro immigration consultants 34/D-3, Old Jamrud Road, University Town, Peshawar University town.	3
2	Adwize International Office #1, Block-A, 4th Floor Jawad Tower University Road Peshawar.	2
3	Hak International Fawad Plaza University Road,Peshawar	2
4	Ucac International consultancy Suit# 104, 2nd Floor, Town Tower, University Road, Peshawar	2
5	Emigre Pacific Immigration Law Firm 84 Gul Mohar Road University Town Peshawar.	2
6	Mohammadan Law Associates Advocates Advisors Consultants B-107,2 <sup>nd</sup> Floor Town Tower, Jehangir Abad, University Road Peshawar.	3
7	Wisa World Immigration solution Advisors, Town tower University road Peshawar.	2
8	HR Consultants PVT limited No.86 D-1 Aabdara Road, University Town, and	3



	Peshawar.	
9	Pak British International Education and Immigration Consultants Bilour Plaza Saddar	3
10	Bridge Educational and Immigration consultants 12-15, Shahid Plaza, Arbab Road, Peshawar.	3
11	Ibn-e –Abdulah Law Associates Suit #11, Azam tower Arbab Road.	3
12	Vision Consultants (Pvt) Ltd. TF-59 Deans Trade Centre, Peshawar Cantt.	3
13	Micado Educational Consultants: 2nd Floor, Rasheed Building, 1091, Saddar Road, Opposite GPO, Peshawar Cantt, Pakistan	3
14	Wales International, Suite No 13, Islamia Club Building, Khyber Bazar, Peshawar.	3
15	Ali Associates Office# 211, 2nd Floor, Amin Mansion, GT Road, Peshawar	
Total	15	40

Table 2: List of Social sciences departments in University of Peshawar taken as Sample

S.No	Departments in University of Peshawar	Professors
1.	Institute of Education and Research.	1
2.	Department of International Relations.	1
3.	Department of Political Science.	1
4.	Department of Economics.	1
5.	Department of social sciences	1
6.	University of Engineering and technology.	1
7.	Area Study Centre(Research Institute)	1
Total		7

### Conclusion

Brain drain is a very complex and vast .In this respect a brief description about the main reasons of Brain-Drain and possible measures to tackle this issue in Pakistan context has been given. Proper data of Pakistani skilled workers is not available, it is the need of the time to develop human resources database especially in the field of science and technology.

As per available data most of the talented youth are migrating for a better job /economical problems. As discussed earlier several economical as well financial schemes need to be initiated as per demand and qualification is an effective tool for retaining of the talents in origin country.

Most of the emigrants decided to leave the country for good academic working life at the same time most of the respondents are not sure about job availability on return. HEC took several initiatives to tackle the issue, at the same time ministry of foreign affairs and bureau of overseas employment cooperation must facilitate government in identifying and emigrating skilful workers through proper infrastructure or fixed agreement. It is also concluded from the study that our youth lacking career guidance and counseling services which creates problems while choosing a career for themselves. Findings show that there is no respect for talent, no merit system which discourages our talented and intelligent emigrants. The pull factors of the migration are higher wages and income along with job mobility, also most of the clients consider professional career development as a pull factor to move. Most of the emigrants consider foreign degree & modern educational system as an attractive thing to move; in short most of them consider social security is a big reason for leaving their homeland. Special schemes in various academic fields should be launched with a view to encouraging talents and career strengthening. At government level new projects, Diasporas networks must be encouraged to compensate the loss of qualified workers residing abroad. Good practices in human resource planning and management is very important step for facilitating educated persons at their right place. It is also important for retaining highly skilled manpower to provide them technical and financial assistance.

### **Findings**

According to emigrant's data, following findings are obtained:

1) *Reasons for leaving Pakistan*

- Economic factor
- Political situation prevailing
- Family consideration
- To improve their Academic qualification
- Better job
- Research work
- Good living standards.

2) *Confident about getting jobs on return*

32% of the emigrants are quite confident that they will find job after return whereas 50% of the emigrants are not confident about their future careers remaining 18% of the emigrants are in doubtful condition.

3) *Intentions of return to their homeland*

35% of the emigrants want to return, 40% of the emigrants do not want to come back and the rest 5% of the qualified skilled workers not sure whether they would return or not.

4) *Measures that has to be taken to make them stay in Pakistan*

- Availability of job is a measure which can stop their migration.
- Research facilities to be provided.
- Overcoming of economical problem.
- Secure working environment and working facilities.
- Quality Education in their homeland.
- Developmental opportunities to be provided to them.

5) *Impact of career guidance and counseling on brain drain*

Career guidance & counseling services in educational Institutions serves as a tool for giving proper direction towards career development and has a major role in lessening brain drain rate. A great help & support in choosing a profession best suitable to them. Career services as a guideline in knowing inner capabilities and a tool for adjusting in surroundings. Counseling services help qualified people in selecting appropriate field and a direction in every crucial problem of life. There is strong correlation between brain drain and career guidance & counseling services.

6) *Solutions to stop Brain Drain (As per skilled workers)*

- Employments to be provided suited to their qualification.
- Basic facilities (Health, Education, and Security) to be provided.
- Educational reforms.
- Secure working environment.
- Research facilities and good working environment.
- Fair recruitment and promotion system.
- Economic problems to be resolved.
- Proper encouragement and better academic and professional opportunities.

- Awareness campaigns to be initiated to stop brain drain.

### Findings from Referrers Data

#### 1) *Reasons for Brain drain*

- Professional isolation.
- General Job dissatisfaction.
- Poor economic returns.
- Dissatisfaction with social/political conditions.
- Insecurity of life.
- Family consideration.
- Lack of proper planning for manpower.
- Lack of opportunities for development.

#### 2) *Remittances and brain drain*

- 61% of the professors suggest remittances can never be a substitute for brain drain while 24% of the professors think remittances may be a substitute for brain drain 5% of the Chairman considers remittances are a substitute for economy not brain drain.

#### 3) *Brain drain can be controlled by*

- *Restriction on emigration of Intellectuals.*
- Tax applied by source countries.
- Initiate attract projects for skilled migrants.

#### 4) *Retention should be provided through Educational/Economic support Developmental/Recreational/Career building programmes*

#### 5) *Reasons for dissatisfaction among youth*

- Home environment.
- Social instability.
- Lack of guidance and counseling services at educational institutions.
- Involvement in political affairs.

#### 6) *How overseas Intelligentsia could be attracted from abroad.*

- By providing better working condition.
- By stoppage of nepotism.
- By providing high jobs suitable to their qualification.
- By becoming loyal and truthful in our commitments.
- Through economical support.

- Improved social/political stability.
- Economic returns should be balanced.
- By respecting talent.
- By providing business opportunities.
- By offering attractive packages.

7) *Solutions to combat brain drain. (Results from Professors data)*

- By stopping political corruption.
- Providing better working environment and working facilities..
- Better economic return should be provided at their country of origin.
- Equal opportunities provided to talented youth.
- Adaptation of merit system.
- Keeping social behavior towards qualified persons.
- Greater job opportunities and job security.
- Justice in rules & law..
- Respect for talent.
- Research facilities and proper assistance in researches.

8) *What are attractive for Pakistanis overseas*

- Higher wages and income.
- Greater job mobility.
- Professional/ career development.
- Degree demand.
- Social security and job security.
- Modern educational system.
- Prestige of foreign training as a reason to go abroad.

### **Recommendations**

In the light of the conclusion drawn from my study, the following recommendations are made:

- 1) *Quality education to be provided in our Educational Institutions:* Include qualified teachers, adequate facilities, proper funding, comprehensive curriculums, affordable tuition fees and the availability of scholarships, research facilities and proper educational support. All of these factors are dependent to a certain degree on budget. For accessible quality education, a serious financial commitment by the government is necessary. One of the important measures to be taken at the national level is the reorientation of education system to discourage the migration of qualified Intellectuals.

- Respect should be appreciated as well as scholarships/economic support programme should be initiated for the poor talented students.
- In the recruitment selection, scholarship, promotion, standard should be set which should be applicable equally and uniformly to all level of people without discrimination and nepotism.
- Quality education must be provided along with research facilities.

2) *Manpower Planning:*

As mentioned in UNESCO 127th Executive conference in developing countries planning in education sector has to be defining in conformity with the social strategy, economic needs, structure of qualifications and skills. Manpower planning has not been a great success in a number of countries affected by brain drain. Contents and curricula along with education training policies have to be designed that they should ensure continues absorption of personal demanded by different societies and branches of its economies.

3) *Retention through Economic / Developmental, Recreational / Educational Programmes*

Educational opportunities and qualitative improvement of the training can reduce the pressure for studies abroad. Bilateral foreign aid programmes and fellowships by international organizations should be utilized fully for such trainings. The granting of favorable conditions of stay and employment for higher qualified personnel in their countries of origin should be given high priority.

4) *Developmental opportunities along with fair merit system to be adopted:*

- Opportunities for development
- Recreational activities to explore their talent
- Fair merit system

5) *Secure working environment*

6) *Measures that need to be taken to bring back Pakistani Intelligentsia from abroad*

- By initiate attractive projects
- By restricting t and apply taxes on them

- Economic returns should be balanced
  - Business opportunities
  - To offer attractive packages
- 7) *Policy level intervention*
- Necessary budget allocation for Education sector
  - Initiate programmes/projects for encouraging talented youth.
  - Set mechanisms for getting help from overseas Pakistanis.
  - The intergovernmental committee for migration should be in the framework of its possibilities, pursues its activities for the return of the talent.
  - As suggested by UNESCO 127th Executive conference in developing countries students who are deputed abroad in a way that they fit with the requirements of the home country. They have clear goal in their mind and a stake in returning back to their positions.
- 8) *Teachers Role*
- Assist students in a variety of information about themselves.
  - Their values, skills, and interests, occupations, training and career education services and resources
  - Provide them concrete examples of relevant theoretical ideas from occupational settings.
- 9) *Proper career guidance and counseling facilities from primary to higher level*
- 10) To impose tax on Pakistani professionals working in foreign countries
- 11) *Developed and developing countries work jointly for compensation of their qualified talented workers.*
- 12) *We can get benefit from overseas intelligentsia by encouraging and giving incentives, benefits and encouragement to overseas Diasporas and initiating joint Diasporas network.*

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