

Educational Migration as a Brain Drain: Curse or Boon for Pakistani Universities

Malk Ghulam Behlol*

Hukam Dad**

Abstract

Migration of intellectuals and skilled population at a large scale has significant impacts on the development and progress of a nation. The increasing rate of migration of teachers, engineers, doctors, technicians from Pakistan to the developed world may have serious economic, social and educational implications. The main focus of the current study were to find out the magnitude and methods of brain drain from the Pakistani Universities. It also aimed at studying the causes and impacts of brain drain on the higher education institutions of Pakistan. It is a mixed method research with the use of survey questionnaire for the collection of quantitative data that was triangulated with indepth interview. 81 faculty members filled the questionnaire and three top level management members of Universities participated for the interview. Setting of the study was General HEC recognised higher education institutions (universities) functioning in Rawalpindi-Islamabad cities. The major conclusions of the study are that brain drain has positive as well as bleak effects on the intellectual, social, economic development of country as well as on higher education system of Pakistan. The majority of the younger faculty members with the designation of Assistant Professor are abroad and not joined their duties after the completion of their studies. There is a need of comprehensive policy to check the brain drain at national level and attract best brains to contribute for the development of knowledge economy.

Keywords: Migration, University teachers, Brain drain

Introduction

Migration of intellectuals and skilled population at a large scale has serious impacts on the development and progress of any nation and also on higher education institutions. It is termed as *brain drain or brain circulation, brain wastage* that has positive as well as negative impacts on the development of a nation. Sinking economies, poor governance, lack of opportunities and law and order situation in some of the developing countries of the world and especially of Pakistan forcing speedy outflow of the

* Assistant Professor, Fatima Jinnah Women University Rawalpindi.

Email: ghulam_behlol@yahoo.com

** Associate Professor, Education Department, National University of Modern Languages Islamabad. Email: hdad@numl.edu.pk

intellectuals and skilled individuals from the country. Farooq and Ahmad, 2017) reported that Pakistan is at number three in South Asia (after India and Bangladesh) and sixth in the World (after India, Mexico, Russia, China, and Bangladesh) in human capital movement. There were more than 450000 skilled individuals migrated from Pakistan till 2011 for educational and employment purposes and majority of them got employment in the Middle East. It is also reported that 3500 medical graduates migrate to foreign countries for the sake of employment opportunities every year from Pakistan (Khan & Ahmed, 2013). According to the official reports published by the Ministry of Finance that the rate of Pakistani emigration has a rising trends for the last two decades (Economic survey, 2018-2019). Disappearance of competent teachers, engineers, doctors, technicians from the homeland is irreparable economic, social, political loss to the family as well as to the country.

Waqas Ahmed Published in the Express Tribune (December, 2019) that Pakistan is losing its brain capital because of massive migration of the skilled and highly technical professional population. It is also reported that One lakh Pakistani migrated in 2018 to the developed and developing countries of the world. In this context, the major setback has taken the engineering profession. Because of gripping economic uncertainty, more skilled workers and intellectuals from the universities are also leaving from Pakistan. The report also states that 8, 84,101 young Pakistani population migrated in the last two Years (2017-2018). Detailed and in-depth analysis of the report revealed that majority of the young people who migrated from country were engineers, doctors and university teachers (10,000 Engineers, 3,500 medical professionals and 9,511 Mathematicians and Accountants). As a result of this grim situation, the researcher has attempted to investigate about the current situation of migration from the higher education institutions of Pakistan in the current study. It is an exploratory study and the major research questions are:

1. What is the magnitude and mode of brain drain from Pakistani universities?
2. What are the causes of intellectual migration from Pakistani universities?
3. What are the effects of brain drain on the functioning of universities in Pakistan?

Review of Literature

Estrada (2012) first time used the term “brain drain” that means excessive movement and mobility of the highly skilled and competent scientists and technologists from one country to another country for better job employment opportunities. Docquier and Rapoport (2006) noted in their entry in the New Palgrave Dictionary that the “migration of engineers, physicians, teachers and skilled people, and other very highly skilled professionals with university training”. The study on brain drain has given birth

to some new terms related to the topic are *brain wastage*, *brain circulation*, *brain gain* etc.

Distressing economic situation and lack of employment opportunities forcing educated youth to leave Pakistan in search of better future. Majority of them are losing faith in the economic revival and better tomorrow. Majority of educated adults (two third) strongly intends to migrate from Pakistan without any longing of coming back to the motherland (Gallop-Pakistan, 2000). The statistics of Year wise migration from Pakistan is vividly explained as under:

Table 1: *Profession wise migration of Pakistanis for employment in abroad*

Profession	2010	2011	2012	2013	2014	2015	2016	2017	Total
Engineer	2408	2951	3577	2764	6668	7322	2453	4021	32164
Doctor	819	1453	1218	1131	2074	2276	2779	1632	13382
Accountant	1381	1802	2593	3473	3573	4698	4768	5856	28144
Manager	1936	2272	2797	3849	4990	6459	6698	7739	36740
Teacher	537	615	956	868	975	1171	1203	1854	8179

Source: *Bureau of emigration and overseas employment Pakistan (Annual plan 2010-17)*

According to United Nations report (2002), international migration is increasing at alarming rate day by day. There are 3 % people of the country are not of native origin in the developing world. They are not born in the country in which they are living and working till the year 2000. The figure has touched 175 million that is twice as large as in the year 1970. The sections of the society migrating from the developing countries are students, teachers, doctors, engineers, skilled labour, hard labour etc. Asylum related migration is only 9 %. The majority of the world migrants are living in Europe (56 %), and one in every ten person in the developed world is a migrated citizen (United Nations, 2002). This speedy flow of the professionals towards the green pastures may positively and negatively affects the sending country. Likewise is the case of the universities that they are intellectually benefitted and also affected on the absence of the quality personnel from their institutions.

The section of the society migrating from the developing countries is not poor rather skilled manpower and highly educated professionals (Farooq and Ahmad, 2017). It has serious repercussions on the economy as well as on the smooth working of the institutions. Some of the developing countries like Pakistan have shortage of quality skilled vocational labour, and consequently they may face challenges in case of this speedy flow of skilled population from their country (Neill, 2003). Pakistan is basically an agriculture country, and its economy heavily rests on agriculture. There are more than 30 percent of the agriculture experts from universities and agriculture organisations

who have been migrated to the developed countries. The country may face the shortage of the experts in the near future (Abbas & Guriro, 2018).

The factors that may contribute to migration are lack of jobs, law and order situation, political victimization, sectarian conflicts, salary opportunities, educational opportunities, entertainment and social activities, cost of living, social status of the area, public spaces, creative opportunities, night life, advancement opportunities, colonial legacy, similar language, lack of research funding (Estrada, 2012; Beine, Docquier & Rapoport, 2001a; Beine, Docquier, & Rapoport, 2001b; Artz, 2003; Steelman, 2004).

International Landscape of Brain Drain

The Portuguese policy of brain circulation is focusing on retaining and bringing back the highly skilled national who are working in the foreign universities by providing them financial incentives and lucrative job positions. To attract foreign highly skilled professionals that may bring extra-value to technological and scientific areas in particular; to prevent the loss of highly skilled Portuguese/foreigners now integrated in the domestic markets of science, technology and academic (Estrada, 2012). They are also considering *cyclic model of migration* that is consisted on *Exit stage, adjustment stage, consolidation stage, networking stage, repatriation, immigration or circulation stage*. At the exit stage, the sending country may face shortage of labour and fall in output. The countries that have larger pool of unemployed labour force may have positive impact at this stage. At adjustment stage, the information flow provides awareness about learning of needed skills to adjust in foreign country. The consolidation stage provides positive growth in the sending economy. The changes in housing, living standard, education of children may be observed.

A great number of Albanian brightest students are studying in the universities of the developed countries of the world (Kuznetsov and Sabel, 2006). In Italian universities alone, some 12,000 Albanian students are enrolled. This figure is likely to be much higher if we bear in mind that thousands of Albanian have emigrated to Greece, Italy, England, Germany, the US, Canada, etc., and a larger contingent of their children enroll each year in the universities of these host countries. Furthermore, a survey realized in year 2000 with 835 university students studying in the US, Italy, France, etc., indicated that only 45.5 percent of them were willing to return to their country of birth after their graduation. Later, another survey in 2004 revealed that 56 percent out of 181 PhD holders and PhD candidates were willing to return in Albania (Gibson & McKenzie, 2011).

Brain drain has positive as well as negative effects for the developing countries. It may increase the flow of remittance, establishing network with the developed institution, exchange of ideas, learning of latest skills about different fields that may

have positive effects on the social and intellectual progress of the country. The other side of the coin is that the country may lose the quality work force and have to rely on adhocism, breakdown of research team. We may enhance their positive role by acknowledging the contribution of expatriate, providing support, protection and/or advocacy, strengthening of migration department, facilitating or promoting dual citizenship and/or overseas voting, promoting philanthropy, either individual, or through home village/town, alumni or religious associations, developing knowledge networks and databases of skills, building on expatriate professional associations (Fisher & Amanda, 2010). .

Some developed countries in the world like USA relies on imported scientists. 12 percent of all science and engineering degree holders in 1995 in USA were not of American origin; and among them over 72 percent were born in a developing country. 23 percent of those having a doctorate are not USA born citizens and this proportion is even much higher in some key areas such as engineering and computer sciences (40 percent). US is earning 7 billion dollar every year from 500,000 foreign students. The rate of increase in the ration of foreign students is 5 percent per annum in the last two decades (Regets, 2001).

The national policy of Italian government is focusing on brain circulation on the basis of following steps: competitive examination for academic posts, equalization of curriculum according to the international standards, English language as a medium of examination and text-book material, creation of academic centers of excellence, optimization of remuneration package, mandatory retirement at the age of 65 years, establishment of exchange programme. According to Chau (2012), the developed countries are catching the talented human capital from the developing countries to boost their economies. To reverse these trends, it is required that we may focus to develop competitive knowledge based, innovation and eco-efficient economy where people enjoy high quality of life and high level of income.

Methodology of the Study

It is a mixed method descriptive research applying qualitative and quantitative approaches to collect the data. The variables of the study were studied in natural setting without any control and manipulation. The survey method was used to collect quantitative data about brain drain from the public sector Universities of Pakistan with the structured questionnaire. Semi-structured interview was used for the collection of qualitative data to triangulate results and to get insight about the intangible variables of the study. This helped to get a clear picture about the situation exists in our universities.

Population and Sampling

Faculty and top level management in the public sector universities of Pakistan were the population of the study. There were more than 140 universities in public and private sector in Pakistan in the category of general Universities. The universe of the study were the universities located in Rawalpindi and Islamabad cities in public sector domain. The researcher applied convenient sampling technique to select the sampled universities. Two universities from Islamabad and two universities from Rawalpindi were selected. Only those universities were selected whose administration was willing to participate in the study. Top level management directly influence policy formulation about recruitment, leave matters and scholarships, therefore, it was considered that their viewpoint is highly useful for the study. Four faculty Deans (one from each university) and two Vice Chancellors were selected for the structured interview to elicit in-depth information regarding intangible variables such as effects of brain drain in the development and functioning of universities for knowledge economy. The majority of the Heads of Department were not Chairperson rather *Incharge* and have a minor say in the decision making. Consequently, most relevant participants are Faculty Deans and Vice Chancellors.

Faculty of social and Management Sciences were selected for filling the questionnaire. Department of Education, Economics, Sociology, Anthropology, Economics, International Relations and Psychology participated were from the Faculty of Social Science. Department of Public administration and Management sciences participated under the Faculty of Management sciences. Eighty-one randomly selected faculty participated in the study. For the administration of questionnaire, random sampling technique was applied to select the whole population. It is a small sample yet it has significant impact in answering the research questions of the study.

Data Collection Instruments

A questionnaire was constructed by the researcher to find out the magnitude and mode of brain drain from the public sector universities of Pakistan. The instrument was validated by the experts and pilot tested before its administration for data collection. The items of the questionnaire focus on number of the faculty members who are abroad for study, join and did not join their duties, agency funded them, mechanism for bringing them back, number of personnel's working on contract at academic and administrative posts after retirement and their intellectual, social, technical and financial contributions to the university.

A semi-structured interview was constructed to gather insight about the intangible aspects of the study. The focus of the interview questions was on the intellectual development of the faculty who go for study abroad, academic problems faced by the

university in their absence, their intellectual and technical contribution to the institution, mechanism to bring them back, and suggestions to reap the benefits of brain circulation.

Nature of Data and Data Sources

In this study, one set of data consisted on the ideas gathered from the interview from top level university administration. It is qualitative data that was compared and contrasted and critically analyzed to get insight about the effects and causes of brain drain on the development and functioning of the universities. The second set of the data was of quantitative in nature that has provided base line information about the brain drain from the universities of Pakistan. It presents quantitative analysis of brain drain in the general and professional universities in the different areas of Pakistan.

Collection and Analysis of Data

Research team approached the Registrar office to get approval for the collection of data. We briefed them about the objectives of the study and assured them that data would be only used for research purposes. After the frustrating and tiresome approval process, we obtained informed consent form the faculty for the collection of quantitative data. Quantitative data was analyzed with the help of SPSS version 16 to calculate percentages for drawing findings of the study.

After hectic efforts and number of postponements, we are successful in getting interview of the Registrars and Vice Chancellors of the universities. Interview data was transcribed, refined and validated by applying back-check technique. Ambiguities and redundancies were removed to reflect over the views provided by the respondents. The data was coded in respect to the major strands of the study to draw major and sub-themes of the study. Quantitative and qualitative findings were integrated to finalise the major conclusions and implications of the study. At the last moment, because of unknown reasons, one of the university declined to participate in the study. The data is analyzed under the following tables and only the number of frequencies was calculated.

Analyses of Data

Analysis of quantitative and qualitative data is as under:

Table 2: *Teachers gone abroad for study in last ten years in respect to their ages (2000-2020)*

Number of universities	Age Level					Total
	25-30	31-35	36-40	41-45	46-50	
03	26	24	34	6	1	81

This table explains about the age levels of the teachers who were abroad for studies. It reflects that the majority of the teachers in the group of 36-40 years are in the

foreign countries for higher studies. Only six teachers are in the category of 41-45 years. 26 teachers are in the age group of 25-30 years and 24 teachers are in the age group of 31-35.

Table 3: *Designation of faculty who are abroad for study in the last ten Years (2000-2020)*

Number of universities	Designation				
	Instructor	Lecturer	Ass. Prof.	Asso. Prof.	Professor
03	--	26	51	4	---

This table reflects about the designation of the faculty members who are in the foreign countries for the studies. It is noted that the majority of the Assistant Professors are abroad for higher studies. The figure is 51 out of total 81 faculty members. There are 26 lecturers and only 4 Associate Professors are abroad for higher studies.

Table 4: *Analyses about the teachers joined, resigned and left without information in the last ten Years (2000-2020)*

Number of Universities	Teachers joined duty	Not joined duty	Resigned	Not informed
03	30	51	20	31

This table explains the data about the faculty members who have joined, resigned and left without information to their universities. 51 faculty members out of 81 did not return to homeland and joined their duties. Among the 51, 20 of them tendered their resignations and 31 left without any information. They had neither resigned and nor informed their departments about the joining of their duties. It may have negative effects in the development of the university and likewise the country also.

Table 5: *The organization funded for their study (2000-2020)*

Number of universities	Organizations				
	HEC	USAID	F. Bright	University	Any other
03	67	8			6

This table explains about the funding agencies that provided funding for the study in foreign countries. Majority of the teachers have secured funding from Higher Education Commission of Pakistan. 67 out of 81 teachers have got funding from HEC and 8 have secured through USAID and 6 are in the categories of *any other*.

Table 6: *Serving on academic and administrative posts after retirement on contract after retirement (2000-2020)*

Number of universities	Academic Posts	Administrative posts
03	24	20

This table contains the data about the number of faculty members serving on academic and administrative posts after retirement. The number of faculty members serving on academic posts after retirement is 24 and number of faculty members serving on administrative posts is 20 in the three universities of sample group.

Analysis of Qualitative Data

Three Deans and one Vice chancellor out of four Deans and Two Vice Chancellors were willing to appear for the semi-structured interview. All the Faculty Deans belonged to the Faculty of Social Sciences and one of them was of female gender. Collected qualitative data is analysed as under:

All the participants (4) of the study viewed that whole sale migration/brain drain of intellectuals and skilled population has serious impacts on the running of universities. Universities are facing shortage of faculty, and it also increases the workload, and sometimes, it has become difficult to find out their replacement for teaching and research of technical subjects. The administration and faculty has to walk on tight rope in this situation.

Two participants out of four has viewed that there is need of review of dispatching faculty abroad for studies. They viewed that the use of Information and Communication Technology may save lot of financial and time resources to learn the latest approaches from the faculty of developed countries even without leaving or part time leaving from the country. It will help to provide access to wider number of faculty to update their skills and education.

However one of the participants out of four viewed that by organised and well thought out planning, we can get benefits of *brain circulation* by visiting and bringing in the best brain in one another countries. We need to establish academic networks that facilitate the circulation of faculty based on mutual needs and requirements. The exchange of ideas needs to be developed, experimented in reciprocal basis in either side of countries with equal benefits and expenses consumed.

One of the participant out of four viewed that brain drain not only effects the institution but also to the family of the faculty. Education of children and household affairs also suffer and family members have to pay the price of it.

Two of the participants out of four viewed that Pakistan have already wide gap in

the vocational labour, and consequently they may face challenge in case of this speedy flow of skilled population from their country. The country may face the shortage of the experts in the near future.

The participants of the study are agreed in suggesting that brain circulation is required to focus on open international competitive examination for academic posts, equalization of curriculum according to the international standards, English language as a medium of examination and text-book material, planning and implementation of economic development based projects and well thought out exchange programme for developing and boosting the economies of both the countries instead of training professionals just to fulfill the needs of developed countries. To reverse these trends, it is required that we may focus to develop and practice competitive knowledge based innovations that may provide sustainable upward boost to the economy with the support of highly skilled populace. It will also help for bringing back the teaching faculty and skilled labour for their meaningful contributions in the social, intellectual and economic development of Pakistan.

Discussion and Conclusions

It is concluded that majority of the younger faculty members with the designation of Assistant Professor are abroad for higher studies. It is a good sign for the future development of the universities because they may serve the universities for longer period of time. To ensure their return to institution requires solid measures and practical steps. It is suggested that study bond not only written on paper to fulfill the formality but implemented in true letter and spirit because the study revealed that 51 out of 81 faculty members of the sample group did not join their duties after the completion of their studies. We need to introduce split degree program that not only provide learning in foreign universities but also chance for academic development of national universities. The research thesis under the split program may be supervised both by the national and international experts. In this way research skills of senior and junior faculties may be strengthened.

HEC has done a commendable service for the provision of funding opportunities to the faculty members who are studying abroad for last ten years. It is required that how to cascade the skills and knowledge learnt by these faculty members may be planned and implemented.

To check the brain drain, employment opportunities for young faculties may be increased by not granting second employment opportunities to the faculty after retirement. Job conditions and attractive salary packages may be offered to adjust them according to international standards.

We may enhance the benefits of brain circulation by revisiting the policies, effective

use of ICTs, academic networking and designing project on mutual needs and benefits for social, intellectual and economic development of the countries and also of the performance of the universities in the developing countries of the world. We may use it to transfer the latest skills, innovations, research results for both of the countries.

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