

## Intellectual brain drain and economic growth in developing countries: A theoretical solution of strategic compensation

<sup>1</sup>Tayyebah Sehar, <sup>2</sup>Muhammad Mushafiq, <sup>3</sup>Kiran Bibi, <sup>4</sup>Waseem Rafiq

<sup>1,2,3,4</sup>. Preston University Pakistan,

### ABSTRACT

*Brain drain is a real problem for the developing countries like Pakistan. It not only impacts the workforce, but its effect eventually translates to economic growth as well. The most severe form of brain drain is intellectual as top tier skilled employees' move out of the country. This study explores the issue of intellectual brain drain in Pakistan moreover analyzes its severity to the economic growth. Finally, this study provides with a novel solution for the issue of brain drain by utilizing the strategic compensation. This is significant for the academia and industry as the recommendations provided can help tackle intellectual brain drain. Brain drain is distinguished as the relocation of professionals looking for the better way of life and personal satisfaction, more significant compensations, admittance to cutting edge innovation and more steady political conditions in better places around the world. This movement of professionals for better freedoms, both inside nations and across global boundaries, is of developing concern overall as a result of its effect on in general frameworks in developing nations. For what reason do professionals leave their nations and travel to another country? What are the results of such relocations particularly on the instructive area? What approaches can be embraced to stem such developments from developing nations to developed nations? This article seeks to raise questions, identify key issues, and provide solutions which would enable immigrant professionals to share their knowledge, skills and innovative capacities and thereby enhancing the economic development of their countries. The discussions and findings concluded that compensation patterns need to be influential and persuasive so that brain drain can be converted to brain gain.*

**Keywords:** Intellectual brain drain, Economic growth, Strategic compensation, Turnover

### INTRODUCTION

The human civilization incorporated the footprints of movement of individuals in tribes since old ages that incorporated the conflicting ideas regarding the associated costs along with benefits linked to such migrations so far. This phenomenon of the movement of people incorporating the skilled and resourceful human capital from home to other countries has been regarded as Brain Drain (Panagiotakopoulos, 2020). This phenomenon is a global issue particularly for developing nations like Pakistan (Iravani, 2011). The skilled human capital migration to grab the economic opportunities has led towards various negative associations in the native countries, for instance, the leaving cost, skilled human capital shortage, and other economic issues. Various past research has been ensured to determine the primary causes and solutions of

brain drain (Afridi & Baloch, 2014). The present research focuses on the determination of the solution of brain drain, particularly in developing nation Pakistan.

### **Background**

The term of brain drain has its roots in the British Royal Society of London back in 1952. The term was used to be referred to the skilled and talented labor that tends to migrate from the native country to other host nations. In that era majority of the scientists and other technical individuals migrated from the USSR towards America in outsized numbers (Giannoccolo, 2005). To overcome the issues that arose due to such migration various rules were enforced on immigrants by the US government. Furthermore, this term of brain drain was extensively used back in the 1950s and 1970s to refer towards the RSETs (researchers, scientists, engineers, technicians) that migrate from developing nations like Taiwan, India, South Korea, Malaysia, Pakistan towards the developed nations, that included the United Kingdom, America, Germany, and Australia to get more opportunities of employment (Hutch et al., 2017).

This phenomenon of brain drain was not an instant paradigm that emerged among the developing nations. However, it has been evolved that the “reasoned action” theory of Ajzen and Fishbein (1980) has been of the view that there occurs a strong association between the intention of individuals and their final decisions. This theory was applied to other situations that involve the decision of migration; thus, leading to fact that the intentions shaped by surroundings do play role in shaping the migration decision (Baruch, Budhwar & Khatri, 2007).

Brain drain has been further described as the individual’s large emigration that entails the technical skills from native towards host countries based on the political instability, fewer opportunities, conflicts, or other health and wealth issues. Brain drain has been regarded further to be the economic cost as the trained skilled human capital takes the training invested in them by the native government. It is also the same as the capital flight ensuring the financial capital movement (Iravani, 2011). Pakistan is no exception in this phenomenon of brain drain as, besides its developments, the country still upholds some backdrops in its political and economic systems. There has been a visible increment in this issue of brain drain in Pakistan. However, research have been ensured to overcome and prevent this phenomenon. In doing so, a reverse phenomenon of brain gain has also been focused on that involves the usage of various strategies to gain the brains instead of the drain (Afridi & Baloch, 2014). In doing so, various strategies have been ensured through various countries like, China, India, South Korea to attract the skilled labor force by offering various opportunities (Daugeliene & Marcinkeviciene, 2009). Such strategies, for instance, included the brain circulation along with diaspora option, flexibility, communication, and health and wealth opportunities have been proved by researchers to be quite beneficial strategies.

The present article is structured in following various brain drain associated sections with an approach to build harmony and consistency of ideas following each other to reach a suitable conclusion. Primarily to comprehend intellectual brain drain it is necessary to understand that various types of brain drain exist in various forms and shapes such as wastage of expertise, education, optimistic approach, experience, knowledge gap automatically widens because a lot of investment is at stake in terms of time and money and also it is very costly in a sense when it comes towards competition at the global operational level when the same individual is going to contribute at a platform having a global mechanism in nature but might be

competitive for that parent company from where the intellect has flown towards the host country. Thus, the present study focuses on meeting the following research objectives that include.

- To get an insight into the intellectual brain drain position in Pakistan.
- To determine the arising issue of brain drains as a problem in Pakistan's economy.
- To determine whether the strategic compensations act as a solution for brain drain in Pakistan or not.

### ***Intellectual Brain Drain***

Intellectual or knowledge brain drain can be demarcated as a great outflow of qualified, experienced, and skilled workers from one country that is developing in nature towards the developed one (Ndiangui, 2021). The movement of knowledgeable manpower from less-advanced states to more advanced countries is a universal phenomenon. The noticeable migration of intellect is from the poor and unindustrialized countries to the advanced countries. From the perspective of globalization, it is acceptable but on the other hand on real grounds, certain declarations approximately among 59 million migrants in OECD countries unaccompanied, 20 million are greatly skilled (Kuruvilla & Ranganathan, 2010). Pakistan is also among those where the intellectual resource is grasped and by high lucrative compensation plans and offers at the name of persuasive offers like US H1-B, UK and Australia skill program, Green Card System for Technology doyens in Germany (Sajjad, 2011). Pakistan is a developing nation, challenged with the loss of highly skilled workers.

The knowledge workers have been the primary emphasized population to meet the needs based on the enhancing technological variations at a global level (Holbeche, 2009). To sustain the competitive edge, the administrations of the companies and other government sectors have become more focused on the sustainability of the skilled workers' skills and their sustainability (Harvey, 2009). Thus, in doing so, the primary strategic priority has been on the sustainability of the skillful, quality employees (Bersin, 2008).

Moreover, other research conducted through the research institution of Asian Network of Economic Research has also elaborated that the essential immigration causes of intellectuals, such as scientists was the desire to get associated with global knowledge. The scientific networks have been developed through the developed nations of Japan, the USA, Eastern Asia, and Europe that was based primarily on the scientists and technocrats from developing and developed nations to establish scientific capabilities. These caused the loss of skilled professionals from such nation's leading towards the need to hire foreign faculty to overcome the economic as well as social losses. The brain circulation and remittances have been found to play a key role in compensating these losses. All these factors resulted in enhanced encouragement of all skilled and less skilled individuals to look for opportunities overseas to overcome the economic losses. However, these practices have been observed to result in lack of professionals in developing nations like Pakistan particularly in education sector and health sector. This phenomenon of intellectual brain drain has further been referred as intellectual human capital relocation from developing towards developed nations (Tahir, Kauser & Tahir, 2011).

The trend of brain drains particularly the intellectual drain has been distressing the developing nations where there has been an excess of unskilled and less educated manpower due to the relocation of skilled

workforce and highly educated personnel in industrialized nations. A big concern has been viewed in the healthcare field in which the doctors have been migrating from developing to developed nations in large number. 6% physicians have been found to be working in outside their own countries. Furthermore, 90% of the doctors and engineers has been found to be moving to USA, Germany, Canada, UK, and Australia. However, this intellectual brain drains experiences vary from nation to nation. But the emigration of such intellectual individual has been considered a great loss for native nation. It has been further observed that the poor nations have primarily been facing the loss of doctors, scientists, engineers with private and public positions been vacant due to immigrations.

### ***Intellectual Brain Drain in Pakistan***

Pakistan has also faced a great loss of intellectual personnel in past few decades. The doctors have particularly been brain drained towards developed nations leading towards a great loss. Brain drain is an intentional movement of educated individuals. It is the skilled and talented human capital movement for education, employment, or trade etc. This intellectual brain drain of skilled individuals from Pakistan has been due to the reason that the developed nations offer desirable condition, higher salaries along with social benefits (Barker, 2003). It is the basic scientific and technical loss that occur when individuals migrate to practice what they learn. However, this migration of intellectuals like engineers, businessmen, doctors has been a major unresolved issue for different nations and research.

The Pakistanis emigrating abroad has been on enhancing pace with passing year. The people settling in abroad are highly educated leading towards an unfavorable situation for the ideology and economic development of the country. Billions of moneys are invested to educate the masses in Pakistan by the government. However, these masses of experts have been migrating towards the developed nation due to under-developed markets.

The professionals of Pakistan have been on the pace of leaving country from past three decades. According to 2009 statistics of Pakistan Overseas Employment Corporation, 36000 professionals that entails the doctors, teachers and the engineers have migrated towards other nations (Tahir, Kauser & Tahir, 2011). Among the primary reasons behind this loss, one of the most essential is the loss of faith in the economic system of Pakistan. Majority of skilled professionals are moving abroad for better opportunities. A drastic number of migrations of health professionals have been observed. According to which almost 1000-1500 physicians go out of the country and only 10% returns.

Past study of Kaukab and Shahana (2005) focused towards determining the consequences brain drain have on Pakistan economy and declared that brain drain results in bad social influence over donor country. Brain drain lead towards continuous level of skilled professionals' regeneration. However, the developed nations also undergo the consequences of brain drain as the lack of proper pharmaceuticals results in capable people shortage for implementation of medical services. Docquier (2006) have further declared that the brain drain is an expetive for developing nations. He determined the magnitude, reasons and the various

reasons behind the brain drain among both developed and developing nations and presented some positive influences. The researcher explored that the brain drain is beneficial in regards of the human capital enhancement in terms of education, development, technology, governance, and experience.

The skilled migration is mostly associated with the aim to study overseas. The students thus, do not return and get settled in abroad that lead towards the intellectual brain drain. USA has been found to be a desired destination for the foreign students. Almost 4% foreigners enroll in higher education in USA which is on enhancing pace. Thus, the intellectual brain drain lead towards the economic and social downfall as the major expertise move towards other countries in search for better life. So, the need of hour is to establish strategic solutions and strategic offerings in order to sustain the intellectual expertise within the country.

## **PROBLEM IN PAKISTAN**

The essential point of the present study has been the discussion of the fact that brain drain has become an alarming issue in the developing nations like Pakistan. The less rated economic and education system leading towards the less opportunities and development of the markets lead towards the migration of the skilled personnel. The skilled and talented individuals move towards developed nations for high level of opportunities. The need of the hour is to ensure the establishment and retention of the skilled labor in different industries of Pakistan. The major reason behind this pitfall has been the academic gap in the country; as majority of the big colleges and universities are somehow situation in developed 3 urban cities like Karachi, Lahore, and Islamabad. However, the issue that the government has been facing of brain drain of highly qualified individuals have been due to this gap as well.

Pakistan is ranked as the 6th largest population country with population of 191 million according to 2013 survey and is known to be the 9th largest on basis of labor force with 60.36 million population (Afridi & Baloch, 2014). However, besides all the worthy human capital availability, the retention of labor has suffered based on the concrete policies being practiced in Pakistan. This has led towards the change in the migration rate of the skilled labor to a visible higher number, thus, resulting in enhanced brain drain rate in Pakistan. Pakistan due to its high rate of intellectual personnel and hardworking labor has been facing the issue of brain drain on increasing pace as the skilled and technical human capital is focused to leave their homeland to get the higher economic opportunities along with high salaries.

Pakistan faces this shortage in talented labor every year as migrants to the Gulf States along with the Organization for economic Corporation and Development (OECD). Many these immigrants include the individuals associated with the medical field. Almost 4000 of the medical doctors and physicians migrate towards the developed nations every year for improvements in their living and economic perspectives (Afridi & Baloch, 2014). However, the country does have been enjoying the Diasporas' migration benefits in remittances form. Thus, these movements have deprived Pakistan from its technical, medical, educated and highly qualified skilled human capital; leading towards the brain drain cost in long run.

The migration of the talented people known as the brain drain is a big issue of the countries like Pakistan that is still unresolved to a greater extent. Pakistan faces the issue of this immigration due to the limited resources, availability of the employment and better salary and incentives offerings (Barker, 2003). The skilled labor moves towards other nations due to availability and easy access of all these opportunities.

Moreover, there has been a limited level of decentralized system induced in other working systems that lead towards the increasing attraction of the qualified individuals towards the foreign lands that work with complete decentralized strategic working patterns.

The political instability is among the primary reasons causing this increasing rate of brain drain in the past few decades in Pakistan. The maximum population of Pakistan comprises of youth that are either students or starters in their professions. The political volatility has caused towards the declining trust of the skilled labor in the government and its strategies so far. Thus, leading towards the accumulation of this curse of brain drain for developing countries like Pakistan (Docquier. 2006). The researcher was further concerned regarding this growing brain drain magnitude from developing nations to developed nations.

The biggest problem that Pakistan is facing as a resultant of this intellectual brain drain is the loss of its professionals and high-level technicians. The education systems at present have also been the cause of resulting in the growth of this brain drain system as the universities to obtain the best faculty offers various salary and compensation opportunities of the talented faculty on visit or permanent basis. This led towards the increment in the brain drain. The skilled labor leaving the native countries result in losses for the native country in terms of loss of skilled workers and declining economic developments.

The primary issue faced by Pakistan is the development and sustainability of the training, learning and improvement opportunities for the qualified people. This led towards the decisions of such labor to migrate towards developed nations where their skills are polished and improved with every passing time. Thus, the government do require to ensure the sustainability of the economic and the political systems and encouragement of the training and improvement programs.

Furthermore, the brain drain occupies an economic aspect of issue in Pakistan that cannot be deprived from its political aspect. The contradiction between the trainings of highly professional manpower along with the lack in satisfying ability of the economic system of country results in the complexity among the various societies inter-dependence, thus resulting from the economic, scientific, and technological developments of developing nations. A direct and indirect level of push and pull strategy interplay occurs during this brain drain process; as the developing nations with less opportunities losses more through the brain drain, while the developed nations do benefit from this process through attracting all qualified cream of individuals towards them.

## **SITUATION IN ACADEMIA**

The dimension is very important to be highlighted from the perspective of academia in Pakistan in a sense that from the perspective of developing countries and rationally for countries like Pakistan higher education systems add towards the inclusive development, but this development is subjected to capable, knowledgeable, and qualified staff of the higher education bodies. Obviously as it is also clear from the perspective of Pakistan that retention of such a qualified resource is big challenge because of low compensation patterns, insecurity, and unpredictable situation as well as low professional growth scenarios in the country. Thus, higher education institutions require to sustain this resource as the priority. However, the higher education institutions have been facing hardships to sustain knowledgeable and highly qualified faculty members. Retention is proving itself a huge dilemma for countries developing in nature.

It is very necessary to understand in terms of Pakistani perspective as it will also highlight the pattern commonly and frequently found in resembling developing countries so other fellow nations may also determine and pave their path ahead. If we closely examine the situation of Pakistan, it can be understood that there is poor and very weak concern of all regulatory mechanisms towards education sector and the piece of work and law formulation is just towards the paper formalities and documentation end and when it comes towards matter of implementation of those laws on real grounds the matter and scenario get worst, reflected by results of QS ranking. It is to be kept in view that two of most widely known rankings are familiar that are Academic Rankings of World Universities abbreviated as ARWU, while the other one is Quisqualis Symonds commonly known as QS World University Ranking which involves annual publication of university rankings.

It is hereby to keep in view that the indicators of the ranking involve indicators that are academic peer review, faculty to student ratio, employer compensation review, citations per faculty ratio, international faculty, and international student's ratio. Thus, the factor of employer perspective is greatly contributory towards the development and efficient performance of all institutes and equally applicable towards the academic institutes. If we look at the ranking it can be found that US remained at the top with 100 scores, UK with 9805 scores remained at the second highest level, Germany scored 94. While Pakistan scored 9.2 in terms of its higher education system and overall position is at 50<sup>th</sup> number reflecting a huge potential to be worked upon. On the other hand, its neighboring country India remained at the 24<sup>th</sup> number with a score of 60.9 (Muralidharan & Sundararaman, 2011).

Investigative results under the supervision of South Asian Network of Economic Research revealed that developed countries like Japan, USA, Western and Eastern European countries have highly persuasive and attractive and absorption potential based hubs and networks in the fields of scientific and intellectual expertise. These networks are basically meant for enhancement of scientific and academic capabilities from developed countries and for developed countries on the grounds, but on the other side of picture entirely these factors lead towards the engagement of foreign talent to rectify the hazards due to departure of local talent and attainment of those financial and social loss produced by the evacuation of highly skilled expert workers (Durrani & Singh, 2011).

It is usually argued that this drainage is remunerated through settlements and brain circulation. In this manner both expert and semi-skilled personnel are invigorated to pursue employment overseas to tackle unemployment as well as economic problems etc. even though it worked for a tiny duration but if we look with seriousness, the conclusion can be drawn that that we are missing and suffering of professionals specially in the areas of great concern which are health and education. If Pakistan's educational compensation pattern is examined one can say that it is fact that education is the pivotal and central hub for progress, development and improvement as well as strengthening of any country because it is the point where generations are groomed and prepared for contribution at national level so if key handlers of that center will be dissatisfied and discontented then surely nation must face worst scenarios in return.

### ***Strategic compensation instead of traditional compensation***

To overcome the problem of brain drains and to ensure the minimum level of migrations the need of hour is to introduce and offer patterns of strategic compensations afar from the traditional compensations;

so that the academicians could be used and retained efficiently and effectively leading towards their contribution in progress of country. Strategic Compensations has been referred as the reward configuration based on needed, preferred, and prioritized outcomes of an organization. However, this is quite a new concept in educational organizations; though the performance-based pay and merit pay are known ideas in academic but have not been proved to uphold a beneficial achievement track in academics.

Past research has indicated that the federal along with other universities have experimented the compensation approach of performance-based aspect. But these systems presented small rewards to the employees along with extra work and employer abusive nature work burden and used such approaches as control devices for the employees. However, strategic compensation is contrary to such old traditional compensations. In strategic compensations the compensations offered are aligned accordingly with the goals of organizations followed by the quality measurement setups to ensure goals achievements. This has been referred to be an essential part of present global systems as the scheme of cash based on test scores has proved to be inefficient (Akhtar, Aamir, Khurshed, & Hussan, 2015).

However, the total reward involves the traditional benefits the employees get as employment part along with other supporting programs for fulfilling the balance of career mobility and work-life acknowledgement (Cao, Chen & Song, 2013; Medcof & Rumpel, 2007). There have been various contradictory views regarding the determination of effectiveness of monetary rewards. Some researchers have indicated that the employees with less or more experience gets motivated through non-monetary rewards including the appreciation, acknowledgement of work, work-life balance, special projects. So, organizations in present are keener towards offering more non-monetary compensations than just financial incentives to retain the employees (Hytter, 2007; Zahra, et al. 2013; Milkovich & Newman, 2008).

In the paradigm of brain drain these non-monetary compensations do hold an effective position as the profit-oriented organizations do ensure the retention of its employees through such offerings. However, the organizations like of academics and healthcare sectors do face high level of competitiveness. The colleges and universities are keener towards attracting the most capable and skilled staff from all over the world as the internationalization of academics have created a hype for sustaining high level knowledgeable and productive staff to become the biggest awareness production source of nation (Khalid, Irshad, & Mahmood, 2012).

The brain drain in Pakistan has also been due to the lack of offering of strategic compensations. The teachers will be more satisfied on receiving a recognition, allocation of decision power, and such other intrinsic opportunities. It will lead towards meeting the basic characteristics of job that include the task identity of task, feedback, autonomy as these is interlinked with the satisfaction level as well. Thus, strategic compensations have an essential position in shaping the issues like brain drain of developing nations such as Pakistan.

## **FACTORS IMPACTING COMPENSATION**

There are various factors that have been influencing the compensations offered from the employer perspective. These entails the macroeconomic situation that shapes the demand of a skill, the position an organization holds in business market along with the company willingness of offerings for employees.

### ***Utilization of Strategic Compensations***

The utilization of the compensation in strategic manner refers to the alignment of the limited resources with the goals of an organization. The strategic compensations lead an organization to consider that how the pays could be utilized as source for achieving the goals than viewing it as cost. There have been various strategic compensations that have been drivers of businesses success.

### **Segmentation and differentiation**

The management and reward system for the talent has been observed to be the primary priority to overcome the talent outflow. In these efforts the differentiation of pay along with the segmentation of employees play a key role. Thus, in doing so, the organizations do require to customize its offerings in regard of making high investments on the employees with higher experience and performances, rather than trying to fit one size for all the increases. It means that the organizations must ensure the differentiation to be made while offering the bonuses and other incentives to the skilled employees to retain the human capital within the country.

### **Flexibility**

One of the issues associated with enhancing brain drain as discussed before has been the lack of flexibility at workplaces. Employees seek flexible environment either working in telecommunication or working for elongated hours and are keener towards working where such issues can be easily accommodated. Thus, workplaces require to ensure the implementation of flexible policies to attract the quality talent and stop the drainage of skilled employees. In doing so, the employers have been observed to become keener towards utilization of conjoint analysis to determine the compensations that employees value the most.

### **Communication**

The organizations along with all the public sectors do need to focus on the establishment of the culture that offers open communication regarding the pay and compensations to the employees. The HR departments play a vital role in ensuring the transparency of the offerings along with the managers. Such strategic compensation communications are essential part in ensuring the satisfaction and the feeling of association of the employees with the organization to determine the reasons behind deciding the associated compensations (Butt & Katuse, 2017).

### **Analytics and decision-making**

Another basic strategic compensation that organizations have been focused on were the insights associate with data to clearly identify the issues of workforce and facilitate with required solutions. For instance, almost 70-80% of the academic institutions' expenditure are associated with the personnel costs. Such organizations incorporate the supplementary pays, retirement funding, basic salaries, and other such compensations as the key offerings. In Pakistan even the private sectors have become more focused of incorporating such strategic compensation strategies to sustain best knowledge as compared to the public universities.

To meet the specified needs, the organizations do acquire choices regarding the adjustments in total compensations being offered to reach the strategic level of outcomes. In Pakistan, there has been a current accountability state for employees to make them the productive and skilled citizens in banking sector as well as other sectors specifically as opportunities of all sorts are available in banking sector after privatization. (Ahmed, Tariq & Hussain, 2015; Mushafiq & Sehar 2021). However, the strategic compensation cannot play a magical role in fixing the banking, education, or any other sectors. These strategic compensations do have ability to improve the outcomes of the students, teachers, their inputs along with rewards-based performances when aligned with comprehensive instruction and support systems.

Moreover, the strategic compensations have been elaborated by the past research to play a key role in shaping the team performances, actions and inputs of the teams, enhancement in the professional performances and growth of the individuals, allowing the employees to have a grip over their own rewards (Hodor, 2016). Furthermore, such compensations have been evolved to play a role in retaining the better performances, recruiting the skilled performers along with the ensuring deter of the people acting as source of risks (Ahmad & Rauf, 2012). Furthermore, the strategic compensations through better communication do play essential part in informing the professional development requirements and facilitate with essential data used in improvements efforts being made.

It has been observed further that the strategic compensation programs that assured holistic changes have presented similar level of outcomes. However, the need is for the continuous level of patience and improvements along with learning along with changes to be ensured in the compensation systems. Thus, developing nations like India, Pakistan etc. have been observed to working towards the utilization of such strategic compensations to recover the brain drain been done due to lack of satisfaction of skilled professionals (Khan, Khan & Turi, 2017).

## **CONCLUSION AND RECOMMENDATIONS**

Based on all the above discussion made and in the light of the evidence from the past literature it can be concluded that the objectives of the present study have been met to a great extent. Brain drain has been a big issue under consideration in Pakistan. There have been various factors that played an essential role in enhancing this issue in Pakistan as the industrial, academic, and other businesses growth issues have played negative part. The bad governance, financial issues, corruptions, tax issues, inflations have impacted the GDP of country that in turn also impacted the lifestyles of people leading them towards brain drainage. Moreover, another big dilemma that has been observed to play an essential role has been the disruption in the association of the industry and the academic worlds. This resulted in a decrease in the retention of competent and skilled personnel.

Previous research evidence, as well as detailed discussions on intellectual brain drain, have revealed that the government has placed less emphasis on the establishment of academics, which has led to students' desire to move abroad and study there with better opportunities available; as there has been great attraction in the technical and business fields. However, after 2000, there has been an increment in the universities and colleges in Pakistan. New programs have been introduced with a focus on attracting foreign and best staff from all over the world to ensure the offerings of various developmental opportunities for students

(Akhtar, Aamir, Khurshed, & Hussan, 2015). Yet, there has also been an attraction for the students to study abroad due to the offered scholarships. Therefore, the need of the hour is to ensure that the best possible individuals are made to come to Pakistan for facilitating the people with best opportunities. In such way, the intellectual brain drain of the skilled professionals could be reduced. Moreover, other opportunities like better salary and compensation packages, non-monetary rewards system introduction along with better opportunities through government should be introduced to retain the skilled human capital in country.

It has further been observed that besides the lack of coordination among the Ministry of Education and the Ministry of Commerce & Industry there has been various organizations like SMEDA (Small And Medium Enterprise Development Authority) that are working in a functional way to develop and establish small and medium startups in order to create more opportunities for the people (Afridi & Baloch, 2014). This in turn have been working towards the optimistic impact in efforts of the government and the private sectors to stop the skilled professionals from moving to abroad countries.

These organizations, however, have been unable to create a joint platform to reach the better job opportunities for training the students. The academic sector of Pakistan has also been keener towards establishment of the improved availability of the programs to create social networking like introducing job fairs for making access to the availability of the jobs on campus. However, there has been lacking standardized systems in case of job information and students' placements. The students are presented with less opportunities to exercise their learning, thus, leading the intellectuals to migrate towards other nations like USA, Canada, Europe etc. for better opportunities. To survive in Pakistan, personal links are needed to get a single internship. The academic sectors have been an essential part of the system of a country and the public universities in management, IT and behavioral fields has been observed to be on declining position. The universities need to improve their systems to get best ranking scores. This in turn will lead towards the retention of the talented people to remain in Pakistan.

Despite of all the efforts of developments being made by the government and the public sectors, the gap of academics and industry has not been filled to a greater extent. The universities are mostly situated in big cities of Pakistan like Karachi and Pakistan, Lahore. Thus, leading towards limited opportunities available for the students. There has been a lack of technical incentives and staff that lead towards the limited teaching and practicing methodologies. The role of different technical boards such as TEVTA, NAVTEC etc. has been less and requires drastic level of improvements.

The need of the hour is to utilize and establish the new paradigms of offerings that are being made to the employees and the skilled workers. The brain drain issue has been observed to have its roots within the unavailability or less availability of the better salary, incentives, and other compensations offerings to the talented workforce. As a result, the talented and skilled professionals have moved towards other developed nations for better lifestyle. Thus, the need of hour is to ensure the utilization of other strategic compensation than using the traditional compensations offerings. The intrinsic factors like recognition, feedback, proper communication, flexibility in workplace along with the decision-making powers are some of the strategic compensations that might lead towards the better developments and enhance availability of opportunities, resulting in less brain drain.

Pakistan has been unable to produce better entrepreneurs that could establish new developments and play a vital role in national developments. Thus, to ensure the development of businesses in country, the need is to bridge the gap of academics and industry as a starter and generate better infrastructures for integration of the talent and opportunities availability. In doing so, the comprehensive support and instruction systems are a requirement along with the strategic compensations as the strategic compensations cannot control or change the whole brain drain situation of Pakistan. A large of highly qualified professionals such as doctors, engineers have been observed to move towards developed nations for better opportunities. For instance, every year 36000 professionals almost move towards other nations for better opportunities (Tahir, Kauser & Tahir, 2011). Thus, this results in a great loss for the country regarding the loss of expertise and intellect from the country. So, the need is to ensure the employees to get hold over their own outcomes and rewards.

In doing so, the National Commission of Human Developments along with other such institutions and the HR departments of the organizations could play a significant role. The exchange of employment to be made on provincial along with national level should be done to establish liaison among the industry and human capital for job opportunities. Moreover, the strategic compensations of intrinsic values must be ensured for creating a trust factor among the employees that might lead towards the less intentions of the talented workforce to remain in their native country, Pakistan.

Moreover, the research culture should be ensured to be established within the industries and the academics that in turn will facilitate the skilled workforce to practice their own research, creating less attraction for other countries offerings as the need is of creation of sincere professionals that meet the challenges of the present instable political and economic situations. The pragmatic ways like human resource developments, offering strategic compensations and bridging the industry-academic gaps must be ensured to overcome this brain drain issue. Thus, the objectives of the present study regarding getting an insight into intellectual brain drain, the problems behind the brain drain in Pakistan and the strategic compensations have been proved to play an essential solution for overcoming brain drain has been met based on all the discussion made above.

## REFERENCES

- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall, Inc
- Afridi, F.K. & Baloch, Q., 2014. Strategies for Reversing the Brain Drain of Pakistan through Brain Circulation and Diaspora Option. *Life Science Journal*, 11(8), 771-775.
- Ahmad, I., ur Rehman, S., Ali, S.I.S., Ali, F. & Badshah, R., 2013. Problems of government secondary school system in Pakistan: Critical analysis of literature and finding a way forward. *International journal of academic research in business and social sciences*, 3(2), 85.
- Ahmad, N., Tariq, M. S., & Hussain, A. (2015). Human resource practices and employee retention, evidences from banking sector of Pakistan. *Journal of business and management research*, 7, 186-188.
- Akhtar, C.S., Aamir, A., Khurshid, M.A., Abro, M.M.Q. & Hussain, J., 2015. Total rewards and retention: Case study of higher education institutions in Pakistan. *Procedia-Social and Behavioral Sciences*, 210, 251-259.
- Barker, R. L. (2003). *The social work dictionary* (5th ed.), Washington, DC: NASW Press.
- Baruch, Y., Budhwar, P. S., & Khatri, N. (2007). Brain drains: Inclination to stay abroad after studies. *Journal of world business*, 42(1), 99-112.
- Bersin, J. (2008). *The Business Impact of Talent Management*. *Banking Strategies*, 84(5), 6.
- Butt, M. A., & Katuse, P. (2017). International Human Resource Management Practices in Automotive Industry in Pakistan: Implications for Economic Growth. *International Journal of Business and Management*, 12(2), 136.

Cao, Z., Chen, J., & Song, Y. (2013). Does Total Rewards Reduce the Core Employees' Turnover Intentions? *International Journal of Business and Management*, 8(20), 62-75.

Daugėlienė, R., & Marcinkevičienė, R. (2009). Brain drain problem in Lithuania: possible actions for its' solution via brain gain. *European Integration Studies*, (3).

Docquier, F. (2006). Brain Drain and Inequality Across Nation, Discussion Paper No. 2440, IZA, 53072 Bonn, Germany.

Durrani, S., & Singh, P. (2011). Women, Private Practice and Billable Hours Time for a Total Rewards Strategy?. *Compensation & Benefits Review*, 43(5), 300-305.

Giannoccolo, P., (2005). Brain drains competition policies in Europe: a survey (No. 534). *Quaderni-Working Paper DSE*.

Harvey, D., (2009). Talent strategy is vital. *Personnel Today*, 23(13), pp.147-152.

Hodor, E. S. (2016). Direct versus Indirect Rewards for the Attraction of the Employees. *Logos Universalitate Mentalitate Educatie Noutate-Sectiunea Stiinte Sociale/Logos Universality Mentality Education Novelty-Section: Social Sciences*, 5(1), 19-27.

Holbeche, L. (2009). *Aligning Human Resources and Business Strategy*. (2nd ed.) Oxford: Elsevier.

Hutch, A., Bekele, A., O'Flynn, E., Ndonga, A., Tierney, S., Fualal, J., ... & Erzingatsian, K. (2017). The brain drain myth: retention of specialist surgical graduates in East, Central and Southern Africa, 1974–2013. *World journal of surgery*, 41(12), 3046-3053.

Hytter, A. (2007). Retention Strategies in France and Sweden. *The Irish Journal of Management*, 28(1), 59-79.

Iravani, M.R., (2011). Brain drain problem: A review. *International Journal of Business and Social Science*, 2(15).

Kaukab, S. & Shahana. (2005). Situation of migration and potential available to reverse the brain drain--case from Pakistan. *Public Personnel Management*; Spring, 34(1), 103-112.

Kuruvilla, S. & Ranganathan, A., 2010. Globalisation and outsourcing: confronting new human resource challenges in India's business process outsourcing industry. *Industrial Relations Journal*, 41(2), 136-153.

- Khan, A., Khan, S. & Turi, S., 2019. An exploratory study focusing on teaching and learning practices at the tertiary level in Pakistan: A case study of a public sector university. *International Journal of Educational Development*, 65, 106-114.
- Khalid, S., Irshad, M. Z., & Mahmood, B. (2012). Job satisfaction among academic staff: A comparative analysis between public and private sector universities of Punjab, Pakistan. *International journal of Business and Management*, 7(1), 126.
- Medcof, J.W., & Rumpel, S. (2007). High Technology Workers and Total Rewards. *Journal of High Technology Management Research*, 18, 59-72.
- Milkovich, G. T., & Newman, J. M. (2008). *Compensation*, (9th ed.). USA: McGraw Hill International Edition.
- Muralidharan, K., & Sundararaman V. (2011). Teachers Performance Pay: Experimental Evidence from India. *Journal of Political Economy*, 119, 845-863.
- Mushafiq, M. and Sehar, T. (2021), Reality of short-term causality of Islamic and conventional banking term deposit rates in Pakistan, *Asian Journal of Economics and Banking*, 5(1), 66-78. <https://doi.org/10.1108/AJEB-10-2020-0072>
- Ndiangui, P. (2021). From brain drain to brain gain: the battle against talent drains. *Journal of Culture and Values in Education*, 4(1), 34-48.
- Panagiotakopoulos, A. (2020). Investigating the factors affecting brain drain in Greece: looking beyond the obvious. *World Journal of Entrepreneurship, Management and Sustainable Development*, 16(3), 207–218. <https://doi.org/10.1108/wjemsd-10-2019-0076>
- Sajjad, N., (2011). Causes and solutions to intellectual brain drain in Pakistan. *Dialogue*, 6(1), 1819-6462.
- Tahir, M.W., Kauser, R. & Tahir, M.A., (2011). Brain drains of doctors; causes and consequences in Pakistan. *World Academy of Science, Engineering and Technology*, 75, 406-412.
- Zahra, S., Irum, A., Mir, S., & Chisti, A. (2013). Job Satisfaction and Faculty Turnover intentions: A Case of Pakistani Universities. *Journal of Business and Management*, 9(2), 83-89.