**Brain Drain in Bangladesh: Exploring Key Factors, Impacts and Strategic Policy Recommendations**

**ABSTRACT**

Brain drain is a significant concern for Bangladesh since it causes the outflow of highly trained and educated persons in quest of better opportunities elsewhere. This study aims to investigate the various causes of brain drain, with a focus on four key factors: educational, living, economic, and political environments. The research attempts to examine how these characteristics influence the decision to emigrate by conducting a quantitative analysis of 180 responses obtained using a structured questionnaire. The study uses SPSS Version 27 for statistical analysis and employs correlation and regression techniques to assess the link between these parameters and the possibility of emigration. A theoretical framework that conceptualizes these characteristics as independent variables influencing the decision to consider emigration serves as the foundation for the research. Preliminary findings show that, while all four factors are important, living conditions have the most negative link with the intention to emigrate, implying that improving living standards in Bangladesh could effectively prevent brain drain. The study recommends enhancing educational infrastructure, improving job opportunities, ensuring political stability, and implementing economic reforms to create a more conducive environment for talent retention. The study not only helps to a better knowledge of emigration dynamics in underdeveloped countries, but it also provides policymakers with insights into how to retain talent in Bangladesh.

***Key words:*** *Brain Drain, educational facility, living condition, economic condition, political condition, Bangladesh.*

**1.1 INTRODUCTION**

Brain drain is one of the most crucial and persistent challenges for Bangladesh as it is a developing country. The term mainly refers to the migration of highly educated and expertise individuals from their country to pursue better opportunities abroad. This kind of migration is not only a national loss but also indicates some crucial challenges for the country’s socio- economic development. Brain drain means emigration of talented people like doctors, engineers, teachers and technicians from one country to another (Yamin and Luna, 2016). Most migration occurs between developing and developed nations. (Dodani and LaPorte, 2005).

According to World Economic Forum survey conducted around five years ago (2020) revealed that 82% of Bangladeshis between the ages of 15 and 29 would like to go overseas, it caused quite a stir in the country. The finding drew tremendous attention and spurred broad debate across the country. The poll emphasized the younger generation's desire to pursue better chances overseas, which is motivated by reasons such as access to superior education, higher-paying employment, greater living circumstances, and possibilities for personal and professional advancement. The discovery also highlighted underlying challenges in the country, such as concerns about limited prospects, unemployment, and a lack of suitable circumstances for retaining young people. This data not only resonated with the youth, but it also prompted politicians, educators, and thought leaders to consider how to establish an environment in Bangladesh that could nourish and sustain the dreams of its younger people.

Brain drain may have either a positive or negative influence on the welfare and development of a source nation. Research indicates that emerging nations are more likely to experience losses than gains. Country-specific factors, like migration, development, population size, language, and geography, determine whether a country gains or loses. Policymakers should assess the costs and advantages of brain drain to develop effective policies. (Docquier, 2014)

**1.2 RESEARCH QUESTIONS:**

1. Why people want to migrate from their country?
2. What factors influence their decisions to migrate?
3. How do Bangladesh's living conditions influence its inhabitants' decisions to migrate abroad?
4. Does demographic patterns like age, gender and educational qualification have any different impact on the decision to emigrate among individuals in Bangladesh?

**1.3 PURPOSE OF THE STUDY:**

The research objectives include:

1. To assess the Extent and Nature of Brain Drain in Bangladesh
2. To examine the causes and challenges of brain drain in the development of Bangladesh.
3. To identify successful strategies and best practices and also propose policy recommendations and solutions to address brain drain.

**2 LITERATURE REVIEW:**

The existing body of research on brain drain is quite limited, with only a few publications thoroughly addressing its causes, implications, and potential solutions. Nonetheless, Brain drain is one of the most emerging concept for the sustainable economic development in developing countries. (Yamin and Luna, 2016). According to Yamin and Luna (2016), skill migration can be retained through providing some push and pull factors by public and private sectors. But this study did not provide in depth sectoral analysis. Although this research paper provided some strategies and policy recommendations but did not critically evaluate the effectiveness of these policies for talent retention and migration.

Rahman (2020) in his study he provided valuable insights into the economic and socio-political impacts of brain drain in Bangladesh but more comprehensive analysis might be done about the influences on local labor markets, including employment and wage dynamics. Additionally, he did not provide any quantifying details on the impact of brain drain on key sectors. Comparative studies with other labor-sending countries could offer broader context, and gender-specific impacts of migration warrant further exploration.

Docquier, (2014) explored the key driving forces of migration. These were pursuing better economic opportunities, advanced educational facilities, and more stable political environments. This study also assessed significant impact of remittances from emigrants which offers economic benefits and innovation. The paper recommended some policies to mitigate brain drain, such as improving domestic job opportunities and stability, encouraging return migration, and engaging with diaspora communities. However, it did not analyze the sector-specific impacts as well as how to retain the skilled people in the developing countries.

Usman et al. (2022) explored the relationship between brain drain and remittance inflow, as well as the impact on economic growth in Sub-Saharan African nations between 2006 and 2020. The results demonstrated that remittances and commerce had a favorable impact on economic growth. Human capital flight, poverty, inequality, and inflation, on the other hand, have all hampered economic growth.

According to Dodani and LaPorte, (2005), young, well-educated and healthy individuals’ migration reasons are most likely higher education and economic improvement. One of the pull factors of developed country is the ongoing disparities in working environment between rich and poor countries. Many researchers from developing countries identified other factors for not returning after training which include: lack of research funding; limited career structures; poor intellectual stimulation; poor facilities; threats of violence; and lack of good education for children in their home country (Adams RH, 2003).

Ross and AlWaheidi, (2021) stated that mainly living conditions influence brain drain but organizational practices also have an impact. Other factors corresponding inadequate income, political instability, lack of transparency were also considered even more critical in driving brain drain. The study only focuses on the health sector but it might also cover other sectors like education and technology. Secondly, this research uses data from a single point in time, so it could not be valid for a longer time period. Other factors such as cultural and psychological factors could also be focused which might benefit other researchers.

This happens due to two distinct factors, push and pull factors. One of the major push factors is the lack of quality higher education opportunities. According to UNESCO data (2024), the number of Bangladeshi students seeking higher education overseas has climbed dramatically over the years. In 2015, roughly 24,112 students traveled overseas, a figure that is expected to triple by 2020, reaching 70,000 to 90,000 students each year. However, available data do not support the notion that an average of 90,000 students left for the United States alone. In the academic year 2023-2024, the number of Bangladeshi students in the United States hit a new high of over 17,000. This shows that, while the overall number of students traveling overseas has grown, the figure of 90,000 students traveling to the United States alone is inaccurate.

On the flip side, the primary pull factors are better career opportunities, quality higher education, social security, freedom of choice, etc. Both these factors contribute to skilled individuals departing from their homeland for good. (Islam and Haque, 2021). The empirical findings of Moazam, & Awan (2024) show that, with the exception of low-income nations, there is a reciprocal relationship between brain drain and remittance inflow across all Asian panels. There is a reciprocal association between remittances and economic growth in low-middle-, high-, and overall Asia. Conversely, there is a one-way relationship between lower- and upper-middle-income economies. The results also show that remittances at all income levels are significantly impacted by brain drain. While unemployment and gender inequality exacerbate brain drain, social safety nets, improved living standards, and higher-quality institutions decrease it.

According to International Organization for Migration - IOM, (2020) brain drain is influenced by several factors such as unsafe living conditions; economic disparities; social issues, such as a decline in freedoms and values that discourage talent from staying. Moreover, poor organizational practices, such as low salaries and poor working conditions motivate individuals to migrate in search of better prospects in abroad. Whereas, Shahabadi, Salehi, and Hosseinidoust (2020) analyzed the influence of competition on brain drain from selected Islamic nations to the United States between 2007 and 2015. Their data show that increased national competitiveness greatly lowers brain drain, whereas welfare and real pay differences serve as push factors. Furthermore, high unemployment rates have a favorable and considerable impact on skilled migration. According to the survey, low competitiveness in Islamic nations is a big deterrent to professionals seeking opportunities outside. To retain competent personnel, authorities should improve economic prospects, reduce unemployment, and promote innovation, according to the authors. This study contributes to the brain drain literature by stressing competition as a crucial predictor, and it suggests future research into its impact in various regional and sectoral situations.

Raji et al. (2018) used the pool ordinary least squares technique to investigate the causes, impacts, and consequences of brain drain on African economic development, with a focus on Ethiopia, Kenya, and Nigeria. The paper discovered a negative correlation between brain drain, remittances, and economic growth. Human capital development, on the other hand, correlates positively with economic growth in Ethiopia, Kenya, and Nigeria. Based on the findings, the report advises the following policies to combat brain drain in Africa. Lastly, Ngoma and Ismail (2013) investigate the causes driving brain drain in developing nations, discovering a \*\*inverted U-shaped relationship\*\* between skilled migration, wage differentials, and income convergence. They identify \*\*population size, political instability, and geographic distance\*\* as significant variables. Despite the demand for qualified labor in emerging countries, migration \*\*continues to increase\*\* as a result of these persistent reasons.

**3 METHODOLOGY:**

**3.1 Research Design:**

This study develops main four factors that influence people’s decisions to migrate from Bangladesh to abroad. These factors are selected from other significant researches and from literature review. The framework is designed according to the independent factors and dependent factor.

Educational conditions

Living conditions

Economics conditions

Political conditions

Brain Drain

**Figure1: Proposed Theoretical Framework**

**3.2 Hypothesis Development:**

**H1:**  *Educational conditions influence the brain drain*

**H2:** *Living conditions influence the brain drain*

**H3:** *Economic conditions of Bangladesh influence brain drain*

**H4:** *Political conditions of Bangladesh influence brain drain.*

**3.3 Population and Sampling**

This study uses a cross-sectional quantitative research methodology to investigate the influence of Education, living condition, economic condition and political condition of Bangladesh on the decisions of emigration. Respondents were chosen using a non-probability sampling approach known as judgment sampling.

This study's target demographic includes a varied variety of Bangladeshi individuals throughout four age groups—20-25, 26-35, 36-45, and over 45 years old—each representing various stages of career and personal growth likely to consider emigration. This category includes young folks in the early phases of their careers, established professionals looking for better prospects for their families, mid-career individuals seeking stability or career adjustments, and senior professionals considering relocating for retirement or to join relatives abroad. The study's broad demographic spectrum guarantees that it captures a variety of perspectives on the causes influencing the decision to emigrate, with an emphasis on educational, economic, political, and lifestyle situations.

**3.3.1 Sample:**

Fromthispopulation, 200 people were surveyed. From which this study could only use 180 responses. Due to incomplete information and inconsistency, 20 responses was excluded for the analysis. This stratification guarantees that the sample represents the population's diversity in terms of age and other aspects that may impact their decision to move.

**3.3.2 Data collection**

The questionnaire was created using proven measuring scales from previous investigations. (Basher and Farzana, 2026). The questionnaire consists of major four variables such as education facility, economic condition, living condition and political condition structured using Likert scale that ranged from strongly agree to disagree. The participants were chosen through both direct interactions at community events and internet channels used by potential emigrants. The structured questionnaire distributed to these individuals was intended to elicit extensive information about their perceptions of and satisfaction with local conditions in comparison to prospective prospects abroad.

**3.3.3 Variables:**

Independent variables are Educational facility, Better Living condition, Economic Condition and Political Condition. Dependent variable for this study is Consideration for Emigration.

**3.2 Tools of analysis:**

Thisstudy used SPSS version 27 to analyze and prove the hypothesis. Several statistical techniques were applied such as: Descriptive statistics to find out the mean, skewness, standard deviation and kurtosis. Pearson correlation coefficients were used to investigate the association between the independent and dependent variables. ANOVA is used to determine the overall model fit and significance of the regression model. Lastly, Multiple regression was used to analyze the impact of the independent variables on the dependent variable, revealing which elements are important predictors of emigration consideration.

**4 RESULTS, ANALYSIS AND INTERPRETATION:**

**Table 1: Frequency Distribution**

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| **Statistics** |
|  | **Age** | **Highest Education Level** | **Gender** | **Employment Status** |
| N | Valid | 180 | 180 | 180 | 180 |
| Missing | 0 | 0 | 0 | 0 |
| Mean | 2.69 | 2.33 | 1.48 | 1.96 |
| Skewness | .381 | .198 | .090 | .061 |
| Std. Error of Skewness | .181 | .181 | .181 | .181 |
| Kurtosis | -1.161 | -1.243 | -2.014 | -.940 |
| Std. Error of Kurtosis | .360 | .360 | .360 | .360 |
| Sum | 484 | 419 | 266 | 352 |

The survey data from 180 respondents gives a thorough overview of the demographic features of people considering emigrating from Bangladesh. The average age ranges between "26-35 years" and "36-45 years," with a little inclined toward younger demographics, indicating a young responder base. The level of education is often between a Bachelor's and a Master's degree, with the distribution trending somewhat toward higher educational attainments. Male respondents dominate, with a slight percentage in this survey. Employment status is centered on employed individuals, implying that the majority of respondents are participating in the labor field. Finally, these statistics provide a demographic profile of educated, primarily young, and employed people, providing significant insights into the population segments most likely to consider emigration due to various socioeconomic causes.

**Table 2: Pearson Correlation of this study**

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| --- |
| **Correlations** |
|  | Consideration for emigration | Education Facility total | Job opportunity total | Better life total | Economic Condition total | Political Condition total |
| Pearson Correlation | Consideration for emigration | 1.000 | .173 | .012 | -.270 | -.066 | .081 |
| Educational Facility total | .173 | 1.000 | .166 | -.176 | .104 | .275 |
| Job opportunity total | .012 | .166 | 1.000 | .048 | .103 | .258 |
| Better life total | -.270 | -.176 | .048 | 1.000 | .132 | .005 |
| Economic Condition total | -.066 | .104 | .103 | .132 | 1.000 | .214 |
| Political Condition total | .081 | .275 | .258 | .005 | .214 | 1.000 |
| Sig. (1-tailed) | Consideration for emigration | . | .010 | .439 | .000 | .191 | .141 |
| Educational Facility total | .010 | . | .013 | .009 | .082 | .000 |
| Job opportunity total | .439 | .013 | . | .259 | .084 | .000 |
| Better life total | .000 | .009 | .259 | . | .039 | .472 |
| Economic Condition total | .191 | .082 | .084 | .039 | . | .002 |
| Political Condition total | .141 | .000 | .000 | .472 | .002 | . |
| N | Consideration for emigration | 180 | 180 | 180 | 180 | 180 | 180 |
| Educational Facility total | 180 | 180 | 180 | 180 | 180 | 180 |
| Job opportunity total | 180 | 180 | 180 | 180 | 180 | 180 |
| Better life total | 180 | 180 | 180 | 180 | 180 | 180 |
| Economic Condition total | 180 | 180 | 180 | 180 | 180 | 180 |
| Political Condition total | 180 | 180 | 180 | 180 | 180 | 180 |

The correlation analysis of 180 respondents showed varied degrees of association between emigration consideration and several socioeconomic characteristics. Educational facilities (Educational Facility total) had a slight positive connection (r =.173, p =.010) with emigration consideration, suggesting that views of local educational quality have a minor influence on emigration decisions. Better living conditions (r = -.270, p <.001) have a negative correlation, indicating that they significantly reduce the risk of considering emigration. Job possibilities and economic conditions have low connections with emigration contemplation, suggesting a limited direct influence. Political conditions reveal a weak positive association (r =.081, p =.141), indicating that they have a low impact on emigration considerations. Political conditions reveal a weak positive association (r =.081, p =.141), indicating that they have low impact on emigration considerations. This pattern implies that, while educational and living conditions are more directly related to emigration decisions, economic and political issues may play a less obvious effect.

**Table 3: Anova result of this study**

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| **ANOVAa** |
| Model | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 4.261 | 5 | .852 | 3.642 | .004b |
| Residual | 40.717 | 174 | .234 |  |  |
| Total | 44.978 | 179 |  |  |  |
| a. Dependent Variable: Consideration for emigration |
| b. Predictors: (Constant), Political Condition total, Better life total, Economic Condition total, Job opportunity total, Educational Facility total |

The model yielded an R-value of 0.308, showing a moderate positive association between the predictors and the consideration of emigration. This value indicates the strength of the linear relationship between the combined independent factors and the dependent variable.

The model explains just a small percentage of the variance in emigration considerations, implying that, while the included variables have an impact on emigration decisions, this model cannot explain a large portion of the variability. This suggests the presence of other factors not captured by the model that may impact the decision to emigrate. The moderate R-value and low R² indicate that emigration decisions are complex and influenced by multiple factors beyond the model's scope.

**Table 4: Regression Analysis of this study**

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| **Coefficientsa** |
| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | Correlations | Collinearity Statistics |
| B | Std. Error | Beta | Lower Bound | Upper Bound | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Constant) | 1.684 | .258 |  | 6.522 | .000 | 1.174 | 2.193 |  |  |  |  |  |
| Educational Facility total | .019 | .012 | .120 | 1.559 | .121 | -.005 | .044 | .173 | .117 | .112 | .877 | 1.140 |
| Job opportunity total | -.001 | .012 | -.007 | -.092 | .927 | -.024 | .022 | .012 | -.007 | -.007 | .918 | 1.089 |
| Better life total | -.033 | .010 | -.241 | -3.243 | .001 | -.054 | -.013 | -.270 | -.239 | -.234 | .942 | 1.062 |
| Economic Condition total | -.010 | .012 | -.059 | -.790 | .431 | -.033 | .014 | -.066 | -.060 | -.057 | .931 | 1.074 |
| Political Condition total | .010 | .012 | .063 | .810 | .419 | -.014 | .034 | .081 | .061 | .058 | .850 | 1.177 |
| a. Dependent Variable: Consideration for emigration |

The total model was statistically significant (F = 3.642, p = 0.004), indicating that the set of predictors, taken together, accounts for a significant percentage of the variance in respondents' consideration of emigration. Among them, better living conditions emerged as the most important factor influencing the decision to stay or go, implying that policies focused at enhancing Bangladesh's quality of life could be beneficial in preventing brain drain.

**4.1 Discussion**

The findings of regression analysis imply that, among the categories investigated, living conditions had the greatest influence on emigration decisions, whereas the effects of educational, economic, and political situations are not statistically significant in this group. This information can be used to more accurately target efforts aimed at retaining talent within the country through improved living conditions.

**5 CONCLUSION, LIMITATIONS AND SCOPE FOR FUTURE STUDY**

**5.1 Conclusions**

This study thoroughly investigated the impact of educational, living, economic, and political situations on the decision to emigrate among Bangladeshis of various ages. The data reveal that, while educational and political factors do not influence emigration decisions much, living conditions are far more important. In addition, economic considerations had little direct influence on emigration decisions in the current study.

The study sheds light on the intricate interplay of various elements that contribute to the brain drain phenomena in Bangladesh, emphasizing the importance of living conditions. This knowledge is critical for policymakers and stakeholders looking to design tailored efforts to keep talent in the country.

However, brain drain is not always negative for developing countries like Bangladesh as it can be used for earning remittances. Bangladesh is one of the leading countries for remittances. The government must deploy resources for economic development and employment creation to benefit future generations.

**5.2 Recommendations:**

A comprehensive policy strategy is required to reduce brain drain in Bangladesh. In order to raise the general standard of living, the government should first improve living conditions by funding social security, healthcare, and infrastructure. Second, in order to build competitive learning environments that retain talent, educational reforms should concentrate on modernizing universities, boosting research funding, and encouraging industry-academic collaboration. Third, in order to guarantee that talented professionals find good career options in the nation, economic policies must encourage the development of jobs, increased pay, and entrepreneurship opportunities. In order to increase public trust, lessen corruption, and foster an atmosphere where people feel confident about their future, political stability and sound governance should also be given top priority. Finally, to promote knowledge transfer, investment, and the repatriation of qualified professionals, diaspora engagement initiatives should be reinforced. Bangladesh may lessen talent exodus and foster an atmosphere that supports long-term social and economic growth by putting these strategic strategies into practice.

**5.3 Future implication:**

Future studies should focus on the long-term impact of brain drain on the development of Bangladesh which may provide information about the long-term efficacy of various policy approaches. Furthermore, investigating other underlying causes, such as cultural and psychological influences on emigration, could provide a more comprehensive picture of the brain drain problem. Comparative research with other labor-sending countries may also provide useful insights into global migration trends and their local consequences, allowing for more internationally informed policy responses. Furthermore, sector-specific studies could shed light on how different industries are particularly influenced by brain drain, allowing for more targeted interventions in areas where talent is most likely to leave.

**5.4 Limitation:**

This study, while extensive, has drawbacks. The reliance on a cross-sectional dataset restricts the capacity to infer causality or track changes over time. Furthermore, the sample size, while appropriate, represents just a percentage of possible emigrants, and may not reflect all of the intricacies of the broader population's emigration motivations.

To summarize, effectively addressing brain drain needs a multidimensional approach that takes into account not only the economic but also the social and political components of migration. As Bangladesh grows, efforts to enhance domestic conditions must be addressed in order to retain and recruit high-skilled persons who are critical to long-term development.

**Original research paper.**

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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