

A Study of Economic, Institutional, and Family Factors Associated with Migration Intentions in Final-Year University Students in Pakistan

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ABSTRACT: One of the major challenges facing Pakistan is brain drain, as an increasing number of university graduates consider pursuing education and employment opportunities abroad. This study aimed to examine the associations of perceived economic opportunity, institutional trust, household income, and parental migration status with migration intentions among final-year university students in Pakistan. A quantitative cross-sectional research design was employed, and data was collected from 200 students using standardized self-report questionnaires. The findings indicated that perceived economic opportunity was positively associated with migration intentions, whereas institutional trust showed a strong negative association with intentions to migrate. Household income was also positively associated with migration intentions. Parental migration status did not significantly moderate the examined relationships. Furthermore, migration intentions varied across academic fields. The findings highlight the importance of strengthening institutional trust, expanding viable employment opportunities, and promoting transparent and merit-based systems to reduce graduate's intentions to migrate and support the retention of skilled human capital in Pakistan.

KEYWORDS: Brain Drain, Migration Intentions, Institutional Trust, Economic Opportunity, University Students, Pakistan

Introduction

A great deal of international migration has taken place over the last several decades, especially among the highest educated people who are looking to find improved educational and professional and economic opportunities. Skilled migration helps the world share knowledge and develop skills and careers, but it can also bring significant problems for developing countries in the form of brain drain. Where jobs are few and job structures are fragile and unstable, countries with better educated populations tend to lose the best and brightest to other countries, limiting their ability to innovate, be productive, and move forward with sustainable growth.

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In recent years there has been a significant rise in the emigration of highly talented persons and university graduates from Pakistan. In an attempt to find better employment, better salary packages, better working conditions and better quality of life, more and more highly educated Pakistanis are emigrating from the country year after year, as per the figures of the Bureau of Emigration and Overseas Employment (BEOE). Policymakers are worried about this trend, since the constant depletion of skilled human resources could impact research, higher education, the healthcare system and the economic growth of the country. The factors that affect the intention of migration of students have thus become an important field of study.

It is known that migration intentions are one of the best predictors of actual migration. Prior to a definite decision to relocate, individuals consider their anticipated career opportunities, economic opportunities, institutional environment, and personal situation. Such perceptions have a great impact on whether they want to stay in their home country or go for opportunities in other countries. Therefore, it is significant to investigate the intentions of university students in the final year of university education as they are at a critical stage in making educational and career choices.

The previous studies found that some factors associated with intentions to migrate are job opportunities, expected income, quality of life, political stability, family influence and social networks. Of these, perceived economic opportunity has repeatedly been a key factor in determining migration decisions. Generally, students who think that their country of origin does not have many employment opportunities, low pay, or limited career prospects are more inclined to think about migration in order to achieve professional success. Importantly, people make decisions based on their perception of future opportunities, and not on the real economic conditions alone.

Another important factor influencing migration intentions is institutional trust, which refers to individuals' confidence in public institutions, governance, fairness, and the effectiveness of government systems. Perceptions of transparency, merit and support within institutions can make students more positive about their future in their own country. Conversely, a lack of trust towards institutions can motivate people to pursue opportunities in countries where they think institutions are more stable, fair and offer better career prospects. Although the concept of institutional trust and the impact it has on migration intentions is a relatively under-researched topic in the Pakistani context, the situation is not that different in the international arena as well. In the Pakistani context, the role of institutional trust on migration intentions is not as much explored as it is in the international arena, yet there is a growing body of evidence across the world.

Family attributes can also play a role in the migration decision. Students of more well to do families may have more resources to attend foreign study or work placements, and parents who have migrated may have access to foreign networks and migration-related information. But, previous studies have yielded mixed results on whether or not parental migration status influences migration intentions, which suggests that migration intentions may more and more become a reflection of the individual's career aspirations instead of the family's migration history. Moreover, the motivation to migrate may vary according to disciplines due to various labour market opportunities and career aspirations of graduates from different disciplines.

While several studies have been conducted on the intentions to migrate among the citizens of different nations, few studies have focused on the perceived economic opportunity, trust in institutions, household income, parental migration status and academic discipline of Pakistani university students. The vast majority of current studies has been on objective economic indicators or on a general level of migration trends, and has not sufficiently accounted

for students' own perceptions on their migration intentions. This is significant, because perceptions can be a powerful influence on decision making, stronger than reality.

This study fills this gap by studying the effect of perceived economic opportunity and institutional trust on migration intentions among final year university students of Lahore, Pakistan, holding household income constant and examining whether parental migration status moderates the relationship between perceived economic opportunity and migration intentions. The study concentrates on students who are about to enter the labour market and offers evidence on the factors that motivate highly educated young adults to contemplate moving. The findings will be useful to the existing literature on skilled migration and will also inform policy makers, universities and government agencies in designing a policy that would help them keep highly skilled individuals within their nation and limit the impact of brain drain in Pakistan in the long term.

Background of the Study

The issue of migration of highly educated and skilled people from the developing world to other countries in search of better opportunities is causing hardships for the developing countries, especially Pakistan. The number of university graduates who depart the country affects the availability of highly skilled human resources, and thus the economic development, innovation and productivity of the country. High rates of out-migration of skilled graduates cause a shortage of skilled personnel and hinder the development of the country, although it is also seen to have positive effects such as remittance and transfer of knowledge. A lack of employment opportunities, low wages, economic instability, and governance problems have prompted students to consider studying in other nations for careers as well. Economic factors, such as institutional trust and family situations, also are a factor in migration decisions. The candidates who are more inclined to think that there are better opportunities abroad are less confident about domestic institutions, or have family members who have migrated, are more likely to say that they plan to migrate. The problem of student brain drain has received considerable attention in the past but little work has been done to explore the various factors associated with economic, institutional and family factors that influence the decisions of university students in Pakistan regarding their migration intentions. Therefore, the present study is focused on the economic opportunities, institutional trust, academic discipline, parents' migration status, and household income perceived to influence migration intention of the final year university students of Lahore city in the context of Pakistan. The results will be used as evidence for policies in order to keep skilled graduates in the country and to minimize brain drain.

Problem Statement

In Pakistan, brain drainage is a growing concern especially for the educated graduates planning to go overseas for higher education and employment opportunities, thereby causing loss of skilled human resources. While previous research has focused on economic and political motives that drive migration, the influence of economic opportunities, institutional trust, academic discipline and family background on migration intent of learners is not well investigated. Hence, this study explores the economic, institutional and family factors that affect the migration intentions of the final year students from the University of Pakistan to find any concrete evidence that can be used to frame policies for the reduction of brain drain and retention of skilled graduates in Pakistan.

Research Questions

- ▶ Does the economic prospect of a particular destination affect the decision of the final year university students to migrate in Pakistan?
- ▶ How are institutional trust and intention to migrate related for students?

- ▶ Are intentions to migrate different by academic discipline?
- ▶ Do economic opportunity perceptions condition the association between migration intentions and parental migration?
- ▶ Is there an interaction between institutional trust and migration intentions?
- ▶ Is there an interaction between institutional trust and migration intentions that is mediated by parents' migration status?

Objectives

- ▶ To explore the effect of economic, institutional and family factors on the migration aspirations of the fourth-year students at the university.
- ▶ To examine the role of perceived economic opportunities in students' migration decisions.
- ▶ To investigate the relationship between institutional trust and university students' migration decisions.
- ▶ To investigate if there are any differences in migration plans by academic area.
- ▶ How the parents' migration status moderates the link between economic and institutional factors and migration intentions.
- ▶ To examine the impact of household income on students' intent to migrate.

Hypothesis

H1: The destination country's economic opportunity has a strong impact on the migration intentions of migrants.

H2: Migration intentions are significantly negatively related to institutional trust.

H3: The intention of migration is highly inter-disciplinary variable.

H4: Parents' migration status significantly influences the relationship between the perceived economic opportunity and migration intentions.

H5: The relationship between institutional trust and parents' intentions to migrate is moderated by the parents' migration status.

H6: Household income has a significant effect on migration intentions.

Significance of the Study

The study adds to the existing knowledge on economic, institutional and family pull factors on intention to migrate of the final year university students of Pakistan. The findings will assist the policy-makers and Higher Education Commission (HEC) in developing the policy to address the issue of brain drain by providing employment opportunities and strengthening public sector, and to keep the graduates within the academic institutions. The study is also relevant in existing literature on migration and human capital as it brings Push – Pull Theory and Human Capital Theory in the context of Pakistan. Also, it will serve as a valuable reference for future researchers interested in the fields of migration, labor economics and human capital development.

Variables of the Study

Table 1

Variable	Variable Type	Conceptualization	Operationalization
Migration Intentions	DV	The strength of a student's cognitive and behavioral	Measured using the validated Migration Intentions Scale (Leong & Soon, 2011),

		inclination to pursue higher education or employment outside Pakistan within three years of graduation	comprising 8 items rated on a 6-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Higher aggregate scores indicate stronger migration intentions
Perceived Economic Opportunity (Push Factor)	IV	The student's subjective assessment of Pakistan's economic environment as it relates to their career prospects, including perceptions of wage adequacy, job availability, career growth potential, and economic stability	Measured using an adapted 5-item Economic Opportunity Perception scale. Items rated on 6-point Likert scale. Higher scores indicate more negative economic perceptions that theoretically increase migration intentions.
Institutional Trust (Push Factor)	IV	The student's perception of fairness, transparency, and meritocracy within Pakistani educational and professional institutions	Measured using a 6-item Institutional Trust scale adapted from governance literature. Items rated on 6-point Likert scale. Higher scores indicate higher institutional trust, which theoretically <i>decreases</i> migration intentions.
Academic Discipline	IV	The field of study in which the student is enrolled, categorized according to labor market demand and migration propensity	Categorical variable coded as: 1 = Medical/Health Sciences, 2 = Engineering/Technology, 3 = Natural Sciences/Research, 4 = Business/Economics, 5 = Social Sciences/Humanities, 6 = Other
Parental Migration Status	IV (<i>Moderating</i>)	Whether the student has immediate family members who have already migrated abroad, serving as a proxy for social capital and migration network effects	Single-item binary measure: "Do you have any immediate family member (parent or sibling) currently living abroad for work or study?" Responses: 0 = No, 1 = Yes.
Household Income	IV (<i>Control</i>)	The total monthly income of the student's household, measured as a proxy for socioeconomic status and family capacity to finance international migration	Categorical measure: 1 = Less than PKR 50,000, 2 = PKR 50,001–100,000, 3 = PKR 100,001–200,000, 4 = PKR 200,001–300,000, 5 = More than PKR 300,000.

Literature Review

Based on the ARDL model of time series data (2000–2024), this study has shown that, graduate output has a significant impact on unemployment when GDP growth is limited and that graduate unemployment is a direct push factor for skilled emigration. The macroeconomic evidence is solid, but the study is unable to account for differences in migration intentions within the population. Intention varies between students who graduate from same educational programs, with the same economic conditions; aggregate data cannot reveal this. The current study goes further by measuring the perceived (not actual) economic opportunity at the individual level (Farooq et al., 2025).

This quantitative survey of 150 Lahore undergraduates found that academic resilience negatively predicts migration intentions ($\beta = -0.31$, $p < 0.01$), while parental migration status ($\beta = 0.42$, $p < 0.001$) and higher income ($\beta = 0.28$, $p < 0.05$) positively predict intentions. The study innovates by introducing psychological factors into brain drain analysis but omits institutional variables (governance, meritocracy, research capacity) that may mediate the resilience-intention relationship. The present study incorporates institutional trust alongside economic perceptions to test whether resilience operates independently or through institutional confidence (Humayun, 2025).

This qualitative study found some perceived research infrastructure and institutional autonomy deficits actually foster migration intentions as students get exposed to the international environment in the context of HEC reforms through thematic analysis of 20 interviews with HEC officials, faculty and students. Qualitative design and a small sample ($N=20$) do not allow for statistical generalization, while the rich insider perspectives provide a glimpse on unintended policy consequences. The present study measures these institutional perceptions in a larger sample, and examines whether governance dissatisfaction is associated with migration intentions apart from economic concerns (Manzoor et al., 2024).

This study examined economic instability (78%), job scarcity (72%), political uncertainty (65%) and lack of career development (68%) as the main push factors for the migration of 300 urban Pakistani youth concluding that youth migrate partly out of necessity and not out of choice. Descriptive frequencies provide information on the prevalence of factors, but do not test for interactions or relative importance. It is unclear whether political uncertainty affects economic perceptions or whether it works by itself. In the present study, multivariate analysis is used to simultaneously test the unique and interaction effects of economic and political-institutional factors (Dar & Sami 2025)

European Social Survey

Based on EGS data, Docquier et al. (2015) explored the joint effects of institutional quality and economic opportunities on migration aspirations. They found that people were less likely to think about migrating when they thought that their home countries had stronger institutions and they had better job prospects there. The study showed that migration decisions are a function of the interplay of both economic and institutional factors, not just one or the other. The analysis, however, was general and didn't specifically look at the general university student population, who may have different career aspirations. The present study builds on this, by investigating the experiences of only final year university students, who are entering the labour market.

This narrative review showed that more than 30,000 doctors graduate from medical schools in Pakistan every year and 60.4% of neurologists and neurosurgeons interviewed planned to go abroad to train (mainly in UK/USA) while just 14% planned to come back. The evidence in the sector shows that brain drain is not a uniform phenomenon across professions (in the health sector). The review is based on a synthesis of existing data, however, and does not involve collecting of original student level data, and it is for practicing professionals and not for final year students at the decision point. The present research is based on standardized measures with comparable measures and final year students from across various disciplines (Shakir et al., 2024).

This policy analysis made a comparison between Pakistan's policies with those of China and India along with those of the Gulf countries and came up with the conclusion that there was no comprehensive policy on human capital in Pakistan, where only 1% of GDP is spent on R&D, and professional advancement is based on discretion and not performance. Comparative framework: The framework is useful for policy learning as a policy analysis, but not as an empirical research because the identified institutional gaps do not measure migration intentions of

individuals when important economic factors are not included. This study is empirical in nature, directly measuring institutional trust and testing it independent from other factors (Tahir, 2026).

From surveys conducted among the university students in several Central and Eastern European countries, found that institutional mistrust and perceptions of corruption increased migration aspirations both directly and indirectly via reduced life satisfaction. The results indicate that macro-economic considerations are not the only factors influencing migration choices; people's trust in public institutions and in the government also plays a role. While the study yields valuable insights from transition economies it is mainly about corruption and distrust in institutions and not about economic opportunity at the same time. In the present study, both variables are explored in the same model to gain a better understanding of the attitudes of Pakistani university students towards migration (Mara et al., 2026).

The Silent Exodus

This socio-cultural study with the help of interview data analysis through interpretive phenomenological analysis method, reported emotional cost of migration without family, adaptation problems, identity crisis, as well as estimation of annual economic cost of \$4 billion in Pakistan. The psychological documentation is valuable as it reveals migration was an emotionally-costly process and not solely rational. The analysis, however, does not systematically measure the relations among specific push factors and intentions. The present study builds on this qualitative observation by quantifying the relationship between economic perceptions, institutional trust and individual characteristics in predicting migration intentions (Minute Mirror 2026a).

Hussain et al. (2020) employed a cross sectional survey of University of the Punjab students to determine the factors affecting the intentions of students to go abroad for higher education. The results revealed that push, pull, global networking and personality factors were significant in explaining students' intentions to migrate. Perceptions of improved education and career opportunities overseas, in particular, boosted students' eagerness to move. The study offers much evidence from Pakistan, but mainly on educational migration rather than on how students' perceptions of the domestic economic opportunities affect overall migration intentions. The present study builds on this literature through examining perceived economic opportunity as a direct measure of intentions to migrate among final-year university students, for migration for education or migration for employment.

Golovics (2026) investigated the link between institutional trust and migration intentions using individual-level survey data from the Eurobarometer survey for 27 countries of the European Union. The intention to migrate was found to be significantly associated with decreased trust in public institutions even after being controlled for socioeconomic and labour market factors through the use of weighted logistic regression analysis. The findings indicate that trust in the institutions decreases uncertainty about future opportunities and increases people's willingness to stay in their own country. The study offers compelling evidence from developed countries but may not be applicable to Pakistan due to differences in the quality of governance and labour market conditions. The current study adds to this evidence by focusing on institutional trust among the final year students of the University in a developing country context (Golovics 2026).

Theoretical Framework

The analysis of the study is based on four complementary theories that explain the intentions of students to migrate from an economic, institutional and family perspective.

Push–Pull Theory of Migration (Lee, 1966)

Factors affecting people's migration choices include push factors (un desirable features of the country of origin) and pull factors (an attractive feature of the country of destination). This study chooses the perceived economic opportunity and institutional trust as critical push factors. Perspective on job market, economic situation and lack of trust in national institutions are correlated with the intention to migrate among students. As a result, this theory is the basis of the explanation of the relationship between perceived economic opportunity, institutional trust and intention to move.

Human Capital Theory 1964 (Becker)

According to Human Capital Theory, while education and skills are viewed as an investment in Human Capital Theory, they are expected to lead to greater productivity, job opportunities and lifetime earnings. Rational people make a comparison between opportunity cost to stay in their home country and benefits to move abroad. Pakistani university students have to make a rational decision when they think that they will get better prospects in terms of economic opportunities, job promotion and professional status in another country. Students, therefore, may perceive that there are less opportunities available in Pakistan and thus may look for employment opportunities and/or higher studies abroad to get the best returns on their investment of education. This theory is also closely aligned with academic discipline with graduates of engineering, information technology and medicine more likely to have transferable skills that enable them to be more employable internationally.

Institutional Theory

According to Institutional Theory, the quality of the formal institutions (governance, transparency, meritocracy, accountability, and regulatory effectiveness) influences the economic and social choices of people. Confidence in future career development is fostered by strong institutions and diminished by weak institutions, which prompts an individual to seek out other opportunities. Students' trust in national institutions may be affected due to the political pressures, corruption allegation, insufficient research funding, and lack of merit system in Pakistan. So, the more students lack trust in the institutions, the greater they want to migrate due to the fact that they believe the conditions of their professions in foreign countries are more secure and fair. The institutional theory, then, gives the theoretical basis to studying institutional trust as an important factor influencing migration intentions (North, 1990).

Social Network Theory

Social Network Theory aids in comprehending how migration also is highly influenced by migrants' past social and family networks. Family members overseas contribute to the reduction of uncertainty and cost of migration through information, financial support, housing, emotional support and jobs. Parental migration status is used as a moderating variable in this study, as students should be more likely to have migration intentions if their immediate family members are in the country they migrated to than if they are not. When economic grievance and distrust of institutions run parallel to the initial family connections in a child's life, they can strengthen the impact of the early family ties (Massey et al., 1993).

Household Income as a Control Variable

Household income is also incorporated as a control variable as household financial resources may also play an independent role in shaping migration intentions. Students from low-income families may experience greater challenges to move abroad for international education because they do not have the resources to afford the costs of

international education, visa processing and the cost of international education. Higher income families may have available resources to experience international education. The estimation of the independent effects of the main explanatory variables is more accurate when controlling household income

Methodology

Research Design

For the present study, a quantitative cross sectional research design was used to explore the relationship between perceived economic opportunity, institutional trust and migration intentions of final year university students of Lahore, Pakistan. The quantitative approach was selected since it enables the relationships between variables to be quantified by standardized instruments and statistical analysis. The cross-sectional design allowed for capture of data at one time point and was appropriate for exploring migration intentions and migration intention predictors.

Participants

The study was conducted on 200 final year undergraduate students of public and private university Lahore, Pakistan. Considering the fact that the students were in their last year of school, it is appropriate that they are in a stage where they are making choices around higher education, employment and migration. Convenience sampling was used to recruit participants because the participants were easily accessible and willing to participate. The participants were required to (a) be enrolled as final year undergraduate students, (b) age 20-30 years, and (c) give informed consent for participation in the study. Students who took the questionnaire in previous semesters and those who did not take the questionnaire were not included in the analysis.

Sample Size

Based on the statistical analysis that was carried out on this study such as Pearson correlation, hierarchical multiple regression, moderation analysis, one-way ANOVA, 200 participants were considered to be enough in order to present the results of the statistical analysis. The number of participants was also consistent with the recommended ratios of participants to predictors for multiple regression analyses, ensuring adequate power to identify medium effects.

Research Instruments

Migration Intentions Scale

An 8 item standardized scale was used to assess the intentions to migrate. The participants responded to the questions on a Likert scale ranging from 1 to 5, where 1 meant that the participant had very low intention to migrate abroad and 5 meant a very high intention to migrate abroad. In the current study the scale was found to have good internal consistency (Cronbach's $\alpha = .874$).

Perceived Economic Opportunity Scale

An index indicating the level of economic opportunity that participants feel they have in their lives. Perceived economic opportunity was measured on a 5 item standardized scale which involved the perceptions of employment opportunities, career advancement and economic opportunities in Pakistan. Responses to items that indicated more positive perceptions of economic opportunities were given higher scores. The Cronbach's α internal consistency was good for the scale ($\alpha = .900$).

Institutional Trust Scale

The level of institutional trust was determined using a 6 item standardized scale that indicates participants' confidence in the public institutions, governance and country's fairness. Scores were higher for institutional trust. Cronbach's α was .919 for excellent reliability.

Demographic Information Form

The participants also filled out a socio-demographic questionnaire, asking for data regarding gender, age, academic field, family income, type of university and parents' migration status. Household Income was considered as a control variable and Parental migration Status was considered as a moderator.

Procedure

The students who fulfilled the inclusion criteria were approached during the scheduled class hours and briefed about the purpose of the study. The questionnaires were administered with a written informed consent, and the participation was voluntary. Confidentiality of the participant's responses and for research purposes only was assured. It took about 15–20 minutes to finish the questionnaire. In order to analyze completed questionnaires, missing values and incompleteness were checked for and then the data was entered into IBM SPSS Statistics. Questionnaires were not re-used for multiple responses because they were incomplete.

Ethical Considerations

The study followed the ethical guidelines for human subjects research. Respondents could opt-out of the study at any time without any repercussions; and participants were not required to complete the study. The aims of the study were explained to the participant prior to consent. Anonymity and confidentiality were maintained by not collecting identifying information. All data was kept safe and secure and was only used for research purposes.

Data Analysis

IBM SPSS was used to analyse the data. Descriptive data (mean, standard deviation, minimum, maximum, skewness and kurtosis) were used to analyse the distribution of the variables. To determine the internal consistency of the study instruments, Cronbach's alpha coefficients were calculated. Analysis of relationships between migration intentions, perceived economic opportunity, institutional trust and household income was performed using Pearson product-moment correlation. Household income was entered on the first step of the hierarchical multiple regression analysis in order to gauge the unique contribution of each predictor after accounting for the added unique variance associated with household income. To understand how the relationship between perceived economic opportunity, institutional trust, and migration intentions were influenced by parental migration status, an analysis of moderation was carried out. Finally, a one-way analysis of variance (ANOVA) was conducted to compare the intentions to migrate between academic disciplines and then post hoc comparisons were made. All tests were tested at the .05 level of statistical significance using two-tailed tests.

Results

Descriptive Statistics (Demographics)

The sample comprised 200 final-year students from five universities Table 2 presents the demographic characteristics of the participants.

Table 2*Demographic Characteristics of Participants (N = 200)*

Characteristic	Category	n	%
Gender	Male	99	49.5
	Female	101	50.5
Age	20-22 years	90	45.0
	23-24 years	55	27.5
	25-26 years	55	27.5
Year of Study	Final Year (Bachelor's)	93	46.5
	Final Year (Master's)	107	53.5
Academic Discipline	Medical/Health Sciences	29	14.5
	Engineering/Technology/IT	56	28.0
	Business/Economics/Commerce	77	38.5
	Social Sciences/Humanities	38	19.0
Family Abroad	No	111	55.5
	Yes	89	44.5
Household Income	Less than PKR 50,000	42	21.0
	PKR 50,001-100,000	34	17.0
	PKR 100,001-200,000	43	21.5
	PKR 200,001-300,000	42	21.0
	More than PKR 300,000	39	19.5

Gender distribution of the sample was 49.5% male and 50.5% female. Most students were aged 20-22 years (45.0%), with the remainder distributed across 23-24 years (27.5%) and 25-26 years (27.5%). The majority of the sample (53.5%) was made up of master's students. Business/Economics/Commerce (38.5%) followed by Engineering/Technology/IT (28.0%), Social Sciences/Humanities (19.0%), and Medical/Health Sciences (14.5%) were the most represented disciplines. Almost half (45%) of students said at least one of their immediate family members lived overseas. There was a fairly equal distribution of household income across all 5 categories.

Descriptive Statistics

Table 3*Descriptive Statistics for the Main Study Variables*

Variable	N	Min	Max	M	SD	Skewness	Kurtosis
Migration Intentions	200	2.50	5.75	4.29	0.79	-0.27	-0.64
Perceived Economic Opportunity	200	2.20	6.00	4.37	1.06	-0.15	-1.23
Institutional Trust	200	1.00	4.50	2.54	1.05	0.31	-1.18

The mean score of migration intention was 4.29 (SD = 0.79) on a 6-point scale, which corresponded to a moderate level of intent to migrate. The mean of perceived economic opportunity was 4.37 (SD = 1.06) indicating that students overall had a negative perception about the economic environment in Pakistan. The mean of institutional trust was 2.54 (SD = 1.05) which suggests that people were less trusting of Pakistan's institutions. The values of skewness and kurtosis were within acceptable limits (-2, +2) indicating the approximate normality of the distribution of all variables and thus suitability for parametric analysis.

Reliability Analysis

Cronbach's alpha was computed to assess internal consistency of the three composite scales.

Table 4

Reliability Analysis

Scale	Items	Cronbach's α	Interpretation
Migration Intentions	8	.874	Good
Perceived Economic Opportunity	5	.900	Excellent
Institutional Trust	6	.919	Excellent

Cronbach's α was used to assess the internal consistency reliability of each scale. The numbers in this range represent acceptable, good, and excellent reliability, respectively, of .70, .80, and .90. The internal consistency for all study scales was good to excellent.

Pearson Correlation

Pearson correlation analysis was conducted to examine relationships among the key variables. Table 4 presents the correlation matrix.

Table 5

Pearson Correlation Analysis Among Key Variables

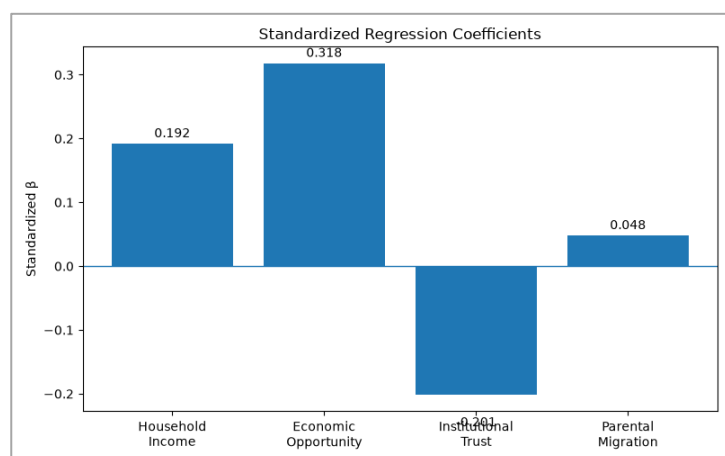
Variable	1	2	3	4
1. Migration Intentions				
2. Perceived Economic Opportunity	.424**			
3. Institutional Trust	-.378**	-.558**		
4. Household Income	.216**	.058	-.072	

**Note. $p < .01$ (2-tailed)

There was a moderate positive correlation between the perceived economic opportunity and migration intention ($r = .424$, $p < .01$) suggesting that students with negative perception about the economic situation in Pakistan associated with higher intentions to migrate. The institutional trust had a moderate negative correlation with migration intention ($r = -.378$, $p < .01$) meaning students with higher institutional trust indicated lower migration intentions. Household income positively correlated slightly with intention to migrate ($r = .216$, $p < .01$). There was a strong negative correlation between perceived economic opportunity and institutional trust ($r = -.558$, $p < .01$).

Figure 1

Standardized Regression Coefficients Predicting Migration Intention



Hierarchical Regression Analysis

To test H1, H2 and H6, hierarchical multiple regression was performed. Variables were added into three steps: Step 1 (household income as control variable), Step 2 (perceived economic opportunity and institutional trust as main variables), and Step 3 (parental migration status and interaction variables as moderators). The regression results are given in Table 5.

Table 6

Hierarchical Regression Results Predicting Migration Intentions

Variable	Step 1 β	Step 2 β	Step 3 β
Step 1 (Control Variable)			
Household Income	.216**	.189**	.192**
Step 2 (Main Effects)			
Perceived Economic Opportunity		.326**	.318**
Institutional Trust		-.196**	-.201**
Step 3 (Moderator Effects)			
Parental Migration Status			.048
Economic Opportunity $\times$ Parental Migration			.073
Institutional Trust $\times$ Parental Migration			-.066
Model Statistics			
R^2	.047	.235	.244
ΔR^2	.047	.188	.009
F	9.68**	25.04**	15.93**
ΔF	9.68**	30.74**	1.22

**Note. $p < .01$

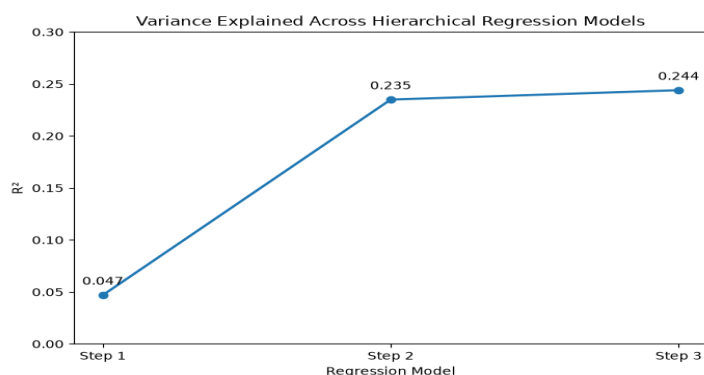
Step 1: Household income, alone, accounted for 4.7% of the variance in intentions to migrate ($R^2 = .047$, $p < .01$). The positive coefficient ($\beta = .216$, $p < .01$) supports H6.

Step2: The inclusion of perceived economic opportunity and institutional trust further enhanced the R^2 to .235 ($\Delta R^2 = .188$, $p < .01$) in Step 2. Both predictors were significant statistically. Perceived economic opportunity was positively related ($\beta = .326$, $p < .01$), and thus was supported by H1. Results indicated that institutional trust negatively affected the results ($\beta = -.196$, $p < .01$), thus supporting H2.

Step 3: Parent migration status and interaction terms did not significantly increase the model ($\Delta R^2 = .009$, $p > .05$). The interaction terms were not significant, thus failing to support H4 and H5. The own migration status of parents was not significant ($\beta = .048$, $p > .05$). The final model explained 24.4% of the variance in migration intentions ($R^2 = .244$, $F(6,193) = 15.93$, $p < .01$).

Figure 2

Standardized Regression Coefficients Predicting Migration Intentions



Moderation Analysis

To further test H4 and H5, moderation analyses were conducted using Hayes' PROCESS macro (Model 1). Table 6 presents the moderation results.

Table 7

Moderation Analysis Results

Interaction Term	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95% CI
Economic Opportunity × Parental Migration	.070	.082	0.86	.390	[-.091, .232]
Institutional Trust × Parental Migration	-.059	.090	-0.66	.511	[-.236, .118]

Note. Predictor variables were mean-centered prior to analysis.

There was no significant interaction between the perceived economic opportunity and parent migration status ($b = .070$, $t(196) = .86$, $p = .390$). The relationship between institutional trust and parent's migration status was also not significant ($b = -.059$, $t(196) = -.66$, $p = .511$). The results did not support H4 and H5 as there were no significant moderating effects of parental migration status on either of the two relationships.

ANOVA for Academic Discipline Differences

One-way ANOVA was conducted to test H3, examining whether migration intentions differed significantly across academic disciplines. Table 7 presents the ANOVA results.

Table 8

ANOVA Results for Migration Intentions by Academic Discipline

Source	SS	<i>df</i>	MS	<i>F</i>	<i>p</i>	η^2
Between Groups	4.94	3	1.65	2.68	.048	.039
Within Groups	120.72	196	0.616			
Total	125.66	199				

The ANOVA revealed a statistically significant difference in migration intentions across academic disciplines, $F(3,196) = 2.68$, $p = .048$, $\eta^2 = .039$, supporting H3. The effect size was small, indicating that academic discipline explained approximately 4% of the variance in migration intentions.

Figure 3

Mean Migration Intentions Across Academic Disciplines

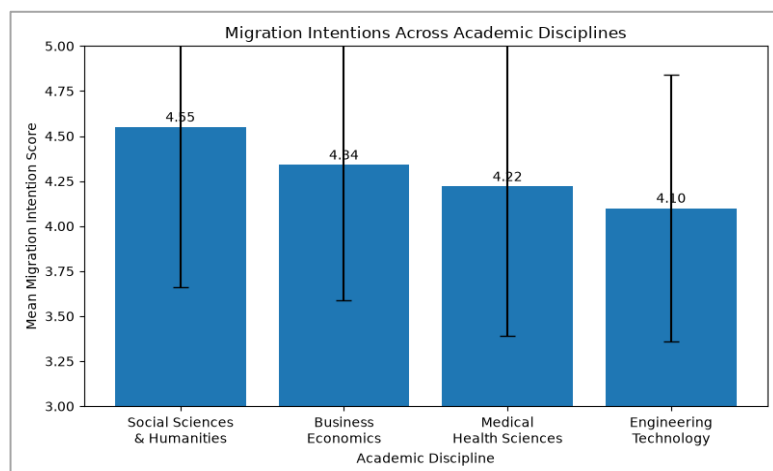


Table 9*Post-Hoc Comparisons (Tukey HSD)*

Discipline (I)	Discipline (J)	Mean Difference (I – J)	SE	p	95% CI
Medical/Health Sciences	Engineering/Technology	.294	.180	.384	[-.169, .756]
	Business/Economics	-.114	.170	.914	[-.551, .322]
	Social Sciences/Humanities	-.323	.189	.363	[-.810, .165]
Engineering/Technology	Business/Economics	-.408*	.142	.033	[-.776, -.040]
	Social Sciences/Humanities	-.617*	.165	.014	[-1.044, -.191]
Business/Economics	Social Sciences/Humanities	-.209	.153	.605	[-.600, .182]

Post-hoc comparisons using Tukey HSD revealed that Social Sciences/Humanities students reported significantly higher migration intentions than Engineering/Technology students (mean difference = .617, $p = .014$). Business/Economics students also showed higher intentions than Engineering/Technology students (mean difference = .408, $p = .033$). Medical/Health Sciences students did not differ significantly from any other group.

Table 10*Mean Migration Intentions by Academic Discipline*

Academic Discipline	n	M	SD
Social Sciences/Humanities	38	4.55	0.89
Business/Economics/Commerce	77	4.34	0.75
Medical/Health Sciences	29	4.22	0.83
Engineering/Technology/IT	56	4.10	0.74

Social Sciences/Humanities students reported the highest migration intentions ($M = 4.55$), followed by Business/Economics ($M = 4.34$), Medical/Health Sciences ($M = 4.22$), and Engineering/Technology ($M = 4.10$).

The findings suggest that perceived economic opportunity, institutional trust and household income are important determinants of a final year university student's migration intentions in Pakistan. Students who view the economic condition of Pakistan negatively, lack confidence in institutions and belong to higher income group families report higher intentions to migrate from Pakistan. The academic discipline is also a factor: Higher intentions among students of Social Sciences and Business compared to students of Engineering. The hypothesized relationships remained unchanged when parental migration status was included as a moderator. The final regression model accounted for about 24% of the variance in the intentions to migrate.

Discussion

The present study focused on investigating how perceived economic opportunity, institutional trust, household income and parent's migration status affect migration intentions among final year university students in Pakistan. These results clearly show that students' migration plans are more driven by their expectations on future employment and trust in national institutions than migration experiences of their families.

The results provide support for Human Capital Theory that views migration as an individual's investment to reap the future rewards of economic and professional gains, and Push–Pull Theory which regards migration as a reaction to lack of opportunities and institutional difficulties in the country of origin. The perception of economic opportunity was the strongest predictor of intentions to migrate. Those who believed that there were fewer career opportunities in Pakistan were more likely to indicate intentions to move.

This result is in line with earlier studies that have found that the subjective assessment of employment opportunities has a greater effect on migration decisions than objective economic conditions. It implies that a combination of higher salaries outside the country and expectations of professional growth, job security and better quality of life are driving the motivation of the talented graduates. The attitude toward public institutions showed a negative association with the intention to migrate, meaning that students who showed higher trust in public institutions were less inclined to think of migrating out of the country. This discovery adds to existing studies and shows that in addition to economic considerations, perceptions of governance, fairness, and merit-based opportunities also affect migration decisions. If students think institutions are transparent and offer equal opportunities, they are more likely to go on the career path in their country of origin. Household income was positively related to intentions to migrate, indicating that students from higher income households have more resources to pursue international study or work. This discovery lends support to the Human Capital Theory as it suggests that financial ability helps in migration in a way that's not just a result of dissatisfaction with home conditions but an investment for future education and career. As hypothesized, there was no significant moderation of the relationship between perceived economic opportunity, institutional trust and migration intentions by parental migration status.

The discovery points to the fact that the intentions of migration of the present-day university students are determined not so much by the migration experience of their families as by their subjective views and future plans. More information about the world and more opportunities for gaining global scholarships and employment may have lowered the need for students to rely on family migration networks. The study also revealed that there exist significant differences among the academic disciplines, with students from the social sciences and business reporting higher intentions to migrate than Engineering students. The disparities could be due to differing perspectives on the employment opportunities and prospects for career opportunities in the various disciplines. The overall results indicate that addressing graduate brain drain requires a step-by-step reform strategy, which includes economic reforms, institutional quality enhancement, merit-based recruitment and career development for young graduates.

It is also suggested that the present work contributes to the migration literature theoretically. It illustrates that the thinking process behind migration intentions of university students in Pakistan is influenced not only by the actual economic opportunities but also by perception of economic opportunities and trust in institutions. The findings extend Human Capital theory by revealing the psychological perception's of the migration decision-making process in the context of developing country like Pakistan. In addition, findings confirm Push–Pull Theory, as students' views of reduced opportunities in their country and reduced confidence in the institutions are important factors affecting intentions to migrate. The findings have significant implications for the practical utilization by the Higher education institutions and policy makers in Pakistan. Universities need to enhance their career counseling services, internship possibilities, and connections with the business sector to build graduates' confidence in the job market in their home country. Policy measures that improve institutional transparency, merit-based selection of candidates and graduate employment initiatives can mitigate migration intentions of skilled young professionals at a policy level. An approach that takes into account both economic opportunities and institutional confidence may be more effective than tackling employment creation alone.

Strengths & Limitations of the Study

Limitations: This study has some limitations in its interpretation. Firstly, cross sectional research design does not allow for causal inference between the variables in the study. Second, the sample was limited to final year university

students which may limit the generalizability of the results. Third, the study was based on self-report questionnaires which meant that responses were open to social desirability and response bias. Lastly, while there are some significant variables that came into play in the decision to migrate such as perceived economic opportunity and institutional trust, others, such as political stability, career satisfaction, family expectations, and psychological well-being were not explored.

Strengths: Although study has its drawbacks, it has multiple strengths. It explores migration intentions under the lens of economic and psychological determinants in a unified theory. It also targets the final year students in the university, who are a population very relevant for skills migration decisions. Moreover, the use of validated measurement instruments and different statistical techniques allows for a thorough analysis of the relationships proposed.

Recommendations for Future Research

Further studies should involve longitudinal research designs to look at changes in migration intentions and the extent to which they lead to actual migration. Participants from various provinces and universities should also be a part of the researchers to make the result generalizable. Moreover, further studies should explore other factors that may affect the decision to migrate in the future, including political stability, career aspirations, mental health, social support, and quality of life. Mixed-method or qualitative studies can also give a deeper insight into the personal experiences and motivations of students which influence their decisions to migrate.

Conclusion

The current study focused on the effect of perceived economic opportunity, institutional trust, household income, and migration background of parents on migration intention in final year university students in Pakistan. The results show that the intention to migrate is mainly determined by students' expectations of job opportunities in the future and the functioning of national institutions. Household income helps to drive migration intentions by expanding opportunities in the other countries, whereas parental migration status does not have a significant impact on these relationships. The study helps build the body of research on skilled migration by showing that economic and institutional perceptions shape migration intentions, and that these perceptions are a significant factor beyond financial considerations. The conclusions of these findings highlight that reducing brain drain is not just about job creation but also about fostering institutional trust, transparency and merit-based systems, enhancing graduate career pathways and ensuring that the talented young professionals can confidently build their future in Pakistan.

Taking each of these factors into account simultaneously, higher education institutions and policy makers can make a difference in helping the country achieve its long-term social and economic development, while retaining skilled graduates. The current study is a useful addition to the literature on migration, as it combines the Human Capital Theory with the institutional view to examine why students in universities in Pakistan intend to migrate. It points to the fact that the subjective opportunity assessment and institutional trust are crucial factors in migration decision making processes in addition to objective economic factors.

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