

Exploring the Influence of Brain Drain on Generation Alpha Students' University Enrollment and Academic Development in Pakistan

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Abstract

This research examines the impact of brain drain on the university enrolment and academic career development of Generation Alpha students in Pakistan. Brain drain with outward migration of its professionals and talented young people has serious implications for the quality of higher education, institutional capacity, and talent build up in a nation. The aim of this paper is to realize how brain drain perceptions influence Generation Alpha scholars' enrollment decisions towards Pakistani universities and their implications for academic development in the country. Qualitative research method was used for which a purposive sample of Generation Alpha Geer students were drawn from different urban and semi-urban areas in Pakistan. Semi-structured interviews explored students' perceptions about the educational experiences of domestic versus international study, financial implications, career opportunities and skilled professional emigration and the influence on their academic life. Thematic analysis techniques were used to determine recurring patterns of interest, governing themes and sub-themes. Generation Alpha learners are particularly interested in the scholarships granted by foreign universities, employment opportunities and research facilities. Declining push factors such as lack of funding, inadequate infrastructure and shortage of the local staff were said to be determining their decisions to enroll. Brain drain is having a negative impact on quality of academic guidance, research and motivation in Pakistani universities. Some recommended that scholarships, better infrastructure, career

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counseling and policy interventions would motivate students to study within the country and boost the nation's academic growth. This study provides insights into the generational aspects on brain drain, particularly in regard to student perceptions and enrolment decisions and addresses its wider impact on the academic progress of Pakistan. The study offers recommendations for policy makers, universities and interested parties to formulate policies aimed at retaining talent, improving academic quality and the sustainable development of higher education.

Keywords: Brain Drain, Generation Alpha, Higher Education Policy, University Enrollment, Academic Development

1. Introduction

The phenomenon of brain drain, also commonly known as emigration of highly skilled professionals to foreign countries, is a long standing challenge for the socio-economic and academic growth in Pakistan. Political instability, economic troubles and a scarcity of professional prospects in recent years have only accelerated this trend. More than 350,000 Pakistanis quit the country in 2025 alone, said a story carried by Pakistan Today (2024), equipped with feature of job insecurity, poor salaries and lack of career growth. The highly skilled migrants including the healthcare professionals, engineers, academicians and scientists) are victimized a lot due to which over 832,000 high-skilled professionals were recorded as emigrants during 2020-2024. In addition to sapping Pakistan's human resources, these trends also have negative impacts on the universities (Qureshi & Awan, 2025)

The flow of migration has also been accompanied by falling attendance at university in Pakistan. According to the (HEC) report, higher education enrolment has dropped by almost 13% over the past few years and private and public universities are finding it difficult to attract students for themselves (HEC Annual Report 2023–24). Financial limitations, lack of infrastructure facilities and availability of competent programs to the satisfaction are taken as prime deterrents which lead to drop out among students, particularly in rural area. The region's next student wave, Generation Alpha, those loosely defined as born from 2010 to 2025. This is a very global generation, more conscious than their parents of overseas education opportunities and the attraction of studying relocating abroad. Their choices will determine the country's future human capital and the direction of its educational institutions (Abbas & Guriro, 2018; Sabir et al., 2024; Hussain, 2024; Hussain, 2023; Hussain & Khoso, 2022; Hussain & Abbas, 2023); Perveen & Hussain, 2023; Hussain et al., 2024).

Research in brain drain and the determinants of university enrolment behavior among Generation Alpha students is still scarce, although both these developments are so contriving. Existing literature tends to concentrate on the mass-exodus of professionals and its economic or health impacts with relatively little known about how young individuals perceive these trends, or the effect they have on student choice to pursue post-secondary education. This research gap is filled with respect to the impact of causing this brain drain on the enrollment decisions and, thereby, academic development in Pakistan of students now classified as generation alpha. The study also investigates more general institutional related problems like faculty off take, downgraded research programs and curriculum voids that compound the effects of brain drain on academic quality (Athar, 2025; Shahzadi et al., 2023; Sindhu et al., 2023; Ahmad et al., 2023; Hussain & Khoso, 2021; Laghari et al., 2024).

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1.1 Research Objectives

1. To examine how Generation Alpha students' perceptions of brain drain influence their university enrollment decisions in Pakistan.
2. To evaluate the impact of skilled professional emigration on the academic development of Pakistani higher education institutions, including research productivity, faculty quality, and institutional capacity.
3. To identify strategies and policies that could mitigate the negative effects of brain drain, retain talent, and promote academic development in Pakistan.

1.2 Research Questions

1. How do Generation Alpha students perceive brain drain, and how does this perception affect their university enrollment decisions in Pakistan?
2. What are the effects of skilled professional emigration on academic development, including research output, teaching quality, and infrastructure in Pakistani universities?
3. What institutional and policy interventions can be implemented to encourage Generation Alpha students to pursue higher education within Pakistan and support the country's academic development?

1.3 Problem Statement

Pakistan's higher education system is faced with a twin challenge: falling enrollment in university and an increasing brain drain. Brain drain depletes the stock of potential researchers, erodes the supply of skilled faculty and diminishes institutional resources, concretizing a challenge to academic scaling. At the same time, Generation Alpha students are entering the higher education sphere at a time of economic instability and diminished job prospects, increasing the likelihood that they will leave visa-free for more study or work abroad. There is, however, still not much empirical evidence on how brain drain perceptions shape university attendance choices when it comes to this generation of students. These dynamics, if not fixed, will pose serious impediments to the academic development of Pakistan and its ability to build a competent workforce for the future.

1.4 Rationale of the Study

This research is important for the exploration of new ailments of Pakistan's education and human capital. Generation Alpha is the next generation of professionals in this country, and their choice in higher education could be affected by how global attainment trends are playing out as well as local academic resources. The exploration on the impact of brain drain perceptions for enrollment decisions can guide policies related to talent retention, capability enhancement, academic infrastructure improvement and research strengthening. Moreover, as an analysis that connects the perceptions of students with the realities at universities, this study can inform institutions on how to improve its offerings and scholarships and help in retaining Pakistan's competitive advantage in the knowledge-based global economy.

1.5 Significance of the Study

The findings provide evidence-based policy recommendations, for national educational policies to lessen the pattern of brain-drain and increase intake in higher education. It directs

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universities to adjust program of study, faculty development program and research foci to the new demands presented by Generation Alpha students. It provides a basis for creating sustainable strategies for keeping youth talent and academic excellence in institutions. The work fills in a lacuna in literature by exploring the nexus of brain drain, generational perceptions and academia and institution building in Pakistan.

2. Literature Review

Brain drain has emerged as one of the most persistent problems in Pakistan's education and development sectors. Since the last two decades, high levels of skilled migration have diluted the pool of qualified professionals and indirectly shaped students' perceptions on returns to investing in higher education within the country. Meanwhile, another new cohort, Generation Alpha is coming of university age and making choices in an environment shaped by accelerated globalization, economic turbulence and surging emigration of the highly skilled. Yet, sparse is the literature which connects brain drain and its impact to Generation Alpha's university enrollment propensity and school performance. In the following we review existing research, point at missing pieces and describe how our work fits in (Afridi et al., 2010).

2.1 Current Knowledge on Brain Drain in Pakistan

Most of the previous studies neither exclusively speak of medical brain drain nor consider associated factors with respect to migration plans or intentions. Migration is often associated with unemployment, poor governance, lack of career options and limited research. Pakistan has experienced large-scale skilled migration, and more than 45,000 skilled workers departed during 2023 which was one of the highest repatriation years on record. Academics constantly maintain this migration cause loss of human capital which then would hamper innovation, productivity and economic competitiveness. Health and engineering fields are the most reported. Medical trainees express strong intention to emigrate, prompted by poor working conditions, low salaries and under-recognition of the profession. African universities face similar dearth's of personnel as competent academics migrate, thereby undermining research guidance, mentoring and organizational productivity. Evidence has been largely limited to the short-term effects and less developed models on how brain drain have its influence in the younger generations' attitude towards education (Uzun, 2024).

2.2 University Enrollment Trends in Pakistan

Studies show that higher education participation is disturbingly low. Across many provinces the rate of increase in enrolment has slackened and there are reports falling number of postgraduate admissions by several public educational institutions. Tuition fees escalation, economic uncertainty and lack of employability prospects have led to students not willing to invest their time into further degrees. The University of Peshawar, for example, recorded that 178 students were admitted to the PhD programs in 2020 and only 66 in 2024. There are concerns that this decline in enrolments can be attributed to the belief that it is more lucrative to pursue studies overseas which contributes to a cycle of out-migration as well. But there are no studies in the literature that directly addresses Generation Alpha. Though older research does investigate Generation Z, as well as the previous (Millennials)

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generations, a new generation is coming into college in a society vastly distinct with respect to technology, economics and society. Their choice is shaped by early digital access, globalized aspirations and visible role models who have left for better lives(Hijazi et al., 2024).

2.3. Academic Development Challenges in Pakistan

Research with regard to the quality of teaching, research capacity, relevance of the curriculum and availability of resources limited academic development study in Pakistan. Indeed, it is generally accepted that systemic barriers limit the student's ability to excel in school. Limitations associated with funding have hampered the establishment of laboratories, hiring faculty and accessing new learning technologies. High student-teacher ratios, obsolete curriculum and lack of exposure to applied learning practices are common challenges faced by several institutions; Brain drain aggravates these weaknesses. o Former senior educators, seasoned researchers as well as experienced superintendents who have left the nation are directly decreasing sacrifice in terms of mentorship and academic resource persons. Universities have problems hiring faculty members; production goes down, fewer publications means that once again the institution drops on academic ranking. They also make for poorer educational motivation of younger learners as well (Humayun et al., 2025).

2.4. Linking Brain Drain with Educational Aspirations and Generation Alpha

Very few recent studies have yet addressed how brain drain influences the educational choices of younger generations. Researchers also demonstrated that medical students have come to plan migration prior to completing their studies believing that once in service there is little opportunity for advanced professional development. The system inadvertently tells us that success is earned overseas rather than at home. Young people see their relations, seniors and professionals emigrating and notice that their standard of living is higher elsewhere reinforcing academic exit instead of national contribution. These results have serious implications, little has been written about Generation Alpha. A major study has never been undertaken, to answer the question: Does this generation of young adults experience its choice of college and academic focus influenced by the continuation long-term drain of such valuable people? In view of the fact that Generation Alpha is currently growing up in a world with quite extreme levels of global mobility, weak domestic institutional performance and increasing climate concerns, this gap is an important omission from current debates(Behlol, 2020).

Existing reviews of the literature indicate significant gaps which constrain our knowledge about brain drain. Previous authors have little interest in generations, and research generally fails to recognize that student's expectations and motivations are influenced by the tendency for human capital flight. We have limited studies on academic development early in the learning and most of the research work is focused on graduates from college level and not pre-university learners. Few longitudinal studies are available and educational psychology explanations, such as academic self-confidence, motivation or institutional commitment have been surprisingly neglected. The current study fills this gap by treating the Generation Alpha as a new generation which will define Pakistan's future knowledge-based economy(Ahsan, 2023).

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2.5 Theoretical Framework

The Push Pull Theory of Migration is the major analytical framework for this study. According to the theory, people shift from one place to another because of “push and pull” factors, where push is the determinant factor which turns the direction towards distancing oneself from their home country and the positive external condition (pull as per this model) tend to attract an individual in any other area. This model was proposed by Lee in 1966. Weak academic infrastructure, insufficient job opportunities and lack of research culture are among the push factors in Pakistan. The factors pulling students are scholarships in foreign countries, better income opportunities, global academic environments and quality of life. This model is pertinent to the study as those who are part of Generation Alpha witness this migration pattern and thus prepare their educational expectations. Their decisions are motivated not only by private pursuits but also by the sight of talented professionals who have already opted to exit the country.

The researcher also applies Becker (1993) Human Capital Theory. This model provides a rationale for education as an investment in anticipation of future returns. When expected returns volatility and expected returns are low, students might instead cyclically not go to university, take enrollment at a center of higher education as an intermediate step before migration or start their studies in another country. Using the model, this study provides a framework to understand how anticipated educational returns in Pakistan influence academic development and enrollment among Generation Alpha students. Both are theories that link education, economic outcome, and migration motive together. Both theories are present in cross-country studies on brain drain and higher education choices. In both theories, there are well-defined variables that can be analyzed systematically. There are other rational perspectives on education such as Social Mobility Theory or Rational Choice theory that are applicable, but they do not have the same combined explanatory power when migration pressure looms large in determining educational decisions.

The literature reviewed reveals brain drain in Pakistan as widely available on sources relating to its causes, economic impact and professional implications. Yet there are large chasms in knowing how it is influencing the educational choices, views and narrative of Generation Alpha. Falling university enrollment, poor education infrastructure and increasing skilled migration make the study of this matter an imperative. The present study extends previous work and provides a fresh generational perspective by investigating how long-term human resource loss affects future students in their educational motivation and intentions.

3. Research Methodology

3.1 Research Design

This research was qualitative based on how brain drain shaped the university enrollment and academic future of Generation Alpha students in Pakistan. Qualitative methodology was used as there is a need to focus on perceptions, motivations and lived experience in depth that is not always possible or part of the numerical data. A preliminary investigation was used to help explain how long-term skilled migration influenced the perspectives of youth beginning or about to start tertiary studies. The reason why a phenomenological research

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design was chosen for this study is because it aimed to explore the participant's perspective on education, their view on higher education being worthwhile in Pakistan, and how they perceived the overall national progressive direction of professional outmigration. This study was appropriate for examination of complex social educational relationships taking place in economic, cultural, and policy situations (Reiling, 2018).

3.2 Population and Sampling

The participants were Generation Alpha students (Secondary and higher secondary) currently enrolled in private and public institutes in Narowal, Zafarwal and Shakarghar who born between 2010 to 2025. The cities were chosen to reflect a range of educational environments (urban and semi-urban), in which gaps in educational aspirations had been identified. Students were purposively sampled and a sample size of 40 (20 students, 10 teachers and 10 parents) was chosen. This way it was possible to select participants with a personal impact of education and migration dynamics and who could share meaningful points of view. Supplemental interviews with teachers and parents were also conducted in order to get some contextual information related to the motivational orientation of the students. Purposive sampling was most suitable for the study because the current research aimed at obtaining rich, first-hand information and not to be statistically representative of the whole population (Sehar et al., 2021).

3.3 Data Collection Methods

Researchers collect Primary data from two sources. The first source was semi-structured interviews with 20 students. Each interview took place over 20–30 mins. The students expressed their perception about future educational aspirations, the importance they associate with academic pursuit in Pakistan, their knowledge on migration including family or community and motivation for secondary education. The second data source was focus group interviews with 10 teachers and 10 parents. These conversations also provided insights with respect to the guidance for Generation Alpha, lack of motivation in attending local universities and brain drain exercising effects throughout classroom expectations, mentoring and educational planning. Using semi structured interviews provided flexibility with a firm scaffold and, thereby ensured high level of accuracy of the data collected from all respondents). Secondary data corroborated and built on the primary findings. This data was derived from governmental reports into skilled migration; data about enrolment issued by the Higher Education Commission (HEC); published research on educational development and international migration, and selected news-paper articles and policy papers which reported academic participation trends. These papers assisted in situating the core finding within the wider context of national educational issues, and longer term trends associated with the brain drain from Pakistan (Sajjad, 211 C.E.).

3.4 Data Analysis

Data analysis was conducted using a thematic approach. Transcripts of interviews were coded manually in three stages. In the next stage, open coding was used to identify frequent ideas and quotes modified by participants reflecting these initial categories. In the second stage, axial coding brought those codes together into related categories and subcategories

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based on thematic similarities of concepts. Selecting coding was then used in the final stage to further develop categories into themes which described how brain drain affected student motivation and academic development. This analytic approach facilitated consistent interpretation of student's views and kept all findings in proximity to participants' speech, as per recent qualitative research recommendations (Bou-Habib, 2022).

3.5 Ethical Considerations

Ethical approval was obtained before data collection. Participation was voluntary. Students were informed of their rights to withdraw at any point. Consent was obtained from parents and school authorities for all participating students. Identifying details were removed to ensure confidentiality.

3.6 Limitations of the Methodology

The study included several limitations. The sample was limited to the three tehsils of Narowal District (Narowal, Shakargarh, and Zafarwal). It restricted the inclusion of all such regions in Pakistan where you could find varying socioeconomic gradients. The study was based on self-reported data. This information might be subject to recall bias or the wish of participants to provide socially accepted answers. The research was qualitative and depth-oriented, thus the conclusions could not be generalized to the wider population. These restrictions did not diminish the significance of the study. The study provided new perspective into a group that researchers had not thoroughly explored. It demonstrated how international migration trends influenced students' perceptions of academic progress and educational opportunity in Pakistan. (Zafar, 2023)

4. Data Analysis and Findings

Analysis began after the last interview and upon a meticulous preparation of the transcripts. The examination was incremented in such a way that you could pinpoint very clear patterns about what participants thought. The emphasis remained on the ways students presented their experiences, decisions, and expectations in terms of migration patterns and academic trajectories. Each transcript was read and reread to ensure accurate understanding of the meaning communicated by participants. Codes were formulated through verbatim coding and analyzed in relation to broader themes. These themes reflected the main ideas that emerged from the study. This strategy enabled an organized look at how participants perceived educational access in the midst of rapidly changing migration patterns in Pakistan. It also served to link personal experiences to broader social and educational factors (Srivastava & William, 2023).

Question 1: How do Generation Alpha students perceive brain drain, and how does this perception affect their university enrollment decisions in Pakistan?

Following the transcription of all semi-structured interviews, the data corpus was subjected to Thematic Analysis to systematically identify, analyze, and report patterns (themes) within the data. The initial step in data familiarization involved generating an exploratory Word Cloud using specialized software Word Cloud library from the consolidated interview transcripts, utilizing this as a lexical analysis tool to provide a frequency-weighted visual

summary of the data. Prior to generation, a comprehensive stop word list was applied to the full text to ensure the resulting visualization only highlighted words possessing semantic value. The visually dominant terms were subsequently employed as *a priori* indicators to inform and validate the generation of initial codes during the subsequent manual, iterative coding process. This combined approach ensured that themes were grounded not only in automated frequency analysis but also in a rigorous review of the participants' intended meaning and context, thereby enhancing analytic transparency and guiding the deeper qualitative analysis (Beine et al., 2021).

Figure 1: Perceptions of Brain Drain and Their Influence on Generation Alpha Students' University Enrollment Decisions in Pakistan



Theme 1: Awareness and Understanding of Brain Drain

Sub theme 1.1: Recognition of Skilled Migration Trends

Majority of the participants clearly understood that well-educated were exiting Pakistan for better prospects. "The country is losing talented individuals across sectors: medicine, engineering, IT and social sciences in general," students said. 'Why would anyone stay there?' "All the alumni I know want to get out after they graduate, because they feel that Pakistan cannot provide a safe future," one participant said. Another added, "It puts us in the news and in families. The degree was completed by my cousins and they went to Saudi Arabia and Canada."

The students learned that brain drain was a much speculated and experienced phenomenon. *"The professor of medicines was a widely-shared post, and the women's replies suggest not only that the issue is well-known at least at the societal level, but also within their own social support networks"*

Sub theme 1.2: Link between Economic Factors and Brain Drain

Participants often associated brain drain with economic instability, unemployment, inflation and lack of career opportunities. A second point made by young people with potential is that

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they do not see sustainable long-term prospects in the domestic labor market. *"It takes 16 years of studying and yet I can't find a job that pays enough to be able to support my family,"* said one interviewee. *"Abroad salaries are 10 times more, and of course people go where their competence is appreciated,"* another said. These comments reveal how students relate brain drain to economic push factors, which define life planning on a precocious level.

Theme 2: Impact of Brain Drain Perceptions on University Enrollment

Sub theme 2.1: Influence on Choice of Academic Programs

Students said they were factoring in academic disciplines that would help them move more easily after graduation. IT, engineering, medical sciences and business were consistently referred to as *"gateways to the world job market."* *"I opted for software engineering, because I know that is how I'll get to Europe or the U.A.E.,"* one student said. *"Don't simply study,"* said another, *"and study in areas that are not from the global competition."* Students are taking degrees not just out of interest. They are 'thinking about the wider world' in terms of what might be valuable from abroad, and this represents a form of long-term strategic thinking shaped by migration ambitions.

Sub theme 2.2: Enrollment Decisions Based on Global Competitiveness

Participants considered a university's global prestige, exchange programs and future job opportunities overseas when comparing institutions. *"I chose a university in a foreign country even though I have an entrance exam here because foreign accreditation gives you more credibility for getting life visas,"*; Another wrote, *"They know that certain universities have higher global rankings and graduate students who go abroad to stay."* That's a reminder that university-enrollment decisions are made in the context of other educational choices and opportunities. They are result itself that is influenced by the students' belief that studying in the right place will boost their global competitiveness.

Theme 3: Emotional and Social Consequences of Brain Drain

Sub theme 3.1: Feelings of Uncertainty and Pressure

Several students also stated their emotional strain over prolonged uncertainty that whether they can settle and work in Pakistan. *"We are made to feel guilty about wanting to leave because everyone says there is no future here,"* said one protester. Another said, *"Sometimes you feel that if you are in Pakistan, you have missed out."*

These emotional responses say that the brain drain is more than just an economic or educational truth. It is also a mental weight that affects the way students picture their future in the country.

Sub theme 3.2: Sense of Loss and National Concern

Many students lamented that Pakistan was losing its best and brightest to similar tragedies. They thought that it impedes national development when highly educated citizens migrate and settle abroad forever. *"Pakistan wants people who can think and educate to stay here and build this country, but on the other hand everyone is compelled to look at a way out,"* one participant said. Another said, *"It's as if the country keeps losing hope every time another doctor or engineer leaves."* These reactions demonstrate that Gen alpha students have both the national implications of movement and private hopes, on their radar.

Theme 4: Desire for Improved Policies and Educational Reforms

Sub theme 4.1: Call for Better Employment and Career Prospects

Participants felt that the government has to act quickly to increase job creation, establish

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appropriate salary rates and improve work environment. *"If Pakistan had good jobs and a fair salary, less students will think of leaving,"* wrote one person. Stakeholders also mentioned some reforms in education to work: *"I do not know why they come here because things are moving gradually, and if we have a strong educational system I do not think most of us will travel"* (Student).

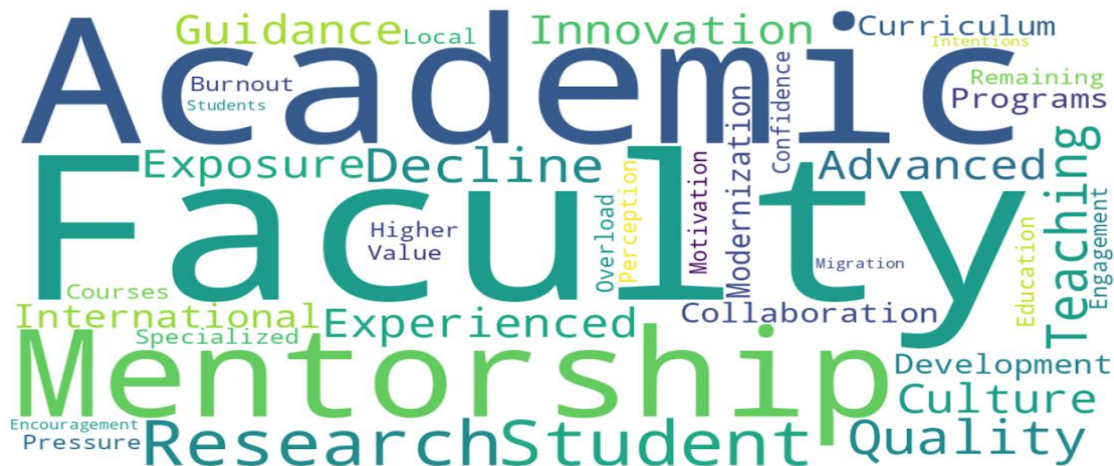
Sub theme 4.2: Expectation of Institutional Accountability

Some participants also emphasized that institutions of higher learning must do a better job with career services, employer connections and skill development. *"We are spending so much but not getting a value,"* said one student, who said that universities needed to teach them "real skills" so they did not have to depend on foreign markets. This suggests that the higher education institutions will be expected to take a proactive role in mounting a response against brain drain.

The thematic analysis shows that Generation Alpha students perceive brain drain as a real and personal issue that directly shapes their educational decisions. They connect the phenomenon with economic challenges, lack of career growth, and limited domestic opportunities. Their awareness affects how they choose programs, universities, and long term academic pathways. The findings also reveal that brain drain creates emotional pressure and concern about the future, while simultaneously motivating students to pursue globally competitive educational strategies. These perspectives provide insight into how brain drain influences enrollment behavior in Pakistan and highlights the need for policy reforms to retain talent.

Research Question 2: What are the effects of skilled professional emigration on academic development in Pakistani universities?

Figure 2: Effects of Skilled Professional Emigration on Academic Development



Theme 1: Decline in Quality of Teaching and Mentorship

Sub theme 1.1: Loss of Experienced Faculty

Professional migration has, according to the respondents, diminished the accessibility of

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highly motivated lecturers in higher education. Many pupils said that there are too many talented academics who decide to work overseas in research institutes with higher budgets. *"Our best professors go to the Gulf or to Europe for higher salaries, and we end up with even fewer lecturers who are good,"* said one protester. Another one commented, *"PhDs are not retained in universities as the pay gap is so big compared to foreign offers."* The replies imply that migration of professionals relevant to knowledge erodes academic strength and also reduces the availability of expert teachers who could shape the next generation.

Sub theme 1.2: Reduced Mentorship and Guidance

Students said that the loss of experienced teachers has an impact on academic support, career counseling and research guidance. *"When the senior professors leave, it's students that suffer because junior faculty don't get to mentor research in a similar way,"* one student said. Another said, *"We notice the difference in mentorship".* It would have been faster growth, if the professors had remained abroad. This demonstrates that brain drain is detrimental not only to the quality of instruction but also to the support infrastructure upon which students depend for academic growth.

Theme 2: Limited Research Culture and Innovation

Sub theme 2.1: Lack of Advanced Research Exposure

Respondents stated that the migration of competent researchers results in less exposure to cutting-edge research techniques and international standards of academia. One student told me, *"Universities are losing those who know the modern methods and the international standards so Pakistan definitely remains behind."* *"When foreign trained faculty leave, their ability to publish what they've worked on until the point of leaving is impeded as no work can be published without the appropriate scholar in place."* This links brain drain to the impasse in academic advancement and low interaction with international scholarship.

Sub theme 2.2: Weak International Collaboration

Students also saw faculty migration as hurting academic relations with foreign universities. *"When experienced researchers leave, universities lose contacts that can be useful for joint projects, exchange programs and conferences,"* explained one participant. *"As a result, research collaboration opportunities die when people move abroad permanently,"* said another.

These responses suggest that institutional academic development withers when professionals who keep up international connections are removed from it.

Theme 3: Limited Curriculum Development and Modernization

Sub theme 3.1: Outdated Academic Programs

Participants argued that programs get stale when those who understand the currents of industry and research pull up stakes. *"Curriculum doesn't shift because the senior people who can influence policy are gone,"* one student commented. *Its courses are old and don't meet new international standards."* Another added, *"We still study old content that is not at the standard of new stuff internationally."* Skilled migration is reported to hinder curricular reform and impacts the relevance of university education.

Sub theme 3.2: Shortage of Specialized Courses

Students also claimed that some of the advanced level courses aren't available because there weren't teachers to teach them. *"We don't have advanced AI or data science classes because the professors who could teach these are working abroad,"* said one participant. One wrote, *"It*

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is inevitable that we will see more unqualified teachers. "Another said, "Universities are being made to hire teachers with no credibility because they can't teach specialized subjects."

Shortage of qualified staff affects students' academic development and hinders their access to new disciplines.

Theme 4: Increased Academic Pressure on Remaining Faculty

Sub theme 4.1: Faculty Overload and Burnout

Participants noted that faculty is being forced to carry heavier teaching loads because of a lack of staff, say participants. "Teachers here are doing more than they should, because we never have a full staff," one student said. Another wrote, "When teachers are suffering from overwork, students do not receive enough attention or feedback. A burden of academics impairs teaching and learning.

Sub theme 4.2: Reduced Student Engagement

Students believed that overburdened faculty are unable to dedicate time for classroom debate, monitoring or one-on-one academic assistance. *"We have classes where there are many people being taught by one teacher, so lessons become one way," said one participant. Comments included, "Academic meetings are short because teachers don't have time."* This illustrates how professional migration also tends to impact on the learning by students obliquely.

Theme 5: Student Motivation and Perception of Academic Value

Sub theme 5.1: Reduced Confidence in Local Higher Education

Participants shared that losing skilled faculty erodes confidence in Pakistani universities to provide strong academic grooming. *"When the best teachers are leaving, it makes the system look like they're not in a position of supporting growth, and students disbelieve," one student said. Another added, "Students feel that they have to go abroad to get better education."* This points out a belief that brain drain devalues the credibility of the institutions.

Sub theme 5.2: Encouragement of Migration Intentions among Students

Students explained that witness good professors leaving, the migration desire gets into the mindset of young generations students said. *"If highly qualified experts failed to move ahead in Pakistan, students understand that they have to go out for growth," one participant noted. It becomes a cycle where you have teachers leaving first and then students leaving."* This shows that the exodus of professionals has a psychological and cultural impact on academic planning.

The argument is that the emigration of skilled professionals has implications for academic development at various levels in Pakistani universities. In the eyes of students, brain drain is linked to lower quality of instruction, diminished research capability and obsolete curriculum as well as institutional crisis. They also think that brain drain contributes to student disinterest and further cements their belief in the superiority of academic and career development overseas.

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Research Question3: What institutional and policy interventions can be implemented to encourage Generation Alpha students to pursue higher education within Pakistan and support the country's academic development?

Figure 3: Institutional and Policy Interventions to Encourage Generation Alpha Students to Pursue Higher Education



Theme 1: Need for Improved Financial Support Systems

Sub theme 1.1: Expansion of Scholarships and Fee Subsidies

The financial cost is one of the most significant obstacles to access. There was a widespread view that by offering government-funded scholarships students would be persuaded to remain in the country. *“As for college, the most able students are poor and scholarships are few so only few benefit,”* said one participant. *“If the government subsidizes tuition fees as is done in other countries, I can have more students studying here, rather than looking overseas,”* said another. These responses suggest that introducing more state based financial assistance arrangements could have a role to play in retaining students within Pakistani universities.

Sub theme 1.2: Education Loans with Flexible Conditions

Participants also suggested interest-free student loans to lessen the burden of study costs. *“It's because a student loan is too free and no interest, family pressure or even ignorant self (makes) a decision forcing students to not choose jobs but only go to college,”* commented one student. Another said, *“Repayment after employment would make higher education a reality for me.”* This suggests that policy changes in financial aid would increase college access.

Theme 2: Need for Improved Teaching and Learning Quality

Sub theme 2.1: Faculty Development and Training

Participants highlighted the need to modernize instruction quality. If a university wants to compete on an international scale, then teachers need new training on how to work with new technology and teaching methods,” said one student. Another said, *“Professional development should be required so teachers can stay current”*. This suggests a consensus that organized faculty development measures would enhance academic standards.

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Sub theme 2.2: Hiring and Retaining Qualified Faculty

Students felt that brain drain can be combated by offering attractive packages and professional incentives. *"If universities offer competitive salaries, skilled teachers will remain in Pakistan," shared one participant. "When our teachers feel valued they give more and our children win,"* said another. This indicates the possibility that a change in salary rates and career growth within institutions may enhance academic development and student follow up.

Theme 3: Strengthening Research Infrastructure

Sub theme 3.1: Funding for Research Projects

Participants also felt that strong exposure to research for students would encourage them to study in local universities. There are less funded research and it lowers students' interest to an academic career," one student said. *"If research labs are equipped with the latest gadgets and we get government grants, students will not be forced to go abroad,"* he said another. This demonstrates that states should invest in labs, research centers and grant programs.

Sub theme 3.2: International Collaboration Platforms

Students suggested policies to promote joint programs, exchange agreements, and overseas academic unions. *"If universities tie up with foreign institutions, our students will get global exposure while studying at home,"* said a participant. *"Limiting student visas for Pakistanis will push them towards terrorism,"* commented another, who added that *"research PhD exchange programs can provide Pakistani students with international exposure without having to relocate permanently out of Pakistan."* This attests to the necessity for research policies that are consistent across the world.

Theme 4: Curriculum and Program Modernization

Sub theme 4.1: Industry Aligned Curriculum

The curriculum at universities must be consistent with market demands, participants said. *"Our syllabus is obsolete and not as per industry, that's why students think foreign education will be good for jobs,"* said one student. *"If the curriculum is constantly changed through consultation with industries, students can surely be called to study here,"* .This shows that modernization of academic programs is essential.

Sub theme 4.2: Introduction of Emerging Fields

The curriculum at universities must be consistent with market demands, participants said. *"Our syllabus is obsolete and not as per industry, that's why students think foreign education will be good for jobs,"* said one student. *"If the curriculum is constantly changed through consultation with industries, students can surely be called to study here,"* added another.

Theme 5: Career Development and Employment Support

Sub theme 5.1: Career Counseling and Guidance

Students said not enough of them receive adequate academic or career advice. *"Career counseling offices are deficient, and students don't know how to navigate their future,"* one said. Another said, *"If universities offer career workshops and advice, students will make educated decisions."* This indicates that student confidence in local education pathways can be bolstered by institutional career services.

Sub theme 5.2: University Industry Linkages

Participants highlighted the importance of internships, apprenticeships and corporate partnerships. *"If companies are getting students from universities through the internship*

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system, they will see growth because most of our students need jobs and want to grow," one student said. "They have strong industry link which leads to better chances of getting hired, encouraging students to study here," This indicates that staying out of unemployment after college is paramount for students' schooling choices.

Theme 6: National Policies Supporting Higher Education

Sub theme 6.1: Increased Government Investment

Participants believed that government should place education in the forefront of nation-building plans. One participant said, "We can never develop unless we invest in universities, education budgets must increase!" Another person said, "If Pakistan wants to be competitive globally then policy as far as STEM education, teacher training and research should be in focus." This accounts for the assumption that a more sustainable government commitment is necessary for lasting progress.

Sub theme 6.2: Policy Consistency and Long Term Planning

Students said that reforms can change with different governments. "Policies change every few years, and universities lose direction," one participant said, "Education should have stable long term plans and not short term political agendas." This fact emphasizes the role of policy continuity for academic progress.

The analysis indicates that an institutional and policy based intervention could contribute in motivating Generation Alpha students to undertake higher education studies in Pakistan. A number of universally recognized priorities were raised by respondents: enhanced financial support, the quality of teaching and learning, supportive research cultures, enriched curricula which respond to contemporary needs and expectations, appropriate employment prospects as well as systemic (national) policies in many regards. The push force of student migrant can be alleviated by these policies and hence the academic development of the country is enhanced.

The findings of the present research show how generation Alpha's perception of brain drain have a significant impact on their decision to enroll in higher education in Pakistan. Participants noted that foreign opportunities in education, especially on scholarship and job opportunities while studying, were popular when contrasted to local options. Students do not take admission in Pakistani universities as they get scholarships abroad and for that, go to study in other States," said a participant. At the same time, they can work and send that money to their families." This quote highlights the two- faceted motivation: to study abroad and for financially supporting family (cost-benefit calculation consistent with Human Capital Theory). This finding is also consistent with the Push-Pull Model of migration where domestic job opportunities restrict, and push while International scholarships, employment possibilities and better academic infrastructure pull (Mukhtarov et al., 2022).

The financial and institutional constraints concerning admission, as well as the study in Pakistan, were some of the difficulties which students highlighted. "Even if they get admission in Pakistan, they can only study with difficulty, on their own expenses," one participant wrote. This view of expensive and less beneficial higher education locally gives students a huge motivation to look at places abroad for their studies. These results are consistent emphasized that the absence of scholarship, expensive tuition fees, and substandard research environments made prospective students less inclined towards local universities. The vicious circle continues, with the outflow of high quality professionals

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contributing to institutional weakness that makes Gens A's parents reluctant to send them to locally based institutions.

Participant responses also demonstrated that the impact of brain drain on research productivity was a sign of academic decay. A lack of experienced faculty and limited mentorship in particular were identified as crucial challenges. Many university departments are under-resourced and therefore not able to deliver quality instruction, as a result of which learning performance and research output are adversely affected, students said. This is consistent with the results of researcher suggested that the loss of medical practitioners and academics has left system gaps in higher education and research capacities in Pakistan. Reduced scientific productivity and archaic infrastructure discourage hands-on learning, creativity, and academic growth. These systemic deficiencies only add to the belief held by Gen Alpha that studying abroad is a better route to academic and career success(Behlol, 2020).

Respondents also recommended policy interventions that the institutions can take in order to combat brain drain. These measures ranged from the expansion of tuition assistance, financial aid and scholarship programs to job placement/career advisory services and bolstering research facilities. "If the universities could offer better scholarships and career paths, more students would come here to study instead of studying abroad," said one respondent. This suggestion is in line with the policy reviews that highlight the need for strengthening national academic infrastructure and support by making educational career-oriented locally to keep talent and quality intact. By making incentives match the wants of Generation Alpha, colleges and universities can help with enrollment woes while also addressing a more systemic problem of academic maturity(Humayun et al., 2025).

The results obtained from this study are also reinforced by the findings of Human Capital Theory that considers education a future oriented investment for productivity and earnings (Becker, 1964). Even the students from Generation Alpha today estimate ROI of Pakistani universities vs International ones, and the perceived higher ROI (Return on Investment) is swaying decision making towards enrollments at Institutions abroad. Furthermore, the Push-Pull Model of Migration can make sense of how domestic university structural inadequacies (push factors) and financial rewards or opportunities overseas (pull factors) condition student decision-making(Hijazi et al., 2024).

This study shows a brain drain spiral: outmigration robs domestic universities of its talent pool and appeal, thereby prompting Generation Alpha youth to study abroad leaving their home countries with less talent. Breaking this cycle necessitates combined policy action targeting financial and infrastructure support, career advice, and boosting research capacity. The results of the study verify the past literature regarding brain drain in Pakistan and adds value to it by presenting an aspect of perceptions and enrollment behavior of Generation Alpha as this cohort will significantly influence human capital and education landscape of the country in years to come(Hijazi et al., 2024).

4.4 Conclusion

The current article has provided specific measures of impact of brain drain on Generation Alpha students in accessing higher education and their academic journey in universities located inside Pakistan along with centrality to the broader scenario that could be an era or

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generation-wise consideration for migration, higher education preferences and institutes' challenges. The results suggest that brain drain is not only a national economic social issue but also has an impact on educational decision-making waiting in the minds of young pupils. Students of Generation Alpha understand the magnitude of brain drain in a three dimensional sense as it impacts their decisions about attending post-secondary education(Uzun, 2024).

The findings indicated that the foreign educational institutions are perceived to provide more financial benefits, scholarships and part time job opportunities contributing both academically and financially. Students said that even if they were to gain entry into a college in Pakistan, but for the cost and expensive fees as well as lack of institutional support, studying locally is difficult. "Students don't take admission in Pakistani universities because they have scholarships abroad, and for the scholarships they go study in different countries. In the meantime, their money can work and support families." Such perceptions are congruent with Human Capital Theory, in which students consider education as an investment and select the alternatives that maximize educational and financial returns. To the same logic, the Push-Pull of Migration Model holds that students are pushed away from their home nations and pulled toward foreign education(Sehar et al., 2021).

The research also established how the skilled professional brain drain has negative repercussions for educational progress in Pakistan. Issues such as the shortage of faculty, decreasing research productivity and infrastructure constraints emerged as serious challenges for quality in higher education. The more mature students also reported that lack of supervision, obsolete facilities and limited hands-on training has a negative influence on both teaching motivation as well as skills' uptake. This is in line with the preceding literature highlighting that brain drain erodes local processes whereby institutions offer quality education at competitive price. Policy and institutional interventions were the main theme emphasized in addressing brain drain and favoring domestic academic development. Respondents suggested that the scholarships and financial assistance program, clearer career pathways and industry connections should be further developed while research infrastructure investment needed to be addressed. The reforms would go a long way toward attracting the best to local universities, keeping Generation Alpha's high achievers and growing the overall stock of human capital nationally. "If Chinese universities could offer better scholarships and prospects for employment, we'd get more students studying here instead of going abroad," said one respondent(Zafar, 2023).

These findings add to the literature by focusing on a generation-specific view of brain drain and educational decision making. While earlier work has largely concentrated on skilled professionals' migration, and macroeconomic effects, the present inquiry covers those of these age group ("Generation Alpha") students who jointly have not only potential to alter the face of Pakistani academia but also form its emerging labour force in near future. Additionally, it offers policy implications to policymakers, college administrators and education planner who want to formulate various policies that can help retain talent and improve the quality of higher learning. In the context of future implications, these results being illuminating and show a need for early interventions that create systemic accessibility in Pakistani universities. Revenue, career advisory service, faculty and research facilities are some of the areas in which support is needed in order to stem brain drain among students

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and avert future consequences. Further studies can be conducted longitudinally combining the trends of migration (Qureshi & Awan, 2025).

4.5 Recommendations

Recommendations As a result of the analysis conducted in this research: on the impact of brain drain on university entry and academic investment by Generation Alpha students' in Pakistan, policymakers, educational providers and other stakeholders are advised as follows. These suggestions are intended to make it easier for students to stay in Ontario instead of leaving, and to improve skills training and strengthen academic programming.

- 1) Universities and government must offer merit and need-based scholarships at par or near to what is being offered by the international community. Financial assistance that takes the pressure off of tuition and living expenses is an extremely strong incentive for Generation Alpha learners. Use competitive scholarships to make the local option more attractive.
- 2) For making higher education affordable, they should introduce tuition waivers, ease the payment options such as installment and income based collections. Participants mentioned that cost of education in Pakistan is also high, which leads them to study abroad. One of the push factors against irregular migration is subsidized education.
- 3) Investing in state-of the art research tools, laboratories, libraries and technology enhanced learning spaces is essential. According to students, poor quality facilities reduce the quality of education and motivation. Better infrastructure will lead to good research output and comparable practical exposure on international lines.
- 4) Universities should offer a career counseling infrastructure that will assist students to reach an academic discipline, job market and a research potential within the confines of Pakistan. Participants emphasized that the perceived lack of career prospects at home is a key factor in wanting to study elsewhere.
- 5) The government needs to develop a national policy combining all higher education, labor and economic development policies in the fight against brain drain. This strategy should facilitate and encourage the students to get education at home and offer them planned prospects for career opportunities within Pakistan.
- 6) Pakistani universities can be transformed into vibrant knowledge centers through investment in research funding, international partnerships and innovation incubators. This is conformed to Human Capital Theory as it generates more returns for an investment in domestic education.
- 7) Policies makers will need to understand Generation Alpha's unique needs, such as flexible learning opportunities or online courses, and mentorship programs designed for this generation's desires and career dreams.

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