

BRAIN DRAIN AND PERCEPTIONS OF EDUCATED YOUTH IN INDONESIA

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ABSTRACT

This study identifies the intensity of push factors and pull factors that influence emigration intentions among Indonesian university students. Data were collected through a quantitative survey with N=404 respondents (18-28 years old, majority with undergraduate education), adopting the Urbański (2022) model which examines economic, social, and political factors. Validity and reliability tests confirmed all constructs were valid and highly reliable. Descriptive analysis using a 5-point Likert scale revealed that migration motivation is strongly dominated by structural issues, particularly in the jointly driven by political and economic dissatisfaction. The primary push factor was political conditions and governance (mean=4.30), closely followed by economic conditions (mean=4.21) and social conditions (mean=4.16). The strongest pull factor was economic conditions abroad (mean=4.39), followed closely by political conditions abroad (mean=4.30) and social conditions abroad (mean=4.12). The findings indicate that Indonesian university students' intention to emigrate is triggered by dissatisfaction with governance quality and economic conditions within the country, reinforced by the perception of higher professional rewards, political stability, and better quality of life in destination countries.

Keywords: *brain drain; migration, Indonesian students.*

INTRODUCTION

Indonesia, the world's fourth-most populous country, has formulated a long-term plan to realize the "Golden Indonesia" vision by 2045 (Law No. 59/2024). One strategic issue is the projected demographic dividend, a period where the working-age population exceeds dependents, theoretically creating a window of economic opportunity (Bloom et al., 2010). However, this potential advantage faces a significant challenge: Indonesia is experiencing an increasing trend in emigration among skilled and educated citizens. For example, during the period from 2019 to 2022, an average of 1,000 Indonesians aged 25 to 35 migrated to Singapore each year (Hidayat, 2023). This trend extends beyond Singapore; broader data

from the OECD (2022) documents a growing aggregate of Indonesian talent in various developed nations across Asia, Europe, and the Americas. This phenomenon creates a strategic paradox for national development: while Indonesia seeks to leverage its demographic dividend for economic advancement, it simultaneously experiences a measurable outflow of its most educated citizens to more developed countries.

The phenomenon of migration represents one of the most significant issues with potential for multidimensional impacts on a nation's development trajectory (Morawska, 2000). Previous research has documented both positive and negative effects. From an economic perspective, remittances from migrants have been shown to exert positive long-term effects on home country economies, with particular benefits for regional development in areas of origin (Permatasari & Sugiharti, 2017). However, the reverse side of this phenomenon is equally important: emigration can substantially deplete the skilled human resources that are needed to drive economic growth across strategic sectors such as technology, research, and healthcare (Santoso & Muslihatinningsih, 2022; Šlibar et al., 2023). In the long term, this continuous loss of educated and skilled workers carries the potential to reduce overall national development capacity (Sarjito, 2025). The tension between the immediate positive effects of remittances and the long-term negative impacts of human capital loss suggests that understanding why educated individuals choose to emigrate is essential for designing effective retention strategies.

This sentiment has also crystallized in Indonesian popular discourse through the phenomenon known as “kabur aja dulu” (just leave for now), an expression that gained widespread traction on Indonesian social media as young, educated Indonesians openly expressed their inclination to seek education, employment, and a better quality of life abroad amid perceived domestic economic and political stagnation. This grassroots expression reflects, at a societal level, the same push-pull dynamics that this study examines empirically. Based on this phenomenon, this research seeks to identify and analyze the specific factors that motivate highly educated Indonesians, particularly university students currently pursuing or having recently completed higher education, to migrate toward more developed countries. The prevalence of permanent or semi-permanent settlement intentions among Indonesian students abroad has been reflected in recent OECD data (2022), which demonstrates an increasing aggregate of Indonesian talent distributed across developed nations. This trend is particularly evident among Generation Z and young professionals, who represent Indonesia's future intellectual and economic workforce.

There are two primary categories of factors that research has identified as capable of driving the brain drain phenomenon (Lee, 1966; Urbański, 2022). First are push factors, which are conditions in the country of origin that compel individuals to leave, including socioeconomic conditions such as unemployment, low wages, and limited opportunities; personal factors such as family circumstances and social networks; and political conditions including instability and governance failures. Second are pull factors, which are conditions in destination countries that attract migrants. These include higher income prospects, better employment opportunities, superior quality of life, enhanced social protection and worker safeguards (Olivier, 2018; 2019), improved public services, and greater political stability

and security. The relative weight and interaction of these factors vary across contexts, populations, and individual circumstances (Castles & Miller, 2009).

While a substantial body of research has examined brain drain in various global contexts, studies that specifically map the perceptions and migration motivations of Indonesian Generation Z in the post-pandemic era using Urbański's (2022) push-pull framework remain limited. This research addresses that gap by empirically testing the framework within the Indonesian context. By examining both push and pull factors systematically, this study is expected to provide actionable insights regarding the specific motivations that drive emigration among young educated Indonesians. Such insights can enable policymakers to formulate more targeted and effective policies that address the root causes of human capital flight, rather than implementing generic retention strategies. Ultimately, this research aims to support Indonesia's achievement of the 2045 Golden Indonesia vision by identifying policy interventions that can effectively mitigate brain drain while capitalizing on the demographic dividend through human capital retention.

LITERATURE REVIEW

According to Šverko (2005), brain drain is a form of population migration in which there is an outflow of individuals who have obtained high levels of education such as experts, researchers, and intellectuals from a country. Factors such as unstable political situations drive the phenomenon of brain drain in developing countries (Mishra, Ghimire & Aithal, 2023). Furthermore, factors such as the desire for higher living standards and access to higher education motivate young individuals to leave their home countries for education abroad (Mishra, 2023).

Essentially, brain drain is a phenomenon of the workforce as people who have a history or experience of higher education, commonly known as educated workers. Godwin et al. (2009) explain that brain drain is the phenomenon of the outflow of scientists and technologists from various countries to the United States and Canada from 1950 to 1960. This phenomenon provides an explanation in which highly educated professional workers migrate to obtain higher income, better living conditions, and better career opportunities than before (Saefuloh, 2012). The trend of rampant brain drain became apparent from 1960 to 1970, when scientists, doctors, and technicians also migrated to developed countries at that time such as the United States, England, Canada, and Australia (Ozden, 2006).

The phenomenon of brain drain can be assessed as something detrimental to the country of origin of the migrants. With the prevalence of the movement of expert labor or educated workers, there is a decrease in the availability of quality workers in the country of origin. Furthermore, the prevalence of brain drain has the potential to reflect public dissatisfaction with the welfare obtained from their work. This phenomenon ultimately invited responses from various developed countries as destination countries. They designed residence permit schemes to attract expert labor to build their economies (Ionescu, 2006). Thus, such policies become a particular attraction for educated workers in other countries to obtain higher income and better career opportunities.

According to Lee (1966), migration is a change of residence from the place of origin to the place of destination on a permanent or semi-permanent basis that is not limited to the

distance of movement or the nature of the movement. In the domestic realm, such movement is usually caused by differences in wage levels or expected income between the rural sector, which is predominantly involved in agriculture, and the urban sector, which has industrial advancement and thus has manufacturing sectors (Harris & Todaro, 1970). This motive became the beginning of international migration, where international movement is driven by economic, social, and political factors.

Economic factors include poor economic conditions, high unemployment rates, and low wages or salaries. Social factors include demographic aspects, globalization, and the influence of relatives. Meanwhile, political factors can also have an effect, for example, political conflicts and repressive conditions (Morawska, 2000). Beyond these three factors, there are other factors that also drive international migration, namely the availability of more diverse job opportunities and more promising career opportunities, which ultimately result in income disparities between countries (Castles & Miller, 2009).

There is a development of the concepts of brain drain and brain gain, namely the concept of brain circulation. Brain gain refers to the phenomenon of the return of educated workers who have developed their expertise abroad to their country of origin to contribute to development (Saefuloh, 2012). Brain circulation describes how the diaspora scattered across various countries becomes a solution to overcome the negative problems caused by brain drain (Darmawan & Desiera, 2014).

Based on the explanation regarding the concept of brain drain and other related matters, this research focuses on the concept of brain drain that includes the motives that drive Indonesian society to emigrate to improve their standard of living, particularly among Generation Z. In line with the Urbański (2022) framework, migration is understood as the result of the interaction between push factors that drive individuals to leave their place of origin, and pull factors that attract individuals toward a certain location. These two factors encompass three similar dimensions, namely economics, social, and political, each of which is broken down into a number of specific indicators.

Indicators in push economic factors include poverty, unemployment, low wages, lack of basic health, high fertility rates, and lack of basic education. Then indicators in push social factors include the presence of discrimination, poor medical care, social insecurity or uncertainty, inadequate education systems, and population growth. Meanwhile, indicators in push political factors include the presence of corruption, political conflict, failed government governance, human rights violations, and terrorism. In contrast to the three dimensions in push factors, in pull economic factors some indicators include higher wage prospects, improved living standards, self-development, employment opportunities, good welfare standards, and labor demands or requests from the destination. Then indicators in pull social factors some of them include family reunification or the reunion of families in the migration destination area, homeland, freedom from discrimination, better healthcare, advantages of state welfare. Meanwhile, indicators in pull political factors include safety and security, political freedom, democracy, political stability, and civil rights.

RESEARCH METHOD

This research uses a quantitative approach with a structured questionnaire instrument to collect data from students currently studying in Indonesia, as well as Indonesian citizens who are currently or have studied abroad. The questionnaire is divided into three parts that assess the socio-economic background of respondents, migration intentions, as well as the driving and pull factors that affect migration decisions. The socio-economic background requires respondents to fill in a number of variables that can be correlated with their migration decisions. The migration intention section aims to determine whether respondents plan to migrate and settle in another country. Questions in this section include: (1) their intention to migrate and (2) the country or region that is the target of their plan.

The respondents were recruited using a purposive combined with snowball sampling technique: the questionnaire was distributed through an online Google Form shared across university networks and social media platforms, targeting Indonesian citizens who had higher education experience. Respondents who did not meet these criteria were excluded from the final sample. Data collection was conducted from March 2025 to March 2026, a timeframe worth noting because domestic political and economic conditions may shift over the course of a year and, in turn, influence respondents' perceptions.

The section on driving and pull factors requires respondents to assess the significance of various factors in the form of a Likert scale (1 = not important; 5 = very important). These questions are based on the Urbański (2022) model which divides these factors into six dimensions: (1) economic push factors, (2) social push factors, (3) political push factors, (4) economic pull factors, (5) social pull factors, and (6) political pull factors. Each dimension is then elaborated into a number of specific indicators.

The collected data were analyzed using descriptive statistics, commonly called univariate statistics. Validity testing was conducted using Pearson's Correlation, comparing each item's score to the total score, while reliability testing was conducted using the Cronbach's Alpha formula, where an item is declared reliable if the alpha coefficient (α) is greater than 0.6 (Arikunto, 1983). All items in the research instrument were tested prior to the main analysis: the Pearson correlation coefficients for every item exceeded the critical value ($r = 0.098$) at the 0.05 significance level, confirming that all items were statistically valid, while the overall Cronbach's Alpha coefficient was $\alpha = 0.922$, indicating excellent internal consistency of the instrument as a whole. Reliability was further assessed at the subscale level, yielding $\alpha = 0.894$ for the push factor subscale (17 items) and $\alpha = 0.855$ for the pull factor subscale (16 items).

RESULTS AND DISCUSSION

The survey was conducted by distributing a Google Form link with 404 respondents from various regions with the following distribution:

Table 1. Respondent Profile

Variable	Category	Frequency (N)	Percentage (%)
Age	18-28	267	66.1
	29-39	137	33.9
Gender	Male	176	43.6
	Female	218	54.0
	Not specified	10	2.5
Highest Level of Education	Diploma 1	1	0.2
	Diploma 2	1	0.2
	Diploma 3	27	6.7
	Bachelor	328	81.2
	Master	44	10.9
	Doctor	3	0.7

Source: research results

The demographic profile of respondents was dominated by the young productive age group, namely the range of 18-28 years (66.1%). This is in line with the educational background of respondents, where bachelor's degree (S1/D4) is the highest level of education for 81.2% of participants. In terms of gender composition, respondents were dominated by females (54.0%), followed by males (43.6%).

Table 2. Factors Determining Migration Motivation

Category	Variable	Mean	SD
Push Factors	Economic Push Factors	4.21	0.59
	Social Push Factors	4.16	0.61
	Political Push Factors	4.30	0.55
Pull Factors	Economic Pull Factors	4.39	0.46
	Social Pull Factors	4.12	0.66
	Political Pull Factors	4.30	0.58

Source: research results

Descriptive analysis of the intensity of migration factors shows that, contrary to a purely economic narrative, political conditions form the strongest push dimension (mean=4.30), closely followed by economic conditions (mean=4.21) and social conditions (mean=4.16); all three dimensions were rated as very important (mean $\geq$ 4.00). At the item level, the highest-rated individual push indicators were low wages (mean=4.40), poverty (mean=4.37), and corruption (mean=4.37), indicating that dissatisfaction with both economic hardship and governance failures jointly drive the intention to emigrate. Other salient push indicators included poor governance (mean=4.35) and inefficient government bureaucracy (mean=4.35), reinforcing the weight of institutional dissatisfaction alongside economic hardship. A different pattern appears in the pull factors, which remain dominated by economic considerations. The economic pull dimension recorded the highest average score (mean=4.39), driven particularly by the prospect of higher wages abroad

(mean=4.58) and good welfare standards (mean=4.47), affirming that professional and financial rewards remain the main attraction for respondents. Political pull factors followed closely (mean=4.30), led by the perceived safety and security of destination countries (mean=4.47) and stronger protection of human civil rights (mean=4.41), indicating that political stability is nearly as attractive as economic reward. Social pull factors were rated comparatively lower (mean=4.12), suggesting that non-material considerations such as family reunification (mean=3.90) and ethnic homeland ties (mean=3.97) play a smaller role than economic and political considerations in shaping migration intentions, completing the picture of seeking superior quality of life overall.

The Interplay of Political and Economic Factors in Emigration Motivation

Survey results reveal a more nuanced pattern than a purely economic explanation of brain drain. While pull factors remain dominated by economic considerations (mean=4.39), the strongest push dimension is in fact political rather than economic: dissatisfaction with political conditions and governance in Indonesia (mean=4.30) narrowly outweighs economic push factors (mean=4.21). This is corroborated by item-level results, where corruption (mean=4.37), poor governance (mean=4.35), and inefficient government bureaucracy (mean=4.35) rank among the most influential push indicators, alongside low wages (mean=4.40) and poverty (mean=4.37).

This finding suggests that Indonesian student brain drain is not purely economically rational but reflects a joint dissatisfaction with governance quality and economic opportunity at home, matched by an expectation of financial reward and safety abroad. Respondents, dominated by the young productive age group (18-28 years), appear to weigh both financial stability and institutional trust when considering emigration.

This finding confirms the view of Šlibar et al. (2023) that students as prospective educated workers are highly sensitive to wage disparities and the lack of space for career development in their home country. Furthermore, this finding also aligns with Asmuni, Rohim, & Trihartono (2020) and Mukhtarov et al. (2022), who highlight that persistent governance and economic weaknesses jointly drive emigration motivation, making the strengthening of local institutions such as Village-Owned Enterprises crucial to creating meaningful employment and improving governance at the grassroots level.

The Role of Social Conditions and Political Stability Abroad

Beyond the political and economic push factors discussed above, social conditions in Indonesia were also rated as an important, if comparatively weaker, driver of emigration intention (mean=4.16). Within this dimension, social insecurity (mean=4.25) and inadequate education systems (mean=4.22) stood out as the most salient concerns, indicating that dissatisfaction with the broader social environment compounds the economic and political pressures already discussed.

The particularly high scores for political push factors merit closer interpretation within the Indonesian context. Corruption, poor governance, and inefficient bureaucracy likely reflect widespread public perception of institutional unpredictability, issues that have repeatedly surfaced in national surveys and public discourse in recent years. For young,

educated respondents planning long-term careers, such perceptions may be interpreted not merely as an abstract governance concern but as a tangible risk to career stability and fair professional advancement, reinforcing the appeal of destination countries perceived to offer more predictable, merit-based systems.

Meanwhile, on the pull side, political factors underscore the search for a safer and more stable environment abroad. Destination countries are perceived as offering greater safety and security (mean=4.47) and stronger protection of human civil rights (mean=4.41), contributing to an overall political pull mean of 4.30 — nearly matching the strength of economic pull factors. Social pull factors, by contrast, were rated comparatively lower (mean=4.12), suggesting that respondents are drawn abroad primarily by tangible economic and institutional guarantees rather than social or cultural belonging.

CONCLUSION

This survey finding confirms that the phenomenon of brain drain among Indonesian students is fully consistent with the push-pull theoretical framework of skilled migration proposed by Urbański (2022), which frames emigration decisions as the joint outcome of push factors in the country of origin and pull factors in destination countries. Respondents as a whole are driven by a combination of factors that have been globally identified in previous studies, with political conditions emerging as the strongest push factor (mean=4.30) and economic conditions as the strongest pull factor (mean=4.39). The prominence of political and governance dissatisfaction as a push factor replicates findings in the literature that institutional weakness and corruption in the country of origin are significant triggers of emigration (Chaudhary et al., 2025; Shumba & Mawere, 2012), while the highest score on economic pull factors (mean=4.39), particularly the prospect of higher wages abroad (mean=4.58), aligns with global findings that higher salaries and professional development opportunities in developed countries are the main attractions (Baruch et al., 2007; Lofters, 2012; Saranya et al., 2021).

Furthermore, economic push factors (mean=4.21) and social push factors (mean=4.16), both rated as important, indicate that dissatisfaction with domestic economic opportunity and social conditions compounds the governance concerns already discussed. In parallel, the attractiveness of destination countries extends beyond economic considerations to political stability and safety (mean=4.30), in line with the literature narrative about seeking better living standards and more reliable institutional systems. Thus, Indonesian student brain drain is understood as a rational calculation driven by governance weaknesses and economic inequality in the home country, and attracted by the prospect of higher professional rewards, safety, and stability in destination countries.

Research Limitation

This study is limited to an analysis of push and pull factors without considering geographic variation, academic disciplines, and respondents' institutional origins. This study also did not disaggregate respondents currently residing abroad by specific destination country, nor did it conduct cross-tabulation analyses of migration intentions across demographic subgroups (e.g., gender or age cohort, such as 18–28 versus 29–39), even though Table 1 indicates variation in these characteristics. Incorporating destination-

country distribution would allow future analyses to link specific push and pull factor intensities to the institutional and economic profiles of actual destination countries, while demographic cross-tabulation could reveal whether migration motivations differ systematically by gender or age group. Future research should explore these dimensions to provide a more comprehensive understanding of educated Indonesian youth's perceptions of the brain drain phenomenon. In addition, future studies are encouraged to examine brain drain intentions longitudinally, to assess how push and pull factor intensities shift over time in response to domestic policy changes, and to complement the quantitative survey approach with qualitative interviews that can surface the more personal and contextual narratives underlying respondents' migration decisions.

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