

Strategies for Advancing the National Interests of the Republic of Kazakhstan: Knowledge Transfer and the Role of Kazakhstanis Educated Abroad

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Abstract

This article analyzes the role of Kazakhstanis educated abroad in knowledge transfer and the use of human capital for the national development of the Republic of Kazakhstan. The study addresses the factors shaping decisions to remain abroad or to return, the competencies acquired through foreign education, and the mechanisms for mobilizing this human capital to support Kazakhstan's national interests. The empirical basis of the study comprises 22 in-depth interviews with Kazakhs living in 14 countries across Europe, North America, Asia, and the Middle East. The study follows a phenomenological design, analyzing participants' narratives through Interpretative Phenomenological Analysis to capture the lived meaning of educational mobility and its relationship to Kazakhstan's national development. It was found that the decision to remain abroad is determined primarily by opportunities for professional self-realization (77.3%), the quality of the institutional environment (50.0%), and career development prospects, rather than solely by income level (40.9%); nonetheless, 63.6% expressed willingness to consider returning under favorable conditions. It is shown that foreign education contributes not only to professional knowledge (90.9%) but also to research and analytical skills (63.6%), cross-cultural communication competencies (59.1%), and academic independence (45.5%). Most participants view their contribution to Kazakhstan's development not through mandatory return, but through expert consulting, joint projects, scientific collaboration, mentoring, and remote professional interaction, each reported by roughly half of the sample. At the same time, 72.7% emphasized that the effectiveness of engaging this human capital depends on the institutional readiness of Kazakhstani organizations and the state. The results substantiate the need to shift from a policy of specialist return to the development of mechanisms for the systematic involvement of foreign intellectual potential in Kazakhstan's national development. These findings carry practical implications for designing diaspora engagement policy and strengthening Kazakhstan's transnational knowledge networks.

Keywords: *National interests, Knowledge transfer, Human capital, Educational migration, Diaspora engagement.*

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Introduction

The new Constitution of the Republic of Kazakhstan, which entered into force on 1 July 2026, introduced an important conceptual shift in the state's strategic priorities. Article 3, for the first time, explicitly recognizes the development of human capital, education, science, and innovation as a strategic direction of state activity. At the same time, the concept of national interests is mentioned only once in the Constitution, namely in Article 13(2), where it is associated with the deprivation of Kazakhstani citizenship (Electronic Government of the Republic of Kazakhstan, 2026). A more comprehensive definition is provided in the Law of the Republic of Kazakhstan On National Security (adopted on 6 January 2012), which defines the national interests of Kazakhstan as "a set of legislatively recognized political, economic, social and other needs of the Republic of Kazakhstan, the implementation of which determines the ability of the state to ensure the protection of human and civil rights, the values of Kazakhstani society and the foundations of the constitutional order." (Republic of Kazakhstan, 2012). This legislative framework demonstrates that Kazakhstan conceptualizes national interests not merely in terms of territorial integrity or military security but as a broader system encompassing human development, constitutional values, and the state's long-term socio-economic resilience. In the context of globalization and the emergence of a knowledge economy, human capital is becoming a key factor in ensuring national competitiveness, sustainable economic growth, and strengthening national interests. The international mobility of students, researchers, and highly qualified specialists has become an important element in the global redistribution of knowledge, competencies, and innovative potential.

In the last two decades, the number of students studying outside their country of origin has more than tripled, from 2.1 million in 2000 to almost 6.9 million in 2022-2023 (UNESCO, 2025). More recently, however, UNESCO data show that the number of students studying abroad has reached 7.3 million, and the total number of higher education students worldwide is about 269 million (UNESCO, 2026).

The expansion of international educational mobility has intensified global competition for talent. Whereas educational migration was traditionally viewed through the lens of brain drain - emphasizing the loss of human capital by countries of origin – it is now increasingly understood in terms of brain circulation, transnational professional networks, and knowledge transfer (Saxenian, 2005). Within this perspective, highly skilled individuals are regarded not merely as a

potential loss to their home countries but also as valuable development resources. Regardless of where they reside, they can facilitate the transfer of knowledge, technology, professional expertise, and international networks, thereby contributing to the long-term development of their countries of origin. International organizations are also paying increasing attention to harnessing the potential of highly skilled migration. The Organization for Economic Co-operation and Development notes the steady growth of international educational mobility and stresses its importance for building global knowledge networks, fostering innovation and improving the quality of human capital (OECD, 2024). According to OECD data, in many countries international students comprise more than 10% of the tertiary education cohort, with the highest concentration in master's and doctoral programs (OECD, 2024).

The International Organization for Migration (IOM) views professional diasporas as an important lever for the development of countries of origin through the transfer of knowledge, technology, innovation, and expertise (IOM, 2026). The World Bank also emphasizes the need to move from policies focused solely on the return of specialists to more flexible mechanisms for leveraging transnational professional networks and the intellectual capital of citizens living abroad (World Bank, 2023).

Against this background, the study of the role of the professional diaspora in the provision of national development and the promotion of states' national interests has become particularly relevant. In recent decades, many countries have been actively developing mechanisms for interacting with highly qualified compatriots abroad, viewing them as a source of investment, innovation, scientific cooperation, and international influence (Brinkerhoff, 2012; Gamlen, 2014). At the same time, modern practice shows that the most significant resource for foreign communities is not only financial transfers or repatriation programs but also opportunities to transfer knowledge, professional competencies, and international experience.

This issue is particularly significant for Kazakhstan. Since gaining independence, the country has made substantial investments in human capital through international education, academic mobility, and overseas training. (Akhmetova et al., 2025; Bokayev, 2023) One of the flagship instruments of this policy is the Bolashak International Scholarship, which has supported the education of more than 12,000 specialists at leading universities worldwide (Astana Times, 2023). Beyond Bolashak graduates, a sizeable community of Kazakhstani professionals has emerged abroad. Educated at universities across Europe, North America, and Asia, these individuals have built careers in

academia, science, business, public administration, and other sectors. This growing pool of internationally trained professionals represents a valuable source of knowledge, expertise, and international connections that can contribute to Kazakhstan's long-term development (Bokayev et al., 2024; Kuatbayeva et al., 2026; Iskindirova et al., 2024; Tarman et al., 2026).

Although educational migration, human capital, and return migration have been extensively studied, comparatively little attention has been paid to how Kazakhstan can engage the expertise of its internationally educated citizens and professionals abroad. Existing research has primarily examined the drivers of emigration, the consequences of talent outflows, and the effectiveness of specific educational mobility programs. By contrast, far less is known about the mechanisms through which the knowledge, skills, professional experience, and international networks acquired abroad can be mobilized to support Kazakhstan's long-term development and advance its national interests.

The aim of this study is to analyze the role of Kazakhstani individuals educated abroad in knowledge transfer and the use of human capital for the national development of the Republic of Kazakhstan. The study is based on a phenomenological analysis of 22 in-depth interviews with Kazakhstani individuals living in various countries and who have studied at foreign universities. Special attention is paid to identifying factors influencing their career paths and to the mechanisms for applying gained knowledge, skills, and international experience to increase human capital and advance Kazakhstan's national interests.

To achieve this goal, the following research questions were formulated:

RQ1. What factors influence the decision of Kazakhstani citizens educated abroad to remain outside of Kazakhstan or consider returning?

RQ2. What knowledge, skills, and professional competencies do graduates of foreign universities acquire, and to what extent are they applicable to Kazakhstan's development?

RQ3. Through what mechanisms can knowledge transfer and the involvement of Kazakhstanis abroad in national development processes and the promotion of the national interests of the Republic of Kazakhstan be achieved?

Literature Review

Over the past decades, international educational mobility has been considered a key factor in the formation of human capital and the enhancement of national competitiveness. According to human

capital theory, investments in education contribute to increased productivity, innovative potential, and economic growth (Becker, 1993).

Weldes (1996), in her work “Constructing National Interest,” argues for reconceptualizing the term ‘national interest’ despite its considerable power, noting its flaws in conventional understanding and illustrating how US national interests were constructed during the Cuban Missile Crisis. The problems with the traditional meaning of national interest arise when politicians *try to fit all their desires* under this concept and legitimize their policies in the eyes of their people. Drawing on a constructivist lens, Weldes argues that IR scholars explaining national interests should ask 'why,' rather than 'how,' questions."

In the context of globalization, not only national education systems but also opportunities to gain knowledge and professional experience in international environments are becoming increasingly important. As Brooks and Waters (2011) note, studying abroad is becoming an important mechanism for accumulating educational, professional, and social capital, which can be used both at the individual level and for the development of the country of origin. In turn, Marginson (2016) notes that the modern higher education system is characterized by an unprecedented increase in global participation. As access to higher education expands, universities are acquiring an increasingly significant role in the formation of human capital, the training of highly qualified specialists, and the development of a global knowledge space. In this context, international education is becoming an important element of the broader processes of the globalization of higher education and international knowledge exchange.

Empirical work on international students themselves reinforces this picture of sustained transnational engagement. Examining Bangladeshi students in Germany, Masud (2020) shows that international students rely heavily on polymedia to maintain close ties with family, friends, and professional networks in their country of origin throughout their studies abroad. This finding parallels the experience of the Kazakhstani participants in the present study, for whom digital communication similarly sustains ongoing professional and personal connections with Kazakhstan despite physical distance.

For a long time, studies of educational migration were based on the concept of "brain drain," which posits that the emigration of highly skilled professionals leads to a loss of human capital in countries of origin. Within this approach, the departure of the most educated citizens was viewed primarily as a negative development, weakening a country's scientific, technological, and human

resource potential. However, reviewing four decades of research on the brain drain, Docquier and Rapoport (2012) show that high-skilled emigration does not necessarily deplete a country's human capital and may even generate positive network externalities, thereby revealing the limitations of the purely pessimistic view. Saxenian (2005), analyzing the experiences of India and China, further demonstrated that highly skilled migrants can maintain stable ties with their country of origin and participate in its development, regardless of whether they physically return. As a result, the concept of "brain circulation," which views the mobility of specialists as the circulation of knowledge, technology, and professional experience among different countries and institutional environments, has gained currency in the scientific literature.

Contemporary research develops the concept of brain circulation and increasingly views highly skilled migration as a mechanism for transnational knowledge transfer. Lam and Rui (2023) show that the return of professionals is an active process of transnational learning, in which knowledge gained abroad is adapted to the conditions of the country of origin. The authors argue that knowledge transfer is not a mechanical transfer of experience, but an act of reinterpretation and transformation in the light of the local institutional and social context (Lam & Rui, 2023). Similar approaches are being used in studies of international educational mobility that increasingly highlight the role of foreign university graduates as mediators between different national knowledge systems and professional communities.

Of particular importance in this respect are transnational alumni networks and professional communities. In a case study of Georgian students and alumni, Krannich (2024) shows that graduates of foreign universities can contribute to the development of their country of origin not only through physical return but also through participation in expert networks, professional associations, educational initiatives, and international projects. This approach allows us to view educational migration not as a one-way loss of human capital but as a mechanism for developing long-term knowledge-exchange channels between countries.

This idea has been further developed in studies of international migration networks. Barabuffi et al. (2025), analyzing OECD countries, concluded that highly skilled migration facilitates the dissemination of knowledge and innovation through transnational professional networks. The authors demonstrate that migration networks serve as an important channel for the international circulation of knowledge, facilitating the transfer of professional experience, technology, and innovative practices across countries.

The shift from brain drain to knowledge circulation has spurred research on knowledge transfer. Modern studies treat knowledge transfer as a process involving not only professional competences but also management practices, research approaches, organizational models, and international experience. Levitt (1998) notes that migrants can transmit not only material resources but also social norms, ideas, and practices to their countries of origin, thereby forming so-called social transfers. Further development of this approach has led to the concept of transnational knowledge transfer, which views highly qualified specialists as intermediaries between various scientific, educational, and professional communities.

Research on professional diasporas and transnational knowledge networks occupies a special place in contemporary literature. Meyer (2001) was among the first to propose that scientific and professional diasporas be considered an important resource for the development of countries of origin. In his view, the value of foreign specialists is determined not so much by their ability to physically return, but by their ability to provide access to international knowledge, technologies, and expert communities. Similar conclusions are presented in works devoted to diaspora knowledge networks. Research edited by Kuznetsov (2006) emphasizes that professional and scientific diasporas can serve as channels for the transfer of knowledge, innovation, and best practices between countries, providing states with access to the human capital of their compatriots abroad. In developing this approach, Brinkerhoff (2009) demonstrates that digital technologies and virtual platforms create new opportunities to maintain sustainable transnational ties, engage the diaspora in the development of the country of origin, and expand international knowledge exchange.

In recent years, diasporas have been increasingly conceptualized by researchers not just as social or cultural communities but also as actors in global knowledge networks. Such networks facilitate the exchange of research results, the involvement of international experts, the organization of joint projects, and the dissemination of innovative practices. In this regard, the question of not only the availability of highly qualified specialists abroad but also the ability of national institutions to utilize their potential becomes important. Within the framework of absorptive capacity, Cohen and Levinthal (1990) note that the effectiveness of using external knowledge is determined by organizations' ability to recognize the value of new information, assimilate it, and apply it in practice. Zahra and George (2002) develop this approach, treating the ability to absorb knowledge as a key factor in innovation.

Thus, contemporary research demonstrates a gradual shift from viewing educational migration as a loss of human capital to understanding it as a mechanism for the circulation of knowledge. However, the role of foreign university graduates in contributing to the development of their home countries through transnational knowledge networks and professional communities is still understudied.

Despite the significant growth of research on educational migration, human capital, and professional diasporas, a number of unresolved issues remain. Most existing studies focus on the causes of highly skilled migration, the consequences of human capital drain, or return migration. Significantly less attention has been paid to the mechanisms of knowledge transfer among graduates of foreign universities, as well as the conditions under which knowledge and professional experience acquired abroad can be used to the benefit of the country of origin. Research based on a qualitative analysis of the experiences of graduates of foreign universities from Central Asian countries is particularly limited.

Kassen (2018) examined Kazakhstan's foreign policy strategies in light of its landlocked and transcontinental status. He used discourse, context, and policy analysis to discuss different perspectives and how Kazakhstan's foreign policy strategies are shaped by its geographical location. According to the author, 'the essence of Kazakhstan's foreign policy could be described as balancing between pursuing its own national interests in international relations and leveraging the objective limitations and benefits of its geopolitical location' (Kassen, 2018, p. 314). This brings him to two exit strategies – diversification to address landlocked status and a proactive stance that takes into account the country's transcontinental position.

Recent scholarship on Kazakhstan's human capital and education system further situates the present study within an active and growing research agenda. Using a data-driven approach, Bokayev et al. (2025) evaluate the language competencies of Kazakhstan's civil servants and propose a development model for strengthening institutional capacity - evidence directly relevant to the question of whether Kazakhstani organizations are equipped to absorb and apply the human capital of specialists returning from, or collaborating with, colleagues abroad. Complementary studies examine the broader institutional and educational environment within which such human capital is expected to operate, including teachers' and principals' perspectives on media literacy policy implementation (Yeleussiz & Qanay, 2025) and students' perceptions of school climate and cultural empathy (Yussupova & Tarman, 2025). Taken together, this body of work suggests that

Kazakhstan's capacity to mobilize the knowledge of its internationally educated citizens depends not only on migration and diaspora policy narrowly defined, but also on the everyday readiness of its civil service and education institutions to receive, apply, and disseminate new competencies. Thus, existing literature confirms the importance of international educational mobility for the formation of human capital, the advancement of national interests, and the development of transnational knowledge networks. However, the question of how Kazakhstanis educated abroad participate in knowledge transfer processes, and how their intellectual potential can be leveraged to advance national interests and develop human capital in the Republic of Kazakhstan, remains understudied (Zagrebin & Davletbayeva, 2026). It is this research gap that defines the subject of this study.

Method

Research Design

This study employed a phenomenological research design using semi-structured, in-depth interviews. The phenomenological approach was selected because the study aims to examine not only factual educational and professional trajectories, but also the meanings, motives, perceptions, and interpretations through which internationally educated Kazakhstanis explain their decisions to remain abroad, assess the applicability of acquired knowledge, and describe possible forms of contribution to Kazakhstan's national development.

Phenomenology, in general terms, is the study of lived experience and conscious perception: it examines how the world appears to individuals from a first-person point of view, rather than seeking to explain an objective reality that exists separately from them (Smith, Flowers, & Larkin, 2009). More specifically, the study is grounded in a phenomenological research tradition rather than in qualitative inquiry in the broad sense. Whereas the term qualitative refers generally to an orientation toward narrative, non-numerical data and to the general procedures used to analyze such data, phenomenology denotes a distinct research tradition concerned with uncovering the essential structure of a lived experience shared by a group of individuals — in this case, the experience of pursuing higher education abroad and subsequently negotiating a professional and personal relationship with Kazakhstan as a country of origin. Specifically, this study applies Interpretative Phenomenological Analysis (IPA), an approach that combines this phenomenological concern with lived experience with an idiographic, interpretative analytic

strategy focused on how individuals make sense of major experiences in their lives (Smith, Flowers, & Larkin, 2009; Smith & Osborn, 2003). This phenomenological and interpretative orientation, rather than a generic qualitative label, guided the sampling, data collection, and analytical strategy described below.

The study is exploratory, interpretive, and phenomenological in nature. It focuses on the lived experiences of Kazakhstanis who completed higher education abroad and subsequently continued their professional or personal trajectories outside Kazakhstan. Such a design is appropriate because the research questions address complex processes that cannot be fully captured through standardized quantitative indicators, including decision-making about return or non-return, the perceived value of foreign education, professional self-realization, knowledge transfer, and the conditions under which human capital can be mobilized for national development.

The study is guided by three research questions. The first concerns the factors influencing the decisions of internationally educated Kazakhstani nationals to remain abroad or to consider returning to Kazakhstan. The second concerns the knowledge, skills, and professional competencies acquired through foreign education and their applicability to Kazakhstan's development. The third concerns the mechanisms through which knowledge transfer and engagement of Kazakhstanis abroad can contribute to national development and the promotion of Kazakhstan's national interests.

Participants

The empirical basis of the study consists of 22 semi-structured, in-depth interviews with Kazakhstani participants who had experience studying at foreign universities and were living outside Kazakhstan at the time of the interview. In terms of demographic profile, participants ranged in age from 23 to 44 years, included both men and women, and at the time of the interview resided in 14 countries across Europe, North America, Asia, the Middle East, and Eurasia (see Table 1). Participants were selected through purposive sampling, as the study required respondents with direct experience of international education, professional mobility, and life outside Kazakhstan. Consistent with the phenomenological design of the study, this sampling strategy was not intended to achieve statistical representativeness of the Kazakhstani diaspora, but rather to secure information-rich cases capable of illuminating the phenomenon under investigation — the

lived experience of pursuing higher education abroad and subsequently negotiating a professional and personal relationship with Kazakhstan as a country of origin.

Participants represented different fields of study and professional activity, including engineering, public administration, business, law, healthcare, natural sciences, information technology, education, research, arts management, and international organizations. This diversity made it possible to examine knowledge transfer not as a single-sector phenomenon but as a broader process linked to different forms of human capital.

The inclusion criteria were as follows. First, the participant had to be a citizen or native of Kazakhstan with a direct connection to Kazakhstan. Second, the participant had to have completed or participated in higher education abroad. Third, the participant had to reside outside Kazakhstan at the time of the interview.

Table 1

Distribution of participants by country of residence

Country of residence	Number of participants
Germany	3
United States	4
France	2
Japan	2
Russia	2
Sweden	1
Norway	1
Serbia	1
Poland	1
Turkey	1
United Kingdom	1
Vietnam	1
United Arab Emirates	1
Canada	1
Total	22

The geographical distribution of the sample allowed the study to capture different professional and institutional environments in which Kazakhstanis apply or reassess the knowledge and professional competencies acquired abroad. The inclusion of respondents from different host countries also enabled comparisons of how institutional context, labor market conditions, professional opportunities, and personal ties influence decisions about return, continued residence abroad, and cooperation with Kazakhstan.

Data Collection Tools

Consistent with the phenomenological design of the study, the purposive sampling strategy described above was not intended to achieve statistical representativeness of the Kazakhstani diaspora, but rather to secure information-rich cases capable of illuminating the phenomenon under investigation — the lived experience of pursuing higher education abroad and subsequently negotiating a professional and personal relationship with Kazakhstan as a country of origin. The main data collection tool was a semi-structured interview protocol developed specifically for the study. The protocol included 14 thematic questions covering socio-demographic characteristics, educational background, motives for studying abroad, acquired knowledge and professional competencies, reasons for staying abroad, employment experience, professional achievements, applicability of foreign education, assessment of Kazakhstan's investment in human capital, and willingness to return to Kazakhstan.

The semi-structured format was chosen because it ensured comparability across interviews while allowing respondents to provide detailed narratives and explain their individual experiences. The interview guide was directly aligned with the research questions. Questions on reasons for staying abroad and willingness to return were linked to RQ1. Questions on acquired knowledge, skills, professional competencies, and their applicability were linked to RQ2. Questions on professional achievements, links with Kazakhstan, assessment of state policy, and possible use of intellectual potential were linked to RQ3.

Table 2

Alignment between interview protocol and research questions

Research question	Relevant interview blocks	Analytical focus
RQ1. Factors influencing the decision to stay abroad or consider returning	Questions 5, 6, 8, 9, 14	Reasons for non-return, labor market factors, salary expectations, career opportunities, personal and family circumstances, institutional barriers
RQ2. Knowledge, skills, and professional competencies acquired abroad and their applicability to Kazakhstan	Questions 2, 3, 4, 7, 11, 12	Educational trajectory, motives for foreign education, professional skills, soft skills, technical competencies, applicability of acquired knowledge in Kazakhstan and abroad
RQ3. Mechanisms of knowledge transfer and engagement in national development	Questions 10, 11, 12, 13, 14	Professional achievements, cooperation with Kazakhstan, transfer of expertise, state policy assessment, possible mechanisms for engaging Kazakhstanis abroad

The interview guide also included an introductory section explaining the purpose of the study, the approximate duration of the interview, confidentiality principles, and the voluntary nature of participation. Participants were informed that the interviews would be used only for research and analytical purposes.

Table 3

Structure of the interview guide

Block	Content focus
Socio-demographic profile	Age, marital status, country of residence, languages, education level, current employment
Educational background	Country of study, university, specialization, duration of study, source of funding
Motives for foreign education	Reasons for studying abroad, choice of country and university
Acquired human capital	Knowledge, skills, competencies, professional and personal development
Decision to stay abroad	Reasons for remaining outside Kazakhstan, labor market and institutional factors
Employment trajectories	Job search strategies, employment offers, work by specialization
Professional development	Salary satisfaction, workplace motivation, opportunities for growth
Professional achievements	Career results, projects, links with Kazakhstan
Applicability of knowledge	Use of foreign education in current work, application in Kazakhstan and abroad
State policy assessment	Evaluation of Kazakhstan's investment in foreign education and use of graduates' intellectual potential
Return intentions	Willingness to return to Kazakhstan, conditions for return, alternative forms of engagement

Data Collection

Data were collected through individual semi-structured interviews with 22 participants. The interviews were conducted between May and July 2021. Depending on participants' locations and availability, the interviews were conducted remotely. The same general protocol was used for all interviews, with the possibility of further questions and clarifications depending on the participant's background, both personal and professional.

Before the interview, participants were informed about the purpose of the study and the expected duration of the conversation. They were also informed that participation was voluntary and that the results would be used only for academic and analytical purposes. With participants' consent, the interviews were audio-recorded. Where participants did not agree to audio recording, written notes could be used instead.

Interview duration varied across participants depending on the length and complexity of individual biographical narratives. Across the 22 interviews, duration ranged from 60 to approximately 90 minutes per participant, with a mean length of approximately 75 minutes; participants with more extensive career histories or more elaborated views on return and engagement tended to produce longer interviews. The collected material was subsequently transcribed and prepared for analysis. The final empirical corpus consisted of 22 interview transcripts. The transcripts reflected detailed narratives about educational experiences, employment trajectories, reasons for staying abroad, perceived barriers to returning, acquired competencies, and possible contributions to Kazakhstan.

Data Analysis

Consistent with the study's phenomenological design, the interview transcripts were analyzed using Interpretative Phenomenological Analysis (IPA), an approach that combines an idiographic focus on individual accounts with an interpretative reading of how participants make sense of a shared experience (Smith et al., 2010). IPA was considered appropriate because it requires each transcript to be examined in depth on its own terms before moving to shared, cross-case themes, which allowed the analysis to remain grounded in the particularity of each participant's experience of educational mobility while still addressing the study's three research questions. The purpose of the analysis was to identify recurring patterns in participants' explanations of their educational experience, professional trajectories, reasons for staying abroad, and possible forms of engagement with Kazakhstan.

The analysis followed the sequence of steps associated with IPA. In the reading and re-reading stage, all interview transcripts were reviewed to become familiar with the content, tone, and context of each account. In the initial noting stage, descriptive, linguistic, and conceptual observations were recorded for each transcript, and in the developing emergent themes stage, the responses were organized according to the main areas of the interview protocol and the research questions. Particular attention was paid to the participants' explanations of stay and return decisions, the knowledge and professional competencies acquired abroad, and the ways in which this experience could be applied for Kazakhstan's development. Connections among the emergent themes were then mapped within each individual case (searching for connections across themes), and the same steps were repeated independently for every subsequent participant (moving to the

next case), in keeping with IPA's idiographic commitment to examining each account in its own right before undertaking cross-case comparison.

Finally, in the looking for patterns across cases stage, recurring patterns were compared across interviews. Similar responses were grouped into broader analytical categories, including career and economic factors, institutional conditions, acquired professional competencies, applicability of foreign education, links with Kazakhstan, and mechanisms of knowledge transfer. These categories were then organized around the three research questions.

Table 4 presents the analytical organization of the interview data.

Table 4

Analytical organization of interview data

Research question	Main areas of analysis	Result section
RQ1. What factors influence the decision to stay abroad or consider returning to Kazakhstan?	Salary gap, career growth, professional environment, meritocracy, institutional quality, family reasons, safety, certification barriers, return conditions	Factors influencing stay and return decisions
RQ2. What knowledge, skills, and professional competencies do graduates acquire abroad, and how applicable are they to Kazakhstan's development?	Technical knowledge, research skills, language skills, soft skills, system thinking, international work culture, professional standards, applicability in Kazakhstan	Knowledge, skills, and professional competencies acquired abroad
RQ3. Through what mechanisms can knowledge transfer and engagement of Kazakhstanis abroad contribute to national development?	Cooperation with Kazakhstan, academic networks, research projects, grants, mentoring, expert participation, consulting, remote contribution, institutional partnerships	Mechanisms of knowledge transfer and engagement with Kazakhstan

To improve the reliability of the analysis, the same interview protocol was used across the interviews, and the findings were interpreted in relation to the research questions. Direct quotations from participants were used to support the main findings. The analysis also compared responses from participants living in different countries and working in different professional fields to identify patterns repeated across the sample rather than isolated individual opinions.

During the analysis, the assignment of responses to analytical categories was based on the overall meaning of participants' narratives rather than isolated wording. A participant was included in a particular analytical category when a competency, mechanism, or explanatory factor was explicitly mentioned or could be inferred from the interview's overall context.

Descriptive frequency counts were used for individual themes when reporting the results. Each respondent was counted only once within the relevant analytical category, regardless of how many times it was mentioned again in the interview. If a participant touched on several themes (e.g., project collaboration, expert advice, and mentoring), they were counted once in each relevant category. Thus, the percentages reflect the prevalence of thematic categories among the study participants and are used solely as a tool for describing the phenomenological data, not as a means of statistically generalizing the results.

Trustworthiness of the Data

Several strategies were used to strengthen the trustworthiness of the analysis. Credibility was supported by using a common, piloted interview protocol across all 22 interviews, by grounding every analytical category in participants' own words, and by illustrating each theme with direct quotations rather than relying solely on the researcher's paraphrase. Dependability was addressed through a consistent, documented analytical procedure — reading and re-reading, initial noting, developing emergent themes, and searching for patterns within and across cases — applied uniformly to every transcript, which functioned as an audit trail that could be traced from raw transcript to final theme. Confirmability was pursued by returning repeatedly to the transcripts during coding to check emerging categories against participants' actual statements and by keeping analytical interpretations closely tied to the interview data rather than to prior assumptions. Transferability is addressed descriptively: because the sample deliberately spans 14 host countries and a wide range of professional fields (see Table 1), the analytical categories are more likely to resonate with the experiences of internationally educated Kazakhstanis in other settings, although, consistent with the phenomenological design, no claim of statistical generalizability is made.

Findings

Factors influencing the decision to remain abroad or consider returning

An analysis of 22 in-depth interviews revealed that the decision of Kazakhstani citizens educated abroad to remain abroad is rarely determined by a single reason. In most cases, participants described a combination of professional, institutional, economic, and personal circumstances that collectively shaped their subsequent educational and career trajectories. The most common factor was opportunities for professional self-realization, which was substantively mentioned in 17 of the

22 interviews (77.3%). For most respondents, studying abroad was not the final stage of their education but rather a starting point for professional development, enabling them to secure their first job, continue their research, expand their professional contacts, and integrate into the international professional community.

Across the sample, this professional theme took several related forms: an initial job or research opportunity that emerged unexpectedly and reshaped an already-planned return, a sense of being professionally “chosen” or recognized by an institution abroad, and a gradual reframing of financial security as a stepping-stone toward, rather than a substitute for, professional maturity. These sub-themes recurred across participants from different host countries and professional fields and are illustrated below through representative accounts.

A revealing interview was conducted with a 27-year-old participant, a graduate of German universities living in Germany, who initially planned to return to Kazakhstan after completing her master's degree, but subsequent developments changed her professional trajectory:

"I thought about coming back after my master's degree. I went at the last minute, thinking about whether to come back. And then it happened—the job here fell through."

A similar logic can be discerned in several other interviews. The opportunity for employment, gaining professional experience, and further career advancement gradually became the determining factor influencing the decision to continue working in the country of study.

Most participants did not pit their overseas careers against Kazakhstan. On the contrary, many viewed working abroad as a stage in their professional development that could further enhance their value to their country of origin. In this sense, international mobility was perceived not as a definitive break with Kazakhstan but as a means of accumulating human capital.

The next most important group of reasons was institutional conditions for professional development, substantively mentioned in 11 of 22 interviews (50.0%). Respondents focused not so much on salary as on the transparency of career advancement, meritocratic selection principles, the quality of work organization, respect for employee qualifications, and the existence of clear rules for professional development.

Thus, a 38-year-old research participant, a graduate of Lund University living in Sweden, explains her decision to stay in Sweden as follows:

"Sweden chose me to stay with them."

This quote reflects not so much the fact of securing a job as the existence of an institutional environment capable of identifying promising specialists, supporting their professional development, and creating conditions for further research.

Financial aspects were mentioned directly or in a substantive way in 9 of the 22 interviews (40.9%); however, virtually no participants considered income level as an independent reason for living abroad. In most cases, financial advantages were perceived as a means of achieving professional independence, offsetting tuition costs, accumulating international experience, and building a stable career position, rather than as the ultimate goal of educational and professional mobility.

This idea is particularly evident in the interview with a 28-year-old research participant, a graduate of the University of Latvia, living in the USA:

"I am trying to become the best in my profession... That includes financial independence... Moreover, I want to gain experience, I want to get rich... and return to Kazakhstan."

The financial aspect, then, is not the final goal but a tool for achieving professional maturity, after which a return becomes more realistic.

A separate group of motives revolved around security, quality of life, and personal comfort. These factors were mentioned directly or substantively in 6 of the 22 interviews (27.3%) and were often considered not in isolation, but in conjunction with professional and institutional factors. For some participants, a sense of security, a more predictable social environment, trust in the rules, and the quality of everyday life became additional factors in long-term residence abroad. As a 28-year-old Latvian university graduate living in the United States noted:

"I do not feel safe in Kazakhstan."

Despite the diversity of individual trajectories, an analysis of interviews reveals that most participants do not rule out returning to Kazakhstan or engaging professionally with the country under favorable conditions. In 14 of 22 interviews (63.6%), respondents explicitly or substantively

indicated their willingness to consider returning if their professional, institutional, financial, or family circumstances changed. These conditions included the availability of interesting work, opportunities for professional growth, competitive compensation, a modern research infrastructure, transparent career mechanisms, and the opportunity to apply acquired knowledge without professional losses.

A typical illustration of this position is the words of a 29-year-old research participant, a graduate of a Canadian university, living in Canada:

"Wherever I was needed, there I was."

This phrase reflects that, for a significant portion of participants, their choice of country of residence was determined not by a desire to leave Kazakhstan permanently, but by where the most suitable professional opportunities were available. The participant himself, however, did not rule out returning, citing changing conditions in the country. This logic is characteristic of the majority of respondents, whose decisions were driven by a search for a favorable environment for professional fulfillment rather than by a final break with Kazakhstan.

Thus, the results of the first research question indicate that a combination of interrelated factors influences the decision to remain abroad or consider returning. The most important factors are opportunities for professional development, the quality of the institutional environment, financial stability, security, and the prospects for applying acquired knowledge. Moreover, most participants do not view a foreign career as a rejection of their ties to Kazakhstan. On the contrary, they perceive the accumulation of international experience as a potential resource that, given the right conditions, can be used to further the country's development.

Knowledge, skills, and professional competencies acquired during studies abroad

An analysis of the interviews revealed that foreign education contributed to the development of not only specialized professional knowledge but also a broader range of research, analytical, communication, and general competencies. In 20 of the 22 interviews (90.9%), participants directly or indirectly noted acquiring professional knowledge, skills, or competencies related to their chosen field of study. When analyzing this category, any mention of professional or subject-specific knowledge acquired in their specialty was taken into account, regardless of the respondent's subjective assessment of its novelty compared to a Kazakhstani education. Moreover,

almost all interviews emphasized that the value of foreign education is determined less by the volume of information acquired than by a qualitatively different approach to learning, working with information, and solving professional problems.

Four interrelated competency themes emerged from this research question: discipline-specific professional knowledge, research and analytical skills, cross-cultural communication and teamwork, and academic independence and self-organization. Participants generally described these competencies as cumulative and mutually reinforcing - acquired together through the same academic experience - rather than as separate, unrelated skill sets, as illustrated in the accounts below.

A typical example is an interview with a 38-year-old research participant, a graduate of Lund University living in Sweden, who describes the most significant learning outcomes as follows:

"In Sweden, we were taught how to search for literature and process material properly. We can skim articles in 30 seconds. We were taught how to write articles."

This quote demonstrates that the acquired professional competencies extend far beyond narrow professional training to include scientific inquiry, critical analysis of information, academic writing, and independent research. Similar conclusions are evident in other interviews, where participants repeatedly emphasized that foreign universities have, above all, changed their approach to acquiring and using knowledge.

The next most common group was research and analytical skills, mentioned directly or indirectly in 14 of the 22 interviews (63.6%). Respondents described mastering scientific research methods, working with academic literature, statistical analysis, research planning, publication preparation, and developing critical thinking. Participants noted that their training focused not on reproducing existing information but on independently finding solutions and analyzing complex professional problems.

Thus, a 30-year-old research participant, a graduate of a Japanese university living in Japan, describes the acquired professional competencies as follows:

"Conduct scientific research, review scientific literature, improve my skills as a chemical engineer... problem solving and people management."

In this case, research skills are combined with applied engineering training and the ability to apply scientific methods to solve practical problems.

In addition to professional knowledge, respondents placed significant emphasis on developing universal competencies. Thirteen of the 22 participants (59.1%) directly or substantively noted that studying abroad significantly improved their communication skills, ability to work in an international environment, presentation skills, teamwork, and interaction with representatives of different cultures. Furthermore, several interviews emphasized that constant participation in international projects and studying in a multicultural academic environment shaped a new model of professional behavior.

For example, a 27-year-old man, a graduate of the Polytechnic University of Turin, living in Germany, notes:

"Communication skills between people from different cultures and countries, when you need to be truly open-minded, as they say, to understand what the other person really wants... In fact, people from different regions of the world sometimes act differently in different situations... project management skills."

These responses suggest that the international educational environment facilitates the development of competencies that are significantly more difficult to develop within the traditional educational model and that are becoming increasingly in demand in the global labor market.

Competencies related to independence, self-organization, and continuous learning deserve special attention. This aspect was mentioned directly or indirectly in 10 of the 22 interviews (45.5%). Many respondents emphasized that the main result of the training was a change in their attitude toward responsibility, initiative, and the ability to make independent decisions.

Thus, a 26-year-old woman, a graduate of a Polish university, living in Poland, notes:

"One hundred percent is independence... You have to take responsibility for yourself, for your life... That is why I really think I have become more independent, more financially literate; that is, I have come to understand the value of money..."

In many interviews, the development of independence was seen as one of the most important benefits of studying abroad, with an impact not only on professional activity but also on graduates' future life trajectories.

An analysis of the interviews also shows that most participants view the acquired knowledge and skills as potentially in demand in Kazakhstan. In 13 of 22 interviews (59.1%), respondents explicitly or substantively noted that their professional competencies could be used in the country. At the same time, a significant portion of respondents emphasized that the successful application of this knowledge depends not only on specialists themselves but also on national organizations' willingness to embrace new approaches, modern management methods, and international professional standards.

A characteristic statement was made by one of the participants, a 34-year-old woman, a graduate of an American university living in the UAE:

"100%. Everything I have learned, I can apply... My skills are absolutely applicable in Kazakhstan. My husband and I both worked in Kazakhstan for many years."

This quote demonstrates that respondents associate the competencies acquired abroad with the possibility of their direct application in the Kazakhstani professional context, given the appropriate conditions.

Thus, the results of the second research question demonstrate that international education develops a set of complementary competencies, including professional knowledge, research skills, analytical thinking, communication skills, independence, and experience working in an international environment. For most study participants, the key value lies not in the volume of information acquired but in changes in approaches to learning, professional practice, and problem-solving. Respondents view these competencies as a key resource that, given the appropriate institutional conditions, can be used to develop human capital in the Republic of Kazakhstan.

Mechanisms of knowledge transfer and engagement of Kazakhstanis educated abroad in national development

The interview results indicate that most study participants view their contribution to Kazakhstan's development as significantly broader than simply returning to the country. The analysis revealed

that respondents understand knowledge transfer as an ongoing process of professional interaction, achieved through expert consultations, joint projects, research collaborations, mentoring, teaching, remote work, and participation in international professional networks. The analysis took into account both the forms of such interaction already implemented by the participant and their explicit willingness or intention to pursue them if the appropriate conditions were met.

The most frequently mentioned activities were participation in joint projects with Kazakhstani organizations (12 out of 22 respondents; 54.5%), expert consulting, and the transfer of professional experience (12 out of 22; 54.5%). Less frequently mentioned were teaching and mentoring (11 out of 22; 50.0%), remote forms of professional interaction (10 out of 22; 45.5%), and academic collaboration (9 out of 22; 40.9%). The most specific and confirmed examples related to joint projects and mentoring, while remote and academic forms were more often described as potential areas of involvement.

At the same time, 14 participants (63.6%) explicitly or implicitly expressed their willingness to consider returning to Kazakhstan if professional conditions were favorable. In contrast, 16 respondents (72.7%) directly or substantively emphasized that the effectiveness of using foreign human capital depends primarily on the institutional readiness of the state and organizations.

Respondents identified expert activity and consulting as among the most common engagement mechanisms. Most participants emphasized that accumulated knowledge can benefit Kazakhstan regardless of country of residence. A typical statement was made by a 41-year-old man, a UK university graduate working in education in Vietnam:

"The plan is not to look for an employer, but to find partners. I do not plan to be an employee... We will sell our knowledge, and if anyone needs advice or help launching a project, we will help. However, it is not like we have an employer and we work for them."

This position reflects an understanding of knowledge transfer as long-term professional cooperation based on partnership, expert support, and the implementation of joint initiatives, rather than solely on labor migration back to Kazakhstan.

Research participants also consider joint scientific and professional projects to be an equally important mechanism. Many respondents emphasized that modern digital technologies enable them to effectively interact with Kazakhstani organizations while maintaining their professional

activities abroad. One research participant noted that collaboration with Kazakhstani colleagues is already underway through joint research and projects. This format of interaction allows for the use of international experience without the need to return to the country constantly. It facilitates a sustainable exchange of knowledge between foreign specialists and Kazakhstani organizations. A significant portion of the study participants linked knowledge transfer to the development of professional and research culture, mentoring, and training young professionals. Half of the respondents (11 out of 22) explicitly or implicitly indicated a willingness to share professional experience through teaching, mentoring, and supporting emerging professionals. In some cases, this included scientific supervision and training of young researchers. Particularly revealing is the experience of a 36-year-old man, a graduate of universities in Japan and France, now working as a research fellow in France:

"We showed them how science is done, how the lab works, and what equipment is available. I liked that during their studies here, students have close contact with the research lab..."

Another important feature of the foreign research environment, according to the same respondent, is the development of academic independence:

"The system here is that you propose. You do what you want. You can consult with me whenever you want. I am just like a supervisor." That is what they say. He is not really an "enslaver," roughly speaking; he is a supervisor, that is, an advisor."

These statements indicate that the participants view knowledge transfer not only as the transfer of professional competencies, but also as the dissemination of modern academic practices, research culture, and new models of specialist training.

At the same time, interviews show that the successful implementation of these mechanisms depends not only on specialists' willingness to participate in Kazakhstan's development but also on a favorable institutional environment. Most participants emphasized the need for transparent career mechanisms, recognition of professional competencies, development of research infrastructure, and openness of government organizations to international cooperation. According

to respondents, institutional conditions determine the ability to utilize the human capital of Kazakhstani nationals educated abroad effectively.

Thus, the study's findings demonstrate that knowledge transfer, as understood by participants, is a multi-channel process that includes expert consultations, joint projects, mentoring, teaching, academic collaboration, and remote forms of professional interaction. These findings suggest the need to shift from a policy focused primarily on the physical return of specialists to a more flexible model for engaging foreign human capital in the Republic of Kazakhstan's national development processes.

Discussion

The findings provide a new perspective on the role of international educational mobility in the development of human capital in Kazakhstan. While studying abroad has traditionally been viewed through the prism of a potential "brain drain," the interviews reveal a more complex picture. Most study participants do not perceive studying abroad as a permanent break with their country of origin. Instead, they see studying overseas as an opportunity to acquire knowledge, professional experience, and international connections which can be used for the benefit of Kazakhstan, under the right conditions.

According to the study's results, the main reasons for choosing to remain abroad or to consider returning are professional. Most participants linked their decision to opportunities for professional development, the quality of the research and work environment, access to modern technology, transparency in career advancement, and the opportunity to implement their own ideas. However, salary was rarely cited as the primary reason for pursuing a career abroad. These results align with research that has moved beyond a purely negative reading of high-skilled emigration. Docquier and Rapoport (2012) show that such emigration need not deplete a country's human capital and can produce positive network effects, while Saxenian's (2005) concept of brain circulation emphasizes migrants' continued ties to their countries of origin.

The second important finding of the study concerns the human capital acquired during study abroad. Interviews revealed that participants consider not only professional knowledge but also the development of critical thinking, research skills, independence, problem-solving skills, academic communication, and working in an international environment to be the most valuable outcomes of their education abroad. Many respondents emphasized that these competencies

proved to be the most in-demand in their subsequent professional careers. These findings are also consistent with Becker's (1993) human capital theory, which posits that education shapes an individual's long-term productivity and professional potential. Moreover, these findings extend the work of Brooks and Waters (2011), Marginson (2016), and Lam and Rui (2023), who show that international educational mobility is not only individual human capital accumulation but also the development of competencies that can benefit the country of origin.

The most significant finding of the study relates to knowledge transfer mechanisms. Interviews revealed that most participants do not associate the use of their potential solely with a physical return to Kazakhstan. Instead, respondents consider a wide range of mechanisms for participating in the country's development, including expert consulting, joint projects, teaching, mentoring, scientific collaboration, and remote interaction. Thus, participants perceive knowledge transfer as a continuous process of professional collaboration that can occur regardless of the specialist's place of residence. These results are consistent with the work of Meyer (2001), Kuznetsov (2006), and Brinkerhoff (2009), who view professional diasporas as important sources of knowledge, international connections, and expert potential. However, our study shows that for Kazakhstani, the most important thing is not so much existing diaspora structures as the opportunity to participate in specific professional and research projects.

The interviews also revealed that specialists' willingness to participate in Kazakhstan's development does not in itself guarantee successful knowledge transfer. Most participants emphasized the need to create a favorable institutional environment, including transparent career mechanisms, support for research, openness to international collaboration within organizations, and demand for professional competencies. In this regard, the study's results are consistent with the concept of absorptive capacity advanced by Cohen and Levinthal (1990) and further developed by Zahra and George (2002). As the interviews demonstrate, the effectiveness of using foreign human capital is determined not only by the availability of qualified specialists but also by organizations' ability to absorb, adapt, and apply new knowledge in practice.

This study, accordingly, expands existing understanding of the role of Kazakhstanis educated abroad in national development processes. Unlike most studies devoted to the causes of educational migration or the return of graduates, this work demonstrates how specialists themselves understand the mechanisms of knowledge transfer and the conditions for their participation in the country's development. The findings suggest the feasibility of shifting from

policies focused primarily on the physical return of specialists to a more flexible model of interaction based on the development of expert networks, joint projects, academic collaboration, and other forms of transnational knowledge exchange.

These findings should be interpreted in light of several limitations. The empirical basis is a purposive, non-probability sample of 22 interviews conducted in 2021; while appropriate for a phenomenological design aimed at information-rich cases rather than statistical representativeness, it limits the extent to which the reported frequencies can be generalized to the wider Kazakhstani diaspora. The retrospective, self-reported nature of the interviews also means that participants' accounts of their motives and competencies reflect their present interpretations of past experience rather than an independent, objective record of that experience. In addition, because data collection took place several years before publication, some institutional and policy conditions Kazakhstan discussed by participants — for example, the state's approach to diaspora engagement — may have evolved since the interviews were conducted. Future research would benefit from larger and more representative samples, comparative designs across sending countries or professional sectors, longitudinal tracking of specialists' return and engagement decisions over time, and evaluation studies that assess the actual effectiveness of specific knowledge-transfer mechanisms — such as joint projects, mentoring schemes, or expert consulting arrangements — once implemented by Kazakhstani institutions. Notwithstanding these limitations, the study's contribution lies in showing, from the perspective of internationally educated Kazakhstanis themselves, that engagement need not depend on physical return, and in identifying institutional readiness — rather than specialists' willingness alone — as the key constraint on effective knowledge transfer, a gap that prior research on Kazakhstan's diaspora policy had not directly addressed.

Overall, the findings suggest that national interests cannot be viewed solely through the traditional lenses of security, economic growth, or geopolitical influence. Rather, they are closely intertwined with the values that underpin the country's long-term development. In the case of Kazakhstan, this implies that investment in human capital, knowledge exchange, and engagement with internationally educated citizens should be regarded not only as instruments of educational or migration policy but also as components of a broader national development strategy. From this perspective, the aspirations, competencies, and transnational networks of Kazakhstanis abroad constitute an important strategic asset that can strengthen the country's intellectual, economic, and institutional resilience.

Conclusion

This study aimed to analyze the role of Kazakhstanis educated abroad in knowledge transfer and the use of human capital for the national development of the Republic of Kazakhstan. The results obtained allowed us to answer the research questions posed.

First, it was found that Kazakhstani decisions to remain abroad or to consider returning are driven mainly by the availability of opportunities for professional growth, the quality of the institutional environment, and prospects for career and academic fulfillment, rather than by economic factors alone. At the same time, the majority of participants remain willing to contribute to Kazakhstan's development if favorable professional conditions are available.

Secondly, the study showed that the main value of foreign education lies not only in acquiring professional knowledge but also in developing a research culture, critical thinking, academic independence, skills for working in an international environment, and other competencies that form the basis of modern human capital.

Third, it was established that most participants view knowledge transfer as a much broader goal than simply returning to Kazakhstan. The most promising mechanisms for engaging Kazakhstanis educated abroad include expert consultations, joint projects, scientific and academic collaboration, teaching, mentoring, and remote professional interaction. However, implementing these mechanisms requires creating institutional conditions that ensure the relevance and effective use of acquired knowledge and international experience.

The results demonstrate that the potential of Kazakhstanis educated abroad is an important resource for national development. The practical significance of the study lies in the potential to use its results to improve public policy on working with Kazakhstanis abroad, to create mechanisms for knowledge transfer, and to strengthen international scientific and professional cooperation.

This study has limitations related to the phenomenological analysis of 22 in-depth interviews, but it also provides a deep understanding of the participants' experiences. Further research should focus on increasing the sample size, conducting comparative studies, and assessing the effectiveness of different mechanisms for engaging Kazakhstanis educated abroad in the national development process.

Acknowledgements

This research was funded by the Science Committee of the Ministry of Science and Higher Education of the Republic of Kazakhstan (Grant No. AP26104137).

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