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EDUCATIONAL MIGRATION AS A TOOL FOR DEVELOPING NATIONAL HUMAN CAPITAL: THE EXPERIENCE OF THE BOLASHAK PROGRAM

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ABSTRACT

The development of human capital has become a strategic priority for states seeking to strengthen their competitiveness in the global knowledge economy. In this context, international educational migration is increasingly viewed not only as a form of academic mobility but also as a mechanism for the accumulation, circulation, and utilization of knowledge in support of national development. This article examines the Bolashak International Scholarship Program of the Republic of Kazakhstan as an institutional mechanism for transforming educational migration into national human capital.

The purpose of the study is to provide a theoretical and analytical interpretation of the Bolashak Program as a model of managed educational migration and to explain the mechanisms through which overseas education contributes to long-term national development. The research is based on an integrative literature review, thematic analysis, institutional analysis, comparative analysis, and the formal-legal method. The source base includes international and national studies on educational migration, human capital development, knowledge circulation, and the Bolashak Program.

The findings demonstrate that the effectiveness of overseas education programs depends not solely on participation in international academic mobility but on the existence of an institutional chain connecting public investment in education, the acquisition of global competencies, graduate return and reintegration mechanisms, knowledge transfer processes, and subsequent institutional transformation. Based on this analysis, the article proposes a conceptual model explaining how educational migration can be converted into a sustainable resource for national development.

The originality of the study lies in conceptualizing the Bolashak Program as an institutionalized model of managed educational migration and in developing a framework that links educational mobility, knowledge circulation, and national human capital formation. The practical significance of the research consists in identifying institutional conditions that enhance the developmental impact of state-sponsored international scholarship programs.

KEYWORDS

Educational Migration; International Academic Mobility; Human Capital; National Human Capital; Knowledge Transfer; Brain Circulation; Managed Educational Migration; Bolashak Program; Higher Education Internationalization; Kazakhstan

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Introduction

In the context of the emerging knowledge economy, human capital is widely recognized as one of the key drivers of long-term socio-economic development. According to Human Capital Theory, investments in education contribute to increased labor productivity, innovation capacity, and national competitiveness (Becker, 1993). Under conditions of globalization, educational migration has acquired particular significance as a mechanism for accessing advanced knowledge, technologies, and international professional networks (Teichler, 2017; Brooks & Waters, 2011). Consequently, international academic mobility is increasingly viewed not merely as an educational process but also as a strategic instrument for human capital formation capable of generating long-term effects on science, education, and public governance.

For the Republic of Kazakhstan, the development of human capital constitutes a strategic national priority. Over the past decades, state policy in education and science has focused on the internationalization of higher education, modernization of research infrastructure, digital transformation of the educational environment, and integration into the global knowledge system (Robertson & Bayetova, 2021; Amirbekova, Makhanova, & Kussaiyn, 2025). At the same time, Kazakhstan has consistently pursued the objective of becoming a regional educational and research hub in Central Asia, viewing international academic mobility as an important mechanism for strengthening national intellectual capacity (Pogorelskaya & Pokrovskaya, 2025; Goh, Uralbayev, & Trad, 2026).

A central component of this strategy is the Bolashak International Scholarship Program, established by the President of the Republic of Kazakhstan in 1993. Over more than three decades of implementation, the program has become one of the largest state-sponsored overseas education initiatives in the post-Soviet region. Unlike most international scholarship schemes, Bolashak combines full government funding for overseas education with mandatory return and employment requirements for graduates upon completion of their studies. This distinctive institutional design allows the program to be viewed not only as an educational initiative but also as a policy instrument for managing skilled migration and fostering national human capital development (Perna, Orosz, & Jumakulov, 2015; Bokayev, Torebekova, & Davletbayeva, 2020).

A substantial body of literature has examined various dimensions of the Bolashak Program. Existing studies have explored the impact of international education on graduates' professional development, reintegration processes following return migration, the program's contribution to mitigating brain drain, and its role in the internationalization of Kazakhstan's higher education system (Perna et al., 2015; Jonbekova et al., 2021; Jonbekova et al., 2023; Kuzhabekova, Sparks, & Temerbayeva, 2019). Considerable attention has also been devoted to the governance of skilled migration and the state regulation of educational mobility (Bokayev et al., 2020), as well as to the transformation of Kazakhstan's higher education system under conditions of globalization and intensifying international competition for talent (Robertson & Bayetova, 2021; Almukhambetova, 2026).

Despite the growing body of scholarship, a significant research gap remains. Most existing studies focus either on specific outcomes of the Bolashak Program or on educational migration as an independent social phenomenon. Limited attention has been paid to the mechanisms through which educational migration is transformed into national human capital through a system of interconnected institutions responsible for participant selection, educational financing, graduate return, professional reintegration, and the subsequent transfer of knowledge into the economy, public administration, and the national research and education system. In other words, literature lacks a comprehensive conceptual explanation of how international academic mobility can be converted into a resource for long-term national development.

Against this background, the central research question of this study is formulated as follows: «How does the Bolashak Program facilitate the transformation of educational migration into national human capital in Kazakhstan?»

The study is based on the hypothesis that the effectiveness of the Bolashak Program is determined not merely by overseas education itself but by the existence of an institutional chain encompassing state investment in education, the accumulation of global competencies, mechanisms of graduate return and reintegration, knowledge and technology transfer, and subsequent institutional transformations in public administration, science, education, and the economy. It is the interaction of these elements that enables educational migration to become a sustainable resource for national development.

The aim of this study is to provide a theoretical and analytical interpretation of the Bolashak Program as an institutional mechanism for transforming educational migration into national human capital. To achieve this objective, the article: (1) systematizes theoretical approaches to educational migration, human capital, and knowledge circulation; (2) examines the institutional logic of the Bolashak Program; (3) identifies the key mechanisms of graduate return, reintegration, and knowledge transfer; and (4) proposes a conceptual model explaining the transformation of international academic mobility into a resource for national development.

Research Gap, Originality and Contribution

Although a substantial body of scholarship has examined the Bolashak Program, existing studies have primarily focused on specific dimensions of international educational mobility, including graduates' career trajectories, reintegration experiences, the mitigation of brain drain, and the internationalization of higher education in Kazakhstan (Perna et al., 2015; Bokayev et al., 2020; Jonbekova et al., 2021; Jonbekova et al., 2023). While these studies provide valuable insights into the outcomes and governance of the program, they generally address individual aspects of educational migration rather than the broader mechanisms through which international academic mobility contributes to national development.

Furthermore, the existing literature has largely approached overseas education either as an individual investment in human capital or as a policy instrument aimed at reducing skilled emigration. Comparatively limited attention has been devoted to the institutional processes that connect educational mobility with the accumulation, circulation, and utilization of knowledge within national systems of governance, education, science, and innovation.

This article seeks to address this gap by conceptualizing the Bolashak Program as an institutionalized model of managed educational migration. Rather than examining isolated outcomes of overseas education, the study focuses on the institutional chain linking public investment in education, the acquisition of global competencies, graduate return and reintegration, knowledge transfer, and subsequent institutional transformation.

The originality of the study lies in the development of a conceptual model explaining how educational migration can be transformed into national human capital through a sequence of interconnected institutional mechanisms. Unlike previous studies that primarily assess the effectiveness of the Bolashak Program at the level of individual participants or policy outcomes, the proposed framework examines the entire process through which international academic mobility generates broader societal and institutional effects.

The theoretical contribution of the article consists in integrating Human Capital Theory, international academic mobility research, and the knowledge circulation approach into a unified analytical framework. The proposed model advances existing scholarship by explaining not only why governments invest in overseas education, but also how such investments may be converted into long-term national development resources.

The practical contribution lies in identifying the institutional conditions under which state-sponsored international scholarship programs can produce sustainable developmental outcomes. The findings may be relevant for policymakers, higher education administrators, and researchers engaged in the design, evaluation, and reform of educational mobility programs in both Kazakhstan and other countries pursuing human capital development through international education.

Methodology

This study adopts a theoretical and analytical approach based on an interdisciplinary framework integrating Human Capital Theory, educational migration studies, international academic mobility research, and the knowledge circulation perspective. The central focus of the analysis is the Bolashak International Scholarship Program of the Republic of Kazakhstan, examined as an institutionalized model of managed educational migration and a mechanism for national human capital development.

The methodological foundation of the study is an **integrative literature review** combined with elements of institutional analysis. This research design was selected because the research objective requires the synthesis of diverse sources, including theoretical studies on human capital and educational migration, empirical research on international academic mobility, as well as analytical and regulatory materials related to the implementation of the Bolashak Program.

The literature selection process was conducted in several stages. First, a systematic search was performed using the following keywords: *educational migration*, *academic mobility*, *international student mobility*, *human capital*, *brain drain*, *brain gain*, *brain circulation*, *knowledge transfer*, and *Bolashak*. Second, inclusion and exclusion criteria were applied. The review included publications directly addressing educational migration, international academic mobility, human capital development, graduate return and reintegration mechanisms, and studies examining the Bolashak Program within broader socio-economic and institutional contexts. Publications unrelated to the research topic, duplicate records, and studies lacking an analytical component were excluded from the review.

At the subsequent stage, the selected sources were categorized into the following analytical themes: (1) Human Capital Theory; (2) educational migration and international academic mobility; (3) brain drain, brain gain, and brain circulation approaches; (4) institutional mechanisms of graduate return and reintegration; and

(5) studies of the Bolashak Program as a state policy instrument for human capital development. This approach enabled a transition from a descriptive review toward an analytical synthesis of literature.

Within the study, institutional analysis is employed to explain how formal policy mechanisms—including participant selection, educational funding, return obligations, employment requirements, and graduates' integration into professional and administrative structures—create conditions for transforming individually accumulated educational resources into socially valuable human capital. Consequently, the research focuses not only on describing the program itself but also on identifying the structural links between educational mobility and long-term national development outcomes.

It should be emphasized that the study does not seek to provide a comprehensive empirical evaluation of the effectiveness of the Bolashak Program based on primary quantitative data. Rather, the conclusions are derived from a theoretical and analytical synthesis of the existing literature and an institutional interpretation of available scholarly and policy sources.

The initial pool of publications comprised more than 80 sources. Following an assessment of relevance, analytical value, and scientific significance, 33 representative publications were selected for inclusion in the final review (Table 1).

Table 1. Criteria for the Formation of the Research Source Base

Parameter	Description	Inclusion Criterion
Publication period	1993–2026	Publication addresses educational migration, human capital, or the Bolashak Program
Main period of analysis	2010–2026	Priority was given to recent studies reflecting current scholarly debates
Databases	Scopus, Web of Science, Google Scholar, CrossRef	Sources indexed in international academic databases or possessing substantial scientific relevance
Types of sources	Journal articles, monographs, analytical reports, regulatory documents	Sources containing theoretical, empirical, or institutional evidence relevant to the research topic
Initially identified	More than 80 publications	Publications identified through keyword searches and related combinations
Included in analysis	33 publications	Most cited, methodologically robust, and substantively relevant studies
Languages	English and Russian	Publications accessible for scholarly analysis and containing sufficient information
Geographic focus	Kazakhstan, Central Asia, international experience	Studies enabling comparison between national and international approaches to human capital development

Source: Compiled by the authors

During the screening process, duplicate publications, news materials, journalistic sources, and studies lacking an independent analysis of educational migration, international academic mobility, human capital, or the Bolashak Program were excluded. Priority was given to peer-reviewed academic publications indexed in international databases, as well as studies specifically addressing Kazakhstan's experience in overseas human capital development.

To achieve the research objectives, a combination of complementary research methods was employed.

Theoretical-conceptual analysis was used to examine the evolution of scholarly perspectives on educational migration, international academic mobility, and human capital. This method made it possible to identify the major stages in the development of research approaches, ranging from the concept of *brain drain* to theories of *brain circulation* and managed educational migration (Becker, 1993; Docquier & Rapoport, 2012; Saxenian, 2005; de Haas, 2021).

To systematize the findings of previous studies, **thematic analysis** was employed. The following thematic categories were identified:

- human capital development;
- graduates' career trajectories;
- return and reintegration mechanisms;
- knowledge and technology transfer;
- international academic mobility;

- institutional effects of educational migration;
- retention factors and repeated emigration among graduates.

Thematic analysis enabled the identification of recurring patterns, dominant themes, and contradictions within the existing scholarship on the Bolashak Program.

Institutional analysis was applied to examine the functioning of the Bolashak Program as an instrument of public policy. Particular attention was devoted to participant selection procedures, educational funding mechanisms, mandatory return requirements, employment obligations, and the relationship between the program and national labor market needs.

This approach made it possible to conceptualize educational migration not as an individual decision-making process but as an element of state human capital governance.

The formal-legal method was used to analyze the regulatory framework of the Republic of Kazakhstan governing the Bolashak Program, state educational policy, and human capital development. This method enabled the examination of the evolution of program objectives, participant eligibility requirements, graduate return mechanisms, and priority fields of study.

Comparative analysis was employed to compare Kazakhstan's experience with international scholarship schemes and educational mobility programs implemented in other countries. This facilitated the identification of the distinctive features of the Bolashak Program and its position among contemporary human capital development instruments.

The theoretical foundation of the study is built upon three interconnected perspectives.

The first is **Human Capital Theory**, which conceptualizes education as an investment that enhances labor productivity and the innovative capacity of society (Becker, 1993).

The second is the **international academic mobility perspective**, according to which educational migration serves as a mechanism for developing professional and research competencies within the global educational environment (Teichler, 2017; Brooks & Waters, 2011).

The third is the **brain circulation approach**, which views international mobility as a channel for the transnational exchange of knowledge, technologies, and professional practices across countries (Saxenian, 2005; de Haas, 2021).

The integration of these perspectives enabled the development of the conceptual model proposed in this study, explaining the transformation of educational migration into national human capital.

Research Limitations

This study has several limitations.

First, the analysis is based on secondary sources, including published academic research and official documents, and does not incorporate original empirical data.

Second, a substantial proportion of the existing studies on the Bolashak Program rely on qualitative methods and relatively small samples, which limit the possibility of statistical generalization.

Third, the dynamic nature of state policy in education and science implies continuous changes in the regulatory framework and implementation mechanisms of the program. Consequently, institutional developments may evolve more rapidly than they are reflected in academic publications.

Despite these limitations, the combined use of an integrative literature review, institutional analysis, and comparative approaches provides a sufficiently robust analytical basis for examining the Bolashak Program as a mechanism of national human capital development and a model of managed educational migration.

3. Theoretical Foundations of Educational Migration and Human Capital Development

3.1. Educational Migration as a Form of International Mobility

Educational migration represents one of the most dynamic forms of international population mobility and encompasses the movement of individuals beyond their country of citizenship or permanent residence for the purposes of education, professional training, research internships, or academic activities (King & Raghuram, 2013). In contemporary conditions, it has become an important component of the global knowledge market, facilitating the cross-border movement not only of people but also of competencies, technologies, and professional practices.

Unlike labor migration, which is primarily driven by economic incentives, educational migration is associated with the accumulation of human capital through the acquisition of knowledge and professional skills (Teichler, 2017). International academic mobility enables students and researchers to access the educational resources of leading universities, participate in international research projects, and develop sustainable professional networks that extend beyond national educational systems (Brooks & Waters, 2011).

Contemporary research demonstrates that educational migration influences not only the individual career trajectories of participants but also the development of both sending and receiving countries. Through the transfer of knowledge, technologies, and organizational practices, it contributes to the modernization of national systems of education, science, and public administration (Altbach & Reisberg, 2013). Consequently, educational mobility is increasingly regarded as an object of public policy aimed at strengthening human capital and enhancing national competitiveness.

In Kazakhstan, this trend has been reflected in the development of state policies supporting international academic mobility and the establishment of specialized mechanisms for overseas human capital development. The most significant instrument in this regard is the Bolashak International Scholarship Program, which is viewed by the state as a mechanism for accumulating human capital and increasing the country's competitiveness within the global educational environment.

3.2. Human Capital Theory and Public Investment in Education

The theoretical foundation for analyzing educational migration is provided by Human Capital Theory, developed in the works of Theodore Schultz and Gary Becker. According to this perspective, education, professional training, and the acquisition of knowledge and skills are viewed as investments that increase productivity, income, and economic efficiency at both the individual and societal levels (Becker, 1993; Schultz, 1961).

Within this framework, public expenditure on education is interpreted not as a social cost but as a long-term investment in national development. The accumulation of human capital contributes to innovation, technological advancement, and the strengthening of national economic competitiveness (OECD, 2023). For this reason, many countries implement programs supporting academic mobility and overseas education, considering them instruments for developing highly qualified professionals and future leaders.

In the context of globalization, state-sponsored international education programs assume particular importance because they provide access to leading universities and research centers worldwide. In such cases, governments effectively invest in the import of advanced knowledge and competencies, expecting their subsequent application within the domestic economy. The effectiveness of these investments depends not only on the quality of education received but also on the existence of mechanisms ensuring the utilization of accumulated human capital within national labor markets and systems of governance (Perna, Orosz, & Jumakulov, 2015).

From the perspective of Human Capital Theory, international educational mobility can therefore be understood as an instrument for strengthening the intellectual capacity of the state, while overseas scholarship programs constitute a specific form of public investment policy.

The Bolashak Program can be interpreted precisely within this framework. Through the program, the state makes targeted investments in the education of students at leading foreign universities with the expectation that the acquired knowledge and competencies will subsequently contribute to the modernization of the economy, public administration, science, and higher education.

3.3. From Brain Drain to Brain Circulation

For many years, international educational mobility was predominantly analyzed through the lens of the *brain drain* paradigm, according to which the emigration of talented students and highly skilled professionals leads to a reduction in the human capital of sending countries and reinforces global inequalities in the distribution of knowledge and technology (Docquier & Rapoport, 2012). Within this framework, educational migration was generally viewed as a threat to national development, particularly for countries with transitional economies.

However, globalization, digital communication technologies, and the expansion of international scientific cooperation have substantially reshaped these perspectives. Since the beginning of the twenty-first century, the concepts of *brain gain* and *brain circulation* have gained prominence in academic literature, emphasizing international mobility as a mechanism for the transnational exchange of knowledge, technologies, and professional practices (Saxenian, 2005; de Haas, 2021).

Unlike the linear logic of the brain drain approach, the concept of brain circulation assumes that highly skilled individuals can maintain professional connections with their countries of origin regardless of their place of residence. As a result, educational and professional mobility creates enduring channels for the exchange of knowledge, research practices, and innovation among countries and institutions (Saxenian, 2005). Under appropriate institutional conditions, such processes can generate significant benefits for countries of origin even in contexts characterized by high levels of international mobility.

Within this perspective, state-sponsored programs aimed at graduate return and professional reintegration acquire particular significance. These mechanisms make it possible to transform educational migration from a potential source of human capital loss into an instrument of human capital accumulation and reproduction (Perna et al., 2015; Bokayev et al., 2020).

Thus, contemporary scholarship has gradually shifted from focusing on the risks associated with international mobility toward examining the institutional mechanisms that enable educational migration to contribute to national development. In this context, particular attention is given to programs that not only finance overseas education but also establish mechanisms for graduate return, professional reintegration, and subsequent knowledge transfer.

The Bolashak Program represents one of the most illustrative examples of such an approach. Its institutional architecture enables educational migration to be viewed not as a potential source of human capital loss but as a mechanism for its accumulation, reproduction, and utilization in support of Kazakhstan's long-term socio-economic development. Consequently, the program provides a valuable case for both national and international scholarship on managed educational migration and human capital development.

Despite sustaining scholarly interest in educational migration, several important research gaps remain. First, much of the existing literature focuses either on the individual outcomes of overseas education or on the macro-level risks and benefits of academic mobility, while the institutional mechanisms through which educational migration is transformed into long-term national human capital remain insufficiently explored. Second, studies of the Bolashak Program have largely adopted descriptive or policy-oriented perspectives, whereas comprehensive explanations linking public investment in overseas education, graduate return, professional reintegration, and knowledge transfer remain limited. Third, insufficient attention has been paid to the institutional conditions that enable countries to minimize brain drain risks and transform educational mobility into a mechanism of national development.

Against this background, the central research question of this study is formulated as follows: «How does the Bolashak Program facilitate the transformation of educational migration into national human capital in Kazakhstan?»

The study is based on the hypothesis that the effectiveness of the Bolashak Program is determined not by overseas education alone but by the existence of an institutional chain comprising participant selection, public financing, return mechanisms, graduate reintegration, and the subsequent transfer of knowledge into public administration, science, education, and the economy.

In a broader international context, the Bolashak Program can be compared with other state-sponsored overseas scholarship schemes designed to strengthen national human capital. Similar initiatives in various countries are likewise based on the premise that international education should generate not only private benefits but also broader societal returns. However, the distinctive feature of the Kazakhstani case lies in the stronger integration of state selection mechanisms, public funding, return obligations, and targeted graduate incorporation into national institutions. This allows the Bolashak Program to be conceptualized as a prominent example of managed educational migration policy within a state seeking to harness global academic mobility for domestic development.

4. Evolution of Scholarly Approaches to Educational Migration and the Position of the Bolashak Program

Contemporary understandings of educational migration have emerged through the gradual evolution of scholarly perspectives on the role of international mobility in the socio-economic development of states. Changes in global migration patterns, the expansion of transnational professional networks, and increasing competition for highly skilled talent have substantially transformed academic approaches to assessing the consequences of educational mobility.

At different stages of intellectual development, educational migration has been interpreted as a source of human capital loss, a mechanism of human capital accumulation, a channel for international knowledge exchange, and an element of state strategies aimed at fostering knowledge-based economies. The major stages of this evolution are presented in Table 2.

Table 2. Evolution of Theoretical Approaches to Educational Migration and Human Capital Development

Period	Dominant Concept	Core Idea	Key Authors	Relevance to the Bolashak Program
1960s–1990s	Human Capital Theory	Education is viewed as an investment that increases labor productivity and economic growth	Becker (1993), Schultz (1961)	The state invests in citizens' education to develop a highly qualified workforce
1970s–2000s	Brain Drain	Emigration of talented students and professionals leads to human capital loss	Docquier & Rapoport (2012)	Overseas education is viewed as a risk of losing highly trained personnel
2000s–2010s	Brain Gain	International mobility may benefit countries of origin through knowledge and investment flows	Meyer (2011), Jonkers & Tijssen (2008)	Returning graduates are increasingly viewed as agents of modernization
2000s–2020s	Brain Circulation	Knowledge, technologies, and professional networks continuously circulate across countries	Saxenian (2005), de Haas (2021)	The Bolashak Program becomes a mechanism for graduate return and knowledge transfer
2010s–2020s	International Academic Mobility	Educational migration contributes to international research networks and intercultural competencies	Teichler (2017), Brooks & Waters (2011), Altbach & Salmi (2011)	Graduates develop global professional and academic networks
2020s	Managed Educational Migration	States strategically regulate educational mobility to support national development	Perna et al. (2015), Bokayev et al. (2020), Jonbekova (2024)	Bolashak is viewed as a tool for human capital development and intellectual sovereignty
Contemporary Stage	Educational Hub and Knowledge Economy	International mobility becomes part of national innovation and knowledge economy strategies	Amirbekova et al. (2025), Goh et al. (2026), Pogorelskaya & Pokrovskaya (2025)	Bolashak is integrated into Kazakhstan's strategy of becoming a regional educational and research hub

Source: Compiled by the author

The evolution of scholarly approaches summarized in Table 2 demonstrates a gradual expansion of the research agenda. While early perspectives focused primarily on either the economic returns to education or the risks associated with the international migration of highly skilled individuals, contemporary scholarship increasingly emphasizes institutional mechanisms for managing mobility and harnessing its outcomes for national development (Docquier & Rapoport, 2012; Saxenian, 2005; de Haas, 2021).

Particularly significant in this regard are studies examining international academic mobility as an element of public policy. Unlike traditional perspectives that conceptualize migration primarily as an individual decision, contemporary research increasingly views educational mobility as a strategic instrument of human capital governance, enabling states to develop the workforce necessary for the modernization of economies, scientific systems, and public administration (Teichler, 2017; Brooks & Waters, 2011).

In the Kazakhstani context, this transformation of the research agenda is most clearly reflected in studies devoted to the Bolashak International Scholarship Program. Early research primarily examined the program as a mechanism for overseas human capital development and a policy instrument for mitigating brain drain (Perna et al., 2015; Bokayev et al., 2020). Subsequently, scholarly attention shifted toward graduate reintegration, professional career trajectories, knowledge transfer, and the program's impact on the

development of Kazakhstan's higher education and research systems (Kuzhabekova et al., 2019; Jonbekova et al., 2021; Jonbekova et al., 2023).

At the same time, recent studies increasingly focus on the role of the program in supporting the development of a regional educational hub and a knowledge-based economy. Within this perspective, educational mobility is no longer viewed as an isolated migration process but rather as an element of a broader strategy aimed at human capital development and the enhancement of national competitiveness (Amirbekova et al., 2025; Pogorelskaya & Pokrovskaya, 2025; Goh et al., 2026).

Despite significant advances in the study of the Bolashak Program, the existing literature remains largely concentrated on specific dimensions of the phenomenon. The most extensively examined topics include the governance of skilled migration, graduates' career trajectories, reintegration processes, the internationalization of higher education, and the development of the country's research capacity (Perna et al., 2015; Bokayev et al., 2020; Jonbekova et al., 2023). Considerably less attention has been devoted to analyzing the interconnections between different stages of educational mobility and the mechanisms through which educational migration is transformed into a resource for national development.

The existing literature provides valuable explanations of individual outcomes associated with the program but does not offer a comprehensive conceptual model explaining the transition from public investment in education to the formation of national human capital. In particular, the relationships among the acquisition of global competencies, graduate return and reintegration mechanisms, knowledge transfer processes, and the emergence of long-term institutional effects remain insufficiently explored.

This gap highlights the need to examine the Bolashak Program not merely as an educational initiative or a mechanism for regulating skilled migration, but as an institutionalized system for transforming international educational mobility into a resource for socio-economic development.

Accordingly, the following section analyzes the Bolashak Program as a model of managed educational migration that connects public investment in education, mechanisms of graduate return, and the utilization of acquired knowledge in the process of national human capital formation.

5. The Bolashak Program as a Model of Managed Educational Migration

5.1. Evolution of the Program's Goals and Functions

The Bolashak International Scholarship Program, established by the President of the Republic of Kazakhstan in 1993, is one of the longest-running state-sponsored overseas education initiatives in the post-Soviet region. Its creation coincided with a period of profound political and economic transformation accompanying Kazakhstan's transition to independence. Under these circumstances, the state faced the challenge of developing a new generation of professionals capable of supporting the modernization of the economy, public administration, and the social sector.

Initially, the program was designed to address the human resource needs of the newly independent state and to train specialists in areas where the national higher education system lacked sufficient expertise and institutional capacity. As Kazakhstan developed, however, not only the scale of the program expanded, but also its functional purpose evolved.

Gradually, Bolashak transformed from a mechanism for training individual specialists into an instrument of state human capital development policy. The changing objectives of the program reflected the evolution of national priorities—from addressing workforce shortages associated with state-building to promoting economic modernization, strengthening research capacity, and fostering a knowledge-based economy (Perna et al., 2015; Robertson & Bayetova, 2021). The evolution of the program is summarized in Table 3.

Table 3. Evolution of the Bolashak Program as a Human Capital Development Instrument

Period	Primary Objective	Dominant Function	Institutional Developments
1993–2000	Development of human resources for the newly independent state	Workforce provision	Establishment of a system for overseas training of specialists
2001–2010	Modernization of the economy and public administration	Formation of a professional elite	Expansion of scholarship numbers and fields of study
2011–2020	Integration into the global educational environment	Knowledge transfer	Increased emphasis on master's degrees, PhD programs, and research internships
2021–present	Knowledge economy and innovation-driven development	Knowledge circulation and human capital development	Stronger engagement with employers, targeted applications, and research placements

Source: Compiled by the authors

The evolution outlined in Table 3 demonstrates a gradual shift from a quantitative approach focused on workforce provision toward a qualitative model of human capital formation. While the primary objective during the early stages was to address shortages of qualified personnel, the contemporary version of the program prioritizes the development of research competencies, international professional networks, and the country's innovation potential.

As a result, Bolashak has evolved into not merely an educational initiative but also a key component of Kazakhstan's long-term socio-economic development strategy.

5.2. Institutional Design and Implementation Mechanisms

One of the defining characteristics of the Bolashak Program is the comprehensiveness of its institutional design. Unlike most international scholarship schemes that focus solely on financing overseas education, Bolashak encompasses the entire cycle of educational mobility management—from candidate selection to graduates' professional integration upon their return to Kazakhstan.

The program is based on several interconnected mechanisms.

First, the state fully finances tuition, living expenses, and related costs for participants. In this respect, educational mobility is treated as an object of public investment in human capital (Perna et al., 2015).

Second, the program employs a multi-stage selection process aimed at identifying the most qualified and motivated candidates. Selection is based not only on academic achievement but also on applicants' potential contribution to national development.

Third, a central element of institutional architecture is the mandatory return and employment requirement. Combined with a system of guarantees and monitoring mechanisms, this arrangement minimizes the risks of permanent skilled emigration and strengthens the connection between public investment in education and the subsequent utilization of graduates' competencies within the country (Bokayev et al., 2020).

Fourth, the Center for International Programs plays a significant role in supporting participants, monitoring academic progress, and coordinating interactions with employers. Through these functions, educational mobility becomes integrated into the broader system of state human capital governance.

Consequently, the institutional architecture of the program allows it to be conceptualized as a mechanism of regulated educational migration that ensures not only overseas training but also the subsequent incorporation of graduates into national institutions.

5.3. Bolashak within the System of Educational Migration Channels

Despite its scale, the Bolashak Program represents only one of several channels of international educational mobility available to Kazakhstani citizens. Other opportunities include academic exchange programs, inter-university mobility schemes, international scholarship programs, and self-financed overseas education (Asanova & Ryssaldy, 2013; Delovarova et al., 2023).

The principal distinction of Bolashak lies in the degree of state involvement in educational mobility. In most alternative channels, the government exercises little control over students' post-graduation trajectories and generally lacks mechanisms to facilitate or require their return.

To better understand the position of Bolashak within Kazakhstan's system of international educational mobility, it is useful to compare it with other major pathways through which citizens pursue education abroad. Such a comparison highlights differences in state involvement, graduate return mechanisms, and the extent to which educational mobility contributes to national human capital development. The main characteristics of these channels are presented in Table 4.

Table 4. Main Channels of International Educational Mobility Available to Citizens of Kazakhstan

Educational Mobility Channel	Funding Source	State Involvement in Selection	Graduate Return Mechanisms	Contribution to National Human Capital Development
Bolashak Program	State budget	High	Mandatory return and employment obligation	High
International academic exchange programs (Erasmus+, Fulbright, etc.)	International organizations and partner foundations	Limited	None	Moderate
Inter-university academic mobility	Universities and partner institutions	Partial	None	Moderate
Self-funded overseas education	Private funding by students and families	None	None	Depends on individual post-graduation decisions

Source: Compiled by the authors based on an analysis of educational mobility mechanisms in the Republic of Kazakhstan

The comparative analysis demonstrates that Bolashak differs from other educational mobility channels not only in terms of state funding but also in the extent of institutional oversight throughout the entire educational cycle. Whereas alternative forms of international education are primarily oriented toward meeting the educational aspirations of individual participants, Bolashak is embedded within a broader state strategy aimed at human capital development. The existence of participant selection mechanisms, mandatory return requirements, and professional reintegration measures allows the program to be viewed as an instrument of managed educational migration designed to generate long-term societal benefits.

In the case of Bolashak, the state functions not only as a provider of financial resources but also as an active participant throughout the educational migration process. This involvement contributes to a higher degree of control over the accumulation and utilization of human capital.

In recent scholarships, such an approach is increasingly described as a model of **managed educational migration**, characterized by the active role of the state in shaping international mobility in support of national development objectives (Jonbekova, 2024).

5.4. Regulation of Skilled Migration and Internal Human Capital Redistribution

An important feature of the Bolashak Program is its combination of mechanisms aimed at regulating both external and internal forms of skilled migration. While mandatory return requirements are intended to prevent the international loss of human capital, employment placement and service obligations contribute to its redistribution within the country.

The use of differentiated employment requirements and targeted employer-sponsored applications enables the program to respond to the needs of specific sectors and regions for highly qualified specialists. As a result, Bolashak functions not only as a training mechanism but also as an instrument for managing the spatial distribution of human capital (Bokayev et al., 2020).

At the same time, existing research suggests that administrative mechanisms alone do not guarantee the long-term retention of highly skilled professionals. Following the completion of their mandatory service obligations, many graduates reassess opportunities for international mobility by comparing employment quality, remuneration, and career prospects available domestically and abroad (Jonbekova et al., 2021; Jonbekova et al., 2023).

This finding indicates that the effectiveness of the program depends not only on the quality of its institutional design but also on the broader condition of the national innovation system, labor market, and academic environment. Consequently, educational migration can become a sustainable development resource only when supported by mechanisms that enable the long-term utilization of accumulated human capital within the country.

Overall, the Bolashak Program represents an institutionalized model of managed educational migration through which the state seeks to ensure a complete cycle of human capital formation—from participant selection and educational funding to graduates' professional reintegration and the utilization of accumulated competencies in the national interest. To explain the logic of this process and the interconnections among its constituent elements, the following section introduces a conceptual model of the transformation of educational migration into national human capital.

6. A Conceptual Model of Transforming Educational Migration into National Human Capital

The proposed model is based on the premise that educational migration does not automatically contribute to the strengthening of national human capital. Its positive effects depend on the existence of institutional mechanisms that ensure a sequential transition from individual educational achievement to socially significant outcomes. From an analytical perspective, the model consists of five interconnected components: public investment in human capital development, the acquisition of global competencies through overseas education, the return of graduates, their professional reintegration into national institutions, and the subsequent transfer of knowledge, skills, and managerial practices. Only when all these elements are present can educational migration be regarded as a sustainable resource for national development rather than merely a temporary channel of individual mobility.

6.1. Theoretical Foundations of the Model

The analysis of scholarly literature demonstrates that existing studies of educational migration generally focus either on specific stages of academic mobility or on outcomes associated with it. Human Capital Theory primarily emphasizes educational investment and its economic returns (Becker, 1993), whereas the knowledge circulation perspective focuses on transnational exchanges of knowledge and professional networks (Saxenian, 2005; de Haas, 2021). Studies of the Bolashak Program have predominantly examined graduate return, career trajectories, and the prevention of skilled emigration (Perna et al., 2015; Bokayev et al., 2020).

At the same time, the existing literature lacks a comprehensive conceptual framework capable of explaining the mechanism through which educational migration is transformed into national human capital. To address this gap, the present study proposes an original conceptual model that integrates Human Capital Theory, research on international academic mobility, and the knowledge circulation approach.

The model was developed through a thematic analysis of scholarly literature and an institutional analysis of the Bolashak Program. The review included studies addressing educational migration, international academic mobility, human capital development, knowledge circulation, and state-sponsored scholarship programs. The recurring themes identified in the literature were subsequently compared with the institutional architecture of the Bolashak Program.

This process led to the identification of eight recurring analytical categories that collectively represent the transformation of educational mobility into a resource for national development: public investment in human capital, international educational migration, the accumulation of global competencies, graduate return and reintegration mechanisms, knowledge and technology transfer, institutional effects, national human capital, and state competitiveness within the knowledge economy. These categories are consistently reflected in studies on human capital (Becker, 1993), international academic mobility (Teichler, 2017; Brooks & Waters, 2011), knowledge circulation (Saxenian, 2005; de Haas, 2021), and the Bolashak Program itself (Perna et al., 2015; Bokayev et al., 2020; Jonbekova et al., 2023).

The inclusion of these specific elements is justified by the fact that each represents a distinct stage in generating societal returns from educational migration. Excluding any one of these components would disrupt the causal logic of the model and make it impossible to explain the transition from individual educational experiences to long-term effects at the level of the state and its institutions.

Accordingly, the proposed framework should be understood as the result of a theoretical synthesis of existing scholarly approaches and an institutional analysis of the Bolashak Program rather than a simple description of the stages of overseas education. Its purpose is to explain the mechanisms through which educational migration is transformed into national human capital and to identify the key institutional conditions necessary for this process.

The model follows a sequential institutional logic and reflects the transformation of educational migration into national human capital through a series of interconnected stages and mechanisms. Each stage emerges because of the preceding one while simultaneously serving as a prerequisite for the next. Within this framework, public investment creates the conditions for international educational mobility; educational mobility facilitates the acquisition of global competencies; return and reintegration mechanisms enable the domestic utilization of acquired knowledge; knowledge transfer generates institutional effects; and the cumulative impact of institutional change contributes to the formation of national human capital and enhanced state competitiveness. Thus, the effectiveness of the program depends not on individual components in isolation but on the coherence of the entire institutional chain presented in Figure 1.



Fig. 1. Conceptual Model of the Transformation of Educational Migration into National Human Capital: The Case of the Bolashak Program

Source: Developed by the authors based on a thematic analysis of scholarly literature and an institutional analysis of the Bolashak Program.

6.2. Public Investment and Educational Mobility

The starting point of the model is public investment in human capital. According to Human Capital Theory, education represents one of the most effective forms of long-term investment, contributing to increased productivity, innovation capacity, and economic competitiveness (Becker, 1993).

Unlike spontaneous forms of educational mobility, the Bolashak Program involves strategic state participation in human capital formation through educational funding, the selection of highly promising candidates, and the designation of priority fields of study. Educational migration thus becomes not merely an individual educational strategy but an instrument for achieving national development objectives.

The next element of the model is international educational migration as a mechanism for accessing global educational resources. At this stage, participants become integrated into leading universities, research centers, and international professional communities.

6.3. Accumulation of Global Competencies

Educational mobility results in the accumulation of global competencies, understood as a combination of professional expertise, research skills, digital literacy, leadership capabilities, and intercultural communication skills.

Unlike traditional perspectives that associate overseas education primarily with the acquisition of a degree, the proposed model conceptualizes acquired competencies as a multidimensional resource encompassing not only specialized knowledge but also new professional practices, managerial approaches, and research cultures.

Research by Jonbekova et al. (2023), Perna et al. (2015), and Kuzhabekova et al. (2019) indicates that graduates acquire not only professional expertise but also competencies in project management, academic writing, research design, intercultural communication, and collaboration within international professional teams. These competencies are highly transferable across sectors and constitute the foundation for subsequent knowledge transfer processes.

Particularly important are competencies related to innovation and the production of new knowledge. These capabilities create the conditions necessary for future technology transfer and institutional transformation within the country.

6.4. Reintegration and Knowledge Transfer

A central component of the model is the stage of graduate return and professional reintegration. The analysis demonstrates that this stage largely determines the overall effectiveness of educational migration as a mechanism of human capital development.

Within the brain drain framework, the principal risk associated with educational mobility is the permanent loss of highly trained professionals who remain abroad after completing their studies (Docquier & Rapoport, 2012). The Bolashak Program seeks to minimize this risk through institutional mechanisms requiring graduates to return and fulfill employment obligations within Kazakhstan.

However, physical return alone does not guarantee societal returns on educational investment. Reintegration requires the incorporation of graduates into national institutions and the creation of conditions that enable them to apply their acquired competencies in professional practice.

Following reintegration, the process of knowledge and technology transfer begins. Graduates become carriers of new professional standards, managerial approaches, and research practices in public administration, education, science, healthcare, and business. At this stage, individual human capital acquires collective significance and extends beyond personal career achievements.

6.5. Institutional Effects and the Formation of National Human Capital

The next stage of the model concerns the emergence of institutional effects. Whereas the previous components primarily relate to individual program participants, the focus at this stage shifts toward organizations and social institutions.

Through knowledge transfer, new organizational practices emerge, managerial processes are modernized, international research networks expand, and innovation activity intensifies. Unlike individual achievements, these effects possess the capacity for long-term reproduction and sustainability.

Institutional change ultimately enables the transition from individual human capital to national human capital understood as the collective stock of knowledge, competencies, and organizational capacities within society. Within this framework, human capital is not viewed as a simple aggregation of individual qualifications but rather as a system of interconnected resources that support long-term national development.

The final component of the model is state competitiveness and the development of a knowledge economy. The accumulation of human capital creates favorable conditions for scientific advancement, high-technology industries, digital transformation, and innovation-driven entrepreneurship. Educational migration is therefore conceptualized not as an end in itself but as a means of achieving broader socio-economic development objectives.

The proposed model makes it possible to interpret the Bolashak Program as a mechanism of institutionalized knowledge circulation through which international educational mobility is systematically transformed into a resource for national development. Unlike linear models of educational migration that focus exclusively on overseas training, the present framework highlights the complex interrelationships among public investment, academic mobility, graduate reintegration, and institutional change that collectively enable the reproduction of national human capital.

To assess the analytical potential of the proposed framework, the following section examines how the individual elements of the conceptual model manifest themselves in the implementation of the Bolashak Program. Attention is devoted to mechanisms of human capital formation, knowledge transfer, institutional change, and the factors influencing the effectiveness of transforming educational migration into national human capital.

7. Contribution of the Bolashak Program to the Development of National Human Capital

7.1. Formation of a Professional and Managerial Elite

Over more than three decades of implementation, the Bolashak Program has become one of the largest state-sponsored human capital development initiatives in Central Asia. According to the Center for International Programs JSC, more than 12,800 citizens of the Republic of Kazakhstan—including master's students, doctoral candidates, and participants in academic and professional internships—have completed their studies under the program.

The scale of the program allows it to be viewed not merely as an educational instrument but as a long-term mechanism for developing the country's human resource capacity.

Table 5. Key Indicators of the Bolashak Program (as of 2025)

Indicator	Value
Year established	1993
Program operator	Center for International Programs JSC
Number of graduates	More than 12,800
Main forms of training	Master's degrees, doctoral studies, academic and professional internships, and, to a lesser extent, undergraduate studies
Geographic coverage	Leading universities in North America, Europe, and Asia
Key feature	State-funded education combined with mandatory return and employment obligations
Priority fields of study	Public administration, education, healthcare, engineering, information technology, science, and innovation
Strategic objective	Development of national human capital

Source: Compiled by the authors based on data from the Center for International Programs JSC and official analytical reports.

These figures indicate that the Bolashak Program differs significantly from most traditional scholarship initiatives both in terms of scale and institutional design. Over three decades of implementation, it has established a sustainable mechanism for overseas human capital development aligned with the country's strategic development priorities. The large number of graduates, the broad spectrum of fields of study, and the continued application of mandatory return mechanisms allow the program to be regarded as one of the key instruments of Kazakhstan's human capital development policy.

Research demonstrates that a substantial proportion of graduates are employed in government agencies, national companies, higher education institutions, research organizations, and the private sector (Perna et al., 2015; Bokayev et al., 2020).

Of particular importance is the formation of a professional and managerial elite possessing educational experience from leading international universities and familiarity with global standards of governance, research, and decision-making. In this respect, the program contributes not only to the training of specialists but also to the development of a human resource base capable of supporting the modernization of public institutions and organizations.

Empirical evidence suggests that many graduates perceive themselves as agents of institutional change and demonstrate strong motivation for professional and civic engagement within Kazakhstan (Jonbekova et al., 2023). This finding is consistent with the logic of the conceptual model proposed in this study, in which human capital accumulation serves as a prerequisite for broader organizational and institutional transformation.

7.2. Knowledge and Technology Transfer

One of the most significant outcomes of the program is the transfer of knowledge, technologies, and professional practices. Unlike traditional interpretations of educational migration as merely a process of acquiring qualifications, contemporary scholarship emphasizes the role of acquired competencies in organizational modernization and the diffusion of innovation (Saxenian, 2005; de Haas, 2021).

A study by Perna, Orosz, and Jumakulov (2015), based on interviews with employers and program graduates, found that one of the most valuable outcomes of overseas education is graduates' ability to adapt international experience to domestic organizational contexts. Employers highlighted graduates' strong

analytical skills, familiarity with modern management tools, and readiness to initiate organizational change. According to the study, competencies acquired abroad are most frequently reflected in strategic planning, project management, the development of innovative educational and research practices, and the implementation of contemporary decision-making approaches (Perna et al., 2015).

The program's contribution to the research sector is particularly important for the long-term development of human capital. Studies by Kuzhabekova, Sparks, and Temerbayeva (2019), as well as Jonbekova et al. (2023), demonstrate that graduates of overseas training programs actively participate in international research collaboration, scholarly publishing, and joint research projects. Experience gained in foreign academic environments facilitates the diffusion of contemporary research standards, promotes academic mobility, and strengthens the integration of Kazakhstani scholars into global scientific networks. As a result, educational migration becomes a channel for transmitting not only professional expertise but also a research culture that shapes the quality of the national scientific environment.

Thus, existing research confirms that the societal benefits of educational migration extend well beyond individual career achievements. Knowledge and competencies acquired abroad are disseminated through professional communities, educational institutions, public organizations, and research teams, thereby creating conditions for broader institutional effects. Within the framework of the conceptual model proposed in this study, this stage represents the transition from individual human capital to the collective knowledge base of organizations and institutions that forms the foundation of national human capital.

7.3. Impact on Higher Education and Research Infrastructure

A significant proportion of Bolashak graduates are employed within the higher education and research sectors. Many hold academic and administrative positions in universities, research centers, and scientific organizations (Sarinzhipov, 2013).

The program's impact is manifested in several ways. First, graduates contribute to the dissemination of contemporary educational approaches, including student-centered learning, digital teaching technologies, and innovative models of academic organization (Rustemova et al., 2020; Ryymin, 2015). Second, they actively participate in the development of research infrastructure and international scientific cooperation.

Particularly important is the interaction between the Bolashak Program and broader processes of higher education internationalization and the development of research universities. Collectively, these processes create favorable conditions for Kazakhstan's gradual integration into the global knowledge system and enhance the competitiveness of its higher education sector (Robertson & Bayetova, 2021; Amirbekova et al., 2025).

Consequently, the program's contribution extends far beyond the preparation of individual specialists and affects the institutional development of universities, research organizations, and educational policy.

7.4. Limitations and Challenges of the Model

Despite the considerable achievements of the program, the findings of this study indicate that the transformation of educational migration into national human capital is not automatic and depends on a few institutional conditions.

First, mandatory return requirements do not eliminate the risk of subsequent emigration after graduates fulfill their service obligations. Research suggests that some graduates continue to consider international mobility opportunities in search of more favorable conditions for professional development and higher standards of living (Jonbekova et al., 2021; Jonbekova et al., 2023).

Second, the effective utilization of accumulated human capital largely depends on the condition of the national labor market. A mismatch between graduates' qualifications and available opportunities for professional realization may reduce the societal returns on educational investments (Perna et al., 2015).

Third, regional disparities in the distribution of highly qualified specialists remain a persistent challenge. Despite existing incentives for regional employment, graduates continue to concentrate in major cities and leading national institutions (Bokayev et al., 2020).

Fourth, many institutional effects are long-term and difficult to measure. Unlike employment rates or career advancement indicators, graduates' contributions to organizational development, scientific progress, and innovation ecosystems are not easily captured through short-term quantitative metrics.

Finally, intensifying global competition for talent makes it increasingly difficult for states to retain highly qualified specialists solely through administrative mechanisms. This reality necessitates the further

development of professional integration policies, research infrastructure, and opportunities for utilizing accumulated human capital within the country.

Accordingly, the effectiveness of the program depends not only on the quality of overseas training but also on the capacity of national institutions to effectively absorb and utilize acquired knowledge and competencies for long-term national development.

To place the Bolashak Program within a broader international context, a comparative analysis was conducted of state-sponsored overseas education programs that are comparable in terms of objectives, state involvement, and orientation toward human capital development. The selected cases include countries that use international education as a strategic instrument for economic modernization, public sector reform, scientific advancement, and innovation development. Selection criteria included centralized public funding, an institutionalized approach to educational mobility, and a long-term orientation toward utilizing trained professionals for national development purposes.

Table 6. State-Sponsored Overseas Education Programs: A Comparative Overview

Country	Program	Main Objective	Distinctive Feature
Kazakhstan	Bolashak	Human capital development	Mandatory return and employment obligation
China	China Scholarship Council (CSC)	Development of scientific and engineering personnel	Integration into the national innovation system
Saudi Arabia	King Abdullah Scholarship Program	Large-scale international educational mobility	Full state funding of overseas education
Azerbaijan	State Program on Education Abroad	Development of specialists for economic modernization	Focus on workforce provision for priority sectors
Singapore	Public Service Commission Scholarships	Formation of a managerial elite	Direct integration into the civil service system

Source: Compiled by the authors based on comparative analysis of national scholarship programs

The comparison demonstrates that most state-sponsored overseas education programs pursue similar objectives related to human capital accumulation and the development of a highly qualified workforce. However, the mechanisms through which these objectives are achieved differ considerably. Whereas the Chinese and Saudi Arabian programs emphasize the scale of international mobility and workforce development, and the Singaporean model focuses on preparing a managerial elite for public service, the Bolashak Program combines public funding, mandatory return requirements, and structured professional reintegration mechanisms. This combination allows it to be regarded as one of the most institutionalized models of managed educational migration.

Unlike programs primarily focused on financing overseas education, Bolashak seeks to ensure a complete cycle of human capital formation—from educational investment to the utilization of accumulated knowledge within the national economy and public administration system. Consequently, the program may be interpreted as an instrument of a long-term human capital development strategy aimed at strengthening state competitiveness in the knowledge economy.

At the same time, the transformative potential of the Bolashak Program should not be viewed exclusively through a positive lens. The effectiveness of converting educational migration into national human capital is constrained by several factors. First, graduates' return to the country does not automatically guarantee the utilization of their competencies in strategically important sectors. Second, program outcomes depend heavily on the quality of the institutional environment, including employment opportunities, career progression mechanisms, professional adaptation, and demand for internationally acquired knowledge. Third, discrepancies may arise between the fields of graduate training and the actual needs of the domestic labor market and public administration system. Fourth, the long-term effects of the program are unevenly distributed: while some graduates make substantial contributions to national development, others may have more limited or delayed impacts.

Therefore, it is analytically more appropriate to view Bolashak not as an unequivocally successful policy instrument but as an institutional model with significant transformative potential, the effectiveness of which depends not only on the design of the program itself but also on the broader quality of the national institutions responsible for absorbing and utilizing accumulated human capital.

Research Limitations

This study has several limitations that should be acknowledged. First, the analysis is primarily based on an integrative literature review and institutional analysis and therefore does not include an independent quantitative assessment of the long-term career and institutional effects of the Bolashak Program. Second, the available literature varies considerably in methodological rigor and analytical depth, which inevitably limits the generalizability of the findings. Third, the article focuses primarily on the Kazakhstani case, whereas a more extensive international comparison could further strengthen the explanatory power of the study. These limitations point to promising directions for future research, including the use of primary empirical data, comparative analysis of international scholarship programs, and the evaluation of graduates' long-term contributions to the development of national institutions.

Conclusions

The findings of this study suggest that the Bolashak Program should be understood not merely as a mechanism for financing overseas education but as an institutionalized model of managed educational migration aimed at fostering national human capital development in the Republic of Kazakhstan. In contrast to approaches that interpret international academic mobility primarily through the lens of individual educational trajectories or the risks of brain drain, this study demonstrates the importance of the institutional linkage connecting public investment in education, graduate return, professional reintegration, and the subsequent transfer of knowledge into national institutions.

At the theoretical level, the study argues that educational migration can become a resource for long-term national development only when institutional mechanisms exist to transform individually accumulated competencies into socially valuable human capital. On this basis, a conceptual model is proposed that explains the relationships among international academic mobility, return and reintegration mechanisms, and institutional effects in the spheres of public administration, education, science, and the economy.

At the same time, the findings do not support an overly linear or uniformly positive interpretation of the program. The effectiveness of such initiatives depends on the quality of the institutional environment, the ability of national organizations to utilize graduates' competencies, and the alignment between educational training and domestic development priorities. In this regard, the Bolashak Program should be viewed not as a completed success story but as an evolving institutional mechanism whose effectiveness is shaped by the interaction between educational policy and broader institutional conditions.

Future research should focus on the empirical assessment of graduates' long-term career trajectories, comparative analysis of similar international scholarship programs, and the examination of specific mechanisms of knowledge transfer into national institutions. Such studies would contribute to a more precise understanding of the conditions under which educational migration becomes a sustainable mechanism for the accumulation, reproduction, and utilization of national human capital.

Ultimately, the experience of the Bolashak Program demonstrates that, under appropriate institutional conditions, educational migration can function not as a source of human capital loss but as a mechanism for its accumulation, circulation, and strategic deployment in support of long-term national development.

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