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# Understanding the Human Capital Benefits of a Government-Funded International Scholarship Program: An Exploration of Kazakhstan's Bolashak Program

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## **Abstract**

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## **Keywords**

higher education, international education, public policy, human capital, educational benefits

## **Disciplines**

Education | Educational Assessment, Evaluation, and Research | Higher Education | International and Comparative Education



# Understanding the human capital benefits of a government-funded international scholarship program: An exploration of Kazakhstan's Bolashak program



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## ABSTRACT

This study utilizes qualitative research methods to explore the human capital benefits of one government-sponsored international scholarship program – Kazakhstan's Bolashak Scholars Program – and how program characteristics and other forces promote and limit these benefits. The findings raise a number of questions for policymakers, administrators, and researchers about how a government-sponsored international scholarship program should be structured so as to maximize human capital development for individuals and the sponsoring nation.

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## 1. Introduction

Educational attainment, an indicator of the human capital accumulated by a population, is a primary determinant of a nation's prosperity and global economic competitiveness (Acemoglu and Robinson, 2012; OECD, 2012). The World Economic Forum underscores the importance of higher education to national competitiveness asserting that, "today's globalizing economy requires countries to nurture pools of well-educated workers who are able to perform complex tasks and adapt rapidly to their changing environment and the evolving needs of the production system" (Schwab, 2014, p. 7).

Although labor market policies and other forces also play a role (Rashid and Rutkowski, 2001), higher education is particularly important to the competitiveness of nations with developing and transitioning economies, including the 15 former Soviet Socialist Republics that, since the dissolution of the Soviet Union in 1991, have been moving from socialist systems to market economies. Moving from a centrally-planned economy to a market economy requires substantial restructuring of the labor market. This restructuring tends to "place a heavy burden on the education and training sectors of the economy to smooth any labor market adjustment" (Clark, 2003, p. 28).

One approach that several former Soviet states (e.g., Azerbaijan, Armenia, Kazakhstan, Russia), as well as governments around the world (e.g., Brazil, China, Iran, Saudi Arabia), have adopted to develop human capital is to offer subsidies that enable students in the home country to study at postsecondary institutions abroad (Edelstein and Douglass, 2012; Knight, 2006; Perna et al., 2014a; British Council and DAAD, 2014).<sup>1</sup>

National governments that sponsor international scholarship programs assume that the benefits of attending a higher education institution outside the home nation are different from the benefits that result from attending a domestic institution (Messer and Wolter, 2007). By taking advantage of long-standing, high-quality educational offerings in other nations, this approach may build the international perspectives of the home nation's population, promote knowledge transfer, and develop skills required by employers (Knight, 2006; Varghese, 2008). Worldwide, 2% of all tertiary education students (about 3.5 million individuals) studied in a foreign nation in 2010 (UNESCO Institute for Statistics, 2012). Although the percentage is small, the potential benefits of studying abroad to individual and societal prosperity may be large, especially in a nation that is transitioning economically and politically (Kim, 1998).

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<sup>1</sup> Throughout the paper, we refer to the provision of governmental subsidies for promoting the enrollment of students at higher education institutions abroad as a government-funded international scholarship program (Perna et al., 2014a).

Drawing on human capital theory and qualitative research methods, this study explores the human capital benefits created by one international scholarship program that is sponsored by a government in a transitioning nation, Kazakhstan's Bolashak Scholars Program. The program was initiated in 1993 by then (and current) president of the country Nursultan Nazarbayev. The [presidential decree \(1993\)](#) that effectively established the Bolashak program articulated the perceived value of educating citizens abroad for meeting labor market needs:

In the transition of the economy of the Republic of Kazakhstan to the market economy and expansion of its international relations there is an urgent need for staff with appropriate education, and therefore it becomes especially important to send the best prepared young people to study in leading educational institutions of foreign countries.

The Ministry of Education and Science of the Republic of Kazakhstan (2010) claims that the Bolashak program has “made a significant contribution to the development of the country's human resources and has provided a unique opportunity to young talented Kazakhstani to obtain education from the best universities in the world” (p. 7). Despite this assertion, little is known about the nature of the human capital benefits that are produced or the ways that various program characteristics and other forces promote and limit the program's benefits.

Using exploratory research methods, this study addresses this knowledge gap. This study does not provide an evaluation of the effectiveness of the Bolashak program, but rather explores the perceived benefits of Bolashak and the characteristics of the program and other forces that influence these benefits.

## 2. Guiding perspectives

The economic theory of human capital assumes that productivity is determined by an individual's human capital. Human capital increases with the quantity and quality of educational investment, as well as with on-the-job training, geographic mobility, and emotional and physical health ([Becker, 1993](#)). In a market economy, greater productivity is expected to be rewarded with an increase in earnings ([Becker, 1993](#)).

In a centrally-planned economy, the correlation between education and earnings is typically smaller, as governments in these economies determine the distribution of workers across industries and set wages based on criteria other than supply and demand ([Arabsheibani and Mussurov, 2007](#)); these economies also tend to have egalitarian wage structures ([Clark, 2003](#)). Although the labor markets of many newly independent states experienced profound disruption immediately following the dissolution of the Soviet Union ([Abrahart, 2000](#)), the tenets of human capital theory now appear to hold. Even in the early years of the transition (that is, between 1994 and 1998), educational attainment was positively related to wages in Russia, with a stronger relationship at privately-owned firms than in the public (state) sector ([Clark, 2003](#)). Using multivariate analyses, [Arabsheibani and Mussurov \(2007\)](#) found that, even after taking into account endogeneity bias, annual incomes in Kazakhstan ten years after independence (2001) increased with level of schooling. These findings suggest that “the initial conditions for restructuring of the labor market are in place [in these nations] and provide significant incentives for individuals to undertake new and essential human capital training” ([Clark, 2003](#), p. 29).

From the perspective of endogenous theories of economic growth, studying in a foreign nation is a form of human capital import. Government-sponsored international scholarship programs may promote human capital in the home nation, as students returning after acquiring education abroad are assumed to “contribute to faster creation of new knowledge and help other

people acquire skills without any direct costs” ([Kim, 1998](#), p. 338). By sponsoring programs that provide financial and other support to study in and earn degrees from postsecondary institutions outside the home nation, governments may not only encourage individual human capital accumulation but also benefit the home country by improving national economic growth and productivity ([Kim, 1998](#)), the internalization of democratic values ([Spilimbergo, 2009](#)), human rights practices ([Atkinson, 2010](#)), and “international understanding and knowledge of foreign languages and cultures” ([Edelstein and Douglass, 2012](#), p. 7).

Research suggests that studying in a foreign nation produces many benefits for individual participants and home nations ([Crossman and Clarke, 2010](#); [Flander, 2011](#); [Spilimbergo, 2009](#)). Nonetheless, studies examining the outcomes of foreign education have noteworthy methodological and theoretical limitations. In their comprehensive review, [Twombly and colleagues \(2012\)](#) conclude that the positive effects found in research examining U.S. students who study abroad may be overstated because of the reliance on data from single institutions and small and non-representative samples, insufficient theoretical grounding, and inattention to the self-selection of students into study abroad programs or the growth and development that would occur among college students regardless of their program participation.

Conclusions about the benefits that result when U.S. students study abroad likely have limited relevance for other nations, especially nations that restrict eligible countries, institutions, and majors and/or have post-completion requirements. Nonetheless, [Twombly et al.'s \(2012\)](#) observation that the individual benefits of studying in a foreign nation vary based on characteristics of participants and the program, as well as characteristics of the host nation, likely applies regardless of the home nation. The societal benefits of foreign education to a home nation depend on which nation pays the costs of attendance and whether students live and work in the host nation after completing their programs ([Bergerhoff et al., 2013](#)). Other characteristics that may influence the nature and benefits of the human capital developed are the level and length of study (e.g., exchange versus degree; undergraduate versus post-baccalaureate), the academic majors that a program supports, and the requirement to work for a certain period or in certain occupations in the home nation upon return ([British Council and DAAD, 2014](#); [Perna et al., 2014a](#)). In his assessment of the many individual and societal benefits that result from higher education, [McMahon \(2009\)](#) concluded that the mechanisms that governments use to promote higher education investment (and thus advance individual and societal prosperity) should vary to reflect the national context, including characteristics of the economy. For instance, when the economy is less-technologically advanced, promoting undergraduate degree attainment may be a more effective use of finite resources than encouraging academic research and graduate education ([McMahon, 2009](#)).

Human capital, as measured by postsecondary education and training of skilled workers, is a determinant of innovation in Eastern European and former Soviet states ([Akhmedjonov, 2010](#)) and a key driver of improved global competitiveness ([Schwab, 2014](#)). Although research suggests various benefits of foreign education to the development of an individual's and a nation's human capital, little is known about how the characteristics of a government-sponsored international scholarship program in a nation with a transitioning economy and developing higher education system may produce these benefits.

## 3. Research methods

To address this knowledge gap, this study utilizes qualitative research methods to explore the human capital benefits of one government-sponsored international scholarship program:

Kazakhstan's Bolashak Scholars Program. The study does not offer an evaluation of the program, but rather uses the Bolashak program as a purposively selected case for exploring how a program produces various benefits. The study is not designed to determine whether the program causes particular outcomes, whether the program's benefits exceed the costs, or whether the program benefits exceed the benefits produced by other human capital development strategies, including studying abroad without this program or studying in the home nation. Because of data and other limitations, we do not attempt to quantify the program benefits or determine the benefits that would have resulted in the absence of this program.<sup>2</sup>

Rather, this study explores the human capital benefits that may be produced by a government-sponsored international scholarship program and the characteristics of the program and other forces that contribute to and limit these benefits. Reflecting our interest in understanding how a program produces benefits, this study uses exploratory methods and draws primarily on data collected through interviews to address the research questions. Consistent with the underlying assumptions of this methodological approach (Maxwell, 2013), our goal is not to make claims about the population of government-sponsored international scholarship programs. Instead, our study sheds light on the ways that a government-sponsored international scholarship program operating within a particular national context produces benefits using a purposive, theoretically-driven data collection process (Yin, 2003a,b). The particular benefits of the Bolashak program reflect the combination of the program's characteristics and the economic, political, and cultural context of Kazakhstan. By focusing on understanding the program characteristics and other forces that influence these benefits, the findings may be transferable to other programs, particularly those with similar characteristics and operating in similar national contexts (Maxwell, 2013). The findings are likely most directly transferable to government-sponsored international scholarship programs in other nations of the former Soviet Union and Soviet bloc, and other nations at similar stages of economic development.

### 3.1. Research questions

This study explores the following questions:

1. What are the human capital benefits associated with the Bolashak program, a government-sponsored international scholarship program operating in the Republic of Kazakhstan, a nation with a transitioning economy?
2. How do program characteristics and other forces promote and limit the human capital benefits of the Bolashak program?

One of the former republics of the Soviet Union, Kazakhstan is the world's 62nd largest nation in terms of population (about 17 million in 2013) but 9th largest in land mass (2.72 million kilometers, [Statistics Agency of the Republic of Kazakhstan, 2013b](#)). Kazakhstan is located in Central Asia, a region that is made up by six countries that differ from each other in many ways, including their "wealth, natural resources, population size, geography, government control, languages spoken, treatment of non-titular ethnic groups, and existing higher education resources" (Merrill, 2010, p. 26). A landlocked country comprised of 14 regions and two cities "of

Republican importance" (Astana and Almaty), Kazakhstan borders Russia, China, Kyrgyzstan, Uzbekistan, and Turkmenistan.<sup>3</sup>

Since achieving independence in 1991, Kazakhstan (like other former Soviet nations) has adopted a number of political and economic reforms. Indicating the success of these reforms, both the European Union (in 2000) and the U.S. Department of Commerce (in March 2002) have granted Kazakhstan "market-economy status" ([Bureau of Economic and Business Affairs, 2012](#)). Although real wages fell and unemployment and self-employment rates spiked immediately following independence ([Arabsheibani and Mussurov, 2007](#)), Kazakhstan now ranks 50th of 144 nations on the World Economic Forum's Global Competitiveness Index and is one of the 24 economies that is transitioning from the second to third of three stages of development ([Schwab, 2014](#)). Other nations in this transition include some other former-Soviet and Soviet bloc nations (Russian Federation, Hungary), Mexico, Turkey, the United Arab Emirates, some South American nations (e.g., Argentina, Brazil, Chile, Uruguay), and some small nations (e.g., Bahrain, Barbados, Seychelles).

Despite its wealth and development, Kazakhstan continues to be plagued by corruption. Kazakhstan scored just 26 out of 100 on [Transparency International's \(2014\)](#) 2013 index of corruption in the public sector (where 0 represents highly corrupt and 100 represents very clean) and at the 15th percentile on corruption control, an indicator of the extent to which public power is perceived to be used for private gain. According to the Ministry of Education and Science, \$100 million is exchanged each year at Kazakhstani universities through corrupt practices, such as paying for semester grades ([Satayeva, 2014](#)).

In addition to eliminating corruption, transitioning to the highest stage of global competitiveness (an innovation-driven economy) requires strategies that promote the production of "new and different goods through new technologies and/or the most sophisticated production processes" ([Schwab, 2014, p. 10](#)). [The Ministry of Education and Science of the Republic of Kazakhstan \(2010\)](#) asserts that increasing the number of foreign-educated individuals through the Bolashak program is a fruitful strategy for pursuing the goal of increased global competitiveness.

### 3.2. Data collection and analysis

We developed data collection protocols based on our review of relevant theory and prior research, and collected and analyzed data from multiple sources ([Yin, 2003a](#)). To understand the development, goals, and characteristics of the Bolashak scholarship program, we reviewed presidential decrees as well as government documents about the program available on the website of the Center for International Program's (CIP) ([www.bolashak.gov.kz](http://www.bolashak.gov.kz)), the organization that has administered the scholarship program since 2005. We also reviewed annual summaries of the number of recipients since 2005 by destination country, level of study, type of program, home region, gender, and parents' occupational background. We were unable to obtain data for the initial years of the program (beyond total numbers of recipients) or for program outcomes in any year.

We conducted semi-structured interviews with ministry officials, current and former program administrators, Bolashak scholarship recipients, and employers of Bolashak recipients. We conducted an initial round of interviews in May 2012 with 16 individuals in Astana, the current capital. Analyses of these data informed the second round of interviews, conducted in September 2012 with 16 individuals in Astana and 15 in Almaty (the capital when Kazakhstan was part of the Soviet Union). We conducted a

<sup>2</sup> Quantifying the individual and societal benefits of the program and identifying its causal impact would certainly inform decisions about program characteristics and funding. Nonetheless, such a study requires the availability of systematically collected reliable data on participant characteristics, program characteristics, and outcomes, data that were not available to our research team.

<sup>3</sup> Kazakhstan considers the two cities of Astana and Almaty to be "of Republican importance" because of their population size and economic output.

third round of interviews in May 2013 with 12 individuals in Astana and 3 in Karaganda, the nation's fourth largest city. The concentration of interviewees in Astana and Almaty reflects the concentration of employers and recipients in these two cities.

Consistent with qualitative research methods, the 62 interviewed individuals were purposively selected. Purposive selection is a sampling method in which interviewees are "selected deliberately to provide information that is particularly relevant to [the research] questions and goals" (Maxwell, 2013, p. 97).

To learn more about the history, administration, and operations of the program, we interviewed two officials from the Ministry of Education and Science, one official from the Ministry of Economics and Trade, and one official from the Agency of Statistics, as well as eight current and former Bolashak program administrators. Interviews with two administrators of other international scholarship programs in Kazakhstan generated additional insights into the unique contributions and orientations of Bolashak.

We also interviewed 31 Bolashak recipients and 18 employers of Bolashak scholars (including one of the ministry officials listed above). Our strategy for selecting these interviewees began by identifying organizations in Kazakhstan that employ recipients of the Bolashak scholarship. The program requires Bolashak recipients to send proof of employment to CIP for five years after their return to Kazakhstan. Drawing on these data, CIP program administrators shared with our research team a list of the 30 organizations that employed the highest numbers of Bolashak recipients at the time of our inquiry. Each of the included organizations employed at least 10 recipients; the top employer employed 182 recipients. Collectively, these 30 organizations employed 500 Bolashak recipients, about 12 percent of all Bolashak recipients employed at the time.

We purposively selected 20 of the 30 employers from the list provided by CIP to ensure inclusion of a diverse array of employers. We also purposively selected employers so as to include organizations that employed individuals who received Bolashak scholarships to earn bachelor's, master's, and doctoral degrees. Eighteen of the 20 organizations agreed to participate by making one or more of their representatives (typically a director of human resources) available for interviews. Participating employers hailed from many different sectors including financial services and consulting ( $n = 7$ ), information-technology and software engineering ( $n = 3$ ), transportation ( $n = 2$ ), construction ( $n = 1$ ), oil and gas ( $n = 2$ ), government ( $n = 1$ ), medical ( $n = 1$ ), and non-profit ( $n = 1$ ). The employers also included multiple organizational types, including government, national companies, and multi-national companies. With this purposive sampling strategy, our findings reflect the understandings of a diverse set of current employers of Bolashak recipients.

To identify Bolashak recipients for interviews, we asked representatives at the 18 participating organizations to nominate Bolashak recipients in their employ. Because we only received nominations for employees who received the Bolashak scholarship for study at the bachelor's and master's degree levels, we contacted higher education institutions in Kazakhstan to help us recruit interviewees who received the Bolashak scholarship for doctoral studies or for a research internship abroad.

The combination of employee nominations and targeted recruitment of doctoral scholarship and internship recipients resulted in a sample of 31 Bolashak recipients who agreed to be interviewed. The interviewees included individuals who received the scholarship to support study at the bachelor's ( $n = 3$ ), master's ( $n = 19$ ), and doctoral degree ( $n = 6$ ) levels; two additional interviewees received Bolashak for both master's and doctoral study. We also interviewed one faculty member at a university in Kazakhstan who received Bolashak funding for a research internship. We interviewed these Bolashak recipients (15 women and 16 men) in

four small groups and seven individual meetings. Because only 1% of Bolashak recipients in 2012 were studying at the doctoral degree level, we do not consider data from doctoral degree recipients in this study. We also do not consider the human capital benefits of research internships as these internships are short-term experiences targeted to university faculty and researchers and not designed to promote degree attainment.

Interviews with government officials, program administrators, employers, and Bolashak recipients probed perceptions of program goals, application requirements and procedures, services provided to graduates and employers, and program benefits, strengths and weaknesses. We offered interviewees the option of conducting the interviews in any of the three languages spoken by on-site researchers – Kazakh, Russian, and English – and deferred to the language preferences of interviewees. One participant asked to be interviewed in Kazakh; all of the rest were interviewed in Russian or English.<sup>4</sup> We audio-recorded all interviews (with permission), and produced English-language transcriptions.

To facilitate analysis and ensure trustworthiness of the findings, we first created a database that included data from documents, reports, and interview transcriptions (Yin, 2003b). We used qualitative data analysis software (HyperResearch) to facilitate the coding and compiling of the data into categories. Multiple members of the research team worked together to develop a preliminary list of codes based on theory and prior research, but then coded interview transcripts independently, allowing additional codes to emerge. We revised the initial codes based on discussions among team members and as we collected and analyzed additional data. We separately identified emergent themes and then together characterized and substantiated overlapping themes and condensed the data into overarching themes.

To further ensure the credibility and trustworthiness of the findings, we triangulated interview data with data from program documents, governmental documents, secondary data sources and prior literature to ensure that the themes emerging from different data sources converged. Data triangulation is a strategy for mitigating the risk of "chance associations and of systematic biases" in research (Maxwell, 2013, p. 128).<sup>5</sup> The diverse perspectives of the team – with individuals working at universities in Kazakhstan and the United States, with multiple nationalities (U.S., Hungary, Kazakhstan), and who did and did not have direct prior experience with Bolashak (as a former scholarship recipient) – also contributed to a comprehensive and nuanced assessment of the data collected and helped ensure credibility and trustworthiness of the findings.

## 4. Findings

### 4.1. Perceived human capital benefits of the Bolashak scholarship program

Between 1994 and 2012, the Bolashak program sponsored the undergraduate and graduate education of 9233 Kazakhstani students at universities abroad (CIP, 2013b). Fluctuating over time, the number of Bolashak awards was low in the "formation" years (1993–2000); during this period, the number of new awards ranged from a low of 17 in 1995 to a high of 187 in 1994. Between 1994 and 2004, 785 awards were made for study in 13 nations (CIP, 2013a). In

<sup>4</sup> The language preferences of the interviewees suggest that our sample overrepresents the perspectives of Kazakhstan's "Russified" employers. Exploring the implications of this characteristic is a potential direction for future research.

<sup>5</sup> Given our interest in understanding the human capital benefits of the program, we use data from student interviews to triangulate data from employer interviews. In the findings section, we present more quotes from employers than from students, as we perceive employers' views about recipients' human capital development to be more credible than recipients' self-assessments.

2005 President Nazarbayev called for the program to expand to support 3000 students at any point in time (CIP, 2013a). About 3000 individuals now study in 200 universities in 24 nations with support from the program.

Despite the relatively small number of Bolashak scholarships awarded, ministry officials, program administrators, employers, and recipients believe that the program has generated many benefits. Some asserted that the program is preparing, in the words of one employer, “the next generation of leaders of the country.”

Employers also perceived other benefits, reporting that foreign-educated individuals tend to have strong communication, self-presentation and leadership skills; are flexible and adaptable; and understand how to network. A financial services employer stated, “Bolashakers are more open-minded [than graduates of local universities]. They have lived abroad, are more adaptable. They easily can be exposed to other colleagues, management. . . They can quite quickly be integrated to organization.”

An employer in the transportation sector described the contributions of foreign study to critical thinking, saying: “For middle management it is preferable to have foreign education. . . You should have critical thinking. You know, we don’t have a subject “critical thinking” here in Kazakhstan. All universities abroad have elements of critical thinking.” Similarly, an employer in the financial services sector stressed the value of foreign study to developing “judgment,” explaining, “If you studied at a local school, you are exceptional at rule-based subjects. . . Judgment is the key, and it is very difficult to teach especially the senior level.”

Employers also perceived Bolashak recipients to possess essential content knowledge. An employer in financial services best described the value of foreign study to a transitioning economy, stating:

You see a large number of people who are general majors of business, production businesses, for example, all of whom have some form of international education, because, as these people come back and see old Soviet style manufacturing, for example, you are going to experience theory from overseas and implement it here. So you see some basic companies locally who were able to transform themselves to become more efficient than the old Soviet system.

Foreign study may also promote the acquisition of knowledge needed to improve business practices. Bloom et al. (2012) concluded that businesses in Kazakhstan (as in some other Central Asian transition nations) “often operate with extremely poor management practices . . . worse on average than those in developing countries like India” and that poor management processes limit a firm’s productivity (p. 598). In our study, an employer in the construction sector explained that Bolashak recipients possess needed knowledge of international standards. The employer summarized the contributions of a master’s degree recipient stating, he “knew our requirements and international requirements. His language proficiency was high and, besides, he knew all requirements regarding standards of international contracting.”

The program may also advance connections to “the global world,” something that requires effective communication and credible relationships with foreign partners. An employer in the financial services sector most clearly states this view:

[Bolashak recipients] were able to deal with international companies and they started to give contracts and licenses for international products to be made locally. I think that with international education they were able to do that so efficiently, and this also gives them credibility when talking with international company.

For a nation that seeks to establish trading and other relationships with international partners but where most citizens speak only Russian or Kazakh, the program’s encouragement of English-language expertise may be especially beneficial. An employer in the information-technology sector praised the English-language proficiency of scholarship recipients, stating, “Usually we don’t have people whose English language is better than that of those from Bolashak.” An employer in the financial services sector explained the value of foreign language skills to his company, stating that, “If some kind of project is initiated and it requires dealing with foreign partners, then we need people that know foreign language. If someone had studied in foreign language than I think it is easier to work with foreign partners.”

Some employers are explicitly capitalizing on the ways the program is perceived to expand participants’ perspectives. A master’s degree recipient described the contributions of his international vision to his company, explaining: “My first responsibility is to think like an American. They just ask me: ‘Don’t be a local guy, we are paying you for being an American. Look at things as an American marketer, not the Kazakhstani marketer.’”

#### 4.2. Program features and requirements that promote and limit program benefits

Although ministry officials, program administrators, employers, and scholarship recipients uniformly identified multiple human capital benefits of the Bolashak program, available data prevent us from determining whether these benefits would have accrued in the absence of the program or if the perceived benefits exceed the costs. Identifying the program characteristics associated with various benefits is also challenging because of the many programmatic and contextual changes that have occurred since the program was first adopted. Despite these limitations, our analyses point to the role of five program features: scholarship selection criteria, permitted study destinations, level of study, academic specialty areas, and the requirement to work in Kazakhstan after program completion.

##### 4.2.1. Scholarship selection criteria

Attention to both the stated and unwritten criteria for receiving a scholarship is critical to understanding whether receiving a scholarship represents more than having political connections. Corruption (as evidenced by bribes for admission and oral examinations and other activities) is a relevant aspect of the higher education context in Kazakhstan (Heyneman, 2013). As such, it is not surprising that, especially in the program’s early years, many perceived that only those who were politically connected would receive an award.

The perceived opportunity to participate has improved over time, especially with the adoption of more rigorous application and selection processes in 1997 and the expansion of the number of scholarship awards to 3000 in 2005.<sup>6</sup> Suggesting that at least some employers perceive that the program now signals not political connections but the most productive workers, an employer in financial services stated that the program “selects the best students.”

The adoption of more rigorous selection criteria may have improved perceptions of the fairness and openness of the program, but these requirements also serve to restrict participation in the program to individuals who have the highest academic achievement (i.e., those likely attending the best secondary schools). Although the specifics have changed, since 1997 recipients of the Bolashak scholarship have had to demonstrate superior academic

<sup>6</sup> For additional discussion of the forces that have influenced participation in the Bolashak program over time, please refer to Perna et al. (2014b).

performance, Kazakh and foreign language proficiency, and psychological well-being.

Another requirement, the need to demonstrate sufficient collateral to cover the award, limits the opportunity to participate in and benefit from the program to those with financial resources. To be eligible for the scholarship, applicants must demonstrate collateral (typically real estate owned by the family of the applicant) equal in financial value to the scholarship to be received. Those who do not own property of sufficient value may participate in the program if they can recruit up to four guarantors who will assume liability for the required amount. The Bolashak scholarship contract stipulates that if the scholarship recipient does not return and work in Kazakhstan for five years upon program completion, they have to repay the government the full amount of scholarship received. In case of non-return and non-repayment, the government will seize the recipient's collateral or hold the guarantors liable for repayment.

#### 4.2.2. Permitted study destinations

Efforts to understand the human capital benefits that result from the Bolashak program must take into account Kazakhstan's high rate of foreign study. Kazakhstan ranks among the top 15 nations in the world in terms of the number of students participating in tertiary education programs in a foreign nation ( $n = 58,438$  in 2011, OECD, 2012). Although considerably lower than for China, India, Korea, and Germany, the number of Kazakhstani students enrolled in tertiary education programs abroad is only about 18% lower than for Russia ( $n = 71,072$  in 2011), a nation whose total population is more than 8 times larger than that of Kazakhstan (142.5 million versus 17.7 million in 2013, Central Intelligence Agency, 2013).

Although it funds fewer than 10% of Kazakhstan's internationally mobile students, the Bolashak program appears to have altered the distribution of study destinations. In the initial years, recipients were permitted to study only at designated universities in the U.K., U.S., Germany, and France. In 2011 the most common destinations of Bolashak recipients were universities in the U.K. (39%) and U.S. (26%), with only 9% in Russia and the remainder dispersed across 30 other nations (CIP, 2013b). In contrast, the most common destination of all Kazakhstani students enrolled in tertiary education programs abroad was Russia (50% in 2012), with very small shares studying in the U.K. (4%) and U.S. (3% in 2010; UNESCO Institute for Statistics, 2012). The considerably lower rate of study in Russia among Bolashak recipients than non-recipients indicates the program's role in altering the types of foreign education individuals acquire.

The program began to regulate the permissible higher education institutions in 2007. A program administrator described this restriction as an attempt to ensure that government resources are invested in high-quality foreign education:

They [the program] wanted to limit and include the best universities. Students studied everywhere taking classes in community colleges for language classes, ESL. They decided that it is not quite appropriate because we were spending too much money and we wanted the best quality. So they switched to the idea of choosing the universities.

Bolashak program administrators determine program quality using the international rankings of universities. At the time of data collection, universities ranked in the top 200 of Times Higher Education World University Rankings or QS World University Rankings were considered to be of the "best quality" by Bolashak program administrators.

#### 4.2.3. Study level

Another program characteristic that influences human capital development is the permitted study level. Permissible study levels

have shifted over time in part to reflect changes in the availability of high-quality education in Kazakhstan (described in greater detail in Section 4.3.1). The Bolashak program was initially targeted to master's degrees but expanded to support doctoral study in 2000, undergraduates in 2005, and short-term research internships for faculty in 2008. To account for the expected contributions of Nazarbayev University to undergraduate study,<sup>7</sup> control costs, and address other issues (e.g., perceived "unreadiness" of younger students to live abroad for four years), the program eliminated new awards for undergraduates in 2010. Because of these changes, the distribution of awards by study level has varied dramatically. In 2011, 86% of Bolashak scholarships were awarded for master's degree programs, compared with 27% in 2005. Undergraduate awards represented none of the awards in 2011 but 69% of awards in 2005 (CIP, 2013b). Table 1 summarizes the changes in the distribution of Bolashak scholarships by study level over time.

Few Bolashak recipients have studied at the doctoral level (3% of awards in 2005 and 6% in 2013, CIP, 2013a,b). Although two of the nation's public universities (Eurasian National University and Kazakh National University) began offering doctoral programs in 2005 (Stetar and Kurakbayev, 2010), then-president of CIP, Sayasat Nurbek emphasized the importance of the doctoral education supported by Bolashak to the nation's economic growth, stating, "You need thousands of Ph.D.s to move a country forward in education, applied science, industry, and other areas" (Foster, 2013). Promoting foreign study at the doctoral-degree level (that is, training university staff and faculty abroad) may be particularly important to advancing the modernization of higher education at home.

Interviewees disagreed about whether the program should provide funding for foreign study at the undergraduate level. A former Bolashak administrator justified elimination of funding for undergraduates, asserting that, "employers give preference to master's [degrees]. It is a small country, and every employer wants to have [foreign-trained] master's degree applicants." Some Bolashak recipients perceived that the investment in undergraduate study is "wasted" as recipients are too young and naïve to maximize a foreign study experience. In a representative comment, a master's degree recipient explained, "The state invests so much money during three or four years for the student, but at that age, the student is not mature enough to realize this. There are so many cases of misconduct, misbehavior."

At the same time, other Bolashak recipients and employers argued for continued support of undergraduate study. One employer stressed that the country needs undergraduates who have been trained in technical and scientific disciplines and another stressed that the nation's higher education system is still underdeveloped. An individual who studied abroad for both bachelor's and master's degrees described perceived differences in the knowledge acquired through these two foreign-study experiences: "During my four years in the U.K. [for bachelor's degree study] I got much more knowledge, more basic knowledge, fundamental knowledge than those people who did their one-year master's degree."

Comments from other employers suggest that it is the length of time spent abroad that matters. An employer in the information-technology sector articulated the perceived value of longer foreign-study experiences stating: "Before we perform an interview with Bolashak students, I usually check how many years did he or she spend at the western university. If it's only two years, then it is not so good."

<sup>7</sup> Nazarbayev University, the nation's first research university, was founded in 2009 and enrolled its first students in 2010.

**Table 1**  
Change in the distribution of Bolashak scholarship awards by study level.

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013
Undergraduate	69%	57%	36%	49%	41%	33%	–	–	–
Master's	27%	38%	52%	46%	56%	53%	86%	51%	35%
Ph.D.	3%	2%	4%	1%	1%	1%	3%	1%	6%
Research internship/Internship <sup>a</sup>	–	–	–	2%	1%	12%	11%	48%	59%
Postgraduate studentship (Aspirantura)	1%	1%	0%	1%	–	–	–	–	–
Clinical residency	0%	2%	7%	1%	1%	2%	–	–	–
Number of scholarships awarded	1796	778	267	1311	1013	1661	520	1102	1113

Data source: Center, 2013a,b.

Percentages in each column may not add up to 100% due to rounding. –, denotes that no Bolashak scholarships were awarded for that study level in given year.

<sup>a</sup> Prior to 2012, scholarships in the internship category were only awarded for researchers; since then, Bolashak scholarships are awarded for all types of internships.

#### 4.2.4. Academic specialties

Since its creation, the Bolashak program has sought to enhance education and training in areas of perceived national need. A former president of CIP was reported explaining (Foster, 2013):

When we started the program 20 years ago, there was a big need for people with degrees in certain fields. For example, Kazakhstan had no training programs for diplomats or people in international trade. That's because that kind of training was done in Russia during Soviet times. So the first decade of Bolashak was spent largely in training people who were trained before in the Soviet Union.

In an August 2013 speech to a session of the Republican Commission on Training Cadres Abroad, Secretary of State Marat Tazhin also articulated the government's interest in having the program address workforce needs stating, "We are trying to make it [the Bolashak program] more practical, to take into account the actual needs of our economy, state, and society in general" (Inform, 2013).

Between 1994 and 1997, students studying in economics and humanities disciplines received most awards. But, perceived national needs have shifted over time, with greater emphasis in recent years on increasing the supply of scientists, engineers, and information-technology specialists (Foster, 2013). Since 2005, the scholarship has been available only for the priority specialties identified by the Republican Commission on Training Cadres Abroad, a governmental commission comprised of vice-ministers and ministers of various governmental units, including the Ministry of Labor. The Republican Commission develops the list of priority specialties annually to reflect projected demand for skilled workers in various sectors.

There is both overlap and difference in the fields available through Bolashak and at Kazakhstani universities. For instance, the National Classifier of Major Fields produced by the Ministry of Education and Science (2008) identifies only four specialties in law for Kazakhstani universities, whereas the list of priority specialties for Bolashak identifies 75 law specialties (Republican Commission on Training Cadres Abroad, 2012). By encouraging foreign study of legal specializations that are not available in Kazakhstan, the Bolashak program may help elevate the nation's legal standards to international levels.

Nonetheless, some employers reported that funded specialty areas do not match employers' needs. Others observed the challenges associated with workforce forecasting. An employer in the medical sector explained that, in the prior decade, "People thought that we would need the specialties related to finance and economy. And right now we have a lot of economists and financial people. We need a shift to the technical specialties, engineering specialties and hard sciences." The 2011–2015 Strategy of Development for the Bolashak program noted the weak linkage between the education of the workforce and the labor needs of

employers, emphasizing that only half of Bolashak recipients in recent years work in their specialty area (Tileubergenov, 2011; Ministry of Education and Science of Republic of Kazakhstan, 2011).

Limiting funding to identified specialty areas may cause at least some potential recipients to opt out of the program. An employer of Bolashak recipients shared that her son was studying abroad using private funds only, because the field he was interested in studying was not on the list of academic specialties permitted by the Republican Commission.

#### 4.2.5. Obligation to work in Kazakhstan

For nations like Kazakhstan that are net exporters of tertiary education students, the benefits of foreign education to human capital development are reduced when a recipient does not return to the home nation (Knight, 2006; Macready and Tucker, 2011). The Bolashak program has attempted to minimize brain drain by requiring applicants to pledge to return to Kazakhstan to work in their specialty area for five years after program completion. A former administrator explains the rationale for this requirement, stating: "In Africa, India, Middle East scholarships, a lot of very talented guys [*sic*] who now work in the U.K. and U.S. studied there and were sent by their governments there to become future help for their country. But they prefer to stay there [rather than return home]."

Those who do not meet the work requirement must repay the government for the costs of their education; repayment is ensured by the collateral requirement discussed in Section 4.2.1. Given this requirement, it is not surprising that program administrators told us that very small numbers of recipients do not fulfill their pledge to return to Kazakhstan after program completion.

Ministry officials and Bolashak recipients consistently agreed that the work requirement is appropriate since the government is paying the costs. A master's degree recipient typified this view, explaining: "I think it's an investment. Of course it's understandable that they want a student to stay in the country and payback by working in their organizations for the motherland's benefit."

The work requirement is strictly enforced, creating some limitations on human capital development. Recipients are restricted from completing a post-program internship in the host nation, an experience that could offer opportunity to apply and strengthen knowledge acquired through the formal educational program. The work requirement also prohibits recipients from participating in corporate training programs abroad. An employer in the oil and gas sector summarized the negative consequences of this restriction as "a barrier for [the Bolashak recipients'] career." Some Bolashak recipients reported that the Ministry of Education and Science grants exceptions to these restrictions on a case-by-case basis but the numbers of requested and granted exceptions are not known.

The negative consequences of the work requirement are likely exacerbated by the new mandate, established in 2012, that Bolashak applicants must be employed and recipients must work for the same employer who employed them before they received the scholarship for five years after program completion.<sup>8</sup> A Ministry official articulated the perceived benefits of this requirement to human capital development, stating:

We want this student who goes to study abroad to know what he can learn and what exactly is needed, so that he can take the knowledge there [in the destination nation], then come back, use it, utilizing his knowledge here in Kazakhstan. And the student will know his employer so he will know the demands, the requirements of the employer, and when he will be choosing his subjects and the elective courses, among them he will choose ones that will be more relevant to his further work.

Other interviewees explained that, prior to the adoption of this requirement, Bolashak recipients lacked the experience required for jobs. A master's degree recipient who experienced challenges in finding his current position explained: "All the answers were, 'You don't have enough experience.' It doesn't mean anything if you graduated from a western university. I think the main problem is that we didn't have enough experience." Employers also articulated the perceived value of employment experience, with one employer in a nationally-owned company stating, "Here we look for experienced people with at least three years of experience. We don't have fresh hires."

Nonetheless, requiring Bolashak recipients to return to work for their prior employer may produce inefficiencies, as employers may be required to employ recipients who do not have the optimal set of skills and recipients may be required to work for firms that do not fully utilize their skills and knowledge. Suggesting the possible skill decay and other negative consequences that may result from this requirement, one master's degree-recipient wishes to leave the government position he is mandated to hold, explaining that,

I think it would be better for me to use my knowledge and experience in educating and research, by being a teacher or a researcher, rather than being an administrative worker, because the work I do now, it does not give me much opportunity to think creatively.

#### 4.3. Other forces influencing the program's human capital benefits

Four other forces emerged as influencing the human capital benefits developed through the program: availability of higher education opportunities at home, transition to employment, geographic location of recipients, and ease of integrating new learning into the prevailing home culture.

##### 4.3.1. Availability of higher education opportunities at home

The availability of high-quality education at home influences the benefits of foreign education to a nation's human capital. Kazakhstan had relatively high rates of educational attainment and literacy when the Soviet Union dissolved, but "the provision of the basic forms of education deteriorated in the initial stages of transition," as measured by expenditures on education per GDP and enrollment at the nursery, primary, and secondary school

<sup>8</sup> The requirement to return to the previous employer does not apply to individuals who secured admissions to the universities abroad prior to applying to Bolashak. This category of "self-entered" applicants can apply for Bolashak scholarships for master's, Ph.D. or clinical residency. "Self-entered" applicants must have at least 2 years of work experience, a minimum GPA of 3.37, be accepted to one of the top 200 universities (as determined by international rankings), and the field of study must be on the list of priority fields as determined by the Republican Commission.

levels (Arabsheibani and Mussurov, 2007, p. 346). Following independence, the nation's "public universities suffered from poor resources, low faculty salaries, and an outdated choice of specialties" (Stetar and Kurakbayev, 2010, p. 28).

Particularly over the past decade, education in Kazakhstan has undergone considerable change. Kazakhstani universities introduced three-year bachelor's degrees, as well as master's and Ph.D. programs in 2004 (as promoted by the European Bologna Process) and implemented other changes designed to improve the quality of higher education (Merrill et al., 2011). The government has also recently invested substantial resources (46.3 billion Kazakh Tenge, or about 308.7 million USD, in 2012 alone) in creating the nation's first research university, Nazarbayev University (Ministry of Finance of the Republic of Kazakhstan, 2012). Founded in 2009 and enrolling its first students in 2010, Nazarbayev University (2013) aspires to be a "world-class university."

A former president of CIP stated that building higher education capacity at home by joining the Bologna Process and investing in domestic research universities was a deliberate governmental strategy designed to replace foreign higher education with domestic opportunities whenever possible:

The logic is that, whenever we have the internal capacity, we try to switch because the costs [of sending students abroad] are quite high. Another problem of constantly sending people abroad is you do not develop your own capacity, faculty, infrastructure, education institutions.

The share of adults in Kazakhstan age 25–34 who had attained at least a tertiary education increased from 15% in 1999 to 41% in 2013 (Statistics Agency of the Republic of Kazakhstan, 2009; Kultumanova, 2013), reaching a level of higher education attainment comparable to the OECD (2013) average of 39% in 2011. Although the increase in higher education attainment in Kazakhstan is a positive development, the Ministry of Education and Science (2010) notes persisting challenges in the nation's higher education system pertaining to corruption, faculty training, material and technical resources (e.g., library collections) and laboratory equipment, and funding for university research.

##### 4.3.2. Transition to employment

Returning Bolashak recipients are highly motivated to find employment, given the mandate to work in their specialty area in Kazakhstan for five years after program completion. Recipients must send regular updates about their employment status to CIP so that the program can ensure compliance with this obligation.

The value to employers of the foreign higher education provided through the program is suggested by recipients' ease of transition into Kazakhstan's labor market. Many interviewees expressed satisfaction with their current employment and the process of finding employment after returning home. In a representative comment, a Bolashak recipient who is now employed at a private company stated:

I am just doing what I thought I would like to do when I came back from the U.S. That is why I love my position right now and that is why I want to be here. It is really linked to what I studied there.

The current low unemployment rate among scholarship recipients indicates the attractiveness of Bolashak recipients to employers: 5714 of the 9250 scholarship recipients between 1994 and 2013 had graduated as of April 2013; only 87 of these 5714 recipients were not employed (Zhumagulov, 2013).

Unemployment has not always been low, however. Among 750 Bolashak alumni responding to a survey of their re-adaption experiences, the most commonly reported challenge was unemployment (reported by 28% of respondents, Tileubergenov, 2011).

Of the 2913 Bolashak recipients who were trained between 2005 and 2009, 16% were unemployed (*Inquiry of Parliament Members to Prime Minister, 2011*), a rate higher than that reported for the nation by the *World Bank (2014)*. According to the World Bank, the national rate of registered unemployment in Kazakhstan declined steadily between 2000 and 2011, from 13.5% to 5.4%. The seemingly large gap between national and Bolashak unemployment rates is likely attributable to discrepancies in data collection methods and the high prevalence of self-employment in the general population of Kazakhstan.

The current low rate of unemployment of Bolashak recipients may be attributable in part to CIP's creation in November 2007 of a unit for providing employment assistance. Even with this administrative structure, however, Bolashak recipients require an average of three to six months to obtain employment after they return to Kazakhstan (*Ministry of Education and Science of Republic of Kazakhstan, 2011*). A few recipients described difficulties finding satisfactory employment. In the words of a Bolashak recipient who is now working for a public university:

It took me about 5 months [to find this job]. It was a big surprise for me. I thought after I came back I would be in high demand. I was sending my CVs through job sites. I got some interviews, but not what I was looking for.

The 2011–2015 Strategy of Development for the Bolashak program concluded that delays in securing employment are attributable to scholars' unrealistically high expectations, time required to re-adapt to local conditions, and scholars' lack of practical skills and work experience. Interviewees also described these difficulties. In a representative comment, an employer stated that Bolashak recipients often "come with high self-esteem," a characteristic that makes it "difficult" to agree on the terms of employment. One Bolashak recipient perceived that some peers have unrealistic salary expectations, stating: "They have high expectations like 5000 [U.S. dollars] a month, but the jobs have only 500 [U.S. dollars] a month." Program administrators expect that these challenges will be mitigated with the new requirement that recipients return to work for their previous employer.

#### 4.3.3. Concentration of benefits in two largest cities

The geographic distribution of former Bolashak recipients suggests that the human capital benefits of the program are concentrated in the nation's two largest cities, Astana and Almaty. About 85% of former Bolashak recipients (but less than 15% of the nation's total population) reside in these two cities (*CIP, 2013b; Statistics Agency of the Republic of Kazakhstan, 2010*).

Several forces contribute to the concentration of former Bolashak recipients in these two cities. First, the majority (55%) of applicants between 2005 and 2010 were from Almaty or Astana (*CIP, 2013b*). Second, Astana and Almaty are more economically prosperous (and thus likely more desirable places of residence to those returning to Kazakhstan) than other areas. The only region with comparably high GDP per capita is the oil-rich region of Mangystau. These two cities also have considerable job opportunities, as together these cities have about 40% of the country's legal entities (*Statistics Agency of the Republic of Kazakhstan, 2013a*).

The focus of CIP's employment services may also contribute to the relative concentration of former Bolashak recipients in these two cities. A Bolashak recipient perceived that CIP provides little employment assistance to those in engineering, as most engineering positions are located outside of Astana:

If you have an engineering background it is very hard to find a job with the Center for International Programs. Generally they provide fairs and vacancies for accountants, economists, risk managers or IT. Most of these companies that advertise their

vacancies, they are located in Astana. That is why it is very hard to find an engineering job in Astana because most of the companies are located in West Kazakhstan. Especially when you talk about oil and gas.

The concentration of Bolashak recipients in Astana and Almaty means that employers in other parts of the nation realize few benefits from the program. An employer in the IT sector in Karaganda explained the challenges of attracting individuals from Astana and Almaty to work in the regions, stating:

Almaty is the financial capital of our country. And salaries are higher there. And getting students from Almaty is harder because of the distance. Astana is 200 kilometers from Karaganda, and if you have a family and friends in Astana you can work in Karaganda. But Almaty is 1000 kilometers and more.

#### 4.3.4. Integration of new knowledge into the prevailing culture

The benefits of the human capital developed by the Bolashak program may also be influenced by the extent to which recipients experience challenges as they attempt to integrate their new knowledge into the prevailing culture. An employer of Bolashak recipients in the IT sector points to the difference in perspectives of Bolashak recipients, stating that individuals with foreign study "bring western values from abroad and there is such thing as cultural difference between western people and local people."

Difficulties integrating new perspectives and approaches into the prevailing culture may influence the extent to which individuals and a nation are able to take advantage of the human capital developed by a program. One type of challenge that emerged in this study pertained to the process of negotiating terms of employment. As described earlier, employers and recipients referred to the high expectations of some Bolashak recipients as impeding their transition to employment in Kazakhstan. In another example, an employer in the financial services sector shared that, at his company's recruitment events, some Bolashak recipients seem to see themselves as "a special caste," explaining that they are often:

asking what kind of special conditions [the employer has] for Bolashakers, what special conditions for career development. [I told them] you are asking the wrong questions. You should ask what skills are needed to your company and how can I be helpful to your company.

Other employers, however, interpret recipients' attitudes as positive indicators of their ambition, achievement, and confidence. An employer from the financial services sector praised the goal-orientation of recipients, stating, "They are striving to work, to get the investment they have done to Bolashak program back. So they were very goal-oriented to get into the program. And when they are coming back, they are willing to get as much possible out of that."

A second related challenge that emerged in this study pertains to the difficulties some Bolashak recipients experienced in attempting to implement the knowledge they acquired abroad into prevailing norms and approaches. These difficulties may be especially great for Bolashak recipients who are employed in organizations where few other employees have international educational experiences. A Bolashak recipient articulated these challenges, saying:

I worked for a pure Kazakhstan [company]. That was terrible. I was the only person who graduated from an international university, the only one from Bolashak. I was like an alien because I did not study [in Kazakhstan]. Eventually, I left – they didn't fire me. It's reverse cultural shock.

## 5. Conclusions

This study used qualitative research methods to explore the human capital benefits associated with participation in one government-sponsored international scholarship program.

### 5.1. Study limitations

Because the research design does not control for students' self-selection into the program, we cannot conclude that the Bolashak program caused any of the identified human capital benefits. We also cannot make claims about the nature and extent to which the human capital benefits of foreign study undertaken without Bolashak funding (either with private funds or with support from a different international scholarship program) are similar to or different from the benefits identified in the present study. The study also does not consider changes in program benefits over time. Attention to changes over time in the wage premium received by those who engage in foreign study is especially important in nations like Kazakhstan where many jobs are low-paying.

Although the findings shed light on the labor market outcomes and experiences of Bolashak recipients, the findings do not consider the full range of individual and societal benefits that may be produced by the Bolashak program. Exploring a broader range of individual and societal benefits of a program like Bolashak may be especially important in contexts with a high incidence of corruption and concerns about democratic and human rights practices.

This study also focuses on exploring the benefits associated with study at the bachelor's and master's degree levels. The frequency of Bolashak awards for research internships increased dramatically in 2012 (after our study had commenced), when almost half of all Bolashak scholarships were awarded in this category. Additional research is needed to better understand the human capital and other benefits that result from this most recent programmatic focus.

### 5.2. Summary of findings

Despite the limitations, this study provides useful insights into the ways that programmatic characteristics and other forces are mediating – both positively and negatively – the human capital benefits that are produced by a government-sponsored international scholarship program. Although serving a small number of individuals who tend to reside in one of the nation's two largest cities, the program is perceived to be creating a number of benefits for individuals and employers. The low incidence of unemployment among recent Bolashak recipients, as well as the relative ease with which many recipients transition into Kazakhstan's labor market may be indicators of the value employers place on human capital developed abroad. Employers report benefitting from the Bolashak program through the knowledge imported by Bolashak recipients. Both ministry officials and employers perceive the program to be an effective, albeit imperfect, policy tool for addressing Kazakhstan's short- and mid-term workforce needs.

This study also suggests the ways that the benefits of this government-sponsored international scholarship program to human capital development may be influenced by aspects of the historical, political, economic, cultural, educational, and demographic context. Prominent contextual forces that emerged in this study include the availability of high-quality education at home, pervasiveness of corruption, workforce needs of employers, such geopolitical characteristics as the geographic size of the home nation, the concentration of highly-educated labor in the current

and former capital cities, and prevailing norms and expectations of the home and host nations.

### 5.3. Questions for policymakers, practitioners, and researchers

Although pointing to a number of potential and perceived human capital benefits, the findings from this study also raise a number of questions for policymakers, administrators, and researchers about how a government-sponsored international scholarship program should be structured so as to maximize human capital development for individuals and the sponsoring nation.

#### 5.3.1. Is the program more than a mechanism for screening desirable employees?

One question pertains to the extent to which a government-sponsored international scholarship program is actually building human capital rather than only screening potentially desirable employees. Recent unemployment rates of Bolashak recipients are low and participating employers reported that, compared to job candidates educated at home, recipients tend to have better judgment, critical thinking, and foreign-language skills (especially in English, a language required for many international partnerships), and have the technical knowledge required for global competitiveness. As in other research (e.g., Flander, 2011), recipients also are perceived to have an expanded "vision" and at least some employers are intentionally leveraging the insights gleaned from foreign study to stimulate innovation.

Some of these perceived qualities, such as content knowledge, familiarity with international standards, English language proficiency, and global perspectives, may reflect human capital accumulated while studying abroad. Other attributes, however, such as adaptability, flexibility, leadership, communication, and self-presentation skills, are likely characteristics that Bolashak recipients possessed even before participating in foreign study. If the latter is true, then at least some of the benefits of the Bolashak program are achieved through its selection process; the Bolashak program's screening process signals to prospective employers the individuals who possess a particular set of attributes.

A government-sponsored international scholarship program is an expensive approach to screening potentially productive workers for employers. Efforts to determine whether the benefits of a government-sponsored international scholarship exceed the costs must attempt to distinguish between the extent to which a program serves as a screening mechanism for employers and the extent to which it promotes real improvement in recipients' human capital.

#### 5.3.2. What are the trade-offs associated with particular eligibility criteria?

Another question pertains to the selection criteria. One challenge, especially in a nation where corruption is part of the context, is determining eligibility criteria that both signal fairness in the opportunity to participate and allow the opportunity for all to participate, especially for individuals who would not enroll in foreign education in the absence of the program. The academic eligibility criteria for the Bolashak program may increase the likelihood that recipients will successfully complete an educational program in another nation but also limit the program benefits to those who have had the best secondary school education. The collateral requirement reduces the government's financial risk but also limits participation to individuals from families with financial resources. At least some of these high-achieving, middle- and upper-income students would likely self-finance foreign education if the Bolashak program were not available.

### 5.3.3. Should a program restrict study to particular academic specialty areas?

A third question pertains to whether and how a program should encourage the development of particular types of knowledge. Through its attention to the international ranking of the institutions that recipients attend, the program appears to encourage study in nations that are not common destinations for Kazakhstani citizens. Through its specification of academic specialties the program is attempting to encourage foreign study in areas of national need and that are unavailable at home universities.

Only about 45% of international scholarship programs sponsored by governments worldwide designate academic priority areas (Perna et al., 2014a). Consistent with government behavior in a centrally-planned economy (Abrahart, 2000) and the Kazakh government's approach to appropriating funds to its home universities, the Bolashak program limits scholarships to designated academic specialties. This approach may build necessary human capital, especially if the specialties are unavailable in the home nation. But suggesting the challenges, only about half of earlier Bolashak recipients report obtaining employment directly related to their specialty area (Tileubergenov, 2011).

Reaching consensus about the most important priority areas and skills required for workforce readiness is fraught with political and other difficulties (Perna, 2012) and may not be sufficiently responsive to globalization and technological change (McMahon, 2009). Disagreement about whether the program should focus on training administrators rather than engineers, researchers, and teachers is one reason that the Global Education program proposed by Russian Prime Minister Medvedev has not advanced (Munasingh, 2013).

### 5.3.4. What level of study should a program fund?

A fourth question pertains to the most appropriate degree level. The benefits and costs of providing funding for different degree levels should be considered in light of a nation's higher education system and economic needs (McMahon, 2009). Although eliminating funding for undergraduate study may have reduced direct program costs (given the shorter length of master's degree programs than undergraduate degree study), the net benefits of this change for individuals and society are unclear. It is also not clear how the benefits vary based on both degree level (undergraduate or master's degree) and length of time (one year, two years, four years) spent studying abroad. Producing more doctoral degrees may foster development of the nation's own higher education system but additional foreign-educated bachelor's degree recipients may produce other benefits.

### 5.3.5. How should a program try to maximize the return on its investment?

A fifth question pertains to the extent to which a program should explicitly require recipients to return to the home nation after completing foreign study. Requiring recipients to return to work in Kazakhstan for five years or else repay the government for its investment likely minimizes the brain drain that often occurs with international scholarship programs (Knight, 2006). Although constructed somewhat differently, this requirement has parallels to programs in the U.S. that forgive loans for students who pursue degrees and obtain employment in designated fields (e.g., teachers, nurses). Nonetheless, the Bolashak program's work requirement may have negative consequences for human capital development, as it may encourage at least some potential candidates to forego the opportunity to participate in and benefit from the program.

The recently introduced requirement that scholarship applicants have to be employed when they apply for a Bolashak scholarship and that they have to work for the same employer after

program completion (unless they secure admission to a foreign university on their own) was designed to ensure that recipients acquire education that is relevant to employers. However, this requirement also has important negative consequences. An individual who returns to work for that employer for the mandated five-year period may find restricted opportunities to apply the skills acquired and may receive a smaller wage premium for these skills than might be available from another employer inside or outside of Kazakhstan. Requiring recipients to return and work for their previous employer may also create other inefficiencies, as employers are required to employ workers who may not have the required skills and/or workers may not be employed by firms that best utilize their education and skills.

### 5.3.6. How can a program ease the integration of recipients into the workforce?

A sixth question pertains to the ways a program should be structured and implemented so as to best promote the transition of recipients back into the home nation's workforce after they complete their foreign study. In this study, the human capital benefits to individuals, employers, and the nation appear to be influenced by the availability of post-program employment services. While some praised the available employment-related assistance, the concentration of former recipients in the nation's two largest cities implies the challenges associated with effectively linking graduates to employers located throughout a geographically large nation.

### 5.3.7. How can a program ensure broader societal change?

A final question pertains to the ways a program can be structured so as to facilitate and encourage broader societal change. The findings from this study suggest that difficulties associated with integrating new knowledge and perspectives into prevailing norms may limit the benefits of the human capital developed through a government-sponsored international scholarship program (and other efforts to create societal change). Some employers resented what they perceived to be Bolashak recipients' high sense of entitlement. Conflicting expectations about appropriate behavior during the job search may prejudice some employers against hiring Bolashak recipients, which in turn may negatively impact recipients' integration into the workforce in Kazakhstan. The dissatisfaction with, and disinterest in, public sector employment reported by some Bolashak recipients is consistent with other research (Altbach, 2004), but suggests that the program may have limited impact on the creation of broader societal policy changes.

Like other research (Marginson, 2006), the findings from this study suggest that the success of a government-sponsored international scholarship program for improving a nation's human capital development depends on the characteristics of the domestic governance, economic, and social infrastructure. The findings from this study also raise questions about the long-term impact of the Bolashak program, given the slow rate of national economic and cultural change.

## 5.4. Concluding note

Attention to how a government-sponsored international scholarship program may maximize benefits to individuals, employers, and society is important to policy and practice in many nations, as the promotion of foreign education through student mobility is a primary goal of the European Higher Education Area and because half (52%) of all nations worldwide sponsor at least one program that promotes higher education abroad (Perna et al., 2014a). The findings from this study offer insights for other nations that may be particularly useful to other

nations of the former Soviet Union and Soviet bloc, as well as other nations with a centralized, high-middle income economy and a high incidence of corruption.

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