

Understanding the programmatic and contextual forces that influence participation in a government-sponsored international student-mobility program

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Abstract Although prior research establishes the forces that “push” and “pull” students to participate in foreign study, the transferability of findings from earlier studies is limited by the absence of theoretical grounding. In addition, relatively little is known about how a government-sponsored student mobility program promotes foreign study in a nation with a transitioning economy. Using case study methods, this study explores the characteristics of students who participate in such a program and identifies the programmatic characteristics and contextual forces that promote and limit participation. The findings shed light on the appropriate theoretical perspectives for understanding student participation in a government-sponsored mobility program and illustrate the need to consider how aspects of the national cultural, economic, and political context influence participation. The findings also raise several questions about how an international student mobility program should be structured to encourage participation and maximize benefits to individuals and society within a particular national context.

Keywords International student mobility · Human capital · Public policy · National context

Reflecting an interest in maximizing the many benefits of foreign study to both individuals and society, governments around the world provide subsidies designed to encourage such behavior (Edelstein and Douglass 2012; Kim 1998; Perna et al. 2014). The benefits that a government-sponsored mobility program creates, however, depend on the characteristics of the program and participants.

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Participating in tertiary education abroad may be particularly beneficial for nations that are undergoing economic and political reforms, including the former states of the Soviet Union. In addition to taking advantage of well-established and high-quality educational offerings in other nations, promoting foreign education may build the international perspectives of the home nation's population and may contribute to the development of "global citizens" (Hunter et al. 2006). Foreign education programs are often intended to enhance students' understanding and knowledge of foreign cultures and language (Edelstein and Douglass 2012; Varghese 2008), develop intercultural adaptability and sensitivity (Root and Ngampornchai 2013; Williams 2005), and foster open-mindedness, cooperation, tolerance, flexibility, and other interpersonal soft-skills and cross-cultural understandings (Bird and Stevens 2008). Government-sponsored student mobility programs may also promote human capital development in the home nation, as students returning from study abroad may "contribute to faster creation of new knowledge and help other people acquire skills without any direct costs" (Kim 1998, p. 338). Foreign study may also produce other benefits, including raising national economic growth and productivity (Kim 1998), expanding the internationalization of democratic values (Spilimbergo 2009), and improving human rights practices (Atkinson 2010).

Many studies document the reasons that students report for participating in tertiary education outside the home nation. Some (often descriptive) studies assert that students may be "pushed" to study outside the home nation when they perceive that the quantity and/or quality of higher education at home is insufficient, have an interest in obtaining new cultural and intellectual experiences, and view study abroad as improving future employability. Students may also be "pulled" to study in a foreign nation by the prospect of participating in high-quality or specialized higher education options, learning a new language, building on ancestral or historical connections, and acquiring internationally-recognized credentials (Macready and Tucker 2011; Maringe and Carter 2007; Mazzarol and Soutar 2002).

Despite the contributions of these studies, knowledge of student participation in foreign study is limited in several ways. First, research tends to focus on short-term exchange programs sponsored by developed nations, including the United States, Canada, Australia and New Zealand, as well as Western European nations and the European Union. Although most student mobility occurs from developing to developed nations (Altbach 2004), only a few studies (e.g., Andere 2004; Mathews 2007) have examined participation in programs sponsored by developing countries.

Second, while shedding light on some aspects of student mobility, the transferability of findings is limited by the absence of theoretical grounding (as also noted by Souto-Otero et al. 2013) and consideration of the national context. Consequently, available studies do not explain why some forces push and others pull students to study abroad, whether the forces that push and pull apply to students living in other nations and considering other choices, or how policymakers in a particular nation should craft a mobility program to maximize participation across groups.

To address these limitations, this study explores the programmatic and contextual forces that contribute to participation in one program: Kazakhstan's Bolashak Scholars Program. Whereas much research draws on data obtained through questionnaires (e.g., Mazzarol and Soutar 2002; Netz et al. 2012; Souto-Otero et al. 2013), this study uses case study methodology to examine participation in a program sponsored by a nation transitioning from a state within the Soviet Union to an independent, democratic nation with a market-based economy to produce a more in-depth understanding of the forces contributing to program participation within a particular national context.

Guiding perspectives

Like research about the more general college enrollment process (Perna 2006), this study draws on the economic theory of human capital and sociological theoretical perspectives to conceptualize the decision to study in a foreign nation. Human capital theory predicts that students engage in foreign study when they conclude that the net benefits (the benefits less the costs) exceed the net benefits of pursuing other activities (Becker 1993). The individual benefits may be monetary (e.g., higher future earnings) and non-monetary (e.g., enjoyment of the learning experience); costs include the direct costs of attendance as well as the psychic costs of adjusting to and learning the norms of a foreign nation.

Research suggests that international student mobility produces many benefits (Atkinson 2010; Celik 2009; Crossman and Clarke 2010; Flander 2011; Luchilo 2009; Spilimbergo 2009; Williams 2005) and that students consider the benefits and costs in their decision to pursue foreign study. Using the nation as the unit of analysis, Naidoo (2007) found that the likelihood of international mobility declined as both domestic higher education opportunities improved (a measure related to potential benefits) and as tuition in the host country (a measure of costs) increased. Souto-Otero et al. (2013) found that the perception that grant amounts were insufficient to cover the costs of study abroad limited participation in the Erasmus program.

Sociological theories predict that assessments of the benefits and costs will be influenced by the contexts in which individuals are embedded, that is, the understandings, expectations, and resources of an individual's family, schools attended, local and regional community, and broader economic, social, policy, and political context (Perna 2006). As Cantwell et al. (2009) also argue, “the meaning that students give to the action of studying abroad is dependent on aspects of the political economy in both the sending and receiving countries, as well as the actors' understanding of these aspects, and may not be assumed as the same for all students” (p. 350). Differences in context (including the magnitude of the “knowledge gap” between the home and destination nations, Kim 1998) likely explain differences across nations in the predictors of participating in study abroad (e.g., Netz et al. 2012) and variations across regions in the characteristics of participating individuals (Choudaha et al. 2012).

One relevant contextual dimension is the availability of a government-sponsored international student mobility program. From a public policy perspective, programs that increase the demand for foreign study options address two types of market failures: the absence of complete information about the many non-economic benefits of foreign study and the failure of an individual to consider the many societal benefits that may result from study abroad (Paulsen 2001). Without government “intervention,” the level of participation in foreign education is less than optimal (McMahon 2009). Policies that reduce the financial costs of students' enrollment and/or reduce trade barriers (e.g., visa and other immigration issues) may encourage foreign study (Dee 2010). Strategies that governments around the world use for promoting foreign study differ considerably (Perna et al. 2014).

Although nations with innovation-driven economies offer a disproportionate share of government-sponsored student mobility programs, nations in all stages of economic and political development sponsor programs (Perna et al. 2014). McMahon (2009) concluded that the mechanisms that governments use to encourage enrollment in higher education should reflect the national context. For instance, when a nation's 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).

Research methods

To develop a more complete conceptualization of the programmatic and contextual forces that influence participation in a government-sponsored international student mobility program, this study uses case study analyses of one program. Three questions guide the data collection and analysis:

1. What are the characteristics of program participants?
2. How do program characteristics influence program participation?
3. How do other contextual characteristics influence program participation?

Case study methodology is appropriate given our interest in understanding program participation within a particular context (Yin 2003a, b). The case selected for this study is the Bolashak Scholars Program, an international scholarship program sponsored by the Republic of Kazakhstan and established by (then and current) President Nazarbayev in 1993. A former republic 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 square km) (Smailov 2013). A landlocked country comprised of 14 regions, Kazakhstan borders Russia, China, Kyrgyzstan, Uzbekistan, and Turkmenistan. Although not without similarities, Kazakhstan differs from other Central Asian nations in many ways including its "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).

Since achieving independence in 1991, Kazakhstan (like other former Soviet nations) has adopted many political and economic reforms. Signaling the success of these initiatives, both the European Union (in 2000) and the US Department of Commerce (in March 2002) granted Kazakhstan "market-economy status" (Bureau of Economic and Business Affairs 2012). Although real wages and employment rates fell and unemployment and self-employment rates spiked immediately following independence (Arabsheibani and Mussurov 2007), Kazakhstan now ranks 51st of 144 nations on the World Economic Forum's Global Competitiveness Index and is one of 21 economies transitioning from the second ("efficiency-driven") to third ("innovation-driven") of three stages of development (Schwab 2012). Also in this transition are other former-Soviet and Soviet-bloc nations (e.g., Estonia; Hungary; Russian Federation), Mexico, Turkey, some South American nations (e.g., Argentina, Brazil, Chile, Uruguay), and some smaller nations (e.g., Bahrain, Barbados, Trinidad and Tobago). The third stage ("innovation-driven") is dominated by nations in North America and Western Europe (Schwab 2012).

Transitioning to 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 and business models" (Schwab 2012, p. 9). Improving educational attainment is one effective approach for fostering a nation's technological advancement (Acemoglu and Robinson 2012; McMahon 2009).

Although Kazakhstan had relatively high rates of educational attainment and literacy when the Soviet Union dissolved, "the provision of the basic forms of education deteriorated in the initial stages of transition," as measured by expenditure on education per GDP and primary and secondary school enrollment rates (Arabsheibani and Mussurov 2007, p. 346). The World Economic Forum recently ranked Kazakhstan's health and primary education system 92nd of 144 nations (Schwab 2012). Suggesting some progress, the share of Kazakhstan's working age population (25 years and older) without any formal

education declined over the past 20 years, from an estimated 7.7 % in 1990 to 0.7 % in 2010 (Barro and Lee 2013).

The number of higher education institutions in Kazakhstan grew from 125 in 1996 to 177 in 2005 (Organisation for Economic Co-operation and Development 2007), but this expansion in system capacity led only to very modest increases in overall higher education attainment. Even with the founding of the nation's first research university (Nazarbayev University) in 2009, the percentage of Kazakhstan's working age population that completed tertiary education barely changed in the course of 20 years, rising from an estimated 8 % in 1990 to just 11.8 % in 2010 (Barro and Lee 2013). The World Economic Forum ranks Kazakhstan's higher education system 56th of 144 nations (Schwab 2012).

The Ministry of Education and Science of the Republic of Kazakhstan (2011) implies that funding higher education opportunities in other nations through the Bolashak program is a fruitful strategy for promoting the nation's transition to an innovation-driven economy, stating that the program has "made a significant contribution to the development of the country's human resources and has provided a unique opportunity to young talented Kazakhstanis to obtain education from the best universities in the world" (p. 7).

Data collection and analysis

Consistent with case study methodology (Yin 2003a), we developed data collection protocols based on our review of relevant theory and prior research. The research team collected and analyzed data from multiple sources. To understand the development, goals, and characteristics of the program, we reviewed presidential decrees as well as documents published by the Ministry of Education and Science. Documents that describe the development of the Bolashak program are available on the Center for International Programs' (CIP) website (www.bolashak.gov.kz).

We also reviewed available program data. We were unable to obtain data prior to 2005 beyond the total number of recipients. Until 2007, foreign quasi-governmental agencies (e.g., American Councils for International Education; British Council; French National Centre for University and School) placed scholars at universities abroad, prepared students' travel documents, and prepared students for the host country. After a 2005 independent audit revealed inefficiencies with the administrative structure, the government established CIP. CIP is responsible for disseminating program information; receiving applications and selecting applicants; sending scholars for training; tracking scholars' academic progress and return to Kazakhstan; providing employment assistance; and monitoring completion of program requirements.

In addition to reviewing available data and documents, we also conducted interviews with current and former program administrators, ministry officials, program recipients, and employers. We conducted an initial round of interviews in May 2012 with 16 individuals in Astana, the current capital. Analyses of these data informed a second set 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 third round of interviews in May 2013 with 12 individuals in Astana and 3 in Karaganda, the nation's fourth largest city. The 62 interviewed individuals comprise 3 officials from the ministry; 8 current and former program administrators; 18 employers of Bolashak recipients; 31 Bolashak recipients; and 2 administrators of other international student mobility programs in Kazakhstan. We interviewed Bolashak recipients in four small groups and seven individual interviews.

Recipients were purposively selected to include those who received support for study at the bachelor's, master's, and doctoral degree levels.

Interview questions focused on respondents' perceptions of program goals, participation and application requirements, services provided to recipients and employers, and program benefits, strengths, and weaknesses. Questions from the interview protocol included: How did you first learn about the Bolashak program? Why did you apply for the Bolashak scholarship? Would you describe the process of applying for the Bolashak scholarship? How well does the Bolashak program serve the needs of business and industry in Kazakhstan? and What do you think are the most important benefits of the Bolashak program? We deferred to interviewees' language preferences, conducting interviews in Russian and English. We audio-recorded all interviews (with permission) and produced English-language transcriptions. Most interviews were about 45 minutes in duration.

For the analyses, we first created a case study database for data from the documents, reports, and interview transcriptions (Yin 2003b). We used qualitative data analysis software (HyperResearch) to assist in the coding and compiling of data into categories. Multiple members of the research team participated in data coding and analysis. We worked together to develop a preliminary list of codes based on theory and prior research, but then 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 identified overarching themes. The diverse perspectives of the research team—with individuals working at universities in Kazakhstan and the US, with multiple nationalities (Canada, Hungary, Kazakhstan, and US), and who did and did not have direct prior experience with the program—contributed to a more comprehensive and nuanced analysis and helped to ensure the credibility and trustworthiness of the findings.

Findings

The number of Bolashak recipients has fluctuated over time. Participation was especially low in the program's "formation" years, 1993 to 2000, with the number of new awards ranging from a low of 17 in 1995 to a high of 187 in 1994. Between 1994 and 2004, 785 scholars received scholarships to study in 13 nations (CIP 2013c). In 2005 President Nazarbayev called for the program to expand to support 3,000 scholars at any given time. About 3,000 individuals now study in 200 universities in 24 nations through the Bolashak program (CIP 2013b). Between 1994 and 2013, 9,250 scholarships were awarded for individuals to study in 33 nations (Zhumagulov 2013).

Over time, the level of study funded by the program has also shifted. The program was initially limited to master's degrees but expanded to doctoral study in 2000, undergraduate study in 2005, and short-term research internships for faculty in 2008. To account for the expected contributions to undergraduate study of Nazarbayev University (the nation's first research university, founded in 2009), control costs, and address other issues (e.g., perceived "unreadiness" of younger students to live abroad for 4 years), new awards for undergraduates were eliminated in 2010. As a result, no new scholarships for undergraduate study were awarded in 2011; 86 % of Bolashak scholarships were for master's degrees, 3 % for doctoral degrees, and 11 % for research internships. By comparison, in 2005 69 % of Bolashak scholarships were awarded to undergraduates, 27 % to master's degree students, 3 % to doctoral students, and 1 % for post-graduate student assistantships (CIP 2012). Reflecting Kazakhstan's engagement in the Bologna Process (since 2011), the

program is expected to begin to provide funding to support short-term student mobility (one semester to 2 years in length) in 2015 (Foster 2013).

Variations in participation across groups

Program participation does not vary by gender. More men than women initially received scholarships but now about 50 % of the scholarships are awarded to women (CIP 2013b).

As noted by others (Stetar and Kurakbayev 2010), few recipients are from rural areas. Even with presidential recognition of the need to increase participation of rural youth and the establishment of a quota to achieve this goal, rural youth receive only small shares of the awarded scholarships (e.g., 8 % in 2010 and 3 % in 2011, CIP 2013a). A quota for rural areas is no longer relevant, as the program is now limited to post-baccalaureate degrees and no Kazakh universities are located in rural areas.

Limited data are available to consider variations in participation across other demographic characteristics. The only available measure of social class is parents' employment sector (e.g., private enterprise, state-owned organization). Data on the hometown of recipients suggests that recipients may be from higher-income families than non-recipients. About half (55 %) of applicants between 2005 and 2013 were from Almaty or Astana (CIP 2013b). With above average GDP per capita, Astana and Almaty are more economically prosperous than other areas of Kazakhstan; the only other region with comparably high GDP per capita is the oil-rich region of Mangystau (Statistics Agency of Kazakhstan 2012).

Program characteristics that influence participation

Several program characteristics appear to influence participation: perceptions of benefits relative to costs; selection criteria; collateral requirement; requirement to return and work in Kazakhstan; and availability of information.

Perceived benefits and costs

Consistent with human capital theory, program recipients believed that benefits exceeded costs. Suggesting the perceived benefits, recipients stated that they participated in the program to obtain “an overseas experience” and receive “a degree from one of the top universities in the world.” One recipient stated that the program “gives you opportunity to see the world, get top knowledge in the field, state of the art technologies, equipment, etc. of other universities, meet different people, network, and bring technologies—transfer them back to Kazakhstan.” Others perceive that recipients are the nation’s “future leaders” and are preferred by employers.

Recipients also stressed the program’s financial components, with some asserting it is more generous than scholarships in other nations. In a representative comment, one recipient explained, “The government pays for your education, they cover full living expenses, like, just everything.” A master’s degree recipient explained that the benefits were too attractive to pass up: “Of course, if my government was ready to pay for me and my fees, I had to find the best university in this area to go to—a world-top university.”

Coverage of the financial costs may be especially important for those from lower-income families. A master’s degree recipient explained that foreign education “is expensive and my parents couldn’t afford to pay for my education abroad and for living

expenses and everything.” Another master’s degree recipient stated, “The government provides a lot of support to people who, the young generation, who doesn’t have financial ability to go and study abroad. This is a great opportunity for all of us.”

Nonetheless, the financial components may be insufficient for more affluent families to accept, or be restricted by, program terms. An employer reported that her son is completing an undergraduate degree in London but is not receiving Bolashak funding because he wishes to study a major field that is not permitted by the program. (Since 2005, the scholarship has been available only for the priority specialties identified by the Republican Commission on Training Cadres Abroad.) Another employer explained that he is paying for his son to study at a university in China because his son cannot pass the Kazakh language requirement.

Selection criteria

In 2012 the Minister of Education and Science identified five categories of applicants: (1) those with at least 2 years of work experience who are self-admitted to master’s or doctoral-degree programs at foreign universities; (2) government employees for at least 2 years; (3) individuals employed in research and education; (4) recent graduates of universities who are employed in the university from which they graduated; and (5) individuals pursuing internships in education, research, engineering, and medicine.

Applicants for master’s degree studies who are not self-admitted are selected based on the following criteria: essay; transcript; minimum scores on the national secondary-school leaving exam, foreign language proficiency test, Kazakh language test, and psychological test; and interview (CIP 2013a). Except for the national secondary-school leaving exam, these items were also considered when the program funded undergraduate study. A former program administrator explains that the psychological assessment “gives a good sense of personality, individuality and, of course, internal stability... [The test can identify] if he [*sic*] is a total maniac, has a strong suicidal inclination, or is drug abuser.” Conducted by a panel of experts, the interview is designed to “assess knowledge of the constitution; we want them to understand which country we are living in,” history of Kazakhstan, and “goal setting: Who do you want to be? What is your dream? Why do you want to study abroad?”

Not surprisingly, we found that perceived characteristics of recipients mirror the selection criteria. Ministry officials, program administrators, scholarship recipients, and employers consistently described recipients as having strong academic performance and foreign language skills and as self-motivated. Recipients are an elite group, as one former program administrator estimated that “60–70 %” of applicants fail the interview; scholarship recipients described the interview process as “stressful” and “depressing,” with “very tough questions.”

Consistent with other research (e.g., Mathews 2007; Souto-Otero et al. 2013), participants perceive that insufficient English language skills limit participation. This perception persists even though the scholarship is available for study in non-English-speaking countries. Some also perceived that insufficient foreign language skills played a particularly large role in restricting participation of rural youth. When the program had quotas to increase participation of rural youth in undergraduate studies, it also lowered the foreign language proficiency requirement and offered rural students the opportunity to study English for 2 years prior to beginning their degree program.

Collateral requirement

Another programmatic characteristic that influences participation is the requirement that recipients pledge their homes as collateral against the value of the government's investment in their education. An employer explained that the collateral requirement "is a problem because not everyone has real estate of their own; some rent, some live not in the cities but in rural places." A recipient explained that, "Sometimes [a family's home] mortgage is less than amount of money they are going to spend on your education. Then you have to prove that another guy [*sic*] would cover your expenses."

The challenges of documenting collateral may be financial and bureaucratic. One recipient described the challenges associated with obtaining the required documentation:

The biggest challenge in Bolashak, when you've got the scholarship: you have to provide mortgage. This mortgage takes a lot. Because you get certain paper from the local governmental organization where they say that there is no mortgage on this building or whatever you are going to put up. And it is valid only for 1 day. If you live in a different part of Kazakhstan, you have to buy plane ticket, airfare, otherwise... Okay, they said it's valid for 3 days for Bolashak, but in this process, you bring everything to Astana. Then they confirm that everything is right. And you take all these papers and go back to your local city and go to local government and they put a stamp that now it is under mortgage. And then you take all this stuff and go back again to Astana, where you finally sign your Bolashak contract.

Other recipients stressed that the process of documenting the required collateral requires "a lot of money and effort" and must be accomplished in a very short period of time.

Obligation to return and work in Kazakhstan

Participation is also influenced by the requirement that recipients return and work in Kazakhstan for 5 years after program completion. Although some opt out of the program to avoid this requirement, most interviewees stated that the work requirement is appropriate, given the government's investment in their education. An individual who is both a current employer of Bolashak graduates and a former scholarship recipient stated:

I think is a good thing to come here to Kazakhstan and to work here for 5 years and you actually pay back to the government what they paid for you. It's a good requirement. I had no problems with coming back here to work in Kazakhstan.

Program information

As noted by others (Irsaliyev 2004), insufficient information is another program characteristic influencing participation. Some interviewees attributed the low participation of rural youth to the lack of information about application requirements and program benefits.

CIP has attempted to improve knowledge by sending employees to the regional capitals to take applications, providing information through its magazine and website, and engaging in a comprehensive media campaign. Launched in 2006, the website communicates application requirements and selection criteria, partner universities, and employment opportunities. In 2003 two national television channels began airing a series of programs entitled, "Bolashak is Education of the Future," with the goal of encouraging Kazakhstan youth to consider international education. A PhD recipient attributed his first

awareness of the program to the media campaign, explaining: “It was announced everywhere about Bolashak scholarships—through TV, radio, newspapers, everywhere, universities.”

Interviewees generally agree that most individuals now know about the program. Nonetheless, reflecting the complexities and new-ness of doctoral study in the nation rather than lack of information per se, knowledge about the use of the scholarship for doctoral study may still be lacking. In the words of one recipient: “Most students didn’t know how to apply for PhD programs.”

Contextual forces that influence participation

Our analyses reveal four aspects of context that influence participation: national norms for foreign study; quality of primary and secondary education; quality of available higher education; and democratization of opportunity.

National norms for foreign study

Kazakhstan ranks among the top 15 nations worldwide in the total number of students participating in tertiary education programs in a foreign nation ($n = 58,438$ in 2011, Organisation for Economic Co-operation and Development 2012). The number of all Kazakhs enrolled in tertiary education programs abroad—including those with and without Bolashak funding—is only about 18 % lower than for Russia ($n = 71,072$ in 2011), a nation with total population that is more than 8 times larger than that of Kazakhstan (142.5 million vs 17.7 million in 2013, Central Intelligence Agency 2013).

This high overall participation in foreign study may contribute to a “worldview” in which participation in Bolashak is understood to be worthwhile and appropriate. This predisposition may contribute to the program’s success in enrolling recipients in highly-ranked universities in developed nations. In the initial years, the program allowed scholars to study only at designated universities in the U.K., US, Germany, and France. Permissible destinations have changed over time. For instance, the program permitted study at 480 universities in 2008 but only 200 universities in 21 countries in 2009 (Ministry of Education and Science of Republic of Kazakhstan 2011). In 2012, the most common destinations of recipients were universities in the U.K. (39 %) and US (26 %), with only 9 % in Russia and the remainder dispersed across 30 other nations (CIP 2013c). In contrast, the most common destination of all Kazakh students enrolled in tertiary education programs abroad was Russia (50 % in 2012), with very small shares studying in the U.K. (4 %) and US (3 % in 2010, UNESCO Institute for Statistics 2012). The more general tendency to study in Russia is not surprising, as a high share of ethnic Russians populate the border regions and move across the border for study and work (Olcott 2010).

Quality of primary and secondary education in Kazakhstan

Weaknesses in the nation’s primary and secondary education (described in the methods section) likely limit the ability of some to meet academic selection criteria and the academic success of some scholarship recipients. Educational quality is perceived to be especially low in rural areas, likely contributing to the low rate of program participation among rural youth. A former administrator explained:

You have to admit a simple fact that a rural school graduate is a lower quality student than a city student. Some teachers are teaching multi-grades because of lack of teachers and small schools. You cannot demand any quality from such teachers. A lot of rural English teachers do not know English well.

Quality of higher education

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). The Ministry of Education and Science (2010) noted continuing weaknesses including corruption, absence of systematic approaches to faculty training, lack of current material and technical resources (e.g., library collections, laboratory equipment), and insufficient research funding.

At least some recipients pursued Bolashak because of perceived inadequacies in higher education at home. A doctoral-degree recipient explained:

After getting my bachelor's degree, I got my master's degree, then I got a PhD from Kazakh National University. And I always stayed in science, in biology. Then I just found out I can't get anything new here in Kazakhstan. Because the situation was not good—equipment, techniques from the beginning of this century. I just decided to go abroad and figure out if I can get more from there. And I applied for Bolashak scholarship for PhD.

An employer voiced a similar view: "The quality of their study [through Bolashak] is much higher than in any other university, especially here in Kazakhstan."

Democratization of opportunity

Another relevant contextual force is the perceived opportunity to participate. A former administrator described the perceived connections of early recipients, recalling that: "In 1995 when I was a student, I knew that someone went to study on Bolashak scholarship. It was mainly someone who was someone's relative. Sons or daughter of ministers or something like that, with a very high position." An employer reported hearing about the Bolashak program as a high school student in 1999 but believed at the time that "only elite people can go." Another employer described recalling how, in earlier years, program applicants were "surprised" by their awards:

They were applying and thinking that, as usual, it will be like—as usual, not transparent. And most had no hope they'd get accepted. When people came to us, to Human Resources, and said, "Listen. Without any connections, totally with ordinary education... We got accepted." We didn't think it was possible, in our country like this—to simply get accepted.

A few interviewees believed that initial recipients were "elite" not because of corruption but because of the many challenges facing the nation in the early years of independence. An employer explained that when the program started:

We actually had other economic issues to be solved. We didn't pay very close attention to that program. The people were very busy getting some food, some money, some clothes, rather than thinking about education... At the beginning,

usually participating people didn't have those problems... And usually, yes, that was rich people or people who are close to the government, elite people.

Two programmatic changes may have improved perceptions of the opportunity to participate. First, on March 3, 1997, President Nazarbayev decreed the need to regulate application and selection processes. Second, in 2005 President Nazarbayev decreed that the program expand to 3,000 scholarships. A former administrator explained the implications of this change: "When you have 3,000 scholarships, you have to fulfill this target, and you are not interested in their parents' position. You are interested in his GPA, his ability to study." A recipient noted the impact of the expansion on the perceived opportunity to participate: "In 2005 the situation changed. More people could go abroad and get the bachelor's, master's and PhD. That was encouragement for us to apply."

Discussion

Whereas other research identifies forces that push and pull students to foreign study, this study explains participation in a government-sponsored mobility program using the economic theory of human capital and sociological theories of context. The findings provide useful insights for policymakers and administrators in Kazakhstan and other nations about how the structure of a government-sponsored international student mobility program may encourage participation and thus maximize benefits to individuals and society.

First, policymakers and administrators should recognize that, consistent with human capital theory and the more general college enrollment decision (Perna 2006), individuals will likely only choose to participate in an international student mobility program if they perceive the benefits to exceed the costs. In this study, those who received the Bolashak scholarship perceived that program benefits outweighed the costs of attending a higher education institution abroad, demonstrating foreign language proficiency, documenting collateral, and returning to work in Kazakhstan. Students also considered in their decisions the availability of funding for higher education abroad, as well as the eligible academic majors, institutions, and destination countries. Building on these findings, policymakers and program administrators should identify the understandings that potential participants have of various program characteristics (e.g., application requirements, post-completion obligations, type and amount of funding, eligible majors, institutions, and destination countries, etc.) and how characteristics of their program influence the perceived benefits and costs of participation.

Findings from this study should also encourage policymakers and administrators in other nations to consider who has the opportunity to participate in and benefit from a government-sponsored mobility program. Opportunity is influenced in part by characteristics of the broader national context. Like other research (Kalyuzhnova and Kambhampati 2007, Mathews 2007), our study finds that participation in the Bolashak program has been lower in rural areas and higher in the largest and most affluent cities. These participation patterns mirror geographic differences in the availability of resources that promote participation, including the availability of high-quality primary and secondary education and program information. In its early days, the program served only a small number of politically-connected individuals. This pattern changed with programmatic efforts to reduce corruption and improvements in the economic health of the nation. Corruption (as evidenced by bribes for admission and oral examinations and other activities) is a relevant aspect of the higher education context in many nations (Heyneman 2013).

Policymakers and program administrators should also monitor the extent to which program characteristics influence the participation of different groups of students. Although the Bolashak program's generous coverage of foreign education costs may promote participation for those from less-affluent backgrounds, the need to document sufficient collateral and meet various rigorous selection criteria likely work in the opposite direction. The Bolashak program (like some merit-based programs in the US, e.g., Perna and Steele 2011) may primarily serve those with middle- and upper-middle-income backgrounds as at least some individuals from the highest income families opt out of the government's requirements and participate in foreign study on their own terms. As Lee et al. (2006) forecast, concentration of government resources at the upper end of the income distribution may increase in the future, as the Bolashak program now only funds post-baccalaureate study (and thus benefits only those who have successfully attained high-quality undergraduate preparation).

When considering the transferability of information about government-sponsored mobility programs sponsored by other nations, policy makers and program administrators should consider how national norms toward foreign study, the quality of domestic education, the presence of corruption, and other characteristics of the national context influence participation in a particular nation's program. Echoing findings from push/pull studies (e.g., Mazzarol and Soutar 2002), perceived inadequacies in the quality of tertiary education in Kazakhstan appear to increase the perceived benefits of foreign study. Relatively high national engagement in foreign study may contribute to an understanding that program participation is worthwhile. The Bolashak program may be leveraging this tendency to expand participants' study destinations.

Finally, the results of this study suggest the need for policymakers and program administrators to collect and use data that describe the characteristics of individuals who apply and are selected to participate and document recipients' experiences and outcomes. Although not structured to encourage equal educational opportunity, the Bolashak program's use of resources to enhance human capital of the highest-achieving students and requirement that recipients return the investment (by working in the country after program completion) may generate long-term benefits for the home educational infrastructure, a particularly pressing need as Kazakhstan transitions from an efficiency-driven to an innovation-driven economy. Fully understanding these benefits requires the systematic collection and analysis of relevant data.

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