

**The rationale for sponsoring
students to undertake international
study:** an assessment of national
student mobility scholarship programmes



Going Global 2014

Foreword

International student mobility is a crucial aspect of the internationalisation of higher education, enriching the lives of ambitious and talented young people from across the globe, and building greater understanding and trust between nations. The internationalisation of education is at the heart of what both the British Council and the German Academic Exchange Service (DAAD) do, and we are delighted to present this important study to you. It seemed like a natural fit to work together to develop this investigation and to manage this research project.

The benefits that international study can bring to the individual student and to the country, institution and community hosting the internationally mobile student are wide-ranging and well documented. The marketing and promotion of inward student mobility (including the use of scholarships to attract international students) is visible and plentiful, in particular within traditional host countries and institutions.

International mobility can also benefit the students' home countries – helping to build capacity and expand participation in tertiary education, to provide opportunities for further learning in disciplines unavailable at home, and to support developing more inter-culturally aware and employable graduates.

Countries take different approaches towards cross-border mobility on the part of their students. Some have no explicit policy towards international student mobility, while others take a more strategic approach and invest national funds to facilitate the outward mobility of their students. The importance of a strategy-led perspective on international student mobility is growing rapidly.

This report builds our comprehension of the underlying rationale as to why countries take very different approaches towards encouraging their domestic students to undertake an international study experience. More specifically, it broadens our understanding of the policies, scope, mechanisms, drivers and (perceived) benefits of international student mobility schemes across 11 countries.

To conduct this study, the British Council and DAAD worked with Boston College CIHE and GO Group, and optimised our combined knowledge, expertise and extensive networks to gather detailed documentary evidence and interview data from the study countries.

Through this report, the British Council and DAAD provide a detailed picture of the international higher education landscape with a focus on national strategies relating to promoting outward student mobility and the policy objectives that drive these.

The 11 case studies in this report are an important go-to reference, and the comparative analysis and findings contain valuable information for national governments and agencies looking to develop scholarship programmes and other initiatives to encourage outward mobility, as well as those who may not have considered doing so.

Jo Beall
Director, Education and Society,
British Council

Nina Lemmens
Director, DAAD, USA

Acknowledgements

The German Academic Exchange Service (DAAD) in partnership with the British Council conceived this research project and co-funded it together with support from Auswaertiges Amt. (the Federal Foreign Office of Germany). The Center for International Higher Education (CIHE) at Boston College, and Global Opportunities Group were contracted to conduct the study.

The principal author from GO Group was David Engberg working with Gregg Glover; Laura E Rumbley and Philip G Altbach provided expert input from CIHE. Nina Lemmens and Helmut Blumbach managed the project from the DAAD side. Liz Dempsey and Michael Peak managed the project from the British Council side.

We would also like to acknowledge the contributions of the country experts – further details are available in Appendix A.



Glossary

ASI: Agency of Strategic Initiatives (Russia)

BMSP: Brazilian Mobility Scholarship Program

BP: Bologna process

CAPES: The Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (Brazilian Federal Agency for Support and Evaluation of Graduate Education)

CIP: Center for International Programs (Kazakhstan)

COMEXUS: Mexico-United States Commission for Educational and Cultural Exchanges

CONACYT: National Council on Science and Technology (Mexico)

CPV: Communist Party of Vietnam

CSC: China Scholarship Council

CPNq: Conselho Nacional de Desenvolvimento Científico e Tecnológico (National Council for Scientific and Technological Development – Brazil)

DAAD: Deutscher Akademischer Austauschdienst (German Academic Exchange Service)

DIKTI: Directorate General of Higher Education (Indonesia)

GDP: Gross Domestic Product

HCDPs: Human Capital Development Plans (Indonesia)

HEC: Higher Education Commission (Pakistan)

HEI: Higher education institution

IIE: Institute for International Education

KASP: King Abdullah Scholarship Program

LASPAU: Academic and Professional Programs for the Americas

MEC: Ministry of Education and Culture (Indonesia)

MES: Ministry of Education and Science (Kazakhstan)

MHRD: Ministry of Human Resource Development (India)

MOET: Ministry of Education and Training (Vietnam)

MOF: Ministry of Finance (Vietnam)

MOHE: Ministry of Higher Education (Egypt, Saudi Arabia)

MSJE: Ministry of Social Justice and Empowerment (India)

NSMC: National Scholarship Management Committee (Pakistan)

NKC: National Knowledge Commission (India)

NTF: National Training Foundation (Russia)

OSS II: Overseas Scholarships for MS/MPhil Leading to PhD, phase two (Pakistan)

SACM: Saudi Arabia Cultural Mission

SC: Scheduled Castes (India)

SC/ST: Scheduled Castes and Scheduled Tribes (India)

SPIRIT: Scholarships Program for Strengthening Reforming Institutions (Indonesia)

STEM: Science, technology, engineering, and mathematics

USAID: United States Agency for International Development

VIED: Vietnam International Education Development

Summary of findings

A broad range of countries around the world provide some form of tertiary scholarship programme for the outward mobility of their citizens. This examination of publicly supported national scholarship programmes in 11 countries finds that there are a number of shared characteristics across these initiatives, as well as differences, in the ways national governments approach these activities, what they hope to gain from them, and the extent to which they document the results and impact of scholarship programmes.

Key findings of this analysis

There are a variety of different reasons why countries choose to implement scholarship programmes for outward mobility. However, most of these can be distilled down to a common interest across all countries to enhance the human-resource capacity among their citizens. More specifically, most countries are interested in enhancing their national knowledge base in the fields and disciplines seen as most closely connected with economic development – most often in the STEM (science, technology, engineering, and mathematics) fields.

The majority of countries provide scholarship support at the graduate level (i.e. master's and doctoral-level study), the implication being that there will be a 'multiplier effect' exerted by programme alumni, who return to their home countries to take up teaching, research and related knowledge-development activities. Only a small number of countries provide scholarship support

in non STEM-related fields or at the undergraduate level – although some of the undergraduate scholarship programmes are quite large in terms of the numbers of students they send abroad. Most of this publicly funded mobility is 'vertical' in nature, whereby participants are provided with support to attend prestigious or highly ranked institutions in ostensibly more highly developed countries in the global north.

The processes for selecting scholarship recipients vary to some degree, but most involve appreciably transparent and standardised approaches to advertising scholarship opportunities and vetting qualified candidates through the use of selection committees and expert panels. Still, many countries could expand their recruitment activities to ensure the largest pools of possible participants are identified, given that some scholarships go unused for lack of qualified applicants. In addition, more care may need to be taken in a number of national contexts to ensure that scholarship programmes do not perpetuate social inequality already pervasive in society. Very few scholarship programmes specifically target disadvantaged social groups; most are ostensibly merit-based in their approach to application criteria and awarding decisions.

Likewise, few programmes seem to engage their alumni in organised or sustained ways. The provision of 're-entry' support for returnees is not a priority among the programmes examined in this study. Furthermore, programme alumni are rarely consulted or involved for use in

the ongoing operations or improvement of the scholarship programmes from which they have benefited.

Several common assumptions pervade the discourse about the value of implementing outward mobility scholarship programmes. Most notably, there is a shared understanding across the countries included in this study that there is a positive correlation between education and prosperity. Furthermore, there seems to be little debate about the value of investing in the overseas education of a small number of citizens; this review indicates that there is a generally accepted notion that society will reap appropriate benefits from this investment in the future. Interestingly, however, apart from quantitative information – focused largely on the number of scholarship participants, their destinations, and fields of study – there are enormous gaps by country in terms of documented proof of the tangible outcomes of these significant investments. Indeed, despite the obvious feel-good factor about such scholarship programmes, and the logic behind providing opportunities for high-quality training abroad to enhance economic development in the sending countries, much remains to be done to fully appreciate what these scholarship programmes actually achieve – for the individuals whose mobility is supported, the countries that fund them and the institutions in both sending and receiving countries where the intellectual experiences are most directly lived out.

Contents

	Foreword	
	Acknowledgements	
	Table of contents	
	Glossary	
Outward mobility study	Summary of findings	
	1. Introduction	3
	1.1 Overview	4
	1.2 Focus of this project	4
	1.3 Outward mobility scholarship programmes in context	5
	1.4 Methodology	5
	2. Country case studies	7
	2.1 Brazil	8
	2.2 China	11
	2.3 Egypt	16
	2.4 India	19
	2.5 Indonesia	23
	2.6 Kazakhstan	27
	2.7 Mexico	31
	2.8 Pakistan	35
	2.9 Russia	38
	2.10 Saudi Arabia	42
	2.11 Vietnam	46
	3. Analysis	51
	3.1 Motivations for outward mobility programme development	52
	3.1.1 National development	52
	3.1.2 Human capacity development in key fields	53
	3.1.3 Organisational reform and performance enhancement	53
	3.1.4 Interpersonal and international connections	53
	3.1.5 Social inequalities	54
	3.2 Characteristics of outward mobility programmes	54
	3.2.1 Scale and approach	54
	3.2.2 Focus and funding	55
	3.2.3 Administration and selection	56
	3.2.4 Eligibility, participation and distribution	57

3.3 Outward mobility programme outcomes and impacts	58
3.3.1 Individual programme impacts	59
3.3.2 Organisational impacts	60
3.3.3 National impacts	60
3.3.4 Other impacts	60
4. Recommendations and questions for future enquiry	61
4.1 Begin and end with rationale	62
4.2 Provide high-quality, goal-orientated and responsive programme administration	62
4.3 Define 'quality' thoughtfully	63
4.4 Measure and ensure programme impact	63
4.5 More questions ahead	64
Appendices	65
A: Country experts	66
B: National Outward Mobility scholarship programmes by Country	66
C: Scholarship questionnaire	72

1. Introduction

1.1 Overview	4
1.2 Focus of this project	4
1.3 Outward mobility scholarship programmes in context	5
1.4 Methodology	5

1. Introduction

1. Introduction

1.1 Overview

Worldwide, demand for tertiary education has expanded dramatically over the past 25 years, a function of population increases, expanding incomes and the value assigned to tertiary education as a driver of individual social mobility and national economic development.¹ In some countries, however, tertiary institutions often lack the capacity to accommodate growing numbers of secondary school graduates, do not offer programmes in certain fields, have shortages of highly trained academic staff and/or suffer from poor quality. These challenges are especially acute in developing nations, where deficiencies in tertiary capacity, variety and quality limit the ability to develop human-resource capital, a central ingredient in fuelling innovation and economic growth.² In response, many countries are engaging in cross-border tertiary education activities in an effort to grow their stock of highly skilled human capital and, by extension, expand national (largely economic) capacity. These activities can take many forms. At the institutional level, they include the establishment of foreign branch or foreign-branded campuses. At the programme level, examples include dual/joint degrees programmes and twinning programmes, as well as e-learning courses. And at the individual level, they involve the movement of people – both into a country to provide instruction or training to a domestic audience, or, more commonly, away from a country for full or partial degree attainment or for non-degree training.

Individual cross-border mobility has expanded rapidly in recent years. In 2000, 2.1 million students worldwide

participated in tertiary education abroad.³ By 2010, the number had risen to 4.1 million.⁴ Estimates suggest that 7.2 million students will be seeking tertiary education abroad by 2025.⁵ The majority of these students are moving of their own accord from developing nations (education importers) to developed ones (education exporters), especially those where English is spoken. They undertake study abroad for many reasons, among them to obtain knowledge and credentials not available at home, to gain the prestige of a foreign degree, to improve their professional prospects and, in some cases, to emigrate. Most are seeking full degrees, with roughly equal numbers pursuing undergraduate and graduate study. Business, management and STEM fields attract the majority of international enrolments. Most internationally mobile students are self-sponsored – that is, they pay for their education themselves.

In a growing number of countries, however, governments are launching and operating outward mobility scholarships that send their citizens abroad for tertiary training. This is not a new phenomenon: a number of countries have funded outward mobility scholarships for decades. But it represents an expanding and evolving trend, and is thus one with important implications for sending countries, receiving countries, support agencies and those nations considering whether developing outward mobility programmes might be in their strategic best interests.

1.2 Focus of this project

This project reviews national government-funded outward mobility scholarship schemes in eleven countries (Brazil, China, Egypt, India, Indonesia, Kazakhstan, Mexico,

Pakistan, Russia, Saudi Arabia and Vietnam) with the goal of better understanding why governments sponsor these programmes; how they are designed, administered, and funded; who participates and where they study; and what impact the programmes are having. Its aim is not to be globally exhaustive in presenting and analysing the provision of outward mobility scholarships, but instead to explore a subset of national examples that – by their varied size, scope and orientations – may provide a meaningful picture of key trends and issues of relevance to a broad international audience.

This section contextualises those that follow. In Section 2, the individual country case studies are presented. Nine of the 11 cases follow a common design (overview; scholarship reviews; impact considerations; and future prospects) that intends to relate the country's outward mobility scholarship 'story' and to assist with browsing and cross-country comparison. The Egypt and India case studies vary from this format and are less robust in scope. They are included, however, because of each country's political and economic importance on the world stage, and because of their unique approaches to outward mobility scholarship programming when compared to the other countries examined in this report. Section 3 analyses the case studies from a comparative perspective. Sub-sections focus on why nations offer outward mobility scholarships; the key characteristics of these programmes (focus, scale, funding, administration, participation and destination); and what impact they are having. Section 4 draws from the case comparisons to present a series of recommendations related to the provision of outward mobility scholarships, and identifies questions for future inquiry.

1. Altbach, PG, Reisberg, L and Rumbley, L (2009). *Trends in Global Higher Education: Tracking an Academic Revolution*. Boston: Center for International Higher Education.
2. Task Force on Higher Education and Society (2000). *Higher Education in Developing Countries: Peril and Promise*. Washington, DC World Bank.
3. Source: OECD (2012). *Education at a Glance*.
4. Ibid.
5. Bohm, A, Davis, D, Meares, D and Pearce, D (2002). *The Global Student Mobility 2025 Report: Forecasts of the Global Demand for International Education*, IDP, Canberra, Australia.

1.3 Outward mobility scholarship programmes in context

The 11 nations reviewed in this project are certainly not the only ones providing government-funded scholarships – indeed, they are only a small sample. By one estimate, there are 183 nationally funded scholarship programmes for outward student mobility around the world, with some 52 per cent of the world's countries (102 in all) offering at least one such programme.⁶ Although a substantial body of literature has been generated on various aspects of a small number of long-standing student mobility programmes – notably, the Fulbright Program in the United States and the Erasmus programme in Europe, neither of which are covered in this report – relatively little has been written about outward mobility programmes from a comparative perspective.

One of the most notable recent examinations of nationally funded scholarship programmes – produced by colleagues at the University of Pennsylvania (United States) and Nazarbayev University (Kazakhstan) – provides a typology of such initiatives around the world. The typology was developed by examining key variables of scholarship programmes, including such aspects as the economic competitiveness of the home country, the degree of political freedom of the home country, the study level (postgraduate versus undergraduate) for the scholarships offered, academic discipline or field priorities/restrictions imposed by the scholarship programme, destination restrictions imposed by the programme and the return obligations of the programme.⁷ Four main types of scholarship programmes were identified:

- Type 1 – development of basic skills.
- Type 2 – development of advanced knowledge in developing nations.
- Type 3 – development of advanced knowledge in developed nations.
- Type 4 – promotion of short-term study abroad.

From this global population of nationally funded programmes, 94 (51 per cent) were found to fall into the Type 3 category, while 33 (18 per cent) were considered Type 2. Both Type 2 and Type 3 programmes overwhelmingly provide funding for postgraduate study and impose restrictions on destinations for scholarship recipients. One hundred per cent of Type 2 programmes include return obligations, but only 55 per cent of Type 3 programmes were found to oblige recipients to return to the home country.⁸

Framing this analysis is an understanding that 'foreign education' (i.e. study outside the home country) is related, both practically and theoretically, to notions of economic- and human-capital development, as well as to the generation of broader societal benefits by returnees. While individuals choose to pursue education outside the home country for a variety of reasons, benefiting society at large is presumably a less important objective for them than achieving their own goals, particularly when they are self-funding. Government support for outward mobility, however, changes this equation – 'With an international scholarship program, a government "intervenes" in the higher education market in ways that increase the number of students who are studying at or earning degrees from a postsecondary educational institution in a foreign country.'⁹ In doing so, the national government also presumably aims to realise a broader societal benefit from this investment. Data from the European Union's

flagship student mobility programme, Erasmus, seem to support the plausibility of this assumption: 'The major professional impact of Erasmus is not to enhance individual career benefits for the mobile ones, but a – macro-societal – change of the overall competencies of graduates in line with the growing internationalization of the world of work.'¹⁰

The comparative analysis that exists on scholarship programming is tantalisingly scarce. This void leaves open many questions about the ways in which approaches to this work around the world parallel and/or contradict one another, and ultimately, what such efforts and investments produce. Set against this backdrop, this study thus represents an important initial perspective on this phenomenon. Ideally, this analysis will benefit a broad range of stakeholders involved in designing, developing, managing, and sustaining these types of scholarship programs, as well as those who are hosting scholarship program recipients and engaging meaningfully with the sending countries.

1.4 Methodology

The data collected for this study were supplied almost exclusively by country experts, that is, project colleagues living in, or intimately familiar with, the case countries and their outward mobility scholarships.¹¹ This data-collection approach was selected for two principal reasons: First, to minimise language complications (each of the country experts is fluent in English and the case country language) and, second, to improve access to primary source data, whether that be unpublished government documents or informants associated with the various scholarship programmes and who understand their contextual nuances.

6. Perna, L et al. (2014). *Promoting Human Capital Development: A Typology of International Scholarship Programs in Higher Education*. Educational Researcher, Vol. 43, No. 2, pp. 63–73.

7. Ibid.

8. Ibid.

9. Ibid, p. 64; Paulsen (2001), as cited in Perna et al (2014).

10. Teichler, U (2013). *The Event of International Mobility in the Cure of Study – The European Policy Objective*. In Zgaga, P, Teichler, U and Brennan, J (Eds.) *The Globalisation Challenge for European Higher Education. Convergence and Diversity, Centres and Peripheries* (pp. 55–78). Frankfurt am Main: Peter Lang.

11. A list of the country case experts is included in Appendix A.

The country experts collected data in two phases. During phase one, they compiled lists of all active outward mobility programmes in their country that include government funding.¹² Given the number and variety of these programmes, it was decided to focus the case study reviews on scholarship programmes that:

- result in recipients earning an undergraduate or graduate degree abroad or credits that count towards a degree that is later conferred at home
- have been active during the past five years
- are funded in part or in whole by the national government.

Scholarships linked with university-to-university exchanges and those not resulting in a recipient earning academic credit, like a non-degree training programme, are excluded from the case reviews. So, too, are scholarships that use national funding to encourage inward student mobility and scholarships funded entirely by businesses or individual philanthropists.

In the second phase, the country experts completed questionnaires, prepared and distributed to them by the research team, for each qualifying scholarship.¹³ They also uploaded relevant data materials to a cloud-based file-sharing platform. The research team then used the completed questionnaires and supporting materials to develop the individual country case studies, following up with the country experts, as needed, for additional information. While the case studies follow a consistent format, they do not profile all qualifying scholarships in each country. Instead, for the countries with many qualifying scholarships (Brazil, Mexico and Pakistan, for example), one or two scholarships were selected for specific scrutiny. This approach allowed for deeper presentation of at least one programme for each case country and closer consideration of its purposes, features and impacts. The comparative case study methodology was then used to evaluate the case experiences. This qualitative review process works well with data collected from a variety of sources and is especially well suited for research that seeks to understand similarities inherent in complex phenomena.¹⁴

The 11 nations reviewed in this project were selected on the basis of their geographic distribution; their political and economic status on the world's stage; the diversity of their scholarship programmes, especially in relation to their scale (large and small), scope and administrative approach; and because it was anticipated that data about their programmes would be readily available for analysis. While certainly prominent in discussions related to educational mobility, well-known scholarship schemes, such as Erasmus and Fulbright, were excluded. This decision reflected their focus on short-term, non-degree and professional development programming, the supra-national nature of the funding (for Erasmus), and because much is already known about their purview, oversight and impacts. By focusing on less well-known programmes in countries that are predominately education importers, this project seeks to offer a new and broader perspective on the practice of outward mobility programmes.

12. A list of all programmes in each country is included in Appendix B.

13. See Appendix C.

14. Miles, MB and Huberman, AM (1994). *Qualitative Data Analysis* (2nd edition). Thousand Oaks, CA: Sage. Yin, RK (1994). *Case Study Research: Design and Methods*. Thousand Oaks, CA: Sage.

2. Country case studies

2.1 Brazil	8
2.2 China	11
2.3 Egypt	16
2.4 India	19
2.5 Indonesia	23
2.6 Kazakhstan	27
2.7 Mexico	31
2.8 Pakistan	35
2.9 Russia	38
2.10 Saudi Arabia	42
2.11 Vietnam	46

2. Country case studies

2.1 Brazil

Glossary terms:

- BMSP: Brazilian Mobility Scholarship Program
- STEM: science, technology, engineering and mathematics
- CAPES: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (Brazilian Federal Agency for Support and Evaluation of Graduate Education)
- CPNq: Conselho Nacional de Desenvolvimento Científico e Tecnológico (National Council for Scientific and Technological Development).

Overview

Brazil increased its capacity to encourage outward mobility in dramatic fashion shortly after US President Barack Obama's visit with President Dilma Rousseff in April 2011.

At that time, roughly 6,000 Brazilians travelled abroad for graduate study, and virtually no government support existed for undergraduate students to study abroad.¹ Shortly thereafter, President Rousseff announced a bold plan to establish 75,000 new scholarships to send Brazilian students abroad for tertiary study. The idea for the Brazil Scientific Mobility Program (BSMP) was born.² This programme, together with long-standing scholarships administered by CAPES, an agency within Brazil's Ministry of Education, and by CNPq, an agency of its Ministry of Science, Technology and Innovation, comprises a significant effort by

Statistics overview: Brazil

1. Population (world rank)	201,009,622 (6)
2. Per-capita GDP	US\$11,700
3. Public expenditure on education as a per cent of GDP	5.6%
4. Number of HEIs: public–private	531–2,069
5. Number of tertiary students	4,453,156
6. Number of mobile tertiary students: outbound–inbound	26,148–14,738
7. Per cent of labour force with tertiary education	8.6%
8. Tertiary gross enrolment ratio (%): 1990–2007	11%–30%

Source:

1. The World Factbook 2013–14. Washington, DC: Central Intelligence Agency, 2013. (<https://www.cia.gov/library/publications/the-world-factbook/index.html>).
2. Ibid.
3. Ibid.
4. http://en.wikipedia.org/wiki/Universities_and_higher_education_in_Brazil
5. http://gse.buffalo.edu/org/inthigheredfinance/files/Country_Profiles/Latin_America/Brazil.pdf
6. UNESCO Institute for Statistics (www.uis.unesco.org/education/Pages/international-student-flow-viz.aspx).
7. World Bank (<http://data.worldbank.org/indicator/SL.TLF.TERT.ZS>).
8. World Bank (<http://data.worldbank.org/indicator/SE.TER.ENRR>).

Brazil to promote the outward mobility of its students at a time when demand for tertiary education placements is growing and the country is working to improve its economy.

Brazil Scientific Mobility Program

BSMP became official by presidential decree in December 2011. At that time, official figures for the programme were raised to 101,000 scholarships: 76,000 to be funded by the government and 25,000 by private funds. This enormous undertaking seeks to invest in Brazil's knowledge society by supporting full and partial undergraduate and post-graduate (master's and doctoral) study, as well as research and teaching sojourns for professionals.³ In doing so, it purports to enhance Brazil's innovation capacity in technological industries, better integrate Brazil into international knowledge

networks and encourage internationalisation at Brazilian higher education institutions, most of which did not previously have mobility schemes in place. Another important characteristic of BSMP is that, for the first time in Brazil's history, a large-scale programme is aimed at specific strategic areas only, in this case science, technology, engineering and mathematic (STEM) fields and medicine. This demonstrates a strategic decision by the government to insert Brazil into the mainstream of the global knowledge economy. Despite early protests from humanities scholars, these fundamental characteristics of the programme remain unchanged.

Initially, programme officials used university rankings to identify 200 eligible foreign institutions to which scholarship recipients could apply. This number has since

1. President Obama observed in their meeting that only 7,500 Brazilian students studied in the United States, while the number of Chinese students exceeded 120,000.
2. In Portuguese, the programme's official name is *Ciência sem Fronteiras*. Although the literal English translation of the programme is *Science Without Borders*, this name is a registered trademark of the Khaled bin Sultan Living Oceans Foundation. To avoid conflict, Brazil Scientific Mobility Program is used to refer to the programme in English.
3. BSMP also provides funding for foreign scientists and graduate and undergraduate students to visit Brazil for study and research.

increased to 250.⁴ In terms of applicant eligibility, there are no preferences for gender, income or ethnicity, although there have been demands for ethnic quotas by organised movements. To ensure that the public investment in awardees yields a return to society, regulations require that scholarship recipients abroad return to Brazil after completing their studies for at least the same amount of time that they studied abroad. No other special advantages or services are provided to recipients upon returning to Brazil.

Two agencies administer the programme: The Brazilian Federal Agency for Support and Evaluation of Graduate Education (CAPES), an office of the Ministry of Education, is responsible for 40,000 scholarships; and the National Council for Scientific and Technological Development (CNPq), an office of the Ministry of Science, Technology and Innovation, manages 35,000.⁵ Private companies co-manage 26,000 scholarships in partnership with these agencies, normally CNPq when research is involved and CAPES when professional training is the main objective. The programme is promoted through the national press and advertising on national television and websites, with calls for proposals/applications issued at regular intervals.

Different criteria are used to evaluate graduate and undergraduate applicants. For post-graduate awards, candidates must be admitted to a foreign higher education institution before beginning the application process, and selection is determined on a case-by-case basis by a variety of expert committees. Affiliate organisations like LASPAU (Academic and Professional Programs for the Americas) in the United States, assist with selection and then the matching of award winners with institutions. At the undergraduate level, scholarship students study abroad while completing a degree programme in Brazil. Consequently, the institution where the applicant is

enrolled conducts initial selection. Each institution may use its own eligibility criteria – normally based on academic performance – and selection procedures, with CAPES then providing final approval. CAPES manages placement abroad, in partnership with local agencies in 20 countries, such as the Institute of International Education (IIE) in the United States and DAAD in Germany. A steering committee selects countries for placement based on the feasibility of success and student interest.

The 76,000 scholarships offered by the Brazilian government are fully funded from the federal budget. All scholarships include travel expenses, health insurance and an initial allowance, with individual awards varying by level and destination.

CAPES scholarships

CAPES was created in 1951 as a government agency to 'ensure the existence of specialised personnel in sufficient quantity and quality to meet the needs of public and private projects which aim to develop the country.'⁶ Since then, it has been an important agency for the education of specialised human resources, and has maintained scholarship programmes for all areas of knowledge, both for Brazilian and foreign institutions, with the majority existing in the humanities. At the postgraduate level, CAPES offers scholarships for full doctoral study, as well as sandwich programmes where students complete one year of their doctoral studies at a foreign institution. CAPES also administers several overseas scholarships offering one year of undergraduate study, mainly in engineering or basic science. Most CAPES scholarship students study in the United States, France, Germany and the UK. In 2011, over 600 students received CAPES scholarships to complete full doctorates abroad and 1,350 undergraduates received sandwich scholarships.

Brazil's Ministry of Education oversees CAPES scholarship programmes. CAPES'

committees make final decisions on applicants for graduate-level scholarships, which are evaluated on an individual basis. Admission to a tertiary institution abroad is mandatory before candidates will be considered for a scholarship. CAPES awards are promoted online and via outreach to universities. Funding comes from the Ministry of Education. All scholarships include travel expenses, health insurance and an initial allowance.

While no specific evaluation system exists for CAPES scholarship programmes, the common understanding is that they have contributed on a fundamental level to the development of science and research in Brazil, albeit to a smaller degree over time than the BSMP.

Impact

Following the establishment of BSMP, the Brazilian government commissioned the Center for Management and Strategic Studies, an agency of its Ministry of Science, Technology and Innovation, to design a methodology to assess the programme's impact. CAPES and CNPq will implement the methodology, which focuses on four areas: impact at the institutional level; production of knowledge and innovation; impact at the personal level, mainly employability and career path; and impact on society. To date, no report using the methodology has been publicised. As of December 2013, over 39,000 BSMP scholarships have been awarded towards a target of 45,000 projected by that date.⁷ These figures are quite encouraging considering the unprecedented size and scope of the project. However, the Minister of Education has stated that while the government has already approved almost 50,000 scholarships (65 per cent of its total before 2015), the private sector has approved only 3,600 (less than 15 per cent of its share).

It is still too early to fully evaluate the impact of BSMP. The experiences of the first undergraduate students to return from their

4. The enormous challenge of sending massive numbers of students only to top-ranked international universities soon became evident. After the first announcement of BSMP, most of the institutions available to host Brazilian students were not ranked among the top 250 universities worldwide.
5. CAPES is an acronym from the organisation's name in Portuguese, Coordenação de Aperfeiçoamento de Pessoal de Nível Superior. Likewise, CNPq is an acronym of Conselho Nacional de Desenvolvimento Científico e Tecnológico. História e Missão. CAPES. (Cited: 5 December 2013) www.capes.gov.br/sobre-a-capes/historia-e-missao
6. História e Missão. CAPES. (Cited: 5 December 2013) www.capes.gov.br/sobre-a-capes/historia-e-missao
7. See online source for real time count: Painel de Controle do Programa Ciência sem Fronteiras. *Ciência sem Fronteiras*. (Cited: 2 December 2013) www.cienciasemfronteiras.gov.br/web/csf/painel-de-controle

period abroad may have a deep impact on the rigid STEM curricula in Brazil. In two years, Brazil turned from almost no undergraduate students abroad to tens of thousands.⁸ Universities around the world have turned their attention to hosting Brazilian students, and see Brazil's ambitious scholarship initiatives as a reliable source of students and tuition fees in a time of crisis in higher education. The programme is highly unique in that for the majority of Brazilian institutions, it has been the first and only incentive for a still incipient internationalisation process.

Some relevant issues have emerged since the programme's inception. Perhaps most significant is the importance of English language competence for a programme of this scale: The small number of Brazilian students who meet minimum English requirements has proven problematic. As a remedy, CAPES and CNPq are funding and providing English language courses through *Inglês sem Fronteiras* (English without Borders) programmes, and more recently by sending students abroad six months before their studies begin for immersion English language training.

Another aspect concerns the reality of sending massive numbers of students exclusively to top-ranked universities around the world. This became clear after the very first announcements for the programme when most of the institutions available to host the students were not highly ranked. Portugal, for example, a popular early destination, offered only one institution in the original host list.

Future prospects

It will likely take years until the full impact of the Brazil Scientific Mobility Program can be fully measured and understood. While ambitious, the government approval and implementation aspects of the programme have enjoyed significant progress before it is due to conclude in 2015. The future of the programme may be affected by the Brazilian national elections in October 2014.

Scholarship programme overview: Brazil Scientific Mobility Program

Years operational	2011–present (2015 scheduled end date)
Total awards	101,000 (planned)
Awards since inception	Approximately 39,000
Administrative authority	CAPES (Ministry of Education) and CNPq (Ministry of Science, Technology and Innovation)
Funding	Brazilian government; private funds
Eligibility	Citizenship; host-country language fluency
Level/s supported	Bachelor's, master's and doctoral (full and partial)
Fields supported	Science, technology, engineering, mathematic, medicine
Recipient obligations	Recipients obliged to return to Brazil and remain for at least the same amount of time as their study abroad
Host universities	Top 250 institutions worldwide, determined by international rankings

Figure 1: Numerical breakdown of scholarship levels

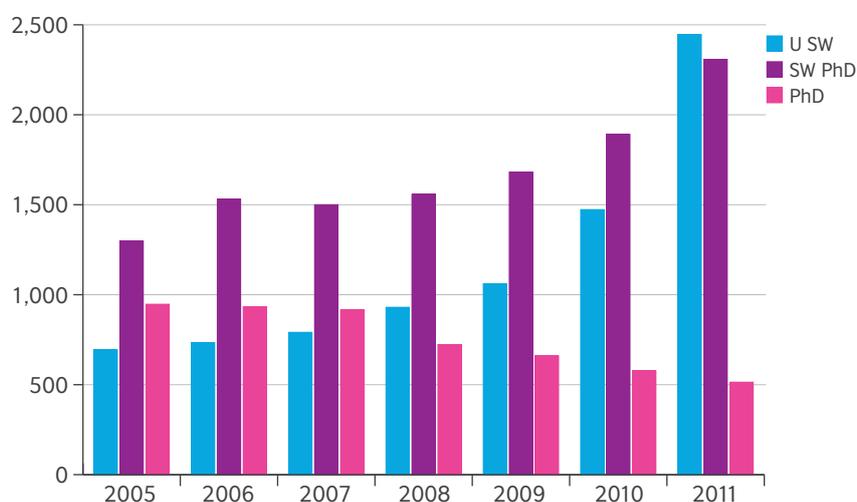


Figure: general trends in scholarships administered by CAPES. U SW = Undergraduate Sandwich, SW PhD = PhD Sandwich, PhD = Full PhD. Data from GEOCAPES.

These numbers include the Brazilian Scientific Mobility Program (BSMP). Some general trends can be noticed: a strong increase in undergraduate scholarships (especially in 2011 with the start of BSMP), steady decreases of full PhD scholarships and an increase in the sandwich PhD scholarships.

Source: GEOCAPES. CAPES. (Cited: 5 December 2013). <http://geocapes.capes.gov.br/geocapesds/#>

8. The goal of the programme is to sponsor 64,000 undergraduate scholarships out of a total of 101,000.

2.2 China

Glossary terms:

- CSC – China Scholarship Council

Statistics overview: China

1. Population (world rank)	1,349,585,838 (1)
2. Per-capita GDP	US\$9,100
3. Public expenditure on education as a per cent of GDP	N/A
4. Number of HEIs: public–private	1736–706
5. Number of tertiary students	25,632,973
6. Number of mobile tertiary students: outbound–inbound	562,889–71,673
7. Per cent of labour force with tertiary education	N/A
8. Tertiary gross enrolment ratio (%): 1990–2007	3%–23%

Source:

1. The World Factbook 2013–14. Washington, DC: Central Intelligence Agency, 2013. (<https://www.cia.gov/library/publications/the-world-factbook/index.html>).
2. Ibid.
3. Ibid.
4. Ministry of Education, China (2013). Statistics for 2012. Retrieved from www.moe.gov.cn/publicfiles/business/htmlfiles/moe/s7567/201309/156873.html
5. Ibid.
6. UNESCO Institute for Statistics (www.uis.unesco.org/education/Pages/international-student-flow-viz.aspx).
7. N/A.
8. World Bank (<http://data.worldbank.org/indicator/SE.TER.ENRR>).

Overview

The People's Republic of China understands education is key to its development and global competitiveness. For over a decade, government spending on education has increased at over 20 per cent per annum and now totals more than US\$250 billion each year.⁹ Beginning in the early 21st century, a substantial commitment was made to developing and funding outward mobility scholarships. The design and scope of these programmes has changed over time in step with national priorities. Early programmes focused primarily on sending Chinese education professionals abroad for non-degree professional-development training, with award recipients choosing their own fields of study and host universities. A series of national policy statements, published after 2005, triggered

a shift in this approach.¹⁰ Enhanced training in science and technology and the development of a more innovative workforce were identified as priorities to China's future economic competitiveness. The creation of several new scholarship schemes followed. Unlike the earlier programmes, these focus on degree attainment in priority fields, require recipients to return to China following completion of their studies, and map more closely with China's efforts to build world-class tertiary education institutions. They also represent a significant increase in the number of awards distributed each year.

National Merit Scholarship

The National Merit Scholarship for Self-Funded Study Abroad Students is China's first student-focused scholarship

programme.¹¹ Launched in 2003, and still ongoing, it offers up to 500 scholarships per year to Chinese students who are already engaged in doctoral studies abroad. Individuals pursuing any major may apply for the scholarships, so long as they are under 40 years of age and have not previously received government funding. Awards are for a fixed US\$6,000 per person per year, although a select number of US\$10,000 awards are reserved for exceptional applicants, usually those involved in research in key fields.

To apply, candidates submit materials to the Chinese Embassy in their host country.¹² Embassy staff send the top applications to the China Scholarship Council (CSC), a non-profit organisation affiliated with China's Ministry of Education, for additional scrutiny. Final awards are made by the Ministry of

9. Source: www.nytimes.com/2013/01/17/business/chinas-ambitious-goal-for-boom-in-college-graduates.html

10. *The National Outlines for Medium and Long-term Planning for Scientific and Technological Development* (2006–2020) No. 44 [2005] of the State Council (<http://cfd.seu.edu.cn/s/583/t/2172/73/24/info95012.htm>); 11th Five-Year Plan for National Economic and Social Development (2006–10) (http://english.gov.cn/2005-11/09/content_247198.htm).

11. Official programme name: 国家优秀自费留学生奖学金.

12. Host countries currently include Australia, Austria, Belarus, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Israel, Japan, The Netherlands, New Zealand, Norway, Portugal, Russia, Singapore, Spain, Sweden, South Africa, South Korea, Switzerland, Thailand, United Kingdom, United States, Ukraine.

Education.¹³ In offering these awards, the government's stated purpose is to help self-funded students. However, the awards also represent an opportunity to encourage recipients to return to China's workforce; following completion of a degree, grant recipients are encouraged to contact embassy officials for help making professional connections and finding work at home.¹⁴

Elite Doctoral Scholarship

Launched in 2007, the Elite Doctoral Scholarship¹⁵ focuses on China's best students and universities. The programme's goal is to train a cadre of leading-edge science and technology experts who will return to China to help improve and reform the country's tertiary education system. It was established to address concerns that without proactive talent development, the country's future innovation and research capacity would continue to lag behind other nations, thereby diminishing China's global competitiveness.¹⁶ Like the National Merit Scholarship, this programme funds doctoral education. It differs, however, in that only students enrolled at China's top universities – those receiving Project 211 and Project 985 funds – may apply.¹⁷ Also, award recipients receive full funding and are required to pursue degrees in fields identified as important to China's development and competitiveness (energy and resource sciences, environmental and agricultural

sciences, information technology, life sciences, aero sciences, marine sciences and nano-material sciences). A final difference is its scale – at 7,000 grants per year¹⁸, it is ten times larger than the National Merit Scholarship.

Master's Scholarship

China's Scholarship for State-Funded Master's Students¹⁹ was started in 2009 and also funds study in fields deemed critical to national development and competitiveness. Its goals are to develop top-level universities and academic disciplines, promote international collaboration in graduate education, strengthen the teaching and research quality of Chinese universities and help recipients develop global skills and outlook.²⁰ The programme targets government agency and vocational/technical school employees. Students from these schools may also apply, but no more than 50 student awards are made each year. Applicants must be under 40 years of age and demonstrate fluency in the language of their host country. Award winners may pursue full degrees abroad or partial degrees under joint supervision.

Elite Bachelors Scholarship

China's first outward mobility scholarship for undergraduate students, the International Exchange Schemes for Elite Undergraduate Students,²¹ was launched in 2012. It funds approximately 3,000 students per year,²² most of whom go abroad in their final year of study. The programme's goals are to encourage inter-institutional collaboration and cultural exchange, improve recipients' cross-cultural skills and abilities, and, like the doctoral and master's programmes, 'develop talent.'²³ Like the doctoral scholarship, this programme targets students from China's top universities, although study in specific fields is not required. Following their studies, award recipients are required to return to China to complete their home university degrees.

All government-sponsored tertiary mobility scholarships in China, inbound and outbound, are administered by the CSC. Applicants for the new doctoral and master's scholarships apply directly to the CSC. Candidates for the undergraduate scholarship submit materials to their universities, which then forward the best applications to the CSC for additional scrutiny. Peer review panels, organised by the CSC, review applications, after which staff in China's Ministry of Education make final award decisions based on the panels' recommendations. Applications for all three scholarships must include a letter of offer

-
13. China Scholarship Council (2013). Regulation for Scholarship for Self-funded Study-abroad Students (in Chinese). Retrieved from www.csc.edu.cn/Chuguo/Default.aspx?cid=271, accessed 29 October 2013.
 14. Shen, R (2011). Developing a new mechanism for public-funded study abroad programmes (in Chinese). *China Scholar Abroad*, 2011(11): pp. 14–16.
 15. Official programme name: 国家建设高水平大学公派研究生项目.
 16. Wang, WL and Cao, Z (2007). Expanding postgraduate students studying abroad is a demand from China's human capacity building strategies: an interview with Ms Xiu-Qing Zhang, the secretary of the China Scholarship Council (in Chinese). *China Scholar Abroad*, 2007(6): pp. 12–13. Zhou, Y and Zhang, H (2009). Developing public-funded study-abroad programmes, enhancing high-level human resource building, and serving the strategic demand of the country: an interview with Mr Jing-Hui Liu, the secretary of the China Scholarship Council (in Chinese). *World Education Information*, 2009(9): pp. 10–15.
 17. Project 211 and Project 985, launched by China's central government in 1995 and 1998 respectively, funnel billions of dollars annually to around 100 national universities with the goal of lifting the quality of their teaching, research and infrastructure to world-class levels.
 18. 2014 target number.
 19. Official programme name: 国家公派硕士研究生项目.
 20. China Scholarship Council (2013c). Application for Scholarship Schemes for State-Sponsored Master's Students (in Chinese). Retrieved from www.csc.edu.cn/Chuguo/ef6a0410f70d489cbffd99c7c2bfa6d2.shtml, accessed 29 October 2013.
 21. Official programme name: 优秀本科生国际交流项目.
 22. 2014 target number.
 23. China Scholarship Council (2013d). Application for International Exchange Schemes for Elite Undergraduate Students (in Chinese). Retrieved from www.csc.edu.cn/Chuguo/a08eccd5bf9c40cabd4bd8e0d57a914f.shtml, accessed 29 October 2013.

from a host campus. As a consequence, most scholarship winners end up at universities with which their institution has a standing partnership agreement. Most are in developed Western countries.

Each of the new scholarships covers all expenses for the duration of a recipient's time abroad, including international airfare, with individual award amounts differing based on living and tuition costs in the host country. Unlike China's National Merit or Professional Development scholarships, doctoral and master's grant recipients sign contracts requiring them to return home and work for at least two years following completion of their studies. The CSC promotes the scholarship opportunities on its website, while encouraging universities to distribute information about the programmes and their application cycles to their students.

Impact

According to CSC statistics, fewer than 3,000 Chinese received government-funded outward mobility scholarships in 2003. In 2010, that number increased to over 13,000.²⁴ Such figures illustrate the country's greatly increased commitment to human resource capacity development and are a sign that the country's intellectual capital is indeed increasing. Overarching impact measures, whether qualitative or quantitative, have not been undertaken, however. Apart from the CSC's tracking the number of award disbursements, there has been no formal assessment of the broader impact these programmes are having. Indeed, officials report that there is

currently no tracking of how many award recipients return to China after completing their studies, despite many being contracted to do so.

Nevertheless, a number of academic reviews of the scholarship schemes have identified several positive outcomes. For instance, universities are said to be benefiting from greater interdisciplinary collaboration between campus units, an increase in partnership agreements with foreign institutions, and, perhaps most significantly, changes to the provision and quality of graduate education.²⁵ In addition to the academic training and qualifications individuals receive, officials familiar with the programmes also point to an improvement in communication skills and the understanding of different cultures, as well as improved employment prospects.²⁶

Future prospects

Currently, all of China's outward mobility schemes are being operated without a scheduled end date. With policy documents identifying the next decade as critical to China improving the scientific and technological dimensions of its workforce and with its tertiary education institutions engaged in efforts to improve their teaching and research quality and expand their links with institutions abroad, it seems likely that funding for these programmes will continue for the foreseeable future. Determining whether or not the scholarship schemes will indeed meet the national policy goals that inspired their creation will not be possible without the establishment of formal impact review procedures.

24. China Scholarship Council Yearbook (2003–10).

25. Shen, R (2011). Developing new mechanism for public-funded study abroad programmes (in Chinese). *China Scholar Abroad*, 2011(11): pp. 14–16.

26. Zhou, Y and Zhang, H (2009). Developing public-funded study-abroad programmes, enhancing high-level human resource building and serving the strategic demand of the country: an interview with Mr Jing-Hui Liu, the secretary of the China Scholarship Council (in Chinese). *World Education Information*, 2009(9): pp. 10–15.

Scholarship programme overview: National Merit Scholarship

Years operational	2003–present (no scheduled end date)
Awards per year	Approximately 500
Awards since inception	Approximately 3,400
Administrative authority	China Scholarship Council
Funding	Chinese government
Eligibility	Any citizen currently enrolled in a doctoral programme in another country
Level/s supported	Doctorate
Fields supported	Any
Recipient obligations	None
Host universities	Any; current host countries include Australia, Austria, Belarus, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Israel, Japan, The Netherlands, New Zealand, Norway, Portugal, Russia, Singapore, Spain, Sweden, South Africa, South Korea, Switzerland, Thailand, United Kingdom, United States, Ukraine

Scholarship programme overview: Top University Scholarship

Years operational	2007–present (no scheduled end date)
Awards per year	7,000 planned for 2014
Awards since inception	Approximately 37,000
Administrative authority	China Scholarship Council
Funding	Chinese government
Eligibility	Project 211 or 985 university enrolment, host-country language fluency, under 35 years of age, previous international study or work experience, citizenship
Level/s supported	Doctorate (full and partial)
Fields supported	Approved list only
Recipient obligations	Return home to work for at least two years
Host universities	Must be home university partner; current host countries include Australia, Belgium, Canada, France, Germany, Japan, New Zealand, Switzerland, United Kingdom, United States

Scholarship programme overview: Master's Scholarship

Years operational	2009–present (no scheduled end date)
Awards per year	350 planned for 2014
Awards since inception	Approximately 4,600
Administrative authority	China Scholarship Council
Funding	Chinese government
Eligibility	Host country language fluency, under 40 years of age, previous international study or work experience, citizenship
Level/s supported	Master's
Fields supported	Approved list: agriculture, public management, economics and business studies, social work, international finance, international law
Recipient obligations	Return home to work for at least two years
Host universities	Home university partner preferred; current host countries include Japan, Russia, Singapore, Spain, Sweden, Thailand, United Kingdom, United States

Scholarship programme overview: Bachelor's Scholarship

Years operational	2013–present (no scheduled end date)
Awards per year	3,000 planned for 2014
Awards since inception	Approximately 3,000
Administrative authority	China Scholarship Council
Funding	Chinese government
Eligibility	Any student currently enrolled at a Project 211 or 985 university; citizenship
Level/s supported	Bachelor's (full and partial)
Fields supported	Any
Recipient obligations	Complete degree at home university
Host universities	Must be home university partner; current host countries include Australia, Belgium, Canada, Columbia, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Poland, Portugal, Russia, Singapore, Spain, Sweden, South Korea, Switzerland, United Kingdom, United States

2.3 Egypt

Glossary terms

- HEI – Higher education institute
- MOHE – Ministry of Higher Education
- USAID – United States Agency for International Development

Overview

The Arab Republic of Egypt has a long history – with evidence dating from the early 19th century – of sending its citizens abroad to acquire skills seen as valuable to the national interest.²⁷ Indeed, ‘Since the early 1900s, Egypt has adopted a system of “Scientific Missions” aimed at enhancing research, education and development in Egypt, based on the transfer of technology and know-how from scholars who travel to various parts of the world and obtain degrees and qualifications from abroad.’²⁸

Today, the Central Administration for Missions and Cultural Representations, which sits within the Egyptian Ministry of Higher Education (MOHE), is responsible for overseeing a range of international study and research opportunities for

Statistics overview: Egypt

1. Population (world rank)	85,294,388 (16)
2. Per-capita GDP	US\$6,500
3. Public expenditure on education as a per cent of GDP	3.8%
4. Number of HEIs: public–private	68–105
5. Number of Tertiary Students	2,397,863
6. Number of mobile tertiary students: outbound–inbound	11,627–49,011
7. Per cent of labour force with tertiary education	N/A
8. Tertiary gross enrolment ratio (%): 1990–2007	17%–N/A

Source:

1. The World Factbook 2013–14. Washington, DC: Central Intelligence Agency, 2013. (<https://www.cia.gov/library/publications/the-world-factbook/index.html>).
2. Ibid.
3. Ibid.
4. http://en.wikipedia.org/wiki/Education_in_Egypt#Higher_education_system
5. www.britishcouncil.org/learning-skills-for-employability-egyptian-education.htm
6. UNESCO Institute for Statistics (www.uis.unesco.org/education/Pages/international-student-flow-viz.aspx).
7. World Bank (<http://data.worldbank.org/indicator/SL.TLF.TERT.ZS>).
8. World Bank (<http://data.worldbank.org/indicator/SE.TER.ENRR>).

qualified Egyptian academics and researchers. This scholarship landscape includes both state-financed scholarships, as well as grants offered to Egyptians by foreign entities, including governments, non-governmental agencies, HEIs, etc. Scholarships offered by foreign entities directly to individuals employed by the Egyptian government must be approved by the MOHE so that the scholarship recipients may obtain an approved leave-of-absence from their posts in order to pursue the scholarship opportunity, and so that the Egyptian cultural bureaux in the host countries can follow up on awardees’ academic progress while abroad.

The Egyptian government is motivated to support these activities in order to move Egypt towards ‘a better future’ through the ongoing development of

its universities and research centres. Improving the qualifications of academics and researchers is seen as a key to improving the quality of education and scientific research in the country, which in turn can provide tangible benefits to the country’s development goals.²⁹

In the contemporary era, the MOHE has established seven five-year plans (beginning in 1982) to provide a policy framework for Egyptian scholarships for study and training abroad. During each five-year plan, the government has made adjustments and modifications in relation to the key areas emphasised for support and development, depending on the national priorities and interests of the moment. For example, under the current five-year plan (2012–17), the emphasis is on creating a modern society based on science and technology.

27. Information provided by Sector of Cultural Affairs and Missions (13 November 2013).

28. Education, Audiovisual and Culture Executive Agency (EACEA); (2012). ‘Higher Education in Egypt.’ Retrieved 29 January 2014 from http://eacea.ec.europa.eu/tempus%20/participating_countries/overview/egypt_tempus_country_fiche_final.pdf

29. Information provided by Sector of Cultural Affairs and Missions (13 November 2013).

In working to achieve this broad objective through scholarship support for international study and training, the government is keen to ensure that its actions are coherent and effective. Perhaps most fundamentally, there is a primary interest in assuring that the investment in international scholarships contributes meaningfully to building a strong, qualified scientific community that is capable of fulfilling its role as the engine of future scientific advancement in Egypt. In addition, efforts to improve and expand Egyptian tertiary education overall must run parallel to the country's foreign scholarships initiatives, so that the system can absorb returnees and incorporate what they have learned from their experiences abroad. In essence, there is a fundamental interest in maximising the return to the higher education system on the investment made in these scholarships. The government is further concerned with making clear and accurate determinations about the national plan for scientific advancement. Part of this work includes devising a selective worldwide map of the universities and research institutes that distinguish themselves internationally in various fields and disciplines of interest to Egyptian development interests.

These are ambitious official objectives. In light of limited impact assessment of Egypt's various scholarship-related activities, however, it is unclear the extent to which the various components of these efforts are yielding the desired outcomes for the modernisation agenda of Egypt's higher education sector and the country's national plan for scientific advancement.

Government missions

Currently, the government of Egypt funds a series of overseas study opportunities generally called government missions. Support is available across three main categories: full-degree scholarships for students pursuing doctorates abroad (up to four years); joint supervision scholarships for those pursuing doctorates from Egyptian universities but also working with supervisors abroad (up to two years); and scholarships for short-term postdoctoral and sabbatical research sojourns abroad (three to six months).³⁰

During the life cycle of the sixth five-year plan (2007–12), the yearly budget for state-financed scholarships was approximately US\$80 million.³¹ In the period 2012 to 2014, 240 awards for overseas doctoral study (full-degree), 485 overseas postdoctoral/research awards and 720 joint supervision awards were granted.³² The majority of recipients between 2012–14 were male – ranging from 68 per cent among the joint supervision awardees to 79 per cent of the postdoctoral/research awards. Input from informed sources indicates that the government sometimes does not meet its goals for scholarship awards. For example, in some years, the missions office planned to distribute awards to over 1,000 individuals to pursue doctorates abroad but sent fewer because not all applicants met qualifying criteria, such as language proficiency.³³

The missions programme is targeted at the academic staff in Egypt's government universities and research centres, and these scholarship opportunities are announced annually online by the MOHE. Eligibility criteria include an age limit of 30 years for doctoral candidates, and 40–50 years for postdoctoral grants, depending on career status (i.e. 40 years of age for assistant professors, 45 years for associate

professors and 50 years for professors). Scientific committees are established to evaluate applications and select award recipients. Meanwhile, Egypt's cultural centres and educational organisations abroad communicate with foreign universities to assist in the admission and enrolment of awardees. In principle, any institution around the world can be considered as a host for a mission awardee, however the Egyptian government is committed to having its scholarship recipients affiliate with institutions with high global rankings (although no specific ranking scheme is systematically adhered to) and reasonable fees.³⁴

Mission scholarships cover each awardee's tuition, fees, round-trip travel and health insurance, and also provide a monthly stipend and allowances for books, clothing and housing. An additional allowance may be provided to students with accompanying family members. The specific funding amount received by recipients varies with the local costs and expenses incurred overseas.

Upon completion of their overseas experience, scholarship recipients are required to attend their home institutions for a period equal to two years per year of their scholarship support, but not to exceed seven years. As an incentive, if mission awardees complete their studies early, they are entitled to a financial reward (essentially, a monthly stipend for each of the remaining months of the grant). Returnees who have distinguished themselves abroad have the opportunity to receive a grant from the Ministry of Scientific Research through the Science and Technology Development Fund to create or improve research centres at their home institution, so that they may continue their outstanding work in Egypt. If a grantee does not return after the mission, the government requests reimbursement.

30. Personal communication with Dr Mohsen Elmahdy Said, 6 November 2013.

31. Information on the breakdown across the various programmes funded by this budget could not be obtained.

32. Information provided by Sector of Cultural Affairs and Missions (13 November 2013).

33. Personal communication with Dr Mohsen Elmahdy Said, 6 November 2013.

34. Sector of Cultural Affairs and Mission. (13 November 2013).

Foreign scholarships

Egypt's government is implicated, to a certain extent, in all scholarship activity in which government employees are involved. When it comes to awards granted by foreign entities, the Agreements Administration within the MOHE's General Administration for Cultural Relations, and a similar unit within the Foreign Ministry, both co-ordinate the work of interacting with the stakeholder parties (particularly the scholarship grantors and grantees), and reviewing such grants.

As a result of this framework, several executive programmes have been established with 'friendly countries.' These are scholarship programmes that are implemented and executed bilaterally between Egypt and the counterpart governments abroad. There are 21 such executive programmes active today, running the gamut from short-term language study opportunities to multi-year doctoral support. All of these executive programmes enjoy at least partial funding support from the host country governments. However, the MOHE tops up insufficient funding from the host side so that recipients are sufficiently supported financially. About half of the 21 countries involved in these executive programmes are European (Austria, Belgium-Flanders, Czech Republic, Denmark, Finland, Greece, Hungary, Italy, Norway, Slovenia), and half non-European (Armenia, Azerbaijan, China, India, Japan, Kazakhstan, Mexico, Pakistan, Russian Federation, South Korea, Tajikistan).

The Central Administration of Missions has also started a number of new programmes in co-operation with the German Academic Exchange Service (DAAD) and the Fulbright Commission, where both the MOHE and the foreign organisations co-finance the programmes. Furthermore, the Central Administration of Missions has been selected to implement the Cairo Initiative, a US-Egypt initiative to develop human capacity and strengthen Egypt's workforce via domestic and US-based training and full degree attainment in key areas.³⁵

Impact

According to statistics issued by the MOHE's Strategic Planning Unit, some 4,168 Egyptians received missions scholarships to pursue doctoral degrees abroad during the period of the sixth five-year plan (2007–12). Another 3,100 benefited from foreign grants or studied abroad at their own expense. The MOHE believes that this – along with its support for joint supervision sojourns abroad ultimately yielding doctoral degrees issued in Egypt – has made a significant impact in terms of raising the quality of doctorate holders in Egyptian universities and research institutes.

Apart from such quantitative details, however – such as numbers of awards given – there is little evidence of a systematic or sustained effort to assess the impact of the overseas scholarship support or the professional trajectories of awardees.

Future prospects

Given Egypt's long-standing interest in providing overseas study opportunities for its citizens, it is difficult to imagine that this commitment to an investment in scholarships for study outside the country will erode. This assessment seems particularly accurate in light of Egypt's ongoing interest in advancing its economic development and modernisation agendas. In spite of the social, political and economic turmoil of recent years, the mission department is working hard to send abroad as many scholars as possible and to keep up with its plans to expand on government and foreign support.

35. See www.eecous.net/ci.html

2.4. India

Glossary terms

- MHRD – Ministry of Human Resource Development
- MSJE – Ministry of Social Justice and Empowerment
- NKC – National Knowledge Commission
- SC – Scheduled Castes
- SC/ST – Scheduled Castes and Scheduled Tribes

Overview

In terms of numbers of tertiary education institutions, India has the largest higher education system in the world, with some 35,000 undergraduate colleges, 700 universities and another 12,748 diploma-granting entities.³⁶ Similarly, its student population is estimated to be the world's third largest, after China and the United States. There is every indication that India will soon surpass the United States' total enrolment numbers, given that the country's modest gross enrolment ratio stands at approximately 18 per cent, and there is significant interest among both policy

Statistics overview: India

1. Population (world rank)	1,220,800,359 (2)
2. Per-capita GDP	US\$3,800
3. Public expenditure on education as a per cent of GDP	3.85%
4. Number of degree-granting institutions – affiliated colleges/universities	700–35,539
5. Number of tertiary students	18,500,000
6. Number of mobile tertiary students: outbound–inbound	200,621–21,432
7. Per cent of labour force with tertiary education	10%
8. Tertiary gross enrolment ratio (%): 1990–2007	6%–12%

Source:

1. The World Factbook 2013–14. Washington, DC: Central Intelligence Agency, 2013. (<https://www.cia.gov/library/publications/the-world-factbook/index.html>).
2. Ibid.
3. University Grants Commission (UGC), 'UGC at a glance', March 2012.
4. www.dreducation.com/2013/08/data-statistics-india-student-college.html
5. Ernst & Young Report for the Federation of Indian Chambers of Commerce and Industry (FICCI) – Education Summit 2012.
6. Outbound information: UNESCO Institute for Statistics (www.uis.unesco.org/education/Pages/international-student-flow-viz.aspx); inbound information: personal communication from UGC (14 February 2012).
7. World Bank (<http://data.worldbank.org/indicator/SL.TLF.TERT.ZS>).
8. World Bank (<http://data.worldbank.org/indicator/SE.TER.ENRR>).

makers and the general public to expand access to tertiary education.³⁷

Even without having yet achieved universal tertiary education access, in India 'an enviable 4.4 million new graduates and postgraduates are joining the country's labour force each year. India's sizeable young population presents a demographic advantage, in that the labour market's high growth rate is potentially sustainable over time and may give India an edge over competitors in many sectors of the economy.'³⁸ Yet India's tertiary education system is beset with enormous challenges, including the fact that it 'suffers from a

quality deficit, is poorly organized, overly bureaucratic, lacks direction, and does not yet serve a large-enough proportion of young people demanding access.'³⁹

As in many countries around the world, India is concerned with the quality, relevance and efficiency of its tertiary education system, particularly in terms of advancing the country's social and economic objectives in the coming decades. Indeed, in 2005, India's prime minister convened the National Knowledge Commission (NKC), whose mission 'was to prepare a blueprint for India to capitalise on its intellectual resources and enormous

36. Altbach, PG (2013). 'India: The Dilemmas of Reform.' In Rumbley, LE and Helms, RM (Eds.). *India: The Next Frontier* (pp. 7–9). International Briefs for Higher Education Leaders, No. 3. American Council on Education and Boston College Center for International Higher Education.

37. Ibid.

38. Narayanan, L (2013). 'Higher Education and the Indian Labor Market.' In Rumbley, LE and Helms, RM (Eds.). *India: The Next Frontier* (pp. 11–12). International Briefs for Higher Education Leaders, No. 3. American Council on Education and Boston College Center for International Higher Education.

39. Altbach, PG (2013), pp. 7–8.

knowledge base in order to meet the challenges of the 21st century.⁴⁰ So far, however, with just one very small-scale exception described below, this blueprint has not included a national-level commitment to fund international study experiences for Indians. There also seems to be little such support at the level of India's 28 states, where a great deal of responsibility for tertiary education rests, given the country's federal system of government.

According to Dr Pawan Agarwal, a senior education advisor with the Government of India's Planning Commission, 'the high cost of tertiary education in other countries combined with domestic resource constraints mean it is unlikely that India will institute any scholarship schemes for study abroad in any significant manner.' Furthermore, even without the investment in a costly national scholarship programme, Dr Agarwal notes that Indian students are already studying outside the country in

high numbers (second only to the number of Chinese students studying outside their home country). Ultimately, 'India does not see overseas study provision to augment capacity constraint in Indian higher education in any significant manner,' although 'there has been some thinking of using overseas study provision to potentially address both quality and quantity deficits in [India's] post-graduate and doctoral studies.'⁴¹

Cultural Exchange Programmes and Other Programmes

India's Ministry of Human Resource Development (MHRD) provides some administrative support (although no financial support) for scholarships/fellowships offered to Indian nationals by foreign governments (specifically, the governments of the more developed countries of the Commonwealth) under a framework of Cultural Exchange Programmes and Other Programmes.⁴²

Such scholarships are normally offered at the doctoral and postdoctoral levels, with undergraduate scholarships only available for language study.

The MHRD's role with regard to these bilateral scholarship opportunities involves advertising the programmes, taking in completed application materials from interested candidates (according to the guidelines established by the countries offering the scholarships) and helping with the application review via selection committees. Final decisions regarding awards are made by the countries offering the scholarships.

National Overseas Scholarship for Scheduled Castes and Tribes

The only outward mobility scholarship that is funded at the national level in India is the National Overseas Scholarship for Scheduled Castes and Tribes, which has been operational for more than a decade and is administered by the Ministry of Social Justice and Empowerment (MSJE). The MSJE is charged with advancing the interests of the Scheduled Castes and Scheduled Tribes (SC/ST), a sector of Indian society that has traditionally been disadvantaged when it comes to accessing the same social and economic benefits and opportunities available to other groups.

Specifically, the National Overseas Scholarship is meant to provide assistance for the pursuit of master's and doctoral-level studies abroad to selected castes, de-notified tribes, nomadic and semi-nomadic tribes, landless agricultural labourers and traditional artisans. The scheme aims to award a total of 30 scholarships per year, distributed across five specific study areas and three categories of recipients (See Table 1).

Table 1: National Overseas Scholarship for Scheduled Castes and Tribes. Candidates distribution of awards by study areas and recipient categories

		Number of awards
Fields of study	Engineering	20
	Management	
	Pure sciences	5
	Agricultural science	5
	Medicine	
	Total	30
Recipient categories	Scheduled castes	27
	De-notified, nomadic and semi-nomadic tribes	2
	Landless agricultural labourers and traditional artisans	1
	Total	30

40. Lavakare, PJ (2013). 'India's National Knowledge Commission.' In Rumbley, LE and Helms, RM (Eds.). *India: The Next Frontier* (pp. 9–11). International Briefs for Higher Education Leaders, No. 3. American Council on Education and Boston College Center for International Higher Education.

41. Personal communication with Dr Pawan Agarwal, 14 March 2014.

42. Information provided by Dr PJ Lavakare, a former adviser to the Indian government, and former Executive Director of the Fulbright Commission in India, in a detailed document produced for this report entitled 'The Rationale for Sponsoring Students to Undertake International Study: An assessment of national student mobility scholarship programmes (India Project Study)', dated 25 November 2013.

Over a three-year period (2004–07), the Indian government allocated INR 33 million (US\$529,089) for this programme, but ended up spending INR 35 million (US\$561,155) on a total of 55 awards. Between 2009 and 2011, the budget allocation grew to INR 110 million (just under US\$1,763,630), but with just INR 59.6 million (US\$955,567)⁴³ spent on a total of 60 awards.

Just under one-third (30 per cent) of the awards are set aside for women, although male candidates may receive more than 70 per cent of these awards in a given year if not enough eligible female awardees are identified.

To be eligible, scholarship applicants must be no more than 35 years of age, and have a total personal or family monthly income of less than INR 25,000 (US\$401).⁴⁴ Only one scholarship recipient is allowed per set of parents/guardians under this scheme. Applicants must have achieved a minimum academic qualification of First Class or 60 per cent marks (or equivalent grade) in a previous and relevant master's (for doctoral applicants) or bachelor's (for master's applicants) degree. Preference is given to experienced candidates, especially those whose employers have guaranteed their jobs upon return. The MSJE announces these opportunities in newspapers and on the ministry's websites, and receives the applications directly from applicants. A selection committee set up by the MSJE determines the final selection of awardees.

Under this programme, a doctoral-level scholarship provides financial support for up to four years and a master's-level scholarship provides up to three years of funding. In both cases, the scholarship

covers the host institution tuition and fees, a monthly maintenance allowance, travel and visa expenses, medical insurance coverage and contingencies.

Following their selection as a scholarship recipient, individuals have three years to secure admission at an accredited institution in any country with which India has diplomatic relations. The government of India ultimately approves all placements. Selected candidates must execute a bond with the MSJE and the Indian mission abroad confirming that they will not stay abroad following completion of their studies or longer than the duration of their scholarship, whichever happens first. Once back in India, awardees must immediately inform the MSJE of their return to the country, return to government service if they were so employed before undertaking the scholarship experience, and remain in India for at least five years.

Goa Scholar Programme

As previously mentioned, India's federal structure places significant oversight for tertiary education in the hands of each of the country's 28 states. At the state level, there have recently been some modest indications of interest in supporting student experiences abroad in Andhra Pradesh, Arunachal Pradesh, Jharkhand, Madhya Pradesh and Tamil Nadu.⁴⁵ However, only one state, Goa, appears to have put in place a scholarship scheme that specifically includes support for study outside of India.

The Goa Scholar Programme, launched in 2003, is operated by the Directorate of Higher Education, Goa. Its objective is to promote the pursuit of postgraduate studies

by outstanding young Goans through merit-based scholarship support in both India and abroad. The goal is to select up to 10 Goa scholars per year, identified by a selection committee on the basis of both academic merit and 'qualities of person that offer the promise of effective service to the country/world in the decades ahead.'⁴⁶

Any person under 32 years of age who was born in Goa or has been living in Goa for at least 15 years is eligible for consideration, as long as he or she has passed the qualifying undergraduate degree examination from an institution located in Goa, has achieved a meritorious rank on the qualifying degree examination (per determination of the screening committee) and has been admitted to a postgraduate programme in an 'institution of proven excellence' in India or abroad. 'Excellence' in this context is defined as top 50 institutions in the United States, the United Kingdom, Australia, France, Canada, Germany, Singapore, Switzerland and India, 'as determined by the screening committee based on standard international/national rankings.'⁴⁷

Awardees must study full-time in one of a pre-determined set of priority fields indicated by Goa's state government, including engineering, dentistry, medicine, pharmacy, architecture, finance, law, fine arts, home science, management, environment, computer science and administration. Annually, 40 per cent of the scholarships are reserved for women. In financial terms, the scholarships consist of a one-time payment of US\$15,000, plus annual payments for two years of INR 200,000 per year (US\$3,200).⁴⁸

43. US\$ figures calculated per direct foreign currency conversion, as of 2 February 2014.

44. Ibid.

45. Lavakare, PJ (25 November 2013). 'The Rationale for Sponsoring Students to Undertake International Study: an assessment of national student mobility scholarship programmes. (India Project Study).'

46. Ibid.

47. Ibid.

48. GBP figures calculated per direct foreign currency conversion, as of 2 February 2014.

Impact

Apart from statistical exercises to calculate the amount of funding expended or numbers of awards given out, there is no indication that any formal assessments have been undertaken to gauge the impact of either the national-level National Overseas Scholarship or the state-level Goa Scholar Programme. It is known that between 2004 and 2011, 115 National Overseas Scholarships were awarded, and that since its inception, in 2003, the Goa Scholar Programme has provided scholarships to 64 students. Data are not currently available regarding the breakdown of scholarship recipients funded to study overseas as opposed to in India, but the main thrust of the programme is to provide overseas study opportunities, so the majority of these scholarships have likely funded overseas study.

What is notable is the relatively small numbers of awardees over time, in relation to the vast Indian student population. By sheer numbers alone, it would seem that these two examples of publicly funded support for students' overseas study have had very little impact on expanding opportunities for the student populations they seek to target. Meanwhile, the lack of qualitative data available about the trajectory of awardees (during and after the scholarship period) also makes it impossible to gauge what kinds of results these initiatives might be yielding for the broader society.

Future prospects

At present, India's reform and modernisation agenda for the country's tertiary education sector, including its orientation towards internationalisation, does not prioritise public funding in support of outward student mobility – at least at the national level.⁴⁹ Furthermore, unless other states in India follow Goa's lead, which seems only marginally possible, and begin organising scholarship programmes at the state level for overseas study, there are few indications that Indian students will see the addition of new (public-source) funding opportunities of this nature in the near to mid-term. This position stands in notable contrast to overseas scholarship programming currently being funded by the governments of Brazil, China, and Russia – India's peers in the so-called BRIC group of countries.

49. Lavakare, PJ (summer 2013). *India's International Education Strategy – Is There One?* International Higher Education, 72: pp. 17–18.

2.5 Indonesia

Glossary terms

- MEC: Ministry of Education and Culture
- GDP: Gross Domestic Product
- HCDPs: Human Capital Development Plans
- DIKTI: Directorate General of Higher Education; scholarship name
- SPIRIT: Scholarships Programme for Strengthening Reforming Institutions

Statistics overview: Indonesia

1. Population (world rank)	251,160,124 (5)
2. Per-capita GDP	US\$4,900
3. Public expenditure on education as a per cent of GDP	3.0%
4. Number of HEIs: public–private	90–2,885
5. Number of tertiary students	4.2 million
6. Number of mobile tertiary students: outbound–inbound	34,067–6,437
7. Per cent of labour force with tertiary education (2008)	7%
8. Tertiary gross enrolment ratio (%): 1990–2007	9%–17%

Source:

1. The World Factbook 2013–14. Washington, DC: Central Intelligence Agency, 2013. (<https://www.cia.gov/library/publications/the-world-factbook/index.html>).
2. Ibid.
3. Ibid.
4. Kuipers, Joel C 'Education'. In *Indonesia: A Country Study* (William H Frederick and Robert L Worden, eds.). Library of Congress Federal Research Division (2011).
5. Ibid.
6. UNESCO Institute for Statistics (www.uis.unesco.org/education/Pages/international-student-flow-viz.aspx).
7. Index Mundi (www.indexmundi.com/facts/indicators/SL.TLFTERT.ZS).
8. World Bank (<http://data.worldbank.org/indicator/SE.TER.ENRR>).

Overview

The government of the Republic of Indonesia has sponsored a number of outward mobility scholarships over the past decade, a response to its interest in further reforming government, improving education and strengthening the nation's economy. DIKTI scholarships help current and prospective university educators attain advanced degrees abroad. SPIRIT scholarships send government agency staff abroad to receive training in key skills areas. While both programmes invest in individual talent development, they, and Indonesia's other current scholarship schemes, share the goal of improving and reforming the organisations that employ scholarship

recipients, which, it is anticipated, will in turn result in positive advancements for the country.

DIKTI Scholarship programme

Indonesia's higher education system has experienced dramatic growth in recent years, the result of population growth, rising incomes, an expanding middle class and demand for skilled workers.⁵⁰ In 1990, around 900 public and private tertiary institutions enrolled nearly 1.5 million students. By 2009, more than 4.2 million students were enrolled at approximately 3,600 institutions.⁵¹ As enrolments grown, however, the number of faculty with terminal degrees has not kept pace – in 2007, just

seven per cent of faculty held doctoral degrees and 40 per cent master's degrees, totals significantly lower than other countries in the region.⁵²

In an effort to address this challenge, Indonesia passed a law in 2005 requiring that all public and private university faculty hold a degree that is at least one level higher than the students they teach – a master's degree for undergraduate faculty and a doctorate for graduate educators.⁵³ Two years later, a decree by Indonesia's Ministry of Education and Culture (MEC) specified that all tertiary educators have at least a master's degree by 2015.⁵⁴ To help achieve this goal, the decree recommended creating an outward mobility scholarship

50. Franken, J (2011). Analysis: Indonesia: Increased spending, international focus. The Jakarta Post. Retrieved from: www.thejakartapost.com/news/2011/08/08/analysis-indonesia-increased-spending-international-focus.html

51. Source: Hill, H and Wie, TK (2012) 'Indonesian Universities: Rapid Growth and Major Challenges' in 'Education in Indonesia (2013) edited by Suryadarma, D and Jones, GW.

52. Ibid.

53. Ministry of Education and Culture Republic of Indonesia (2013). Guidelines for Graduate Scholarships Abroad from the Directorate General of Higher Education for the Fiscal Year 2013 (translated from Indonesian: 'Pedoman Beasiswa Pendidikan Pascasarjana Luar Negeri, Direktorat Jenderal Pendidikan Tinggi, Tahun Anggaran 2013').

54. Source: www.dikti.go.id/files/atur/Permen42-2007Serdos.pdf

programme, citing the lack of domestic training in certain fields, especially at the doctoral level, and space constraints in many graduate programmes.

The DIKTI scholarship programme was launched in 2008.⁵⁵ In addition to helping educators upgrade their qualifications, the programme seeks to improve the overall quality of Indonesia's tertiary teaching and research. Since inception, DIKTI has funded just under 750 scholarships each year. Of these, 77 per cent have been awarded to support doctoral study.

The scholarship borrows its name from its administering authority, the Directorate General of Higher Education (DIKTI), an office of the MEC. Day-to-day programme operations are managed by staff in the directorate's human resources division, the same office that oversees the appointment, salary and promotion of all of the country's public university educators and administrators. DIKTI promotes the scholarship on its website, at a national tertiary education conference it hosts each year in Jakarta, and via staff presentations at public and private universities. Universities are also encouraged to promote the programme.

Application for DIKTI is open to university faculty and staff at both public and private institutions, as well as DIKTI staff. Prior to application, candidates must secure an offer of admission from a qualifying university, receive approval to apply from their home campus or office, and have demonstrated proficiency in English. Doctoral degree applicants must also develop an approved research plan. Scholarship candidates electronically submit their application materials to DIKTI for review. Candidates whose applications comply with the programme's eligibility criteria are then interviewed by DIKTI staff, who make award decisions.

DIKTI scholarships are funded through Indonesia's national budget. Awards cover all costs associated with completing a degree programme, to include tuition, transport, health insurance and a living allowance, as well as fees related to passport and visa procurement, conference attendance and book purchases. Living allowances differ by location and include annual caps. Through 2013, an average of US\$35,000 per year has been awarded to all scholarship recipients.

DIKTI master's scholarships cover two years of study; doctoral scholarships three years. A one-year extension is available for doctoral students, if needed. According to sources at DIKTI, increasing doctoral scholarship support to four years is likely in the future due to differences in the time needed to complete programmes in different countries. To date, the directorate has addressed this challenge by working to establish co-funding agreements.⁵⁶ Before 2014, these agreements typically resulted in host universities waiving tuition fees after a student's third year of study. In a shift with this practice, agreements after 2014 will request that host universities provide doctoral students with half a year of complementary academic and English training prior to the start of their formal studies, plus, if needed, a tuition waiver for one term after their scholarship ends. In return, DIKTI agrees to fund doctoral students for four years instead of three.⁵⁷ After completing their studies, all DIKTI scholarship recipients are required to return to Indonesia and the jobs they left. This includes prospective academic staff, that, following graduation, are assigned a work position at a university. According to officials familiar with the DIKTI programme, non-returnees are rare. Awardees who do not return are required to pay a fine equalling double the total cost of their entire scholarship. It is not known, however, whether or how this penalty is implemented.

Since the programme began, DIKTI scholarship recipients have studied in 33 countries.⁵⁸ Of these, approximately 30 per cent have studied in Asian countries, a similar number in European countries and 25 per cent in Australia. In 2013, the top three host countries were Japan, Australia and the United Kingdom. DIKTI encourages grant applicants to seek admission to highly ranked universities, but allows freedom of choice. To guide university selection, DIKTI divides possible host institutions into three groups: Group A (universities with a world ranking from 1 to 500), Group B (world ranking between 501 and 1,500), and Group C (world ranking over 1,500). Over the history of the programme, 46 per cent of grant recipients have attended Group A institutions, 43 per cent Group B institutions and 11 per cent Group C institutions.⁵⁹ Programme staff do not track why grant recipients select one country over another, but acknowledge that there seems to be a bias towards countries with which DIKTI has agreements, as well as those countries that have been most active in recruiting DIKTI scholars.

SPIRIT

The first decade of the 21st century was witness to impressive economic and political reform in Indonesia.⁶⁰ Economically, investment levels increased, exports were strong, and, since 2002, GDP has grown at over five per cent per year. Because of these gains and the fact that its economic growth was largely driven by domestic consumption, Indonesia was affected less than neighbouring countries during the 2008–09 global economic downturn. On the political front, Indonesia has made significant strides in promoting democracy and human rights, dismantling corruption and decentralising its bureaucratic structure by transferring power from its pre-1999 authoritarian government to outlying regions.⁶¹

55. Official programme name: Beasiswa DIKTI.

56. According to DIKTI officials, co-funding contracts have been signed with institutions or agencies in the following countries: Australia, Germany, France, Japan, Netherlands, New Zealand, Philippines, Taiwan, Thailand, United Kingdom and the United States.

57. Source: interview with DIKTI official.

58. Ministry of Education and Culture (2012), 'DIKTI Scholarship 2008–2011.'

59. Ministry of Education and Culture (2012), 'DIKTI Scholarship 2008–2011.'

60. Source: http://lcweb2.loc.gov/frd/cs/pdf/CS_Indonesia.pdf

61. Source: www.indonesia-investments.com/culture/politics/reformation/item181

Despite these advances, issues persist, among them a governing bureaucracy that is slow, inefficient and saddled with corruption; a 2010 report found corruption in Indonesia to be the highest of 16 Asia-Pacific countries studied.⁶² Because of these challenges, Indonesia's 2010–14 National Medium-Term Development Plan (RPJMN 2010–14) identified further bureaucratic reform as a top national priority.⁶³

The Scholarships Programme for Strengthening Reforming Institutions (SPIRIT) project was created as a response to this call to action. Its concept is simple: enhance the skills and abilities of government staff and improvements to capacity building, policy development, service and professionalism will follow.

SPIRIT provides foreign and domestic degree and non-degree scholarships for key government agency staff. It is anticipated that approximately 2,600 civil servants will receive SPIRIT scholarships, with around 1,000 in degree training (500 overseas, 300 domestic and 180 students studying on linkage or double degree programmes) and the remainder in non-degree training. It is funded by the Indonesian government through a US\$112,650,000 World Bank loan. Scholarships support staff training in key areas identified in Human Capital Development Plans (HCDPs) developed by the participating agencies.⁶⁴ Accordingly, SPIRIT achieves a dual impact: participating agencies create plans for bureaucratic reform and their staff gain the skills necessary to implement and manage them. In so doing, SPIRIT dovetails nicely with Indonesia's broader bureaucracy reform efforts and represents a shift in approach from previous government-financed training programmes that focused exclusively on individual training.⁶⁵

Administratively, a steering committee is responsible for overseeing the policy and regulatory framework of SPIRIT and reviewing its progress. A project co-ordination unit serves as the steering committee's secretariat and is responsible for co-ordinating overall project operations. Two project implementation units, the Ministry of National Development Planning (Bappenas) and the Ministry of Finance, report to the co-ordination unit and are responsible for programme implementation, to include candidate selection, placement, pre-departure training and scholar re-entry. Bappenas oversees programmes for itself and 10 participating government agencies.⁶⁶ The Ministry of Finance oversees programmes for its affiliated administrative units. Plans are in place to hire independent consultants over the course of the project to aid, among other tasks, with start-up, pre-departure training, scholarship recipient monitoring and post-programmes survey oversight.

Selection for a SPIRIT scholarship is a multi-stage process. First, basic eligibility must be established: candidates must have at least two years of government service, be nominated for training in a field listed in their agency's HCDP and meet age requirements (under 40 for doctoral and under 37 for master's programmes) and academic requirements. Eligible candidates must then pass English proficiency and academic potential exams, and receive approval by an interview panel. Individuals passing these requirements then receive up to nine months of intensive English and academic training. If they complete this training satisfactorily, they may then apply for study at up to four accredited universities of their choice. An offer of admission results in full funding support for the duration of a degree programme.

Since its inception, the United Kingdom has hosted 37 per cent of SPIRIT award winners, followed by Australia (19 per cent), The Netherlands (17 per cent); the United States (16 per cent) and Japan (six per cent).

After scholarship recipients complete their training, they are required to return to their employment agencies and work for a period of time equalling twice the duration of their training, plus one year. As with DIKTI scholarships, the penalty for not returning after completing their degrees is double the cost of their total scholarship.

Impact

After six years of operation, the DIKTI programme has awarded 4,395 scholarships. Of these, 3,403 have supported doctoral studies and the remainder master's studies.⁶⁷ According to sources familiar with the programme, approximately 50 per cent of the planned grant recipients have completed their studies and returned to Indonesia. Government officials are pleased with the programme's progress to date, noting that many of the sponsored scholars have increased their academic productivity, as measured by the number of their scholarly publications, and that new relationships with colleagues abroad is helping internationalise Indonesian tertiary education. While returnees are no doubt influencing their institutions in other ways, broader outcome studies have not been attempted.

Preliminary reviews of the SPIRIT programme indicate that it is off to a positive start: most participating agencies have or are near to completing their HCDPs and pre-departure training programmes and university enrolments are progressing in step with target rates. Broader impact reviews are not yet possible given the small number of scholarship recipients who have completed

62. Source: <http://in.reuters.com/article/2010/03/08/idINIndia-46740620100308>

63. Source: www.a4des.org/documents/RPJMN_Presentation_8Feb2010.pdf

64. HCDPs are meant to identify medium- and long-term goals for an agency and priorities for improving core business functions; determine key competencies and skills needed to realise these goals; identify specific degree and non-degree training programmes; and specify procedures for re-integrating staff into their agency after they complete their training. Source: <http://documents.worldbank.org/curated/en/2011/02/13763489/indonesia-scholarships-program-strengthening-reforming-institutions-project>

65. Ibid.

66. These agencies include: Bappenas; National Civil Service Agency (BKN); Investment Co-ordination Board (BKPM); Supreme Audit Board (BPK); Financial and Development Supervisory Board (BPKP); National Land Agency (BPN); Ministry of Foreign Affairs (MoFA); Ministry of Home Affairs (MoHA); National Institute of Public Administration (LAN); State Ministry for Administrative and Bureaucracy Reforms (MenPAN).

67. Source: anonymous government official.

their studies to date. The programme is well positioned to evaluate future impacts, however, as specific goals and a plan to measure them were developed at its start. These include having 95 per cent of scholars complete their study programmes, providing training in 90 per cent of each participating agency's priority areas, increasing the percentage of staff with competence in priority areas by 30 per cent and having at least 75 per cent of participating scholars express satisfaction with the programme. Programmes' measurements will be based on the HCDPs of each participating agency, two staff/alumni surveys and an independent technical audit.

Future prospects

The establishment of scholarship programmes like DIKTI and SPIRIT, and others in recent years, is a clear indication that Indonesia's government sees value in targeted training as a tool for national improvement. In addition to the human resource and reform enhancements that these programmes are creating, they are also establishing new connections between scholarship alumni and people and organisations around the world. These social networks will undoubtedly lead to additional benefits as Indonesia seeks to build on the economic, educational and reform gains it has experienced during the past decade.

Scholarship programme overview: DIKTI

Years operational	2008–present
Awards per year	Varies by sub programme
Awards since inception	4,400
Administrative authority	Directorate General of Higher Education (DIKTI)
Funding	Indonesian government; some co-funding for doctoral students
Eligibility	Current or prospective university lecturers; citizenship; host country language fluency; under 45 years of age
Level/s supported	Master's and doctorate (full degree)
Fields supported	Government-approved list
Recipient obligations	Return to previous work position
Host universities	Top 1,500 ranking worldwide with preference to top 500; most common host countries: Australia, Japan, Malaysia, United Kingdom, Netherlands, Germany, France, Thailand, United States, Taiwan

Scholarship programme overview: SPIRIT

Years operational	2011–17
Awards per year	Varies by sub programme
Awards since inception	425
Administrative authority	Bappenas, Ministry of Finance
Funding	Indonesian government (via World Bank Loan)
Eligibility	Government agency employee; host language fluency; citizenship; two years work experience in position
Level/s supported	Master's and doctorate (full degree); non-degree training
Fields supported	Agency approved only; differs by agency
Recipient obligations	Return to previous work position
Host universities	Top 1,500 ranking worldwide with preference to top 500; most common host countries: United Kingdom; Australia, The Netherlands; United States; Japan

2.6. Kazakhstan

Glossary terms

- HEI – higher education institute
- MES – Ministry of Education and Science
- BP – Bologna process
- CIP – Centre for International Programmes
- DAAD – German Academic Exchange Service

Overview

Outward mobility scholarships have played an important role in the Republic of Kazakhstan's development since shortly after its founding in 1991. Bolashak, its first and best-known programme, was founded in 1993,⁶⁸ a time when the nation's HEIs were outmoded, under-resourced and lacked many specialised programmes. Still operational, Bolashak today has more than 10,000 alumni and has played an important role in helping the country establish connections abroad and develop skills and expertise in key areas.⁶⁹ A newer tertiary student scholarship was established in 2011 to help Kazakhstan comply with tertiary mobility and quality standards associated with the Bologna accord. Together, these programmes provide an important boost to the country as it works to improve its educational, industrial, civic

Statistics overview: Kazakhstan

1. Population (world rank)	17,736,896 (62)
2. Per-capita GDP	US\$13,500
3. Public expenditure on education as a per cent of GDP	3.1%
4. Number of HEIs: public–private	71–62
5. Number of tertiary students	571,691
6. Number of mobile tertiary students: outbound–inbound	36,594–11,974
7. Per cent of labour force with tertiary education	50%
8. Tertiary gross enrolment ratio (%): 1990–2007	42%–51%

Source:

1. The World Factbook 2013–14. Washington, DC: Central Intelligence Agency, 2013. (<https://www.cia.gov/library/publications/the-world-factbook/index.html>).
2. Ibid.
3. Ibid.
4. Statistics Agency of Kazakhstan.
5. Ibid.
6. UNESCO Institute for Statistics (www.uis.unesco.org/education/Pages/international-student-flow-viz.aspx).
7. Index Mundi (www.indexmundi.com/facts/indicators/SL.TLF.TERT.ZS).
8. World Bank (<http://data.worldbank.org/indicator/SE.TER.ENRR>).

and health infrastructure. Their design and scope also serve to illustrate the country's shifting national needs and priorities.

Bolashak Scholarships

Established via by executive order, Bolashak's original goal was to 'train specialists in key areas to help the country build international relations and transform to a market economy.'⁷⁰ At its start, the programme funded up to 100 awards each year, supported master's-level study in the social sciences, humanities, medicine and engineering, and sent recipients to universities in France, Germany, the United Kingdom and the United States. As the programme matured, its focus evolved with the country's shifting socio-economic needs. In 1997, responding to a new national plan for economic development, greater emphasis was placed on science

and technology training and the pool of host countries was expanded. In 2000, doctoral scholarships were added and the foreign language requirement was reduced to encourage additional applications in the engineering, science and technology fields. In 2005, undergraduate scholarships were added, additional technical fields were selected as priorities and the number of scholarships was significantly expanded, a change made possible due to burgeoning natural resource exports. Six years later, the undergraduate awards were eliminated to direct more funding to graduate-level grants in government administration, industrial development, education, healthcare, engineering and management. The programme also added funding for professionals to go abroad for non-degree training in the same fields.

68. Bolashak means 'future.' Official programme name: Қазақстан Республикасы Президентінің «Болашақ» халықаралық стипендиясы. Source: http://adilet.zan.kz/rus/docs/K930001394_#z0

69. Source: www.bolashak.gov.kz/index.php/ru/o-stipendii/istoriya-ravvitiya

70. Kazakhstan President Nursultan Nazarbayev signed Bolashak into law on 5 November 1993. Source: http://adilet.zan.kz/rus/docs/K930001394_#z0

The administration of the Bolashak programme has likewise evolved over time. Prior to 2005, Kazakhstan's Ministry of Education and Science (MES) managed the programme, but contracted organisations from other countries to help identify host institutions and prepare scholarship recipients for their study experience.⁷¹ In 2005, following an audit that revealed inefficiencies in this approach, MES founded the Centre for International Programmes (CIP), a Kazakh joint stock company, to oversee principal operations.⁷² CIP assumed full administrative responsibility for the programme in 2007, and today operates satellite offices in China, Germany, Russia, the United Kingdom and the United States.

Partnering with the CIP to manage Bolashak are the MES and the Republican Commission.⁷³ The Republican Commission is responsible for approving priority majors, overseeing programme regulations and making final award decisions. The ministry oversees scholarship funding and the Independent Expert Committee, a body that reviews applicant documents, interviews candidates and recommends award recipients to the Republican Commission. CIP oversees all other programme logistics, including marketing and promotion, the receipt and review of applications, tracking scholars' academic progress, and the programme's post-study home work requirement.⁷⁴

Bolashak selection is highly competitive. Following submission of an application, individuals meeting initial merit thresholds are tested for Kazakh and foreign-language

proficiency and undergo a psychological exam. Candidates passing these exams are then interviewed by the Independent Expert Committee. In making final award decisions, the Republican Commission considers an applicant's overall portfolio vis-a-vis others applying for scholarships in the same field, then selects the top candidates in those fields deemed to be of greatest national need.

The Republican Commission manages a list of approved host institutions. In 2013, this list included 200 universities in 20 countries, mostly Western, selected on the basis of international university rankings.⁷⁵ Applicants are expected to receive an offer of admission from one of them prior to applying for Bolashak. Scholarship winners may attend universities not on the approved list, but only if granted a special waiver. Scholarship recipients have a year to secure admission to an approved university. If they do not, the Republican Commission may extend or cancel their scholarship.

Bolashak scholarships cover all costs associated with degree completion (university applications, visa and travel expenses, university tuition and fees, accommodation and a living allowance). Individual awards are based on host country costs, so vary from person to person. In 2013, the average award was approximately US\$37,000.⁷⁶

After completing their studies, Bolashak recipients are required to return to Kazakhstan to work for a minimum of five years in a related field. To guarantee this obligation, award winners pledge collateral

equalling the total cost of their award before beginning their studies. Families unable to afford the collateral payment may instead secure one or more financial guarantors.

Any Kazakh citizen may apply for a Bolashak award. Historically, generating qualified applicants from non-urban areas has been challenging: from 2008 to 2011, an average of only six per cent of award recipients came from rural regions.⁷⁷ In an effort to reverse this trend, the CIP now sends staff to rural areas to promote the programme and has created quotas for rural applicants. An online application, launched in 2013, streamlined the process for all applicants, but has been especially beneficial to individuals living in Kazakhstan's rural areas.

Academic Mobility Scholarships

Kazakhstan became a Bologna Process signatory in 2010. In an effort to comply with Bologna standards, a number of new tertiary initiatives followed, among them a plan to significantly increase tertiary-level student and faculty mobility. In 2011, an Academic Mobility⁷⁸ scholarship was created with the goal of sending 300 students abroad each year to earn credit towards their master's degrees.

Academic Mobility scholarships support study in all fields, but are open only to students enrolled at Kazakhstan's state and national universities. Unlike Bolashak, award winners are limited to studying at institutions with which their university has a standing mobility agreement. To date, this has resulted in most scholarship recipients going to universities in former Soviet Union

71. Partner agencies included: American Councils for International Education; British Council; Center for Higher Education Studies of Czech Republic; the French National Centre for University and School; the German Academic Exchange Service; and the Netherlands Organization for International Co-operation in Higher Education.

72. Source: <http://bolashak.gov.kz/index.php/ru/o-stipendii/istoriya-razvitiya>

73. The Republican Commission is chaired by Kazakhstan's Secretary of State. Its 15 members include eight agency ministers plus other senior government representatives. The Commission reports directly to Kazakhstan's president.

74. Source: <http://bolashak.gov.kz/index.php/ru/o-stipendii/istoriya-razvitiya>

75. To qualify, universities must be ranked among the world's top 200 universities by the Times Higher Education Supplement, QS World University Ranking, and Academic Ranking of World Universities. Source: Center for International Programs. History of the Program. Accessed 20 October 2013 <http://bolashak.gov.kz/index.php/ru/o-stipendii/istoriya-razvitiya>

76. Source: http://bolashak.gov.kz/images/stipu/Formy_zayavlenii/Formy_finansovyx_zayavlenii/Tablica_norm_stipendii.pdf Accessed 20 October 2013.

77. Perna, LW, Orosz, K, Jumakulov, Z, Gopaul, B, Ashirbekov, A and Kishkentayeva, M (2013). *Promoting human capital development: a typology of international scholarship programs in higher education*. Paper presented at the European Conference on Educational Research (ECER), Istanbul, Turkey.

78. Official programme name: Академиялық ұтқырлық бағдарламасы.

countries, a result that decision makers understand must change in the future in order to comply with Bologna requirements related to mobility within the European Higher Education Area.

The MES funds the programme and determines the number of scholarships to award to each university. Some US\$200 million was earmarked for scholarships in the programme's first year. Scholarship funds cover travel, living and insurance costs. Partner universities agree to waive tuition costs and provide accommodation.

Currently, universities are responsible for administering the programme. Because several institutions have not been effective in this role, however, administration of the programme will shift to the CIP in 2015, at which time applicants from private universities will also be accepted. In advance of this change, planning is also underway to identify ways to further improve the programme's effectiveness.

Impact

Having funded more than 10,000 scholarships over the past 20 years, Kazakhstan's outward mobility programmes have clearly increased the country's intellectual capital. Apart from tracking the number and types of degrees earned abroad, however, there have been no formal attempts to measure the qualitative impact these awards have and continue to make.

Asked to comment on Bolashak's impact, officials familiar with the programme responded that it had generated key workforce training and skills, enhanced recipients' worldview and prosperity, and promoted a positive image of the country and sense of national pride. They also noted that many scholarship alumni now hold leadership positions in government and business, and are thus contributing to political and economic reform.⁷⁹ A report on Bolashak by representatives of Nazarbayev University and the University of Pennsylvania echoed these comments and concluded that the programme's contributions to human capital development and nation building validate the government's investment. The report also applauded a number of operational changes over the programme's history that have reduced brain drain, focused skills development in critical areas and broadened participation beyond the country's wealthy and political elite.⁸⁰

Future prospects

In adopting the Bologna standards, Kazakhstan is obliged to place greater focus on tertiary quality, mobility and outcome assessment. An MES policy report, *Academic Mobility Strategy in Kazakhstan for 2012–2020*, includes a number of specific goals and benchmarks, among them that 20 per cent of all university students will be mobile by 2020.⁸¹ Additional goals outlined in the plan include improving conditions

for hosting international scholars and students at Kazakhstan's universities; improving language education programmes, especially those in English; and expanding relationships with overseas universities and organisations.

Given the scope of these goals, and the country's growing economic prowess, the prospect of Kazakhstan continuing its tradition of funding outward mobility scholarships remains strong. Indeed, while the Academic Mobility scholarship programme has an anticipated end date of 2020, no official end date for Bolashak has been scheduled.

79. <http://bolashak.gov.kz/index.php/ru/o-stipendii/istoriya-razvitiya>

80. Perna, LW (2013). *The Many Contributions of the Bolashak Program to Human Capital Development*.

81. *Academic Mobility Strategy in Kazakhstan for 2012–20*.

Scholarship programme overview: Bolashak

Years operational	1993–present (no scheduled end date)
Awards per year	Varies by sub programme
Awards since inception	Over 10,000
Administrative authority	Centre for International Programmes
Funding	Kazakh government
Eligibility	Varies by sub programme; citizenship; host-country language fluency
Level/s supported	Master's and doctorate (partial and full); non-degree training
Fields supported	Government-approved only; changes annually
Recipient obligations	Five-year home work requirement in related field
Host universities	Top 200 ranking; mostly in developed countries

Scholarship programme overview: Academic Mobility

Years operational	2011–present (2020 scheduled end date)
Awards per year	Approximately 300
Awards since inception	Approximately 800
Administrative authority	Kazakh universities (after 2015: Centre for International Programmes)
Funding	Kazakh government
Eligibility	Public university students (after 2015, public and private university students may apply); citizenship; host-country language fluency
Level/s supported	Bachelor's, master's (partial)
Fields supported	Any
Recipient obligations	Home university degree completion
Host universities	Any standing home university partner; mostly neighbour countries

2.7. Mexico

Glossary terms

- STEM: science, technology, engineering and mathematics
- CONACYT: National Council on Science and Technology
- COMEXUS: Mexico-United States Commission for Educational and Cultural Exchanges
- IIE: Institute for International Education
- LASPAU: Academic and Professional Programs for the Americas

The number of Mexican students receiving tertiary education has tripled over the past 30 years, as its population expands and its economy strengthens. Projections suggest that demand for university placements will continue to grow in the future. To meet this demand, authorities estimate that it will be necessary to increase the capacity of Mexican universities by almost 48 per cent between 2010 and 2020.⁸² Within this context, outward mobility scholarship programmes, administered by two of Mexico's oldest and most prestigious funding organisations, CONACYT and COMEXUS, are providing relief for the country's highly populated tertiary education system while helping expand the country's human resource capacity in key areas.

Statistics overview: Mexico

1. Population (world rank)	118,818,228 (12)
2. Per-capita GDP	US\$15,400
3. Public expenditure on education as a per cent of GDP	5.3%
4. Number of HEIs: public–private	404–1,955
5. Number of tertiary students	3,493,347
6. Number of mobile tertiary students: outbound–inbound	25,836–N/A
7. Per cent of labour force with tertiary education	17.2%
8. Tertiary gross enrolment ratio (%): 1990–2007	15%–27%

Source:

1. The World Factbook 2013–14. Washington, DC: Central Intelligence Agency, 2013. (<https://www.cia.gov/library/publications/the-world-factbook/index.html>).
2. Ibid.
3. Ibid.
4. World Education News (<http://wenr.wes.org/2013/05/wenr-may-2013-an-overview-of-education-in-mexico>).
5. Ibid.
6. UNESCO Institute for Statistics (www.uis.unesco.org/education/Pages/international-student-flow-viz.aspx).
7. World Bank (<http://data.worldbank.org/indicator/SL.TLF.TERT.ZS>).
8. World Bank (<http://data.worldbank.org/indicator/SE.TER.ENRR>).

CONACYT scholarships

Mexico's National Council on Science and Technology (El Consejo Nacional de Ciencia y Tecnología, CONACYT), a public agency of the federal government, oversees national policies related to science and technology activities. Founded in 1970, CONACYT's mission is to help provide Mexico with a high-quality, competitive and innovative science and technology infrastructure that will benefit the nation's development.⁸³ A key component of its service responsibilities is the administration of domestic and international scholarship programmes. International awards focus on postgraduate skills development, with the goals of increasing human resource capacity in key fields, establishing collaborative connections with top universities worldwide

and increasing the number of Mexican university educators/researchers with doctoral degrees. CONACYT does not offer scholarships for overseas study leading to bachelor's degrees.

The number of CONACYT scholarships supporting overseas studies has increased steadily in recent years, growing from 2,000 in 2002 to 5,000 in 2012.⁸⁴ Of these, 37 per cent were for doctoral programmes, 60 per cent for master's and the remainder for non-degree 'specialist' work at the postgraduate level. The scholarships primarily support study in STEM fields, although occasional awards are made to humanity and social science degree seekers. Demand for non-STEM scholarships is typically stronger than for those supporting STEM study. As a result, extra effort is needed to recruit

82. Source: Wilson Center Mexico Institute, www.wilsoncenter.org/sites/default/files/Wood_Edu_US_Mex.pdf

83. Source: www.conacyt.gob.mx/index.php/el-conacyt

84. Source: www.conacyt.gob.mx/index.php/becas-y-posgrados/becas-en-el-extranjero

candidates to apply for STEM awards. CONACYT promotes its outward mobility scholarships on its website, via social media, at conferences and by collaborating with Mexican universities. CONACYT also works to connect science and technology professionals in other countries with Mexican universities. In addition to providing students with practical training, this exposes them to different teaching styles and creates links for potential future opportunities, such as applying for an outward mobility scholarship.

To be eligible for scholarship consideration, candidates must be Mexican citizens, prove completion of a degree immediately preceding the level they are seeking, demonstrate host-country language fluency and present a letter of acceptance from a host institution. Candidates submit application materials to CONACYT via a secure website. Committees made up of members of Mexico's scientific and technological community then evaluate applications meeting the scholarship's baseline eligibility criteria. A fixed set of review criteria guide the committees' reviews and include a candidate's academic and professional background and intellectual aptitude, the quality of the proposed host institution and graduate programme and whether the admitting university has a co-operation agreement with CONACYT.⁸⁵ Preference is given to applications seeking doctoral programme placement and that include offers of admission from schools ranked among the world's top 100 universities.⁸⁶

As a condition to receiving a CONACYT award, recipients are required to repay the full cost of their scholarship if they do not return to Mexico. In an effort to help scholarship recipients to find work at home following completion of their studies, CONACYT manages an alumni registry and a newsletter of current job openings.⁸⁷ In 2014, it also launched a programme called 'CONACYT Professorships' that matches doctoral degree earners with 500 academic and research positions in Mexico.⁸⁸ Selected scholars will have a contractual relationship with CONACYT and with the Mexican universities/research centres that compete to host them.

To enhance the function of their outward mobility scholarships, CONACYT officials seek to negotiate co-operation agreements with universities outside of Mexico. These agreements are attractive to foreign partners in that they can provide a steady flow of sponsored students into specific degree programmes, as well as connect them with multiple universities in Mexico for other types of collaboration, such as faculty exchange and joint research projects, thereby contributing to greater campus internationalisation. Most existing agreements are with institutions in Canada, the United States and Europe, although partnerships with Asian universities are also being developed. Between 2002 and 2012, the majority of CONACYT's outward mobility scholarships placed students in the United States (24 per cent), the United Kingdom (22 per cent), Spain (9.5 per cent) and Germany (seven per cent).

Funding for CONACYT scholarships comes from the Mexican government. After an allocation has been pledged, CONACYT officials decide how best to appropriate the funds across their suite of scholarship programmes. Awards cover medical insurance, tuition, fees and living expenses⁸⁹ for a fixed period of time: 36 months for doctoral programmes, 24 months for master's programmes and 12 months for specialist or research programmes. CONACYT caps tuition payments at US\$23,000 per year.

Fulbright-García Robles scholarships

Founded in 1990, the Mexico-United States Commission for Educational and Cultural Exchanges (La Comisión México-Estados Unidos para el Intercambio Educativo y Cultural, COMEXUS) is an independent organisation funded by the governments of Mexico and the United States. Through its Fulbright-García Robles scholarship programme,⁹⁰ COMEXUS administers grants to Mexicans to go to the United States to obtain master's and doctoral degrees, conduct postdoctoral research, teach Spanish at US universities, and develop professional and leadership experience.⁹¹

A board of directors⁹² governs COMEXUS, who, among other responsibilities, decide which fields are emphasised in each scholarship cycle. Target fields vary from year to year, but are selected on the basis of their joint importance to both countries and to help realise the scholarship programme's goal of promoting mutual understanding through educational

85. These agreements typically result in host institutions providing costs or preferential support to CONACYT scholarship recipients, thus reducing overall costs to the Mexican government.

86. Source: Dr Jesús Arturo Borja Tamayo, Director of International Co-operation, CONACYT and the CONACYT website.

87. Source: www.conacyt.gob.mx/index.php/becas-y-posgrados/enlace-laboral

88. Source: Dr Jesús Arturo Borja Tamayo, Director of Evaluation and International Co-operation, CONACYT and the CONACYT website.

89. Living expense stipends fluctuate based on the cost of living in a city.

90. The scholarship is named in honour of Alfonso García Roble, a Mexican diplomat and Nobel Peace Prize winner, and J. William Fulbright, a Rhodes scholar, university president, and long-serving member of the US congress and senate. Both men benefited from and were strong advocates of international education exchange.

91. Fulbright-García Robles scholarships also support Americans going to Mexico to conduct research at all academic levels, to teach English in Mexican schools and to engage in short-term, non-degree professional development.

92. The COMEXUS board includes ten members, four representing the US and Mexican governments and six representing the countries' business and education sectors.

and cultural exchange. In the current scholarship cycle, Mexican nationals may apply for master's study in all areas except medicine, dentistry and veterinary medicine. Preference is given, however, to applicants in the fields of aerospace engineering, environment, adversarial law and public health.⁹³ In over 20 years of operation, COMEXUS has provided more than 4,000 scholarships, with the majority (80 per cent) supporting master's degree study.⁹⁴

The COMEXUS staff are responsible for the management and administration of all scholarship programmes. COMEXUS disseminates information about Fulbright-García Robles scholarships through newspapers, conference presentations, website postings, mailings to universities and through administrating agencies in the United States, such as the Institute of International Education (IIE) and the Latin American Scholarship Program of American Universities (LASPAU).

Any Mexican citizen may apply for a COMEXUS grant. Individuals who have dual citizenship (Mexico and US), have resided in the United States for more than one year out of the previous five or are living abroad are not eligible. To qualify for application, candidates must achieve a minimum score on a quality scale based on the grade point average of their previous degree and scores from an English proficiency exam and a standardised academic aptitude exam.⁹⁵ Applications are filed electronically via the COMEXUS website. Following a technical review by agency staff, selected candidates are invited for an interview with a panel of representatives from the Mexican and US governments, academic experts and COMEXUS alumni. A rank order list of

candidates by field of study is then developed, from which award winners are selected. A final list of scholarship winners is published on the COMEXUS website.

Fulbright-García Robles awards cover full or partial degree study in master's and doctoral programmes. After selection for a scholarship, individuals may seek university admission on their own or request assistance in identifying and applying for a degree programme from COMEXUS or administrative partners like IIE and LASPAU. After completing their degree programmes, many grantees seek and carry out an additional year of practical training in the United States. American visa requirements then require that they then return to Mexico for a minimum of two years.

The US and Mexican governments combine to contribute approximately US\$4,000,000 annually to fund Fulbright-García Robles scholarships for both Mexican and US grantees.⁹⁶ A small amount of funding also comes from companies and private foundations. The number of master's and doctoral scholarships awarded each year varies according to budget allocations. Scholarship funding for master's study in the United States is available for up to two years; doctoral support is available for up to three years. The scholarships cover tuition, placement fees and insurance, but are capped at US\$25,000 per person. Host universities in the United States may also contribute tuition and resources on a case-by-case basis to pay for costs not fully covered by the grant. Award recipients are obliged to inform COMEXUS if the funding they receive from multiple sources surpasses their total costs. In such cases, COMEXUS funding is proportionately reduced.

Impact and outcomes

Beyond tracking the number of awards given over time, no formal methodology has been deployed to measure the impact of either the CONACYT or Fulbright-García Robles scholarships. Both programmes are nevertheless widely understood to be generating important outcomes at various levels of society. Since its inception, CONACYT's scholarship programme has had a profound impact on the development of Mexico's human resources. A basic indicator used to measure education levels is the number of doctorates per 1,000 people. While Mexico's count (one per 1,000) is still low compared with the United States (eight per 1,000) and other developed countries, CONACYT's programmes have led to substantive growth in the number of professionals who hold advanced degrees. Many of these degrees are doctorates are in STEM fields. According to Dr Arturo Borja Tamayo, CONACYT's Director of International Co-operation, 'the development of human capital in STEM fields [has been] one of the pillars to creating a "knowledge economy" in Mexico and to advance the internationalization of its universities and research.'⁹⁷ On an individual level, COMEXUS and CONACYT scholarship recipients enjoy greater marketability and professional opportunities upon returning to Mexico. Indeed, a number of scholarship alumni are today strategically placed at universities, educational institutions, companies, industries and cultural organisations throughout Mexico. In 2014, the Mexican government's cabinet counted more than ten COMEXUS alumni.

93. Source: www.comexus.org.mx/posgrado_eua.html

94. In 2013, COMEXUS awarded 72 grants for master's programmes. Source: COMEXUS chart of awards, 2013, provided by COMEXUS office.

95. Scores from either the Graduate Record Exam (GRE) or the Graduate Management Admission Test (GMAT) are considered.

96. Source: www.comexus.org.mx/acerca.html#

97. Source: Conversation with Dr Arturo Borja Tamayo, Director of Evaluation and International Co-operation, CONACYT.

Future prospects

Changes in Mexican government leadership every six years have, and will continue to generate funding and operational challenges for scholarship programmes like CONACYT. Funding for the COMEXUS grant continues to be steady, the result of it being shared by Mexico and the United States. A positive recent development has been the establishment of a new agreement between Mexico and the United States. Formalised in 2012, the Bilateral Forum on Higher Education, Innovation, and Research intends to increase joint research activities, share best practices in higher education and innovation and promote greater educational mobility in support of science, technology, engineering and mathematics (STEM) education, especially for traditionally underserved demographic groups. Plans call for exponentially increasing the number of Mexican students studying in the United States from 14,000, when the agreement was signed, to 100,000 in 2018.⁹⁸

Scholarship programme overview: CONACYT

Years of operation	1970–present
Awards per year	Approximately 3,000
Awards since inception	N/A
Administrative authority	CONACYT
Funding	Government
Eligibility	Mexican citizenship, admission from host university, demonstrated language proficiency, confirmation of preceding degree
Level/s supported	Master’s, doctoral, specialist (full and partial study)
Fields supported	Mostly science, technology, engineering and maths
Recipient obligations	Scholarship repayment if recipient does not return home
Host universities	Preference given to top 100 ranked institutions and those having agreements with CONACYT

Scholarship programme overview: Fulbright-García Robles

Years of operation	1991–present
Awards per year	Approximately 150
Awards since inception	Over 5,500
Administrative authority	COMEXUS with assistance from LASPAU and IIE
Funding	US and Mexican governments
Eligibility	Mexican citizenship; minimum score on a quality scale
Level/s supported	Master’s and doctorates (full and partial)
Fields supported	All fields except medicine, dental, veterinary sciences
Recipient obligations	Return to Mexico for minimum of two years
Host universities	Any US university

98. Source: Dr Arturo Borja Tamayo, Director of Evaluation and International Co-operation, CONACYT.

2.8. Pakistan

Glossary terms

- OSS II – Overseas scholarships for MS/MPhil leading to PhD, phase two
- HEC – Higher Education Commission
- NSMC – National Scholarship Management Committee
- DAAD – German Academic Exchange Service

Statistics overview: Pakistan

1. Population (world rank)	193,239,868 (7)
2. Per-capita GDP	US\$3,100
3. Public expenditure on education as a per cent of GDP	2.4%
4. Number of HEIs: public–private	86 public–69 private
5. Number of tertiary students	1,995,006
6. Number of mobile tertiary students: outbound–inbound	34,290–N/A
7. Per cent of labour force with tertiary education	22.9%
8. Tertiary gross enrolment ratio (%): 1990–2007	8.43%

Source:

1. The World Factbook 2013–14. Washington, DC: Central Intelligence Agency, 2013. (<https://www.cia.gov/library/publications/the-world-factbook/index.html>).
2. Ibid.
3. Ibid.
4. Higher Education Commission website (www.hec.gov.pk).
5. HEC Annual Report, 2012 (available at www.hec.gov.pk).
6. UNESCO Institute for Statistics (www.uis.unesco.org/education/Pages/international-student-flow-viz.aspx).
7. Index Mundi (www.indexmundi.com/facts/indicators/SL.TLF.TERT.ZS).
8. World Bank (<http://data.worldbank.org/indicator/SE.TER.ENRR>).

With the creation of its Higher Education Commission (HEC) in 2002, the government of Pakistan placed a clear priority on developing Pakistani tertiary institutions into world-class centres of education and research. To accomplish this, the HEC prioritised the overseas training of scholars and scientists. Pakistan took this action against a backdrop in which only 22 per cent of its university faculty held doctoral degrees. Since its inception, the HEC has launched over 50 outward mobility scholarship programmes of various sizes and dimensions.⁹⁹ These programmes have sent 5,215 scholars abroad, over 80 per cent of which have been for master's, doctoral and other post-doctoral study.¹⁰⁰ The awards are funded in part by Pakistan's national government and often administered in collaboration with agencies from other nations. Because of its duration and impact, the *Overseas scholarships for MS/MPhil*

leading to PhD, Phase Two (OSS-II) project represents one of the most prominent and influential of Pakistan's current study abroad scholarship programmes.

OSS-II scholarship programme

The OSS-II programme was approved in 2006 by Pakistan's National Economic Council, a national governing body, chaired by the prime minister, with responsibility for the country's economic policies and plans. Its goal is the creation of a critical mass of highly qualified engineers and scientists by funding postgraduate training at top universities around the world. This thinking is predicated on the belief that targeted investments in human capacity development are needed to expand research activity at Pakistani universities and research institutes, which will in turn foster national economic development.

Several factors affected the OSS-II programme's scope and design, among them Pakistan's shortage of teaching, research and industry personnel with expertise in key fields; limited foreign exchange and the existence of relatively few doctoral-level scholars with overseas training. Concerns that other scholarships were being awarded on the basis of nepotism and favouritism also resulted in the establishment of administrative procedures that are comparatively more transparent and merit focused.¹⁰¹

The OSS-II project offers scholarships in two categories: the '90 per cent category', under which 1,800 total scholarships are to be awarded (450 per year), and the 'ten per cent category', designed to award 200 total scholarships (50 per year). Initially, OSS-II awarded 90 per cent category scholarships on open merit at the national

99. A list of currently active outward mobility scholarship programs is included in Appendix B.

100. Source: Operations Manual, Human Resources Division, Higher Education Commission, Pakistan.

101. These insights offered by Dr Riaz Hussain Qureshi, of the Higher Education Commission regarding the formation of OSS-II.

level in a given discipline. In 2011, an amendment to the Pakistani constitution divided the available scholarships in each subject into quotas to be met in each province. There is no such quota for the ten per cent-category scholarships, which are awarded only on merit.

The HEC administers OSS-II through its Project Management Unit, headed by a project director. HEC promotes OSS-II via advertisements in national and local newspapers, its website and outreach to universities.¹⁰² The HEC's process for selecting OSS-II awardees is highly competitive. To be eligible, candidates must be Pakistan nationals and have completed at least 16 years of education (elementary/secondary, plus four years of tertiary education). Applicants from universities and research and development organisations must also be under 40 years of age and not more than 35 years for all others. For candidates in the 90 per cent category, achievement on the Graduate Aptitude Test (GAT), similar to the Graduate Record Exam, is the primary criterion used in making selection decisions, with preference given to individuals already admitted to a programme. For candidates in the ten per cent category, selection is weighted according to GAT scores and the quality of the admitting university, which must rank in the discipline-specific world top-ranked 50 universities of advanced countries such as the United Kingdom, the United States, Canada, Australia, Singapore, Japan and other European nations. The National Scholarship Management Committee (NSMC), which operates under the HEC, makes final award decisions. For 90 per cent-category applications, the HEC reviews rank-ordered candidates by discipline. A list of provisionally selected candidates is then shared with partner agencies/universities, who conduct interviews with finalists in Karachi, Lahore and Islamabad (or electronically, if a face-to-face meeting cannot be arranged). A final

list of grant winners is then determined and approved by the NSMC. A similar process exists for the ten per cent-category applicants, but without foreign partner agency participation.

Currently, several countries host OSS-II scholars, including France, Germany, China, Thailand, Austria, the Netherlands, South Korea, Norway, Sweden, Turkey, the United States, Australia and New Zealand. Most European countries and some universities offer discounted tuition fee rates if placing large numbers of scholars. Of the HEC scholars currently studying in foreign doctoral programmes, the majority study in France (504), Germany (294), Austria (229) and the United States (209). Over two-thirds of OSS-II scholarship recipients receive training in the fields of engineering, technology, physical sciences and social sciences, a ratio consistent with HEC overseas study grants in general.

In each host country, HEC has signed agreements with a partner agency, such as DAAD or the British Council, for joint selection and placement of a scholar in a particular host university. The partner agencies are responsible for matching the recipients with university programmes. Discipline ranking at top universities plays a role in determining which institutions are selected as host sites. Admission is secured after initial identification by the NSMC and HEC. Candidates in the ten per cent category must find their own placements.

All OSS-II scholarship recipients are required to sign a bond with the HEC to return to Pakistan after completing their degree and to work for five years. Awardees employed by a government institution before their departure must rejoin the same employer after their studies, even if better opportunities arise within the country. For awardees who were not employed prior to studying abroad, an HEC programme called Interim Placement of Foreign PhDs (IPFP) provides placement assistance at public

and private Pakistani universities for one year as Assistant Professors. These scholars receive an attractive pay package and a one-year grant of 500,000 Pakistani rupees (US\$4,750) to underwrite costs associated with their research.

The government of Pakistan funds OSS-II out of budget overseen by its Public Sector Development Programme. There is no co-funding. Individual awards cover tuition, fees, living costs and travel, and vary according to country and institution.

Impact and outcomes

Multiple offices in the HEC are responsible for monitoring and tracking the OSS-II programme's budget spending and achievements. A principal measure of programme success relates to the number of scholarships awarded compared with the number of recipients who have completed degrees and returned home. Since 2007, 1,541 scholars have gone abroad for tertiary studies under OSS-II (1,337 in the 90 per cent category and 204 under the ten per cent category). Of these, 590 have successfully completed their studies and are now serving in Pakistan. Some 16 scholars were unable to complete their studies and 14 elected not to return.¹⁰³ The remainder have yet to complete their studies.

Other measured outcomes pertain to scholarly output – specifically the number of scholarship recipients' publications in impact journals and the number of their major conference presentations. While no statistics exist for OSS-II scholarship recipients, the number of Pakistani journal publications has increased by a factor of six over the past ten years: 948 (in 2003), 1,038 (2004), 2,494 (2007), 4,975 (2010) and 6,400 (2012). Sources attribute this improvement to the increase of doctoral-trained researchers in Pakistan, improved research facilities and government-provided financial incentives to conduct research, all

102. See www.hec.gov.pk

103. Scholars who do not immediately return to Pakistan are liable to repay the full cost of the OSS-II grant.

of which have associations with scholarship programmes like OSS-II. According to Dr Riaz Hussain Qureshi, Advisor to the Higher Education Commission in Pakistan, the overall impact of OSS-II can best be seen in the quality of teaching and research in universities and research and development organisations – both show signs of positive development in Pakistan’s fast-expanding tertiary system.

Since becoming operational, several ideas regarding the administration of OSS-II have been suggested. For instance, officials note that improvement can be made in the way scholars and host institutions are matched. For a large-scale operation like OSS-II, effective matching of domestic and foreign universities is challenging. Stakeholders believe better codifying partner responsibilities and improving inter-institutional agreement

procedures could overcome such challenges. It has also been suggested that a mechanism be put in place to ensure a regular flow of scholarship funds. Twice since 2007, funding for OSS-II has been interrupted because of national budget problems, preventing the distribution of awards for a time. The programme resumed full operations in 2011.

A potential issue with several other scholarships concerns the gap between target goals and actual enrolments. For example, a programme designed to promote faculty development has the goal of awarding 1,500 total scholarships for master’s and doctoral study. Since its inception in 2007, however, it has distributed a total of only 114 scholarships, a function of few applications and even fewer candidates meeting qualification thresholds.¹⁰⁴

Future prospects

According to informed sources, it is anticipated that HEC-managed outward mobility programmes like OSS-II will continue to be a national priority in Pakistan in the coming years. Indeed, funding for OSS-II has been extended until 2022, both to address the gaps in its implementation related to the government’s financial issues and because it is understood to be adding to the country’s highly skilled and educated workforce.

In the future, for a large-scale operation like OSS-II, a split-PhD scholarship programme is recommended to cut down costs of studies overseas, for which proper matching of local and foreign universities is seen by some as the major obstacle in the implementation of this model.

Scholarship programme overview: OSS-II

Years of operation	2006–present (2015 scheduled end date)
Awards per year	2,000 planned by 2015
Awards since inception	Approximately 1,500
Administrative authority	Higher Education Commission
Funding	Pakistan government
Eligibility	Citizenship; 40 years old/younger for faculty; 35 years old/younger for all others; minimum of 16 years of education; fluency in host-country language
Level/s supported	Doctorate
Fields supported	Primarily science and technology fields: medical sciences, engineering and technology, physical sciences; social sciences, business education, arts and humanities
Recipient obligations	Required to return home to work for five years
Host universities	Located primarily in the United States, Australia, Austria, China, France, Germany, Netherlands, Norway, Sweden, Thailand, Italy and New Zealand, but open to institutions from any developed country

104. Human Resource Development Initiative (HRDI), MS Leading to PhD Programme of Faculty Development for UESTPs, Phase I (Source: Human Resource Development Operations Manual, Higher Education Commission, Pakistan).

2.9 Russia

Glossary terms

- HEIs: higher education institutions
- NTF: National Training Foundation
- ASI: Agency of Strategic Initiatives

Statistics overview: Russia

1. Population (world rank)	142,500,482 (10)
2. Per-capita GDP	US\$17,500
3. Public expenditure on education as a per cent of GDP	4.1%
4. Number of HEIs: public–private	658–450
5. Number of tertiary students	6.2 million
6. Number of mobile tertiary students: outbound–inbound	49,585–129,690
7. Per cent of labour force with tertiary education	52.5%
8. Tertiary gross enrolment ratio (%): 1990–2007	53%–75%

Source:

1. The World Factbook 2013–14. Washington, DC: Central Intelligence Agency, 2013. (<https://www.cia.gov/library/publications/the-world-factbook/index.html>).
2. Ibid.
3. Ibid.
4. 'Education for all by 2015: Will we make it?' (PDF). UNESCO, Oxford University Press. 2007.
5. Ibid.
6. UNESCO Institute for Statistics (www.uis.unesco.org/education/Pages/international-student-flow-viz.aspx).
7. Index Mundi (www.indexmundi.com/facts/indicators/SL.TLF.TERT.ZS).
8. World Bank (<http://data.worldbank.org/indicator/SE.TER.ENRR>).

Overview

Since its founding, the Russian Federation government's support of outward mobility scholarships at the tertiary level has been limited. A programme founded in 1993, the President's Mobility Scholarship,¹⁰⁵ is still operational, but provides a limited number of awards each year and, until recently, was not widely promoted. That seems poised to change, however, with the December 2013 ratification of a programme that will issue grants to support master's- and doctoral-level study at top universities around the world. Once operational, this new initiative, tentatively called the Global Education Programme, will significantly increase the number of students receiving state funding to study abroad.

President's Mobility Scholarship

The early 1990s were a time of dramatic change in Russia. In 1991, the country's first ever direct presidential election took place and a new democratic government was formed. The same year, a presidential decree on education called for the creation of not less than 10,000 annual outbound mobility grants for undergraduate and graduate students and educators.¹⁰⁶ Subsequent legislation likewise identified education as a priority in helping Russia build connections abroad and develop talent for its recently privatised economy.¹⁰⁷

The President's Mobility Scholarship was formalised two years after the call for a large outward mobility programme, one part of a bill supporting universities and

students.¹⁰⁸ By that time, however, Russia's economy was in decline and government spending was being reduced. As a result, instead of realising its more ambitious target number, the law provided funding for only 100 outward mobility scholarships each year. Of these, 60 grants were earmarked for the support of doctoral-level study, with the remainder for master's, bachelors and specialist training.¹⁰⁹

As originally written, the goals of this programme were to 'preserve and develop intellectual potential' and 'strengthen state support of Russian undergraduate and postgraduate students.'¹¹⁰ Although never officially updated, a website for the programme today lists its aims as: supporting top students at world-class

105. Official programme name: **Программа стипендий Президента Российской Федерации для обучения за рубежом российских студентов и аспирантов.**

106. Source: 'Top education development priorities in the Russian Soviet Federative Socialist Republic,' Presidential Decree Number 1, 7 November 1991.

107. Source: Russian Federation Federal Law on Education, 10 July 1992, Number 3266-1, Article 1.

108. The law, 'President's Executive Order, Number 443, On Urgent Measures of State Support of Students of the Higher Education Institutions,' was ratified on 12 April 1993. In addition to outward mobility scholarships, it also funded 1,000 domestic scholarships, provided inventive funding to small businesses to hire students and gave money to Russian HEIs to improve their facilities and academic materials.

109. Historically, tertiary education in Russia was undertaken in a single stage, five or six years in duration, that resulted in students receiving a specialist qualification. A 2007 law, devised to bring Russia's system into compatibility with Western models, supplanted the five-year model with a two-stage approach. Source: http://en.wikipedia.org/wiki/Education_in_Russia Accessed 17.1.14.

110. President's Executive Order On Urgent Measures of State Support of Students of the Higher Education Institutions, 12 April 1993, No. 443.

institutions, training highly skilled professionals and helping Russian HEIs integrate into the global education arena.¹¹¹

Russia's Ministry of Education and Science administers the programme. Given its small scale, a lone ministry official has overseen operations since it began. To qualify for application, individuals must be Russian citizens, current university students, and not in their final year of study, a criterion meant to encourage them to return to their home campus to complete their studies. Candidates must also speak the language of their proposed host country and have received an enrolment offer from an institution connected by agreement with their university.

To apply, students submit materials to their universities. Following screening and approval by each institution's scientific council, applications are transferred to the ministry via the programme website. The ministry convenes a Competition Commission that is charged with evaluating and selecting applicants in accordance with a set of fixed review criteria. Commission members include representatives from different ministries, HEIs and non-governmental organisations, such as the Russia's National Training Foundation (NTF).

Applicants are free to propose study in any field. In some years, however, preference has been given to applications in certain disciplines. A 2011 scholarship announcement, for example, identified science, engineering and technology fields, as well as those that 'have high socio-economic importance for the state's defense and safety,' as priority fields.¹¹² Preference is also given to applications that include an acceptance letter from an institution ranking among the top 300 universities worldwide.¹¹³ Host institutions

are typically those universities with which a candidate's university has an active affiliation agreement. Information on host nations over the history of the programme was not available. In 2013, however, Germany was the most common host country (N=34), followed by the United Kingdom (N=15) and the United States and France (N=9).

Over its history, the number of applicants for this programme has been small. Sources speculate that this is because it is not widely known outside of a core group of universities.¹¹⁴ Promotion got a boost in 2012 following an NTF study on how to better promote all of the ministry's mobility programmes. Recommendations included building the programme's now-active website, creating a Facebook page and sending letters to university rectors asking that their campuses actively publicise the programme. Following these measures, 2013 applications doubled over the previous year. The ministry anticipates a similar spike in interest in future programme cycles.

Funding for the grants is included in the Ministry of Education and Science's annual budget. Before 2010, annual funding totalled US\$2 million. Since then, US\$2.4 million has been allocated each year. Awards cover all costs outlined in a budget prepared by candidates. Grants are disbursed directly to each host university and made on an equity basis, with no award exceeding US\$24,000 per person per year, regardless of the cost of living at the host site.

Length of study depends on an individual's study plan. For bachelor's, master's and specialist degree seekers, the average time abroad is one academic year. Doctoral scholarships are typically longer, between one and three years on average. Each

grantees' study plan outlines whether or not they will earn credit towards their home university degree while abroad. Scholarship recipients write and submit reports about their experience to the Ministry of Education and Science after completing their study experiences.

Global Education Scholarship

In 2010 and 2011 speeches at the International Economic Forum, then President Medvedev made clear that the Russian government was interested in funding additional outward mobility scholarships.¹¹⁵ Programme ideas began circulating shortly thereafter. In March 2012, the Agency of Strategic Initiatives (ASI),¹¹⁶ a recently established Russian non-profit organisation, was given the task of overseeing related discussions and planning. Their efforts resulted in the drafting of a presidential decree that outlined the basic features of a new grant programme. After some additional modifications, President Putin signed the decree into law on 28 December 2013.¹¹⁷

Beginning in 2014, the Global Education Programme¹¹⁸ will provide 1,000 scholarships each year for master's and doctoral-level study at top universities around the world. US\$140.6 million has been committed to fund the programme until 2016, with the expectation that, if successful, additional funds will be pledged for it to continue.

The goals of the programme are to support students, develop expertise in science, education, medicine and engineering disciplines, and then channel that expertise back into Russia's workforce to help enhance its global competitiveness.¹¹⁹ Grants will cover study in doctoral and master's programmes only, and only at universities ranked among the top 300

111. Source: www.president-mobility.ru

112. Source: Government's Decree Number 12434r, 25 August 2008.

113. The following three rating services are used to confirm a school's ranking: Academic Ranking of World Universities (ARWU), Times Higher Education World University Rankings (THE) and QS World University Rankings (QS).

114. There were 170 applications for the 100 scholarships in 2012. Anonymous NTF source.

115. Source: <http://eng.kremlin.ru/transcripts/456>; <http://eng.kremlin.ru/news/1732>

116. Source: www.asi.ru

117. Source: www.consultant.ru/document/cons_doc_LAW_156645

118. Official name: **Президентская программа интеграции в экономику российских выпускников ведущих иностранных образовательных организаций «Глобальное образование»**.

119. Source: www.asi.ru/molprof/globaleduintegration.

worldwide. After completing their studies, recipients will be required to return to Russia and work for three years in a field related to their area of expertise. Those who do not return will be fined an amount equalling twice the total cost of their scholarship.¹²⁰ Like the President's Mobility Scholarship, it is anticipated that award winners will receive a fixed amount of funding – early projections suggest up to US\$45,000 per year – to cover tuition, accommodation and other living costs. Scholarship recipients would be expected to cover any expenses above this amount. As a hiring incentive, it has been proposed that any organisation seeking to employ scholarship winners after they return to Russia offer to pay off extra loans they have incurred.

ASI has developed a website to promote the new programme. To test interest in the scholarships, the website encourages prospective applicants to submit information about themselves using a website feedback form. Operational procedures, such as the criteria used to evaluate candidates and the disbursement of funds, have not yet been finalised. The Ministry of Education and Science will have macro oversight responsibility for the programme, but is expected to select a third-party organisation to manage day-to-day operations.

Impact

Since it was initiated, Russia's President's Mobility Scholarship has distributed approximately 2,100 scholarships. According to sources familiar with the programme it has succeeded in meeting its goal of giving top students an opportunity to go abroad for high-quality training. Testimonials from programme alumni speak of a number of positive personal impacts, among them mastering new research methods, building professional connections, improving language and cultural understanding and enhancing career prospects.¹²¹ Formal assessments of the programme's impact have never been conducted, however, and once scholarship recipients complete the programme, communication with them ends. According to officials familiar with the programme, a number of them have not returned to Russia. Of those who do, the post-programme reports they submit to the ministry are archived and never reviewed.

Comments from several officials make clear that lessons drawn from the experience of operating the President's Mobility Scholarship influenced thinking about the design and function of the Global Education Scholarship. Transparency in candidate selection, better promotion, improved participant feedback, clearly defined goals and the appointment of a non-governmental administrative authority were all identified as important features of the new programme.

Future prospects

At present, there are no indications that funding for the President's Mobility Scholarship will expire. And sources familiar with the programme indicate that it shouldn't, pointing to the recent increase in programme applications as a sign that there is demand for the scholarships.

Although its features are not yet formalised, the proposed scale and scope of the Global Education Scholarship suggest that its prospects for developing and integrating new talent into the country's workforce are promising. Worth watching is whether or not funding for both programmes will be continued and whether lessons learned from administering the new programme will result in any changes in how the President's Mobility Scholarship is managed in the future.

120. Source: www.asi.ru/molprof/news/14799

121. Source: www.president-mobility.ru

Scholarship programme overview: President's Mobility

Years operational	1993–present (no scheduled end date)
Awards per year	100
Awards since inception	2,100
Administrative authority	Ministry of Education and Science
Funding	Russian government
Eligibility	Citizenship; host country language fluency; full-time public university students
Level/s supported	Master's, undergraduate and specialist (partial support); doctoral (partial and full support)
Fields supported	Any
Recipient obligations	Return home to complete degree
Host universities	University partner with the priority to top 300 ranked institutions; Almost exclusively European nations, but also Australia, Canada, Singapore and the United States

Scholarship programme overview: Global Education

Year established	2014
Awards per year	1,000 (anticipated)
Awards since inception	0
Administrative authority	Ministry of Education and Science
Funding	Russian government
Eligibility	Not yet determined
Programmes supported	Doctoral, master's (full degree support)
Fields supported	Science, education, health, engineering
Recipient obligations	Three year home work requirement in related field
Host universities	Top ranked on government-approved list

2.10 Saudi Arabia

Glossary terms

- KASP: King Abdullah Scholarship Programme
- MOHE: Ministry of Higher Education
- SACM: Saudi Arabia Cultural Mission

The Kingdom of Saudi Arabia has a long tradition of sending its citizens abroad for academic study. Early programmes sponsored students in nearby countries to study Arabic and Islamic studies. In the 1950s and 1960s, outward mobility programmes were expanded and Saudi students began enrolling at universities in the United States and Europe. By 1975, thousands of Saudis were studying abroad annually on state-sponsored programmes, most of them pursuing master's and doctoral degrees. Saudi Arabia's King Abdullah Scholarship Programme (KASP)¹²² was founded in 2005. As a programme promoting outward mobility, its mammoth scope and scale is unparalleled in Saudi Arabian history; in less than ten years, KASP has provided grants to over 165,000 recipients to go abroad for intensive

Statistics overview: Saudi Arabia

1. Population (world rank)	26,929,583 (47)
2. Per-capita GDP	US\$30,500
3. Public expenditure on education as a per cent of GDP	5.6%
4. Number of HEIs: public–private	24–8
5. Number of tertiary students	200,000
6. Number of mobile tertiary students: outbound–inbound	41,532–26,871
7. Per cent of labour force with tertiary education (2009)	21%
8. Tertiary gross enrolment ratio (%): 1990–2007	10–30%

Source:

1. The World Factbook 2013–14. Washington, DC: Central Intelligence Agency, 2013. (<https://www.cia.gov/library/publications/the-world-factbook/index.html>).
2. Ibid.
3. Ibid.
4. Saudi Arabia Embassy website (www.saudiembassy.net/about/country-information/education).
5. Saudi Arabia Embassy website, 2004–05 figures (www.saudiembassy.net/about/country-information/education/higher_education.aspx).
6. UNESCO Institute for Statistics (www.uis.unesco.org/education/Pages/international-student-flow-viz.aspx).
7. World Bank (<http://data.worldbank.org/indicator/SL.TLF.TERT.ZS>).
8. World Bank (<http://data.worldbank.org/indicator/SE.TER.ENRR>).

language study and to pursue bachelor's, master's and doctoral levels.

King Abdullah Scholarship Programme

Shortly after King Abdullah's ascension to power in 2005, the Saudi government released Vision 2020, a strategic plan that identified economic diversification and human-resource enhancements as key to Saudi Arabia's future development. Understanding that education would be central to realising the plan's goals and that the kingdom had limited tertiary placement opportunities for the country's burgeoning population, KASP was ratified by royal decree the same year.¹²³

KASP began by sending students to the United States, and then broadened its scope to include other developed

countries.¹²⁴ Following five years of operation and stakeholder belief that it was meeting its goals, the programme was re-approved for five more years of operation in 2010. It has since been extended to run until at least 2020.

The official mission of KASP is 'to prepare and qualify Saudi human resources in an effective manner so that they will be able to compete on an international level in the labor market and the different areas of scientific research, and thereby become an important source of supply of highly qualified individuals for Saudi universities as well as the government and private sectors.'¹²⁵ Towards this end, Saudi Arabia's Ministry of Higher Education (MOHE) has established the following goals for the programme:¹²⁶

122. In Arabic, the King Abdullah Scholarship Program's name is: *برنامج الملك عبد الله بن عبد العزيز آل سعود للدراسة في الخارج*.

123. KASP's inception coincided with a period of sharp oil revenue increases, which helped fund a programme of its magnitude.

124. The United States remains KASP's largest receiving nation, enrolling just over 50 per cent of all scholarship recipients.

125. Source: www.mohe.gov.sa/en/studyaboard/King-Abdulla-hstages/Pages/mission-a.aspx

126. Source: www.mohe.gov.sa/en/studyaboard/King-Abdulla-hstages/Pages/goals-a.aspx

- sponsor qualified Saudis for study in the world's best universities
- foster high-level academic and professional standards
- encourage science, education and cultural exchange with other countries
- increase the number of qualified and professional staff in the Saudi workforce
- raise and develop professionalism levels.

KASP administration is overseen by MOHE, with help provided by Saudi Arabia Cultural Missions (SACM) and/or cultural bureaux in each host country.¹²⁷ MOHE promotes KASP through major news outlets, media advertisements, awareness sessions and its website. To apply, candidates submit materials to MOHE via a secure website. A scholarship programme committee screens applications based on merit parameters, then interviews qualifying candidates. The names of nominees who pass these reviews are posted on the MOHE website and shared with media organisations. Their files are then transferred to the SACM in each host country, where staff assess their language ability and academic background, then recommend universities and programmes that align with nominees' interests and career goals. Prior to departing for their studies, scholarship winners attend an annual forum at which they learn about their host country and university, and expectations regarding their participation. Once in their host countries, scholarship recipients retain close links with their SACM office, which monitors their academic progress, liaises with host universities and transfers funds to grant winners and institutions.

To qualify for a KASP scholarship, applicants must be Saudi citizens between 18 and 30 years of age. The programme does not issue quotas for economic status or ethnicity. Women are eligible to apply for KASP grants, but only on the condition that a male companion, usually a husband or family member, accompany them during their entire period of study. In part because of this requirement, 75 per cent of the Saudi students who have taken part in the programme to date have been male. The awarding of a KASP scholarship does not oblige recipients in any way. Because Saudis have a strong tendency to live in their home country, the common assumption is that citizens will return home after completing their studies abroad.

A list of host countries and institutions is managed by MOHE and SACM. Both lists are dynamic and change over time.¹²⁸ Given the scale of the KASP, the host university list is monitored closely in an effort to avoid over-saturation at popular universities. It is felt that spreading grant recipients across a large number of institutions also 'encourages Saudi students to integrate into [the host culture] so that they may benefit both academically and socially.'¹²⁹

KASP funds full-time undergraduate and graduate study in targeted, high-need fields. Bachelor's degree seekers may study medicine, medical sciences and health sciences. For master's and doctoral students, a related but larger number of degree programmes has been approved.¹³⁰ KASP does not typically support enrolment in certificate or diploma programmes, although exceptions have been made with

MOE approval. Because most scholarship recipients study in countries that do not have Arabic as an official language, KASP also supports intensive language training. Scholarship guidelines require award recipients to obtain at least conditional admission to degree programmes before completing their intensive language training. Scholarships for master's degrees cover two years of study, not including language study, if required, and four years for doctorates. Bachelor's degree funding varies with country/institution. In exceptional cases and with SACM approval, scholarships can be extended. A recent press release by the Ministry of Higher Education indicates that as of 2012, approximately 21 per cent of KASP scholars thus far have completed their studies during the time allotted.

The Saudi Arabian government funds KASP in its entirety. All costs associated with a scholar's period of study are covered, including tuition,¹³¹ monthly living stipends, air tickets, health insurance, books, and, if needed, intensive language instruction. Postgraduate students also qualify for bench fees (US\$5,000 for master's and US\$10,000 for doctoral degree seekers) and funding to attend academic conferences related to their field of study.¹³² SACM also provide numerous services to KASP students, including academic mentoring during the programme, social counselling and social activities.

127. Currently, there are 33 Saudi Arabia Cultural Missions or bureaux around the world. These offices – often co-located with Saudi embassies – serve as intermediaries between host-country educational institutions and their counterparts in Saudi Arabia, help in the exchange of scientific and cultural expertise and support Saudi students.

128. KASP scholars are currently sent to the following 23 countries: United States, Canada, United Kingdom, Ireland, France, Spain, Italy, Australia, Germany, The Netherlands, Poland, New Zealand, Austria, Hungary, Czech Republic, Singapore, South Korea, Japan, People's Republic of China, Malaysia, India, South Africa, Turkey. Source: www.mohe.gov.sa/en/studyaboard/King-Abdulla-hstages/Pages/countries-a.aspx

129. Source: www.sacm.org/Departments/Academicaccreditation.aspx

130. Approved graduate programmes include: medicine, dentistry; pharmacy; nursing; medical sciences (radiology, medical laboratories, medical technology, and physical therapy); engineering (civil, architectural, electric, mechanical, industrial, chemical, environmental and communications engineering, as well as heavy equipment and machinery); computer (computer engineering, computer science, networks, etc.); pure sciences (mathematics, physics, chemistry, biology); other disciplines (law, accounting, e-commerce, finance, insurance and marketing). Source: www.mohe.gov.sa/en/studyaboard/King-Abdulla-hstages/Pages/study-levels-academic-disciplines-a.aspx

131. There are no limitations on tuition so long as host universities are accredited.

132. Conference funding includes one month of salary for master's students, two months for doctoral students; registration fees; round-trip airfare; and an additional month of salary for presenting a paper. It is subject to approval by SACM and limited to one event per degree. Source: www.sacm.org/Career.aspx

Impact and outcomes

The MOHE measures the success of KASP based on the number of successful recipients that complete their programmes on time. No other measurements have been put in place. As the programme was initiated by royal order, the MOHE's principal attention at the start of KASP was to make the programme operational. Soon after, the Ministry realised its huge operational requirements and the complexity of students seeking study in different places, further focusing its attention on the administration of the programme. As the number of students going abroad on KASP scholarships increases, administrative pressure intensifies, particularly in placing students in institutions abroad.

KASP has grown substantially over its eight-year tenure, from a total of 5,000 scholars in 2005 to over 35,000 in 2012. A large number of KASP alumni have since returned to the kingdom, and are now involved in fields including medicine, engineering, information technology, business administration and law. The overall perceived impact of KASP has been quite positive.

But according to Saudi officials, several important lessons have emerged concerning the programme's operations. For one, scholarship programmes would benefit from improved co-ordination between government ministries. Links with the Ministry of Labour, for instance, could provide better information regarding target fields of study. Also, better performance measures are needed to evaluate the programme's impact. Instead of just counting the number of students it enrolls and how much money is spent, measures should be created to evaluate the programme's broader social impacts.

Also, in the United States, the SACM recently created a Center for Career Development (CCD) to provide KASP students 'with opportunities for translating classroom learning into practical experience that would benefit them in their careers and to introduce them to companies that can make optimum use of their new skills and prepare them for future positions within the hosting organizations.'¹³³ In addition to the benefits these experiences can produce for scholarship recipients, this type of programme stands as a proactive way to build on the KASP's overall impact.

Future prospects

With KASP's projected end date of 2020, it will take many years for its full impact to be realised and understood. As a scholarship programme, KASP represents an enormously ambitious commitment to the kingdom's youth and future. Accordingly, it raises some interesting questions, for instance: what will be the cultural impact on Saudi society upon the return of such large numbers of internationally educated citizens? Saudi Arabia has a conservative and religious society, which may be affected by the influx of numerous students exposed to a wider, different world.

133. Source: www.sacm.org/Careercenter/CareerExploration1.aspx

Scholarship programme overview: KASP

Years operational	2005–present (funding committed through 2020)
Awards per year	Approximately 30,000 in 2012
Awards since inception	Approximately 165,000
Administrative authority	Ministry of Higher Education, Saudi Arabia Cultural Missions
Funding	Government
Eligibility	Saudi citizens between 18 and 30 years of age
Level/s supported	Full bachelor's, master's, doctoral degrees
Fields supported	Undergraduate: medicine, medical sciences and health sciences; Graduate: medicine, dentistry, pharmacy, nursing, medical sciences (radiology, medical laboratories, medical technology and physical therapy); engineering (civil, architectural, electric, mechanical, industrial, chemical, environmental and communications engineering, as well as heavy equipment and machinery); computer (computer engineering, computer science, networks, etc.); pure sciences (mathematics, physics, chemistry, biology); other disciplines (law, accounting, e-commerce, finance, insurance and marketing)
Recipient obligations	None
Host universities	Accredited universities in approved countries: all Arab countries (except Iraq and Syria), Australia, Canada, Germany, France, India, Italy, Japan, New Zealand, Spain, United Kingdom, United States

2.11 Vietnam

Glossary terms

- CPV – Communist Party of Vietnam
- MOET – Ministry of Education and Training
- MOF – Ministry of Finance
- VIED – Vietnam International Education Development
- GDP – Gross Domestic Product

Statistics overview: Vietnam

1. Population (world rank)	92,477,857 (15)
2. Per-capita GDP	US\$3,800
3. Public expenditure on education as a per cent of GDP	6.6%
4. Number of universities: public–private (4-year) Number of universities: public–private (4 and 2-year)	153–54 338–83
5. Number of tertiary students: four-year institutions Number of tertiary students (4 and 2-year institutions)	1,453,067 2,177,299
6. Number of mobile tertiary students: outbound–inbound	47,979–3,260
7. Per cent of labour force with tertiary education	N/A
8. Tertiary gross enrolment ratio (%): 1990–2007	3–18%

Source:

1. The World Factbook 2013–14. Washington, DC: Central Intelligence Agency, 2013. (<https://www.cia.gov/library/publications/the-world-factbook/index.html>).
2. Ibid.
3. Ibid.
4. Educational Statistics of 2013 by the Ministry of Education and Training of Vietnam (Excel file) www.moet.gov.vn/?page=11.11&view=5251
5. Ibid.
6. UNESCO Institute for Statistics (www.uis.unesco.org/education/Pages/international-student-flow-viz.aspx).
7. N/A.
8. World Bank (<http://data.worldbank.org/indicator/SE.TER.ENRR>).

Overview

Since the mid to late-1990s, Vietnam's economy has been growing rapidly; indeed, its five per cent GDP increase in 2012 was the slowest rate of growth since 1999.¹³⁴ During the same period, the country has also become increasingly concerned about its international economic integration and competitiveness. One clear example of Vietnam's commitment to modernising its economy has been the introduction of a small number of publicly funded overseas scholarship schemes. These programmes have aimed to improve the country's human-resource capacity in several areas deemed crucial to Vietnam's future

economic development – notably, in the science and technology fields, and the overall quality and qualifications of academic staff in Vietnam's tertiary education institutions.

Scholarship No. 322

As Vietnam's economy slowed with the Asian economic crisis in the late 1990s, the government attributed some of the economic difficulties to a lack of expertise in science and technology. A shortage of trained personnel in these key fields was seen as a limiting factor when it came to Vietnam's ability to create economic growth, increase exports and compete

for foreign investment. In addition, there was an expanding awareness that Vietnam's tertiary education system needed attention – universities were neither producing sufficient numbers of graduates in key fields, nor were they staffed with appropriate numbers of faculty with high-level degrees.¹³⁵

In 2000, the Central Committee of the Communist Party of Vietnam (CPV) directed the government to attend to the science and technology skills shortage. One result was the creation of a new outward mobility programme named after its decree number: Scholarship No. 322.¹³⁶ The Ministry of Education and Training (MOET) was made

134. CIA World Factbook. (2014). 'Vietnam.' Retrieved 25 January 2014 from <https://www.cia.gov/library/publications/the-world-factbook/geos/vm.html>

135. In 1999, there were 153 universities and colleges in Vietnam, among which only 69 institutions offered degrees at the bachelor level or beyond. Total student enrolment stood at just 719,842 – representing less than one per cent of the national population at that time. Furthermore, among the more than 30,000 teaching staff at Vietnam's colleges and universities, only 4,378 (or 14.6 %) held doctoral degrees. Source: www.moet.gov.vn/?page=11.11&view=3544

136. Sources: http://dangcongsan.vn/cpv/Modules/News/NewsDetail.aspx?co_id=30579&cn_id=255563 and http://dangcongsan.vn/cpv/Modules/News/NewsDetail.aspx?co_id=30579&cn_id=199074. Official program name: De an Dao tao can bo khoa hoc, ky thuat tai cac co so nuoc ngoai bang ngan sach nha nuoc

responsible for the programme, all aspects of which were first handled by an office specifically created for this purpose. Later, the office was folded into a larger, newly created department within MOET, the Vietnam International Education Development¹³⁷ (VIED), which is given the task of overseeing all government scholarships.

Scholarship No. 322 was specifically created to provide undergraduate and graduate training in the science and technology fields. The government of Vietnam committed to fully funding this initiative, which paid for all costs associated with the study-abroad experience (tuition and fees, living expenses, insurance, air and ground transport and contingencies). Additional limited support, such as language training, was provided by several scholarship host institutions/organisations.

The scholarship targeted individuals who were working permanently or under long-term contracts for the government in the fields of science and technology, or who were involved in such activities as university teaching and programme administration, business administration and development, and public policy development and implementation. Undergraduate scholarships were limited to applicants under 22 years of age; master's under 35; doctoral under 40; and support for research fellowships was available only to those under 50 years old.

Applicants were divided into three main areas: natural sciences and technology, social sciences and humanities and medical pharmaceutical sciences. All applicants were first screened against basic criteria, such as age limits, language proficiency and agreement by employers that the applicant may pursue the scholarship. The next stage of evaluation was undertaken by a selection committee relevant to each of the three main areas noted above. Here, issues such as academic merit, prior academic/scientific achievements and the prospects for success in the academic experience overseas were considered. Depending on the committee, interviews and/or exams could be required. Candidates approved by the selection committee were sent to the MOET for final revision/approval. Those individuals ultimately approved by the MOET to receive scholarships then had two years to gain admission to a programme or institution overseas. After admission had been granted, the MOET approved final placement for each student.

In the first two years of the scholarship's operation, priority was given to applicants and academic staff from leading universities and research institutes, as well as national laboratories and two major high-technology zones in Hanoi and Ho Chi Minh City. In terms of focus areas, grants prioritised support for work in fields where Vietnam did not have sufficient capacity to offer training domestically, as well as in fields

deemed to be of national importance, such as information technology, bio-technology and materials technology.

Scholarship No. 322 recipients were obliged to return to Vietnam following their study experience and undertake employment arranged by the government. Undergraduate award recipients were required to work for a period twice as long as their time abroad; graduate recipients owed a period of employment three times as long as their scholarship support. The government demanded reimbursement of all monies received in cases of failure to fulfil the post-scholarship employment requirement.

During its period of operation (2000–10), Scholarship No. 322 made 4,590 awards, and awardees attended institutions in 34 different countries on four continents. Just over 80 per cent of recipients were at the graduate level. Available data indicate that 3,017 scholarship recipients (nearly 66 per cent of the total) have returned to Vietnam. By 2011, the government calculated that just 33 scholarship recipients had not fulfilled their post-scholarship work obligation.¹³⁸

137. Source: <http://vied.vn/vn/default.aspx>

138. MOET (2011). Ten-year Report on The Project of Training Scientists and Technologists at Foreign Institutions Using Governmental Budget (Scholarship No 322).

Scholarship No. 322 recipients by host country (2000–10)

Host countries	Scholarship recipients
France	681
Australia	601
Russia	557
United States of America	538
Germany	492
United Kingdom	410
China	399
Thailand	192
Japan	187
Holland	103
Canada	101

Source: MOET (2011). *Ten-year Report on The Project of Training Scientists and Technologists at Foreign Institutions Using Governmental Budget (Scholarship No 322)*.

Scholarship No. 322 recipients, by field of study, graduate level only (2000–10)

Years	Fields	Percentage
2000/01–2005/06	Technology	41.72
	Economics and management	14.86
	Natural sciences	14.25
	Social sciences and humanities	13.05
	Agriculture, forestry and fishery	9.05
	Medicine and pharmacy	5.54
	Arts	1.54
2006/07–2009/10	Natural sciences and technology	42.50
	Economics, culture, education, social sciences	34.87
	Biological technology	9.48
	Information technology	9.34
	Material science	3.81

Source: MOET (2011). *Ten-year Report on The Project of Training Scientists and Technologists at Foreign Institutions Using Governmental Budget (Scholarship No 322)*.

Scholarship No. 911

After ten years of Scholarship No. 322, it was widely accepted that programmes in this vein should be extended in order to build additional capacity in the country's science and technology sectors. Specifically, the stock of doctoral degree holders at tertiary institutions was understood to be too low when compared to international standards and other countries in the region. As the global economic crisis of the late 2000s slowed Vietnam's GDP growth, many policy makers and scholars saw a connection between low-quality higher education, low-quality tertiary graduates and limited economic growth, particularly in the science and technology fields. In response, the CPV and the government established a goal of adding 20,000 doctoral degree holders to the academic workforce serving Vietnam's higher education sector by 2020.¹³⁹

The Scholarship No. 911 programme¹⁴⁰ was launched in 2010 to meet this goal.¹⁴¹ It supports overseas doctoral education, strengthening doctoral programmes within Vietnam's universities, and enhancing international collaboration between Vietnamese and foreign doctoral programmes. More broadly, the 911 programme aspires to set Vietnam on a course to comprehensively reform its higher education system in order to meet the country's socio-economic development needs.

The programme seeks to recruit applicants from multiple sources: teaching staff currently working at Vietnam's colleges and universities, research associates employed at research institutes, recent graduates from bachelor's and master's programmes and individuals working outside academia who show promise in their fields. Only those under age 45 are eligible to apply, and all award recipients are obliged to work at their employing institution in Vietnam for two

139. Vietnamese government decree No. 911 (2010).

140. Official name: De an Dao tao giang vien co trinh do tien sy cho cac trung dai hoc, cao dang giai doan 2010–2020.

141. Source: www.oecd.org/countries/vietnam/Viet%20Nam.pdf

years following completion of the period of scholarship support. They are also required to publish at least one article during the scholarship period – ideally in a journal whose impact factor is tracked by ISI Web of Science or Scopus. Application, evaluation and selection processes for the 911 scholarships to go abroad for doctoral programmes are similar to those for the 322 programme.

Although no official list of host countries or host institutions has yet been made public, it is widely assumed that the channels opened by the 322 scholarship programme will be used for 911 awardee placements. As with the 322 scholarship programme, the 911 awards will cover all costs associated with completing a degree.

Four years after its launch, the 911 programme has not yet sent any scholarship recipients abroad, despite clear quantitative goals for each year of the programme. The economic slowdown in Vietnam since the late 2000s, which is understood to have also prevented Scholarship No. 322 from being extended beyond 2010 to 2014, seems to be the likely cause of this delay. In total, 911 aspires to support some 10,000 Vietnamese doctoral students abroad – 800–1,000 scholarships per year between 2010 and 2013, then 1,300–1,500 annually from 2014 to 2020.

Impact

An analysis of the impact of Scholarship No. 911 is not yet possible, given its early stage of development. However, the MOET did complete a report on Scholarship No. 322 after it ended in 2010. It found that all the major goals of the 322 programme had been reached and that the programme had effectively followed all of the government's directives in terms of the selection and support of scholarship recipients, training in science and technology fields, and budget expenditures.

There is no indication that any independent third-party evaluation has been conducted to corroborate the positive assessment coming from the MOET. Critiques of the MOET report might include the fact that the actual numbers of scholarships awarded each year did not always attain stated goals. For example, the original plan was that 400 scholarships would be awarded each year in the programme's early stages, followed by an increase to 700 per year beginning in 2007. These latter-stage target numbers were subsequently revised down by government decision No. 365, and percentages were outlined for the scholarship awards by level of education – 50 per cent should go to doctoral students, 25 per cent to master's students, ten per cent for undergraduate students and ten per cent for research interns. Regarding other goals, such as the impact of returnees on Vietnam's science and technology output, the MOET report did not make any strong statements, nor did it provide reliable evidence of developments in this area. Meanwhile, there are indications that VIED could improve its administration and service delivery to scholarship recipients – some scholarship recipients experienced late stipend transfers and suggested better monitoring of, and support for, academic challenges faced by the scholarship recipients while abroad.

Still, the upbeat perspective of the government on the 322 programme does seem to be supported by those familiar with the initiative. Award recipients and the programme's administrators agree that the objectives of these efforts have been timely and positive for Vietnam. Returnees have added some 1,000 doctoral degree holders to the ranks of the country's tertiary-level teaching staff¹⁴² (in total, just 8,000 of Vietnam's approximately 45,000 teaching staff now hold a doctorate). This has ostensibly contributed to raising the level

of quality in Vietnam's universities and better connecting Vietnam to centres of knowledge and expertise in the countries where the scholarship recipients studied. Furthermore, the 322 (particularly) and 911 programmes have allowed VIED to develop a network of 832 universities¹⁴³ around the world that are willing to receive its scholarship recipients, and perhaps collaborate in other ways.

A final, if less tangible, impact is that those concerned with the development of Vietnam's economic and educational sectors have been buoyed by the government's willingness to invest significantly and to publicly support the advanced training of highly skilled individuals.

Future prospects

With the launch of Scholarship No. 911 in 2010, the country seems committed to continuing its effort to provide some number of advanced training opportunities abroad for qualified citizens. Some observers of the programme further note that its strategic focus on strengthening the higher education system of Vietnam speaks to a clear prioritisation by the national government to improve this sector in broader terms. Moreover, there seem to be new opportunities for Vietnam's universities to expand their autonomy and strategic planning options under the 911 framework, as this programme includes support for overseas study, joint doctoral programmes with international partners and the improvement of doctoral education within Vietnam. The synergies between overseas scholarship activities and domestic developments in Vietnam may prove crucial in the coming years.

142. MOET (2010). *Ten-year Report on The Project of Training Scientists and Technologists at Foreign Institutions Using Governmental Budget* (Scholarship No. 322).

143. *Ibid.*

Scholarship programme overview: Scholarship No. 322

Years operational	2000–10
Awards per year	Variable (ranged from less than one year for research interns to five years for doctoral students)
Awards since inception	4,590
Administrative authority	The Office for Study Abroad Scholarship and then Vietnam International Education Department (both entities are under MOET)
Funding	Government
Eligibility	Citizenship; fluency in host-country language
Level/s supported	Bachelor's, master's, doctorate, research
Fields supported	Natural sciences and technology, social sciences and humanities, and medical pharmaceutical sciences
Recipient obligations	Return to work in government-selected job.
Host universities	Major developed countries as specified by the government. A 2005 decree by the prime minister called on the programme to prioritise placements in the following countries: United States, Canada, United Kingdom, Germany, France, The Netherlands, Russia, Australia, New Zealand, Japan, South Korea, China

Scholarship programme overview: Scholarship No. 911

Years operational	2010–present
Awards per year	None to date
Awards since inception	None to date
Administrative authority	Vietnam International Education Department (under MOET)
Funding	Government
Eligibility	Colleges and university teaching staff; research institute employees; recent graduates from bachelor's and master's programmes; individuals working outside academia who show promise in their fields; citizenship; fluency in host-country language
Level/s supported	Doctoral (full degree)
Fields supported	Science and technology
Recipient obligations	Return to work in former job for at least two years; publish at least one scholarly article
Host universities	Major developed countries as specified by the government. Although no awards have yet been made, it is expected that the 911 programme will prioritise the same countries prioritised by the 322 scholarship programme, and that, generally, relationships developed with host universities under the 322 programme will be built upon for the 911 programme

3. Analysis

3.1 Motivations for outward mobility programme	52
3.1.1 National development	52
3.1.2 Human capacity development in key fields	53
3.1.3 Organisational reform and performance enhancement	53
3.1.4 Interpersonal and international connections	53
3.1.5 Social inequalities	54
3.2 Characteristics of outward mobility programme	54
3.2.1 Scale and approach	54
3.2.2 Focus and funding	55
3.2.3 Administration and selection	56
3.2.4 Eligibility, participation and distribution	57
3.3 Outward mobility programme outcomes and impacts	58
3.3.1 Individual programme impacts	59
3.3.2 Organisational impacts	60
3.3.3 National impacts	60
3.3.4 Other impacts	60

3. Analysis

Comparing the country cases profiled in this study provides insights into their experiences creating and administering outward mobility scholarship programmes. The following sections spotlight similarities, differences and trends related to these experiences.

3.1 Motivations for outward mobility programme development

Why do nations develop outward mobility scholarships? A review of the case countries reveals multiple motivations, perhaps not so surprising given the differences in each programme's scope and scale, not to mention the political, economic and social contexts in which they have been established.

Two general principles were found to have motivated the countries' decisions to launch an outward mobility programme. First, that there is a positive correlation between education and prosperity – having better-educated citizens, so goes the thinking, leads to better-functioning organisations, which in turn leads to greater national prosperity. Second is the notion that sending citizens abroad for tertiary study is worth the investment – because domestic training opportunities do not exist, cannot meet demand or are not considered to be of suitable quality – and that the needs at home for national economic development are acute enough to justify the expense involved in supporting overseas tertiary study for some number of qualified individuals.

Beyond these general beliefs, a comparison of the case study programmes reveals a set of more specific motivations. These include:

- promoting national development
- increasing human capacity in key fields
- reforming and/or improving organisations
- improving interpersonal and international linkages
- addressing social inequities.

These rationales are not mutually exclusive. Instead, commentary related to why a programme was (or should be) established typically referenced several of these motivations, as well as the individual, institutional and national advantages it would produce.

3.1.1 National development

An interest in advancing national development was the most commonly cited rationale for establishing outward mobility programmes, not surprising given that all of the programmes under review are funded in whole or in part with public resources. Indeed, to one degree or another, all of the outward mobility scholarships reviewed make reference to this goal.

Several of the case countries (China, Kazakhstan, Indonesia, Russia, Vietnam) have witnessed notable shifts in their political systems and/or moved to market-based economies within the past 20 years. Others (Brazil, India, Mexico) are seeking to improve on economic progress that has led to burgeoning middle classes. All have made general advancements in education, health and economic strength – as measured, for example, by increases in their Human Development Index scores, a blend of health, education and economic factors – and are experiencing growth in tertiary education enrolments (see Table 3.1). In short, these are nations that have experienced significant developmental advances over the past two decades and understand education to be a useful tool in realising even more.

In describing the motivations for its outward mobility scholarships, China often refers to the importance of innovation in creating a globally competitive economy. With an education system that decision makers believe is less well equipped than other countries to produce innovative thinkers, China anticipates that its sponsored scholars will acquire training, have experiences and meet people that will lead to more collective creativity. While innovation was not explicitly referred to by the other case countries when discussing the motivations for their programmes, all do acknowledge, in one way or another, that sending their citizens abroad results in both knowledge acquisition and improved understanding of different people, places and languages – important skills for countries whose economies are in global competition with each other and thus seeking increased cross-border collaboration.

Table 3.1: Development and tertiary education trends

	Average annual HDI growth 2000–12 (world rank)	Tertiary gross enrolment Ratio 1990–2007 (% gain)
Brazil	0.73 (85)	11–30 (19)
China	1.42 (101)	3–23 (20)
Egypt	0.92 (112)	14–32 (18)
India	1.50 (136)	6–13 (7)
Indonesia	1.28 (121)	9–18 (9)
Kazakhstan	1.08 (69)	40–51 (11)
Mexico	0.59 (61)	15–24 (9)
Pakistan	1.74 (146)	3–5 (2)
Russia	0.84 (55)	55–74 (19)
Saudi Arabia	0.74 (57)	10–30 (20)
Vietnam	1.22 (127)	3–18 (15)

Source: Summary – Human Development Report 2013
<http://hdr.undp.org/en/content/human-development-report-2013-summary>

Source: World Bank
<http://data.worldbank.org/indicator/SE.TER.ENRR>

3.1.2 Human capacity development in key fields

Each of the scholarships reviewed was developed in response to specific needs. With just one exception (Russia), human capacity development was identified as a shared need in each of the case countries. As developing nations, each has identified knowledge and skill areas that are not adequately being served by their existing tertiary systems. Unable to provide training (or training of adequate quality) in these areas, outward mobility programmes thus represent an effective strategy for developing human capital. If you can't train them at home, so goes the thinking, send them to institutions that can.

Across the countries there was significant consistency in the disciplines their scholarship programmes are targeting. For the most part these include the STEM fields, although business, management, economics and agriculture are also well represented. Less common are the social sciences and humanities, although they too, are being targeted by several countries. The scholarship programmes in Indonesia and Vietnam, for example, send students abroad for study in the soft sciences –

both countries are seeking to expand the number of tertiary academic staff with credentials in these fields.

3.1.3 Organisational reform and performance enhancement

Reforming and improving organisations is another common motivation underlying outward mobility scholarships. Brazil, China, Indonesia, Mexico and Vietnam all offer programmes with this goal. Most commonly, tertiary education institutions are the beneficiaries of these programmes. Indonesia's DIKTI scholarship and Vietnam's 322 and 911 scholarships, for example, were developed in response to the relevant country seeking to increase the number of university faculty who hold high-level degrees – especially doctorates – in their fields. Several small scholarship programmes in Egypt and Pakistan also share this goal. Having better educated educators, trained in the latest pedagogies and research methods, it is believed, will lead to higher-quality teaching and research, and reform of the countries' tertiary education systems.

In China, the government is dedicating substantial resources to the creation

of world-class universities. In line with this policy, two of its outward mobility scholarships provide students at selected institutions with opportunities to go abroad for doctoral- and bachelor-level study at top universities in other countries. Like the scholarships in Indonesia and Vietnam, the motivation for these awards is a belief that improving teaching and research functions will produce a multiplier effect that benefits other institutions and, by extension, broader society.

Indonesia's SPIRIT programme provides scholarships in support of master's and doctoral study abroad to qualifying government agency staff. Similar to the programmes supporting postgraduate study by university professionals, SPIRIT's underlying philosophy is that better-qualified staff will result in improvements in policy development, service and professionalism across the participating government agencies.

3.1.4 Interpersonal and international connections

Another frequently cited rationale for outward mobility programmes was to bring people together. This is best illustrated in the case of programmes supporting postgraduate study. Individuals receiving outward mobility doctoral scholarships in China, Indonesia and Vietnam, for example, are encouraged to include faculty from their home and host institutions on their dissertation committees, experiences that result in senior scholars from each country collaborating for a common purpose. Likewise, because research, especially in the STEM fields, often involves teamwork over long periods of time, it is anticipated that doctoral students will retain collaborative relationships with scholars in other countries long after their formal studies are completed, which will in turn serve to deepen inter-institutional relationships. Saudi Arabia's King Abdullah Scholarship Programme promotes professional development and networking by providing funds for scholarship recipients pursuing master's and doctoral degrees to attend academic conferences. In such ways, outward mobility scholarships are understood to serve as tools in helping to internationalise tertiary institutions.

Egypt and Pakistan co-administer outward mobility scholarships with foreign governments and their representative agencies. For the foreign government, such programmes represent an alternative to traditional foreign development assistance: rather than giving aid, which may or may not be needed, co-sponsoring scholarship programmes emphasises human capital improvement, an essential building block in capacity development. In Egypt, for example, DAAD co-funds and co-administers two scholarship programmes supporting doctoral study in Germany. In addition to developing human capacity in needed areas, expanding professional networks and creating opportunities for scholarship alumni to become reform agents at their home institutions, this relationship serves to build trust and goodwill between the countries. The Fulbright-García Robles scholarship, co-funded by the United States and Mexico, is likewise based on the principal that collaborating neighbours are happy neighbours. A key difference from the Egyptian example, however, is that it funds mobility opportunities for citizens of both countries.

3.1.5 Social inequities

A less-common rationale for outward mobility scholarship programmes is to provide educational opportunities for specific social groups. India's lone national outward mobility programme represents an example of this – eligibility is limited to members of Indian society hailing from traditionally disadvantaged groups. The study-abroad scholarships planned by the US–Mexico Bilateral Forum on Higher Education, Innovation and Research will also include quotas for traditionally underserved demographic groups.

Equity considerations also feature into the decisions taken by various national scholarship programmes to ensure equal or significant participation by women. The Indian and Saudi Arabian programmes profiled here provide examples of such efforts. Meanwhile, in Pakistan, the move to establish quotas by province for scholarships in their national OSS-II scheme speaks of an interest in ensuring that

opportunities for overseas scholarship funding are spread more equitably across the country.

3.2 Characteristics of outward mobility programmes

A review of the scholarship programmes profiled here reveals notable similarities and differences in their operational characteristics. This section explores the following themes:

- scale and approach
- focus and funding
- administration and selection
- eligibility, participation and distribution.

3.2.1 Scale and approach

One of the most striking differences when comparing outward mobility programmes is their size. At one end of the spectrum is Saudi Arabia's King Abdullah Scholarship Program (approximately 30,000 scholarships per year). At the opposite end, Egypt, India and Pakistan each sponsor, among their portfolio of programmes, a handful of scholarships that send fewer than 50 participants abroad each year, with several sending fewer than five. Excluding these large and small programmes, programmes sending between 500 and 1,000 recipients abroad each year are most common among the case countries reviewed.

Specific information regarding scale decisions was not attainable. Nevertheless, it was clear that resource availability is the principal factor in determining how many scholarships a programme will distribute. When planning Russia's President's Mobility Scholarship programme, for example, champions called for a scheme that would send 10,000 students abroad each year for tertiary study – in the end, financial realities resulted in a programme that sends 100. In Kazakhstan, by contrast, growing oil and gas exports allowed the government in 2005 to significantly increase the number of Bolashak scholarships it awards.

But resources only tell part of the story. As Table 3.2 illustrates, the degree to which outward mobility scholarships factor into

each case country's approach to cross-border education differs significantly. Strong economies have allowed the governments of Saudi Arabia and Brazil to fund large-scale scholarship programmes that subsidise 72 per cent and 28 per cent, respectively, of all their internationally mobile students. Saudi Arabia's total is especially striking when compared with the other case countries, and speaks volumes about the impact that a strong economy and committed leadership can have in developing a programme that affects an entire nation in a relatively short period of time. These sizeable percentages also signal that outward mobility scholarships represent a priority cross-border education activity. With the development of several new scholarship programmes in recent years, government-sponsored outward mobility sponsorships in Indonesia also feature significantly as a cross-border tertiary-education activity when compared with the other case countries. At over 11 per cent, Mexico's government likewise sponsors an impressive percentage of its total number of outwardly mobile students. With most of these scholarship recipients receiving funding from two long-standing scholarship schemes, Mexico is unique among the case countries for its consistent commitment over time. Since 2000, China has increased the number of study abroad scholarships it awards by a factor of five. Nevertheless, it still ranks lower than all but three of the case countries (India, Russia and Vietnam), in terms of the percentage of outwardly mobile students who receive some form of government support. This is not to say that China is not interested in cross-border education. In fact, according to internationalisation benchmarking measures, it is comparatively more engaged in cross-border tertiary education than many other countries – its efforts are just spread across a broader range of activities, such as allowing foreign institutions to establish a form of branch campuses, funding inbound study abroad and attracting foreign experts to work and teach in China.¹

1. British Council (2011) Global Gauge.

Table 3.2: Government support of outward mobility

Country	Total tertiary outward mobility per year*	Total tertiary outward mobility receiving government support per year**	Per cent of total tertiary outward mobility receiving government support
Brazil	26,148	7,300	27.9%
China	562,889	13,000	2.3%
Egypt	11,627	500	4.3%
India	200,621	30	0.0%
Indonesia	34,067	3,500	10.3%
Kazakhstan	36,594	1,000	2.7%
Mexico	25,836	3,000	11.6%
Pakistan	34,290	1,000	2.9%
Russia	49,585	100	0.2%
Saudi Arabia	41,532	30,000	72.2%
Vietnam	47,979	500	1.0%

*Source: UNESCO Institute for Statistics (www.uis.unesco.org/education/Pages/international-student-flow-viz.aspx).

** Source: Project country experts. Note: these figures estimate the annual number of individuals that currently receive some form of government-sponsored outward mobility support for tertiary study. Totals are drawn from all of the programmes listed in Appendix B.

3.2.2 Focus and funding

The focus of outward mobility scholarships reflects their goals. With national development and human capacity building representing the most commonly cited motivations for launching scholarships, it makes sense that most target disciplines and levels that are either not available or of sub-standard quality domestically. Indeed, most of the scholarships reviewed for this project support full and partial degree study in high-need disciplines, STEM fields being the most prevalent, and at the graduate (master's, doctoral, and post-doc) level.

Saudi Arabia's KASP and Russia's Presidential Mobility programmes represent notable exceptions. While KASP does restrict which fields and disciplines recipients may pursue, most awards are for undergraduate study. In large measure, this reflects the fact that 48 per cent of the kingdom's citizens are under 24 years of age. Russia's President's Mobility Programme also supports undergraduate study, and in any field, but such free choice

is rare across the case countries. China's National Mobility and Elite Bachelors' scholarships are the only other programmes surveyed that support undergraduate study in any field. More typically, fields of study are prescribed, with an administrative body responsible for determining which fields to target. In the case of Mexico's CONACYT programme, there has been little evolution over time in target disciplines, the result of the country's ongoing need for science and technology expertise. Kazakhstan's Bolashak programme stands in contrast, with target fields updated annually to mirror shifts in national need. At its start, Bolashak offered 100 scholarships each year to support master's study in the social sciences, humanities, medicine and engineering. Today, the number of annual awards has greatly expanded, Bolashak's priority fields now include government administration, industrial development, education, healthcare, engineering and management, and scholarships support full and partial master and doctoral study, as well as non-degree professional training.

For the majority of the scholarships reviewed, funding is exclusively provided by the government. Exceptions include programmes co-sponsored by private interests, foreign governments and host universities. Brazil's BSMP, for example, includes private co-sponsorship – 26,000 of its 101,000 planned scholarships are to be partly supported by private businesses. Programmes blending national and foreign government support include the German-Egyptian short- and long-term scholarships (Germany supplies approximately 30 per cent of funding) and the Fulbright-García Robles Scholarship, which is jointly funded by the US and Mexican governments. Several other programmes (COMEXUS in Mexico, Academic Mobility Programme in Kazakhstan and DIKTI in Indonesia) supply full funding from the sending nation, but have contract agreements with host universities that result in cost reductions, such as waived, reduced or free tuition, accommodation and/or intensive English instruction.

In the majority of cases, scholarships cover all costs associated with an international study experience for a pre-determined period of time (most programmes also include an extension provision, if additional time is needed to complete a degree programme). Saudi Arabia's KASP also provides funds to cover intensive English coursework, bench fees and attendance at professional conferences. Exceptions to the full payment model include Russia, which caps overall award amounts; Mexico, which has caps on tuition payments; and China's National Mobility Scholarship programme, which makes set awards of US\$6,000 or US\$10,000 per recipient per year.

Outward mobility scholarship programmes represent a significant investment for their sponsoring nations (as well as a significant source of revenue for host countries). Information-sharing policies did not allow for the collection of funding data from all of the case countries. Based on the figures that were available, however, annual per-person expenditures range from US\$35,000–40,000 for most programmes. The majority of case countries have procedures in place to protect this investment. Most common is a requirement to return home to work for a specified period of time. All of the programmes reviewed but two (Saudi Arabia's KASP and Russia's President's Mobility Programme) set this condition. In some countries, a financial bond is pledged to guarantee return. In others, scholarship recipients sign a contract that commits them to return and remain at home for a specified period. The penalty for not returning (or failing to complete a degree programme) is typically repayment of the loan at cost. In Indonesia, awardees that do not return pay a fine equalling double the total cost of their scholarship (the same is planned for Russia's new programme). According to officials familiar with the programmes, high participant return rates are the norm, especially among programmes that send university and government agency employees abroad. Given the difficulty in enforcing return requirements, tracking who returns does

not seem to be a universal policy. China for example, asks scholarship recipients to sign return contracts but does not follow-up on who actually does.

3.2.3 Administration and selection

Approaches to programme administration vary across, and within, the case countries. The most common model is for a single administrative office – in or affiliated with the country's Ministry of Education – to oversee the management of all outward mobility scholarships. China, India, Kazakhstan, Pakistan, Russia, Saudi Arabia and Vietnam use this approach. Other countries mostly follow this model, but with exceptions. In Brazil and Indonesia, for example, multiple government agencies have a stake in administering single scholarship programmes. Egypt, Mexico and Pakistan, meanwhile, each offer several programmes that are co-funded and/or co-administered with foreign partner agencies. The roles and responsibilities of these agencies differ from programme to programme. Support activities may include, for example, helping identify host or partner universities, interviewing scholarship candidates, arranging visas, offering language courses, disbursing scholarship funds and monitoring the progress of scholars.

Several of the case countries (China, Kazakhstan, Pakistan and Saudi Arabia) have created new scholarship oversight offices since 2000. In each case, their establishment corresponds with the decision to develop and deploy greater numbers of outward mobility scholarships. Brazil was the lone exception among countries that have dramatically scaled-up their international scholarship numbers in recent years. Rather than centralising administration, they elected instead to contract foreign agencies for assistance in managing their BMSP programme. Outsourcing work in this way meant that they did not have to create their own administrative infrastructure in other countries, a decision that allowed them to more quickly bring the programme online.

Saudi Arabia and Kazakhstan, by contrast, chose not to outsource administration. Saudi Arabia's KASP is administered through foreign offices affiliated with its 33 cultural missions around the world. These offices serve as intermediaries with host-country educational institutions. Kazakhstan's Ministry of Education partnered with foreign government agencies to administer its Bolashak programme until 2005. Following an audit that showed inefficiencies in this approach, the Center for International Programs was established to oversee scholarship administration. It now operates affiliate offices in Bolashak's main receiving countries.

Across the case countries, scholarship administrators spend the majority of their time promoting programmes, processing applications, selecting award recipients and providing logistic support services such as payments. Their responsibilities are broad and complex, especially since they involve significant dealings with foreign cultures, organisations, standards and currencies. Comparatively little time is spent providing re-entry services and evaluating programme impacts. Administrative models are often linked with sources of funding. Scholarship programmes that are entirely government funded are usually managed by a government-affiliated agency. If co-funded, administration is typically shared, as is the case with Mexico's COMEXUS programme and several of Egypt's small-scale scholarship programmes.

There is significant overlap in scholarship application procedures across the case countries. Typically, application materials are submitted directly to a programme's administrative agency via a secure website. Exceptions include China's National Mobility Scholarship programme (candidates send application documents to the Chinese Embassy in the country where they are already studying) and the undergraduate scholarship programmes in Brazil, Kazakhstan and Russia (candidates submit applications to their home universities, which then screen and forward the top applications to the programme

administrator). Required documents often mirror those used for university application: language proficiency and academic standardised test scores (TOEFL, GRE), letters of reference, personal statements, grade records and proof of all previous qualifications earned. In several of the case countries (Brazil, China, Indonesia, Mexico, Pakistan, Russia), applicants must secure admission to a degree programme prior to being awarded a scholarship. In others (India, Kazakhstan, Saudi Arabia, Vietnam), applicants are awarded a scholarship first, and then have a given period of time to receive admission from a host institution. Programmes requiring pre-admission often result in award winners attending universities with which their university or administering agency has an existing partnership agreement.

Selection procedures are slightly more varied and generally quite transparent. In the majority of cases, review panels consisting of administrative staff and disciplinary specialists review applications and, in a number of countries, interview finalists. Candidates are evaluated based on the comparative merits of their previous professional and academic experiences, with the goal of selecting individuals who, it is believed, are the best qualified and will be successful studying in an international setting. The review panels' recommendations are then typically forwarded to a higher authority, usually affiliated with the Ministry of Education, which makes final award decisions. For co-funded programmes, foreign administrative partners are known to participate in the candidate selection process. In Pakistan, for example, partner agencies conduct in-person interviews with OSS-II programme candidates before final award decisions are made.

Because most scholarship programmes are now featured on websites, information about them is easier to locate, share and update than has been the case historically. This has contributed to a small increase in interest in certain programmes and lessened confusion about qualifications

and selection procedures. Applications for Russia's President's Mobility Scholarships, for example, doubled the year after a programme website and Facebook page were created. In Kazakhstan, development of a website for the Bolashak Programme was in part motivated by an interest in better promoting and helping with applications from candidates living in the country's rural regions.

3.2.4 Eligibility, participation and distribution

Across the scholarship programmes reviewed, eligibility criteria closely matched programme goals. Those supporting doctoral study, for example, require applicants to demonstrate previous completion of a master's degree. Similarly, programmes designed to increase the number of university academic staff who hold high-end degrees, are only open to current or prospective tertiary educators. All of the programmes reviewed accept applications from both men and women. Most have age limits – the result of countries seeking to maximise the term of their investments. India's scholarship for scheduled castes and tribes was the only programme reviewed that limits application to individuals from specific social or income groups.

Participant demographics were not available from all of the case countries. From those that were, however, it is clear that the number of men receiving outward mobility scholarships far exceeds the number of women. This is the result of several factors, among them that more men than women gravitate to science and technology fields and the fact that educational attainment rates for women are typically lower in developing countries. Social mores also play a role. In Saudi Arabia, KASP require female recipients to be accompanied by a male chaperone while abroad. Since this can prove challenging, 75 per cent of the Saudis who have received scholarships to date have been male. A divide also exists between the number of urban versus rural scholarship

recipients. In an effort to redress this issue in Kazakhstan, Bolashak programme administrators are now sent to rural regions to more aggressively promote the programme, and its new website is said to be attracting more rural applications. Informants also observed that because income plays a role in educational attainment more scholarship recipients hail from wealthy than from poor families (no supporting statistics were available to support this view). Language requirements also affect scholarship distribution. As with education, a country's elite population are more likely to have foreign language expertise, increasing the likelihood that they will be over-represented among recipient groups. In general, across the case countries, given the primacy of national development as a goal of the scholarships reviewed, less concern is placed on who receives an award than what they are learning. In other words, knowledge needs are given preference over equity issues.

All but one of the scholarship programmes reviewed include restrictions on where award recipients may study (China's National Merit Scholarship Programme was the exception). Typically, a list of approved countries and institutions is compiled in a ministry office, or other higher authority, and managed by the programme administrator. Although uncommon, several countries allow study at institutions not on their approved list, but only following a special petition process.

Because of the widespread reliance on rankings in selecting host universities (evidence that countries are sensitive to issues of quality and/or prestige), the majority of scholarship recipients study in developed countries, especially those where English is spoken. While rankings represent the most common determinant in where scholarship recipients study, other factors are also important. Among the group of surveyed countries, these include the host country's proximity, inter-institutional partnership agreements, politics, host countries' recruitment efforts and whether a programme is co-funded from outside the

country. Typically, several of these factors are at play. Many of Mexico's scholarship recipients, for example, attend universities in the United States, the result of shared sponsorship and close geographic and political ties. In Indonesia, the United Kingdom and Australia attract 37 per cent and 19 per cent of SPIRIT programme recipients respectively, in large measure to due aggressive recruitment by universities in both countries, with The Netherlands – Indonesia's former coloniser – attracting the next largest share (17 per cent).

Given that host-language fluency is a prerequisite for all programmes, some programmes struggle to attract candidates who are both linguistically and academically ready. As a result, a number of programmes fail to reach their enrolment targets each cycle. In Brazil, a shortage of English-speakers meant that most early BMSP applicants applied for study in Portugal, due to the common language. This proved problematic, however, because only one Portuguese university was included on the programme's original list of 200 approved institutions. Indonesia's SPIRIT programme addresses the challenge of readiness by requiring qualified candidates to participate in up to nine months of intensive English and academic training while they are still in Indonesia. Only those individuals who successfully complete this training receive scholarships for international study.

3.3 Outward mobility programme outcomes and impacts

The nature and degree of outward mobility scholarship outcomes is a function of many factors – a programme's goals and design, the number of its participants, the type of new knowledge and skills a recipient acquires and how the participants' collective experiences are applied and absorbed into a country's workforce and infrastructure.

Given the complexity of these factors, some effects are easier to ascertain than others. For example, quantitative impacts (how many people receive scholarships, how many complete study programmes, what they study, what degrees they earn, how many return) are more easily measured than qualitative impacts (how a study

experience influences professional decisions and careers, how programme alumni affect the organisations at which they work, what a programme's collective impact is on society).

This is reflected in the experiences of the case countries. To one degree or another, all collect quantitative information about their scholarship programmes. Somewhat surprisingly, however, the majority only assemble basic quantitative information and few have attempted any sort of qualitative analysis of programme impact. Even more surprising, most have neither developed nor deployed methodologies for determining whether programme goals are actually being realised. There are exceptions, however:

- The Brazilian government has designed protocol for assessing the effects of its Brazil Scientific Mobility Programme that will examine individual, institutional and social impacts, as well as knowledge and innovation production. The scholarship programme's two administering authorities, CAPES and CNPq, are to be responsible for conducting impact measurements. As the programme is still in progress, no impact report has been published to date.
- Three of the case countries, Kazakhstan, Mexico and Egypt, co-fund and co-administer outward mobility scholarship schemes with Germany. These programmes have the goal of developing human capacity, strengthening academic and research structures, and building and improving professional networks. DAAD, which co-ordinates the programmes on behalf of the German government, has commissioned third-party impact reviews of each of the programmes. These reviews included site visits, participant interviews and surveys, all aimed at understanding how successful the programmes have been in meeting their stated goals.
- In Indonesia, a World Bank loan funds the government's SPIRIT scholarship. As a condition of receiving the loan, a set of specific outcome measures was established that relate to specific programme goals. Consistent with World

Bank loans, regular progress reports are prepared regarding attainment of these goals. Once concluded, a third-party contractor will prepare and distribute surveys to alumni to ask about their satisfaction with the programme and its impact, and another third-party contract will conduct a technical audit of the programme.

Significant in these examples is that two involve co-operation with outside organisations, which presumably request impact assessments as a condition of their partnership.

Given the substantial time and resource costs associated with the provision of outward mobility scholarships, it is noteworthy that sponsoring governments have not been more proactive in establishing procedures to evaluate their return on investment. One cause for this may be a lack of 'assessment tradition' within government agencies, or simply because it is assumed that the programme's administrative authority will take care of it. In fact, they rarely do, spending the bulk of their resources instead on programme management – advertising scholarships, collecting applications, selecting candidates and providing services to award recipients while they are abroad.

This is not to say that the case countries are not interested in protecting and maximising their investments – they are, as is evidenced by the significant number of scholarship programmes reviewed that require recipients to sign contracts binding them to return home after completing their studies (or to repay its cost, if they do not return or fail to complete their course), and the fact that most programmes target study in specific disciplines and at the graduate level. Instead, the administrative authorities responsible for these programmes are in most cases simply not taking steps to connect goals (such as the number and type of awards and who receives them) with outcomes (such as the percentage of recipients who complete their studies, how many return to professional positions that allow them to apply their new skills, and how successfully the programme is operating) – let alone their impact (how the experiences of individual scholarship

recipients relate to developments in their personal or professional lives, or how the work of returnees is affecting the country's aspirations for development and/or change).

Also noteworthy is the general lack of effort spent on return and re-entry support. In most of the case countries, scholars who have completed their study programmes are simply expected to return home, and no attempts are made to aid their transition back into society or help in utilising their new skills and abilities. The lack of proactive support can have significant repercussions. Chinese scholars educated in the West, for example, are known to face challenges moving back into an environment that distributes rewards based on relationships with people of influence (*guanxi*), usually powerful bureaucrats, rather than the quality of their work and ideas. In other cases, returning scholars may not have access to the equipment and/or facilities needed to continue research work, or experience difficulties re-integrating with professional colleagues. When combined with opportunities for productive and higher-wage employment in the host country, such circumstances can depress return rates and, for scholars who do return, limit their ability to apply their new skills and knowledge.

In an attempt to limit brain drain, several of the case countries do provide some level of re-entry service. In Kazakhstan, an Alumni Relations Department (part of the organisation that administers the Bolashak programme) helps co-ordinate internships and shares employment information with returned scholars, and a membership association (Association of Bolashak Scholarship Holders) co-ordinates events that connect alumni in an effort to build on their experiences with the goal of building a stronger country. In Mexico, CONACyT scholarship awardees may enrol in an alumni registry that sends out a newsletter of current job openings. Saudi Arabia's King Abdullah Scholarship Program recipients also receive internship placement assistance through a career development centre overseen by the programme's administrator, while in China and Indonesia, embassy and ministry staff help scholarship alumni seek and secure professional positions. In Egypt, scholarship recipients

can receive stipends for completing their studies faster than expected and, on return, may qualify for additional funding to establish or expand laboratory or other facilities at home to continue work that they initiated abroad. Finally, recipients of scholarships co-administered by DAAD are invited to join its alumni network and participate in networking and any scientific events it organises.

While some of the case countries are more engaged than others in ensuring meaningful returns, each would be well served by doing more to identify and measure programme outcomes. One way to organise such efforts could be in terms of stakeholder groups – the individuals who receive awards, the organisations at which they return to work and the countries that sponsor them.

3.3.1 Individual programme impacts

The most impact and advantage of these programmes is gained by award recipients themselves. Because selection is competitive and holding a scholarship is often understood to be a proxy for individual academic excellence, simply receiving an award can confer prestige and advantage when competing for professional positions, for example. Since most of the scholarships reviewed fund study at top universities around the world, they also result in grantees receiving high-quality training and developing networks that can later generate significant social capital ('who one knows', goes the well-known saying, 'is often more important than what one knows'). And, in living and studying abroad, individuals develop language and cultural skills, as well as an expanded worldview that, while difficult to quantify, can translate into personal and professional advantage.

None of the case countries reviewed has procedures for tracking the impact of their scholarship schemes on individual participants' professional careers. That said, officials in Mexico and Kazakhstan did acknowledge that a number of their outward mobility programme alumni have gone on to hold top-level positions in business, industry and government. In Mexico, for example, ten members of the government's cabinet are COMEXUS programme alumni. Despite these claims,

this analysis does not explore the profile of scholarship recipients in order to discover whether they already enjoy significant social or cultural capital before being selected for an award. It may well be the case that – inasmuch as the benefits gained by individual recipients may be exceedingly positive, and the contributions returnees make to their countries highly laudable – the scholarship programmes themselves are perpetuating social advantages already enjoyed by the social elites in the sending countries.

3.3.2 Organisational impacts

Measurement of outward mobility programmes' impacts on the institutions that send and employ scholarship recipients is rare among the case countries. In Indonesia, the administrators of the SPIRIT programme plan to analyse how successful scholarship alumni help their government agencies reform, but have not yet done so. Indonesia's DIKTI programme and Pakistan's OSS-II programme also track the number of academic articles accepted for publication by refereed journals. In both cases, they were found to be increasing. Apart from counting the number of grant alumni who return to their employing institutions after completing their studies, however, none of the case countries is known to be measuring other institutional impacts. Nevertheless, officials familiar with the scholarship programmes have identified a number of anecdotal impacts, among them: improvements to the quality of teaching and research at universities, greater collaboration between campus units, changes to the provision and quality of graduate education and an increase in the number of partner agreements and programmes like joint and dual degree programmes with universities in other nations. Scholarship returnees, it is widely acknowledged, are influencing the organisations they work for in positive ways. How this is happening – and to what extent – is not being systematically evaluated in the case countries reviewed.

3.3.3 National impacts

At the national level, perceived achievements likewise outnumber clearly documented results across

the case countries. Informants familiar with the scholarship schemes were universal in their belief that they are meeting expectations and generating positive national outcomes, such as human-capital expansion, political and economic reform, improved relations with host countries and awareness of operational standards and practices elsewhere. Kazakhstan, Saudi Arabia and Brazil have also received considerable acclaim in the press – both domestic and international – for their flagship programmes, contributing to a sense of collective pride. While such positive national outcomes may indeed be a reality, it is nevertheless important to recognise that formal measurement procedures are scarce and that the people most familiar with scholarship schemes typically also have a stake in them continuing, which can influence perceptions related to their success.

Beyond these perceptions, the programmes reviewed do indeed seem to be having a quantifiable national impact in terms of human-capacity development. In most cases, hundreds, sometimes thousands of grantees are being sent abroad each year to obtain skills and qualifications in fields that are often selected for their importance to the country's development. Brazil has sent over 39,000 scholars abroad since their flagship programme was begun in 2011. Saudi Arabia has sent more than 165,000 scholars abroad on KASP scholarships since 2005. And programmes in Mexico and Kazakhstan have sent more than 65,000 and 10,000 scholarships abroad respectively over their long histories. It is also worth noting that many of the scholarships reviewed go to educators and researchers, who themselves then create a multiplier effect in their countries when they return home and educate others. The fact that several national outward mobility scholarship programmes have been in existence for more than 20 years, and that many new such schemes have been established since the year 2000, suggests that nations increasingly consider them an investment worth making.

3.3.4 Other impacts

Of course, the countries that sponsor outward mobility scholarships are not alone in benefiting from these programmes. Education exporting countries, institutions and commercial service providers do as well. Host nations benefit financially, and through an increase in skilled labour when scholarship recipients do not return home. They also benefit through a net gain in mutual understanding, and, in the case of co-funded arrangements, goodwill, closer working relationships, opportunities for collaborative innovation and closer diplomatic ties. For universities and services providers, mobility scholarship recipients also represent a source of revenue – like other international students, most typically pay the full cost of instruction and, in several countries, surcharges not paid by domestic students. Universities also benefit in other important ways. For instance, hosting scholarship recipients can lead to new forms of collaborative partnership, such as student and faculty exchanges, as well as teaching, research and degree collaborations. Also, international students, especially those on scholarship, are typically high-calibre, which can lend both quality and diversity to the learning experience for the host university's students.

4. Recommendations and questions for future enquiry

4.1 Begin and end with rationale	62
4.2 Provide high-quality, goal-orientated and responsive programme administration	62
4.3 Define 'quality' thoughtfully	63
4.4 Measure and ensure programme impact	63
4.5 More questions ahead	64

4. Recommendations and questions for future enquiry

The insights gained reviewing the outward mobility scholarship programmes sponsored by the 11 countries in this study provide a useful snapshot of trends and issues relevant to similar schemes elsewhere. Furthermore, expanding understanding of the motivations for these programmes and how they operate also gives impetus to a more nuanced consideration of what the future may (or ideally should) hold for these kinds of initiatives. As more countries move to implement outward mobility scholarship programmes – or take steps to evaluate, adjust and/or expand their current offerings – the insights from this broadly comparative study may prove useful.

Clearly, no one model or set of recommendations will meet all needs, given the vastly different national contexts in which the design, development and implementation of outward mobility scholarship programmes must necessarily take place. A series of framework issues, however, deserve careful consideration by the policy makers and programme administrators who are responsible for overseeing these initiatives. It also raises a number of questions that would benefit from further research. In terms of building on what can be learned from the countries examined in this study, the following recommendations are offered for consideration.

4.1 Begin and end with rationale

Outbound-mobility scholarship programmes work best when there is both clarity of purpose and commitment to a guiding rationale for their establishment, most often as part of a broader vision for meeting key national development needs and objectives.

With the rationale for undertaking a scholarship scheme firmly in mind, programmes might best be reverse engineered from the outset. That is, policy makers and programme designers should first identify goals – that is, how the programme will define success – along with how the actual achievement of goals can be measured and assessed. The rationale for a programme should help with the development of clearly articulated

outcomes for the full range of beneficiaries of the programme, from the broadest societal levels down to institutional and individual stakeholders. Procedures should be built into the programme that provide real opportunities to make sense of the extent to which the programme is making an impact at these various stakeholder levels.

Towards this end, administrators should regularly revisit a programme's original focus and assess the ongoing relevance of its stated goals. Shifting national and international contexts may argue for making adjustments in a scholarship's goals, fields of study, size and/or administration.

4.2 Provide high-quality, goal-oriented and responsive programme administration

In keeping with the primacy of rationale as a guiding principle of successful scholarship initiatives, programme design and administration should focus on responsiveness to goals and outcomes. Put simply, programmes should be designed – functionally and administratively – around what they aim to achieve. Effective communication between decision makers (often in the political and policy-making spheres) and programme administrators is key. A healthy give-and-take between the vision a country wants to accomplish and pragmatic considerations related to programme design and implementation is crucial in articulating realistic goals and then attaining them. For maximum effectiveness, administration of a programme will also likely need to evolve over time. For this to happen, programme administrators, policy makers and other relevant stakeholders should continually scan and discuss a programme's operational environment, then implement needed changes.

The following aspects of programme administration deserve ongoing attention.

Participant recruitment. Effective recruitment is essential to an outward mobility programme's success. The larger a programme's pool of applicants, the better the chances of identifying high-quality

candidates that should then be able to successfully complete their studies, the principal goal of every scholarship scheme. Accordingly, effective marketing is needed to ensure that information about a programme is reaching its target audience. In several of the case countries, available scholarships go unfilled each year due to a lack of qualified applicants. Programmes would thus benefit by administrators spending more time on promotion. This requires a commitment to providing timely information about scholarships and their deadlines, as well as the development of application procedures that are accessible, understandable and not overly complex. Well-conceived recruitment plans should be a priority of every scholarship scheme.

Process transparency. In an era of enhanced global concern with quality assurance and assessment in tertiary education, transparency is a key issue for outward mobility programmes. Apart from the prima-facie importance of ethical programme administration, programme credibility and prestige – domestically and internationally – can be enhanced by a demonstrable commitment to transparent procedures across all aspects of programme administration. When it comes to the selection of scholarship recipients, for instance, programme transparency is central to ensuring a fair process and should result in identification of the best candidates. Strategies for achieving this may include ensuring that awardee selection panels embody a wide range of perspectives and experience, along with representation from all parties – such as co-funders – that have a stake in the scholarship's success. Programmes may also consider using their own (successful) alumni in some way as part of the process of selecting new programme participants. Doing so would enable administrators to better understand the programme experience from the perspective of actual participants, who have the best understanding of what is needed to be successful, and provide grantees with opportunities to meet and speak with successful alumni before their sojourns begin.

Apart from the selection of scholarship recipients, transparency is crucial in other operational areas. For example, regular audits of programme finances and procedures by a credible third party can provide important evidence of responsiveness and accountability to funders and the public at large.

Partnerships. To some extent, all outward mobility scholarships engage in partnerships with other organisations or entities. Partners may include the tertiary institutions in the host country that receive the scholarship recipients while abroad, or the domestic or international agencies (governmental, non-governmental or otherwise) that provide support services before, during and after a scholarship winner's study experience. Whoever they are, careful attention should be paid to selecting the right partners, educating them about the desired goals and outcomes of a programme and ensuring the ongoing quality of services provided.

Returnees. Much of the emphasis of scholarship administration is placed on the processes of recruiting, selecting and placing award recipients. Much less attention is given to supporting programme participants once they have completed their study programmes. Programme administrators should think carefully about how best to encourage and support returnees, then deploy services that aid them in maximising the impact of their new talents. Re-entry services could include job-placement assistance, guidance on career development, programme alumni networking, or, in the case of academics, research incentives. While countries may place binding obligations (financial and/or legal) on scholarship recipients to return home after completing their studies, returnees may feel less obliged and more personally motivated to return if there are positive (rather than punitive) incentives in place, and supportive readjustment assistance once back home.

4.3 Define 'quality' thoughtfully

Nations funding outward mobility scholarship programmes are universally concerned, as they should be, with placing their awardees in institutions and programmes of high quality. For the purposes of such placements, quality is often determined on the basis of global rankings; that is, only those institutions that appear in a particular tier of one or more of the major world rankings of tertiary institutions. While such rankings may provide a sense of where a university sits within the global landscape of tertiary education, excellence or appropriateness in the field into which a scholarship recipient is accepted is not guaranteed. An over-reliance on rankings as a proxy for quality can thus do a disservice to individual awardees seeking the right fit for their individual needs. Focusing only on ranked institutions may also prevent the development of valuable channels of communication and collaboration from being established between the countries sending scholarship students abroad and unranked foreign institutions – despite the fact that such institutions could be important repositories of information or resources of value to the sending nations. Countries awarding scholarships would therefore be wise to develop procedures that allow for more nuanced vetting of potential host destinations – procedures that look beyond the very one-dimensional picture offered by most ranking exercises. There are, after all, many academic institutions in the host countries that do not appear in the rankings, but would be an excellent fit for awardees.

Once a programme is underway and has several generations of alumni from which to gather data, efforts should be undertaken to understand and evaluate which countries and institutions students have attended, and whether procedures for directing award winners to specific institutions make sense. Does 'quality' in the context of a given scholarship programme imply an argument for placing many scholarship awardees in the same city, country or at the same institution? Or are there (quality) arguments

for a wider geographic dispersion of awardees? Again, programme rationales and goals should be carefully considered in the quest for answers to these and other questions relevant to 'quality'.

4.4 Measure and ensure programme impact

Good practice suggests that careful assessment of a scholarship programme's impact can help countries understand the return on their investment. But how can countries best measure a programme's influence and effectiveness? From the start, administrators and policy makers should identify clearly definable and measurable outcomes when developing and designing a programme. Regular assessment of a programme's outcomes and impact, set against a programme's goals, can then be undertaken. Programme evaluations at regular intervals will help determine the level and quality of impact and identify potential areas for improvement. As indicated previously, national governments may consider hiring third-party auditors to review administrative performance and programme impact.

Given that mobility scholarships provide resources and opportunities most directly to individuals – who in turn are expected to make a positive contribution to their home countries – tracking the professional trajectories of programme participants and alumni is a crucial aspect of impact assessment. Alumni assessments designed to provide insight into how the programme experience affects participants over time would yield information useful to programme design and implementation discussions.

Scholarship initiatives also affect the institutions involved in the chain of programme activities. Programme administrators would therefore be wise to consider collecting data on the experiences of the institutions abroad that host scholarship recipients, as well as those at home with which alumni are professionally or personally affiliated. The degree to which programme alumni end up delivering positive effects (or not)

for their home country is of vital concern in understanding a program's impact vis-à-vis its intended goals.

No doubt this is advice more easily given out than implemented. But demonstrating meaningful results is critical when public funds are expended in support of overseas student mobility. Establishing monitoring and evaluation systems that are tied to clear indicators is essential to the successful tracking and steering of outward mobility programmes, and, by extension, attainment of their goals.

4.5 More questions ahead

Deeper insight into any phenomenon inevitably leads to further questions. Such is certainly the case with this exercise, which is aimed at developing a fuller understanding of different countries' experiences developing and deploying tertiary-level outward mobility scholarships.

Despite great sums invested in scholarship programmes, there remains a sizeable gap in our understanding of what such investments actually yield for the countries making them. The general assumption for most, if not all, of the governments undertaking these investments is that they produce a multiplier effect whereby the investment in one person's education or technical skills improvement will result in a broader set of benefits for the society as a whole. But, do we know this to be the case? If yes, what is the size of that multiplier effect? Does it vary according to individual, or field studied or activities undertaken once a scholarship recipient returns home?

Then there is the question of quality when it comes to destination institutions. Is investment in a world-class education – i.e. the sending of scholarship recipients to highly ranked universities around the world – a better investment than sending a student to a less highly ranked institution? If yes, by what order of magnitude?

When it comes to other options for public spending on human-capital development, to what extent are governments thoughtfully

examining alternatives or complements to overseas scholarship study? With the announcement in recent years of several very large-scale national scholarship programmes (for example, in Brazil and Saudi Arabia) might countries be feeling compelled (in copycat fashion) to develop their own programmes in order to be visible in the ever more prominent international scholarship landscape? Do these kinds of programmes represent the best use of public funds for achieving human capacity development objectives?

And in regards to participation, who do these scholarship programmes really benefit? Are sending countries perpetuating social inequalities, given that elites typically enjoy better access to the types of educational opportunities that would make them strong candidates for an outward mobility scholarship? Does this matter – to sending countries, receiving countries, or both?

What role should receiving countries and institutions play in developing more effective outward mobility partnerships? Given the enormous sums of money involved, it is hard to imagine that any host countries would be indifferent to them – indeed, a number of nations are actively recruiting outward mobility scholarship recipients. How can they best serve (and what are their obligations to do so) as effective partners in assisting the co-ordination of other countries' scholarship programmes and hosting their recipients?

In the grand scheme of things, how important is this work? As a proportion of the millions of students who are internationally mobile each year, those enjoying government scholarship support are a small minority (see Table 3.2). In some countries, the scholarship support may make a critical difference; in others it is quite insignificant. Can small numbers make the kind of difference that the sponsoring governments are hoping for? Would funds currently being spent on outward mobility scholarships be more effectively spent on other tertiary education initiatives?

Finally, an important question arises with regard to those countries that have not developed outward mobility scholarships – or do not feel that they can afford to do so – as a strategic action item in their development strategies. What are the implications for those countries, particularly in a global context where there is tacit agreement that national tertiary education systems cannot expect to realise their full potential without engaging the world around them in meaningful ways?

Ultimately, only time – and rigorous efforts to assess impact – will reveal the answers to these and other key questions. For now, many students and scholars are mobile as a result of national scholarship schemes and, if current trends continue, many more will be in the coming years. The great optimism attached to these efforts is energising, but there is much yet to learn from these experiments regarding the extent to which national investments are yielding expected returns.

Appendices

Appendix A: Country experts

The following country experts were responsible for collecting the data used to compile this report. Completion of this project would not have been possible without their dedication and support. The authors gratefully acknowledge their contributions.

Brazil

Dr Leandro Tessler, Professor, IFGW, Unicamp

China

Dr Qi Wang, Lecturer, Centre for World-Class Universities, Graduate School of Education, Shanghai Jiao Tong University

Egypt

Dr Mohsen Elmahdy Said, Professor, University of Cairo; Dr Mohamed Hamza, First Undersecretary of State and Director of the Sector of Cultural Affairs and Missions, Egyptian Ministry of Higher Education

India

Dr P.J. Lavakare, Member, Board of Governors, MITS University

Indonesia

Ms Cynthia Oh, Chairman, Werkgroep '72

Kazakhstan

Dr Aida Sagintayeva, Chief Executive Director, Graduate School of Education, Nazarbayev University

Mexico

Ms Maggie Hug, International Education Consultant; Former Deputy Director, Fulbright Commission in Mexico

Pakistan

Dr Riaz Qureshi, Advisor and Professor, Higher Education Commission

Russia

Dr Daria Dydzinskaya, Deputy Head, Department of Higher Education and Science Development, National Training Foundation

Saudi Arabia

Dr Khaled Al-Ajmi, PMP, CISA, CGEIT, CRSIC, ITIL; Expert of Education and Technology in Saudi Arabia; Technical Advisor of CECORP; Adjunct MBA Faculty at Alfaisal University

Vietnam

Mr Duy Pham, Research Associate, Institute for Education Quality Assurance

Appendix B: National Outward Mobility scholarship programmes by Country

In addition to the scholarship programmes profiled in this report, most of the case countries offer additional outward mobility tertiary scholarships that receive partial or full funding from government sources. A presentation of these programmes follows.

Brazil

Name: Brazilian Mobility Scholarship Programme (2015 scheduled end date)

Dates of operation: 2011–present

Overview: funds full and partial bachelor's, master's, doctoral and professional development study abroad in STEM fields

Average number of awards per year: approximately 13,000

Co-sponsor: 25 per cent privately funded

Name: Bolsas no Exterior/CNPq

Dates of operation: unknown start date–present

Overview: funds partial and full doctoral and post-doctoral study abroad

Average number of awards per year: approximately 500 (prior to start of BMSP)

Co-sponsor: none

Name: Bolsas no Exterior/CAPES

Dates of operation: unknown start date–present

Overview: funds partial and full undergraduate and postgraduate study abroad. Undergraduate scholarships target engineering and basic science fields

Average number of awards per year: approximately 2,000 (in fields not covered by BMSP)

Co-sponsor: none

China

Name: National Merit Scholarship

Dates of operation: 2003–present

Overview: funds study in all fields for Chinese citizens already enrolled in doctoral programmes in other countries

Average number of awards per year: 500

Co-sponsor: none

Name: Elite Doctoral Scholarship

Dates of operation: 2007–present

Overview: funds full and partial doctoral study abroad in fields identified as important to China's national development and competitiveness. Only students from China's elite universities may apply

Average number of awards per year: 7,000

Co-sponsor: none

Name: Masters Scholarship

Dates of operation: 2009–present

Overview: funds full and partial master's study abroad in fields identified as important to China's national development and competitiveness

Average number of awards per year: 800

Co-sponsor: none

Name: Elite Bachelors Scholarship

Dates of operation: 2013–present

Overview: funds partial bachelor's study abroad in all fields. Only students from China's elite universities may apply.

Average number of awards per year: 3,000

Co-sponsor: none

Name: Senior Researcher and Visiting Scholar Scholarships

Dates of operation: 2003–present

Overview: funds scholars to conduct research in fields important to national development at top universities in developed countries

Average number of awards per year: N/A

Co-sponsor: none

Name: International Exchange Programme for Young Teachers

Dates of operation: 2004–present

Overview: funds new academics to study and conduct research in key fields for the purpose of teaching and research enhancement. Support is focused on academics from top Chinese universities

Average number of awards per year: N/A

Co-sponsor: none

Name: Special Programme for Developing Talent in the Western China

Dates of operation: 2001–present

Overview: funds academics from China's western provinces to improve their teaching and research and promote regional socio-economic development

Average number of awards per year: N/A

Co-sponsor: none

Name: Joint Scholarship Exchange Programmes with other Countries and Regions

Dates of operation: start date unknown–present

Overview: student and scholars exchange programmes organised by the China Scholarship Council. Recipients receive funds to cover the cost of travel and accommodation while abroad

Average number of awards per year: N/A

Co-sponsor: in 2013, co-sponsors included Algeria, Ethiopia, Ireland, Belgium (Flemish Region), Iceland, North Korea, Denmark, Finland, Columbia, South Korea, Netherlands, Cambodia, Kuwait, Laos, Lebanon, Mongolia, Burma, Morocco, Mexico, Norway, Portugal, Sweden, Switzerland, Sri Lanka, Sudan, Thailand, Tanzania, Turkey, Greece, New Zealand, Iran, Israel, Italy, India, Jordan, Vietnam, Canada.

Name: Other International Collaborative Scholarship Programmes

Dates of operation: start date unknown–present

Overview: a suite of scholarship programmes for academics developed in partnership with universities and research institutes abroad. Recipients receive travel grants

Average number of awards per year: N/A

Co-sponsor: in 2013, co-sponsors included Konrad Adenauer Foundation, Hans Seidel Foundation, Kyung Hee University (South Korea), the Quebec government (Canada), Harvard University (USA), Massachusetts Institute of Technology (USA), Japan Advanced Institute of Science and Technology, Japan Society for Promotion Science, Japan's Ministry of Education, Culture, Sports, Science and Technology, Asian Institute of Technology (Thailand), Universitat Politècnica De Catalunya (Spain), Nanyang Technological University (Singapore), University of Portsmouth (UK), Fulbright Program (USA), Chevening Scholarship (UK).

Name: Scholarship Programmes for Research on Global and Regional Issues and for Senior Scholars of Foreign Languages

Dates of operation: 2010–present

Overview: funds Chinese scholars and students to conduct research abroad related to global and regional issues, foreign languages and media studies

Average number of awards per year: N/A

Co-sponsor: none

Name: Scholarship Programmes for Scholars of the Arts

Dates of operation: 2010–present

Overview: funds scholars and students to conduct research abroad related to the arts. and to encourage cultural exchange

Average number of awards per year: N/A

Co-sponsor: none

Egypt

Name: Scholarships in the Framework of the Executive Agreement

Dates of operation: 1994–present

Overview: funds short-term study in Denmark to collect material for doctoral dissertations

Average number of awards per year: five to ten depending on the number of the months granted

Co-sponsor: Denmark

Name: Scholarships in the Framework of the Executive Agreement

Dates of operation: 2004–present

Overview: funds master's and doctoral study in Mexico in select fields

Average number of awards per year: approximately three

Co-sponsor: Mexico

Name: Scholarships in the Framework of the Executive Agreement

Dates of operation: 1999–present

Overview: funds short-term postgraduate study in Finland to conduct research

Average number of awards per year: approximately ten

Co-sponsor: Finland

Name: Scholarships in the Framework of the Executive Agreement

Dates of operation: 2006–present

Overview: funds ten to 24 months of postgraduate study in Greece to conduct research

Average number of awards per year: approximately four

Co-sponsor: Greece

Name: Scholarships in the Framework of the Executive Agreement

Dates of operation: 1997–present

Overview: funds ten months of study in Belgium to collect material for doctoral dissertations

Average number of awards per year: approximately three

Co-sponsor: Belgium (Flemish)

Name: Scholarships in the Framework of the Executive Agreement
Dates of operation: 2008–present
Overview: funds between 100 and 200 months of Italian language or scientific research study per year, divided into three- to 12-month increments
Average number of awards per year: N/A
Co-sponsor: Italy

Name: German-Egyptian Research Short-Term Scholarship (GERSS)
Dates of operation: 2007–present
Overview: funds three to six months of doctoral research at German universities
Average number of awards per year: N/A
Co-sponsor: Germany (DAAD)

Name: German-Egyptian Research Long-Term Scholarship (GERLS)
Dates of operation: 2007–present
Overview: funds up to 42 months of doctoral research at German universities
Average number of awards per year: N/A
Co-sponsor: Germany (DAAD)

Name: Scholarships in the Framework of the Executive Agreement
Dates of operation: 2007–present
Overview: funds 24 months of master's and 36 months of doctoral study, preceded by one year of Korean language study, at Korean universities
Average number of awards per year: approximately six
Co-sponsor: South Korea

Name: Scholarships in the Framework of the Executive Agreement
Dates of operation: 1991–present
Overview: funds nine months of study in Austria to collect material for doctoral dissertations
Average number of awards per year: approximately five
Co-sponsor: Austria

Name: Scholarships in the Framework of the Executive Agreement
Dates of operation: 2008–present
Overview: funds up to ten months of study in Norway to conduct master's and doctoral research
Average number of awards per year: approximately four
Co-sponsor: Norway

Name: Japanese Government (Monbukagakusho, MEXT) Scholarships
Dates of operation: N/A
Overview: funds 12–24 months of doctoral study, preceded by one year of Japanese language study, at Japanese universities
Average number of awards per year: approximately ten
Co-sponsor: Japanese Ministry of Education, Culture, Sports, Science and Technology

Name: Scholarships in the framework of the Executive Agreement
Dates of operation: 2008–present
Overview: Funds ten months of doctoral study in Tajikistan to conduct research.
Average number of awards per year: approximately ten
Co-sponsor: Tajikistan

Name: Scholarships in the Framework of the Executive Agreement
Dates of operation: 2008–present
Overview: funds up to 48 months of doctoral study in Armenia to conduct research
Average number of awards per year: approximately three
Co-sponsor: Armenia

Name: Scholarships in the Framework of the Executive Agreement
Dates of operation: 2008–present
Overview: funds a combined 60 months of doctoral study in Hungary to conduct doctoral research
Average number of awards per year: approximately five
Co-sponsor: Hungary

Name: Scholarships in the Framework of the Executive Agreement
Dates of operation: 2007–present
Overview: funds study in Kazakhstan to conduct master's and doctoral research
Average number of awards per year: approximately seven
Co-sponsor: Kazakhstan

Name: Scholarships in the Framework of the Executive Agreement
Dates of operation: 2005–present
Overview: funds bachelor's, master's and doctoral study in Azerbaijan
Average number of awards per year: approximately 20
Co-sponsor: Azerbaijan

Name: Scholarships in the Framework of the Executive Agreement
Dates of operation: 1995–present
Overview: funds master's, doctoral and scientific study in Russia
Average number of awards per year: approximately 50
Co-sponsor: Russia

Name: Scholarships in the Framework of the Executive Agreement
Dates of operation: 2005–present
Overview: funds doctoral studies in China
Average number of awards per year: approximately 20
Co-sponsor: People's Republic of China

Name: Scholarships in the Framework of the Executive Agreement
Dates of operation: 2008–present
Overview: funds nine months of doctoral study in Slovenia to conduct research
Average number of awards per year: approximately two
Co-sponsor: Slovenia

Name: Scholarships in the Framework of the Executive Agreement

Dates of operation: 2006–present

Overview: funds up to 48 months of study in the Czech Republic to collect scientific materials

Average number of awards per year: approximately four

Co-sponsor: Czech Republic

Name: Scholarships in the Framework of the Executive Agreement

Dates of operation: 2006–present

Overview: funds bachelor's, master's and doctoral study in India

Average number of awards per year: approximately ten

Co-sponsor: India

Name: Scholarships in the Framework of the Executive Agreement

Dates of operation: 2006–present

Overview: funds postgraduate studies in the social and natural sciences for up to three years

Average number of awards per year: approximately six

Co-sponsor: Pakistan

India

Name: National Overseas Scholarship for Scheduled Castes and Tribes

Dates of operation: start date unknown–present

Overview: funds master's and doctoral study in engineering, management, pure sciences, agricultural science and medicine

Average number of awards per year: 30

Co-sponsor: none

Indonesia

Name: DIKTI Scholarship

Dates of operation: 2008–present

Overview: funds master's and doctoral studies abroad with the goal of increasing Indonesian university educators with high-end degrees

Average number of awards per year: approximately 730

Co-sponsor: none

Name: Scholarships Programme for Strengthening Reforming Institutions (SPIRIT)

Dates of operation: 2011–present

Overview: funds master's and doctoral studies and non-degree training domestically and abroad for civil servants with the goal of reforming and improving government agencies

Average number of awards per year: approximately 120

Co-sponsor: none

Name: Excellence Scholarship (Beasiswa Unggulan)

Dates of operation: 2006–present

Overview: funds bachelor's, master's and doctoral scholarships abroad with the goal of improving human-resource capabilities in support of national development

Average number of awards per year: approximately 230

Co-sponsor: Nuffic Neso Indonesia (Netherlands); CIMB Niaga (Indonesian bank)

Ministry of Information and Communication Technology Scholarship

Dates of operation: 2007–present

Overview: funds domestic and overseas master's study to enhance ICT capabilities and competitiveness within government agencies, businesses and the community.

Average number of awards per year: approximately 41

Co-sponsor: Australia, Germany, Japan, Korea, The Netherlands and the United Kingdom.

Name: LPDP Scholarship

Dates of operation: 2012–present

Overview: funds master's and doctoral scholarships at domestic and international universities. Supports study in six fields deemed significant to national development: engineering, science, agriculture, accounting/finance, law and religion

Average number of awards per year: approximately 1,500

Co-sponsor: none

Kazakhstan

Name: Bolashak

Dates of operation: 1993–present

Overview: funds full and partial graduate (master's and doctoral) study and short-term professional training in fields important to national development

Average number of awards per year since inception: approximately 500

Co-sponsor: none

Name: Academic Mobility

Dates of operation: 2011–2020

Overview: funds partial master's study in all fields; linked with Kazakhstan's efforts to increase tertiary mobility to match Bologna thresholds

Average number of awards per year since inception: approximately 300

Co-sponsor: host universities waive tuition and provide accommodation

Name: Best Faculty Scholarship

Dates of operation: 2005–present

Overview: funds domestic and international research and training for top Kazakh scholars

Average number of awards per year since inception: approximately 200

Co-sponsor: none

Mexico

Name: CONACYT Scholarship

Dates of operation: 1970–present

Overview: funds master's, doctorate and professional development study predominately in STEM fields, but with some awards for humanities, arts and social-science fields

Average number of awards per year: approximately 3,000

Co-sponsor: none

Name: Fulbright-García Robles Scholarship (COMEXUS)

Dates of operation: 1991–present

Overview: funds master's and doctoral study in all fields except medicine, dental and veterinary sciences

Average number of awards per year: approximately 150

Co-sponsor: US government

Name: DAAD-CONACYT Scholarship
Dates of operation: 1999–present
Overview: funds master's and doctoral study in Germany in science, medicine, energy, applied mathematics, environmental studies
Average number of awards per year: N/A
Co-sponsor: DAAD; German universities

Name: Secretaría de Educación Pública (SEP) scholarships
Dates of operation: unknown start date–present
Overview: funds partial scholarships for bachelor's, master's and doctoral study in the United States and other countries in education, health, natural sciences, engineering and computer science
Average number of awards per year: N/A
Co-sponsor: host institutions; CONACYT

Name: Fondo Nacional para la Cultura y Las Artes (FONCA) scholarship
Dates of operation: 1989–present
Overview: funds master's and doctoral study abroad in addition to non-degree experiences for Mexican artists to promote, conserve and demonstrate Mexican arts and culture
Average number of awards per year: approximately 60
Co-sponsor: CONACYT

Name: Instituto Nacional Bellas Artes (INBA) scholarship
Dates of operation: 1994–present
Overview: funds master's and doctoral study abroad in art and art-preservation fields
Average number of awards per year: approximately eight
Co-sponsor: CONACYT

Pakistan

Name: OSS-II Scholarship
Dates of operation: 2006–present
Overview: funds doctoral study in primarily science and technology fields
Average number of awards per year: approximately 200
Co-sponsor: none

Name: Overseas Scholarships for PhD in Selected Fields (Phase-I)
Dates of operation: 2004–present
Overview: funds doctoral study in science and technology fields at foreign universities
Average number of awards per year: approximately 90
Co-sponsor: none

Name: Human Resource Development Initiative MS leading to PhD for Faculty Development Programme for the UESTPs (Phase-I)
Dates of operation: 2007–present
Overview: funds doctoral studies in engineering and technology fields at high-ranking foreign universities
Average number of awards per year since inception: approximately 185
Co-sponsor: none

Name: Fulbright Scholarship Program HEC-USAID

- Dates of operation: 2006–present
- Overview: funds master's and doctoral study in all disciplines in the United States
- Average number of awards per year: approximately 70 master's and 35 doctorates
- Co-sponsor: USAID

Name: MS/MPhil leading to PhD Scholarship in Engineering, Natural and Basic Sciences/ Humanities/Social Sciences, for the Teachers of Weaker Universities
Dates of operation: 2004–present (administration only; no new scholarships)
Overview: funds master's leading to doctoral studies in all fields, for new and disadvantaged universities
Average number of awards per year: approximately 13
Co-sponsor: none

Name: PhD Scholarships for the Study of Science, Engineering and Technology, Austria
Dates of operation: 2003–present (administration only; no new scholarships)
Overview: funds university faculty and public-sector researchers to pursue doctoral studies in science, engineering and technology at Austrian universities
Average number of awards per year: approximately six
Co-sponsor: none

Name: Ph.D. Scholarship in Natural and Basic Sciences, Austria
Dates of operation: 2003–present (administration only; no new scholarships)
Overview: Funds university faculty and public sector researchers doctoral study in natural and basic sciences at Austrian universities.
Average number of awards per year: approximately six
Co-sponsor: none

Name: PhD Scholarship for Natural and Basic Sciences, France
Dates of operation: 2004–present (administration only; no new scholarships)
Overview: funds doctoral study in natural and basic sciences at French universities
Average number of awards per year: approximately four
Co-sponsor: none

Name: PhD Scholarship in Engineering and Sciences, Germany
Dates of operation: 2003–present (administration only; no new scholarships)
Overview: funds university faculty and public-sector researchers to pursue doctoral studies in Germany
Average number of awards per year: approximately five
Co-sponsor: none

Name: MA/MS leading to PhD scholarships in Economics and Finance Abroad

Dates of operation: 2005–present (administration only; no new scholarships)

Overview: funds public-sector employees to pursue doctoral study in economics and finance scholarships in advanced countries

Average number of awards per year: approximately six

Co-sponsor: none

Name: 1,000 Cuban scholarships for Studies in General Comprehensive Medicine

Dates of operation: 2006–present (administration only; no new scholarships)

Overview: funds master's study in the field of general comprehensive medicines (equivalent to MBBS) at WHO-recognised Cuban institutions

Average number of awards per year: approximately 165

Co-sponsor: Republic of Cuba

Name: Joint Scholarship Programme of HEC and AIT Thailand

Dates of operation: 2003–present (administration only; no new scholarships)

Overview: funds university faculty and public-sector researchers to pursue master's study in science, engineering and technology at the Asian Institute of Technology

Average number of awards per year: approximately 20 master's and ten doctoral awards

Co-sponsor: AIT Thailand

Name: Development of High Level Manpower S&T through Split PhD Programme

Dates of operation: 2001–present (administration only; no new scholarships)

Overview: funds university academic staff to pursue partial postgraduate study in science and technology fields at foreign universities

Average number of awards per year: approximately nine

Co-sponsor: none

Name: MS-Level Training in Korean universities/industries

Dates of operation: 2006–present (administration only; no new scholarships)

Overview: fund master's study in engineering fields in Korean institutions and industries

Average number of awards per year: approximately 25

Co-sponsor: none

Russia

President's Mobility Scholarship

Dates of operation: 1991–no scheduled end date

Overview: funds partial master's and specialist study and partial and full doctoral study in all fields

Average number of awards per year: 100

Co-sponsor: none

Global Education Scholarship

Dates of operation: 2014–16 (extension possible)

Overview: funds full master's and doctoral study in science, education, health and engineering fields

Average number of awards per year: 1,000 anticipated

Co-sponsor: none

Saudi Arabia

Name: King Abdullah Scholarship Programme

Dates of operation: 2005–present

Overview: funds bachelor's, master's and doctoral study in professional and STEM fields

Average number of awards per year: 30,000

Co-sponsor: none

Vietnam

Name: Scholarship No. 165

Dates of operation: 2008–present

Overview: funds political leaders and government managers to pursue foreign language and master's and doctoral studies in public administration, economic administration, environment and urban management, society management, human-resource management, international law, justice, information management, natural sciences and technology, social sciences and humanities, and medical pharmaceutical sciences

Average number of awards per year: approximately 30 doctorates, 300 master's, 200 research interns and 400 foreign language

Co-sponsor: none

Name: Scholarship No. 322

Dates of operation: 2000–10

Overview: funded bachelor's, master's, doctorate and research study in natural sciences and technology, social sciences and humanities, and medical pharmaceutical sciences

Average number of awards per year: 450

Co-sponsor: none

Name: Scholarship No. 911

Dates of operation: 2010–present

Overview: funds doctoral study in science and technology fields

Average number of awards per year: none yet

Co-sponsor: none

Name: No. 599

Dates of operation: 2013–present

Overview: a continuation of scholarship No. 322, this programme funds bachelor's and master's in science and technology fields of national importance

Average number of awards per year: approximately 330 master's and 30 bachelor's

Co-sponsor: none

Appendix C: Scholarship questionnaire

To promote consistency in data collection, country experts were asked to prepare reports for each qualifying scholarship based on the following questions:

General

- What is the name of this scholarship in your local language and English?
- When did it begin? When will it end?

Purpose and goals

- Please explain the origin of this scholarship. Whose idea was it (individual, governing body, other)? How was it made official (ministry decree, national government vote, other)?
- What is its purpose (i.e. why was it created)?
- What are its goals?
- How did national circumstances (for example, culture, government, higher education system, economy, etc.) at the time it was created have an impact on its design and scope?

Participation

- Does this scholarship target certain types of applicants (male/female, income, ethnicity, etc.)? If yes, who and why?
- Is receipt of an award conditional in any way (for example, are recipients required to return to home to work for a certain amount of time or in a specific profession after studying abroad)? If yes, please explain.
- Does the scholarship programme include incentives of any kind that encourage recipients to return home (for example, guaranteed jobs, additional money, help finding work)? If yes, please explain.

Administration

Who is responsible for administering this scholarship programme?

How is it promoted?

- What criteria are used to evaluate applicants?
- What is the process for selecting scholarship recipients?
- How are recipients matched with institutions?
- Which countries/institutions host scholarship recipients? How are they selected? Are there specific criteria for selecting hosts?

Funding

- How is this scholarship funded? If co-funded, what organisations contribute funds and how much?
- How are individual award amounts determined?
- What expenses are covered under the scholarship?

Outcomes and impact

- Is there a mechanism in place for measuring whether the goals of the programme are being met? If yes, how does it work and who manages it?
- How has the programme performed in accordance with each of its stated goals?
- What has been the overall impact of this programme?
- Based on the experience in offering this scholarship programme, what lessons can be learned about the design and administration of study-abroad scholarship programmes in the future?

