

An Analysis of Flagship Scholarship Programs – Policy, Communication, and Performance in International Comparison

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IMPRESSUM

ICG Contact Information

The Illuminate Consulting Group
Post Office Box 262
San Carlos, CA 94070
USA

Phone +1 (619) 295 9600

Fax +1 (650) 620 0080

E-mail info@illuminategroup.com

Web www.illuminategroup.com

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Author: Mauro Mondino

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TERMINOLOGY AND ABBREVIATIONS

Access4.eu	EU Portal for Research, Technology, Development and Innovation
ARWU	Academic Ranking of World Universities
AUD	Australian Dollar
BMBF	Bundesministerium für Bildung und Forschung (Federal Ministry for Education and Research)
CAD	Canadian Dollar
CIHR	Canadian Institutes of Health Research
CNY	Chinese Yuan Renminbi
CSC	China Scholarship Council
CUCAS	China's University & College Admission System
DAAD	Deutscher Akademischer Austauschdienst (Germany Academic Exchange Service)
DAC	Development Assistance Committee
DEEWR	Australia's Department of Education, Employment and Work Relations
FCO	British Foreign and Commonwealth Office
GBP	British Pound Sterling
IIE	Institute for International Education
ISCED	International Standard Classification of Education
KBE	Knowledge-based Economy
MoE	Ministry of Education, People's Republic of China
NSERC	Natural Sciences and Engineering Research Council of Canada
Nuffic	Nederlandse organisatie voor internationale samenwerking in het hoger onderwijs (Netherlands Organization for International Cooperation in International Education)
NZD	New Zealand Dollar
PR	Permanent Resident
SGD	Singapore Dollar
SSHRC	Social Sciences and Humanities Research Council
USD	United States Dollar
VET	Vocational and Educational Training

EXECUTIVE SUMMARY

This thesis reviews eight flagship scholarship programs for international students and young researchers from select key actors in the international education market. The policy objectives and select implementation aspects of Australia, Canada, China, Germany, Netherlands, Singapore, the United Kingdom, and the United **States'** flagship scholarship programs are reviewed as part of this research. Throughout the XX century, scholarship programs for international students have broadly served as a foreign policy tool. The purpose of such programs was the creation and consolidation of political and economic ties with the scholarships **awardees' country of origin through cultural and academic exchange.**

The expansion of the international education market throughout the 1990s and 2000s and the concurrent emergence of the national competitiveness paradigm marked a turning point in the way governments use international scholarship programs. Talent recruitment and retention have emerged as driving factors that motivate the sponsoring of foreign nationals' **higher education and** research endeavors.

The impact of the competitiveness paradigm is visible not only in the programs that explicitly pursue talent recruitment and retention goals, such as in the case of Singapore, the Netherlands, and Canada. Even for those programs where public diplomacy was and remains the primary mission, the need to market the national higher education system goes along with the traditional goals (USA, China).

Overall, the current international scholarship programs' **landscape** is characterized by a diversified structure whereby the foreign policy component is often accompanied by a talent acquisition and retention rationale.

INTRODUCTION

The first decade of the XXI century has experienced the emergence of several new actors in the international higher education market. Competition for talented students has increased as newly developed and developing economies, such as China and Singapore, have joined the so-called **‘race for talent’** (Douglass & Edelstein, 2009; Marginson, 2006).

Within the context of international competition in higher education, governments are committing resources to infrastructure development, upgrading of the teaching and research capacity and support schemes for students. The latter have represented **for years one of the most visible signs of governments’ action in their respective** national higher education systems. Historically, governments have supported to a varying degree their nationals pursuing higher education with a wide array of funding schemes such as loans, subsidies, and direct contributions.

The provision of financial support for students pursuing higher education abroad is currently framed by a set of substantially different policy objectives in the host countries. Foreign policy, cultural diplomacy, and national competitiveness are **currently shaping governments’ attitudes and goals** in the provision of scholarship schemes for international students. To date, with the exception of the Fulbright Program for the US and, to a lesser extent, the Chinese Government Scholarship Program in China, little research has been conducted on government-funded scholarship programs for international students. This thesis aims to map out the current portfolio of government-sponsored scholarship schemes for international students and young researchers in select key players of the global higher education market.

Research Question and Policy Relevance

This thesis pursues two main objectives: first, to analyze the main policy drivers that motivate the provision of scholarships for international students and young researchers **by host countries’ governments**. **Second**, to describe select dimensions of the process conducive to the provision of scholarship programs for international students and young researchers.

This study of scholarship programs for international students and young researchers is relevant to policy-making in that it provides a snapshot of the current trends towards talent acquisition, global economic competitiveness and the use of higher education as a foreign policy tool.

Thesis Overview

The remainder of the thesis is articulated as follows. The Background section covers the origin of scholarship program in the XX century and the emergence of the competitiveness paradigm, which will be instrumental to contextualize the recent developments in the international scholarship programs' landscape. The Analysis features eight country case studies covering flagship scholarship **programs' rationale and select aspects of their** implementation. The Findings and Conclusion section wraps up.

BACKGROUND

Scholarship Programs in Historical Perspective

International scholarship programs largely constitute the product of the post-World War II world. With the exception of the Rhodes Scholarships, initiated in **1902 upon Cecil Rhodes' will** (The Rhodes Trust, 2010), most long-standing scholarship programs for international students were created in the 1940s and 1950s.

In the United States, the Fulbright Program was first established in 1946 and received independent legal recognition in 1961 with the Fulbright-Hays Act (Lindsay, 1989, pp. 425-429). The program was initiated to **foster “mutual understanding”** under the belief that an increased contact among people from different nations and cultures would reduce potential sources of conflict (Scott-Smith, 2008, p. 177). The potential political impact of the Fulbright Program was recognized by the US Department of State and largely employed as a public diplomacy tool through the Cold War (Kramer, 2009). In 1973 the Bureau of Educational and Cultural Affairs (ECA), **the State Department's division** responsible for the management of Fulbright, defined the goals of US-sponsored programs **as to “favourably influence the environment within which US foreign policy is carried out”** (Scott-Smith, 2008, p. 187). Since its inception, the Fulbright program has served a public diplomacy instrument to contribute to the creation and consolidation of goodwill towards the United States and its policies abroad.

Within the framework of the then Commonwealth, in the early 1950s the United Kingdom participated in the establishment of the Colombo Plan (The Colombo Plan, 2010), an intergovernmental forum for economic cooperation in South-Asia. Among the initiatives promoted, a scholarship program was initiated to support South-Asia students to study in the **Commonwealth's** developed nations (UK, Australia, New Zealand) (Auletta, 2000). In 1959, the Commonwealth Scholarship and Fellowship Plan (CSFP) was founded to sponsor Commonwealth **students' international mobility** (Commonwealth Scholarship Commission in the United Kingdom, 2010).

The need to maintain close ties with the former colonies and to contain their sympathies towards the Communist bloc in Asia constituted the main driver behind the creation of the CSFP (Auletta, 2000). In 1953, the Marshall Scholarship Fund was established by the British Parliament **“to express gratitude to the American people for the post-war support and assistance”** (Marshall Aid Commemoration Commission, 2010). Overall, political and post-colonial considerations represented the main policy drivers for the creation of programs sponsored by the British government after World War II.

The German experience with international scholarship programs dates back to the post-World War II years, when the then West German government instituted the German Academic Exchange Service (DAAD) and the Alexander von Humboldt Foundation (AvH) in, respectively, 1950 and 1953. Both institutions promoted academic and cultural exchange through the provision of scholarships for international and German students and researchers to build cultural, political and economic ties between Germany and the sending countries (AvH Foundation, 2010, p. 57; DAAD, 2010, pp. 17-18). While the DAAD primarily focused on cultural exchange on a large scale, the AvH was entrusted of the mission to re-build the academic connections that were largely lost during the war years.

The attempt to win “hearts and minds” (Leonard, 2002) through academic and cultural exchanges is not limited to developed Western economies. Starting in the early 1950s, **the newly established People’s Republic of China** offered full scholarships to students from the Soviet bloc (Dong & Chapman, 2008, p. 159). Over time, the government opened Chinese universities to Western students until the beginning of the Cultural Revolution (1966-1976), which imposed a ban on foreign students. **China’s opening** to international education coincided with the late 1970s economic reforms and spurred a new wave of support to international students through programs that lasts until present day (Dong, 2007).

This short review of longstanding schemes **suggests that governments’** sponsorship for international scholarship programs broadly responded to foreign policy considerations and aimed to develop and consolidate a positive image of **the given sponsor country’s** and its policies.

Scholarships in the National Competitiveness Era

The complex set of phenomena that goes under the heading ‘globalization’ has not only directly affected the way commercial and financial transactions are conducted today but has had profound consequences on the way human capital flows are articulated today, as popularized by Friedman in his work ‘The world is flat’.

With regard to higher education, globalization has allowed a substantial increase in the mobility of international students and researchers. For instance, Docquier and Marfouk estimate **that “[b]y 2000, the college-educated made up 34.6% of immigrants to OECD countries, up from 29.8% in 1990, and far out of proportion to the 11.3% of the world’s overall labour force that they represent”** (Docquier & Marfouk, 2006 quoted in Brown & Tannock, 2009, p. 382). The OECD estimates that from 2000 to 2008 the number of tertiary education students enrolled outside their country of origin almost doubled from 1.8 million to 3.3 million (OECD, 2010, p. 313).

If on one side, the supply of internationally mobile students has increased in the past years, the supply of potential destinations has increased, too. Douglass and Edelstein describe a competitive market for international education, where the historically dominant actor -the United States- is now being challenged by developed and developing countries (Douglass & Edelstein, 2009).

The combination of these forces has determined the emergence of the so-called ‘**war on (or competition for) talent**’, which Brown & Tannock describe as follows. “The path to national prosperity lies in maximizing global competitiveness; to be competitive globally, nations (rich nations, in particular) need to maximize their **share of the world’s high tech, high skill, knowledge economy jobs**; to help create and fill these jobs, nations need to recruit the **world’s most skilled and talented individuals**, from wherever they come; since other nations are competing for **these same workers (and indeed, for one’s own set of domestic workers)**, nations need to adjust their immigration, education, economic and social policy in order to attract and retain them [...]” (2009, p. 381).

Within the competitiveness paradigm that underpins the so-called ‘**global competition for talent**’, scholarship and fellowship programs are now framed not only as public diplomacy instruments, as described in the previous section, but have become key tools to attract international students and young researchers (OECD, 2008, pp. 138-139).

METHODOLOGY

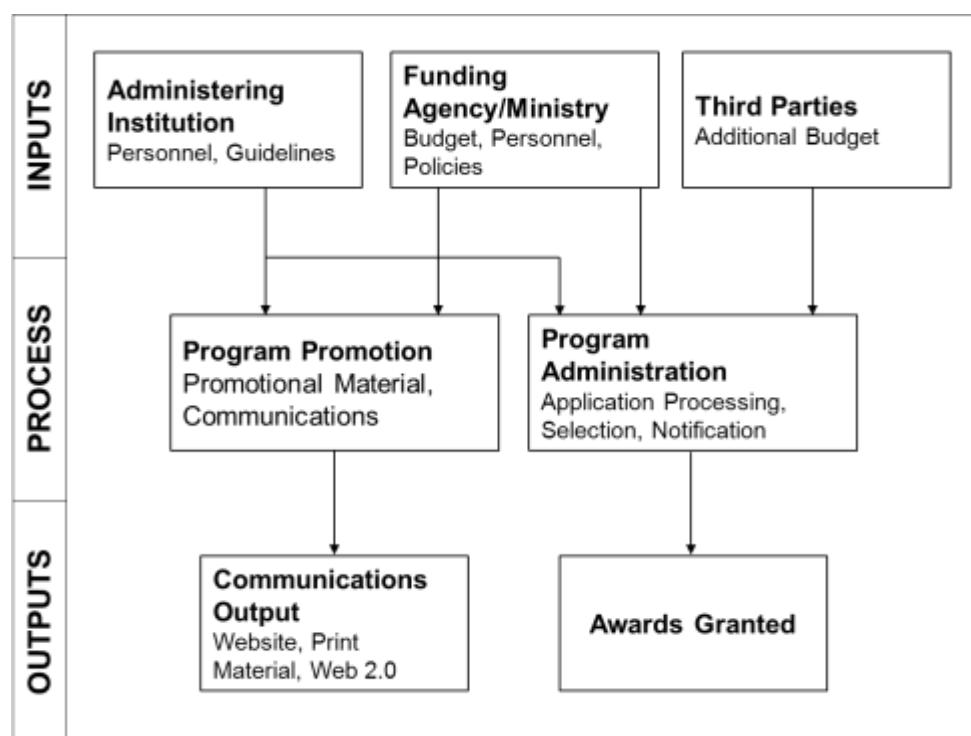
Analytical Framework

Research Design

A logic model is employed to describe the programs' goals, inputs, process, and outputs. The evaluation of the programs' outcomes and impact, though desirable, presents challenges whose resolution falls outside the limited scope of the thesis, as also suggested by the literature surveyed (Lindsay, 1989, p. 432; Scott-Smith, 2008, p. 179). The use of a logic model allows identifying the objectives pursued by the program and connecting them with the resources and processes employed to achieve the stated objectives (Villalba van Dijk, 2009, p. 111).

The starting point for this analysis is the logic model designed for the 'Canada Graduate Scholarship (CGS) Program and Related Programs Review' (Interagency Evaluation Steering Committee, 2008). Building upon the CGS Review, a three-stage logic model is applied to analyze select scholarship programs (see figure below). An additional section dedicated to the programs' policy formulation is added as a way of background for all cases analyzed.

Logic Model



Source: adapted from Interagency Evaluation Steering Committee (2008, p. 9).

Each case is analyzed by covering select dimensions at the input, process and output stages, such as the policy objective pursued, its rationale, selection procedures, marketing and communications practices, and the legal and institutional framework in which the programs are embedded.

Resources

Data have been gathered primarily through desk-based research. Information was collected through publicly available sources and, where possible, through direct request to the institutions that either fund or administer the scholarship programs. Common sources include but are not limited to scholarship programs' annual reports, national ministries' websites and reports, literature and international organizations' databases. Five expert interviews have been conducted to validate the data collected and to gather contextual information on the programs' background, policy formulation, and implementation.

Case Selection

This thesis aims to map and compare flagship scholarship programs in select countries across multiple dimensions. Today international students can choose among several hundred scholarship programs to study in the most popular destinations. For instance, ScholarshipPortal.eu, a scholarships directory supported by the European Commission and by the Academic Cooperation Association (ACA), lists 1,043 scholarships for studies in the EU alone (ScholarshipPortal.eu, 2011).

The US-based Institute of International Education provides a list of 720 scholarships and fellowships opportunities across the Americas, Asia and Oceania, Africa and the Middle East, and Europe (IIE, 2011b). Given the large initial pool of programs, a two-step case selection process was adopted. First, target countries are selected based on their relative share in the market for international students. Second, within the subset of select countries, research is conducted to identify flagship scholarship programs.

Countries were selected based on their relative share in the international student market. The top 20 countries for the latest year available (2008) listed by the OECD under the category **'Foreign/international students enrolled'** were selected as the baseline target group. The following reports the OECD data.

Top 20 Destination Countries (OECD)

Rank	Country	International Students ¹	Year
1	United States	451,898	2008
2	United Kingdom	277,040	2008
3	Australia	187,555	2008
4	Germany	177,799	2008
5	Japan	78,214	2008
6	Canada	65,293	2008
7	Austria	39,154	2008
8	Netherlands	30,052	2008
9	Switzerland	23,362	2008
10	New Zealand	21,218	2008
11	Sweden	18,586	2008
12	Belgium	18,486	2008
13	Spain	15,591	2008
14	Hungary	12,884	2008
15	Finland	8,193	2008
16	Chile	7,735	2008
17	Portugal	7,042	2008
18	Denmark	5,011	2008
19	Slovak Republic	4,628	2008
20	Norway	4,186	2008

Source: OECD Statistics (2011).

OECD data do not cover likely relevant sending and destination countries such as China, Russia, and Singapore. Additional data were gathered from UNESCO's Institute for Statistics Data Centre to include non-OECD countries. UNESCO data aggregate ISCED 5/A, 5/B and 6 levels into one category. As a result, the data capture international students attending higher education institutions and vocational and applied tertiary training, as well. The following table reports the top 20 destination countries from the UNESCO database.

¹ 'International students' refers to 'Non-resident students of reporting country'. The data correspond to the UNESCO ISCED Classification 5A/6, which represents tertiary non-vocational education (e.g. students enrolled in universities and colleges). International students enrolled under the ISCED category 5B (vocational education and polytechnics) fall outside the scope of this research.

Top 20 Destination Countries (UNESCO)

Rank	Country	International Students	Latest Year Available
1	United States	624,474	2008
2	United Kingdom	341,791	2008
3	France	243,436	2008
4	Australia	230,635	2008
5	Germany	189,347	2008
6	Russia	136,791	2008
7	Japan	126,568	2008
8	Canada	92,881	2007
9	Italy	68,306	2008
10	South Africa	63,964	2008
11	China	61,211	2009
12	Austria	53,396	2008
13	Singapore	48,623	2010
14	Malaysia	45,383	2008
15	Spain	37,726	2008
16	Egypt	35,031	2008
17	United Arab Emirates	34,122	2009
18	Switzerland	31,706	2008
19	New Zealand	31,565	2008
20	Belgium	29,844	2008

Source: UNESCO Institute for Statistics Data Centre (2011).

Overall, by comparing the two datasets, the following eight countries² emerge as top players in the higher education market in addition to the ones listed in the OECD list: China, Egypt, France, Italy, Malaysia, Russia, Singapore, South Africa, and United Arab Emirates.

² France and Italy have large international student population but are not recorded in the OECD database as they do not provide disaggregated according to the ISCED 5A and 5B classification.

The subset of 29 countries constitutes the starting point for selecting the final case studies' sample. To be included in the case final study list countries must fulfill the following criteria:

- The country offers scholarship or fellowship programs for international students and young researchers
- The national government sponsors the given program or programs directly or through a third-party institution
- The national government identifies the given program as “flagship” or “prestigious” and utilizes it to pursue explicit policy goals. For instance, **the country's government may mention the program in strategic or planning documents and assign to the program a specific policy objective.**

By combining the mentioned criteria with data and literature availability, and language constraints, the following eight countries and respective programs were selected (see table below). Where a country case featured more than one scholarship program for international students and young researchers, additional literature research was conducted to verify which was treated and **promoted as the country's flagship initiative.** Further analysis on a country's scholarships portfolio is provided in the country cases below.

Final Countries and Programs Case List

Country	Award
Australia	Endeavour Awards
Canada	Vanier Canada Graduate Scholarships
China	Chinese Government Scholarship Program
Germany	Alexander von Humboldt Research Fellowships
Netherlands	Huygens Scholarship Programme
Singapore	A* STAR Scholarships
United	Chevening Scholarships Programme
United States	Fulbright Program Science & Technology Award

ANALYSIS

Australia

Country Profile

Australia's role in the international higher education landscape has grown in the past years to become the third most popular destination among the OECD countries with more than 180,000 students in 2008 (OECD, 2011).

In 2009-2010, the international education industry, which includes higher education³, vocational and educational training (VET) among others, generated revenues equal to AUD 18.6 billion and ranked third among Australia's export activities after coal and iron ore (DEEWR, 2010).

Program Review

In November 2009 the Australian government launched the 'Australia Awards' initiative, which aimed to bring under a common umbrella the scholarships funded by the Department of Education, Employment and Work Relations (DEEWR) and by AusAID, Australia's development cooperation agency (DEEWR, 2010, p. 102).

Under the common 'Australia Awards' brand, two categories, or 'streams', were developed targeting talented international and Australian students on one side (the 'Achievement Stream'), and citizens from select developing countries on the other (the 'Development Stream') (Australian government, 2011).

Two programs constitute the Achievement Stream: the Anne Wexler Scholarships, organized through the Australian-American Fulbright Commission, and the Endeavour Awards, which are open to university and VET students, young researchers and professionals.

The Endeavour Awards make up for most of the scholarships awarded under the Achievement Stream⁴ (see figure below) and are defined by DEEWR as "Australia's only global, merit-based scholarship program for both outgoing and incoming students, researchers and professionals" (DEEWR, 2010, p. 102).

³ As defined by the UNESCO under the ISCED classification 5A and 6.

⁴ The Anne Wexler Scholarship started in 2011 and will grant two awards per year.

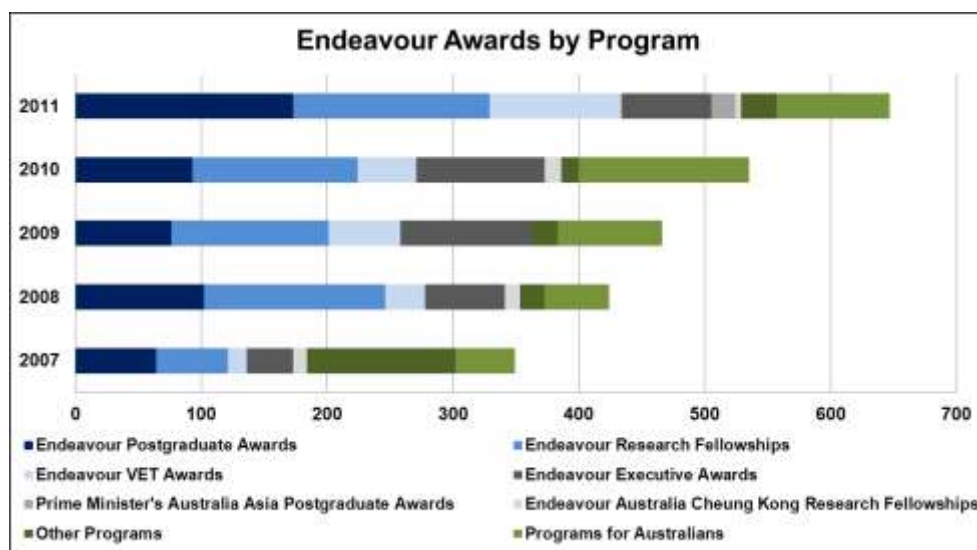
The Endeavour Awards support international and Australian students, professionals, and young researchers to study and research, respectively, in Australia and across the world. The Endeavour Awards include five sub-programs: the Endeavour Postgraduate Awards, **the Prime Minister's Australia Asia Incoming Postgraduate Awards**, the Endeavour Cheung Kong Research Fellowships, the Endeavour Vocational and Educational and Training (VET) Awards, and the Endeavour Executive Awards. The following table reports select characteristics of the program.

Endeavour Awards Categories

Award	Target Level	Target Area	Duration
Endeavour Cheung Kong Research Fellowships	PhD, Master's, Postdoc	Asia (select countries)	4-6 months
Endeavour Executive Awards	Professionals	World	1-4 months
Endeavour Postgraduate Awards	PhD, Master's	World	Up to 4 years
Endeavour VET Awards	VET	World	1-2.5 years
Prime Minister's Australia Asia Incoming Postgraduate Awards	PhD, Master's	Asia (select countries)	Up to 4 years + 1 year internship

Source: Australian government (2011a).

Endeavour Awards by Program



Source: Author's calculations on DEEWR (n.d.-a).

Notes: All programs but "Programs for Australians" are open only to international students. "Other Programs"⁵ includes Endeavour Award for Asia, Endeavour Award for Malaysia, Endeavour Award for Turkey, Endeavour Europe Award, Endeavour Executive Award for India, Endeavour Executive Award for Pakistan, Endeavour Research Fellowship for India, Endeavour Research Fellowship for Indonesia, Endeavour Research Fellowship for Iraq, Endeavour Research Fellowship for Pakistan and Endeavour VET Award for Pakistan.

Given this research's focus on international higher education students and young researchers, the awards granted to Australians, international VET students and international professionals will not be considered.

Within the Endeavour Awards for international participants, three programs are open to students and young researchers. The Postgraduate Awards target eligible Master's and PhD candidates from across the world by offering tuition fees coverage, a monthly allowance, travel and establishment allowances, health care insurance for the duration of their program. The value of the scholarship is estimated at AUD 118,500 for Master's degrees and at AUD 228,500 for PhD programs (DEEWR, 2011a).

The Prime Minister's Australia Asia Incoming Postgraduate Awards is an elite program dedicated to the top 20 PhD candidates from select Asian countries⁶ who are nominated for the Postgraduate Awards. Under this program, awardees receive an additional AUD 35,000 sponsorship to undertake a one-year internship in Australia upon completion of their doctoral studies (DEEWR, 2011a).

⁵ "Other Programs" indicates initiatives that were in place before the November 2009 re-organization of the DEEWR scholarships and are currently being phased out.

⁶ The eligible countries are China (including Hong Kong, and Macao), India, Indonesia, Japan, Malaysia, South Korea, Singapore, Taiwan, Thailand, and Vietnam.

The Cheung Kong Research Fellowships sponsor Master's, PhD and Postdoctoral researchers for a maximum of six months to conduct research in Australia towards the completion of their degree or research assignment in the home country. The Fellowships' funding for travel, establishment, health insurance and living expenses is estimated at a value of AUD 23,500 (DEEWR, 2011a).

Currently the program does not feature quotas for subject areas in any of the three Awards open to international students. With regard to country quotas, **the Prime Minister's Award and the Cheung Kong Fellowship reflect Australia's special relationship with East and South East Asia.** However, no geographic quotas apply for the Postgraduate Awards, which constitutes the largest program in terms of awards conferred (DEEWR, 2011b).

Background and Rationale

Prior to the re-branding of the Endeavour Awards under the Australia Awards label, DEEWR had been funding all the current five award categories plus additional programs targeted to specific countries⁷, which are currently being phased out.

By supporting **Australian and international students' research and study efforts**, the Australian government intends to foster the creation of "enduring regional links and foster closer educational, professional and research ties **between Australia and participating countries**" (DEEWR, 2010, p. 102).

The Endeavour Awards for international participants pursue two concurrent objectives. First, they fulfill a public diplomacy mission that represents the continuation of the Colombo Plan (DEEWR, 2008, 2011b). Second, they serve as a talent recruitment tool for Australian universities and a showcase for **Australia's research and innovation potential** (DEEWR, n.d.-b).

⁷ The ad-hoc programs were Endeavour Awards for Asia, Endeavour Awards for Malaysia, Endeavour Awards for Turkey, Endeavour Executive Award for India, Endeavour Executive Award for Pakistan, Endeavour Research Fellowship for India, Endeavour Research Fellowship for Indonesia, Endeavour Research Fellowship for Iraq, Endeavour Research Fellowship for Pakistan and Endeavour VET Award for Pakistan.

Recruitment and Selection

Candidates submit their applications to the preferred institution in Australia and then apply to the Endeavour Awards independently⁸. DEEWR is responsible for the application and selection process and relies on independent panels composed by academics, business people, and government officials to identify and rank potential candidates according to academic and leadership criteria. To guarantee fairness in the selection process, the panels' members are selected through a public tendering process (DEEWR, 2011b). Based on the selection panels' indications, DEEWR then confers the awards.

Marketing and Communications

Several actors are involved in the marketing of the Endeavour Awards. Given the Awards' international exposure, the marketing of the scholarships relies on the Internet as its main communication medium. DEEWR operates a dedicated website⁹ that features information about the Awards, eligibility criteria, conditions and timelines, an online application portal and a dedicated online alumni community.

The Australian Trade Commission (AusTrade) through its 'Study In Australia' portals¹⁰ promotes the Awards as part of its mandate to market the Australian higher education industry abroad (DEEWR, 2010, p. 76).

Conditionalities

Upon completion of the degree, awardees are expected but not required to return to their home country (DEEWR, n.d.-c). At present, DEEWR neither prevents awardees from applying for a work visa nor encourages scholarship recipients to stay in Australia (DEEWR, 2011b).

The current neutral stance on post-graduation employment, and possibly settlement, in Australia reflects the multiple objectives that are pursued through the Endeavour awards. On one hand, the awardees are encouraged to return home and contribute to the betterment of their home societies. Under this perspective, the Awards fit with the public diplomacy paradigm that emerged from twentieth century programs such as Fulbright and the Colombo Plan.

⁸ For the sake of conciseness, only the Endeavour Postgraduate Awards and the Prime Minister's Australia Asia Incoming Postgraduate Awards are taken into consideration.

⁹ www.deewr.gov.au/endeavourawards.

¹⁰ www.studyinaustralia.gov.au and www.studyinaustralia.org (targeted to South Asia students).

On the other hand, however, the Awards serve as a talent recruitment tool and, potentially, as talent retention mechanism. As prospective graduates from an Australian university, Endeavour Awards recipients are eligible to apply for permanent residency through a skilled worker permit (Department of Immigration and Citizenship, n.d.).

Outlook

The Endeavour Awards constitute Australia's flagship scholarship program for international students. Through the Awards, the Australian government markets its higher education industry, pursues the establishment and consolidation of its relations with international partners, and attracts talented students and potential highly skilled migrants.

The current neutral stance on post-graduation settlement in Australia depends on the multiple objectives that were ascribed to the program at its inception. The current immigration laws, however, provide the suitable legal framework to make the Endeavour Awards an effective talent retention instrument.

Canada

Country Profile

With more than 65,000 international students registered at its higher education institutions, Canada ranks in the top ten destinations for international student flows (OECD, 2011).

Throughout the late 1990s and the 2000s, the Canadian government introduced a wide array of initiatives to foster its economic competitiveness by investing in infrastructure, technology, and higher education. Within the higher education sector, over the course of the 2000s the principle of talent acquisition framed the Canadian **government's** investments. Between 2000 and 2008 the government created three new programs to nurture local talent and attract top Canadian and international experienced researchers¹¹ (SSHRC, 2011).

With the publication of '**Mobilizing Science and Technology to Canada's Advantage**' (the Science & Technology Strategy) in 2007, international talent attraction and retention objectives through scholarship programs were first recognized (Canadian federal government, 2007). In line with the policy goals identified in the S&T Strategy, the 2008 federal budget allocated CAD 25 million over five years for the establishment of a new excellence scholarship program targeted to Canadian and international PhD candidates (the Vanier Canada Graduate Scholarships, or Vanier CGS) (Industry Canada, 2008, p. 26).

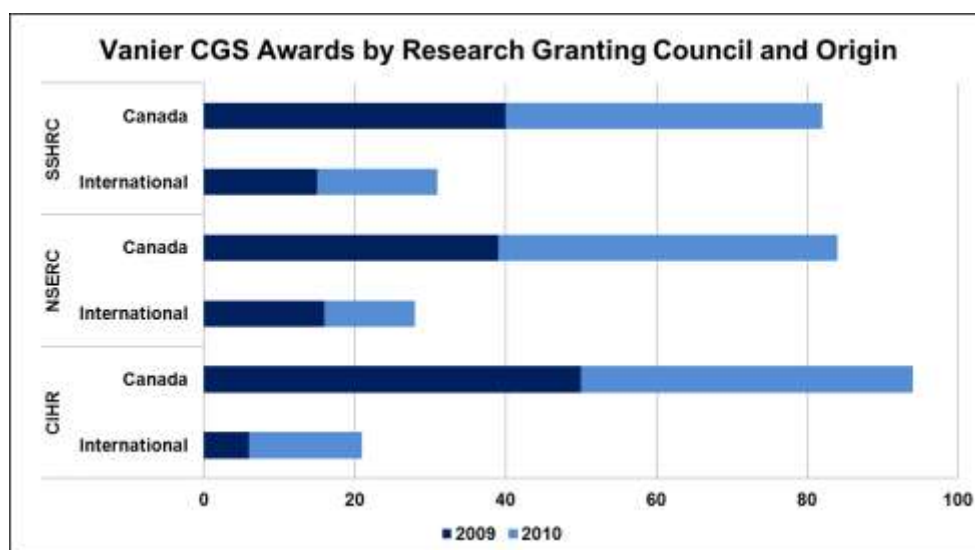
In addition to the Vanier Scholarships, in July 2010 the Canadian government announced the establishment of a new fellowships scheme targeted to 70 Canadian and international postdoctoral researchers every year (Banting Postdoctoral Fellowships) (Prime Minister of Canada Office, 2010). Given the novelty of the Banting Postdoctoral Fellowships, the following sections will be dedicated to the Vanier CGS only.

¹¹ The following programs were created: Canada Research Chairs in 2000, Canada Graduate Scholarships in 2003, and Canada Excellence Research Chairs in 2008.

Program Review

The Vanier CGS program foresees the allocation of up to 500 PhD scholarships each year across **Canada's** three research granting councils (SSHRC, NSERC, and CIHR). The first two rounds of the program, 2009 and 2010, yielded, respectively, an intake of 166 and 174 PhD candidates. The figure below reports the breakdown by research granting councils and by origin.

Vanier CGS Awards by Research Granting Council and Origin



Source: Vanier Canada Graduate Scholarships (2011c).

Each award is valued at CAD 50,000 per year for three years towards the completion of a doctoral degree. The awards are distributed equally across **Canada's three** research councils and no preference is granted to a particular research area. No quotas are allocated to Canadian or international applicants (Vanier Canada Graduate Scholarships, 2011b).

Background and Rationale

The Vanier CGS program was launched in 2009 as part of the Canadian government's effort to recruit and retain talent both within and outside Canada. The Vanier CGS programs constitutes the Canadian government's most direct tool to "**strengthen Canada's ability to attract and retain the world's top-tier doctoral students**" (Vanier Canada Graduate Scholarships, 2011a).

In the 2009 Science and Technology Strategy Progress Report, the mentioned talent recruitment and retention goals were complemented by the introduction of a new visa stream -the Canadian Experience Class- that facilitates the process to obtain permanent residency for skilled temporary workers and graduates of Canadian universities.

Recruitment and Selection

The research granting councils, together with participating universities, are involved in the recruitment and selection process. The selection of the Vanier CGS awardees is structured around the following four-stage process (SSHRC, 2011).

First, PhD candidates submit their application to the chosen Canadian university. Upon successful acceptance in the chosen PhD program, candidates may request to the university to be considered for a Vanier CGS. Second, each university participating in the Vanier CGS program¹² nominates candidates for the awards up to the maximum quota assigned for each of the research **councils'** competence areas. The nominations available for each research council depend on **the universities'** past ability to attract funds from each individual granting council over a three-year period¹³.

The nominations for each research area are forwarded to the respective granting councils, which appoint panels of academics to evaluate the **applications'** academic credentials. The granting agencies select nominees based on the peer review panels from the original pool of applicants submitted by the universities.

The granting agencies' nominees are finally reviewed and selected by the Vanier CGS Selection Board, which includes representatives from SSHRC, NSERC and CIHR, Canadian and international universities, and governmental organizations.

¹² See http://www.vanier.gc.ca/eng/allocations_by_university-liste_d_attributions.aspx for a full list.

¹³ The nominations' full allocation is available at http://www.vanier.gc.ca/eng/allocations_by_university-liste_d_attributions.aspx.

Marketing and Communications

The three granting agencies -SSHRC, NSERC and CIHR- and the Canadian universities are jointly responsible for the marketing of the program to potential applicants.

The main promotion channel is the Vanier CGS' website¹⁴, which features information on the program's background, benefits, conditions, and selection process, among other issues. The Department of Foreign Affairs and International Trade's (DFAIT) dedicated website¹⁵ to promote Canadian higher education also features prominently the Vanier CGS in its homepage and provides information on the program through its scholarships search engine.

In March 2011, the Vanier CGS also established a presence in the popular social networking platform Facebook¹⁶ and in the micro-blogging site Twitter¹⁷.

Conditionalities

International candidates are neither encouraged nor required to return to their home country upon the completion of the PhD. Since the first cohort of awardees will graduate in 2012, no data are available at present to assess whether the Vanier CGS program served as a talent retention tool.

Under the current immigration framework, however, awardees can access the Canadian labor market through two visa arrangements. First, awardees are eligible for the Post-Graduation Permit Program, which grants a work permit up to the same duration of the education undertaken in Canada (Citizenship and Immigration Canada, 2011).

Second, awardees are eligible for the Provincial Nominee Program (PNP), which allows individuals from select categories to access a fast-track procedure to permanent residency.

Outlook

Throughout the 2000s, the government steered the Canadian higher education and research landscape towards the "national competitiveness paradigm". With the 2007 S&T Strategy, the realization of the so-called

¹⁴ See www.vanier.gc.ca.

¹⁵ See www.scholarships-bourses.gc.ca/scholarships-bourses.

¹⁶ See <http://www.facebook.com/pages/Vanier-Canada-Graduate-Scholarships/132563323457921>.

¹⁷ See <http://twitter.com/BESCVanierCGS>.

Knowledge-based Economy (KBE) became the key driver of the **government's economic agenda**.

Within the framework of the competitiveness paradigm, highly skilled migration flows are regarded as a complement for domestic investments in science and technology. In this context, the Vanier CGS program serves as a direct instrument for the federal **government to bolster Canada's academic** profile on one hand, and to contribute to the talent acquisition and retention agenda on the other.

With regard to assessing the **Vanier CGS program's contribution to the** achievement of the policy goals mentioned above, the novelty of the program effectively prevents any assessment on its impact. However, **the program's** features - financial attractiveness and opportunity for a smooth transition into the Canadian labor market, its openness to all fields of science and the current marketing and communications practices, make the Vanier CGS program a competitive award for international students.

China

Country Profile

China's position in the international higher education market has consolidated throughout the 2000s as one key sending and receiving countries worldwide. Chinese students represent the largest cohort in nine out of the ten¹⁸ top destination countries according to UNESCO's international student data (UNESCO, 2011).

China is also a major destination country for international higher education ranking 11th worldwide according to UNESCO's data (61,211 in 2008) (UNESCO, 2011). Chinese governmental sources suggest a much higher figure for international education (195,503 for 2007-08), though the data include also students enrolled in Chinese language classes and non-degree programs (IIE, 2011a).

Recent data published by the Chinese Ministry of Education (MoE) indicate that international students amounted to 265,090 in 2010; 22,390 -accounting for 22.72% of all international students- received a scholarship funded by the MoE towards the completion of their studies in China (MoE, 2011).

Program Review

The Chinese Government Scholarship Program (CGSP) is “one of the major mechanisms of the Chinese educational aid program set up by the Chinese government to sponsor international students and scholars to carry out studies and research in Chinese higher education” (Dong, 2007, p. 3).

CGSP serves as an umbrella program for several scholarship and fellowship schemes targeted to specific geographic areas, degree levels and fields of study and research. The Chinese Scholarship Council (CSC) administers all CGSP schemes on behalf of the Chinese Ministry of Education (MoE).

At present, CSC lists eleven programs for international students and researchers. Each program targets a specific geographic area, a study level, or a research field. The table below summarizes the programs' select features (CSC, 2011b).

¹⁸ South Africa is the only country among the top 10 destinations that does not feature disaggregated data in the UNESCO database. Therefore, it has not been possible to establish the top sending countries.

Chinese Government Scholarship Program Categories

Award	Target Level	Target Area	Duration	Cohort	Start Year
CGSP (“bilateral stream”)	Bachelor’s, Master’s, PhD, Researchers	World	Short term research to 4-7 years	n/a	1950s
China/UNESCO Great Wall Fellowship Program	Researchers	Developing Countries (Asia and Africa)	1 year	25	2000*
Study in Asia Scholarship Program	Researchers	World	1 year	20	2008*
China/AUN Scholarship Program	Master’s, PhD	ASEAN	2-5 years (Master’s), 3- 6 years (PhD)	20	2009*
CGSP for the EU	Chinese language	EU	Up to 1 year	100	2006 ¹⁹
China Pacific Islands Forum Scholarship Program	Bachelor’s, Master’s, PhD, Researchers	Pacific Islands (excluded Australia and New Zealand)	Short term research to 4-7 years	10	2009
CGSP University Postgraduate Program	Master’s, PhD	World	2-5 years (Master’s), 3- 6 years (PhD)	Defined yearly by MOE	2009*
CGSP Degree Oriented Program in Provinces and Autonomous Regions	Master’s, PhD	World	2-5 years (Master’s), 3- 6 years (PhD)	Defined yearly by MOE	2010*
CGSP Cooperative Program with Provinces and Autonomous Regions	Master’s, PhD	World	2-5 years (Master’s), 3- 6 years (PhD)	n/a	2010*
Distinguished International Students Scholarship Program	Master’s, PhD	World (only students with a Chinese Bachelor’s degree)	2-5 years (Master’s), 3- 6 years (PhD)	200	2009*

Source: Access4.eu (2011), CUCAS (2011), CSC (2011b), UNESCO (2000).

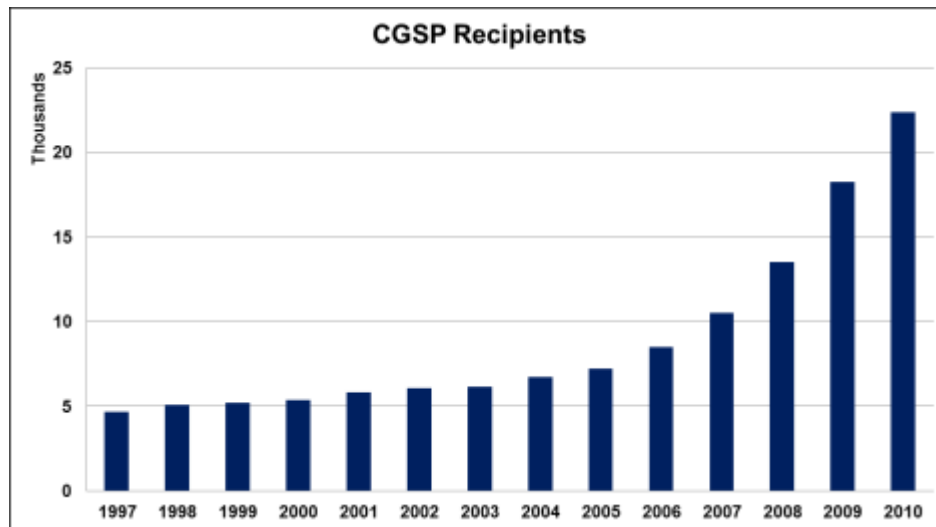
Notes: ‘Start Year’ entries marked with * signal the first year for which public record is available.

¹⁹ Set to expire after academic year 2011/2012.

Between 1950 and 2000 the Chinese government sponsored around 88,000 scholarships through the CGSP, out of around total 400,000 students that studied in China (Dong, 2007, p. 35).

Over the course of the 2000s, parallel to increase in outbound and inbound flows of international students, CGSP's size more than quadrupled from 5,362 in 2000 to 22,390 as of 2010 (CSC, 2010; MoE, 2011). The figure below reports total CGSP scholarships conferred between 1997 and 2010.

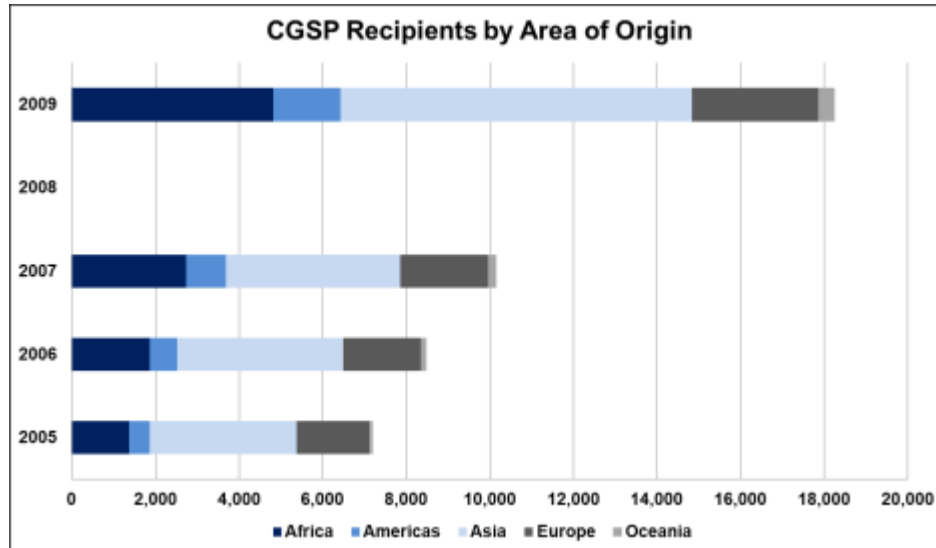
CGSP Recipients



Source: CSC (2010), MoE (2011).

The figures below show the breakdown of CGSP recipients by area of origin and by degree or program.

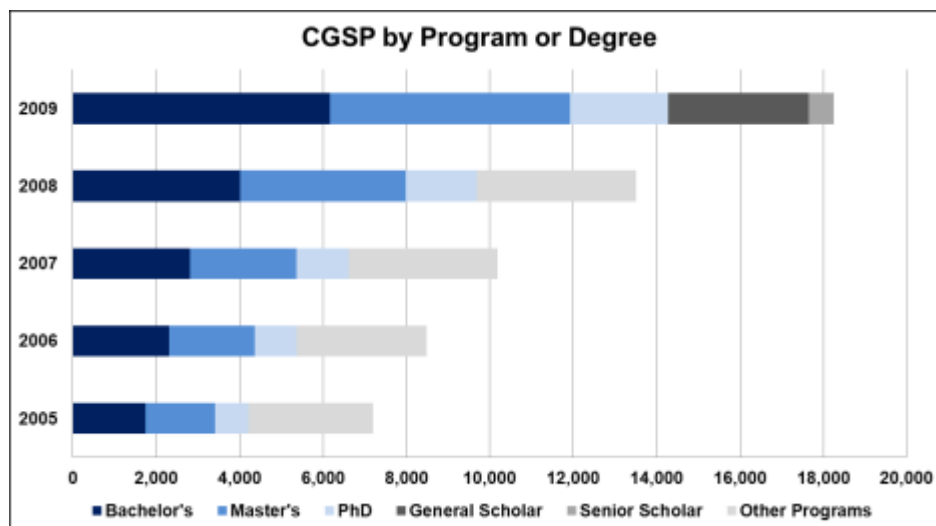
CGSP Recipients by Area of Origin



Source: CSC (2006, 2007, 2008, 2010).

Notes: 2005 and 2007 data do not match the values reported above in the order of 15 units.

CGSP by Program or Degree



Source: Author's calculations on CSC data (2006, 2007, 2008, 2009, 2010).

Notes: 2005, 2007 and 2008 data do not match the values reported above in the order of 15 units. "General Scholar" identifies a non-degree seeking junior researcher or postgraduate student. "Senior Scholar" identifies an academic with at least an "Associate Professor" title conducting research in China. "Other Programs" includes diploma and short-term non-degree seeking programs.

Depending on **the candidate's application credentials and on the availability of funds**, the CSC grants full and partial scholarships (CSC, 2011a). A typical full scholarship covers all expenses that students and researchers may incur into when settling and living in China. Every awardee receives full tuition fee waiver, free on-campus accommodation, a settlement fee, a travel subsidy, health insurance coverage and monthly allowance proportional to the awardees degree level²⁰.

Overall, a full CGSP scholarship can be approximately valued between CNY 55,000 and CNY 60,000 per year²¹. In addition to mentioned benefits, the CGSP offers to all students enrolled into a course taught in the Chinese language up to two years of language training prior to the beginning of the academic program.

Background and Rationale

The creation of the CGSP dates back to the early 1950s, when the newly established Chinese state started to promote cultural, academic, and technical exchange between China and the then Soviet bloc. The program pursued political and diplomatic goals through the so-called instruments of **“public diplomacy” in the East** in the same way the Fulbright Program aimed to improve **America's image in the West**.

As reported in the Background section, the CGSP evolved parallel to **China's** historical circumstances. The program grew through the 1950s and 1960s to incorporate students and researchers from across the world until the decade-long closure concurrent to **Mao Zedong's Cultural Revolution**. **With the** progressive opening of China through the late 1970s and 1980s, the CGSP was revived. **With China's consolidation as a** major player in the international higher education landscape in the 2000s, the program dramatically increased its intake up to the 22,390 awards conferred in 2010.

Despite its longstanding history, the CGSP's core objective has been stable over time. Two objectives underpin **the CGSP**: first **“strengthen[ing] mutual understanding and friendship between the Chinese people and people from the whole world”**. Second, **“develop[ing] cooperation and exchange in the fields of education, science, culture, economy and trade between China and**

²⁰ The following rates apply as of April 2011: Undergraduates and Chinese Language Students: CNY 1,400/month; **Master's degree students and general scholars**: CNY 1,700/month; PhD students and senior scholars: CNY 2,000/month.

²¹ Assuming no tuition fees and CNY 100/day accommodation costs, a settlement allowance of CNY 1,500 and the monthly allowance rates provided in the previous footnote. For further information about living costs for international students in China, see CUCAS' website at http://www.cucas.edu.cn/HomePage/content/content_177.shtml, accessed 7 April 2011. The value of the award should be interpreted as an estimate for comparative purposes only.

other countries” (Dong, 2007, p. 41). Through the CGSP the Chinese government pursues a public diplomacy agenda that runs parallel to the traditional foreign policy channels (Ibid., pp. 31-33). Within the Chinese public diplomacy approach, the provision of scholarships constitutes a medium, among others²², through which promote a favorable attitude towards China from foreign policy makers and public opinions (Kurlantzick, 2007, pp. 226-227; Shambaugh, 2005, p. 33).

The public diplomacy objective common to all CGSP schemes is then adapted and modulated through different streams. On one hand, by dedicating more resources to developing countries, China is pursuing a development and economic cooperation agenda focused on building stable ties with key economic and political partners. Since the scholarships allocation is based on bilateral agreements, the relative share of the scholarships awarded to Asian (46%) and African (26%)²³ countries may indeed suggest that the foreign policy and economic goals are also pursued through higher education as an alternative **“instrument of statecraft”** (Shambaugh, 2005, p. 33). On the other hand, however, scholarships are also used as tool to showcase the Chinese higher education system and promote it in the competitive market for international higher education (Dong & Chapman, 2008, p. 169).

Recruitment, Selection and Communications

The recruitment of CGSP scholars occurs through **CSC’s website, participating universities’ websites and through the Chinese diplomatic missions abroad, which host on their websites the scholarships’ calls for applications and organize promotional events locally.**

The CSC is the sole responsible for **selecting awards’ recipients**. Applicants submit their applications to CSC, which reviews and forwards them to the applicants’ preferred destination universities. CSC finally awards the **scholarships based on the universities’ indication** (CSC, 2011a). Anecdotal evidence on the selection process in Cameroon described by Nordtveit suggests that home country institutions may contribute to the selection process by nominating candidates to CSC (2011, p. 103).

²² The establishment of Chinese language learning centers -the Confucius Institutes- across the world represents another attempt to promote **China’s** reputation through cultural and academic diplomacy.

²³ See Figure 5.

Conditionalities

Systematic evidence on the conditionalities attached to CGSP is not available at present, as CSC does not explicitly require that students return to their country of origin upon completion of the degree. Anecdotal evidence from Kenya (King, 2010, p. 492), however, suggests that awardees can reside in China after graduation.

Outlook

The Chinese Government Scholarship Program serves as one of China's public diplomacy instruments on one side and as a marketing tool for its higher education system on the other. The two objectives are pursued separately through programs catering to different target groups (geographic areas, degree level, and prior experience with Chinese higher education) but they share the same underlying rationale.

By investing in the establishment of cultural and professional ties with foreigners and by marketing its higher education system worldwide, the Chinese government is consolidating its position as not only a consumer but also a key provider in the higher education market.

Germany

Country Profile

Germany is a major destination for international higher education flows, ranking as the fifth most popular country according to the OECD and fourth according to UNESCO (OECD, 2011; UNESCO, 2011). Competences on higher education rest primarily in the hands of the federal states -*Länder*- while the federal government is competent for the promotion of technology and innovation policy. Because of this devolved structure, the German federal government has limited leverage on higher education policy making.

Within this context, the German Academic Exchange Service (DAAD) and the Alexander von Humboldt Foundation (AvH Foundation) serve, respectively, as the “internationalization agency of Germany’s higher education institutions” (DAAD, 2010) and as the organization in charge of “promot[ing] cooperation between excellent scientists and scholars from abroad and from Germany” (AvH Foundation, 2010). Each agency pursues its mandate through a unique set of programs and initiatives that cater to different subject areas and audiences.

Since 1950, the DAAD has been promoting academic and cultural exchange by funding more 700,000 thousands inbound and over 860,000 outbound bursaries and scholarships for international and German students, scholars and professionals (DAAD, 2010, pp. 14-15). The AvH Foundation promotes academic exchange and cooperation among top German and international researchers on a smaller scale. Since 1953 more than 24,000 researchers from Germany and across the world have received funding from the AvH Foundation (AvH Foundation, 2010, p. 59).

Given the breadth of the programs offered under the DAAD umbrella and the specific focus on academic that characterizes the AvH Foundation’s mandate, the following sections will concentrate on the research fellowships funded by the AvH.

Program Review

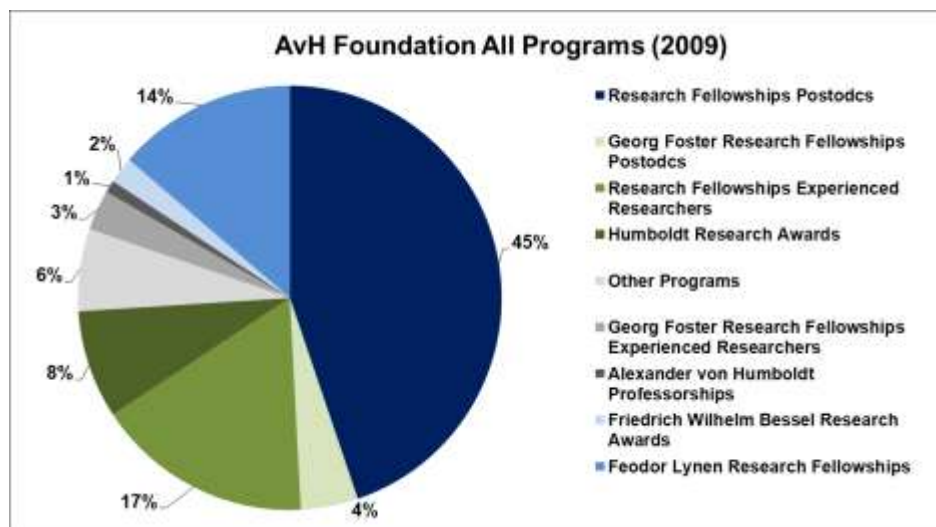
The AvH Foundation funds fellowships and research attachments for both incoming international and outgoing German researchers. Twenty-four programs are targeted to researchers and academics at different stages of their careers²⁴. The AvH Foundation funding portfolio ranges from the Alexander von Humboldt Professorships, which support a full professorship at

²⁴ For a complete list, see <http://www.humboldt-foundation.de/web/sponsorship.html>.

a German university for up to five years, to the Research Fellowships, which sponsor young talented international postdoctoral students for a research attachment in Germany. The Research Fellowships constitute the focus on this case study, as they represent the AvH's flagship program for young international postdoctoral researchers.

The Research Fellowships for young international researchers account for 44.8% of the total awards granted in 2009 by the AvH (see figure below). Each year approximately 400 postdoctoral students receive fellowships lasting from six to twenty-four months.

AvH Foundation All Programs (2009)

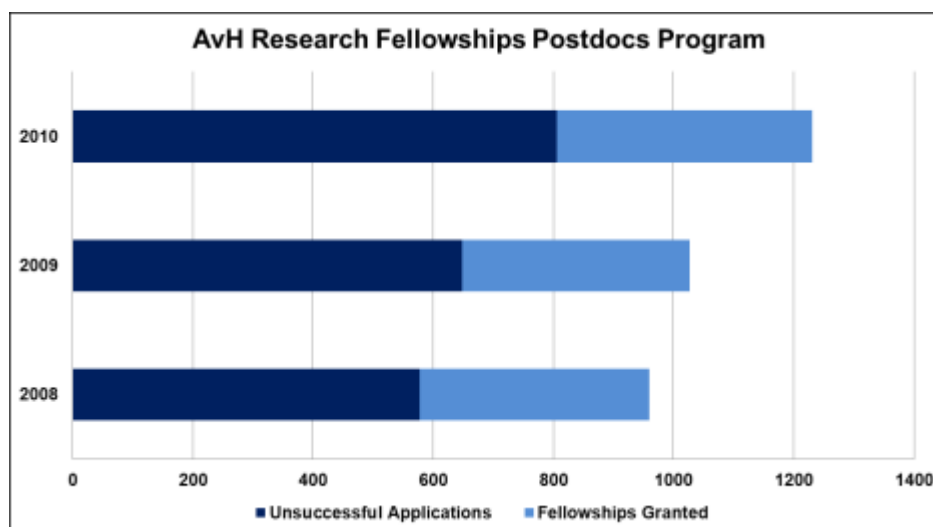


Source: Author's calculations on AvH Foundation data (2010) and AvH Foundation (2011).

Each fellowship comprises a monthly stipend, a research and travel allowance, health insurance coverage and German language training in case the working language at the chosen host institution would not be English. Overall, a Research Fellowship can be valued approximately at around EUR 30,000 per year tax exempt²⁵. The AvH also provides additional funding for dependents and organizes a series of complimentary activities such as two-week long tour upon awardees' arrival in Germany.

²⁵ Assuming a researcher in the natural sciences, single, who spends three months conducting research in another European country in addition to the research attachment at her German host institution. The value of the award should be interpreted as an estimate for comparative purposes only.

AvH Research Fellowships Postdocs Program



Source: AvH Foundation (2011).

Background and Rationale

The Research Fellowships program was instituted in its present form in late 2006 with the purpose to provide separate funding for young and experienced researchers (AvH Foundation, 2011). Prior to 2006, in fact, the AvH Foundation funded fellowships for researchers regardless their age and career stage through the general Research Fellowships.

The program's **origin** dates back to 1953 when the then West Germany federal government instituted the AvH Foundation to facilitate academic exchange and re-build **Germany's academic ties with foreign institutions** that were largely lost during the war period (AvH Foundation, 2011). The Research Fellowships were the first program initiated under the AvH Foundation and up to 2009 accounted for 17,891 out of 24,344 awards conferred (73%) **in the Foundation's history** (AvH Foundation, 2010).

Two overarching objectives have underpinned the Foundation's **activity** until present day. First, through the conferment of research fellowships and bursaries the Foundation was entrusted to promote German-international academic and research cooperation in all scientific fields. Second, the interaction between German and foreign academics would have served as an instrument to re-build **Germany's reputation abroad** (AvH Foundation, 2011). The latter goal could be defined as another form of public diplomacy exercise through academic and cultural exchange, which prominently emerged after World War II across the Western world and in the Communist bloc, as previously **shown in the Chinese Government Scholarship Program's case**.

Recent policy documents by the German federal government confirm the original two-pronged mission. On one hand, the German higher education and research system is promoted through international exchanges and cooperation by means of the programs administered by the AvH Foundation and the DAAD. In this respect the government seeks a balanced approach between the need to attract talent into Germany on one side, and to promote **brain circulation and the upgrading of developing countries' teaching and research capabilities**, on the other (Auswaertiges Amt, 2011, p. 80; BMBF, 2008, pp. 12-15). On the other hand, however, the international mobility and cooperation of students and scientists are considered important instruments of foreign policy through academic and cultural diplomacy (BMBF, p. 19).

Recruitment, Selection and Communications

The Foundation generally recruits candidates for the Research Fellowships through its network of alumni. Previous fellows promote the program upon return to their home university across their networks of contacts (AvH Foundation, 2011).

The conferment of the Research Fellowships depends exclusively upon the **candidates' academic accomplishments and** submitted research proposal. The Foundation entrusts the selection process to independent evaluation committees composed by academic experts across all fields. Candidatures are evaluated regardless the scientific field and country of origin and solely on academic merits (AvH Foundation, 2011).

Conditionalities

Upon completion of the research assignment in Germany, fellows are expected to return to their home institution. This approach reflects the **Fellowship programs' objective to foster academic cooperation and brain circulation** rather than talent retention -or 'brain gain'.

Outlook

The German international scholarships landscape rests on the activities promoted by the DAAD and the Alexander von Humboldt Foundation. The latter funds the Research Fellowships for postdoctoral students, which were recently developed to promote international academic cooperation among young talented researchers. Through the conferment of the Fellowships, the AvH helps consolidating the German academic network international of cooperation and broadly contributes to improving the understanding between the German people and foreign nationals.

Netherlands

Country Profile

The Netherlands is one of the major destinations for international students according to the OECD, which ranks the Dutch higher education system 10th among OECD members for the year 2008 (OECD, 2011).

The Dutch portfolio for government-funded scholarships features two flagship schemes. First, the Huygens Scholarship Programme (HSP) represents the Dutch flagship program dedicated to global talent acquisition and brain circulation. Second, the Netherlands Fellowship Programme (NFP) aims to build capacity by offering education and training to select developing **countries' nationals**. The HSP is fully funded by the Ministry of Education, Culture and Science (OCW) and funds approximately 400 students and young researchers each year (Nuffic, 2009, 2010b). The NFP is supported by the Ministry of Foreign Affairs through its budget line dedicated to development cooperation and awards around 2,000 scholarships and grants for short- and long-term studies in the Netherlands (Nuffic, 2010c, p. 14).

Nuffic, the Dutch agency for international cooperation in higher education, currently administers both HSP and NFP. **Given this thesis' focus on flagship, competition-driven scholarship programs**, the remainder of this case study will focus on the Huygens Scholarship Programme (HSP).

Program Review

The HSP is structured around four sub-programs that address different target groups. The following table summarizes HSP's select features.

Huygens Scholarships Programme Categories

Award	Target Level	Target Group	Duration	Cohort Size ^{26,27}
HSP Incoming	Bachelor's, Master's, PhD	World	6-24 months	around 250
HSP Outgoing	Bachelor's, Master's, Training	Netherlands	6-24 months	around 100
HSP PhD	PhD, Master's	Turkey, FYROM, Iceland, Croatia, China	Up to 4 years	around 10
HSP Dutch Studies	Bachelor's, Master's	World	6-24 months	around 10

Source: Nuffic (2010a).

The largest scheme by cohort size (currently around 250 per year) and funding (around EUR 6.37 million per year) is the HSP Incoming stream, which targets international students currently seeking a full postgraduate degree in the Netherlands.

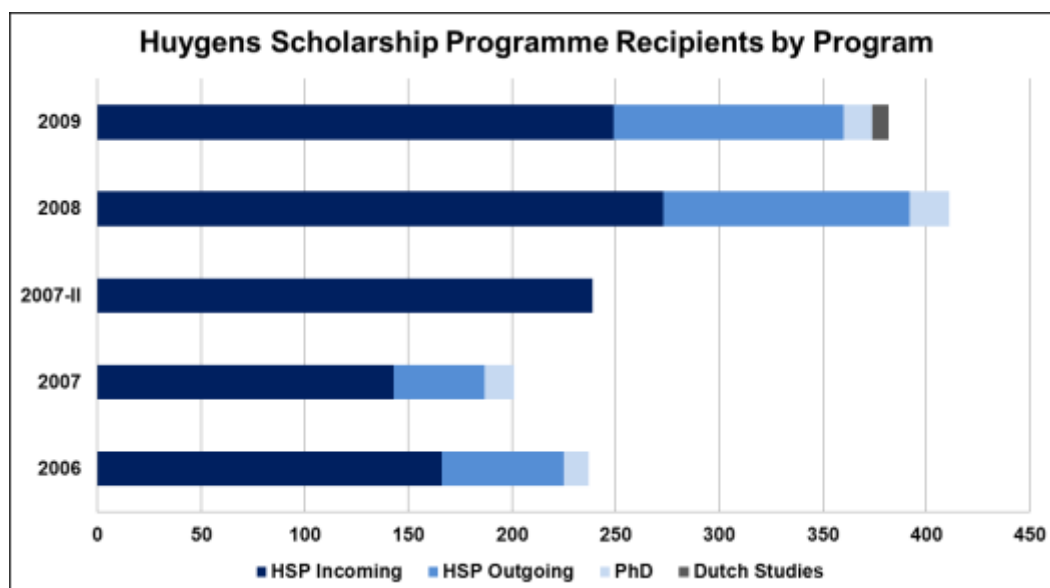
The HSP Outgoing stream supports Dutch students training or study abroad towards a degree in the Netherlands or in the host country. The HSP Outgoing stream currently supports around 100 students per year and is funded by a EUR 3 million budget.

The PhD Program funds a limited number of doctoral students from the **current EU's candidate** countries plus China with an annual budget of EUR 0.5 million. The HSP Dutch Studies stream grants financial support up to EUR 0.13 million to select international students to study Dutch culture, language or history (Nuffic, 2011). The figure below reports the breakdown by program for the 2006 to 2009 selection rounds.

²⁶ The actual cohort size depends on the value of the contribution made to each scholarship awardee. The higher the contribution, the fewer scholarships will be awarded.

²⁷ Based on the last two years' average.

Huygens Scholarship Programme Recipients by Program



Source: Nuffic (Nuffic, 2009, 2010b)

Notes: In the year 2007, two rounds of applications were held for the HSP Incoming stream. Individual data for 2006, 2007 and 2008 for the Dutch Studies program are not available. Between 2006 and 2008, 31 awards were conferred for the Dutch Studies program.

All incoming scholarships' awardees receive tuition fees coverage, a travel subsidy, and a monthly allowance that is equal to the monthly salary of a Dutch worker at the minimum wage. For the year 2011, the monthly allowance has been set at EUR 1,380 (Nuffic, 2010a, 2011).

Overall, the value of the scholarship varies approximately between EUR 18,000 and EUR 30,000 per year²⁸ depending on the awardee's country origin, since all EEA and select countries' students pay domestic fees, while non-EEA students pay full tuition.

Background and Rationale

The current structure of the HSP evolved from an earlier version of the Huygens Scholarship Programme. Until 2006, the old HSP served as an umbrella program for several academic exchanges and bilateral arrangements that were administered by Nuffic on behalf of OCW. HSP

²⁸ The value of the scholarship for international students depends on the tuition fee level set by the individual university. Fees range from EUR 4,000 up to EUR 17,000. In this case, the calculation is based on a Master of Science in Civil Engineering at the University of Delft for the year 2011/2012. Inevitably, the calculation is affected by a certain degree of arbitrariness in the choice of the baseline degree program. Therefore, the figure provided should be interpreted only as indicative for comparative purposes only.

scholarships for incoming students were assigned according to pre-determined quotas that reflected the bilateral arrangements between the OCW and foreign governments (Nuffic, 2011).

Starting in 2006, following the publication of a new policy directive on quality control in the internationalization of Dutch higher education²⁹, two other programs, the DELTA Programme and the Talentenprogramma, were merged with the old HSP into the new Huygens Scholarship Programme (Nuffic, 2011). The DELTA Programme consisted of a scheme that granted Dutch universities additional scholarships for international students proportional to their past international **student recruitment performance**. The scheme's structure, however, incentivized Dutch universities to recruit as many students as they could rather than focus on quality. The DELTA Programme was discontinued in 2006 and merged into the HSP (Ibid.). The Talentenprogramma targeted Dutch students going abroad for a **Master's** degree or training. The current HSP Outgoing program is equivalent to the early Talentenprogramma.

The new HSP inaugurated with the 2006 intake was endowed with an overall budget equal to EUR 5 million covering its four sub-programs. With the publication of the 2007 Strategic Agenda on Higher Education, Research and Science Policy, the OCW doubled its contribution to the HSP to around EUR 10 million per year, thus allowing Nuffic to run a second application round in late 2007 (OCW, 2007, p. 12).

The program's present form pursues two concurrent objectives: first, to attract talented international students and researchers in the Netherlands while promoting the further education and training of talented Dutch students abroad. Second, the internationalization of Dutch higher education through the circulation of talented international and Dutch students and researchers (Nuffic, 2010b, pp. 10-11/15).

Recruitment and Selection

Multiple actors are involved in the recruitment process for the HSP. Nuffic manages a dedicated section on its website providing information about the program and runs a scholarships database for international students that features, among other programs, the HSP. Nuffic relies its website as the main recruitment tool for international and Dutch students (Nuffic, 2011). **Nuffic's offices abroad, the Nuffic Netherlands Education Support Offices or Nesos, organize local events to promote Nuffic's scholarship portfolio and the HSP as the flagship scholarship program for studies in the Netherlands.**

²⁹ See: OCW, Kamerstukken II, 2004-2005, 29 800 VIII, nr.72.

The HSP selection process is managed by Nuffic in cooperation with Dutch universities and an independent selection committee. Since the inception of the new HSP in 2006 no quotas for geographic area or academic fields have been established, in view of the purely competitive nature of the program (Nuffic, 2011).

Candidates must submit their applications through their university of destination and request to be nominated for the HSP. Each university participating in the program selects its nominees and forwards their applications to Nuffic. The agency processes all nominations and ranks them according to a four-tier scale (“excellent”, “very good”, “good” and “very satisfactory”). All candidates ranked as “excellent” are automatically awarded a scholarship, while those falling in the “very good” and “good” category are assessed by the independent selection committee. Upon indication of the committee, Nuffic awards as many scholarships as the yearly budget allows (Nuffic, n.d.-b).

Marketing and Communications

Nuffic is responsible for the marketing of the program through its website and international and local fairs organized by its offices abroad. **Nuffic’s website** constitutes the main marketing channel (Nuffic, 2011). The management of **the HSP alumni community is entrusted jointly to Nuffic’s alumni section and to HuTaC, or Huygens Talent Circle, the HSP alumni association.**

Conditionalities

HSP awardees are not required to return to their home country upon graduation. However, Nuffic does not encourage graduates to settle in the Netherlands. Currently, all HSP recipients, in quality of graduates from a Dutch university, can spend up to one year in the Netherlands in search for employment, training or further education or can access the immigration program for highly skilled workers upon securing a job placement in the Netherlands (Nuffic, n.d.-a).

Outlook

The current Huygens Scholarship Programme serves as the Netherlands’ globally competitive scholarship program. Following a new talent acquisition policy promoted by the Ministry of Education, Culture and Science in the mid-2000s, **the HSP was transformed from a ‘container’ of bilateral agreements to a globally competitive instrument for talent acquisition and retention, and promotion of the Dutch higher education system.**

Singapore

Country Profile

The city-state of Singapore has grown as one of the most active players in higher education, technology, and innovation throughout the 2000s. According to UNESCO data, Singapore attracted more than 40,000 international students in 2010 (UNESCO, 2011) by relying on a small post-secondary education system with three established universities (NUS, NTU and SMU³⁰), two newly created ones, five polytechnics and 13 institutions between joint-ventures, adult learning and arts institutes³¹.

In the words of the then Minister for Education, in the early 2000s Singapore **set the ambitious target “to become the Boston of the East”** (quoted in Olds, 2007, p. 959). In the last ten years, the Singaporean government invested heavily, compared to the size of its economy, in research and technology infrastructure and human capital development (SGD 7 billion for 2001-2005; SGD 13.55 billion for 2006-2010) (Ministry of Trade and Industry, 2005; 2006, p. 7).

The management of the science and technology-related investments was assigned in 2001 to the newly created Agency for Science, Technology and Research (A* STAR) (Ebner, 2004, p. 56; Parayil, 2005, p. 56). Within A*, a dedicated division -the A* STAR Graduate Academy- was established to **“create and sustain a diverse and critical mass of PhD talent to meet Singapore’s R&D manpower needs”** (Ministry of Trade and Industry, 2006, p. 9). The A* STAR Graduate Academy would support talented Singaporean and international students and researchers to pursue advanced studies in Singapore or abroad in view of their potential contribution to **Singapore’s** technological and scientific edge.

Program Review

The A* STAR Graduate Academy is responsible for the administration of all scholarship programs funded through A* STAR. The Graduate Academy currently administers the following programs dedicated to students in the natural, health, biomedical and engineering sciences (see table below).

³⁰ Respectively the National University of Singapore (NUS), Nanyang University of Technology (NTU), and Singapore Management University (SMU).

³¹ For a full list of Singapore’s current post-secondary education institutions, see <http://www.moe.gov.sg/education/post-secondary/>.

A* STAR Scholarship Programs

Award	Target Level	Target Area	Destination	Duration	Commitment	Start Year ³²
International Fellowships	Postdoc	Singapore, Singapore PRs ³³ , ASEAN	University and Research Institutes overseas	2 years	1 year service at A* STAR labs	2000
National Science Scholarships	Bachelor's	Singapore, Singapore PRs, ASEAN	Singapore (BSc), Singapore/Overseas (PhD)	4 years (Bachelor's) + 3/6 years (PhD)	1 year service at A* STAR labs + 5 year research attachment after PhD	2001
Graduate Scholarships	PhD	Singapore, Singapore PRs, ASEAN	Singapore/Overseas (PhD), Overseas (Postdoc)	4 years (PhD) + 2 years (Postdoctoral research training)	3 year service at A* STAR labs	2003
Singapore International Graduate Award (SINGA)	PhD	World	Singapore	4 years	no service commitment	2008
Pre-Graduate Scholarships	Bachelor's	Singapore, Singapore PRs, ASEAN	Singapore	up to 4 years (Bachelor's) + 4 years (required PhD)	no service commitment	n.a.
Undergraduate Scholarships	Bachelor's	Singapore, Singapore PRs, ASEAN	Singapore	up to 4 years (Bachelor's) + 4 years (required PhD)	no service commitment	n.a.
Singapore International Pre-Graduate Scholarships	Bachelor's	World	Singapore	research attachment at A* laboratories from 2 to 6 months	no service commitment	n.a.

Source: A*STAR (n.d.-a).

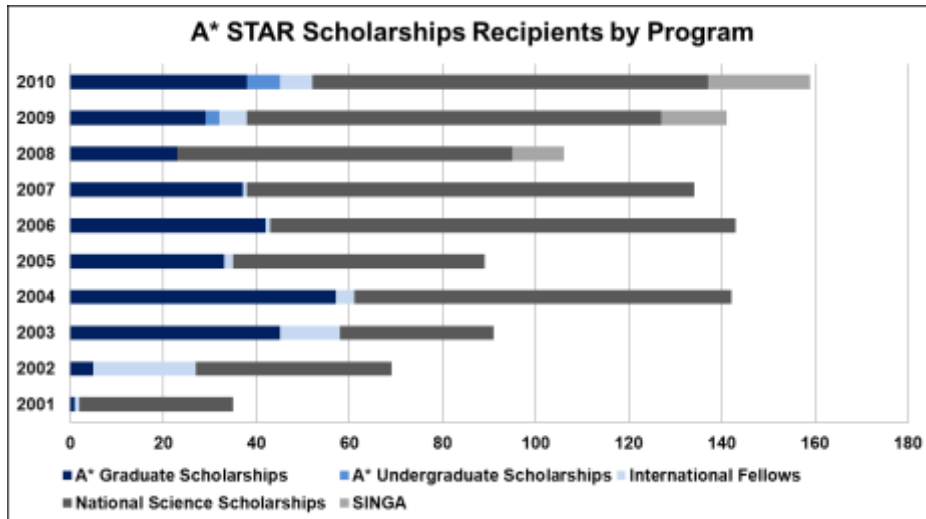
Five out of seven A* STAR Graduate Academy's scholarship programs are open to Singapore's citizens and Permanent Residents (PRs) and to ASEAN countries' nationals. The Singapore International Graduate Award (SINGA) and the Singapore International Pre-Graduate Award are open to international students. SINGA, initiated in 2008, has granted 48 scholarships to international PhD candidates (A* STAR, n.d.-b), though A* STAR plans to upgrade the program's capacity to 240 in the coming years (A* STAR, 2010).

³² Based on the first year of data available.

³³ PR as for 'Singapore Permanent Resident'.

The largest program for Singaporeans, Singapore's PRs and ASEAN nationals is the National Science Scholarships (NSS), which is tenable at select Singapore's universities or abroad. The figure below shows A* STAR scholarships conferred between 2001 and 2010.

A* STAR Scholarships Recipients by Program



Source: A* STAR (2010).

Notes: No data were available for the A* STAR Pre-Graduate Scholarships and for the Singapore International Pre-Graduate Award.

All A* STAR scholarships' awardees receive a monthly stipend, full tuition fees coverage (where applicable), settlement and air travel contributions, computer, book, research and conference attendance allowance (where applicable). For instance, an A* STAR Graduate Scholarship tenable at NUS by an ASEAN national would be valued at around SGD 35,000 per year³⁴. The Singapore International Graduate Award is approximately valued at SGD 40,000 per year³⁵.

³⁴ Assuming a PhD degree in Engineering. The value of the scholarship for international students depends on the tuition fee level set by the individual university for each program. In this case, the calculation is based on a PhD in Engineering tenable at the National University of Singapore. Inevitably, the calculation is affected by a certain degree of arbitrariness in the choice of the baseline university. Therefore, the figure provided should be interpreted only as indicative for comparative purposes only.

³⁵ Ibid. SINGA's awardees received a starting yearly stipend equal to SGD 24,000, which could be increased to SGD 30,000 upon successful completion of an intermediate during the PhD program.

Background and Rationale

The introduction of scholarship programs funded through the A* STAR Graduate Academy fits within the **government's** effort to shape Singapore as a knowledge-based economy focused on the health and natural sciences, and engineering. A* STAR is responsible for nurturing talent in Singapore and attract and retain talent from abroad. The creation of the National Science Scholarships in 2001 and the A* STAR Graduate Scholarships in 2003 constituted the basis for the development **of Singapore's** domestic and regional pipeline of talented researchers. By introducing the SINGA in 2008, the Graduate Academy established its presence in the global competition for talented PhD students and promoted brain circulation and diversity in **Singapore's** research community (A* STAR, n.d.-b).

Recruitment, Selection and Communications

The selection process is managed in its entirety by A* STAR, which grants awards based on academic performance, publications, (where applicable) and research proposal. Depending on the program, the recruitment occurs **via A* STAR's and associated websites, such as the portal dedicated to the Singapore International Graduate Awards.** Thanks to A* STAR's close cooperation with the two largest universities in Singapore -NUS and NTU, a significant part of the recruitment occurs locally.

Conditionalities

All A* STAR scholarship programs targeted to Singaporeans, PRs and ASEAN nationals require awardees to serve in **A* STAR's laboratories and** research institutes for at least one year (International Fellowships) up to five (National Science Scholarships). ASEAN nationals that undertake a graduate or a combined undergraduate plus graduate degree **through A* STAR's** programs are further required to acquire Singaporean citizenship upon completion of their studies. The SINGA program, given its focus on the **internationalization of the Singapore's research community, does not require** awardees to serve in A* STAR facilities upon completion of the program.

Outlook

Since the early 1990s, the Singaporean government has embarked in the ambitious project of developing a technology and innovation-driven economy through large investments in infrastructure and human capital development. A* Graduate Academy, the dedicated division for talent development, recruitment and retention within A* STAR, has supported more than 1,000 students and young scientists in the last ten years.

The A* STAR scholarships' structure, with a service commitment that can last up to five years, represents one of most explicit attempts to retain talents and guarantee a -nominal, at least- return on the investment made by the funding agency. In terms of the overarching themes that underpin this research, the Singaporean case shows how deeply the national competitiveness paradigm has been concurrently **shaping a country's economic** and education policy environment.

United Kingdom

Country Profile

The United Kingdom has historically been a major destination for international higher student flows, thanks to its long-standing academic tradition, to the prestige of some of its oldest universities and to the wide diffusion of the British culture through the Empire and later Commonwealth. Currently, the United Kingdom is the second most popular destination for international students after the United States (OECD, 2011; UNESCO, 2011).

The scholarship programs tradition for studies in the UK dates back to the creation of the Rhodes Scholarships at the beginning of the XX century. Through the 1940s and 1950s, the UK inaugurated the Marshall Scholarships and the Commonwealth Fellowship and Scholarship Plan dedicated, respectively, to strengthen transatlantic relations and to consolidate the political and cultural bonds shared by the former British Empire nations. In 1983 the British government created a new program -the Foreign Office Scholarships and Awards Scheme, which was designed as the first British global merit-based scholarship program (FCO, 2006). In 1994 the program was renamed the Chevening Scholarships Programme, after Chevening House, the official country residence of the British Foreign Secretary (British Embassy in Armenia, 2008).

Program Review

The Chevening Scholarships Programme (or in its shortened version **'Chevening'**) is the British government's global flagship scholarships program that supports foreign nationals' studies in Britain.

Chevening is currently structured around the following three components:

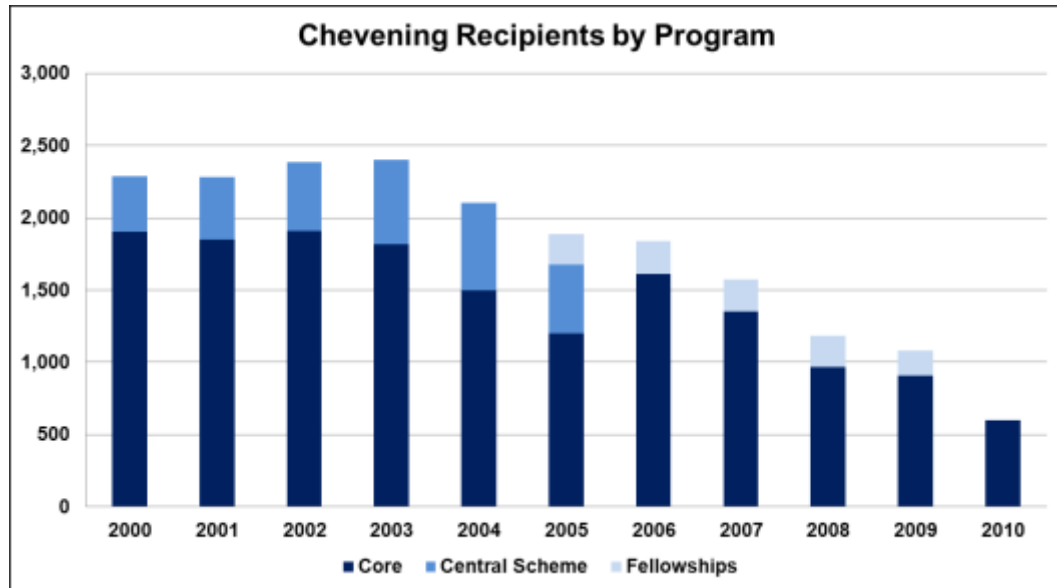
- The Main or Core Scheme funds one-year **Master's degrees** for students from 126, mainly developing, countries³⁶ (FCO, 2011)
- The Central Scheme awards one-year **Master's degree** scholarships through a 50-50 matching mechanism by the Foreign and Commonwealth Office (FCO) and select British and foreign companies and foundations
- The Fellowships Scheme funds the organization of short-term intensive courses targeted to mid-career professionals.

Following the emergency budget issued by HM Treasury in June 2010, the Fellowships Scheme has been temporarily suspended and is scheduled to resume in the academic year 2012-2013 (Ibid.).

³⁶ Eligible countries refer to the call for applications for the academic year 2011-2012.

The program's cohort size and funding have fluctuated significantly in the past years due to subsequent increases and decreases in the FCO's budget (see figures below). Chevening's funds were reduced by one third in the June 2010 Emergency Budget and currently amount at around GBP 17 million for the 2011-2012 round of scholarships (FCO, 2011).

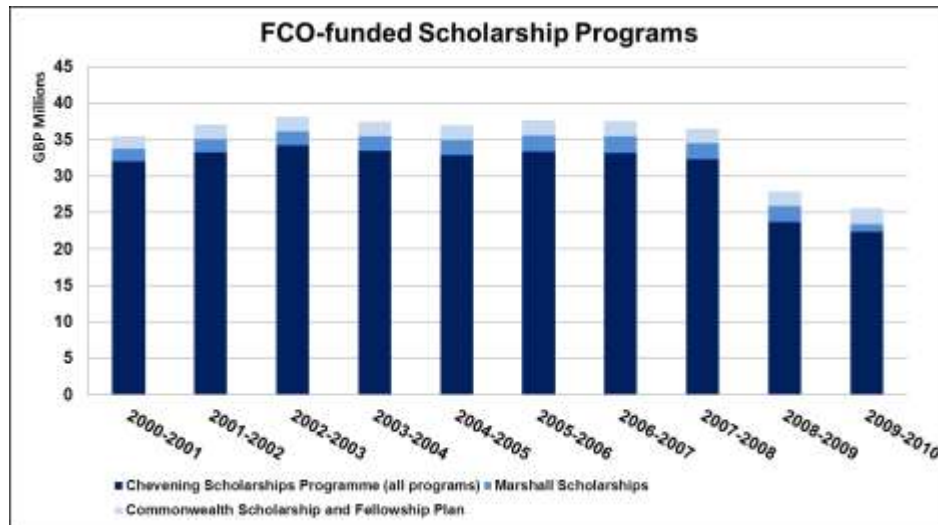
Chevening Recipients by Program



Source: FCO (2002a, 2003, 2004, 2005, 2006, 2007, 2011).

Notes: 2006-2007 to 2010-2011 data for the Central Scheme are not available. The Fellowships Scheme is currently suspended.

FCO-funded Scholarship Programs



Source: House of Commons Foreign Affairs Committee (2009), FCO (2009).

Notes: Actual expenditures data for 2009-2010 are not available. Data have been supplemented with budget allocations, which for the UK historically differ only marginally from actual expenditures.

The majority of Chevening scholars receives funding for a one-year **Master's** degree tenable at a British university. Each scholarship covers tuition fees up to a maximum of GBP 14,000, return air travel, thesis and visa expenses, visa costs and grants a monthly stipend worth approximately GBP 700-870 (British Council Hong Kong, n.d.; British Council Turkey, n.d.). Overall, a Chevening scholarship for a one-year postgraduate degree is valued approximately at GBP 24,000³⁷.

Background and Rationale

The Chevening Scholarships Programme was established as the British flagship scholarship program to nurture political, economic and cultural ties between the United Kingdom and the awardees' countries of origin (FCO, 2011). The program targets talented **"young professionals"** and **"mid-career professionals"** for, respectively, the Main Scheme and the Fellowships under the assumption that the awardees would benefit from the education received and develop a close connection with the United Kingdom (FCO, 2007, p. 4). Through Chevening, the FCO intends to develop close ties with **"tomorrow's leaders"** (FCO, 2002b, p. 94) and promote a positive image of the United Kingdom abroad.

³⁷ Assuming a GBP 800 monthly allowance.

Given its inherently political mission, the Chevening Scholarships Programme can be associated with other public diplomacy instruments that the FCO has been deploying for decades, such as the BBC World Service and the British Council. Though the short-term goal of each program or service focuses on cultural exchange and contamination, the long-term goal pursued by the British public diplomacy tools consists of creating and consolidating good will towards the United Kingdom and its policies abroad.

Recruitment and Selection

A Scholarships Team based in London **FCO's headquarters** allocates scholarship quotas for each country according to **the FCO's** policy priorities and regional strategies (FCO, 2011). Throughout the 2000s, funds allocated to Western Europe considerably diminished and additional scholarships were assigned to emerging economies such as China, India, Russia, Brazil, Pakistan, and Nigeria, among others. For instance, in 2007-2008 the FCO allocated close to 35% of all Chevening Scholarships to the top 15 countries³⁸, despite the original global coverage of the program (House of Commons Foreign Affairs Committee, 2009, Evidence 196). Upon allocation of the country quotas, the British Embassies and High Commissions abroad may also define quotas for specific subject areas deemed important for British bilateral relations with the given country (FCO, 2011).

Recruitment follows different patterns according to the each program's **sub-section**: for the Main Scheme, the competition is public and applicants submit applications through a dedicated online portal. FCO officials then interview shortlisted candidates and awards are conferred by the FCO. Interestingly, applicants are not required to be already admitted to a British university upon submission of the application to Chevening. Successful applicants are assisted by the British Council in finding a suitable host institution in the UK. For the **Fellowships, Embassies and High Commissions'** directly invite potential candidates and then submit nominations to selection panels in London (House of Commons Foreign Affairs Committee, 2007, p. 80).

³⁸ China, India, Indonesia, Brazil, Russia, Egypt, Nigeria, Pakistan, Iraq, Turkey, Mexico, Malaysia, Iran, South Africa, and Hong Kong.

Marketing and Communications

The responsibility for marketing Chevening is shared by the FCO headquarters, the British Council and the British Embassies and High Commissions abroad (FCO, 2011). The London headquarters maintains **Chevening's website, current students and alumni's blogs, a Twitter feed and a Facebook page**³⁹. The British Council, in quality of administrator of the program, maintains contacts with the destination universities, the awardees and promotes Chevening through its English- and local-language websites, and advertises the program at local events and fairs. The British Embassies and the High Commissions abroad assist in the marketing operations by posting information on their websites and by serving as contacts on the field for potential applicants.

Conditionalities

Chevening scholars are required to return to their home countries upon completion of the degree (FCO, 2011). This provision is consistent with **Chevening's** goal to establish friendly relations with the potentially influential leaders in the private and public sector abroad.

Outlook

The Chevening Scholarships Programme has served for close to thirty years as one of **Britain's** public diplomacy tools, together with the BBC World Service and the British Council. **By allocating scholarships' quotas according to the FCO's broad policy priorities, the program serves not only as an instrument to spread goodwill abroad but also as an expedient to contribute to the achievement of the FCO's objectives in specific policy and geographic areas.**

Overall, the Chevening Scholarships Programme fits with the historical public diplomacy mission conferred to several longstanding scholarships programs developed in the Post-World War II era, such as the Fulbright Program and the CGSP.

³⁹ At time of writing (April 2011), 'The Official Chevening Page' on Facebook has gathered more than 29,000 followers and 'cheveningfco' Twitter feed has collected more than 1,900 followers.

United States

Country Profile

The United States is the most popular destination for international student flows with more than 400,000 incoming students in 2008 according to the OECD (2011). In the international scholarships landscape, the United States is active not only with government-sponsored programs, such as Fulbright, but also with several schemes supported by private foundations and charities, such as the Ford Foundation Fellowships.

With regard to scholarship programs open to international students, the Fulbright Program in all its articulations constitutes the flagship initiative sponsored by the federal government. Research shows that none of the federal agencies involved in funding research activities, such as the National Science Foundation and the National Institutes of Health, features a scholarship schemes targeted to international students and young researchers. Against this background, the remainder of the case study will focus on the Fulbright Program.

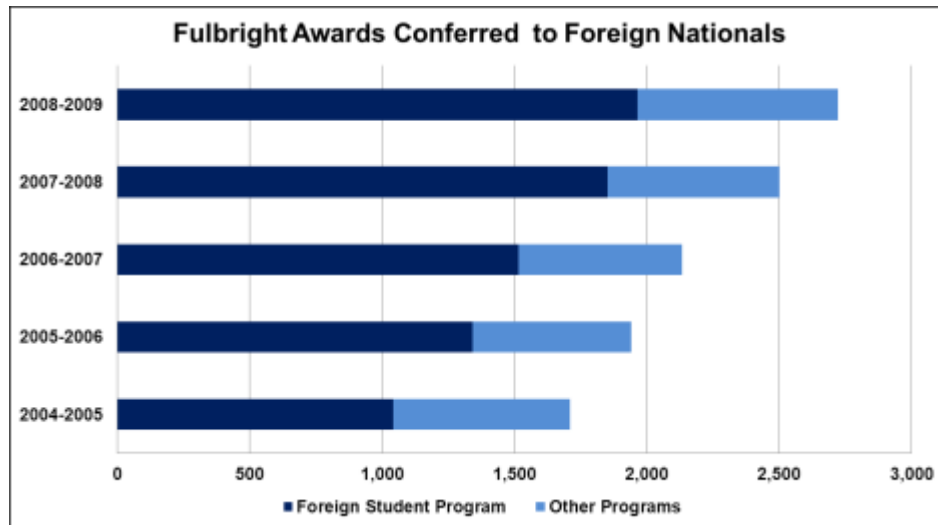
Program Review

The Fulbright Program was established in 1946 to “**foster mutual understanding**” **between Americans and** foreign nationals through academic and cultural exchanges (Scott-Smith, 2008, p. 177). The Program constitutes the umbrella initiative for several scholarships and support schemes dedicated to specific geographic areas, degree levels, career stages, and occupations for both American citizens and foreign nationals. With regard to international students and young researchers, the Fulbright Program generally awards grants for the **completion of graduate degrees (Master’s and PhD)** or for short research assignments in the United States⁴⁰ under the Fulbright Foreign Student Program heading.

The Foreign Student Program accounts for more than two thirds of all scholarships granted to foreign national under Fulbright and is funded by the US Department of State through annual congressional appropriations (J. William Fulbright Foreign Scholarship Board, 2009, p. 67).

⁴⁰ The Fulbright awards are conferred through local competitions in participating countries. Thus, no general rule applies for the duration of the program, benefits and requirements.

Fulbright Awards Conferred to Foreign Nationals

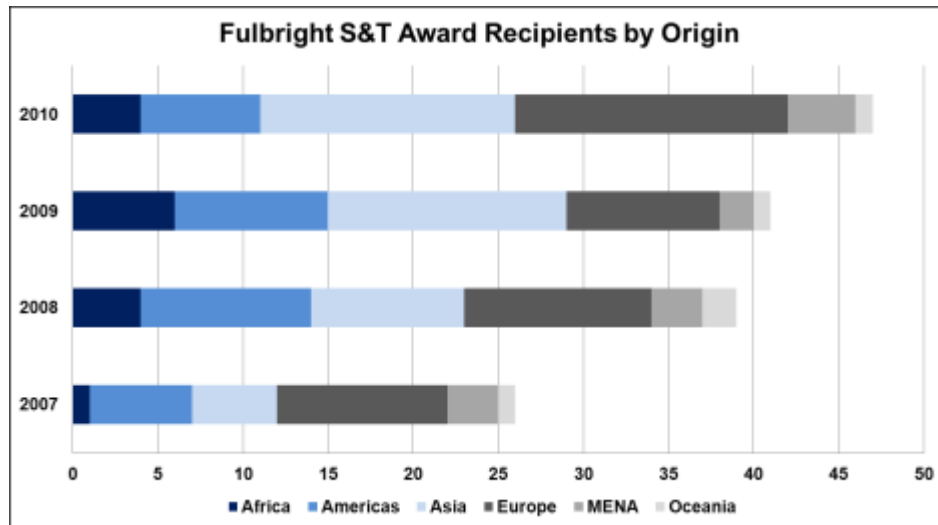


Source: Author's calculations on J. William Fulbright Foreign Scholarship Board (2005, 2007a, 2007b, 2008, 2009)

Notes: "Other Awards" includes all programs that are not targeted at international students and young researchers, such as the Fulbright Scholar Program for academics and experienced researchers, the Fulbright Teacher Exchange Program and the Hubert H. Humphrey Fellowship Program for mid-career professionals.

Within the framework of the Fulbright Foreign Student Program, a new global scheme targeted at doctoral studies in the United was launched in 2007 as the "Fulbright Program Science & Technology Award" (S&T Award). Under this new initiative, around 45 excellent PhD students in the sciences and technology would be placed each year in top US universities and fully funded for up to three years (The International Fulbright Science & Technology Award, 2011a). To date, the S&T Award has granted 153 scholarships to doctoral candidates across all world regions (see figure below).

Fulbright S&T Award Recipients by Origin



Source: The International Fulbright Science & Technology Award (n.d.).

Despite its small size compared to the Fulbright Foreign Student Program, the S&T Award signals the spreading of the competitiveness paradigm to programs that were originally pursuing public diplomacy objectives.

The S&T Awards grants full expenses coverage for up to three years, after which the host university will sponsor the PhD candidate until completion of the degree. The program's benefits include tuition fee coverage, housing allowance and monthly stipend, book and equipment allowance, research and lab allowance, conference allowance, health insurance and return air ticket. The mentioned benefits are coupled with yearly seminars featuring business and academic leaders in the field of technology, science and innovation (The International Fulbright Science & Technology Award, 2011a). Each S&T Award is valued approximately at USD 90,000 per year⁴¹ (Fulbright New Zealand, 2011).

Background and Rationale

The Fulbright Program was originally conceived as an instrument to “increase the mutual understanding” among Americans and foreign nationals, as already highlighted in the Background section. Since its creation in the mid-1940s, the US government has employed the Fulbright Program as a public diplomacy tool to improve its image abroad (Kramer, 2009; Scott-Smith, 2008).

⁴¹ The original estimated value was expressed in NZD at 350,000. At current exchange rates, a Fulbright S&T Award would be valued at around USD 274,000. The value of the scholarship should be interpreted as indicative.

The S&T Award stems from this tradition but also incorporates the principle of global talent recruitment that emerged with consolidation of the national competitiveness paradigm in the late 1990s and early 2000s. The program “aims to be the most prestigious international scholarship in STEM⁴² fields and to demonstrate [the] United States['] commitment to attracting and supporting future researchers and leaders for scientific study and research at U.S. institutions” (The International Fulbright Science & Technology Award, 2011a).

Recruitment and Selection

The selection process follows three stages, one of which occurs abroad and two in the United States. First, candidates are nominated by the local Fulbright Commissions or US Embassies. Nominations are then forwarded to the Institute of International Education (IIE), which oversees the administration of the program on behalf of the US Department of State's Bureau of Cultural and Educational Affairs (ECA). Academic panels in the relevant scientific areas covered by the program assess the candidates and submit shortlisted candidates to the Fulbright Foreign Scholarship Board⁴³, which grants the scholarships. Interestingly, S&T Award candidates do not apply for a specific university but are placed at select top universities upon conferment of the scholarship.

Marketing and Communications

The marketing approach to the S&T Award features a combination of local and centralized promotion. ECA manages a dedicated information and promotion website, while the Fulbright Commissions abroad independently market the program through their websites and local events (The International Fulbright Science & Technology Award, 2011a).

ECA also provides a dedicated online platform for all Fulbright alumni -S&T Fellows included- and has established a presence in social networking and micro-blogging platforms such as, respectively, Facebook and Twitter.

⁴² STEM as for Science, Technology, Engineering and Mathematics.

⁴³ The Foreign Scholarship Board is the decision-making body that oversees the administration of the Fulbright Program. It is composed by American academics, public officials, and business leaders.

Conditionalities

S&T Award winners are required to return to their home country upon completion of their doctoral studies in the United States (The International Fulbright Science & Technology Award, 2011a). However, it is also envisioned that awardees may prolong their stay up to 36 months under a post-doctoral research assignment that may be awarded by the host university (The International Fulbright Science & Technology Award, 2011b).

Outlook

The Fulbright Program has been serving as one of the US of Department of State's public diplomacy tools. Its mission consists of facilitating cultural and academic exchange while promoting the image of the United States and its policies abroad. The program represents the archetype of public diplomacy effort through international scholarship program.

The consolidation of the global competitiveness paradigm has triggered, however, a shift, though marginal in terms of scholarships awarded, from a perspective purely oriented towards public diplomacy to a policy approach that synthesizes political and talent acquisition needs.

Given its novelty, the impact of the Fulbright S&T remains to be ascertained. However, it is not clear whether it would be beneficial for the United States to require talented PhD holders trained in the best American universities to return to their home country rather than access the American labor market. Recent and less recent economic research, indeed, suggests that highly skilled foreign workers and international graduates of American universities have generated a positive and substantial impact on American economic growth throughout the 1990s and 2000s (Chellaraj, Maskus, & Mattoo, 2008; Saxenian, 2000).

FINDINGS

The review of flagship scholarship programs from eight key players in the international education market confirms that the public diplomacy mission that was shared by most programs established in the second half of the XX century has given way to a more diverse landscape. The longstanding programs traditionally focused on nurturing political and economic ties - such as the CGSP and Fulbright - are now accompanied by a host of initiatives that explicitly pursue talent acquisition and retention objectives.

The consolidation of the national competitiveness paradigm in higher education is affecting the structure and mission of most of the scholarship programs analyzed. The Dutch, Canadian, and Singaporean programs were created as a direct tool to attract and retain international talent. The extreme case is represented by Singapore, where for some programs the conferment of a government-funded scholarship not only requires a service commitment upon completion of the degree, but also the acquisition of Singaporean citizenship. The Huygens Scholarship Program and the Vanier CGS do not require any such commitment but leave open a pathway for the integration in the domestic labor market. The Australian Endeavour Awards express the same talent acquisition potential but fall short of explicitly serving as a recruitment tool for highly skilled migration, though the immigration legal framework would allow a transition in the Australian labor market.

Even where scholarship programs were originally established to pursue foreign policy goals through cultural and academic exchange, the principles of the national competitive paradigm apply, as well. The Chinese Government Scholarship Program, for instance, has been pursuing public diplomacy objectives since its inception in the 1950s. With the consolidation of China as a large destination country for international student flows, the CGSP has also become an instrument to market the Chinese higher education abroad.

The Fulbright Program case provides, perhaps, the clearest example of how deeply the concept of talent acquisition inspired by the national competitiveness paradigm influences flagship scholarship programs. Though it constitutes a small share of the Foreign Student Program, the Fulbright Science & Technology Award marks a shift **in the US government's approach to the Fulbright program's function, which** not only covers the traditional public diplomacy objectives but also now fully embraces the national competitiveness paradigm.

The British and the German programs have maintained their original missions. With regard to the Alexander von Humboldt Foundation, the Research Fellowships program has preserved its main statutory mission to promote German-international academic cooperation. The Chevening Scholarships Programme has pursued a public diplomacy mandate that can be interpreted as the continuation of the century-

long British tradition to cultivate political and economic ties with Commonwealth nations.

Overall, the review of flagship scholarship programs from select key actors in the international higher education market shows the transition from the widely spread public diplomacy model towards a more nuanced landscape, whereby programs are not only motivated by foreign policy considerations but are embedded by and built around the principles of talent acquisition and retention.

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ICG CONTACT INFORMATION

San Francisco Bay Area Office
P.O. Box 262
San Carlos, CA 94070
USA

Phone +1 (619) 295 9600
Fax +1 (650) 620 0080

E-mail info@illuminategroup.com
Website www.illuminategroup.com