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GLOBALISATION AND INTERNATIONALISATION OF TERTIARY EDUCATION*

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*The views expressed in the paper do not imply the expression of any opinion on the part of the United Nations Secretariat.

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Final Report submitted to the United Nations Population Division

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TABLE OF CONTENTS

LIST OF TABLES AND CHARTS

I. Globalisation and Transnationalisation of Higher Education: The Issue

In today's Globalisation Era, knowledge is increasingly a commodity that moves between countries. The growth of the knowledge-based economy has led not only to competition among employers worldwide for the best brains but also among the institutions that train the best brains. Rapidly increasing demand for higher education, in turn, exceeds the capacity of many countries to supply it domestically. For decades, many students have migrated to other countries to obtain higher education and today they continue to do so in increasing numbers. However, change is underway in how higher education is delivered that could affect future pathways of international student mobility. Increasingly, institutions of higher education are building partnerships with universities in other countries, delivering education using online and other technologies, and setting up branch campuses abroad that are changing the structure and relationships that traditionally existed in higher education. If these trends continue, growing numbers of students seeking higher education in the years ahead will be able to obtain quality education in their homelands or neighboring countries rather than having to travel to other regions to do so.

The traditional form of cross-border flows in higher education has been for students to migrate from one country to another to advance their studies. Several economic and social factors encourage international student mobility and competition between countries for foreign students (Clark and Sedgwick 2005, OECD 2004a). Students themselves are eager to advance their education and, if opportunity and resources permit, willing to do so by leaving their homelands and migrating to another country. In addition, universities in North America and Europe have been eager to receive foreign students for a host of reasons. Foreign students were welcomed traditionally because they brought cross-cultural and international diversity to universities. North American and European universities still value foreign students for that reason but also recognize today that foreign students can help stabilize their student bodies and revenues. As the tertiary school-age population declines in countries with aging populations, a trend already underway, foreign students become substitutes for domestic students and can allow universities to stabilize their enrollments.

Governments of countries that send or receive foreign students usually view this type of international migration flow favorably. Many receiving countries even recruit and provide scholarships to foreign students as a means of enhancing their international status and relations with other countries. Because most foreign students pay their own living costs and student fees, governments recognize that they bring in foreign exchange for expenditure in the cities and regions where education institutions are located, thereby stimulating local economies. Governments have long seen the training of foreign students as a means of advancing development (Harbison and Myers 1964). To achieve that end, governments and private foundations started scholarship programs in the 1960s and 1970s as a means of building human capacity in Asia, South America and Africa. However today, sending countries are more likely than receiving ones to provide scholarship support, particularly in science and

technology fields, but receiving countries continue to subsidize foreign students in other ways.

In the past, most foreign students went to the United States or Europe to do their studies and that continues to be the principal pathway they follow today. However, even as the overall volume of international students increased in recent decades, the composition of flows to different destinations has changed. Moreover, further change may be on the horizon as cross-border education activities grow. The development community is becoming aware of the opportunities and challenges presented by cross-border higher education (CBHE). Development experts recognize that CBHE has enormous potential for expanding the pool of human capital available to low- and middle-income countries which, in turn, could advance their economic and social development (Knight 1999, Ninnes and Hellsten 2005, OECD 2004a). Therefore, it is important to document the type of CBHE activities emerging to assure that countries wishing to strengthen their higher education capacity and increase their pool of skilled workers can take advantage of new opportunities. It is also important to document how international student mobility is changing and identify trends that may emerge in the future as CBHE grows (Davis 2003, Tremblay 2005 , United Nations Population Division 2005 pp.141-150). The main objective of this Report is to start this documentation effort by reviewing trends in CBHE and international student mobility.

Box 1: Definitions

Globalisation is seen here as the root cause of changes taking place in higher education and can simply be defined as "…the flow of technology, economy, knowledge, people, values, ideas…across borders (Knight 1999 p.14)." **Internationalisation of higher education** refers to institutional arrangements set up by governments, universities and education agents that involve the delivery of higher education services in two or more countries. OECD uses the term **cross-border higher education** (CBHE) to convey that same concept. **Transnational education** is another term that describes educational services that extend beyond the borders of a single country. I mainly use the cross-border terminology in this report because that term is the most widely used. CBHE implies that some activity or person actually crossed an international border or was executed by institutions located in two or more countries. On the other hand, education can have an international or even transnational dimension without any international student or institutional mobility. The focus of this Report is on the cross-border movement of students or the delivery of higher education by providers located in one country to students in another country.

The education activities described in this Report go under different names, including **higher education**, **tertiary education**, **post-secondary**, and **undergraduate and graduate educatio**n. I use higher education in this Report to refer to the acquisition of the advanced, specialized, and professional training that prepares workers for management and other high-skilled jobs. Usually higher education is delivered at a set of institutions called colleges or universities but online delivery is on the increase.

II. The Internationalisation of Higher Education: What is Changing?

For decades, students have gone to other countries to advance their higher education and high-income countries have awarded grants and travel assistance to their teachers and researchers to enable them to collaborate with scholars and institutions in other countries. Cross-border mobility of students, teachers and researchers has increased in recent decades and international flows of academic personnel now crisscross the globe in all directions, bringing growing numbers of people from diverse cultures into exchange with each other in a neutral environment focused on learning and intellectual exchange. Students who crossed international borders for higher education purposes used to originate mainly in countries in the South and flowed to countries in North America or Western Europe to continue their advanced studies. Today, in contrast, significant south-to-south and north-to-south flows are occurring as well and flows in all directions are growing rapidly.

In the past, international research collaboration mainly involved individual faculty members from developed countries traveling to another developed country or to a developing one for research collaboration. On those trips, the visiting foreign faculty member may have delivered lectures or participated in seminars at the host institution but the main purpose of the visit was to collaborate with research colleagues in another country. Graduate students often accompanied their professors abroad and visiting faculty took advantage of their travel to recruit prospective graduate students for study at their universities. Individual research collaborations between academic professionals from different countries remain important today. However, formal collaborations between universities that involve curriculum and program development are growing and likely to expand in the years ahead.

Accompanying the increased international mobility of students and academic personnel, universities have taken steps in recent decades to enhance the international content of their programs and course offerings and to require students to learn foreign languages so that they will be well equipped to work in corporations, government agencies and other institutions that have transnational operations. Whereas foreign language programs were justified in the past as a means of facilitating cultural exchange and creating increased understanding among people from different countries, now they are more likely to be justified as essential to prepare students to work in a global context in which most complex organisations already have transnational operations or will have them in the future. To equip their students for work in the global economy, leading universities encourage students to participate in Study Abroad programs and to pursue study programs that include international curricula. In addition, business schools are developing international MBA programs, law schools are expanding their course offerings in international law and regulation, and medical schools are collaborating with health programs abroad to make their students aware of tropical and other diseases that travel rapidly from one country to another as international flow of people increase.

Multilateral and bilateral agencies and private foundations have recognized for decades that to advance economic and social development, the supply of human capital in emergent economies needed expansion (Harbison and Myers 1964) and higher education capacity needed to strengthening (Thompson and Fogel 1976). In response to this perceived need, in the 1960s, private foundations and bilateral agencies developed scholarship programs that enabled students from developing country to obtain higher education in North America or Europe. However, sending students to another country for higher education was costly and fell out of favor in the 1980s as evidence accumulated that scholarship programs led to a "brain drain" for most sending countries and a "brain gain" for countries where foreign students went. In response, funding agencies phased out their scholarship programs in the 1980s. A few private foundations continued to provide scholarships for foreign students in selected fields such as agriculture and population studies, but most of those programs too were eventually phased out in the 1990s.

Support for study abroad and capacity building at home also fell out of favor in the 1980s because development experts recognized that a disproportionate share of education resources in developing countries were being spent on higher education and that investing in primary and secondary education was a more equitable and efficient means of improving health and other social indicators. Experts argued that before investing further in elite higher education, countries should invest in elementary and secondary education and seek to achieve universal education at those levels. In addition, countries were encouraged to provide short-course training to extension agents and others who need specialized skills to deliver health, agriculture and community-delivery services. "Get the job done" mentality carried the day and funds were cut back for universities at the same time that tertiary enrollments started to increase rapidly as a result of economic and population growth. As a result, education quality suffered at many third-world universities. Further deterioration in higher education capacity occurred in countries where governments passed laws that required universities to admit all qualified students but restrained them from raising student fees to cover the costs of growing student bodies. As a result, many faculty members associated with universities in Africa, Latin America and Asia left them to work in the private sector or fled their countries to work with international agencies or NGOs that sought to internationalise their staffs. Those developments led to further deterioration in higher education institutions in the developing world and exacerbated the brain drain.

Given that the global number of foreign students continued to rise in recent decades even as scholarship money for foreign students from governments and donors diminished in the 1980s, where did students get their support? While data on foreign students' sources of financial support are not generally available, the Institute of International Education (IIE) has gathered and published data since 1979 on sources of support of foreign students studying in the United States. In the 2004/05 academic year, 60 percent of U.S. foreign students drew on family or personal resources, a level of support that has remained stable throughout the 1979 to 2004 period. Trends in non-family support, shown in Chart 1, confirm that government support, in general, declined in recent decades and show that U.S. universities are

now the major source of support for most foreign students, especially at the graduate level. Whereas U.S. universities funded fewer than 10 percent of foreign students enrolled in higher education in the United States in 1979, they funded a quarter of them in 2004. At the graduate level, universities funded almost 45 percent of all foreign students. That trend occurred because of the growth in the United States of grant and contract money from the federal government, corporations, and private foundations to support research in science and technology fields. Research grants usually include funds to support graduate student assistantships. However, at the same time as research funding was increasing, fewer U.S. students were entering science and technology fields and, therefore, universities turned to foreign students to fill assistantship openings on their research projects.

Types of cross-border higher education arrangements. International research and program collaborations between universities located in two or more countries are growing rapidly and have implications for international student mobility. Universities, governments and other institutions are setting up collaborative programs that usually involve the delivery of higher education itself in a different country than the one where the host institution is located. Since these program developments are relatively recent, no common terminology or typologies exist to describe or classify them. In its cross-border work on education, OECD (2004a) differentiates between who migrates: students, programs or institutions. Sauv↓ (2002) uses the GATS framework to classify education services into four categories: "cross-border supply" of education services from one country to another; "consumption abroad" or the supply of education services in one's territory to a national of another country; "commercial presence" or the supply of education services by an institution (university, corporation) from a foreign country; and "movement of natural persons" or the supply of the education service by a provider from another country. Under Sauv↓'s typology, foreign students would be a consumption abroad service while movement of natural persons would involve the international mobility of the supplying institution's teachers or managers. Cross-border supply is the type of cross-border activity of interest in this Report.

Cross-border supply of higher education services, however, can take different forms depending upon the output produced. Table 1 identifies six types of transnational higher education services that have implications for whom and what migrates at different stages of the post-secondary education process, including Study Abroad programs, Program Partnerships, Branch or Offshore Campuses, Distance Learning, Corporate Training, and Outward-Bound training. Table 1 also identifies the credit or degree mode typically used by universities delivering the service and gives examples of program suppliers.

Universities can set up **Study Abroad** programs in several ways but typically they do so by collaborating directly with universities in another country; by setting up an office in another country and delivering the service themselves; or by contracting with education agents who deliver the service to their students. The Erasmus program in Europe is the largest Study Abroad program. It was set up in 1987 under the auspices of the Socrates program, Europe's education program, and permits

European nationals to spend 3-12 months of study in another European country -- 31 European countries currently participate in the Erasmus program. Supported by the European Commission, by 2004, over 1.2 million students and 2000 tertiary institutions had participated in Erasmus. In 2003/2004, there were 135,586 European students receiving financial support from Erasmus. The United Kingdom is the biggest net importer of Erasmus funded students followed by Ireland, Sweden, and the Netherlands. Erasmus also supports teacher mobility. Information and statistics on Erasmus are available online at http://www.erasmus.ac.uk/. In 2003, the European Parliament and Council approved the Erasmus Mundus program to allow students from third-world countries to study in Europe. Under this extended program, third-world students will receive up to 5,000 scholarships annually and European Union graduate students can compete for 4,000 scholarships for study in third-world countries.

Growing numbers of U.S. students also participate in Study Abroad programs, 174,629 did so in 2002/03, up from 76,302 ten years earlier. Most U.S. students travel to Europe to study (63.5 percent in 2002) but that percentage has declined slightly in recent years. While Latin America receives the second largest percentage of U.S. students (15 percent), Oceania and Africa are increasingly attractive destinations for U.S. students. Most U.S. nationals have to self-finance their study abroad but some students, on a needs basis, receive subsidies from their universities.

Program Partnerships and **Branch or Offshore campuses** are difficult to differentiate because both involve some form of collaboration between institutions located in two or more countries. The distinction drawn here between these two types of institutional collaborations depends upon whether students receive a degree for their study as well as course credit and, if a degree is awarded, which institution awards the degree. **Program Partnerships** are defined as international institutional collaborations under which each of the participating partners awards course credit. While some Program Partnerships may require Study Abroad participation as part of the degree, as long as the degree is awarded by a single institution to students enrolled in the study program in the university's home country, it can remain outside of a country's regulatory framework. Thus, according to this definition, Program Partnerships are "informal" and mainly involve collaboration on program "content" rather than formal accreditation.

Branch or Offshore Campuses, on the other hand, are formal cross-border higher education initiatives (CBHE) structured from the outset with the intent of awarding participating students with a joint degree in the name of the participating partners or under the brand name of the foreign participating university even though none of the education may have taken place in the university's origin country. It is becoming common under Branch Campus arrangements for students to receive a degree from the foreign university that set up that campus even though it is not located in the country where the higher education took place. Awarding the degree in the name of the foreign university collaborator can address a concern often raised by education experts about cross-border education, namely that "quality" may be

compromised (OECD 1999). If a prestigious international university allows its name to be used on the degree, this sends a strong signal to prospective students and their future employers that quality standards were high.

It is easier for universities to establish Program Partnerships than Branch Campuses in another country because they are informal collaborations and thus less likely to be restricted by a country's regulatory framework. Since Program Partnerships can usually be set up by two or more universities in different countries, they are more common than Branch Campuses. All countries have regulations that guide university establishment, recognition, and accreditation but differ with respect to whether and how foreign providers can offer education services within their borders (OECD 2004b). In most countries, from a juridical standpoint, as long as the foreign university is not setting up a Branch Campus in its own name but only collaborating with an established higher education institution in that country, it does not have to obtain government approval. Thus, establishing a program partnership between two or more universities incorporated in different countries is an easier way for foreign universities to deliver higher education services in another country since no accreditation issues are involved. Foreign universities, however, may prefer the Branch Campus over the Program Partnership arrangement because that enables them to retain greater control over the curriculum and expand their revenue base.

Using this distinction**,** evidence indicates that increasing numbers of universities are teaming up with universities in other countries to develop joint study programs or **Program Partnerships** (OECD 2004a). Students at participating universities may spend up to a year at the partner institution(s) as a Study Abroad student. Program Partnerships are similar to Study Abroad programs in that each participating institution awards students credit for study carried out at the participating foreign university but they differ in that all or most of the content of the foreign study program is developed jointly by the program partners. Moreover, students enrolled in the study program are required to follow the joint curriculum and usually have to do part of their training at the foreign participating institutions. The Trium Global Executive MBA program is an example of a Program Partnership. Offered jointly by the London School of Economics and Political Science, the New York University Stern School of Business, and the HEC School of Management, Paris (alpha order), this MBA program started in 2000. The three collaborating schools participate in the program as equal partners and provide instruction to enrolled students in six intensive education modules that is delivered at five different international locations. Each collaborating partner delivers one module and students do another module at Shanghai University (a collaborating institution but not a partner) and the final one focuses on emerging markets and its location will vary annually. The Trium MBA is awarded separately by each partner.

Branch or Offshore Campuses, on the other hand, can be set up by a foreign university in another country or can be set up as collaboration between universities located in two or more countries. The regulatory framework of the country where the campus is developed has to allow foreign education provides to deliver higher education within their borders. Under Branch Campus arrangements,

students receive a degree either in the name of the foreign university or jointly in the name of both partner universities. Since most countries have restrictive laws regarding the delivery and certification of education services within their borders, branch campuses are relatively rare. Generally, branch campuses can only be set up in countries that have legal frameworks that enable and permit foreign institutions to provide higher education services and degrees. Countries seeking to attract foreign providers are using different approaches. While some may allow foreign institutions to set up and deliver whatever type of program they wish, others may require that the foreign provider can only develop programs with established universities in the host country.

One can only guess at the number of Branch Campus partnerships operating globally because there is no comprehensive listing of universities that supply higher educational services in another country. Therefore, information compiled for this Report comes mainly from internet sources set up by universities, governments, education agents, and for-profit institutions that engage in the delivery of cross-border education services. Appendix A lists several foreign universities that have set up degree programs in other countries. The listing is a partial one and biased toward institutions that the author knows. The countries of origin covered by the foreign universities listed in Appendix A include initiated by the three most active countries in CBHE activities – namely, Australia, the United Kingdom, and the United States – as well as by universities in India, China, Singapore, and Thailand. Most of the foreign partnership universities, in turn, are located in a few countries in Asia or the Middle East and all but three of the partnerships were set up in the 21st century.

Australian universities have been very active in setting up transnational Branch Campuses and providing other CBHE services for students from other countries as well as their own students and faculty. The Australian Education International (AEI) is a lead agency there that is part of the Department of Education, Science and Training of the Australian Government. It provides a rich set of information and resources on its website (http://aei.dest.gov.au/AEI/AboutAEI/Default.htm) for Australian universities and students, commercial providers, and others. AEI has an extensive and growing offshore network of education and training centers and has staff in Asia (India, Indonesia, Japan, Malaysia, China, Korea, Taiwan, Thailand, Vietnam), Europe, the Middle East (Dubai), Africa (South Africa and Kenya), the USA and Latin America (Chile).

Several Australian universities have set up Program Partnerships and Branch Campuses in Asian countries. Grant Harman (2005) and Simon Marginson and Grant McBurnie (2004) describe the growth of Australia's offshore education activities in recent years (OECD et al. 2004). Since AEI collects statistics on international students enrolled both onshore in Australia and offshore at Australian higher education institutions, it is possible to assess the impact that internationalisation of higher education is having there. In 2001, 26.5 percent of Australia's international students were enrolled in Australian institutions of higher education offshore but by 2003, that percentage had risen to 40.5 percent (Australian Education International 2003). The Australian universities with the largest offshore tertiary enrollments in

2003 were the University of South Australia (5,816 students), Curtin University of Technology (5,245 students), Royal Melbourne Institute of Technology (5,493 students), Charles Sturt University (4,319 students), and the University of Western Sydney (3,643 students). In 2003, 34 Australian universities had foreign students enrolled offshore. Malaysia and Singapore had the largest numbers of Australian offshore students.

It is unknown how many of Australia's offshore students are studying at Australian Branch Campuses but at least some of them would be doing so. The numbers of Australian offshore students are growing in countries such as Malaysia and Singapore that have encouraged foreign universities to deliver higher education services in their countries. Monash University Australia and the Sunway Group, for instance, set up Monash University of Malaysia as a joint venture in 1998. According to AEI statistics, in 2003, Monash University had 2,005 students enrolled at its offshore campuses.[1]

Cross-border collaborations are usually between universities located in two or more countries but many CBHE initiatives develop with support or encouragement from the host country. Qatar Foundation, for instance, a private foundation founded and endowed in 1995 by the Emir of Qatar, built a physical campus, Education City, in Doha, Qatar, and recruited five prestigious U.S. universities to set up Branch Campuses at the City to deliver higher education services to Qatar nationals and foreign students from the region and elsewhere. Subsequently, the five foreign universities did set up Branch Campuses to provide training in specific fields that follow the same curriculum they offer to students enrolled in that study program in the United States. Carnegie Mellon University offers undergraduate degrees in business and computer science. Cornell University has developed Weil Cornell Medical College in Qatar and offers a 2-year pre-med program followed by a 4-year Medical Program. Georgetown University School of Foreign Service educates undergraduates in foreign affairs and for work in diplomatic services. Texas A&M has developed an undergraduate degree programs in chemical, electrical, mechanical and petroleum engineering and will start to offer graduate degrees in those fields in 2006. Virginia Commonwealth University awards a Bachelor of Fine Arts degree in communication design, fashion design or interior design. Each foreign university partner awards the degree under its own brand name but may give the degree itself a new name to indicate where the study occurred. Students who successfully complete the Cornell University Medical Program, for instance, will receive their Medical Degree from Cornell University under the designation Weill Cornell Medical College in Qatar. All five of the Qatar degree programs were set up since 2000.

Dubai, one of the United Arab Emirates, has taken a similar approach to strengthen its higher education system. There the government provided funding to set

[1] Australian Education International does not indicate in the tables posted on its website whether Australian or foreign students are included in its international student figures. If the statistics include Australian Study Abroad students, that would mean that a smaller number of foreign students from other foreign countries are enrolled at offshore Monash campuses.

up Dubai Knowledge Village (DKV) and invited foreign universities to establish Branch Campuses at the Village and award tertiary degrees under their brand name. Since DKV opened in 2003, 13 universities from seven countries have set up higher education programs. Several British universities participate in the program and other foreign partners come from Australia, Belgium, India, Iran, Ireland, and Pakistan. It is difficult from available sources to assess the Branch Campus arrangements at DKV but they appear to be less structured than the partnerships developed in Qatar. At least one foreign university, the University of Southern Queensland, Australia, opened up a campus in Dubai but closed it after a couple of years. Other universities listed as partners in a given year are not mentioned in subsequent years on DKV's website, suggesting that the collaboration fizzled before it officially started.

Although the typical Branch Campus arrangement is for a foreign university to collaborate with one or more universities in another country, a variant of that model occurred in the case of three British universities that opened up programs at DKV. The three universities – Edinburgh, Birmingham, and Manchester – agreed in 2004 to set up research-based, postgraduate education programs in different fields at DKV under the name of a new university, British University of Dubai. Subsequently, the University of Cardiff and the Sir John Cass Business School, City University, joined the British University partnership. However, rather than awarding degrees under their separate brand names, the participating British universities will award the degrees under the name of a new university, British University of Dubai.

As Program Partnerships and Branch Campus arrangements grow, they will expand the higher education opportunities open to nationals of countries where the programs are based and allow them to choose whether to study at the campus closer to home or to migrate to a foreign country to continue their studies. Students in some regions already have such choices and no longer need to migrate to Europe, North America, or Oceania to further their higher education. However, as will be discussed further below, there is limited evidence to date that international student pathways are changing.

Three other types of transnational higher education activity – **Distance Learning, Corporate Training, and Outward Bound** -- are identified in Table 1 but will not be discussed in detail in this Report even though they are growing rapidly and some of them, such as Corporate partnerships, are probably more pervasive than Program Partnerships or Branch Campuses.

Distance Learning services are growing rapidly because they allow students to do all or at least a significant part of their study program at home. Improvements in ICT make it easier for universities to deliver study programs using new technologies that allow enrolled students to carry forward their higher education in their homelands. New technologies that facilitate Distance Learning include the internet, videoconferencing, videocassettes, and CD-Rom. E-mail communications enable enrolled students to receive rapid feedback from faculty members and administrators who monitor their course work. Most universities delivering distance learning are for-profit institutions and limited to applied fields such as business, ICT, education,

and healthcare. One online provider - American Inter-Continental University (AIU) – offers online education but also has campuses in the United States, London, and Dubai where students can finish their studies after starting it online. Universitas 21 Global based in Singapore collaborates with universities in North America (2 Canadian universities; 1 USA), Europe (5 British universities; 1 German), Asia-Pacific (5 universities), and Oceania (3 Australia) to provide distance learning services to students worldwide. It was set up jointly by Universitas 21, a British firm, and Thomson, a multinational corporation that provides information, software applications and services to business and professional markets. Thomson Learning, an affiliate of Thomson, focuses on the higher education marketplace. Distance Learning providers are marketing their services as a cost-effective way for students to obtain a higher education degree. Increasingly established universities are joining commercial online providers to attract students wishing to do part of their studies through distance learning and another part at a regular university campus.

As corporations built their global operations in recent decades, they often did so in countries with limited human capital and thus have had to develop **Corporate Training** programs to obtain skilled workers. Even in advanced OECD countries with large pools of highly trained workers, corporations regularly train new hires for 2-3 months. Corporations may provide worker training in collaboration with universities or by drawing on the services of corporations like Thomson that cater to that market. E-Cornell, for instance, the for-profit arm of Cornell University, has signed contracts with corporations in recent years to deliver professional and executive development training. Although e-Cornell works in different fields, it has developed a specialty niche in hospitality management and signed agreements with several hotel chains (Shangri-La Hotels and Resorts, Swisshotel, and Taj Hotels Resorts and Palaces) to train their employees drawing on distance learning and face-to-face training. As Microsoft spread its computer operations globally, it set up 1,700 Certified Technical Education Centers at which Microsoft certified personnel train locals using a curriculum developed by Microsoft. IBM teamed up with the University of the State of Puebla, Mexico, to provide students with training in IT technology. There are countless other examples of corporate collaborations with universities in developing countries.

Some universities in emerging economies have set up programs to train nationals and foreign students for a niche market in another country. These programs, dubbed **Outward-Bound** programs here, are relatively rare. Generally, the host countries where these programs are located have encouraged their universities to develop them with recognition that graduating students will practice in the U.S. market or work in another high-income country and generate foreign exchange (if foreign students are attracted to them) or remittances (if their nationals study at them and then emigrate). These specialized training programs have arisen mainly in the medical field and respond to shortages of medical personnel in advanced economies. Many of the students enrolled in offshore training programs are U.S. nationals that were not accepted at a U.S. medical school because of limited training slots. Others are foreign nationals seeking to immigrate to the United States following completion of their medical studies. Since medical personnel immigrating

to the United States or other advanced economies have to be certified, the Outward Bound training programs generally use the curricula that U.S. universities do.

St. George School of Medicine, Grenada, is an example of an **Outward Bound** training program. It was set up in 1977 to train medical doctors for the U.S. medical market but today it trains medical personnel for the United Kingdom as well. Three state governments (New York, New Jersey and California) have approved St. George's medical program and allow U.S. students enrolled in the program to do their clinical training in teaching hospitals in those states. In 2005, St. George set up a partnership with the University of Northumbria of the United Kingdom that will allow any student who completes the one-year certificate course in biomedical science at the British university to be admitted to the 4-year medical degree program at St. George. Students will do their clinical years at affiliated hospitals in the United Kingdom or the United States. Currently St. George has students from 85 countries. Other examples of Outward Bound programs include the training of nurses in the Philippines and medical doctors in India.

What is the size of the cross-border higher education market? The movement of students and higher education across borders has become a growth industry. OECD estimated that $US30 billion was traded by OECD countries in 2000 (OECD 2004a, p. 13) while another estimate of the international education market prepared by Merrill Lynch placed its size at $US2 trillion in 1999 (cited in Hira 2003 p. 911). The 2005 Open Doors Report had an estimate that international students contributed over $13 billion to the U.S. economy in 2005 (Chin 2005, p. 4). For nine countries, Kurt Larsen and colleagues (Larsen et al. 2002) estimated the value of each country's exports and imports of educational services (Table 2). Their analysis indicated that the United States was the biggest exporter of educational services, followed by the United Kingdom, Australia, Italy and Canada. The United States was also the largest importer of educational services, followed by Italy, Canada, Australia, and the United Kingdom.[2] These crude indicators of the global education market are substantial and suggest that countries may not only encourage CBHE for altruistic

Table 2: Exports and imports of education services in $US million, 2000

	Exports	Imports	Net
USA	10,280	2,150	8,130
UK	3,758	150	3,608
Australia	2,155	356	1,799
Italy	1,170	849	321
Canada	796	602	194
Greece	80	211	-131
Venezuela	60	113	-53
Mexico	29	53	-24
Brazil	4	78	-74

Source: OECD

[2] Although the United Kingdom is the second largest importer of foreign students, its revenue receipts from foreign students are lower than several other countries in Table 2 because of how it funds higher education. Whereas most countries charge foreign students tuition and fees that are comparable to or higher than those charged of natives, universities in the United Kingdom have relatively low fees and may waive those for foreign students.

reasons but also because it brings in foreign exchange and expands the revenue base of higher education providers.

The global higher education market should grow rapidly in the future. Table 3 shows estimates of the current and projected supply of higher education students in OECD and non-OECD countries and regions. The current and projected numbers of students in the 20-24 age group is used as the tertiary education referent population by UNESCO and other agencies to calculate tertiary gross enrollment ratio (TGER) and compare trends across countries. While UNESCO asks countries to report their numbers of students enrolled in higher education, it does not ask them to give the age distribution of those students and thus it is not possible to calculate refined enrollment rates for different countries by age.[3]

Whereas 16 percent of the world's population aged 20-24 lived in OECD countries in 2000, only 13 percent will live in those countries in 2025. The numbers of 20-24 year olds in non-OECD countries, in contrast, will rise to 87 percent by 2025. In 2002/03, UNESCO calculated a TGER of 56.8 for OECD countries and 20.8 for non-OECD countries. Future global demand for higher education will depend on age structure changes and changes in enrollments. However, trends in these two factors will differ for OECD and non-OECD countries. The TGER gap between OECD and non-OECD countries should narrow in the years ahead since demand for higher education is rising rapidly in the latter and TGERs have leveled off in the former. However, non-OECD countries will also face increased demand due to expected growth in the size of their 20-24 age populations.

The results of an estimate of higher education enrollments in 2025 in OECD and non-OECD countries from growth of the 20-24 age population and a rise in the TGER to the 2002/03 mean TGER is given in Table 3. The projection is straightforward since the 20-24 age population includes persons aged 0-4 in 2005. No international migration was assumed. The projections in Table 3 shows that student enrollments will expand only modestly in OECD countries by 2025, rising from 46 to 51 million, but in non-OECD countries, enrollments will rise from 69 to 255 million.

[3] While the appropriate age base to use for cross-country comparisons also affects primary and secondary education indicators, it is particularly difficult to identify the appropriate age-group for higher education students because many of them delay their entry or only attend school part time. Standardized denominators are preferred even though they may produce statistics greater than 100% at primary and secondary levels. However, that is unlikely to occur at the higher education level because enrollments are not universal at that level.

Table 3: Population and Tertiary Enrollment in OECD and Non-OECD Countries, 2000-2025*		
	OECD	**Non-OECD**
2000 - Population aged 20-24 (000s)	81,896 (16%)	428,561 (84%)
2025 – Population aged 20-24 (000s)	77,106 (13%)	517,518 (87%)
2000 - % of total 20-24 population	16.0%	84.0%
2025 – % of total 20-24 population	13.0%	87.0%
2002/03 - Tertiary Gross Enrollment Ratio (TGER) **	56.8	20.8
2002/03 - Number students enrolled in higher education (000s)	46,347	69,395
2025 - Projected tertiary enrollment with change in age group but no change in TGER (000s)	44,688	71,958
2025 – Projected tertiary enrollment with increase in TGER (000s) to 2002 OECD level but no change in age group***	6,583	182,564
2025 - Projected tertiary enrollment with change in age group size **and** increase in TGER to 2002/03 OECD mean (000s)***	51,271	254,522

Source: Estimates of 2000 and 2025 population are from the United Nations medium variant projection prepared by the Population Division, Department of Economic and Social Affairs, United Nations Secretariat, *World Population Prospects: The 2004 Revision* and *World Urbanization Prospects: The 2003 Revision*, http://esa.un.org/unpp. Estimates of gross enrollment ratios are for 2002/3 and from the UNESCO Institute of Statistics, *Global Education Digest.* http://www.uis.unesco.org/ev.php?ID=6086_201&ID2=DO_TOPIC

* Statistics are for the 149 countries in UNESCO's Institute of Statistics database in 2000. The 149 countries had 96 percent of world population in 2000.

** TGER is the ratio of total tertiary enrollment to the population aged 20-24. Since all students enrolled are not in this age group, the TGER can be larger or smaller than the percent of the population aged 20-24 that is actually enrolled.

*** Countries with 2002/3 TGERs higher than the OECD mean are assumed to have the same TGER in 2025 as in 2002 for the age structure projection. However, for the change in TGER projection (last 2 rows), the OECD countries with a TGER lower than the OECD mean were raised to the OECD mean.

It will be difficult for developing countries to build sufficient higher education capacity to meet projected growing demand in the years ahead. At the same time, declining enrollments due to demographic changes in developed countries mean that many tertiary institutions in Europe, North America, and Oceania will have surplus capacity that will not be used unless enrollment rates of domestic students increase. Foreign students, on the other hand, are potential substitutes for domestic students and will be sought after by both the traditional host countries and new countries that seek to recruit foreign students.

III. Trends in International Student Mobility

The OECD and UNESCO estimate that the global number of foreign students climbed from 1.3 million in 1998 to 2.0 million in 2003.[4] Moreover, the United States, the largest global receiver of foreign students, saw its numbers increase from 286,343 in 1979 to 565,039 in 2004/05. Foreign student enrollments are large and also growing rapidly in Canada and China, two countries that did not report their data for the OECD and UNESCO database. Several other non-reporting countries receive smaller numbers of foreign students. If full global data on international student mobility were available, the actual number of students enrolled in institutions of higher education outside their country of origin in 2003 could be as high as 2.2 to 2.3 million in 2004. Data in the OECD and UNESCO World Education Indicator (WEI) database show that foreign tertiary enrollments have increased rapidly in OECD countries since 2001 and modestly in non-OECD countries (see Chart 2). It is important when viewing those trends that the WEI database only includes 49 countries but all of them to not report their data. In addition, the estimates for some European countries are inflated because they include foreign residents in their statistics if they are non-citizens (see Box 2).

Who are the main receivers of foreign students? Chart 3 shows the distribution of foreign tertiary students in the WEI database by country of destination in 2003 drawing on statistics reported by countries. Five countries received 70 percent of the foreign students in that year – the United States (28 percent), the United Kingdom (12 percent), Germany (11 percent), France (10 percent) and Australia (9 percent). An additional 15 percent of students were studying in Europe (Netherlands, Sweden, Austria, Switzerland, Italy, Belgium, Spain, and other OECD countries). Japan is the only Asian receiver identified in the OECD Chart and it received (4 percent) of them. Canada and China did not report their data to OECD but other sources indicate that Canada received over 60,000 foreign students in 2003 and China reported that it received 78,000 foreign students in 2003 (see Appendix B).

Country trends in numbers and origins of foreign students are of interest because they shed light on a key question, namely what evidence is there that foreign student enrollments are changing in response to increases in CBHE activities? Chart 4 shows trends in foreign tertiary student enrollment in selected receiving countries from 1990-2003. Several countries do not have data available for 1990 or are missing data for one or more years in the series, in which case the missing data between two points were interpolated. By not excluding the data for the United States in Chart 4, the largest global receiver, the trends for other countries become more visible. There are two regional groupings: Western Europe, an

[4] The OECD and UNESCO World Education Indicators database requests data from the 30 OECD countries and 19 non-OECD countries annually. However, only 27 of the 30 OECD countries and 10 of the non-OECD countries reported their data in 2003 (see Box 2, Data Quality). Canada consistently has not reported data on its foreign student enrollments to OECD but the mix of other non-reporting countries changes annually, making it difficult to track trends.

Box 2: Data Quality

Data on foreign students are produced jointly by OECD and UNESCO (Institute for Statistics) under their World Education Indicators (WEI) Programme. Since 1997, OECD and 19 non-OECD countries have been asked to report their numbers of foreign students along with other information on their education systems to OECD/UNESCO. Many countries that are new student destinations (such as China, South Korea, are not included in the WEI project but will be included in the future as OECD and UNESCO have plans to expand coverage. More problematic is the fact that the data reported to OECD are not always consistent with other statistics published by countries themselves or reported in other sources. A further problem occurs because some European countries that have *jus sanguinis* citizenship laws consider children of non-citizens to be foreigners and, therefore, classify them as foreign students in their statistics. OECD does ask countries to report whether the foreign students are residents or non-residents but it is unclear how many comply.

In the late 1990s, the Institute of International Education (IIE), the British Council and IDP Education Australia started the Atlas Project with support from the Ford Foundation in order to build a global database on international student mobility. In 2003, the first *Atlas of Student Mobility* was published by IIE and included data for circa 2000 on 22 destination countries and 75 sending countries. The *Atlas* indicated in its Preface that it used data that were readily available on the web or in print. *Atlas* data too are often inconsistent with OECD, UNESCO, and other data sources. Atlas is starting to provide updates to the 2000 data through its IIEnetwork but thus far, updates are available for only a few countries.

Education ministries or other institutions in a growing number of countries report data on foreign students. In this Report, if data were available from a country's government source, that is the statistic used. If not, I used the OECD/UNESCO data since those statistics are available for 5-6 years (collection started in 1998) but may be missing for countries from one year to the next. If neither country nor OECD/UNESCO data were available, I used the Atlas data. Several factors may account for inconsistency in the data published by different sources. For instance, the reporting agency may not understand the requests made by UNESCO/OECD or IIE and thus give them the wrong data. On the other hand, the request may be understood but clerical errors can be made by staff doing the work. Other problems could occur depending upon how foreign students are classified. Students going to many countries have to learn the country's language before they can enroll in a tertiary study program. Countries treat these students differently in their databases depending upon whether the foreign language training is offered at a university where the student will enroll. Another problem occurs in the case of Australia. It collects data on foreign students enrolled in its tertiary system onshore and offshore and the latter are often included in the total foreign student population enrolled in Australian institutions of higher education. Moreover, offshore students can be Australian as well as foreign nationals. In this Report, only Australian statistics for onshore foreign students are given. A further data problem stems from the fact that many foreign students are not enrolled in a degree program abroad. In the case of the United States, for instance, if the degree program is not in a specific field or is unknown, foreign students are classified in an "other" category. These students may be treated differently in foreign student databases.

aggregation of eight countries (Austria, Belgium, Denmark, Ireland, Italy, Netherlands, Sweden, and the Netherlands) and Eastern Europe (Ukraine, Hungary, and the Czech Republic). Destination countries in the Western and Eastern European groups received comparable numbers of foreign students. The number received for countries in the Western Europe group ranged in 2003 from 20,531 in the Netherlands to 41,856 in Belgium. In Eastern Europe, the number ranged from 10,336 in the Czech Republic to 18,170 in Ukraine. Some of the countries in the Western and Eastern European groups include more foreign students than some new receivers shown in Chart 4. Appendix B gives the raw data on numbers of foreign students for Chart 4.

Since the United States receives double the number of tertiary foreign students as the next largest receiver, the United Kingdom, it is in a category of its own. From 1990 to 2002, foreign student enrollments in the United States increased by 44 percent but declined slightly since 9/11, especially among undergraduate students (see Chart 5). Changes in government visa requirements for foreign students and in reporting required from universities could be the cause of the declining numbers. To obtain visas, a longer lead-time is required because visa officers scrutinize applications carefully. Under the U.S. Patriot Act of 2002, a Student and Exchange Visitor Information System (SEVIS) was step up to track foreign students in the United States. Colleges and universities are required to input biographical and financial data on foreign students into a computerized database for immigration authorities to review. According to the IIE *Open Doors 2004,* fewer universities reported their numbers of foreign students to IIE in 2003/04 than in 2001/02 (Table 44, p. 93). Moreover, the trend line in the "other" category has continued to rise, suggesting that universities may not be reporting details on their foreign students to the SEVIS database.

The second largest group of destination countries for foreign students includes the United Kingdom, Germany, France and Western Europe who together received an average of 240,000 foreign students in 2003. The numbers of foreign students received by Western European countries are increasing rapidly, a trend that should continue because that group of countries has started to recruit foreign students aggressively. Moreover, the Erasmus Mundus program will provide fellowship support to foreign students and build academic networks between countries in Europe and other regions countries that will lead to further flows. Many European countries are changing their immigration policies in order to make it easier for highly skilled foreigners to remain on in their countries after they complete their studies.

Australia, China, Japan and Eastern Europe each received about 110-130,000 foreign students in 2003.[5] While Eastern Europe's numbers have declined since 2001, they have increased rapidly since 1998 in the three other destinations due to government and university policy changes intended to attract students. The governments of Australia, China and Japan, for instance, encourage their universities to recruit foreign students and provide them with generous scholarship support, facilitate visas for foreign students, and, in the case of China and Japan, have even set up some higher education programs in the English language.[6] In 1983 Japan

[5] Appendix B has lower numbers of foreign students for Australia than reported in the UNESCO/OECD database because they are restricted to foreign students studying onshore in Australia. Since Australia reports all foreign students enrolled in Australian higher education programs as foreign students, including those who are studying at Australian branch campuses offshore, the numbers in other reports may be higher than reported here (see Box 2).

[6] For further information, see "Foreign students hit record high,", People's Daily Online (http://english.people.com.cn/200606/13/eng20060613_273485.html) and website of Akita International University (http://www.akita-u.ac.jp/english/).

provided 2,083 scholarships to foreign students but in 2003 it awarded 9,746 scholarships. Australia's numbers are lower in Chart 4 than reported in other places because they are restricted to foreign students studying onshore in Australia (see Box 2).

China's numbers are growing rapidly too due to policy and program changes made by its Government and universities. China is one of several Asian countries that want to strengthen and expand its higher education capacity, increase its pool of high skilled labor in science and technology fields, attract back expatriates living or studying abroad, and increase its training of foreign students.[7] China also wants to increase its international and regional profile in foreign affairs. Recent reports indicate that China the number of foreign students reached 141,000 in 2005, an increase of 27 percent over the previous year.[8] While over 300 universities and colleges in China have foreign tertiary students, the largest numbers are based at Beijing University of Language and Culture, Beijing University, Fudan University, Beijing Normal University, and Nankai University. South Korea and Japan are the two main sources of foreign students in China.

Canada, Russia, and Spain received an average of 62,000 students in 2003. While foreign student enrollments continued to increase in Russia until 2001, since then Russia's numbers have declined. In contrast, Canada and Spain's numbers of foreign students have increased annually and are likely to continue to increase because their universities are aggressively recruiting foreign students.

The remaining group of countries shown in Chart 4 received fewer than 25,000 foreign students each in 2003 but their numbers are growing rapidly. This fifth group includes several transition economies in Asia (Korea, India, Malaysia, and Taiwan) and the Middle East (Jordan, Lebanon, Saudi Arabia), as well as Cuba, New Zealand and Turkey. In response to encouragement from governments, universities in these countries have actively recruited foreign students. Moreover, many of the cross-border initiatives being set up are or will locate in these countries because they are improving higher education infrastructure. Only one Latin American country (Cuba) is in the list because data are not available on foreign student flows to other Latin American that receive some foreign students (Argentina, Brazil, Chile, and Mexico). Cuba's numbers of foreign students tripled from 1998 to 2002 due to a concerted effort by Cuba to attract foreign students.

In three Middle East countries – Lebanon, Jordan and Saudi Arabia – foreign students inflows are small but trending upward. Lebanon used to be a larger receiver in the past but its numbers declined during its years of civil strife. Today, foreign students are starting to return to Lebanon because of the relatively strong human

[7] People's Daily Online (http://english.people.com.cn/) regularly carries articles about China's efforts to recruit foreign students, attract Chinese abroad home, and expand China's pool of high skilled labor.

[8] Number cited in "Foreign students hit record high,", People's Daily Online (http://english.people.com.cn/200606/13/eng20060613_273485.html).

capital and institutional capacity there. Jordan's foreign students are mainly Palestinians already living there or who come from neighboring countries. Given the substantial investments in higher education made by Qatar and Dubai, one can expect their numbers of foreign tertiary students to increase in the years ahead. At this point, data on foreign student numbers are unavailable for Qatar and Dubai.

Foreign student enrollments are likely to grow in Asia and Oceania in the years ahead due to concerted government efforts in several countries to attract foreign students. In addition to the growing enrollments in Australia, China, Japan, South Korea and New Zealand, mentioned above, other Asian countries with rising foreign student enrollments include, in alpha order, India, Malaysia, Singapore, Thailand, and Taiwan. Hong Kong could be in this group but it no longer reports data separately from China. While several Asian receivers provide foreign students with scholarship support, most pay their own way. Asian governments recognize that importing foreign students can be a valuable source of foreign exchange revenue and have encouraged their universities to develop courses and programs to attract foreign students and even to offer courses in English in order to broaden the numbers and origins of their foreign students. Countries also attract foreign students by setting up attractive websites (namely government education ministries and universities), facilitating visas, providing training in local languages, and building dormitory space.

Who are the main senders of foreign students? Both the World Education Indicator (WEI) and the ATLAS databases collect information on the origins of foreign students enrolled in higher education programs in selected destinations. However, neither database has a complete matrix of inflows and outflows to all countries. The Atlas database includes 97 countries that either sent or received foreign students circa 2000.[9] Table 4 provides data on the 37 sending countries in the Atlas database that exported more than 10,000 students. China produced the largest number of foreign students, 126,519 in 2000, followed by the Republic of Korea (77,983), India (66,621), Japan (64,125), Germany (63,106), and France (60,141). Greece, Italy, Turkey, Morocco and Taiwan also produced significant numbers. With the notable exceptions of China and India, most countries that produced significant numbers were high- or middle-income countries. The China and India exceptions may occur because of the overall size of their populations and the presence in them of large and growing middle classes. In addition, GNP is rising rapidly in China and India.

Since the population size of sending countries varies from 1.2 billion for China to 3.8 million for Ireland, each country's rate of student out-migration was calculated by dividing its number of foreign students by its population size and then

[9] *ATLAS* reports data separately for selected destinations (21 countries) and sending countries (76 countries) but do not cover the full matrix of senders and receivers. By combining data from senders and receivers, the database expands to 99 countries. Since each country's inflow of foreign students come from a small number of countries, usually neighboring ones, one can assume that no more than 10-20 percent of the students in the 99 countries are missing in the Atlas database. *ATLAS* does not report the actual year for their figures but simply says that if statistics for multiple years were available, they used the data for 2000. If statistics for multiple years were unavailable, they used data for the year that was closest to 2000.

multiplying by 10,000. This provides a standardized rate of student out-migration that allows one to compare levels across the 37 countries (Table 4). The measure ranged from a high of 51.8 in Greece to 0.7 in India. Ranking countries by their emigration measure reveals that countries with larger populations generally have the lowest emigration rates. For instance, China, the largest sender, sent only one student per 10,000 abroad. Chinese from other origins, however, had considerably higher odds of being a foreign student. Hong Kong had a rate of 36.8, Singapore had a rate of 33.5, and Taiwan's was 18.7.

Regarding the top destinations selected by foreign students, Table 4 identifies the top receivers for each sending country. In 2000, the United States was the top receiver for foreign students from 15 origins, the United Kingdom for 8 origins, and Germany for 6 origins. The attraction of those destinations for foreign students becomes even more apparent if one looks at which countries is the number one or two destination for the largest senders. The United States holds that position for students from 24 countries, the United Kingdom for 18, and Germany for 12. France is the number one or two destination for 7 countries and Australia for 6. The other 8 countries listed as top destinations hold that rank for only one or two senders.

International student flows are responsive to geographic proximity and historical ties and cultural affinities between sending and receiving countries, as well as to their relative GNP differential. Most students do their studies in a neighboring country in their geographic region or move inter-regionally to a country that has had close ties to its homeland. France, not surprisingly, attracts students from francophone North Africa and sub-Saharan Africa but also is the number two destination for students from Colombia and Romania. France also receives the largest number of British students after the United States. Some other countries send most of their foreign students to a country in their immediate geographic region (Koreans to Japan; Kazakhstans to Turkey; Americans to Canada; Italians to Austria; and French to Belgium; and Greeks to Italy). Australia's foreign students are mainly from Asia – it is the number one choice for foreign students from Singapore and Malaysia and the number two choice for students from India, Indonesia, and Thailand. Germany attracts more students from Eastern Europe than other European countries but is also the number one or two source for students from some francophone countries (Cameroon, Morocco, and Algeria), Brazil, and Spain. European foreign students, on the other hand, show a strong preference for the United Kingdom. Among the European senders, only Swedish students selected the United States as their number one destination. While flows within Western Europe and North America (Canada and the USA) are between countries at comparable levels of development, elsewhere students flow to countries that have higher levels of GNP.

How do foreign student flows to the leading destinations differ? Just as there is destination selectivity to other types of international migration flows that link sending and receiving countries together into coherent migration systems, so too does selectivity exist with respect to the composition of international student flows in receiving countries. This fact becomes apparent if one looks at the regions of origin for foreign tertiary students for the 21 receiving countries included in *ATLAS*.

Foreign students were classified by their origin geographic regions (Table 5). Asian countries are disaggregated into three separate regions (South East Asia, South and Central Asia, and East Asia) because of the size and diversity of that region. Table 5 shows that most receivers, 16 of them, attract more than half of their foreign students from a single region. The only receivers that could be considered global receivers are the United States, France, Australia, Canada and New Zealand. Given that the two top sending regions for Australia and New Zealand are Asian, that means that only 3 countries, Canada, France and United States receive more than half of their foreign students from different world regions. The United Kingdom receives just over half (51 percent) of its students from Europe but otherwise has a diversified flow. Most European countries receive foreign students from elsewhere in Europe and some may be counting resident foreigners in their totals (see Box 2).

The most diversified flows occur for Canada, France and the United States. Only 25 percent of Canada's foreign students come from a single region (Europe) and 22 percent come from a second region, East Asia. Canada also receives significant numbers of foreign students from all other regions except Oceania. France, in contrast, has a more diversified flow than other European countries but its flow is still more concentrated than student flows to Canada and the United States. Table 5 indicates that France generated a third of its students from Europe and an additional third from North Africa and the Middle East. A quarter of France's students come from sub-Saharan Africa. East Asia is the largest regional sender of students to the United States.

Although the flows to most European countries are highly concentrated and include large numbers of students from other European countries, each European receiver draws students from different countries in the region. The last column in Table 5 shows the five top senders to each receiver. Germany and Austria are more likely than other European countries to receive foreign students from Eastern Europe; Italy and Spain attract students from countries that border on the Mediterranean; and Denmark and the Netherlands draw many of their students from Northern Europe.

The same pattern occurs in other regions. Korea received 68 percent of its foreign students from East Asia, including China, Japan, Russia[10] and Vietnam. And Japan received 78 percent of its foreign students from East Asia, mainly China, Korea, Malaysia and Indonesia. There are exceptions. For instance, the United States is in the top five sender list for Korea and Japan. That pattern occurs because growing numbers of U.S. Study Abroad students go to those countries for language training and members of immigrant communities in the United States often send their children for language or study in other fields at a tertiary institution in their ancestral homelands.

[10] The regional classifications were done by IIE and Russia was classified as an Asia country. That is reasonable given the size of Russia's land mass in Asia but most of Russia's population lives in the European section of Russia. Nonetheless, the foreign students from Russia going to Korea probably do come from Eastern Russia.

Changing composition of foreign student flows: The U.S. case: If trend data were available on student origins for different countries across various years, they would likely show that the regional and country origins of students have changed, particularly to countries that draw large numbers of foreign students from different regions (such as Australia, Canada, France, Germany, New Zealand, and USA) . Since the United States does have data available for several decades and is the largest receiver of foreign students, its trends are examined. The regional origins of U.S. foreign students from the 1979/80 academic year to 2004/05 are shown in Chart 6. In 1979, the Middle East was the origin for a third of U.S. students. All other regions in 1979 accounted for less than 16 percent of foreign students and the smallest number came from Eastern Europe. However, the composition of student flows to the United States changed rapidly in the 1980s as government support for scholarships dried up. For the period shown, the absolute and relative share of foreign students from the Middle East declined until 1994/95 and then stabilized. Declines in relative share also occurred for foreign students coming from Latin America and sub-Saharan Africa in that same period.

Keeping in mind that the absolute number of foreign students coming to the United States was climbing at the same time that relative shares from different regions were changing (compare Charts 5, 6, and 7), trend analysis indicates that big regional gains were experienced by East Asia (mainly China, Japan, Korea, Taiwan) and South and Central Asia (mainly India, Pakistan). The relative share of students from Southeast Asia, on the other hand, has steadily declined since 1984, as has the absolute number since 1994. Eastern Europe is another region that has sent increasing numbers of foreign students to the United States in recent years and its trends have increased both absolutely and relatively. Since 1994/95, growing numbers of students come from sub-Saharan Africa, leading to increasing absolute and relative shares from that region.

Regional trends can disguise the extent to which student flows are highly concentrated. In order to illustrate that concept, data were compiled from IIE's *Open Doors* for various years on the top 15 origins of foreign students from 1954-2004[11]. If a country made it into the top 15 listing in any given year, that country's data for other years was added to the database in order to monitor trends for specific countries from four world regions: Latin America, Europe and Canada, Middle East and Africa, and Asia (Chart 8). Twenty-seven countries were a top 15 sender of foreign students to the United States at some point in the 1954 to 2004 period. Although the Chart is somewhat dense due to the number of countries, it does show both the tendency for flows to change and documents the large increases in foreign students coming from India, China, Korea, and Japan. Chart 8 also documents the decreases in foreign student flows from less well-off countries in Southeast Asia, Africa, and South America that occurred after scholarship funding was reduced. In the case of a few countries, such as Brazil, Colombia, Mexico, and Nigeria those declines eventually

[11] Data were compiled for 1954, 1959, 1964, and 1969 and later years using the same five-year interval.

stabilized and increasing numbers of foreign students are again coming to the United States from those countries.

The evidence that international student mobility is changing. The changes that have occurred in flows of foreign tertiary students to the United States raise the question of whether there is a connection between the increase in cross-border education activities in Australia and elsewhere in Asia and changing composition of flows to the United States and Western Europe. To evaluate that issue, data were compiled on the number of foreign students that ten Asian countries (China, Korea, Japan, Philippines, Indonesia, Malaysia, Thailand, Pakistan, Iran and India) sent to four destinations (Australia, EU – Europe, Japan and the United States) in the 1998 to 2002 period. Ideally, other senders and receivers would have been included but these origins and destinations were the only ones that had the data available for the full period.

Charts 9 and 10 show the absolute and relative trends for the 5-year period. All four destinations received increased numbers of foreign students from the ten countries in the five-year period. The patterns are consistent with other data. The United States received double the number of students that the EU did and over a third more than Japan or Australia (See Chart 9). An examination of trends in relative share for different receivers suggests some modest change (see Chart 10). After 2001, the relative share received by the United States declined slightly while the shares flowing to the EU and Australia increased at a sharper pace. Japan showed no change in its share but may start to experience increases in the years ahead given that it is now actively recruiting students and increasing scholarship support.

A recent survey carried out by JWT Education (Cohen 2005) that was presented at the Australian International Conference in October 2005 suggests that different markets attract different types of students. The JWT survey interviewed 332 undergraduate students from China, Singapore, Malaysia and 7 other countries who were studying in Australia. Eight out of 10 Asian students surveyed in Australia indicated that they did not consider doing their tertiary studies in their homelands and went to Australia both because they could afford to do so and wanted the experience of living in another country. The JWT survey concluded that growing numbers of students saw Australia as a destination of first choice. In 2005, only 11 percent of the students said they would prefer to be in the United States whereas in 2000, a comparable survey reported that 33 percent said they would prefer to be in the United States. The comparable figures for study in the United Kingdom were 8 percent in 2005 versus 15 percent in 2000. Another finding of interest from the Survey was that growing numbers of Asian students were using higher education agents to select the foreign tertiary institution where they would do their studies. In 2005, 77 percent of students indicated that they had used an agent in 2005 compared to 60 percent in 2000.[12]

[12] Education agents are intermediaries that recruit foreign students for study abroad and provide them with transition services (taking the right tests, language training, visas, etc.). Some agents are non-profit organisations set up by governments or universities or the private sector but growing numbers

IV. Summing Up and Unsettled Issues

This Report documents changes that are underway in both cross-border higher education (CBHE) and international student mobility. CBHE initiatives are growing rapidly that will allow students in different countries to do their tertiary studies in their homelands or neighboring countries in their regions. Foreign student numbers are also rising rapidly and it is unlikely that they will diminish even as CBHE initiatives grow. Indeed given the rapidly rising demand for higher education in Asia, Africa, Latin America and elsewhere, a more likely scenario would be that providers of higher education will be able to attract foreign students to their domestic campuses at the same time that they are expanding their education services abroad. This argument is premised on the assumption that even as higher education capacity grows internationally in the years ahead, a small number of universities will continue to be identified as "the best" in their business and, therefore, will attract the brightest students globally to their campuses. However the elite universities of the future may not be the same ones of today that are located mainly in countries of North America and Western Europe. If countries are willing to make considerable investments in required to university infrastructure, including setting up state-of-the-art labs, and provide high salaries and research funding to scientists, they will be able to attract the world's best scientists and thereby raise the stature of their institutions. However, given the high costs of developing the requisite infrastructure, it is likely that the leading universities will continue to be located in North America and Western Europe in the years ahead.

While there are strong debates about the costs and benefits of other types of international migration flows, particularly those of low skilled labor migrants, refugees, and asylum seekers, nobody seems to be very concerned about international student mobility or the international migration of high skilled workers. Generally receiving countries see these flows as beneficial to their economies and are opening their doors to foreign students and high skilled labor. Countries in North America, Europe and Oceania/Asia are already competing for foreign students and taking steps to encourage those students to remain after completing their studies in order to increase their pool of high skilled workers. Universities also see foreign students as a source of foreign exchange and university revenue. U.S. universities also want foreign students because insufficient numbers of nationals are available to fill the laboratory and research posts opening up by increasing funds available for science and technology research. The business sector wants foreign students because they too see people in that pool as a future source of skilled labor.

Several countries beyond North America and Europe accept the view that foreign students are good for their economies and foreign relations and are taking

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are for-profit agencies that charge prospective students high fees for their services. IDP Education Australia is an example of a higher education agent that has offices worldwide and channels students to Australia higher education institutions. Internet searches suggest that there are hundreds of comparable agencies albeit most of them are not well known.

steps to improve and expand their higher education services by setting up CBHE initiatives with foreign universities or allowing foreign universities to set up branch campuses and issue degrees in their countries. Dubai, Qatar, Malaysia, Singapore, and South Africa have encouraged branch campus arrangements in recent years and other middle-income countries are encouraging higher education partnerships too, particularly targeted study programs in specific fields. Since many low-income countries have weak tertiary capacity, as capacity expands at other centers in their region, they too should benefit because they will be able to send their students to study at centers closer to their homelands that cost less than post-secondary study in North America or Europe. Currently few students from low-income countries are participating in student mobility flows.

At the same time that middle-income and high-income countries are seeking to broaden their tertiary capacity, they are continuing to send large numbers of their own students to North America and Europe for study in science and technology fields with the objective in mind that they will return and staff the expanding teaching and research programs in their home countries. Indeed the data on student trends suggest that emigration rates and GDP per capita are highly correlated. Today's post-secondary students flowing to Australia, Europe, and North America are likely to come from another country in their region or, if they come from a greater distance, to be from China, Korea, India, Japan, Malaysia , Morocco, Singapore, or Taiwan. Among the largest senders, only China and India are low-income countries, but they have large and growing middle classes that go abroad to do their higher education studies.

The one criticism often directed at international student mobility is that it leads to a brain drain for the sending country and a brain gain for the receiving country. Several articles in a recent World Bank publication (Ozden and Schiff 2006) (Docquier and Marfouk 2006) provide a useful overview of the issues in this debate and advance the argument that "brain circulation" may be a more apt term than brain drain to depict what happens when tertiary students do not return or when other high skilled workers emigrate. Lindsay Lowell (2003) argues that two conditions must be met for brain drain to occur: a significant loss of highly education population and adverse economic consequences for the sending country but data are insufficient to assess whether a drain is occurring. The limited data that are available suggest that return rates vary by country. For instance, Tremblay (2005) compiled data on the return rate of Chinese students by destination and found that whereas 48 percent returned after studying in France, only 14 percent returned after study in the United States. That study and other evidence that students in some fields are more likely to return than others suggests that steps could be taken by sending and receiving countries to increase return rates if the latter are perceived as too low.

Another argument against brain drain has been advanced by Lincoln Chen and colleagues (Akire and Chen 2004, Chen and Boufford 2005). They argue that the migration of medical doctors from poor to rich countries deters global health and, therefore, that doctors and nurses should not be encouraged to migrate and even argue that countries should restrict outflows of health workers. They criticize high-income

countries that accept health professionals from low-income countries, arguing that they make it more difficult to achieve health goals set by international agencies because the supply of health professionals in many countries is small and decreasing rapidly. Hamilton and Yau (2004) provide a more tempered view of why health professionals leave developing countries and argue that steps should be taken by senders to retain their health workers. A recent book by Mireille Kingma (2006) offers another view of international nurse mobility and shows that globalization forces are the root cause.

There is growing evidence that countries are increasingly competing for high skilled labor and most countries are making it easier for skilled professionals and business people to obtain residency visas. Essentially an open-border regime is emerging with respect to skilled labor. While the policy regimes of countries are taking different approaches toward the admission of skilled labor, most countries are making it easier for professional and business people to enter their countries to live and work and to renew their visas if they to remain. Foreign students are a part of this pool and will continue to benefit by having increased choices regarding whether to stay or return home after they complete their studies.

This returns us to the question of how the volume and direction of international student mobility will change as internationalisation of higher education increases in the years ahead. It is clear that there is a high demand for higher education in non-OECD countries and that demand will increase rapidly through 2025 (see Table 2). International student mobility will also increase but growing numbers of students will be migrating to countries closer to home. Although the evidence is strong that there continues to be a high demand for the high-level education in science, business and technology now provided by an elite group of universities, students flowing to those destinations are likely to come from the "better-off" third world countries that are simultaneously seeking to improve the quality of education offered in their tertiary institutions. Finally, as the numbers of tertiary students expands in non-OECD countries, tertiary institutions in OECD countries are likely to move into those markets in order to enhance their international stature and maintain their resource bases. While countries and universities may increasingly compete for foreign students, there are sufficient numbers of them available to keep all institutions occupied for several years.

V. For Further Reading

The Centre for Educational Research and Innovation (CERI) at OECD published a book in 2004 entitled *Internationalisation and Trade in Higher Education: Opportunities and Challenges* (OECD 2004a) that provides an excellent overview of cross-border education and how it is shaping higher education trends in Asia-Pacific, Europe, and North America. The book also looks at implications of these developments for access and equity, cost and funding, and quality and capacity building. An article by Anil Hira (Hira), entitled "The Brave New World of International Education" illustrates that changing demographic trends in OECD countries encourage universities in those countries to look for students in developing

countries with growing populations. Hira argues that higher education is becoming a major international industry and identifies several universities that have established campuses or programs in other countries. The *World Population Monitoring 2003* (United Nations Population Division 2005)focused on population, education and development and has a chapter on international migration for education that provides an overview of foreign student mobility drawing on data from UNESCO, the Institute of International Education, and various governments. Karine Tremblay's published an article entitled "Academic Mobility and Immigration" (2005) that gives an overview of student mobility to OECD countries and shows that while non-return of students often occurs, the volume of non-return varies depending on the comparative employment opportunities in origin and destination countries and the receiving country policy framework. In addition, even if students do not return, brain circulation between students and their homelands allow technology transfers to occur. Remittances and capital investments by former nationals also further development in migrants' homelands.

VI. Acknowledgments

I gratefully acknowledge the help of my colleague, Douglas Gurak, in the preparation of this Report. He generated the projection of the future size of the 20-24 age cohorts in OECD and non-OECD countries and assisted with preparation of the Charts and tables. I also gratefully acknowledge the support of Linda Warner who helped prepare spreadsheets and other material from the *Atlas of Student Mobility* (Davis 2003).database.

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Table 1: Examples of Different Types of Transnational Higher education Activity

Educational service provided by universities	Type of arrangements set up in another country to deliver service	Credit and Degree Mode	Selected program examples
Study Abroad programs	University may set up an office in the foreign country with staff and faculty (permanent or temporary) that allows it to deliver the education directly or it may contract with faculty or a university in the host country to provide a study program for their students.	Students receive full credit from their own university	1. Socrates/Erasmus program was set up by the European Commission to allow students to study abroad for 3-12 months. 2. *IIE Passport: Academic Year Abroad 2006,* 35th Edition lists 6,000 Study Abroad programs.
Program Partnerships	Universities in 2 or more countries collaborate on a specific academic program.	Each university awards credit and degrees to their students enrolled in the program.	1. Trium Executive MBA 2. Cornell-Nanyang Institute of Hospitality Management (Cornell University and Nanyang Technological University); a Master's level program. 3. Universitas 21 Global has set up a joint program with Indian Institute of Management, Bangalore, and will give students a Postgraduate Certificate in Entrepreneurship and Family Enterprise jointly.
Branch or Offshore Campuses	Foreign university sets up a campus in another country to deliver same degree program as offered at home, using teaching methods that are the same as used in origin country. International campuses are integrated into foreign universities regular academic, administrative and resource systems.	Degree awarded in the name of the foreign institution	1. Monash University Australia has set up branch campuses in Malaysia (Monash University Malaysia) and South Africa (Monash University South Africa. 2. Cornell University has set up Weill Cornell Medical College in Qatar in collaboration with Qatar Foundation and will award medical degrees. 3. Universities of Edinburgh, Birmingham and Manchester have set up British University in Dubai and will award Master's degrees in several fields.
Distance Learning	All or most of the study program is delivered via the internet or by videoconferencing, videocassettes and CD-Rom. Both non-profit and for-profit universities offer online education. Some online universities offer combinations of online and face-to-face study.	Credit and degrees awarded by online institution.	1. American Inter-Continental University (AIU) provides online education leading to Associate, Bachelor and Master's degrees. Has 5 U.S. campuses & a campus in London where students can complete their studies. 2. Universitas 21 Global based in Singapore and affiliated with Thomson Learning offers online MBA
Corporate Training	Course developed by corporation or university is franchised to an institution in other countries to deliver	Credit or certification given by franchiser	1. Microsoft's Certified Technical Education Centres 2. e-Cornell University has twinned up with hotel chains (Shangri-La Hotels; Swisshotel; Taj Hotels) to provide professional and executive development
Outward Bound	University or school trains students for export to foreign country where there skills are in demand.	Students receive degree from offshore campus	St George Medical School, Grenada, trains medical doctors and other health professionals for the U.S. health field.

Table 4: Descriptive Statistics on Volume, Emigration Rates and Top Destinations for the Largest Sending Countries

Sending Country	# Abroad	Population (millions)	Emigration Rate (per 10,000)	Top Country	% in Top Country	2nd Top Country	% in 2nd Country	GDP Per Capita
Kazakhstan	20,938	16.2	12.9	Russia	88.3	Turkey	93.7	5,871
Algeria	15,531	30.3	5.1	France	87.0	Germany	89.2	5,308
India	66,621	1008.9	0.7	USA	82.1	Australia	88.6	2,358
Ireland	15,300	3.8	40.3	UK	79.6	USA	86.7	29,866
Canada	32,177	30.8	10.4	USA	78.6	USA	88.0	27,840
Taiwan	37,371	22.3	18.7	USA	76.4	UK	87.2	26,700
Japan	64,125	127.1	5.0	USA	72.5	UK	82.1	26,755
Mexico	15,264	98.9	1.5	USA	69.9	Spain	79.4	9,023
Romania	10,199	22.4	4.6	USA	67.2	France	89.5	6,423
Singapore	13,392	4	33.5	Australia	64.6	UK	99.1	23,356
Colombia	10,735	42.1	2.5	USA	63.0	France	71.3	6,248
Pakistan	11,192	141.3	0.8	USA	62.1	UK	79.2	1,928
Korea	77,983	46.7	16.7	USA	58.6	Japan	82.0	17,380
Thailand	19,232	62.8	3.1	USA	57.1	Australia	71.2	6,402
Austria	11,012	8.1	13.6	Germany	55.6	UK	66.8	26,765
Turkey	42,690	66.7	6.4	Germany	55.4	USA	81.1	6,974
Poland	17,517	38.6	4.5	Germany	53.3	USA	67.1	9,051
Brazil	17,127	170.4	1.0	USA	51.6	Germany	60.0	7,625
Greece	54,881	10.6	51.8	UK	51.5	Italy	66.3	16,501
Morocco	41,296	29.9	13.8	France	51.0	Germany	66.0	3,546
China	126,519	1275.1	1.0	USA	47.4	UK	55.5	3,976
Ukraine	13,445	49.6	2.7	Russia	46.6	Germany	74.1	3,816
Indonesia	27,616	212.1	1.3	USA	42.1	Australia	75.7	3,043
Iran	15,479	70.3	2.2	Germany	41.1	USA	53.0	5,884
Cameroon	10,330	14.9	6.9	Germany	40.1	France	71.8	1,703
Bulgaria	13,104	7.9	16.6	Germany	38.3	USA	63.2	5,710
UK	21,966	59.4	3.7	USA	37.1	France	51.4	23,509
USA	31,541	283.2	1.1	UK	36.6	Canada	48.7	34,142
Sweden	13,628	8.8	15.5	USA	33.7	UK	62.9	24,277
Hong Kong	25,414	6.9	36.8	UK	32.6	USA	62.6	25,153
Norway	12,708	4.5	28.2	UK	30.4	USA	46.9	29,918
Portugal	10,109	10	10.1	France	30.1	UK	52.4	17,290
Malaysia	32,958	22.2	14.8	Australia	29.9	UK	57.8	9,068
Spain	26,182	39.9	6.6	UK	27.5	Germany	48.8	19,472
Netherlands	11,768	15.9	7.4	Belgium	22.9	UK	43.6	25,657
Germany	63,108	82	7.7	UK	21.0	USA	37.0	25,103
France	60,141	59.2	10.2	UK	20.6	Belgium	37.0	24,223
Italy	48,394	57.5	8.4	Austria	14.6	Germany	28.6	23,626

Source: IIE Atlas, 2003.

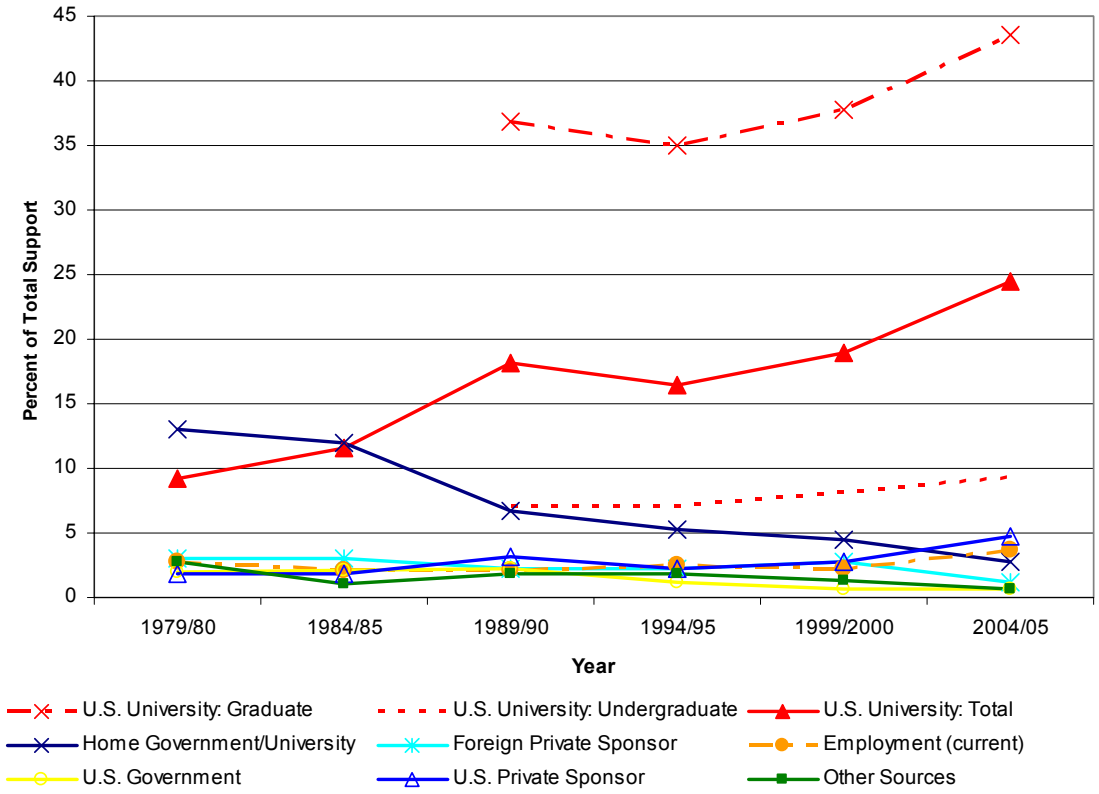
Table 5: Region of Origin of Foreign Tertiary Students for 21 Countries That Reported Data on Foreign Students to IIE Atlas (cerca 2000)

Destination	Region of Origin (percent)									Top 5 Senders (ranked from largest)
	Oceania	Latin America & Caribbean	North America	Europe	North Africa & Middle East	Sub-Saharan Africa	South East Asia	South & Central Asia	East Asia	
USA	1	12	5	17	5	5	7	13	35	China, India, Japan, Korea, Taiwan
UK	1	3	7	51	5	7	8	4	14	Greece, Germany, France, Ireland, United States
Germany	0	3	2	64	11	5	2	2	10	Turkey, Poland, China, Greece, Russia
France	0	5	3	32	31	24	2	1	4	Morocco, Algeria, Niger, Germany, Somalia
Australia	2	1	5	8	1	2	48	10	24	Malaysia, Indonesia, Singapore, Hong Kong, India
Japan	1	2	2	4	1	1	9	3	78	China, Korea, Malaysia, Indonesia, United States
Spain	0	25	2	58	10	3	0	0	1	France, Italy, Germany, Morocco, United Kingdom
Belgium	0	2	1	61	17	15	1	1	2	France, Morocco, Italy, Netherlands, Congo DPR
Canada	1	9	12	25	10	10	6	5	22	France, United States, China, Hong Kong, Japan
Austria	0	1	1	86	5	2	0	1	4	Italy, Germany, Bulgaria, Turkey, Hungary
Switzerland	0	4	2	82	4	4	1	1	3	Germany, Italy, France, Spain, Austria
Italy	0	4	1	77	9	6	0	1	1	Greece, Albania, Croatia, Switzerland, Cameroon
Sweden	1	3	6	76	5	3	1	1	4	Finland, Germany, Norway, France, United States
Turkey	0	0	0	58	9	4	0	27	2	Cyprus, Azerbaijan, Turkmenistan, Greece, Kazakhstan
Netherlands	0	8	2	60	19	3	4	1	2	Germany, Morocco, Belgium, Turkey, Suriname
Portugal	0	17	5	21	0	55	0	0	1	Angola, Cape Verde, Brazil, France, Mozambique
New Zealand	14	1	10	10	0	1	28	3	32	Malaysia, China, United States, Japan, Korea
Denmark	1	2	3	79	6	4	1	2	2	Norway, Iceland, Sweden, Germany, Bosnia & Herzegovina
Ireland	1	1	35	34	8	4	12	2	2	United States, United Kingdom, Malaysia, Germany, Canada
Korea	1	3	9	6	1	1	7	5	68	China, Japan, United States, Russia, Vietnam
Jordan	0	0	1	3	82	1	12	0	1	Palestinian Authority, Yemen, Malaysia, Syria, Saudi Arabia

Note: The highest region of origin is shaded in yellow but the second and third region of origin is also shaded in blue if more than 20 percent of students were from that region.

Source: Davis, Todd M. 2003. Atlas of Student Mobility. New York: Institute of International Education

Chart 1: Non-Family Sources of Support for Foreign Students in the United States



Source: Institute of International Education, Open Doors (New York), various years. Family and personal resources, the largest sources of foreign student funding in the USA, are omitted from this graph. Primary support is not broken down by academic level prior to 1989. The line for total U.S. university support includes support for both graduate and undergraduate students.

Chart 2: Trends in Number of Foreign Tertiary Students, 1998-2003 (based on country reports to OECD)

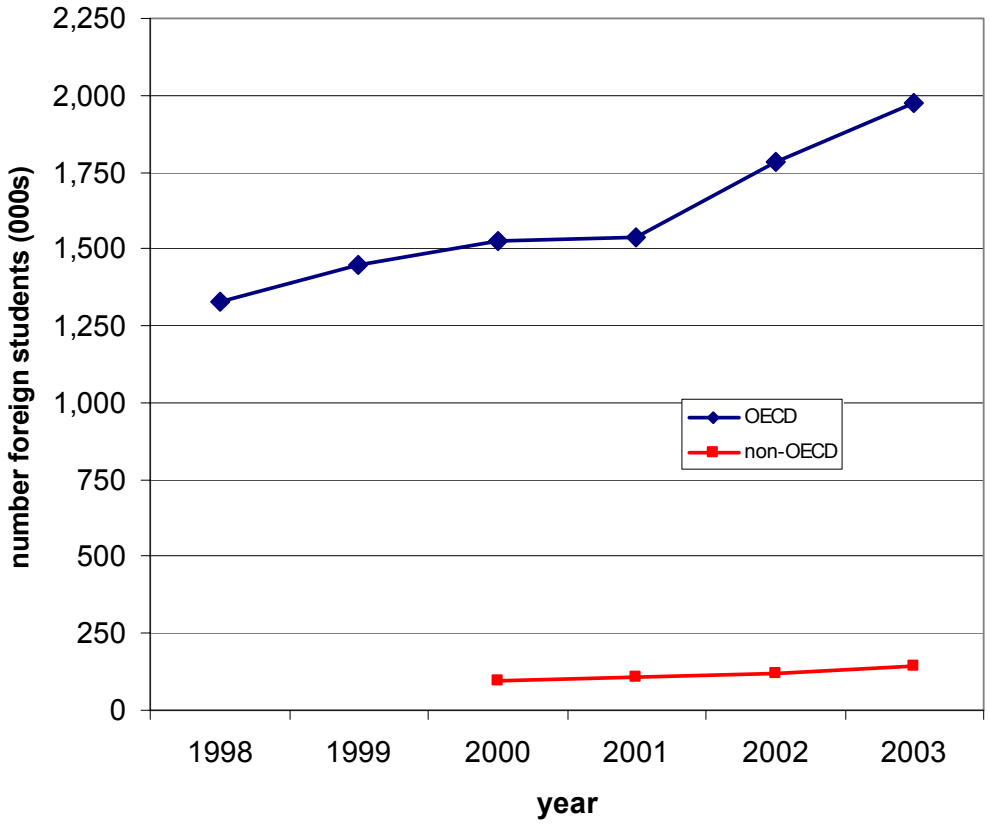
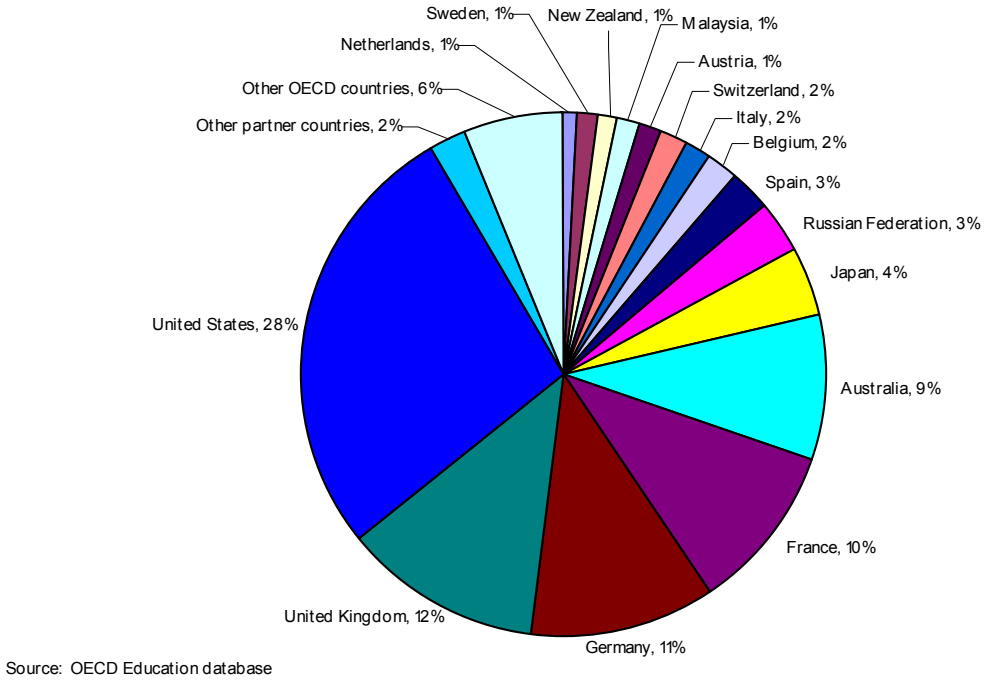


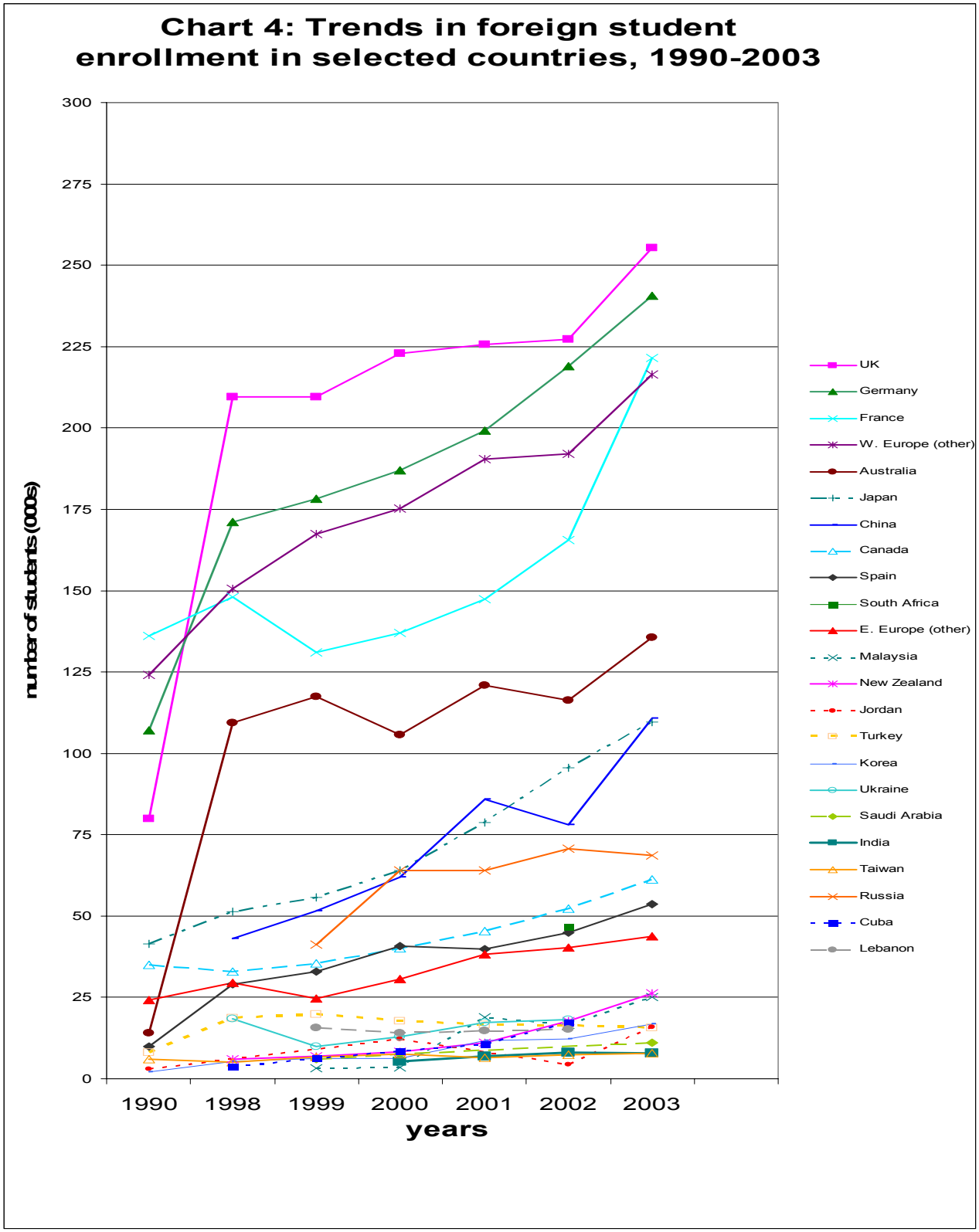
Chart 3: Distribution of foreign students by country of destination (2003)

Percentage of foreign tertiary students reported to the OECD who are enrolled by country of destination (total number of foreign students was 2.12 million)

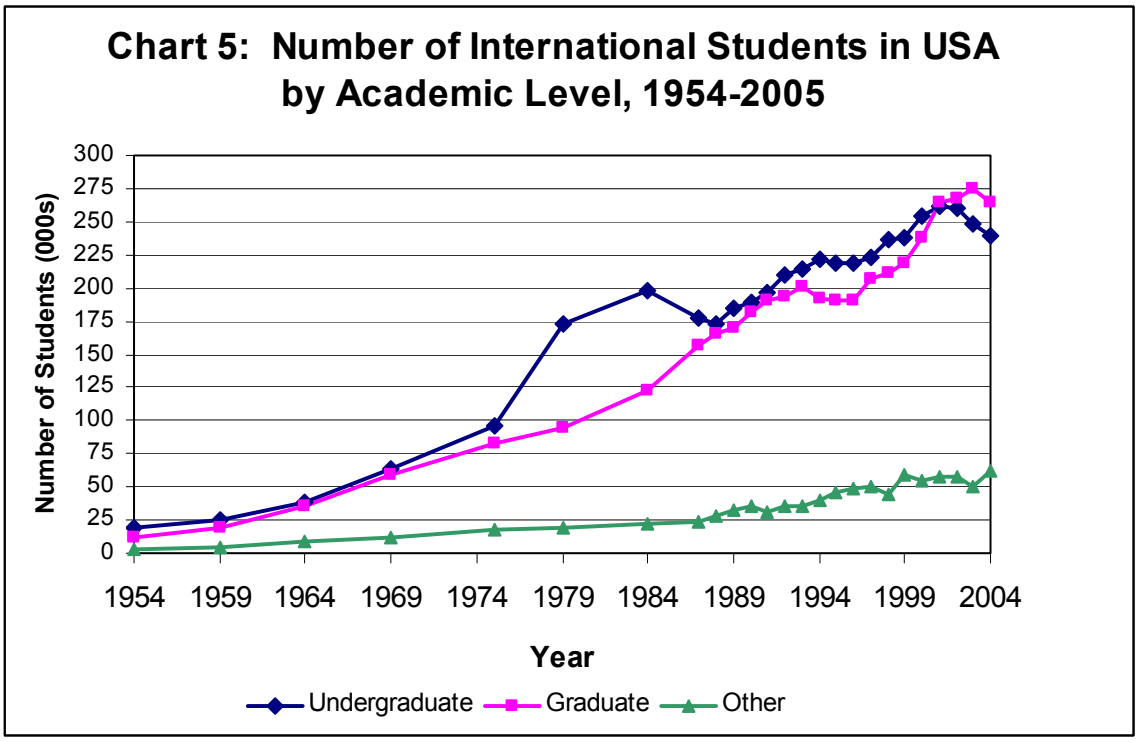


Source: OECD Education database

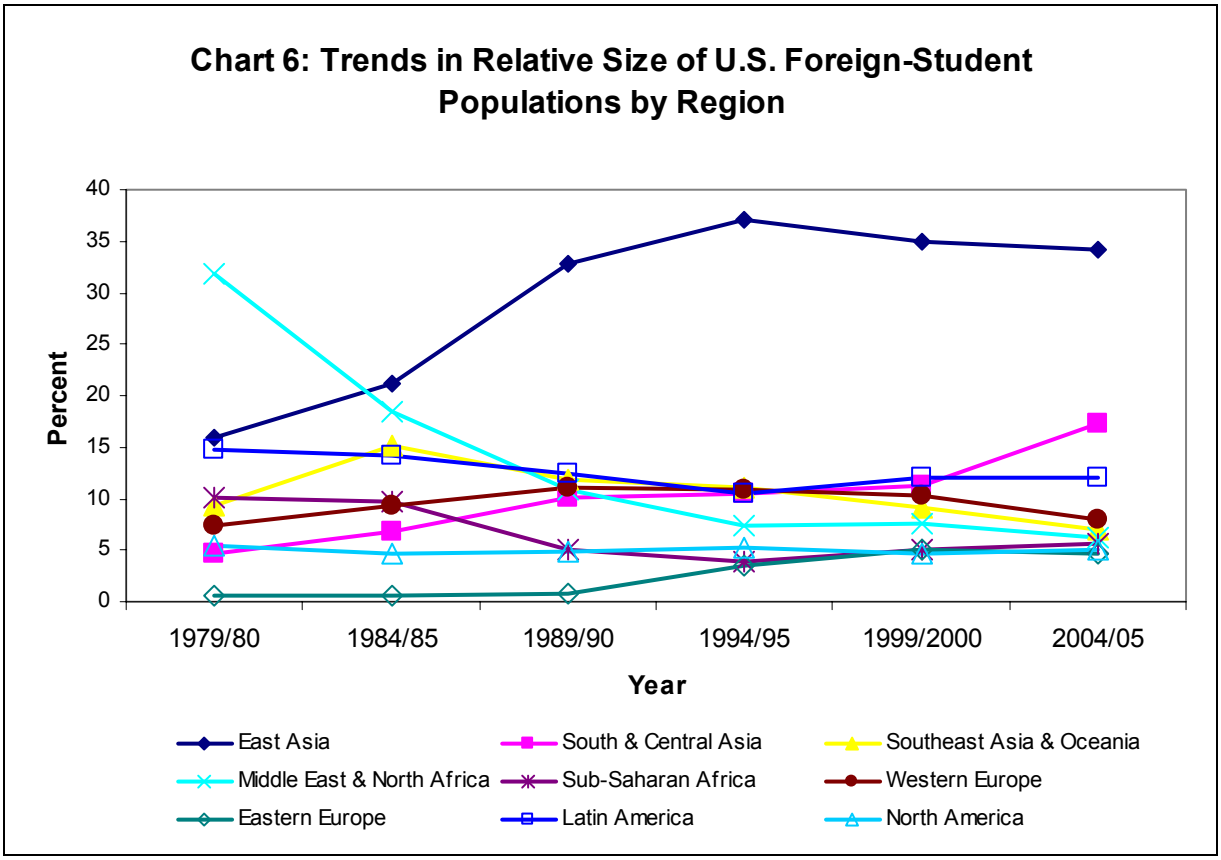
Source: http://www.oecd.org/dataoecd/1/44/35287269.xls



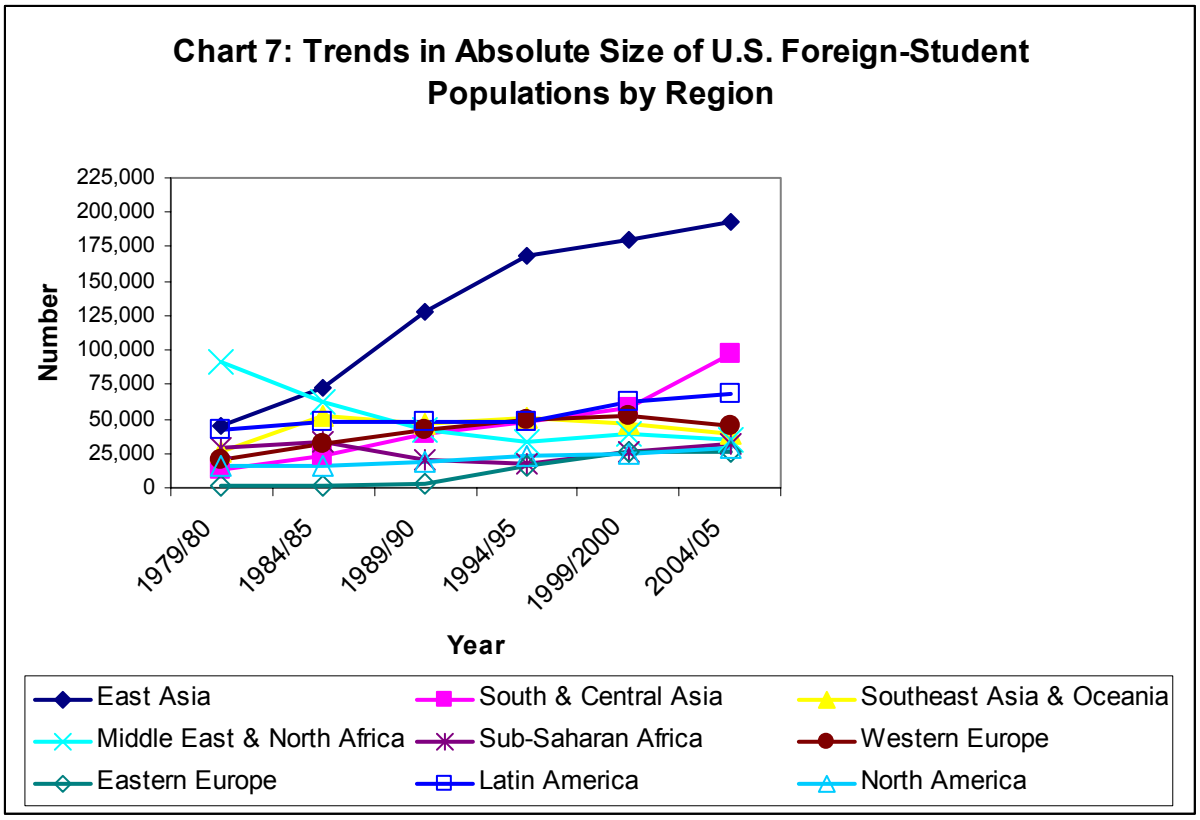
Source: USA line is not shown in chart because the large gap between it and other countries in number of foreign students compress scale differences that can be shown for other countries. In 2003, USA had more than double the number of foreign students that the UK had. See Appendix B for source of data on each country.



Source: *Open Doors 2005: Report on International Educational Exchange.* Annual reports, 1954 to 2004. New York: Institute of International Education.

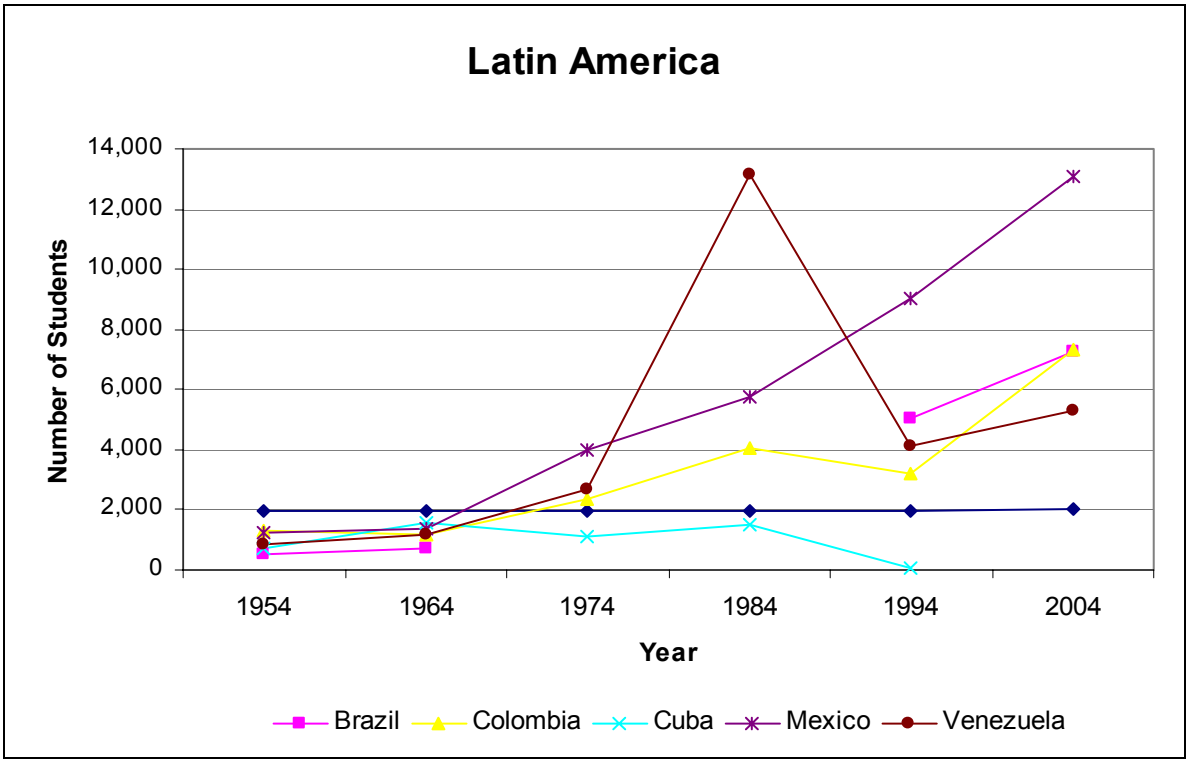


Source: *Open Doors 2005: Report on International Educational Exchange.* Annual reports, 1954 to 2004. New York: Institute of International Education.



Source: *Open Doors 2005: Report on International Educational Exchange.* Annual reports, 1979 to 2004. New York: Institute of International Education.

Chart 8: Trends in Regional Origins of U.S. Foreign Students



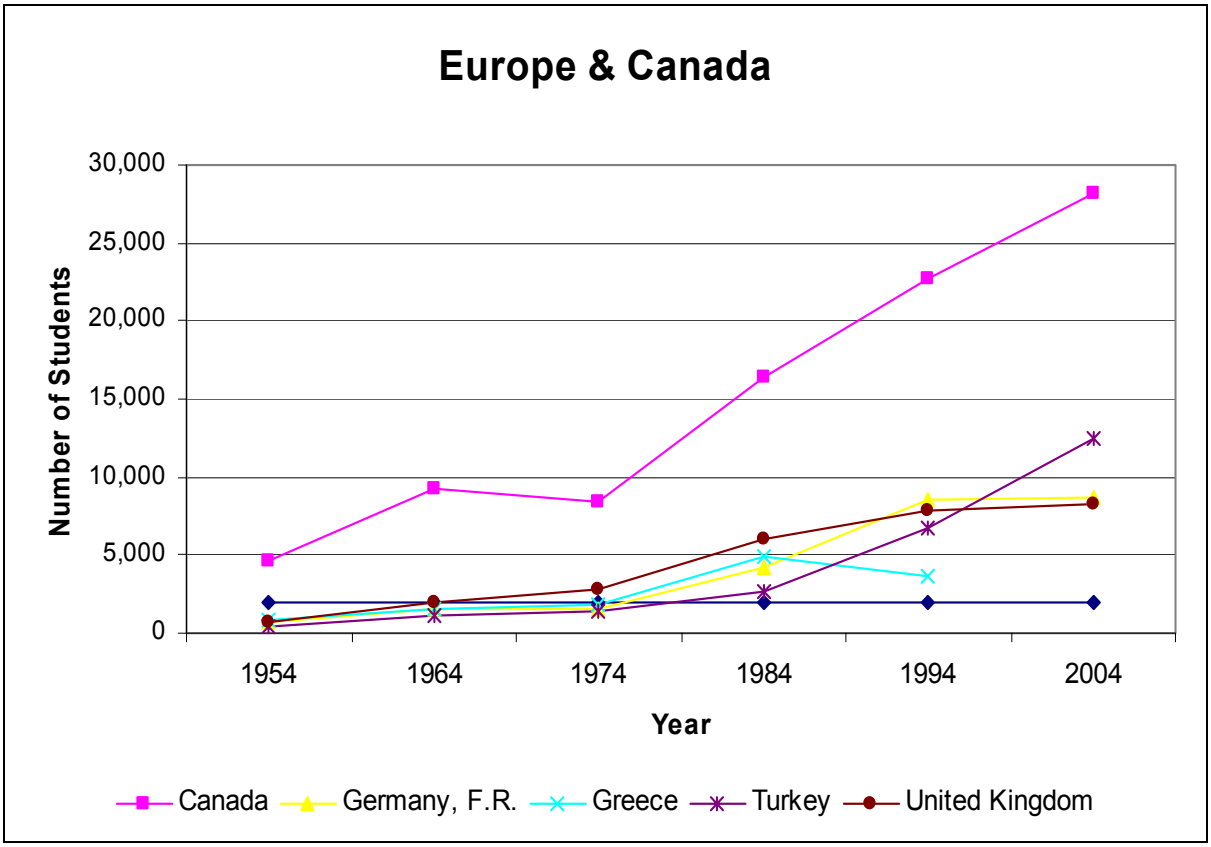
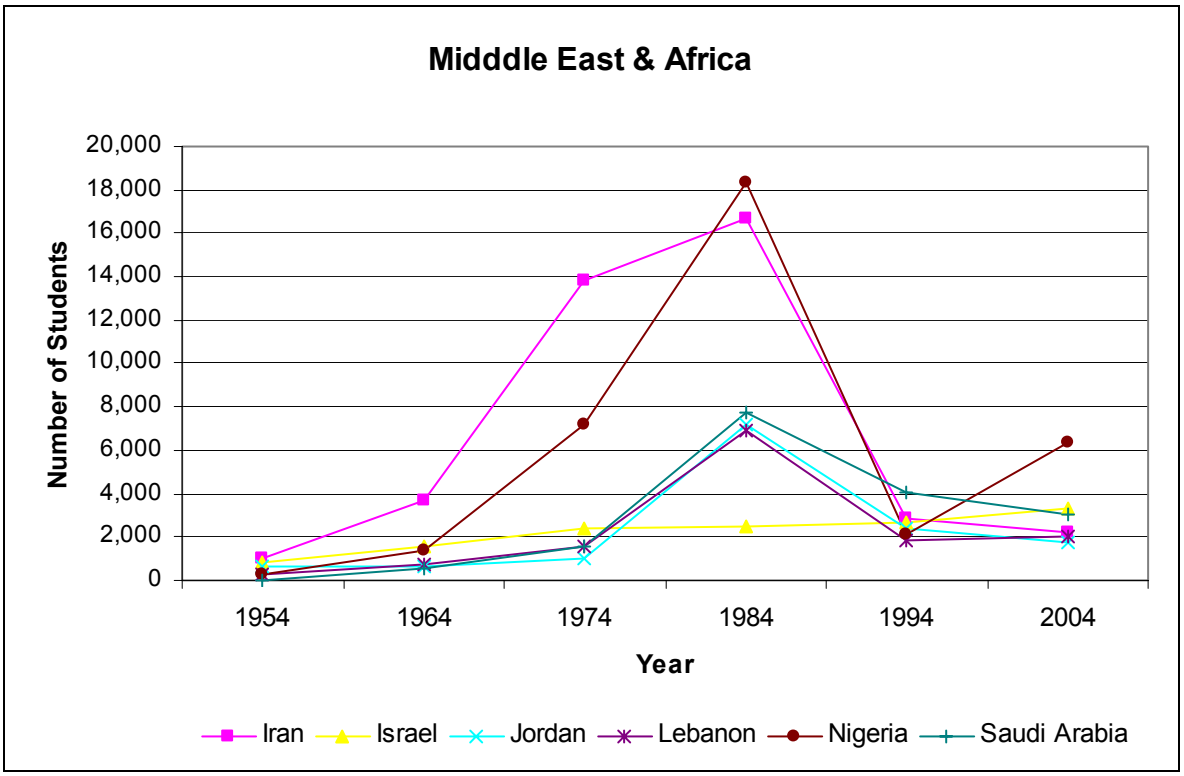
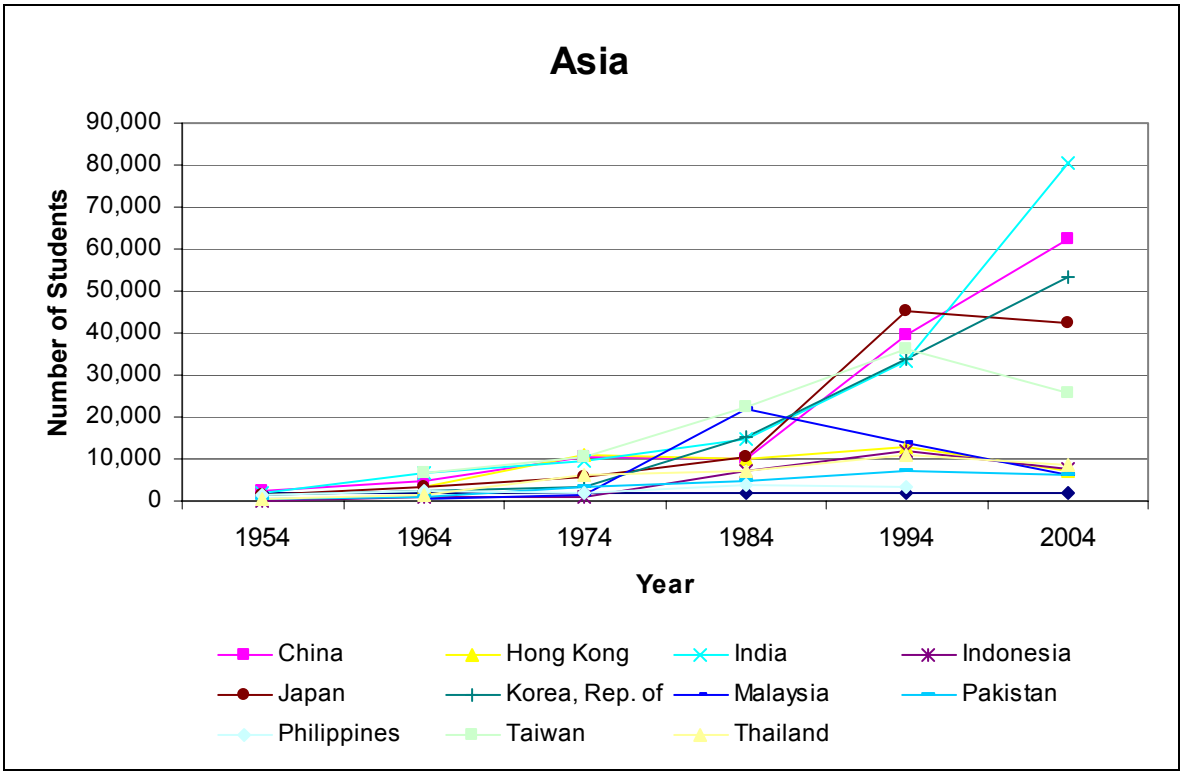
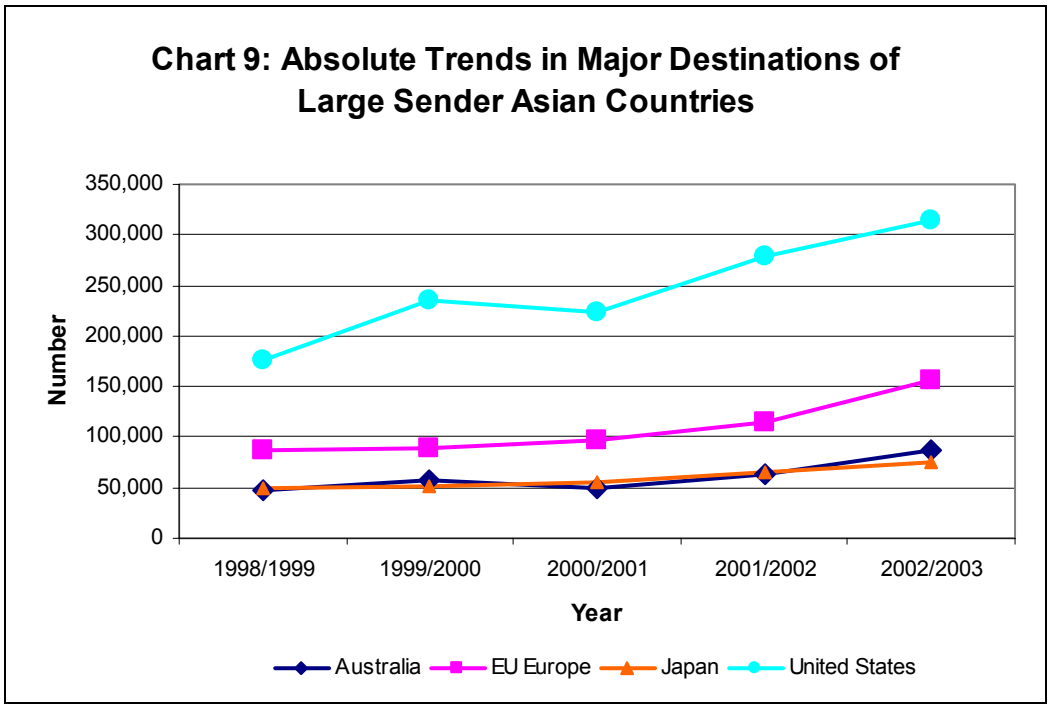


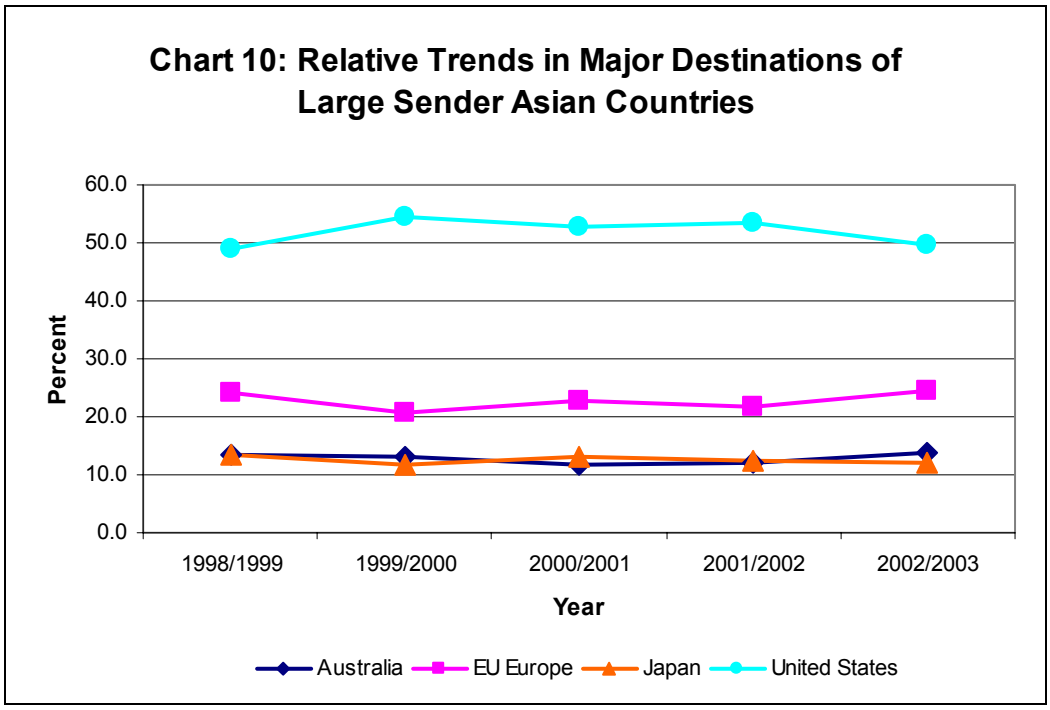
Chart 8: Trends in Regional Origins of Foreign Students in the USA (continued)





Source: *Open Doors 2005: Report on International Educational Exchange.* Annual reports, 1954 to 2004. New York: Institute of International Education.





Source: *Open Doors 2005: Report on International Education Exchange.* Annual reports, 1998-2002, New York: Institute of International Education. Australian Education International (AEI), *Research Snapshots*, "Comparison of Major English Speaking Destinations for Top Five Source Markets" and "International Student Enrolments in Higher Education in 2005". *AEI Research Snapshots* are available online at http://aei.dest.gov/au/AEI/PublicatonsAndResearch/Default.htm.

Appendix A: Selected listing of universities that have partnership or branch campuses programs abroad

Source University	Source Country	Host University or Partner	Host Country	Year	Description	Internet Address
Monash University	Australia	Monash University South Africa	South Africa	2001	Offers comprehensive university studies in different fields. It is located in Ruimsig, near Johannesburg.	http://www.monash.ac.za/
Monash University	Australia	Monash University Malaysia	Malaysia,	1998	Offers a comprehensive university curriculum and awards undergraduate and graduate degrees. Monash University set campus up on site of former school.	http://www.monah.edu.my/
French University of Egypt	France AUF		Egypt	2003	New university that is supported by French consortium and private source/host country investment	http://weekly.ahram.org.eg/2002/575/eg5.htm
HEC School of Management and Institute French Fashion Institute	France	Tsinghua University	China	2006	Plan to offer Advanced Management Program in Fashion & Luxury that will cover Globalization and Innovation, Product Strategy, Communication & Retail, Value Chain and Business Models, Brand Management, and Luxury & Fashion Culture	http://www.hec.fr/hec/eng/about/press_release.html
Bhavnagar University	India	Mauras College of Dentistry	Mauritius	2003	Offers post-graduate programs to students in Indian Ocean sub-region	
Universitas 21 Global	Singapore	Indian Institute of Management Bangalore	India	2005	Joint certificate program will be delivered via online sections and face-to-face classes. Program will be offered for part-time study and result in the award of a joint Postgraduate Certificate in Entrepreneurship and Family Enterprise from the Indian Institute of Management Bangalore and Universitas 21 Global.	http://www.u21global.edu.sg/portal/corporate/html/press-2005-12-22.htm
Asian Institute of Technology	Thailand	AIT Centre Vietnam, Hanoi	Vietnam	1993	Provides postgraduate education, short-term training courses and language training. AIT was set up in 1960 as the South East Asian Treaty Organisation Graduate School of Engineering to train nationals from South East Asians. It receives funding from governments and foundations.	http://www.aitcv.ac.vn/
Asian Institute of Technology	Thailand	Ho Chi Minh City University of Technology	Vietnam	2006	Graduate diploma program in Management Development was set up jointly by AIT-Bangkok and Ho Chi Minh University with funding from the Swiss and Vietnamese governments.	http://www.aitcv.ac.vn/
United World College of the Atlantic	UK	9 United World Colleges	Canada, Hong Kong, India, Italy, Norway, Singapore, Swaziland, USA, Venezuela	various	Provides pre-university and undergraduate education. Calls itself a global educational movement to create “responsible citizens, politically and environmentally aware, and committed to the idea of pece and justice, understanding and cooperation, and the implementation of these ideals through action and personal example.”	http://www.uwc.org/

Appendix A: Selected listing of universities that have partnership or branch campuses programs abroad

Source University	Source Country	Host University or Partner	Host Country	Year	Description	Internet Address
University of Edinburgh University of Birmingham University of Manchester	UK	British University in Dubai	UAE	2004	Master's degree program. Research-based postgraduate university offering programs of a British standard. Birmingham offers training in education and English language training. Manchester offers training in engineering. Edinburgh offers courses in management, IT, and data analysis.	http://www.aaps.ed.ac.uk/Committees/APC/Meetings/2002-03/030226/OriginalProposal.htm
Alliant International University	USA	Alliant Mexico	Mexico	?2002	Awards Bachelors and Masters degrees in applied social science (counseling psychology, education, international relations, bilingual education) and business administration. Website says Alliant Mexico students can transfer easily Alliant campuses in USA. Classes at Alliant Mexico are taught in English. Only 40% of Alliant Mexico students come from Mexico; 20% are from Europe; 20 % from other Latin America, Asia & Africa, & 20% from USA.	http://www.alliant.edu/wps/wcm/connect/website/Home/Campuses/Mexico+City+Campus/
American Inter-Continental University	USA	American University in Dubai	UAE	1995	Awards Associate, Bachelor degrees and Masters degrees	http://www.aud.edu/main.htm
American University	USA	ABTI-American University of Nigeria, Yola	Nigeria	2004	Career-oriented. IT, business, Arts & Sciences; international board and faculty; create regional training center	http://www.abti-american.edu.ng/
Carnegie Mellon University	USA	Carnegie Mellon University Qatar	Qatar		Undergrad degrees in business and computer science. Students follow same curriculum as their counterparts in USA. Qatar Foundation collaboration	http://www.qf.edu.qa/output/page414.asp
Cornell University	USA	Nanyang Technological University	Singapore	2005	Master's degree program in management and hospitality. Set up by Cornell's School of Hotel Administration and NTU's Nanyang Business School.. Will serve as a regional training center in hospitality industry for Asia.	http://www.news.cornell.edu/Chronicle/04/11.11.04/HotelSchool-Nanyang.html
Cornell University	USA	Weill Cornell Medical College in Qatar	Qatar	2001	2-year pre-med program followed by 4-year Medical Program that replicates the curriculum offered at Weill Cornell in New York. All teaching is by Cornell faculty. Students receive a Doctor of Medicine degree from Cornell University. Qatar Foundation collaboration	http://www.qatar-med.cornell.edu
Georgetown University	USA	Georgetown University School of Foreign Service	Qatar	2005	Bachelor of Science degree in foreign service. Course of study covers government, economics, literature, philosophy, and theology. Qatar Foundation collaboration.	http://www3.georgetown.edu/sfs/qatar/
Johns Hopkins University	USA	National University of	Singapore		Offers Johns Hopkins-National University of Singapore Graduate Training Program in Molecular and Cellular	http://www.bms.jhmi.edu/Sin/English/Education/Programs/Immunology/

Appendix A: Selected listing of universities that have partnership or branch campuses programs abroad

Source University	Source Country	Host University or Partner	Host Country	Year	Description	Internet Address
		Singapore			Immunity. Degree will be awarded separately by NUS and Hopkins to participating students..	
New York University Stern School of Business	USA	London School of Economics and Political Science & HEC School of Management, Paris	France UK	2000	Trium Global Executive MBA program sponsored by 3 top universities. Instruction is provided in 6 intensive educational modules in 5 international locations, including China. Program requires 16 months to complete but modules can be taken when offered in 3 year period.	http://www.triumemba.org/
Suffolk University	USA	Local business school	Senegal	1999	Offers Bachelor of Science in Business Administration.	http://www.google.com/u/Sawyer?q=Senegal+&sa=Search+Sawyer
Senghor Alexandrie University	USA	Senghor Alexandrie University	Egypt		Multilaterally funded management training program.	
Texas International Education Consortium (TIEC)	USA	Prince Muhammad University, Al-Khobar	Saudi Arabia	2006	32 USA university collaboration being coordinated by TIEC to operate 17 academic programs all taught in English.	http://www.tiec.org/intopps.html

Appendix B: Number of Foreign Students Enrolled in Tertiary Education in Selected Countries, 1990 to 2003[a]

	1990[b]	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
Australia[c]	14,000	109,437	117,485	105,764	120,987	116,236	135,683
Austria[d]	18,000	28447	29,819	30,382	31,682	28,452	31,101
Belgium[e]	27,000	na	36,136	38,799	38,150	40,384	41,856
Canada[f]	35,000	32,890	35,543	40,033	45,315	52,235	61,303
China[g]	na	43,000	51,600	61881	85,829	78,000	110,844
Cuba[h]	na	3,740	6,169	8,626	10,700	17215	
Czech Rep.[i]		4,074	4,583	5,698	7,750	9,753	12,474
Denmark[j]	7,000	11,022	12,325	12,871	12,547	14,480	18,120
France[k]	136,000	148,000	130,952	137,085	147,402	165,437	221,567
Germany[l]	107,000	171,151	178,195	187,033	199,132	219,039	240,619
Hungary[m]		6,636	8,869	9,904	11,242	11,783	12,226
India[n]	na	na	na	5,323	6,988	8,145	7,738
Ireland[o]	na	6,904	7,183	7,413	8,207	9,206	10,201
Italy[p]	21,000	23,206	23,496	24,929	29,228	28,447	36,137
Japan[q]	41,347	51,298	55,755	64,011	78,812	95,550	109,508
Jordan[r]	3,000			12,155		4,363	15,816
Korea[s]	1,989	5,326	6,279	6,160	11,646	12,314	16,832
Lebanon[t]			15,596	14,008	14,770	15,186	
Malaysia[u]			3,128	3,508	18,892	16,480	27,731
Netherlands[v]	9,000	na	13,619	14,012	16,589	18,888	20,531
New Zealand[w]		5,912	6,900	8,210	11,069	17,709	26,359
Russia[x]			41,210	64,103	64,103	70,735	68,602
Saudi Arabia[y]			6,086	7,561			11,046
South Africa[z]						46,687	
Spain[aa]	10,000	29,000	32,954	40,689	39,944	44,860	53,639
Sweden[bb]	10,000	12,579	19,567	20,805	26,304	22,859	25,523
Switzerland[cc]	23,000	24,344	25,258	26,003	27,765	29,301	32,847
Taiwan[dd]	5,900	5,109	6,616	7,524	6,380	7,331	7,814
Turkey[ee]	8,000	18,662	19,816	17,654	16,656	16,328	15,719
UK[ff]	80,000	209,550	209,513	222,936	225,722	227,273	255,233
Ukraine[gg]		18,312		12,880	17,210	18,170	
USA[hh]	407,529	490,933	514,723	547,867	582,996	586,323	572,509

[a] The data in this table come from several sources. To enhance comparability, data gathered annually since 1998 by OECD and UNESCO (Institute for Statistics) for the World Education Indicators Programme

were used. That database, however, only covers the 30 OECD countries and 19 non-OECD countries and does not have data available for all countries in the database. UNESCO gathers additional data for all countries and, thus those data were used for selected countries. Since OECD and UNESCO collaborate on their foreign student enrollment data, the statistics in the two databases usually match although the classification of the enrollment year in the 2 databases usually differs by one year. For instance, if UNESCO classified the enrollment year as 2001/02 in its database, OECD classified it as 2002/03 in its database. Therefore, if UNESCO data were used, a one-year adjustment was made in the enrollment year so the statistics would be comparable to those in the OECD database. In both the UNESCO and OECD databases, statistics on foreign students enrolled in most countries of Europe are inflated because they include foreigners who are resident in Europe in the totals. The ATLAS Project of the Institute of International Education aims to compile a database for non-resident foreigners studying in different countries but at this point its database includes a small number of countries and is only available for 1-2 years for most destinations. Some countries provide statistics on foreign student enrollments online, in which case those statistics were used.

[b] Except for Japan, Korea, and the USA, the source of data in the 1990 column is Table 53, "Number of foreign students in higher education…," World Population Monitoring 2003, Population, Education and Development, Department of Economic and Social Affairs, Population Division, United Nations, New York, 2005. The 1990 data for Japan, Korea, and USA come from country sources. The 1990 statistic of 80,000 for the UK is from the 2005 UN report but has not been verified. The large gap between the UK 1990 and 1998 statistics suggests that there may be an error in the 1990 UK statistic.

[c] 1998/99-2001/02 Australian data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/). 2002/03 and 2003/04 data are from the Australian Government, Australian Education International, Table G, "Overseas Student Enrolments in Australia by State/Territory and Major Sector, 2002 to 2005" and available online at http://aei.dest.gov.au/AEI/MIP/Statistics/StudentEnrolmentAndVisaStatistics/Recent_TableG_pdf.pdf. Australia compiles statistics on students enrolled onshore and offshore. The statistics in Appendix B are for onshore students only. In addition, Australia compiles statistics on foreign students enrolled in English-language courses (ELICOS). Most of those students enroll in higher education programs after they complete their studies. The statistics in Appendix B do not include the ELICOS students.

[d] 1998/99-2003/04 Austrian data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[e] 1998/99-2003/04 Belgium data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[f] 1990 Canadian data are from the World Population Monitoring Report, 2003. 1998/99-2000-01 data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/). 2001/02 Canada data are from The National Report on International Students in Canada, 2002, the Canadian Bureau for International Education (CBIE), 2005 (ISBN 1-894129-58-X) by researcher Christine Savage and CBIE Project Coordinator, Mary Kane. 2003/04 Canada data are from the Atlas of Student Mobility, Institute of International Education and available online at http://www.atlas.iienetwork.org/? Source for 2002/03 data needs to be identified.

[g] 1998/99, 2002/03 and 2003/04 are from the Atlas of Student Mobility, Institute of International Education, and available online at http://www.atlas.iienetwork.org/?p=53467. 1999/00 statistic is an estimate based on reports that the number of foreign students rose 20 percent annually since 2000 (www.chinaview.cn, 2006, "Foreign students in China increase 20% annually). 2000/01 and 2001/02 China data are from the China Scholarship Council and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[h] 1998/99-2002/03 Cuba data are from the UNESCO database and available online at http://stats.uis.unesco.org/ReportFolders/reportFolders.aspx) in table entitled "Foreign Students by country of origin (for all countries)."

[i] 1998/99-2003/04 Czech data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[j] 1998/99-2003/04 Denmark data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[k] 1998/99-2003/04 French data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[l] 1998/99-2003/04 German data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[m] 1998/99-2003/04 Hungary data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[n] 2000/01-2003/04 Indian data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[o] 1998/99-2003/04 Irish data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[p] 1998/99-2003/04 Italian data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[q] Japanese data are from the Outline of the Student Exchange System in Japan, Student Services Division, Higher Education Bureau, Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXT), 2004, Table entitled "Number of foreign students enrolled at universities, special training college or others (as of 1 May each year), page 7. Available online at http://www.mext.go.jp/a_menu/koutou/ryugaku/05020201/001.pdf.

[r] Jordan data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[s] Korean data for 1990 (actually for 1992) and for 1998/99 to 2001/02 are from Study in Korea, a report available online at http://www.studyinkorea.go.kr/ENGLISH/E200/E200_Co7.jsp. Data for 2002/03 and 2003/04 are from a news article, "Foreigners Rush to Learn Korean" by Kim Rahn, The Korea Times, available online at http://search.hankooki.com/times/times_view.php?term=foreigners+rush+to+learn+korean++&path=hankooki3/times/lpage/nation/200510/kt2005102617023511950.htm&media=kt. The K. Rahn article had the official Korean figure for 2001 (11,646) and thus I assumed that the statistics cited by the reporter for 2002/03 and 2003/04 were reliable.

[t] 1998/99-2002/03 Lebanon are from the UNESCO database and available online at http://stats.uis.unesco.org/ReportFolders/reportFolders.aspx) in table entitled "Foreign Students by country of origin (for all countries)."

[u] 1999/00 Malaysian data are from the UNESCO database and available online at http://stats.uis.unesco.org/ReportFolders/reportFolders.aspx) in table entitled "Foreign Students by country of origin (for all countries)." 2000/01-2003/04 Malaysian data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[v] 1999/00-2003/04 Netherlands data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[w] 1998/99-2003/04 New Zealand data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[x] 1999/00 Russian Federation data are from the UNESCO database and available online at http://stats.uis.unesco.org/ReportFolders/reportFolders.aspx) in table entitled "Foreign Students by country of origin (for all countries)." 2000/01-2003/04 Russian Federation data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[y] The Saudi Arabia data are from the UNESCO database and available online at http://stats.uis.unesco.org/ReportFolders/reportFolders.aspx) in table entitled "Foreign Students by country of origin (for all countries)."

[z] The South Africa data are from the UNESCO database and available online at http://stats.uis.unesco.org/ReportFolders/reportFolders.aspx) in table entitled "Foreign Students by country of origin (for all countries)."

[aa] 1998/99-2003/04 Spanish data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[bb] 1998/99-2003/04 Swedish data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[cc] 1998/99-2003/04 Swiss data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[dd] 1998/99-2003/04 data for Taiwan are from Table 49, "Number of foreign students in Taiwan by field of study," Statistical Yearbook of the Republic of China, 2004 (Directorate General of Budget, Accounting and Statistics, Executive Yuan, Republic of China, October 2005 and are available online at http://eng.dgbas.gov.tw/public/data/dgbas03/bs2/yearbook_eng/y049I.pdf.

[ee] 1998/99-2003/04 Turkish data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/).

[ff] 1998/99-2003/04 UK data are from the joint UNESCO/OECD World Indicator Program and available online in OECD Statistics database on Foreign Students Enrolled (http://oecd.org/). The UK Higher Education Statistics Agency (HESA) has data available on foreign students in UK institutions of higher education since the 1994/95 academic year and can be viewed online at http://www.hesa.ac.uk/holisdocs/pubinfo/stud.htm/ . The HESA numbers reported online are higher than those in the UNESCO/OECD database. HESA will prepare customized reports for a fee.

[gg] The Ukraine data are from the UNESCO database and available online at http://stats.uis.unesco.org/ReportFolders/reportFolders.aspx) in table entitled "Foreign Students by country of origin (for all countries)."

[hh] Data for the USA are from Open Doors Report on International Educational Exchange, Institute of International Education, 2005, p. 3 and available online at http://opendoors.iienetwork.org/?p=69692.