

# **Brain Drain or Brain Gain? The Revitalization of a Slow Death**

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## **Abstract**

For decades, “brain drain” which has been thought to be a disaster worldwide has influenced the socio-economic aspects in many countries under globalization forces. Presented in a narrative approach, the first parts of this paper introduce an overall view of globalization effects on international higher education and the diaporas of intellectual migrants causing brain drain. The next section of the article critically recommends appropriate measures used by many governments to minimize its negative consequences and to inverse them into beneficial brain. Brain drain, as the paper argues, may not always turn to be the dead end for any countries, but leadership and management roles in educating their citizens with transnational patriotism can contribute to the new epoch of brain gain, making knowledge circulate around the world.

## **Introduction**

Many less developed countries (LDCs) are clamouring for the suffer from the outflow of skilled labour force who have been sent to a developed country for further training and do not return home, causing “brain drain”. Happening not only in LDCs but also in developed ones, this phenomenon has influenced the socio-economic and political aspects in many countries. Tracing back the history of brain drain from existing literature (including some 1960s’ and 1970s’ articles), the first parts of this paper examine globalization as a force enabling the burgeoning development of international education in developed countries, causing the unexpected outflows of graduates particularly from LDCs like Vietnam. The next section of the article presents some appropriate measures used by many governments to minimize its negative consequences and to inverse them into beneficial brain. Brain drain, as the paper argues, may not always turn to be the dead end for any countries, but leadership and management roles of the governments play a major role in turning brain drain to the new epoch of brain gain, facilitating knowledge and expertise to circulate around the world.

## **Globalization and International Higher Education**

The aim of this section is to analyze the influences of globalization on international higher education, and it concludes that financial autonomy and international education expansion at higher educational institutions in developed countries have forged the movements of students from LDCs.

Education contributes to a nation's economic growth in several ways such as improving the quality of the workforce, increasing labour mobility, increasing the labour force's ability to absorb new information, removing social barriers to growth, and encouraging entrepreneurship (Thant, 1999). Marginson (1999, p. 19) claims that education has become "a primary medium of globalization" which generalizes the possible knowledge and skills for the global knowledge-based economy<sup>1</sup> and creativity economy<sup>2</sup>. Education is expected to produce a more responsive intellectual workforce who can "thrive in a constantly changing environment" (Seltzer, 1996, pp. 1-2) in the new times. This new time of discontinuity, when even change even turns to be changeable itself (Bennis & Nanus, 1985, p. 8; Law & Glover, 2000, p. 127; Limerick, Cunningham, & Crowther, 1998, pp. 4-5), urges people to come together to deal with the issues and their impacts by utilizing their own knowledge, a giant power and a dominant resource of prosperity and well-being (Marginson, 1999; Nguyen, 2000). In other words, knowledge and practical education are necessary and sufficient conditions for people in the new times to live, to work and manage chaos effectively. The most important role of education is, therefore, to create learning environments that help students "make sense of their world in ways that enable them to change it for the better, for themselves and others" (Lingard, Hayes, Mills, & Christie, 2003, p. 1), and to equally "allocate life chances" (Marginson, 1999, p. 28). Under the influences caused by globalization, educational institutions need to be aware of social inequalities or the questions of "access and exclusion" (Marginson, 1999, p. 28), which they cannot always compensate for. They must reduce as many disadvantages as possible by providing students with two kinds of knowledge to enter the world: social and academic. Social learning builds up students' consciousness of their citizenship and civic participation, and academic learning helps engage them in understanding and applying different kinds of knowledge critically and analytically.

Due to one of the characteristics of globalization as flows or movements of people, ideas and goods (Appadurai, 1996; Christie & Sidhu, 2002; Waters, 2001), knowledge can also be transported through information technology (IT), telecommunications, and the mobility of academic staff and students. As Marginson (1999, p. 21) puts it in regard to education, these technologies facilitate the growth of market exchange in which education is defined as a corporate service that must obey the economic laws of supply and demand. IT and communications technologies speed "the translation of knowledge into transmittable information", so many educational sectors make knowledge "saleable commodities" on a cross-bordered scale.

According to Van Damme (2001, p. 2), globalization and the transition to a knowledge-based society seem to generate new challenges and demands towards higher education. In fact, education is expected to promote social, economic and cultural development, and to contribute to the well-being of all students (*OECD*, 1998). The term "higher education" represents a "continual progression" in education that individuals can acquire after secondary education (p. 14). The participation in some form of tertiary

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<sup>1</sup> Biotechnology, outer-space industry, new material technology and information and communication technologies are considered as the four pillars of the knowledge-based economy.

<sup>2</sup> The creativity economy is mainly based on research and development (R&D).

education is moving towards the norm in society in the new times when parents and students tend to assume that pursuing an undergraduate and post-graduate program is a must-do at present. However, instead of solely certifying students' knowledge with academic degrees and titles, the ultimate goal of tertiary education should be to provide benefits to society by training innovative, informed and responsive workers who also have cultural tolerance and understanding (Taylor, 1996) and social knowledge (Lingard et al., 2003). On the one hand, universities have to be responsible for producing "national identities" and "elites" (Scott, 1999, p. 111; Sidhu, 2003, p. 89). On the other, they are also supposed to become "knowledge producers" (Himmelfarb, 1994, p. 22) in scientific research and development (R&D) which encourages economic growth and social involvement. Nonetheless, it should be noted that not all universities are knowledge producers in R&D because some are mostly involved in knowledge transmission and consumption, as Barnett (1997, p. 1) argues, the notion of the "university" is fading out because people have lost the clear educational purpose of university in the modern time.

In addition, state funding is not equal among public, private and semi-private sectors, and expenditure on education is generally reduced by neo-liberal approaches (Christie & Sidhu, 2002, p. 2). Changes in funding policies, especially in higher education with more autonomy in financial and technological management create more international competition and mobility (Girdwood, 1997; Mok & Lee, 2003). Higher educational institutions tend not to stay within their national or regional boundaries, but open doors to exchange physical infrastructure and training programs, and to recruit more and more overseas students. Driven by this fact, universities promote themselves as "knowledge enterprises" (Currie, 1998, p.15) which utilize marketing and managerial skills and strategies to attract international students although some elite universities are "less likely to engage in mass-production" to ensure their elite status (Sidhu, 2003, p. 12). According to Mok and Lee (2003), in labour market terms, the major shift from labour-intensive manufacturing production to knowledge-intensive economic production and services caused by globalization urges governments to massify their higher education to meet the needs of a great number of citizens. On the one hand, higher education institutions play a major role in the production and allocation of social status, which can be seen as a motivating drive for both students and universities (Marginson, 2004). On the other, the increasing number of university enrolment is less directly influenced by government policies than the perceptions of the labour market who often think that not having a degree may disadvantage them in the labour market (Wolf, 2002). Consequently, many universities, including non-accredited universities, turn to advertise their "names" and run offshore programs. This is the process of commodification in education and the attempts to "sell" their products in lucrative markets.

A chance to study abroad is no longer the exclusive domain of the elites in society, but it is also possible for middle class and working class students who can get financial sponsors and assistance to receive overseas training<sup>3</sup>. Also, international cooperation in research, training and management has been paid much attention to. The

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<sup>3</sup> Many developed countries regard their sponsorship programs as part of their humanistic aid although providing scholarships is indeed one of the effective marketing strategies for their universities, and a diplomatic relation enhancement strategy between countries.

South African Association for Research and Development in Higher Education (SAARDHE) Conference in 2000 posits that the internationalization of higher education has three dimensions which it has to respond to, namely student mobility, lecturer mobility and the development of joint teaching/learning and research programs. Scott (1999) also recommends the term “international exchange”, which refers to student and staff flows between countries and institutions, and to flows of knowledge and science around the world.

Several theorists have agreed that flows of international students are increasing, and that they are necessary for scholarly knowledge sharing across borders, which becomes a means to promote economic and political national policies (Altbach, 2002; Bown, 2000; Scott, 1999; Sedgwick, 1999). According to Sedgwick (1999), international student mobility has increased by more than 300 per cent in the last 25 years. In the 1960s there were about 240,000 students studying overseas worldwide, and the total number of foreign students increased over three times in 1976 to 800,000 (Smith, de Panafieu & Jarousse, 1981, p. 165). In the first few years of the 21<sup>st</sup> century, this figure has been increasing dramatically to an estimated number of 1.6 million students with a large proportion from Asia (Altbach, 2002). International education has, in fact, become a priority of many Western educational institutions and their governments as it can add to their national productivity and profit. In addition, the internationalization of education benefits domestic students and teachers by promoting the cross-fertilization of ideas and cultures from international students who can also widen their knowledge and perspectives when learning in foreign countries. Such courses as American Studies, Southeast Asian Studies, International Business Management to name but a few are taught at some universities, widening learners’ global perspectives from their local stand point. Moreover, faster mobility of academic staff contributes to the process of knowledge globalization. Many academic staff can now receive overseas training by being sponsored or by their own individual budgets, yet the main flow is still mainly from Asia to the West. After returning to their home countries (though some do not return, causing brain drain), they may become the main seeds in transmitting their own knowledge received abroad to those at home.

In summary, the demand to upgrade one’s knowledge and professional skills in the knowledge-based economy becomes increasingly prominent amongst intellectual workers who are responsible for their careers. Higher education is now charged with the responsibility of producing high-value human capital for society where knowledge for both academic and social outcomes has been proven to be the primary source of production. Higher education is expected to play a major role of being the knowledge-producer, and is viewed as the medium to train skilled knowledge workers for countries to integrate and participate in the global knowledge-based economy. However, influenced by the pervasive globalization process comprising Diasporas of professionals across national boundaries due to the permeability of the international market and advances in IT, telecommunications and transportation, countries are now facing with the risk of losing their talents and ideas.

## **An Overview of Brain Drain in the World**

Rao (1979) asserts that the history of cross-national diaporas of scholars and researchers can be traced back to the times when academics migrated to the Lyceum in 355 B.C. and to Athens in 388 B.C. Around 300 B.C. Alexandria, where most of the best work on science and philosophy was carried out between 300 B.C. and 500 A.D., became the first centre of science, philosophy and arts (Dedijer, 1968). Soon after 500 A.D. this centre of teaching and learning was shifted to Gundi Sapur in East Persia, where the Greek King Hursa Anusirwan established a university and gathered scholars, physicians, and scientists from many parts of the world, but mainly from Christian countries. During the middle-ages, cross-border mobility of scholars, teachers and artists was common to European universities, especially to people from Italy, France, Britain and Austria. The direct causes for this cross-national mobility were said to be the economic, political, social issues and intellectual demands for knowledge in natural and physical sciences and humanities (Rao, 1979).

According to Thomas (1968), in the nineteenth century, there was a great flow of human capital from Europe to the New World<sup>4</sup> in terms of exporting physical and unskilled labour, and this flow helped create an infrastructure in the New World which had to send their people to European countries to receive further training at a later stage. As a result, both the sending and receiving countries could enjoy economic benefits.

After World War II, developing countries began to build sustainable physical infrastructure, but they were short of technical and professional personnel in key scientific, administrative and research positions (Rao, 1979). The flow of expertise was then characterized as a North - South, developing – developed direction (Carrington, Detragiache, & Vishwanath, 1996). In the 1960s, depending on their national needs, political leaders receiving countries acted accordingly either to stimulate or to prevent from such migrations, yet those who held high degrees of science could generally be granted immigration permission (Dedijer, 1968). The British Royal Society, for the first time, coined the term “brain drain” to describe the outflow of British scientists to the US in the 1950s and 1960s. As popularly used, the term “brain drain” denotes the migration of scientists, academics, doctors, engineers and other professionals with university training from one country to another (Myint, 1968; Shinn, 2002).

As the skilled workforce net flow moves heavily in one direction from developing countries to developed countries, it is commonly said that the former suffer from shortages of high-level skilled workforce and losses of resources to train that human capital. The latter, on the other hand, gain the needed high-level skills and save huge sums of money and time needed to educate and train such specialists at home

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<sup>4</sup> The *Answer.com* Web defines the New World as one of the names used for the continents of North and South America and adjacent islands in the 16<sup>th</sup> century. The continents were new to the Europeans who assumed that the world consisted only of Europe, Asia and Africa (the Old World) (Available: [http://www.answers.com/main/ntquery;jsessionid=9akafnj4o8jft?method=4&dsid=2222&dekey=New+World&gwp=8&curtab=2222\\_1&sbid=lc04b](http://www.answers.com/main/ntquery;jsessionid=9akafnj4o8jft?method=4&dsid=2222&dekey=New+World&gwp=8&curtab=2222_1&sbid=lc04b)).

(Carrington, Detragiache, & Vishwanath, 1996; Rao, 1979; Rapoport, 2002; Salt, 1997). The losses caused by this global migration have been internationally alerted since the 1960s when the hiring and circulation of skilled workers within transnational corporations (TNCs) has made an increasing contribution to international migratory flows (Salt, 1997). The causes and consequences of brain drain led to debates and resolutions in the United Nations as early 1967, concerning the argument that the poor countries lost their skilled workers to the rich countries (Lowell, 2002).

The discussion on brain drain usually refers to two groups of people. The first group includes professionals who migrate from LDCs or who migrate from a developed economy to a more dynamic one, and join the workforce of the developed countries immediately. The other group consists of students who leave LDCs initially for the purpose of education and training and then decide to live and work in developed countries (Rao, 1979). Each group has different reasons and expectations for their migration. Some professionals go to developed countries to work temporarily, and others migrate on a long-term basis. The receiving countries have to carefully assess the professionals' qualifications, and judge whether they will be able to make a social and economic contribution. Both the receiving and sending countries have to make sure that the migrating professionals do not leave any obligations and financial debts at home.

Gedamu (2002) divides international intellectual migrants into three main categories. The first group includes flows of professionals leaving their home countries due to economic reasons such as lack of employment and low salaries. The second type results from political instability in home countries, and thus people do not trust their governments in creating conditions and opportunities for a promising future. They are usually disadvantaged individuals due to their ethnic, cultural, religious belongings or political affiliation in their home countries. The third cohort consists of scholars who have been sent abroad for further professional development and remain abroad for a better life, leaving their families and work at home. Some of them can find good jobs and are able to secure a stable life, but other migrants' expectations are not met as hoped and become ashamed of returning home being empty-handed. This kind of migration results from the lack of appropriate information and misguidance.

Regarding the general refugee outflow in Vietnam, the number of people migrating out of the country in 2003 was approximately 4.54 migrants/1,000 people (*Nationmaster.com*, 2003). In terms of professional flows in Vietnam, there are four types of academics who have left the country. The first kind includes scientists and researchers working in pre-liberation times before 1975 who migrated to western countries for political reasons<sup>5</sup>. They have presently created a strong overseas Vietnamese community

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<sup>5</sup> When The US withdrew its military support in the South of Vietnam in 1973, it seemed that the communists in the North were able to win the bloody war in Vietnam. The capital of the South, Saigon, fell in April 1975, and after that thousands of Vietnamese people tried to migrate to other countries by taking small wooden boats to set sail for other countries. They had to fight against many difficulties and pirate raids along the way. This exodus last for fifteen years. Approximately 1.6 million "Boat People" fled in the hopes of resettling somewhere else in the world (*Youth Links*, 2005. Available: [http://www.youthlinks.org/students/essay.do?split=true&moduleID=2&page=forces\\_intro&subsection=modules&crumbs=false](http://www.youthlinks.org/students/essay.do?split=true&moduleID=2&page=forces_intro&subsection=modules&crumbs=false))

of more than two million including a number of famous scientists such as Professor Tran Van Khe in Traditional Musical Instruments (France), Professor Trinh Thi Minh Ha in Feminism (the US) and so on. The second type of migrating academics consists of students who do not want to return home after spending several years studying abroad. They are normally divided into three subcategories: (1) those awarded State scholarships to learn in the former Soviet Union and Eastern Europe (before 1991), (2) students, scientists and university lecturers being sponsored by State scholarships or other foreign aid programs to study in foreign countries in more recent times, and (3) those who self-finance their studies. The third type includes researchers in State agencies and university graduates working in locally-based foreign invested companies. After being sent abroad for further training or visiting foreign countries, they decide not to return to Vietnam (Duong, 2002). This is seen as "on-the-spot brain drain, or also termed as "internal brain drain", which tends to be on the rise. The fourth type consists of some of the above people who choose to reside permanently in a developed country with their parents, spouses and/or relatives.

There are two extreme opinions on the phenomenon of brain drain. First, brain drain simply reflects the operation of human capital on the international market during the 1960s (Johnson, 1968), and in the proliferation of TNCs in the late 20<sup>th</sup> century (Salt, 1997). It tends to move from countries where its productivity is low to countries where its productivity is high. In this vein, migrating professionals are better off in receiving countries than in home countries. Therefore, the receiving countries can benefit from their immigration with their trained skills while the sending countries do not lose anything because their services cannot be utilized at home. In the neoclassical view, migration also results from the uneven geographical distribution of labour and capital (Arango, 2004). People tend to move from countries where labour is abundant and wages are low, to countries where labour is scarce and wages are high. As a result, migrants contribute to the redistribution of labour and to the equalization of wages amongst countries.

Nevertheless, other authors like Dandekar (1968) and Patinkin (1968) assert that human capital is indispensable to a country's economic development, so the loss of professionals hinders the growth of the economy, and makes the money that the society has spent on training the lost skilled workforce wasteful. It is generally agreed that deficiency in human capital is a major reason why poor countries remain poor (Stark, 2004) although it must also be realized that the decision to migrate is ultimately a personal choice.

### **The Socio-Economic Effects of Brain Drain**

In general, brain drain occurs due to different reasons such as political and social turmoil (Adams, 1968; Glaser, 1978; Johnson, 1968; Mountford, 1997; Portes, 1976; Rao, 1979; Thomas; 1968), economic imbalances (Portes, 1976; Rutherford, 1992), lack of professional development in home countries (Adams, 1968; Bushnell & Choy, 2001;

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Rutherford, 1992; Salt, 1997), and lack of receptivity in home countries due to the over-supply of specialized graduates in LDCs (Kindleberger, 1968; Rutherford, 1992). It is agreed that brain drain is like a zero-sum game in which rich nations gain on the loss of poor nations (Bhagwati, 1976; Bhagwati, 1979; Bhagwati & Hamada, 1974; Bhagwati & Partington, 1976; Hamada, 1977). If migration did not happen, the home country would have a more skilful workforce, and per capita output would be higher (Stark, Helmenstein, & Prskawetz, 1997; Vidal, 1998). Although different countries have different socio-economic, political and historical contexts, brain drain has a negative effect in most sending countries. Stalker (1994) estimates that every year 23,000 graduates leave Africa mainly for Europe and North America. According to the estimates of the Presidential Committee on Brain Drain in Nigeria, this country had to lose 10,694 professionals from tertiary education alone during the period from 1986 to 1990, making the nation's "engine room" be taken away due to their economic and political crises (Anekwe, 2001, p. 1). Also, with a rapidly growing population, the country has to establish more educational institutions to accommodate its expanding population. Yet, there have been no corresponding employment opportunities for school and university leavers, and hence brain drain has occurred. Ethiopia has also faced the same situation when 50% of the Ethiopians who went abroad for further education have not returned home for the past two decades after completing their studies in the West (Gedamu, 2002, p. 2).

The number of temporary resident overseas-trained doctors arriving in Australia to work in rural and remote areas has increased from 667 in 1992-1993 to 2,899 in 2001-2002 (*AMWAC*, 2002). In 2001, 5.7% of the Australian medical workforce was born in Africa or the Middle East and 16% (8,348) in Asia (*AIHW*, 2003). In the Philippines there are about 2,000 medical doctors migrating to western countries while the country can train only 1,000 doctors every year, resulting in both a waste of money on the training costs and a deficiency of doctors in this country. Many of these migrating doctors even accept to work as nurses with the average salary of 8,000 USD/month, which is 16 times higher than that a doctor in the Philippines is paid (*Tuoi Tre*, 05 August, 2005). In general, Olesen (2002) estimates that the total number of brain drain from LDCs to OECD countries is a stock figure of 12.9 million (with 7 million migrating to the US and 5.9 million to OECD countries), and in most developing countries the migration rate is highest among university graduates. Carrington and Enrica (1998) assert that a majority of LDC migrants tend to be much better educated than the rest of the population, and conclude that the very well educated tend to be the most internationally mobile group.

Amongst the emigrants are students who go abroad to study and decide not to return to their home countries after completing their courses. Within 40 years, the number of non-returnees of this type has increased seven times from 245,000 in 1960 to 1.7 million (Asian students accounting for 44% of the total number) in 2000. In the US, foreign students account for 35% of the total number of students. According to the US National Science Foundation (*NSF*, 2004), half of the PhD candidates in the US are from South Asia. Half of these Asian PhD candidates are originally from India and China who have already been granted degrees by US educational institutions and have decided to remain in that country for higher education. The receiving countries then enjoy the

money that has been spent on their training. In fact, it is estimated that the US can earn seven billion US dollars, and the UK two billion US dollars annually from their “brain gain” (*Lien hiep Hoi KH&KT Vietnam*, 2004). Among the 150 million people who are participating in scientific activities worldwide, 90% are from the seven most developed countries, and 25% are working in the US and Canada. 90% of patents in the world belong to English-speaking countries. These figures show that there seems an uneven exchange of knowledge between the east and the west, which is different from Luke’s assertion (2001) about the reciprocal exchange of knowledge between the two directions. Instead, developed countries are more dominant in the production and application of knowledge.

For the past ten years, developed countries have applied measures to attract skilled workers from developing countries. For example, the US and Germany have loosened immigration policies to people from Russia, China and India who are often assumed to possess high educational backgrounds. To call for skilled labour to come, the US also grants Skilled Worker Visas (H-1B and L-1 Visas) to those who hold at least a bachelor’s degree in the fields which are needed. The H-1B classification applies to people in a specialty occupation which requires theoretical and practical application of a body of highly specialized knowledge, and the completion of a specific course of higher education such as a bachelor’s degree. According to the US Chamber of Commerce, since October 2000 the number of visas granted has annually increased from 140,000 to 195,000. Within the past ten years, the number of immigrants has reached 28.4 million, accounting for 10% of the total US population. The US Immigration and Nationality Act provides employment-based immigrant visas to people with extraordinary ability, which are classified into five preference categories including science, arts, education, business and athletics. Applicants who are mostly outstanding professors and researchers must prove that they have achieved national or international acclaim and recognition in their field of expertise. Seeking highly skilled workforce from foreign countries, Australia has recently tightened the skilled immigration policy which strictly requires applicants to hold at least a Masters’ degree in certain fields instead of a bachelors’ degree compared to the past. In France, effective measures have been applied to encourage foreign professionals to come and work. In fact, French professors lecturing in North African countries are also asked to call for local professionals to migrate to France (*The Labourer*, 23 March 2005).

Brain drain has also occurred amongst developed countries. In Canada, for instance, brain drain has been happening in connection with brain gain – the reception of skilled labour from other countries to replace the lost professionals. The annual average permanent and temporary emigration in Canada to the United States during the 1990s was in a range of 22,000 to 35,000, accounting for 0.1% of the Canadian population, and these emigrants were better educated than both the Canadian-born population and recent immigrants to Canada. While losses of skilled workers to the US accelerated, Canada also enjoyed an influx of 39,000 skilled workers in 1996 into the nation’s labour market (*The Daily Statistics Canada*, 24 May 2000). In general, as trained workforce moves from developing countries to developed countries, the former experience shortages of highly skilled human resource and suffer losses of financial resources to train that human

capital while the latter tend to gain the needed expertise human capacity and save huge sums of money for not having to train such specialists. In other words, brain drain is like a slow death for sending countries (Blagov, 2000).

In Vietnam, amongst the 30,000 students studying overseas, approximately 95% who have received financial assistance and loans have returned home. The others have remained in the foreign countries to work to pay the debt or to pursue higher education (*Tin Tuc Vietnam*, 23 July 2004; *VNS*, 11 November 2004; *UNDP*, 2002). According to the writer's survey done at an Australian university in 2005 (Nguyen, 2005), self-financing students tend not to return to Vietnam after graduation in order to pay the money that their parents had to invest for their education. However, also according to this survey, about 95% of the Vietnamese students at this university expect to return to Vietnam to work due to two main reasons: ties with families in Vietnam and their patriotism. Their patriotism cannot be seen as the sole love for the country and the protection of their home country, but it is expressed as "transnational patriotism" with their expectations and efforts to contribute to the nation's development even from a geographical distance. This is the determinant pull factor from Vietnam (the push factor from Australia) while the pull factor from the Australian university (considered as the push factor from Vietnam) is the chance to enhance their professional development in the modern R&D environment. Consequently, if Vietnam could provide academic courses of high quality as those in Australia, would students choose to study abroad? If Vietnamese educators could train each individual with real patriotism, would Vietnamese academics choose to leave home? It is certain that these questions are just some examples of the challenges Vietnam is facing with at the moment.

### **Sustainable Measures Used to Mitigate Negative Effects of Brain Drain**

To deal with the flows of professionals in the 1960s, when governments were making efforts to mitigate the negative effects of these migrations, sending countries had to raise salaries for professionals, which had to at least reflect their opportunity costs abroad (Adams & Dirlam, 1968). Yet, this approach seems unrealistic in poor nations like Vietnam because it lies out of the State's financial capability. Also, salary differentials amongst employees may result in many negative effects such as strong competition to go abroad, passing-the-buck and increasing personal jealousy. In my view, although the next agenda seems to be too slow for LDCs to carry out, they need to create more local-based professional development opportunities for people and for those in employment. In fact, it calls for the revolutionary economic and technological changes that build up a new class of professionals who produce innovations and encourage the receptivity to change. Furthermore, sending countries must restructure investment in education, tailor their training needs and rationalize human capacity policies. This approach insists that reforms in education be carried out to produce the right skills with the right proportions in order to produce skilled workforce who possess both academic and social knowledge in order to survive and grow in the changing environment. More specifically, the government must place a strong emphasis on the training and development of the knowledge-based economy and R&D.

Furthermore, governments must establish local institutions with both capital and professional assistance from foreign organizations and countries in order to retain most students at home. Attention to and efforts in human resource management should be paid more closely to create favourable conditions for those who have been trained abroad to disseminate the knowledge that they have learnt overseas to locals. If exploited unreasonably, their knowledge is wasted. This is the alarming situation in Vietnam, especially in State agencies, when employees with high qualifications and good working abilities are not employed properly. After a while, their professional knowledge may become fossilized.

The measure of paying remuneration based on meritocracy and working abilities instead of hiring foreign professionals also presents some disadvantages in developing countries. Attracting well-trained professionals by offering high salaries is one of the main causes to internal brain drain. For example, many foreign companies such as Ikea, Electrolux, P&G Cooperation, BP, Prudential, Ericsson, Mercedes-Benz, etc. have come and looked for Vietnamese foreign-trained professionals. A prospective employee can approximately earn a monthly salary of 1,000 USD compared to that of 100 USD paid by the State sector. These foreign employers are also offering attractive working promotion programs to attract as many professionals as possible by accepting students as interns and then promoting bright students to suitable posts in their headquarters. These TNCs have actually contributed to GDP in Vietnam, yet at the same time, they are the State's competitors in staff employment.

Bhagwati (1976, 1979) and Gedamu (2002) also suggest another alternative measure which is to tax emigrants who are indigenously trained in their home countries in order to stop the influx from overseas. Yet, this issue, to my mind, is indeed sensitive and may be not feasible for some countries which really need specialists to work in some specializations and to replace the lost workers. In addition, this measure may impinge on the basic human rights to choose the nature and location to work and reside.

In Vietnam, what the Vietnam Ministry of Education and Training (MOET) does is to request sponsored students and their relatives to sign in an agreement which forces them to return upon the completion of their studies, otherwise the relatives will be held accountable for such "illegal" emigration, and will have to pay back the money for the training fees. In 2000 the Ministries of Finance and MOET issued Circular 75/2000/TTLT/BTC-GDDT, under which State-financed non-returnees must repay all the grants they have received during their time abroad three months after their graduation or even return home ahead of planned time due to violations of academic rules, or because they have chosen to drop out of their courses. The amount of repaid money is determined by the specifics of each case, but must be at least 50 percent of the total expenses (*UNDP in Vietnam*, 11 August, 2000). However, in the case of self-financing students, the possibility to coerce them to return after graduation seems impracticable.

In my own view, governments can reduce the possibility of brain drain by building an appropriate number of training institutions in their countries and designing training programs that best fit their urgent and long-term demands. Political, economic

and educational leaders must reach a consensus in devising long-term strategic plans which recognize and prioritise what expertise fields and the number of expected professionals in the future are required for the national development. Furthermore, they can employ professional locals who have been trained and have been residing abroad as the main seeds in disseminating their knowledge to other local people (Hugo, 2002). Even building networks of professionals in the same expertise can encourage them to contribute their ideas and innovations to the nation's development from overseas. This strategy can reduce the costs and time to send many people overseas and prevent unexpected brain drain. Also, there must be bilateral and multilateral compromises amongst sending and receiving countries to avoid the situation where one country "enjoys" great financial benefits from professional migration whereas others have to "suffer" from the losses. They must plan what kind of expertise needed for their strategic development and the quantity of professionals demanded. The sending countries can negotiate to send professionals trained in an abundant number who may be at the risk of unemployment. The sending countries and receiving countries can meet their demands by exchanging professionals, stopping the unexpected outpouring of talents and facilitating knowledge to circulate amongst the countries.

In addition, calling for more foreign universities to come and build their offshore campuses in LDCs benefits the course of long term education development. Most parents want their children to have a foreign western degree. Also studying at a foreign-funded university which is based locally is less expensive than studying overseas, and helps the local currency circulate inside home countries. Once foreign universities are built, local higher education sectors have to urgently improve their training quality and management in order to attract more students for financial competition (economic bottom line) and social competition (training quality and prestige).

Not all professional migrants can secure a better life in a destination country because their linguistic competence, the skills and knowledge they have obtained somewhere else may not be as appropriate in the foreign country as in their home country prior to migration. For example, some Asian migrants holding high degrees in TESOL (Teaching English to Speakers of Other Languages), Cultural Studies (American or Vietnamese Studies), or Medicine cannot find jobs appropriate to their qualifications. This phenomenon causes a human capital waste (or "brain waste" termed by *OECD*, 1987 cited in Giannoccolo, 2004, p. 4) in receiving countries and a brain drain in sending countries. Also, employers in receiving countries are not always completely informed of migrants' skills except those who have been studying and working with them for a long time. Conflicts at workplace may occur as employers do not share the same culture, background, and language with those of immigrating workers. Finally, compared to their lives in their home countries, many migrants have to start their lives again almost from "square one", e.g. looking for accommodation, or spending some time adjusting into the new living. Migrants do return home due to different reasons such as work failure, retirement, ties with relatives in home countries, and expectations to contribute to the home countries' development by sending remittances<sup>6</sup> and ideas and innovations.

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<sup>6</sup> For example, an article in *Vietnam Net* (17 March 2005) points out that the total amount of money sent by overseas Vietnamese people (*Viet kieu*) in 2004 was approximately 3 billion US dollars.

The innovation type of return, which becomes beneficial to recover the losses in their home countries, is now termed as “brain gain”, the situation when losing countries can benefit from migrants’ returns. Although these returns can be occasional, seasonal, temporary, or permanent returns, all are useful to their home countries. Returnees not only bring skills and knowledge but also “positive externalities” in terms of “technological and economic entrepreneurship networks” to their home countries (Saxenian, 2001 cited in Iredale, Guo, & Rozario, 2003, p. 6). By and large, the language around brain drain has been altered. “Brain exchange” (*OECD*, 1987 cited in Giannoccolo, 2004), which implies a two-way flow of expertise between a sending country and a receiving country, becomes popular in some countries. In order to mitigate the phenomena of brain drain and brain waste, new national policies for immigration and emigration must be set up, and international agreements on transmigration should be signed.

If the five factors of governance, career opportunities, incentives, improved working facilities and appropriate information are paid attention to, brain drain may turn into brain gain. Stark et al. (1997) (also Glaser, 1978; Hunger, 2002; Nguyen, 2004; Stark, 2004) start to look for a situation where brain drain can be minimized and turned into positive effects for both receiving and sending countries. There are normally two main groups of professional migrants: the ablest and the less able. The ablest are usually in a small number, and are more likely to return because they can get best jobs, and employers in the home countries make great efforts to attract them. Nevertheless, according to the writer’s survey done at an Australian university in 2005 (Nguyen, 2005), this group chooses to stay on in Australia to continue their research and work in the suitable environment. For example, in this survey, there is a post-doctoral fellow in Applied Linguistics who chooses to remain in Australia. This person states that Prosodics has not been thoroughly researched or paid proper attention to at Vietnamese universities which are not equipped with adequate R&D facilities for Phonology.

Regarding the less able group, facing with an opportunity to migrate and receive higher expected returns, they start to leave their countries. Employers in the destination countries initially pay these migrant workers the same wage based on their qualifications and average products made. After a certain period of time, employers begin to be able to decipher individual skills, and they tend to tailor their wage payments depending on the workers’ abilities and productivities. Consequently, the less able migrants enjoy a pre-discovery high wage, but a lower wage at a later stage when the migrants of this type want to return to their home country or to move to another country. They are also bringing with them not only the previous knowledge and qualifications but also their skills and a new level of social knowledge back to their home countries or to the new countries. Brain gain is obtained in this case when their human capital is circulating on a cross-border scale.

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The building of transnational networks with the support of information and telecommunications technologies and transportation, which can be located thousands of kilometers away from the home country, can reverse the negative impacts of brain drain<sup>7</sup>. Brain drain, in this situation, can turn to be “brain circulation” (Johnson & Regets, 1998 cited in Giannoccolo, 2004, p. 4) in dynamic directions. These transnational net-workers can take advantage of their linguistic and cultural knowledge in the receiving countries to establish themselves as professional "bridge-builders" whose networks allow them to link specialized enterprises and entrepreneurs in distant regions (Saxenia, 2002). According to Saxenia (2000), thanks to their experience and professional networks, these foreign-trained workers are able to identify promising new markets, raise capital, build management teams, and establish partnerships with other specialist producers worldwide. They can also serve as role models and mentors for local manufacturers, and they become advisors to domestic policy makers to reshape regulations to attract more investments and to support present producers.

The grassroots of brain drain actually lie in one's personal decision and patriotism. Therefore, patriotism should be taught from primary education to his/her whole life. Patriotism should be understood in a broader concept which does not confine citizens to stay permanently within only one country to be seen as patriotic. Patriots can even live outside their nation's geographic borders as long as they contribute to the nation's development. Interesting and practical History and Citizenship Education lessons need to be carefully planned and taught in order to remind students of the nation's heroic past, and to stimulate them to think that a citizen's duty is to develop and protect the country. Teachers' roles must be acknowledged because they are intimately connected to the production of labour power for society by training students and equipping them with skills, competences, attitudes and personal qualities that will be used in the labour market.

### **Conclusion**

The issues of brain drain, brain gain, brain circulation, and brain development are not totally disasters, but they are indeed realities of the knowledge-based economy where knowledge workers are necessarily mobile people, and their mobility must be managed proactively by making the domestic environment attractive and simultaneously maximizing countries' development. A developed science and technology system, on the one hand, is a recognised contributor to economic growth, and on the other it is dependent upon a competent and productive research and development workforce. The loss, gain and circulation of this workforce appear both a threat and an opportunity for countries.

Brain drain is, in fact, a complex phenomenon that urges policy makers of all countries to amend their own policies and to negotiate with other countries internationally

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<sup>7</sup> Some countries have already created their effective “brain gain networks” such as South Korea with the Global Korean Network, the Philippines with Brain Gain Network, Thailand with The Reverse Brain Gain Project, the South African Network of Skills Abroad in South Africa, Project Retour in Hungary, and India with Worldwide Indian Network.

to retain and recruit professionals for their development. To conclude this paper, I would like to borrow the statement presented by Professor Michael Kahn, Executive Director of the Human Sciences Research Council (*HSRC*), in the article “Flight of the Flamingos”

We used the flamingo metaphor to understand our pool of skills.  
Flamingos migrate only to return when the brackish waters are replenished.

(Kahn, 2003, p. 1)

As a result, it can be assumed that if the waters were made and remained fresh, flamingos would not have to migrate, or they might temporarily migrate to look for food and would fly back soon.

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