International Forum
Vol. 12, No. 2
October 2009
pp. 3-23

FEATURE

The Impact of Outsourcing and Brain Drain on Global Economic Equilibrium

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Abstract: *Outsourcing and brain drain are two popular phenomena that have captured the interest of researchers in academia and the business world. Numerous studies have been conducted on these two topics but little research has related them to global economic equilibrium. This paper presents the effects of outsourcing and brain drain that the researcher believes have an impact on the improvement of the global economy. The study assumes that the more positive the outcomes created by outsourcing and brain drain, the greater the possibility to achieve global economic equilibrium.*

Globalization has opened up ways for businesses to share their excess resources in order to maximize benefits on return to all parties involved. In the process of sharing resources and utilizing benefits, however, not all entities benefit equally. There will be those that acquire more wealth, while others will experience diminished capital and resources.

Nations with advanced economies focus their attention on industrialization and manufacturing of goods and services and therefore are able to provide a good selection of employment opportunities. These nations have not, however, shown a similar inclination to increase their population. The result is a labor shortage. Data from Germany ("Marriage and Family" 1995, para. 1), for example, shows that "like most other advanced countries in the postwar era, Germany recorded fewer marriages, more divorces, and smaller families." Individual choice is not the only cause of this labor shortage. Government policy in some countries also affects human reproduction. China's one-child policy (Baochang, Zhenzhen, Feng, & Young, 2007), President Obama's rescinding of the Mexico City Policy prohibiting the international use of federal funds for abortion (Tapper, Miller, & Khan, 2009), and the British Government setting up a fund to support family planning and abortion internationally (White, 2007, para. 10) are some examples of government interventions that affect individual decisions about human reproduction. On the other hand, less developed nations frequently enjoy larger families, but are unable to create appropriate employment opportunities for their population. Labor in such nations becomes abundant, and jobs scarce.

Advanced countries make up for the labor shortage in two ways. First, they allow, and often encourage the international migration, especially of skilled labor, from developing countries into their countries. Second, the jobs from advanced countries are outsourced or transferred to the developing countries where there is abundant labor at a lower price. The former is known as 'brain drain' because the skilled laborers are taken away from the developing countries, and the latter is known as 'offshore outsourcing' where labor stays in the developing country, and workers perform the jobs required by the developed country.

Defining the Terms

Brain drain and outsourcing are two counter forces that have been created by the process of globalization, which "are likely to have a balancing impact on global economy" (Khan & Islam, 2006, p. 1). Even though brain drain takes away skilled workers from their home countries, it also brings in remittance earnings in return. For developing countries such as India and the Philippines, where labor of all kinds is abundant and workers are trained to be exported, brain drain may produce more of a positive impact than a negative one. But for developing countries where skilled labor is scarce, taking away a few good people may well hinder the development of the home country and create problems in areas such as health care and technology. Kenya, for example, "is just one of many developing countries worried about the growing loss of healthcare workers, who mainly migrate to industrialized nations" (Kimani, as cited in Capdevila, 2006, para. 1). Capdevila added that Kenya is not alone in facing the negative effects of brain drain. Most of Africa and many developing countries in Asia are experiencing the same phenomenon. This problem "has led to an estimated shortage of 820,000 doctors, nurses and other health workers throughout the [African] continent" (Capdevila, 2006, para. 2).

Outsourcing, on the other hand, is the movement of jobs from developed countries to developing or less-developed countries where the cost of labor is much cheaper. Outsourcing has become much more cost-effective due to globalization, that removes trade barriers, and advancements in technology. Companies from industrialized countries purchase services from low labor cost countries to reduce production costs. This phenomenon is the outcome of the Information and Communication Technology (ICT) revolution. "Taking advantage of ICT, companies are redistributing their businesses and jobs around the world. . . . It is now easier for companies to break up their service functions, and outsource some of these functions to low-cost locations overseas" (Khan & Islam, 2006, p. 2). Theoretically speaking, outsourcing brings positive effects to the host country because it creates employment opportunities. But in practice, outsourcing, like medicine, may have unwanted side effects.

At first glance, it is easy to assume that brain drain is evil and outsourcing is good for the developing countries, but it isn't quite that simple. This paper will explore the advantages and disadvantages of both brain drain and outsourcing and their impact on the global economy.

The world's economy is dominated by several major nations: the US, Japan, China, Germany, France, the United Kingdom, Italy, Russia, Spain, Brazil, Canada and India. Two currencies—the US dollar and the Euro, dominate. These larger economies are distributed across four of the six continents of the world. The center of global economy appears to be moving away from America to Asia, from the United States to Japan and China, however, the United States still maintains its leadership status.

This year, "China became the world's second largest economy . . . passing Japan" (McIntyre, 2009, para. 1). History informs us that economic power does not remain stable, but keeps shifting from one place to another. The economy giants today understand that they need to be interdependent upon each other for sustainability of economic power and growth. Not only that, they need to interact with the less developed economies in order for them to purchase material and human resources.

Globalization plays a very important role in getting goods, services, technology, and capital cross-borders. In this way, goods are distributed globally and wealth is generated in both developed and less developed economies. with the result that the trend of the global economy is toward equilibrium. A perfect global economic equilibrium where every economy has the same currency value and produces the same GDP will not be possible, however, in this imperfect world of imbalanced geographical, cultural, social, political, and natural situations. But economic globalization may create a win-win situation where the end result is that every economy is better off.

Hall (2010, para. 2) suggested that the following factors affect the global economy: "Trade and government policies affecting trade, technology, the migration of labor and capital and environmental degradation." This paper is limited only to the labor aspects, outsourcing and brain drain (international migration), the two strong forces which may somewhat bring into equilibrium the global economy. The assumption is that the global economy will arrive at equilibrium if the two forces positively impact the less developed economies and bring them up to a higher level of economic development. This is the situation where outsourcing continues to provide employment opportunities to the less developed economies and international migration continues to accommodate workers from them, and thus the economic well being among those nations is achieved.

Brain Drain

Brain drain, or international migration, has been a historical phenomenon, but during recent years the demand by developed countries for immigrant workers has significantly increased due to aging populations. It is a human tendency to look for a “greener pasture” and settle there until one finds a better place. Usually, those who look for greener pastures are highly skilled and have something to give to society. Apart from seeking better opportunities, there are also other reasons why people migrate into developed countries. These include political instability, lack of opportunities, health risks, personal conflicts, desire for wealth, freedom, etc.” (Gemini Geek, 2009, para. 1). Taking these factors into account we see that government policy can have significant effect on those who migrate to another country. Government policy affects workers on the receiving end as much or more as in the sending country. Shapiro (2009) and Sviokla (2009) suggest that United States needs to reform its H1B visa policy (visas for specialized skilled workers to work in the United States) to attract the best and brightest foreign workers who will help in enhancing its economic recovery. In the end, though it does have an element of personal decision, moving from one nation to another is governed by the government policies and regulations, as well as the political and economic situation on both ends.

Brain drain may be regarded as an economic cost to a nation. The emigrants take with them training, intellectual ability, and skills acquired while in their home country.

> These countries have invested in the education and training of young . . . professionals. This translates into a loss of considerable resources when these people migrate, with the direct benefit accruing to the recipient states who have not forked out the cost of educating them. (Dodani & LaPorte, 2005, p. 487)

Not all aspects of brain drain are negative, however. Some intellectual exchanges can be positive for both countries involved, especially if the migration is not unidirectional (Lowell, 2003). Dodani and LaPorte (2005) suggest some ways in which brain drain may be converted into wisdom gain. These include investing some parts of remittance received from expatriates living abroad into research and development; collaborative training programs provided to the home country by expatriate scientists and healthcare professionals living abroad with home country institutions and organizations; and providing healthcare services across borders, such as telemedicine services and telepreventive services.

It is not surprising to learn that, when given the opportunity, skilled laborers will move from a developing country to a developed one. It may be more surprising to learn that skilled laborers will also move from one developed country to another, or from one state to another. Few studies discuss the movement of skilled laborers from developed countries to developing ones, however, it is clear that "PTK (professional, technical, and kindred) or highly skilled workers have moved from industrial to developing countries as expatriates for decades" (Martin, 2003, p. 1). This movement is considerably lower than the movement from developing countries to developed countries, however. Where do people move to/from? "The most popular destinations that people would want to relocate across borders for work are the U.S., the U.K., and Spain" and "employers are currently sourcing the largest number of foreign professionals from China, the U.S., India, the U.K. and Germany" (Manpower Inc. Research, 2010, para. 5). It is clear that talent moves to where talent is needed, however, developed countries are doing better in attracting and retaining skilled labor.

Figure 1 shows that the United States and Australia are collecting the best skilled labor in their countries. Even people from Europe are migrating to North America and Australia. A recent (2006-2007) UNESCO study reported that the prime destinations for skilled labor migration include the European Union, North America, Japan, Canada, and Australia, but the United States remains the major attraction (p. 4). This is not, however, the complete story. People will move to where the action is.

Because of the economic crisis in recent years, many expect that there will be a drastic decline in migration into North America, a massive return to original countries, and a significant drop in remittance revenue. Research conducted by the United Nations Regional Commissions (2009) confirmed that even though there is a decline in the flows of immigrants into Latin America, "reality shows that these flows have not disappeared" (p. 1) and the remittance flows worldwide have shown "constant levels in spite of the severe falls in private capital flows to developing countries" (p. 2).

It is important to note that while the developed countries are engaging in heavy production and creation of wealth, the people's lifestyle has changed, and fewer people are interested in starting a family at an early age. In the developed world, having children is an option, and many are opting not to do so. Bocco (2003) reported that the people living in large US cities "tend to marry later and wait longer to have children, normally well into their 30s" (para. 1). In Scandinavian countries like Denmark, the average age at marriage is "30.2 for women and 32.5 for men" (para. 3). On the other hand, in developing countries people marry young and produce large families. The reasons for the larger populations in developing countries as compared to what is found in developed countries include cultural expectations, lack of knowledge and education regarding family planning and the need for human capital necessary for production. Religious, cultural and other factors also impact population growth. For example, in some cultures birth control is taboo, thus the population in such countries continues to increase (Chowdhury, 2008). In agricultural societies children are viewed as an asset, and therefore people in these societies produce more of them. Research on population growth leads to the conclusion that the countries that produce more reproduce less, and vice versa. The result of this situation is that the least developed countries of the world are progressively becoming a larger percentage of the total world population (see Table 1).

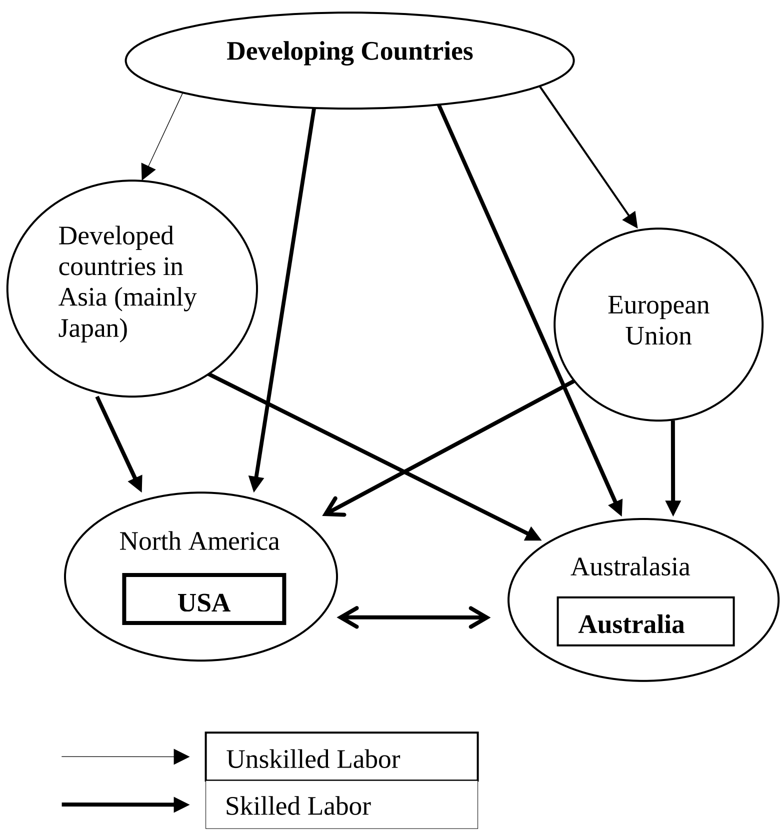

Figure 1. Flow of labor.

Table 1

Share of the World's Population by Development Level

Development level	Share of the world's population		
	1950	2005	2050
More developed	32.3%	18.7%	13.6%
Less developed	67.7%	81.3%	86.4%
Least developed	8.0%	11.7%	19.1%

Note: From the United Nations, *World Population Prospects*: *The 2004 Revision* (Khan & Islam, 2006, p. 9).

According to the projection in Table 1, by the year 2050, nearly 87% of the world's population will either live in developing countries or in the least developed countries of the world. This disconcerting projection is based on the low fertility rate and the aging population in developed countries. If this trend continues, the demand for labor from developing countries will continue to increase because of the severe labor shortage in developed countries. Khan and Islam (2006) suggest that "the developing or least developed countries will enjoy a comparative advantage in the global labor market with their relatively young labor force" (p. 9). The United Nations projects that Japan and virtually all European countries will experience a decline in total population during the next 50 years. In contrast, the young labor force in India and other developing countries will continue to increase to fill the shortage of labor in the developed countries.

Outsourcing

Increasing globalization and information and communication technology advancements are the major factors driving the occurrence of outsourcing, another powerful force in our global economy. Outsourcing has brought about yet another redistribution of labor supply and demand. "Offshore outsourcing" is a term used as synonym to "outsourcing" except that the former represents the performance of business functions by the external or affiliated firms outside the countries that actually developed or manufactured the products or services. Offshore outsourcing is often truncated and referred to simply as *outsourcing*, however, and this can lead to some confusion. This paper explores *offshore outsourcing*, where the jobs are migrating abroad, no matter which term is used to represent the concept.

According to Khan and Islam (2006, p. 3) “Rapid advances in communication and transport technologies have enabled production to be broken up into different stages and to be carried out on the basis of economies of geographical diversification.” For example, the manufacturers of a nation distribute or relocate some manufacturing activities to other nations where resources (including labor) are cheaper. For many developing countries, outsourcing is a blessing because it provides employment opportunities for many who would otherwise be jobless. In addition, employees of international companies are paid much more than those who are employed locally, and therefore increase the average overall salary in the developing countries. Toral (2005) reported the average overall salary increase from 2004 to 2005 in some developing nations as follows: India 13.9%, India IT enabled industry 17.9%, Philippines 8.2, China 8.1, Thailand 6.3%, etc. The service providers need not migrate to the job providing countries: the jobs are performed locally rather than in the countries where the services or products are actually developed or used. Outsourcing, therefore, is a cost saving business process that benefits both the client and the service provider. However, there may be a problem of foreign currency exchange risk that impacts the income of the service provider when the currency value of the client country falls. According to Hogan and Hartson (2007), “Foreign exchange risk arises whenever the service provider incurs performance costs in one country but is paid in the currency of a different country” (para. 1). For example, when the value of US dollar falls, the service providers that receive service fees in US currency will receive less than what they received when the dollar value was higher.

For some scholars, outsourcing is not understood to be a blessing. Kierkegaard (2007) argues that the developing countries in Asia are unlikely to experience employment gains from outsourcing activities. This is because most jobs are created by local companies rather than foreign multinationals. He explains, for example, that “domestic entrepreneurs have played a crucial role in the growth of the Indian IT-related service industry” (Kierkegaard, 2007, p. 1). In fact, he suggests, outsourcing seems to create an unemployment problem for the countries that outsource. Some American opponents of outsourcing point to the problem of taking jobs from the rich and giving them to the poor nations and its effect on the middle class, who do not have much financial margin. They may suddenly find themselves without jobs they could count on before. “America's middle-class,” they say, “cannot survive with a Robin Hood approach, as the jobs are migrating from Boston to Bangalore through the off-shoring process” (Khan & Islam, 2006, p. 3).

There are two major forms of global service outsourcing that provide employment opportunities to developing countries.

1. *Information technology outsourcing (ITO).* ITO is “the provision of some or all information systems by one or more service provider.” ITO

includes services such as “data conversion, data administration, help desk, content development, application development, system administration, mainframe, network management, and website development” (Khan & Islam, 2006, p. 4).

2. *Business Process Outsourcing (BPO).* BPO is when “an organization turns over management and optimization of business processes to a third party that conducts activities based on a set of predetermined standards” (Khan & Islam, 2006, p. 4). BPO, according to Khan and Islam, includes functions such as customer interaction services, back-office operations, and more independent professional or business services.

These forms of outsourcing can be performed in many developing countries where satellite service is readily available and the electricity is reliable. But there are countries in the world with poor internet connections and irregular access to electricity; outsourcing may be difficult in such places. Even with the use of technology to stabilize the power supply, it is difficult to sustain power when the electricity is often cut off for more than two to three days at a time.

In order for outsourcing to be possible, the following criteria must be fulfilled. First, there should be a significant wage difference between the client country and the host country. The major reason why multinational businesses are outsourcing is to take advantage of low labor costs. Second, the work must be able to be done remotely and transmitted over the internet. This again requires efficient access to the internet and full-time availability of electricity. Third, the work must have high information content. Information technology is a key catalyst to outsourcing because of its role in enhancing the speed of information transmission with accuracy and efficiency. Fourth, the work must be easy to set up and repeatable. The above factors suggest that not all work can be successfully outsourced, and therefore some types of jobs are left for client countries to perform for themselves.

The Impact of Brain Drain and Outsourcing on the Global Economy

Earlier, we discussed previous research on positive and negative aspects of brain drain and outsourcing on developed as well as less developed economies. The model in Figure 2 summarizes the interactions of developed economies and less developed economies through outsourcing and brain drain, showing the positive results. The model assumes that outsourcing and brain drain result in global economic equilibrium, if the outcome factors mentioned in the diagram are present and other factors remained unchanged (*ceteris paribus*). Changes in the outcome factors would result in similar changes to the position of equilibrium in the global economy.

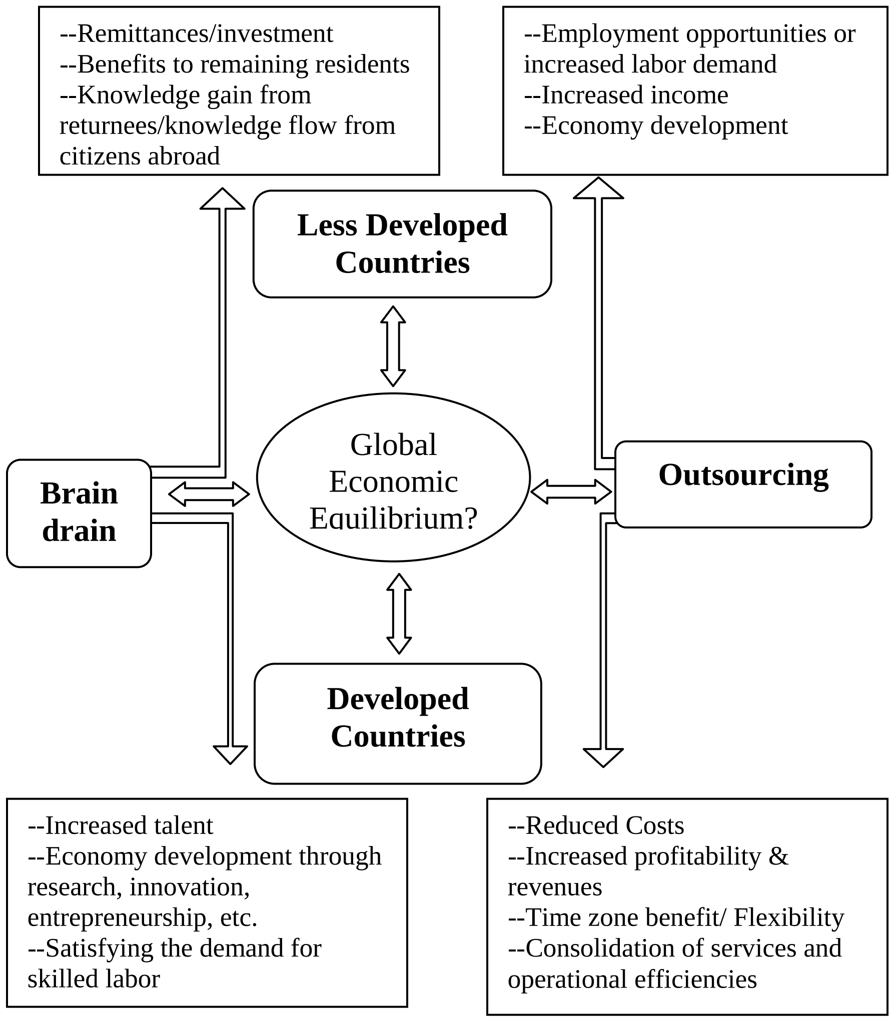

Figure 2. The impact of brain drain and outsourcing on the global economy.

We next take a closer look at Figure 2, beginning with brain drain, or the international migration of workers. For all the negative aspects associated with this phenomenon, there is also a major benefit: the inflow of remittances, which provide an important source of finance for developing countries. This investment may help economic growth and create job opportunities. Dolvo (2004) suggests that this benefit tradeoff can ultimately be favorable for the developing country: "Although the brain drain undeniably has serious negative effects, these may be turned around to benefit migrants' home countries if managed well" (p. 620). In countries like India and the Philippines where labor is abundant, the migration of a portion of population to developed countries will have minimal effects on the sending country, since the percentage of those who emigrate is small in comparison to the population (Furniss, 2006, p. 3). Countries like these intentionally prepare professionals and encourage long term and short term outflow of workers. Buchan (2007, para. 8) reports that "some national governments and government agencies, such as in the Philippines, are attempting to encourage outflow of health workers from their country." These nations benefit by turning brain drain into brain gain.

The departure of some employees may create two significant benefits to the remaining residents. First, since the workers previously working in the country leave for outside jobs, this movement of labor creates vacancies for the remaining residents to fill. Second, the "remaining residents benefit because 'their' brains produce 'better' knowledge (such as more effective medicines, more entertaining movies, or more effective software) abroad than if they had remained at home" (Kuhn & McAusland, 2006, p. 15). The 'brains' that migrate to developed countries will have a higher probability of developing their full potential than if they had remained in home countries. The lack of technology, adequate facilities, and opportunities limit their abilities to advance. But because of the greater privileges received abroad, these 'brains' produce knowledge or products that may bring greater benefits to the remaining residents.

This pattern of providing funds and ideas to the developing country from which a worker comes may also create attractions and opportunities that will eventually entice workers to return home. "Ultimately, involving individuals who are living abroad in creating opportunities at home favors both the retention and repatriation of national talent" (Dodani & LaPorte, 2005, p. 490). The return of knowledge workers to their own countries is one great benefit of brain drain. In some developing countries like India, the return rate in 2000 was very low (Cervates & Guellec, 2002). But countries that have higher rates of return are doing much better in economic development. Cervantes and Guellec (2002) point out some countries as examples: "The relative success of Chinese Taipei, Korea and Ireland in fostering return migration has been attributed to the opening of their economies and policies to foster domestic investments in innovation and R & D" (para. 13).

For developed (host) countries, brain drain is a blessing. Obviously, skilled laborers collected from all over the world will contribute to increased production which leads to economic growth. Greater production yields greater income which is invested back into business expansion that creates more employment opportunities. Since the host countries are able to utilize the talent and increase potential through providing facilities for research, innovation, and other business opportunities, this international mobility of skilled workers brings great benefits to these nations.

> The contribution of foreign skilled workers to economic growth and achievement in host countries, in particular to research, innovation and entrepreneurship, is increasingly recognized–witness the number of foreign-born US Nobel Prize winners or creators of global high tech companies, such as Intel or eBay, and other successful start-ups. (Cervantes & Guellec, 2002, p. 10)

This statement explains how it is that advanced countries like the US are enjoying the benefits of diverse talent gathered from all over the lesser developed countries by providing them with residency and opportunity. This gives rise to the overall development of the host countries. Earlier in this paper we discussed the problem of labor shortage in the industrialized countries and labor surplus in the developing countries. The demand for skilled laborers in the industrialized countries is met by importing skilled labor from developing countries and providing them the opportunity to improve their life.

One of the ways this demand for skilled labor is evidenced is by the number of students that study abroad and do not return to their home countries after completing their course work. According to Cervantes & Guellec (2002), “higher education is an important channel for US firms recruiting highly skilled migrants” (para. 5).

How does brain drain impact global economic equilibrium? There are disadvantages of brain drain for less developed economies as well as for developed economies, but the negative weight, as was discussed above, has more of an effect on the less developed countries. There are, however, positive factors associated with global equilibrium that should be considered when looking at the entire equation, and which are the main focus of this paper.

As the skilled workers move from a less developed economy to a developed economy and then back, this process results in a better flow of knowledge throughout the global economy. “International mobility of skilled workers can generate global benefits by improving knowledge flows and satisfying the demand for skills” (Khan & Islam, 2006, p. 10). In addition, the knowledge flow from citizens working abroad helps to improve the economy of less developed countries. According to Cervantes and Guellec (2002), citizens working abroad from South Africa, Latin America, and India are the ones responsible for linking "researchers abroad to networks in their home countries" and they are "the primary drivers of knowledge and capital flows" (para. 13, 14). Not only the flow of knowledge, but the flow of remittances, as previously discussed in this paper, help improve the economy of less developed countries by providing investment. This model assumes that if the flow of knowledge and money to the less developed economy and the supply of skilled workers to the developed economy continues, all other things being equal, the global economy will move toward equilibrium.

Let us now look at the right side of Figure 2 and explore the other major force that impacts the global economy: outsourcing. Even though, outsourcing, like brain drain, may impact the global economy negatively as discussed earlier, in this model we are looking at the positive impacts. Outsourcing creates employment and other opportunities to assist economic growth in developing countries. According to Khan and Islam (2006), "Global outsourcing, which was largely initiated by the American multinationals and is increasingly being adopted by businesses in developed economies, has led to huge job opportunities in many developing countries" (p. 6). It follows that the higher supply of jobs will create a greater demand for labor. Without having to go abroad, which incurs large expenses, workers in less developed countries can enjoy working in own countries with higher pay. The higher rate of employment will bring in greater income that results in higher per capita income, which translates into a higher standard of living. This phenomenon should bring about an increase in savings and investment which are the basis of economic development for a nation. And this is an age-old wealth-creation theory—more employment, more income and more income, more employment—and it keeps building. According to Ranjan and Srivastava (2010, p. 40), the benefits of global outsourcing to developing countries include "opening up new export, growth and employment opportunities in various tradable service activities." How does this impact the global economy? When a country exports more, it will naturally import more because of the availability of foreign exchange. Outsourcing makes it possible for a developing country to export more and thus import more in return. When developing countries with large populations like China and India become involved in global outsourcing and international trade, both as importers as well as exporters, there will be an unquestionable impact upon the global economy.

As discussed earlier, some have argued that outsourcing is a mixed blessing to the countries who do it because of its nature of creating unemployment among workers in the sending country. There are those, however, who take an opposing view. These authors suggest that the advantages far outweigh the disadvantages for the developed countries that outsource. Ranjan and Srivastava (2010), in a recent article, point out that "global outsourcing is responsible for only a small portion of recent job losses in the US" (p. 40). The model presented in Figure 2 ignores the drawbacks associated with brain drain and outsourcing, assuming that they will be cancelled out, leaving only the net benefits. The major reason why the developed countries, mainly the USA, outsource is the reduced labor costs due to differential wages. Many of the articles cited in this study agree. Ranjan and Srivastava (2010) further suggest that if the multinationals stopped outsourcing, they would lose their competitive advantage in the global market. McKinsey Global Institute (2003) points out another benefit of outsourcing as “an opportunity to drive revenue growth” (p. 5). One example of this is when a company can offer customer service in places where they were not able to before. Outsourcing may do more, however, than just bring profit to firms. “Firms that engage in outsourcing may increase their competitiveness and their profitability. This has the potential of increasing employment, and leading to greater job stability and lower labor market turnover” (Bachman & Braun, 2008, p. 21).

Another advantage of outsourcing is time zone benefit. The distance between countries used to be one of the barriers in business dealings, but it is now an advantage because of the time difference. Thomas Friedman (2007), in his book *The World is Flat,* lists outsourcing as one of the flatteners of the world. Time difference is one reason. When the western world sleeps, the people in India and China can do the jobs for them. Outsourcing also has the advantage of flexibility of location and time. It is not necessary to have fixed office locations and office hours; the jobs can be performed anywhere, anytime. In case of disasters and emergencies, jobs can be quickly transferred to the recovery centers where the operations can continue without interruption (Outsource2india, 2009). Outsourcing also gives the advantage of “consolidation of services and operational efficiencies” (Outsource2india, 2009). Some have claimed that “consolidation and outsourcing improves quality assurance and saves $3.5 million annually for a leading financial services company” (Infosys, 2005, para. 1). These are some major benefits of global outsourcing to the developed economy.

The Obama Administration sees outsourcing as a force that brings a negative impact on employment in the US. Srivastava (2009) reported that Obama “has promised further tax reforms, where there could be a more direct attack on outsourcing” (para. 12).

My argument is that the benefits received from outsourcing far outweigh the negatives. If we cancel out the negative effects from the benefits, we still have net benefits large enough to make a positive impact on the global economy. Some scholars argue that “far from bad for the US, off-shoring creates net additional value for the US economy that did not exist before, a full 12-14 percent on every dollar off-shored” (McKinsey Global Institute, 2003, p. 12).

How does outsourcing impact global economy equilibrium? We have seen in the model how outsourcing benefits developed economies as well as the less developed. In both cases, even though outsourcing may incur some disadvantages, the advantages are higher and therefore the net benefits will be positive. It is a win-win situation where both developed and less developed economies are better off. In a less developed economy, more employment opportunities are created; labor demand is increased, and per capita income increased. These positive impacts lead to economic development of the nations that further contributes to the betterment of global economy. For a developed economy, it may appear that outsourcing benefits the less developed economy by reducing the developed country's wealth. But the literature suggests that the benefits received through reduced labor costs are far greater to the developed country than the disadvantages caused by employment loss. This argument suggests that if outsourcing provides more jobs with higher pay to the less developed economy and reduces labor costs, increases productivity and profitability for the developed economy, other things being equal, the global economy will move toward equilibrium.

Regulatory Bodies

The question before us is this: who is responsible to make this model of fair exchange work? In the matters of brain drain or international migration, governments are ultimately the ones responsible for creating a win-win situation when it concerns turning brain drain into brain gain. Governments may be able to enforce policies that restrict movement of skilled labor, but Srikandarajah (2005) argues that "limiting the movement of highly skilled people may not be necessary" or useful because of the following reasons:

1. The possibility that emigration can have positive impacts means that, unless targeted at specific sectors in specific countries, measures to limit migration can end up doing more harm than good.
2. Denying would-be migrants the right to migrate on the basis of the anticipated impacts of their departure to the sending country may be discriminatory and compromise human rights.
3. Many migrants will find ways around recruitment bans, perhaps applying directly to employers rather than going through recruiters who are unwilling to enlist them.

Therefore, instead of limiting skilled labor movement, a more reasoned policy is for governments to maintain close ties with migrants abroad in order for the nation to benefit from the remittances and investments those who work abroad send to their home countries. Changing attitudes towards migrants abroad and treating them as sources of national revenue and knowledge is a governmental responsibility. The following paragraph by Martin (2003) affirms this conclusion:

> Governments that maintain ties to migrants abroad are able to sustain interest in the migrants' country of origin, which can promote investments and voluntary returns. Migrants from particular countries have developed many networks that serve as points of contact for their home country governments, including the Colombian Red Caldas network, the Global Korean Network, the Philippines Brain Gain Network, the Polish Scientists Abroad, the Association of Thai Professionals in North America and Canada, the Iranian Scientific Information Network, the Tunisian Scientific Consortium, and the Arab Scientists and Technologists Abroad. (Martin, 2003, p. 20)

To turn brain drain into brain gain, it is important that the governments of less developed countries not only encourage labor outflows, but that they prepare workers to meet the labor requirements of the developed countries by aligning their educational curricula with the developed countries' specifications. The Philippines, India, and China are three examples] of less developed countries that participate in training workers to create labor for developed countries. In order for the benefits of brain drain to be distributed equally among the developing economy, other developing countries could potentially also benefit if they implemented policies to develop skilled workers to meet foreign needs. As Cervantes and Guellec (2002) put it, "With the right mix of policies and sustained international co-operation, several countries could, as one Indian official pointed out, see the 'brain drain' be transformed into a 'brain bank.'"

According to McKinsey Global Institute (2003), the US, Europe, and Japan are the major outsourcing countries. US businesses dominate, with 70 percent of the market; India, Ireland, the Philippines, and Russia are the major countries they look to for their supply. As discussed above, outsourcing brings advantages to both developed economy (through productivity gain) and less developed economy (through labor gain), and it has the potential for positive impact on the global economy, although there is a debate going on regarding the growth of unemployment in the developed economy that some say results. Proponents of offshore outsourcing argue that this is a short term phenomenon that "has long term economic benefits, and that it eventually will increase living standards in OECD countries through positive productivity effects and reductions in factor costs" (Olsen, 2006, p. 5). Bachmann and Braun (2008) confirm that "firms that engage in outsourcing may increase their competitiveness and their profitability. This has the potential of increasing employment, and leading to greater job stability and lower labor market turnover" (p. 21). If during the period of short-term unemployment caused by outsourcing in the developed countries, the displaced employees are taken care of, the negative effect of outsourcing may be reduced or removed.

Who is responsible and how an outsourcing policy will be implemented has yet to be answered. McKinsey Global Institute (2003) suggests that the proposal for an insurance policy for displaced workers, such as that developed by Lori Kletzer and Robert Litan, be implemented. Companies would be required to contribute 4-5 percent of their savings to insure those who suffer job loss due to offshore outsourcing. While a plan like this raises many potential concerns, such as ‘Who will get the money from the insurance? and ‘Will people be paid to stay home and not work?’, it is at least a step in the direction of considering the consequences of outsourcing and dealing with them. This arrangement would place the responsibility on businesses, rather than the government, to ensure that their employees’ jobs are secure, and to align the rate of offshoring with the rate of reemployment. Governments and businesses need to work together with the cooperation of world organizations such as the World Trade Organization (WTO) and the Organization for Economic Cooperation and Development (OECD), or the International Association of Outsourcing Professionals (IAOP). If they can establish and implement policies that promote the positive and discourage the negative impacts of international migration and offshore outsourcing, the expectation is that the global economy will benefit.

Conclusions

An attempt to achieve global economic equilibrium through international migration/brain drain and outsourcing may not be one hundred percent practical, since many other factors also affect the global economy. This paper is limited to the labor aspects that are affected by brain drain and outsourcing. It is commonly understood that if the less developed economies continue to improve and the developed economies maintain their current situations of prosperity; the global economy will continue to move toward equilibrium. This paper suggests the possibility of achieving global economic equilibrium by capitalizing on the positive effects brought about as the developed countries and less developed countries interact through outsourcing and international migration.

The model presented in this study is formulated from previous studies, literature, and current issues, and therefore lacks empirical data. However, the proposed theory has practical business and economic implications in both developed and less developed countries. First, outsourcing and international migration are two very real and powerful forces that no multinational business can avoid or do without. Therefore, businesses must find ways to accommodate these forces into their organizations and make the best out of them so that their sustainability and growth are ensured. Second, governments of both developed and less developed countries must accept the reality of these two forces in and seek to create a win-win situation. Developed countries will continue to outsource to create job opportunities in developing countries and to bring in additional income in their own country. Less developed countries can learn to transform brain drain into wisdom gain by recognizing the advantages of the remittance income gained from overseas workers and because many of these workers will one day return to own countries with better knowledge. Also, the trained workers who intended to emigrate but were not hired by the developed countries will remain in own countries to do the development work.

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