Abstract
This paper looks at the effects of brain drain on the Ghanaian economy. It is a reflective study based on the premise that brain drain has a negative effect on the Ghanaian economy. It is based on exploratory studies in Ghana, United Kingdom, Netherlands, Malaysia, a literature review and a tracking of contemporary events from professionals from the public sector of Ghana, most especially the health sector. Data gathered were subjected to reflective analysis with an outcome which revealed that even though brain drain from Ghana has negative connotations on the public sector because of loss of vital human resources from Ghana to other countries, there are however some associated benefits to Ghanaian households and firms. The benefits include improvement in labor resources, reduction of poverty; financial deepening through remittances repatriated back home and improvement in macroeconomic effects through foreign exchange rates. It was revealed that both the sending and receiving countries of the 'brains' could strategize to derive mutual benefits.

Introduction
'Brain drain' usually refers to the movement of skilled professionals from one nation to the other or from one organization to the other (Kwok 1982). It has been defined variously as:

- The loss of skilled and technical labor through the movement of such labor to more favorable, geographic, economic or professional environments (American Heritage Dictionary).
- An emigration of trained and talented individuals for other nations or jurisdiction due to conflict or lack of opportunity or health hazards where they are living. (Wikipedia, the Free Encyclopedia).
- The emigration of highly skilled or qualified people from a country (Oxford Dictionary).

The emigration of highly skilled people from one country to another, is an issue, which is seriously affecting both developed and developing countries. The study seeks answers to the following questions: to what extent do such emigrations have positive and negative economic effects on the home countries of the migrants and the countries which receive them? Are there some benefits associated with brain drain? The main focus of the research is to find out more about the positive and negative effects of brain drain with a special interest in the health sector of the Ghanaian economy. This reflective research paper, therefore, considers the general overview of brain drain, how extensive is the brain drain, the causes and effects of brain drain with more emphasis on the health sector of the economy of Ghana.

The study was conducted by relying on literature on brain drain; data gathered from migrants from both developed and developing countries, especially immigrants in UK, Malaysia, Netherlands and Ghanaians domiciled abroad who were visiting relatives in Ghana. Data were also gathered from a monitored Radio News.
The study made extensive use of the electromagnetic media especially the Internet and other sources of reference relevant to the study.

In gathering data for the analysis, unstructured interviews were conducted with most professionals and students who were residing in the UK, Netherlands and Malaysia who were emigrants from Africa and Far East countries.

A field study in Malaysia and Netherlands was undertaken to collect adequate data on this phenomenon.

Data was also gathered from the office of Nurses and Midwives Council in Ghana, UK General Medical Council and World Bank Report.

General Overview Of Brain Drain
After World War II many people from the European countries especially Britain and Germany started moving to America for better protection. Since that time the professionals with certain required skills from low income countries started migrating to the advanced countries for better economic benefits (Cohen 1996). Movements of professionals from one country to another (Brain Drain) have increased recently due to the impact of globalization, information technology and the rapid changes in the world economy. A number of developed countries including United Kingdom, Canada, Australia and USA have recently changed their policies to attract more highly skilled workers from different parts of the world, through a credit written system of qualification.

The demand for professionals has stimulated increased outflow of skilled personnel from developing countries recently. Although some Analysts suggest that some mobility is crucial for developing countries if the developing countries want to become part of the global economy, the positive and negative impact of such mobility are still questionable. The greatest challenge faced by policy-makers and Human Resource Professionals is how to find the possible solutions to the problem and also how to derive benefits from the high influx of migrated professionals.

How Extensive Is The Brain Drain
Traditionally, medical doctors and nurses have made up the bulk of migrants among the various health professionals. Recently there has been increased movement of other healthcare professionals such as pharmacists and physiotherapists, Dovlo, D (1999).

Migration studies from 61 developing countries to the United States, according to the 1990 U.S. census disclosed that the highly educated immigrants from Africa numbered about 95,000 of the 128,000 African migrants. The biggest migratory flow came from Egypt, Ghana, and South Africa. Among the countries in Asia and the Pacific were Philippines with 730,000 and China with 400,000 migrants where a great majority of them had tertiary education. More than 75 percent of Indian immigrants and 53 percent of Korean immigrants had tertiary education out of the total immigrants of more than 300,000 from both countries. The migratory flow from Mexico was 2.7 million, about 13 percent of which had a tertiary education. The report revealed that for most countries people with tertiary education had the highest migration rate (Carrington and Detragiache 1999).

Relying on the statistics of Organization for Economic Cooperation and Development (OECD) Reporting System on migration, it was revealed that migrants to the United States accounted for less than one-third of the total of immigrants to all OECD. The research also revealed that the migration to the United States, Australia, Canada, France and Germany accounted for about 93 percent of the total migratory flows to the OECD countries. The report further indicated that the migration rate of highly educated individuals from Ghana was 26 percent of all the immigrants from Ghana to OECD countries.

Causes Of Brain Drain
According to this research the major causes of brain drain stem from such factors as large
differences in economic development and living standards among countries; most of the people who migrate from poorly developed economies to highly developed economies are motivated by the economic activities found in the developed economies. Some professionals are lured by improved education, which results in better access to information about living conditions and employment opportunities abroad. People get to know more of other places through learning.

Advancement in information technology and the rapid growth of international contacts through the electro-magnetic media, especially the internet, have also added to the brain drain. People move from one nation to the other after establishing contacts abroad and knowing the adventures there. Others migrate because of the value system.

The quality of education and research in countries attract experts from less developed countries for enhancement of their skills. After acquiring the requisite skills they get attracted by the availability of jobs and the lifestyle of the people in that country. Another factor which pushes people to migrate is instability in the political system of developing countries.

**Negative Effect Of Brain Drain And Its Associated Effect On Ghana**

Brain drain has become an issue, which is seriously affecting both developed and developing countries and having both negative and positive impacts on the giving and receiving countries. Most Economists believe that the major negative impact of brain drain is the reduction of economic growth of the source countries (Lowell 2001). Reports from the Criminal Intelligence Authority (CIA) of the United States of America, have disclosed that in the first half of the 1990s many of the Soviet Science Specialist who were working in the field of nuclear and missile technology migrated to the Middle East to work in violation of the treaty on the non-proliferation of weapons of mass destruction due to economic reasons. Petrakov, who was a member of the Russian Academy, said that 'Russia now has a missing generation of Scientist'. In the top secrete series it is said that eight hundred thousand (800,000) Scientists left Russia in the first ten years of easing of emigration rules in the 1990s. NTV Mir, a television station in Moscow, Russia, on 23 January 2005 at 1018 GMT reported that the training of the Scientist who had migrated from Russia had cost the country $60 billion.

Data gathered from the United Kingdom General Medical Council on registration of doctors in the United Kingdom, based on place of primary medical qualification, from the period 2000 to 2002 as shown below indicate an upward increase of 21 percent.

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Source: United Kingdom Medical Council (as adopted from Buchan & Dovlo, 2004).

These data give the indication that more medical doctors from different countries are moving to the United Kingdom than ever. It is established that the situation is worse with the nursing profession as currently about 45 percent of all new entrants onto the UK nursing register are from international sources as compared with the about 15 percent in 1999 (Dovlo 2004).

According to the Canadian Medical Association, Canada has been relying on foreign medical practitioners for its rural medical outpost since the past decade. The Association reported that about One thousand seven hundred (1,700) medical doctors were from South Africa because most of the Canadian Medical Doctors had left the country.
to work in other countries—'One out of every five Physicians in the Saskatchewan province migrated from South Africa' (Leslie 2003: 12). South Africa with its AIDS pandemic, economic uncertainties and the loss of its doctors to Canada, Australia, Britain, New Zealand and USA was also falling on medical doctors from poorer countries including Ghana, Nigeria, Zimbabwe, Kenya and Uganda for its medical services.

The Economist of 25th September 2004 reported that many of Europe's best brains had migrated to USA to work on the world's best University campuses due to economic reasons. Other countries like Australia, New Zealand and Japan were also competing for the best brains in Europe. In Amsterdam, an upward bias in the social value of high-income type of research had created more serious brain drain problems (Viem and Hapie 1982). Australia has recently put in place so many incentives which attracts highly skilled personnel, especially those from UK and other developed countries to Australia.

According to UNDP Human Development Report (2001), brain drain costs developing countries billions of dollars in a year. It prevents taxpayers from reaping a return on their taxes. The report disclosed that there was a strong consensus that many poor countries, including Ghana, continue to remain poor because of deficiency in human capital as a result of brain drain. It makes investment in education not leading to faster economic development. It affects strategic plans and policies of nations and also causes reduction in the sense of patriotism. Its detrimental effect could cause a heavy burden on basic social services including education and health.

Statistics from Ghana Statistical Services indicate that out of every one hundred and twenty medical doctors turned out yearly from Ghana Medical schools, 70 percent leave the country within two years. As compared to the United States of America, where statistics indicate that currently there is one doctor per two thousand people, in Ghana statistics available indicate that there is one doctor to eleven thousand people and that Ghana now has less than two thousand doctors in total working in Ghana. In an interview by 'Agence France-Presses' the former director of Ghana Health Service, Professor Badu Akosah stated that 'Brain Drain is the single most significant impact on health delivery in Ghana ... Ghana has some hospitals that do not have a single doctor and are run by enrolled nurses who were originally trained to assist professional nurses in the delivery of care'. It was said that there were more Ghanaian nurses working in London than their counterparts working in Accra.

In another development it was indicated that 448 doctors, who constituted 54% of the doctors trained during the period 1999 to 2004, left Ghana to work abroad. A lot of the 2-3 million Ghanaians abroad are health professionals, lecturers, engineers, accountants, architects and other Professionals. This statistics indicate how serious brain drain is affecting Ghana. Due to poverty and other unknown reasons it has become the habit of the Ghanaian youth to take delight in migrating to other countries to even do menial jobs which if done in Ghana could increase their living conditions and make them better off than living abroad.

Due to shortage of medical doctors in Ghana, the few doctors available keep on threatening leaving the country by making demands which the government finds it difficult to meet. Such demands in most cases lead to industrial unrest with untold hardship to the people of Ghana and contribute to increase in the mortality rate.

It was observed abroad that most of the Ghanaian 'brains' were doing excellent jobs in their professions and were holding key positions in the organizations they work for. In UK, for instance, a Ghanaian medical consultant working at the Manchester University Hospital indicated that he had worked for over twenty years in that hospital and was not prepared to come back to Ghana. Among the reasons stated for not coming back were bad economy, incompetent political leadership and corrupt practices.
Most of the professionals interviewed gave the impression that they went abroad through Ghana government scholarship but decided not to return to Ghana because of the benefits they were receiving. It was disheartening to note that some of such experts were in their pension age after working for over forty years abroad and still preferred staying there.

There were a lot of other professionals like lecturers, nurses, architects and security personnel abroad who were Ghanaians who had put aside their professions and were doing other demeaning jobs such as cleaning, serving as kitchen porters, waiters and waitresses, attending to the aged and invalids, washing of vehicles, engaged in security jobs and rendering other services which have nothing to do with their acquired profession. Most of the sponsored students also took delight in staying abroad after their studies without realizing the cost of their studies to the economy of Ghana, especially the organizations which sponsored them.

It was observed that there were a lot of Ghanaian professionals abroad whose living conditions were worse off than when they were in Ghana but for no apparent reasons preferred staying abroad with their expertise. In Amsterdam, for example, most Ghanaian professionals interviewed in the year 2005 indicated that they were taxi drivers who had not registered to drive taxis there but had devised their own means through which they got their passengers.

Most of the 'taxi drivers' indicated that they were university and polytechnic graduates from public universities and polytechnics in Ghana. Most of the Ghanaians were also observed at car selling places assisting people, especially Ghanaians who were searching for used cars to buy at Amsterdam car market; some were also seen working at the market where shipment of cars and other properties to different countries were taking place. Most of them were university graduates and some had completed their doctorate degree programs.

The question that could be asked is what impact would these 'Brains' have made if they had stayed and put their expertise to the service of Ghana? Ghana spends a lot of its income on training these professionals but most of the returns from such professionals are kept abroad. For instance, Ghana lacks Medical Doctors and sometimes has to rely on doctors from Cuba and elsewhere who work at most of the hospitals located in the rural areas. Most of the industrial unrest emanated from the actions of the few medical doctors in the country who because of their high demand, as the result of brain drain, embark on strikes to press home higher increases in their remuneration. Whenever such demands are considered by the government it serves as a trigger for workers in other public and private organizations to follow suit.

The universities in Ghana would have been better of with qualified young lecturers if the Ghanaian lecturers abroad were to work in Ghana as lecturers. Available statistics from the manual on condition of service of University of Ghana indicate that in the year 2005, 14.65% of Lecturers there were above sixty years of age. In that report it was indicated that in that year one hundred and ten (110) retired lecturers were called back to the classroom to lecture. This is an indication that brain drain in Ghana is not only in the medical field.

The following measures have been suggested to reduce the negative effects of brain drain:

- The ability of the government to significantly and dramatically lift the standard of living and welfare of all Ghanaians by putting in place sound economic policies leading to a viable private sector, institution of a fair and friendly regulating environment,
- The application of the rule of law in an open and transparent manner, establishing standard of good governance, protection of property right through reputable judiciary system.
- Bonding of all professionals sponsored to do further study abroad.
Brain drain could cause increases in real wages and consequently create equal distribution of national income as a result of labor shortage which raises the value of certain skills.

When the advanced countries enter into a period of recession barriers to the free flow of labor are raised and sometimes-foreign labor with enhanced values in skills and know-how is repatriated to the sending countries. The repatriates return to their motherland with enhanced skills which contribute to the development of such economies. Migration, in this sense, is conducive to the formation of human capital, bringing about innovation and wealth to the sending countries. In Ghana, it could be observed that most of the big assets in the country are owned by the professionals who are based abroad or have returned to settle in Ghana after spending many years abroad.

The receiving countries also benefit from the migrated professionals by saving cost on training and generating highly skilled people to work within those countries. The immigrant professionals are accepted for their cheap labor. The movement of people could also lead to a spillover of knowledge and technology (Meyer, 2003).

In Ghana, most of the 'high class' properties belong to the Ghanaian professionals who reside abroad. Most of them have raised their standards of living and have better lifestyle than their counterparts left behind. In an address given by President Kuffour, the President, indicated that in 2001 Ghanaian professionals abroad remitted US$ 400 million and in 2004 remitted over US$ 2 billion. Much of the money raised was used in servicing the private sector that attracted new international companies like Anglogold-Ashtanti, Newmont Mining Company and expanded the existing companies including Coca Cola; Nestle, Ghana and the Ghana Stock Exchange. The remittances also brought about improvement in Ghana's foreign exchange as a result of the appreciation of the local currency (Cedi) as against the major foreign currencies which result from high inflows of the foreign currencies. At a general durbar of the chiefs and

Positive Effects Of Brain Drain
Brain Drain, despite its negative repercussion, it has some positive effects on both the sending and receiving countries. International migration could reduce unemployment in the labor exporting countries. The UNDP 2001 report indicated that in some countries, including Pakistan, Bangladesh, and Sri Lanka remittances from migrant workers accounted for six to twelve percent of GDP. It was indicated that migrants had high rates of savings and investment in land, agriculture, equipment, vehicles and stores. Unemployment is a problem encountered by many nations, especially developing nations and through brain drain more unemployed Ghanaians will get jobs in Ghana. It has been realized that most of the Ghanaian professionals abroad were compelled to travel as a result of the unemployment situation in Ghana. Recent springing up of many universities has brought about manpower surplus in most skillful areas and this excess has compelled the employers to look for candidates with some number of years of working experience. The fresh graduates who do not have the required experience are forced to look elsewhere abroad for their survival. The unemployed graduates better their living conditions abroad.
people of Kwahu traditional Area in the Eastern region of Ghana, on the 7th April 2007, the President further indicated that over US $6 billion remittances from Ghanaians abroad were sent home to enhance developments in Ghana in the year 2006.

Conclusion And Recommendations
Most developed countries take advantage of their development to attract most professionals from developing countries, usually for their cheap labor. The devastating effects of brain drain affecting developing countries are so enormous that even the health sector of the economies of the developing countries lack the needed medical practitioners.

The study established that the health sector of the Ghanaian economy has suffered a lot as a result of the shortages that the sector encounters. Hospitals and clinics in Ghana lack professional doctors, nurses and other health professionals whose expertise are highly needed for the effective upkeep of the sector.

Despite the negative consequences of brain drain there are positive aspects of it to the developing countries as a result of the remittances repatriated back home and spillage of knowledge that enhances the skills of the immigrants which could be an asset if they should go back home.

Even though there is no single solution that could address the impact of Brain Drain at once, over the long run the policies that could help increase universal education and boost economic development could be the best options to address the emigration of skilled professionals. Reduction of wage differentials between countries and improved living conditions could also help curb the high level of skilled human resource migration. It is also important for both developed and developing countries to take responsibilities to foster commercial ties and enhance international network of science and technology which could help reduce the effect of brain drain. Developing countries could also capitalize on the need for their professionals abroad and train more people with the view of receiving benefits from the developed countries who need the professionals on regularized agreements.

The research revealed that even though the health sector of Ghana has suffered through brain drain, most professionals from the health sector of Ghana resident abroad are doing well in their fields of endeavor which adds some values to their expertise. However there is a greater number of professionals who are not using their acquired skills which could have been put to better use back home. The economic development of Ghana would have been accelerated faster if the professionals abroad had joined hands with the few behind. It has also been revealed that though Ghana has suffered increasing brain drain, it has benefitted in diverse ways through remittances and other developmental activities engaged in by the emigrants.

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Gerald Dapaah Gyamfi
Dean Faculty of Management
Institute of Professional Studies, Legon
Email: gdgyamfi@yahoo.com
Tel: 00233-242-874208
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