

Review

Brain drain and African development: Any possible gain from the drain?

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Everyday, Africa loses her best academics, scientists, doctors, nurses, accountants, and other sought-after professionals, through brain drain, into other richer countries. The question is: Why? The impact of the problem is to the detriment of development of the African continent. It also seems to be a continuous issue without any trend of ceasing. This paper explores the nature, effects (positive and negative) and reason for the brain drain in Africa. What can African countries do to minimize the problem or the impact thereof? The aim of this paper, with some models illustrating the subject matter, is to explore the nature and effects of brain drain on African development and ultimately pinpoint possible positive perspectives of brain gain from the drained brains.

Keywords: Brain drain, Africa, development, brain gain, professionals, migration, training.

INTRODUCTION

The migration of highly trained professionals out of Africa, often called brain drain or brain loss, leaves many countries in the continent short of the skills needed to meet the challenges of economic development. The problem of the brain drain from poor to rich countries has received a lot of attention in the world's press as well as from academics and researchers.

Studies and researches show that brain drain of professionals from Africa is caused by a lot of factors; economical, socio-political and even personal. It costs the countries of the continent massive amount of resources and time to train these professionals who eventually migrate through the brain drain drift.

The objective of this paper is to discuss how brain drain of professionals from Africa affects the economic development of the continent and elaborate on some already identified possible solutions to the problem, as well as identify new ones. The possibilities of benefiting from brain drain are also discussed. This treatise gives

other scientists and academics an opportunity to evaluate and express their opinion about the nature, effects of brain drain in Africa and possible solutions. This is an exploratory study, which is based on conceptual analysis, literature reviewing, theory building and the emic perspective (authors' viewpoint).

BRAIN DRAIN

Simply put, brain drain happens when skilled professionals from a country (mostly poor countries) migrate into other countries (mostly richer countries) to practice their profession and benefit these countries economically. Different factors contribute to brain drain; different strategies have also been experimented to curb this trend.

Brain drain is not uniquely an African affair. Experts in research and development from developing countries migrate to developed countries on a regular basis. About 80% of Indian computer programmers migrate to the USA, depriving the Indian economy about US\$ 2 billion a year in innovations (Oduba, 2000). China, Haiti, Portugal, just to mention a few, in the other continents is also

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Table 1. African immigrants to the United States by country of birth (thousands) 1981 to 2000.

Country of birth	1981–1990	1991–2000
Nigeria	35.3	67.3
Ethiopia	27.2	49.3
Egypt	31.4	46.7
Ghana	14.9	35.6
South Africa	15.7	22.6

U.S. Census Bureau, statistical abstract of the United States (Washington, DC: US Census Bureau, 2003).

affected. In the African continent, countries like Nigeria, Ghana, Kenya, and South Africa are affected by brain drain. This phenomenon leaves these countries in a state of acute shortage of skilled professionals despite their investment in human capital (Imran et al., 2011).

Prospective immigrants flock to companies organising visas and job searches, whose advertisements are prominent every weekend in the business pages of national news papers. The outflow is accelerated by an acute shortage of professionals in such developed countries as Britain, USA and Ireland, who are only too happy to allow African professionals to fill the vacant posts at salaries undreamed of in many African countries. So, what are the factors that motivate professionals to leave their home country for other ones?

The causes of brain drain

Reasons for migration follow several forms. Some Africans migrate to former colonial powers because they can easily identify with the language and culture. Thus, immigrants from Angola, Cape Verde, and Guinea-Bissau are found in Portugal. Those from Algeria, Morocco, and Tunisia usually settle in France (OECD, 2001). Other destinations of emigration are based on the strength of such economies and the employment availability. El-Khawas (2004) identified the United States as the largest recipient of new immigrants that are talented and educated. In fact, Africans, having more African scientists and engineers working in the United States than there are in Africa, are said to be the most educated ethnic group in the United States. African immigration to the United States doubled between the decades of the 1980s and 1990s (Table 1). Nigeria, Ethiopia, Egypt, Ghana, and South Africa dominated immigration flows to the United States during that period (El-Khawas, 2004).

The causes of brain drain can also be explained using a push-pull theory. Dzvimbo (2003) analysed the push-pull factors. The push factors refer to the unfavorable conditions in Africa that drives people to leave. They include, among other factors, job scarcity, low wages,

crime, armed conflicts, political repression, human rights abuses, devaluation of currency and poor educational systems. The pull factors describe the favorable conditions in the receiving countries that help Africans decide to move abroad. They include, among others, higher salaries, greater mobility, less bureaucratic control, safety of environment, and a higher standard of living. In summary, socioeconomic conditions have been potent push factors in the growing phenomenon of an African brain drain. The pull factors, on the other hand, are the prosperity elements in the rich countries; which is simply nicknamed 'greener pasture' by African professionals who migrate there.

The push factors

Due to the deteriorated state of some African countries' higher education quality and lack of education infrastructure at home, thousands of students have to be sent to countries with better universities, such as France, Germany, the United Kingdom, and the United States. Despite the fact that these students are expected to return when they finish their degrees, many of them, however, decide to stay permanently in the West because they can easily find jobs with higher salaries and better working conditions instead of returning to their home countries to join the labour market without any certainty of being employed.

Students, as well as other professionals leave the continent (Country A) for further education and training perhaps with the intention of coming back to develop their countries with knowledge gained from training in the better countries (Country B). In most cases, Africa does not reap the benefit because the 'brains' refuse to come home after the 'train' (Figure 1).

Decline in education quality resulting from lack of funding and low salaries have forced educators, academic professors and other sought-after professionals to migrate overseas for better remuneration and working conditions (Imran et al., 2011; Crush and Frayne, 2010; El-Khawas, 2004).

Oduba (2000) pointed out that declines in public sector

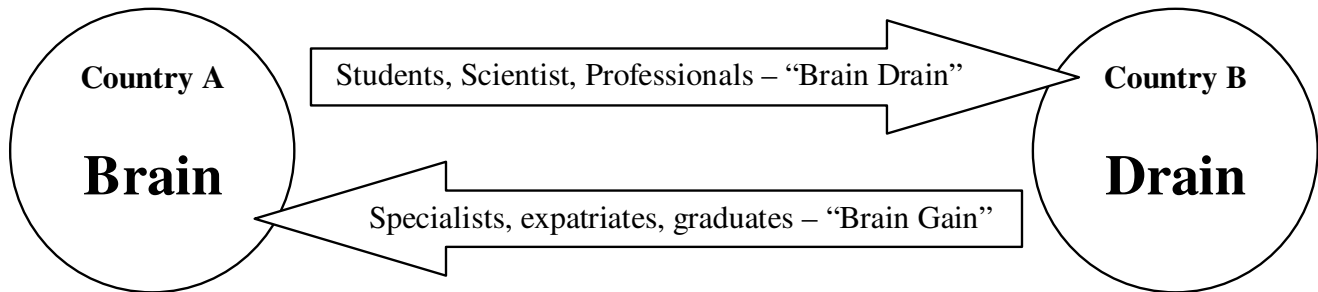


Figure 1. Hypothetical brain drain and gain between country A and B (authors fieldwork, 2006).

wages in Africa have been sharp and potentially troubling. He posed this question: how can public institutions retain professionals, researchers, and scientists, in the face of such sharp declines in average real wages?

However, it is not only the desire for money that makes Africans to migrate. For instance, the worsening political and economic conditions are driving young Nigerians to increasingly desperate measures: severe urban congestion that puts further pressure on a deteriorating, overburdened infrastructure and high unemployment, even among the educated classes.

As a result, according to Kamiyama (2005), some have turned to such activities as drug smuggling, human trafficking and internet fraud. "The ongoing economic stagnation is also leading to a breakdown in public safety, with serious crimes such as burglary, rape, fraud, armed robbery and physical assault becoming increasingly commonplace" The Christian-Muslim religious conflicts and traditional tribal rivalries in Nigeria may contribute to the push factor for brain drain.

South Africa is also hit hard by the flight of other professionals out of the country, according to The New Catholic Times (2002). The only different trend with South Africa, as highlighted by Arnold (2011), is that whereas the brain drain from most African countries has been of indigenous medical professionals, the South African exodus has been mostly of non-indigenous medical professionals.

The pull factors

Many first world countries lacking skilled professionals have relaxed their immigration regulations to make it flexible enough to accommodate more immigrants; especially from Africa. The previous strict restrictions on student visas in Australia, for instance, have been modified to allow skilled professionals to remain for a period in Australian "areas of need", such as in rural and remote areas, after they have completed their studies (Scott et al., 2004).

Persistent shortage of skilled professionals as well as unskilled labour in the Western countries is the reason

why aggressive strategies are being developed to foster brain drain and remedy the impending economic deterioration that would rather have struck them. Due to chronic labour shortage that is threatening economic growth in Australia, in 2005, the government increased its skilled migrant intake and is also considering changing the rules for those entering the country as working holidaymakers to allow them to extend their visas or take on apprenticeships in rural areas.

This concern was voiced by the Immigration Minister, Amanda Vanstone, after the Prime Minister, John Howard made an avowal that the country is suffering from shortage of skilled labour (Fin24.co.za 2005). Even holiday makers who put a minimum of three months into seasonal harvest work in regional Australia can now apply for a further visa. Also, foreigners who completed apprenticeships in rural areas could apply for permanent residency. Such is the desperation as a result of lack of labour:

"Some fruit producers in some parts of the country have complained [that] their produce is rotting in their orchards because of a lack of fruit-pickers" (Fin24.co.za 2005).

In July 2001, the European Union announced "plans for a more liberal residence visa that would make it easier for foreigners to live and work in its member states." Around the same period, Germany planned to admit skilled immigrants at the rate of fifty thousand a year and allow them to stay permanently (Theil, 2001). In the globalised economy, members of the World Trade Organization are committed to principles of free trade that will allow the flow of capital, labor, and services across national boundaries without hindrance. Countries have set up special visa programs to facilitate migration of highly skilled workers to fill labor shortages in key industries. The United States, for example, allows foreign professionals to come and work in the United States temporarily - however, many stay permanently, because many temporary guest workers are allowed to be permanent resident (El-Khawas, 2004).

Luring African professionals with attractive remuneration is made easier by the power of the foreign (hard

currency used by these brain drainer-countries. While Africa is trying to hold onto its professionals, richer countries are offering lucrative packages to recruit Africans with specific skills and competencies to fill staff shortages in certain areas. Shrestha et al. (2008) reiterate this sentiment and warn that government of African countries need to implement lasting solution to the problems of unemployment, low remuneration and embark on a radical project to curb the loss.

Apart from the rather recent fear of terrorist attacks, the state of democracy and political stability has been another contributing pull factors for African professionals going West. Many African countries have been, for years, plagued with coups, dictator military regimes, civil wars, ethnic clashes and political instability caused by the selfish and greedy politicians. An average professional African wants peace of mind, where he can practice knowing fully well that his/her safety, as a citizen is guaranteed.

THE IMPACT OF BRAIN DRAIN ON AFRICA

Who benefits from, and loses as a result of, African brain drain? It benefits the receiving countries by supplying them with scientists, doctors, engineers, economists, academicians, and technologists without the cost of spending resources to educate and train them. Recruitment agencies, also, are cashing in on the brain drain issue as many use the powerful tool of the World Wide Web and have collaborations with foreign embassies that are in need of skilled professionals. African professionals who are desperate to migrate invest a lot in their course by paying fees for administration, visa arrangements, to these agencies. Apparently, they are willing to spend that much because they are certain of earning more, eventually, in hard currency.

Even though there is a migration crisis in the health sector in Africa, it appears that many sub-Saharan African countries have not been able to establish a strategy for managing brain drain (WHO, 2003). Despite the enormous amount of investment that African governments spend annually to educate young people in health fields, these professionals move into richer countries after qualifying (Gwaradzimba and Shumba, 2010).

Medical practitioners from both Nigeria and Ghana, for instance, in their thousands, are working in the United States whereas there is an acute shortage in the health professions in their home countries. Furthermore, as at 2001, nearly half of the teaching staff of the Medical School, University of Ghana, had left the country, leaving the school without enough academics to train future doctors and depriving people from receiving adequate health care (El-Khawas, 2004).

The effect of the brain drain leaves Africa in a state where there is low education quality and lack of skilled professionals to ensure sustainable economic development in the continent.

This results in the continent importing expatriates from the brain drainer-countries. This costs the continent a massive amount of money. An estimated 40% of the Africa's top professionals live abroad, costing the continent over US\$ 4 million per year in consultancy and expatriate (Oduba, 2000). These expatriate are expensive as they are paid in hard currencies and in many circumstances, the African government do not have a say in the condition of employment. Using the services of foreign experts often form part of the conditions of foreign aids than African government receives from the developed countries.

What went wrong? What happened to the once-colonial masters; now resorting to luring their 'once-colonies' to come to their rescue at the verge of economic disorder due to lack of skilled professional? What about every country 'growing her own trees' – developing her own brains – not draining? The fact is that these so-called rich countries have always depended on African recourses, one way or the other, to remain viable and sustainable. It was slave trade, extortion of natural resources and raw materials ... and now, it is draining of the brains. What trend is next? One peculiar phenomenon is that 'raw materials' are always plundered from Africa and then, 'finished goods' there-from are sold back to her at exorbitant price. It is all a semblance of the old slave trade era in another 'sugar-coated' guise. It is a vicious cycle and it seems Africa is always on the receiving end.

While majority of Africans are battling with what Abraham Maslow called deficit needs (physiological, belongingness, safety and esteem) and are ready to give up all to have them, these brain drainer-countries are moving towards the being needs (self actualization) where more attention is given to arts, music, sports and show-biz than development of new generation of brains to ensure economic sustenance. The way they see it is "why stand when you can sit; why train to do the job when you can get it done by 'more-than-willing-desperados' from Africa for peanut pay?"

Some authors have argued that brain drain from a country somehow benefits the same country in another way. Universities could transfer resources, technology and knowledge to developing nations through exchanges of staff and students, research collaborations and "twinning" with institutions. Developing countries in Africa, as indicated by Schmid (2004), see some benefits from the brain drain because migrant workers send money home and might also transfer knowledge back to their countries of origin. These raise a question of 'to what extent is brain drain a problem?' Shall we continue to say it is a problem when professional immigrants from Africa

take hard currencies home and invest them there? As will be discussed later, India and China have both accelerated their technological advancement as a result of the know-how and experience gained by their professional immigrants in oversea countries.

DEBATED STRATEGIES FOR POSSIBLE SOLUTIONS AND IMPLEMENTATIONS

Some have debated that stopping the brain drain is not only impossible, but not advisable for Africa. In fact, Oduba (2000) is of the opinion that the industrialized countries should open up their job markets further to qualified Africans as a one way to access emerging technology, financial resources and physical capital. For instance, he argued that the Asians have benefited from their professionals in research institutions and corporations abroad to an extent that Asian engineers dominate the famous Silicon Valley in the USA, which is regarded as the headquarter research and development in computer technology.

A US based advocacy organization, Physicians for Human Rights, towards 'an action plan to prevent brain drain' demanded reimbursement for the losses incurred by countries that have paid for the education of doctors, nurses and pharmacists only to lose them to countries offering higher wages. It also wants wealthy countries and international organizations to send money to boost salaries of African health workers.

Stricter measures are being implemented in some other countries. In Zimbabwe, for example, many professionals will be bonded to government institutions after they graduate in a bid to stop them leaving for better-paid jobs outside the country.

The government intends to compel professionals, (mostly health sector, lawyers, engineers and technicians) trained using state resources in universities, polytechnics and colleges, to work in the civil service for some time before they can be allowed to join the private sector or legally work in other countries (News24.com, 2005).

The departure of skilled professionals is ascribed to lack of patriotism. Some policy makers have gone as far as suggesting that recipients of government scholarships for training should be bonded, suggesting that government should take legislative action to prevent skilled people from leaving. Obviously, the implied solutions will have limited success. The suggestions are probably unconstitutional and Internationally unacceptable in a post-communist era (Oduba, 2000). What is patriotism to an African who has been failed by his/her own nation that is full of greedy and corrupt government? African government should be more transparent and have the interest of the citizen at heart; thereby instilling confidence in them about their continent.

Africa is uniting more and more politically and economically through vehicles like NEPAD and AU. It is also high time to allow Africans, regardless of their place of birth, to return and work anywhere on the continent. Retention of African professionals, as pointed out by El-Khawas, (2004), should be a top priority to stop the brain drain hemorrhage. Real economic, political, and social reforms will create an environment conducive to keeping many educated people at home rather than having them leave for greener pastures.

Brain gain

Several authors like Kamoche (2011), Batista et al. (2011) and Crush and Frayne (2010) have written on the possibilities of brain gain; that is, benefiting from the brain drain positively. Some few years ago, a global network of highly skilled South Africans was launched which could turn South Africa's brain drain into what was potentially a huge intellectual resource (brain gain) for the country. South African Network of Skills Abroad (SANSA), an initiative by some university dons based in University of Cape Town, used electronic and other methods of speedy communication to link skilled South Africans living overseas with local projects and researchers in order to contribute towards the development of a competitive, knowledge-based economy (SANSA, 1998). In today's world, distances and borders are no longer an obstacle to the exchange of knowledge and to undertaking co-operative work.

What is important is that professionals possess skills constructive to economic development of Africa and that they are interested in making them available; keen to make a contribution to the continent. Some other contributions that could be obtained through brain gain include:

- i. Receiving African graduates in laboratories or training programmes;
- ii. Participating in training or research with other African counterparts;
- iii. Transferring technology to institutions in the African continent;
- iv. Transmitting information and results of research which are not readily available in Africa;
- v. Facilitating business contacts, initiating research and commercial projects.

When debating on the issue of brain drain, a balance should be considered between the adverse effect and the numerous 'gains' that also comes with the brain drain.

Retention strategies

It has been noted that although the brain drain

undeniably has serious negative effects, these may be turned around to benefit migrants' home countries if managed well as aforementioned. This, according to Dovlo (2004), raises the question: "when is an intellectual of more use to his or her country of origin than to a country at the receiving end of the brain drain". Retention, motivation and utilization of top scientists and researchers depends not only on the existence of a certain, sometimes sophisticated, infrastructure, but also on adequate and sustainable resources that are often beyond the scope of many governments in sub-Saharan Africa, given the other major economic and social responsibilities they face (Dovlo, 2004).

Ensuring that people trained abroad does return to their countries of origin should become a major concern to all stakeholders concerned; that is, the country of origin as well as the trainer-country. The responsibilities of both the source and the recipient countries need to be made explicit before a consensus can be reached on viable solutions to the problem that would take into account the needs of all partners concerned. Migration of professionals should be monitored and managed. Measures agreed by both sides should be adopted, and structures for their enforcement need to be put in place (Schmid, 2004).

Agreement between FIFA and African Nation's Cup participating countries concerning professional football players abroad is a good example of 'symbiotic' relationship between concerned parties. Even though these players earn their living as professional players in overseas clubs, they are allowed to leave the club and go to their home country whenever there is a major tournament like African Nation's Cup or the World Cup Finals.

Other different professional bodies in the countries of the continent can come up with similar strategies that ensure an agreement between them and the brain drainer-countries in such a manner that Africa benefits more.

Still in the same line, El-Khawas (2004) suggested that, in the light of gaining from the brain drain, some doctors and nurses could work in their countries of origin for several weeks or a few months. Medical professors, for instance, could spend their sabbatical years or summers in African medical schools, training future generations of doctors, conducting research with their local counterparts, or providing health care services in state-run clinics and hospitals.

They will not come, however, unless they are guaranteed that they can leave once the contractual obligations are fulfilled and unless they feel secure in their ability to return to their previous positions.

RECOMMENDATIONS

More emphasis should be on strategies to retain more academics, educators and trainers in African countries.

The short term concern is to minimize migration of academics and developing more academics in the countries. In the long run, there will be more skilled professionals. Some professionals will always migrate to other richer countries, but there will be enough in the home country to ensure development in the African continent.

Skilled labour in general is important, academics are "doubly so" suggested Shanaham (2005), because of the role they play in research and innovation, as well as teaching and training to build the skills of others - numbers of staff working in UK higher education from developing countries are relatively small and insignificant in the context of the UK labour market, the effect of their loss to developing countries might be much more substantial because of the scarcity of skilled labour there.

Almost all the statistics on the issue of brain drain in Africa have been based on estimates.

One major challenge facing the continent is the availability of sophisticated technology to keep records and track the movement of its professionals. Many sought-after professions have professional bodies where successfully trained people have to register and obtain a registration or license number.

If it is possible for countries to match these numbers to the national identity numbers and possibly international passport numbers (forming the National Brain Bank), then professionals either in the national or international labour markets, as well as their migration trend, can easily be monitored by the government.

This will help the countries to implement suitable brain drain strategies with much ease since the facts and figures will be readily available.

Figure 2 show some of the possible situation professionals, either in the national or international labour market, may find themselves. In the national labour market, some get employed and are well paid; some are not well paid and get frustrated and are ready to leave for the international market.

In the international market likewise, some get employed, others do not get employed and may have to change professions or take up menial jobs to make ends meet.

Some professionals are granted renewable work permit, some temporary or permanent residence permit, while others naturalise. Some plough-back home.

It is important to state that such interventions as shown in Figure 2 may require stable internet connections and/or considerable investment in information technology and systems. This may be farfetched for many African countries.

CONCLUSIONS AND IMPLICATIONS

Brain drain in African countries has being as a

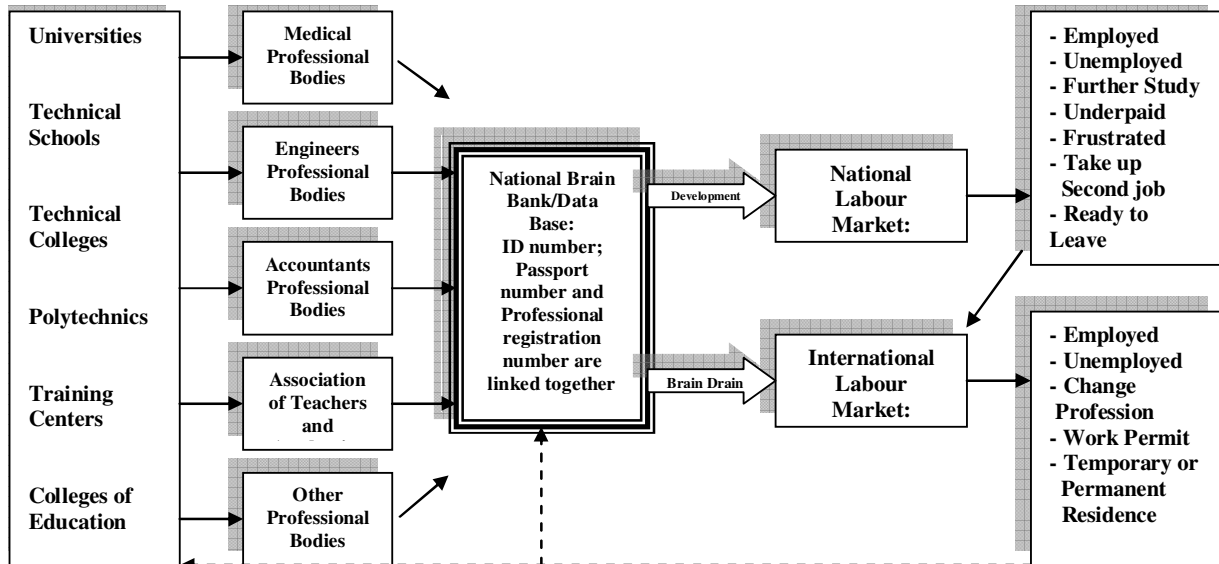


Figure 2. Possible situation for professionals in the labour market; brain gain represented by the dotted arrows (authors' fieldwork, 2006).

consequence of the retarding trend in the countries' professional status quo due to lack of market; lack of befitting recognition; lack of regulating measures and lack of maintenance of the professionals. This is evident in unemployment and the meager remuneration given to the professionals.

Many African leaders are not doing enough to stem the brain drain apart from beckoning on African expatriates abroad to return home in the name of patriotism. Nobody in the right state of mind will come home to a selfish and greedy government where all the leaders sought after is strategies to stay in power for a second and third term against the interest of the citizens. Many African leaders have to pull up their socks and do the right thing at the right time by working hand in hand to fight against nepotism and corruption in African countries. This will save the continent from further anarchy and doom - thereby creating a stable and peaceful environment for professionals to stay and work, thereby mitigating the push factors of brain drain.

Another important issue is working towards curtailing the vast power of the foreign (hard) currencies. The discrepancy between many African currencies and that of the brain drainer-countries is too wide. African leaders in the capacity of African Union (AU) must come up with proper economic and political strategies to 'short-circuit' the wide gap in currency equivalent.

The brain drainer-countries have capitalized on the push factors and offered the professionals the opposite; the pull factors. From shabby salaries to attractive remunerations; from the fear of the unknown caused by political unrest to a stable democratic atmosphere...just to mention a few. If Africa can reverse the push factors contributing to brain drain, the situation will be a better

one.

Brain drain seems to be impeding the rate of economic development in Africa. At the same time, brain drain has a continuous propensity; without any particular strategy of averting it. Not always emphasized are the gains and benefits derived from the brain drain. The continent will, and will continue to, derive considerable benefits in resources and human capital as a result of brain drain - that is the gain. The possible practical solution, just like a viral disease in a human, is to learn to live with it and make the best of it. In other words, the pain that comes with the brain drain can be drained if more professionals are trained and efforts are made to gain from those already drained.

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