

BRAIN DRAIN AND EDUCATIONAL POLICES IN THE ARAB WORLD: IS THERE A LINK?

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Abstract

No doubt that Education process has distorted a long centuries ago in the Arab region. According to Arab league statistics: the rate of enrollment in primary education rises from 77% in 1999 to 86% in 2010. Nevertheless still 5 million children in the age of primary education are not registered. Yemen ranks first in States that don't join their children in primary school. It is worse in Syria, Iraq and Sudan where sectarian conflicts and civil wars.

This paper is going to test a major assumption within brain drain debates which is that skilled migrants are trained at their government's expenses, but fail to pay back because they leave and enable other countries to benefit from their skills due to the failure of educational policies in their homes to satisfy their expectations. It raises more than one research questions: How does the brain drain relate to the failure of education policies? What would be the relevance of brain drain and missing the training and skills as undesirable output of education policies? what is the link of brain drain and the necessity of national or human security? How does the absence of citizenship education before the significant political change in the Arab spring countries lead to fragmented identity?

By analyzing the census of the brain drain in the Arab region and its impacts on the education outputs and identity issue in the sending state, this paper will be presented.

Keywords: Brain drain, Arab region, immigration, statistics, repellent factors, economic costs, strategic vision, education policies

INTRODUCTION

Why do laypeople in general and the highly skilled in particular move across the borders? This question is still wandering and has posed since the sixties of the last century in the Arab region. Most of Arab successive governments are still turning a blind eye to answer it and hide part of ineffective contextual policies that are related to the education and labor policies. This paper tries to explain and analyze the reasons beyond the brain drain, explore the economic cost the developing countries pay to subsidize the education, then pushing the brain to emigrate due to an unfriendly context. The paper concluded with a suggested strategic vision to face this problem and call for a comprehensive policy approach in dealing with this phenomenon.

Undoubtedly the answer to the main question: why do people move reveals the human rights dimension of

the scientists' rights in crossing the borders, and the state rationality in using these minds in the process of development and modernization of their homes. From one side, the spontaneous answers come to legitimize the governments call for movement as a part of freedom and respecting human right, while in practice from the other side, the governments pour their anger on the calibers, accuse them of denying deeds of their motherlands. Consequently and in both cases, the governments do not want to recognize why highly skilled prefer to abandon their homes although they are potentially stick with their lands'?

The question's answering also calls for what Amartya Sen noted regarding the friendly and encouraging contexts of the development that the paper sees it as a proper "container" for the concept of citizenship, and necessary cement for establishing a powerful state and positive society. This context -that protects scientists from the "Call of North" - looked like what "Sen" said .."it is consisting of a list of "helpful policies" that includes openness to competition, the use of international markets, public provision of incentives for investment and export, a high level of literacy and schooling, successful land reforms, and other social opportunities that widen participation in the process of economic expansion". (Amartya Sen. Journal of Democracy. p. 4)

In other words, it is the state that should be committed to removing the main sources obstructing freedoms: the poverty and tyranny, the scarcity of economic opportunities, as well as the regular social deprivation, and the neglect of public utilities and facilities, as well as intolerance or extremism in cases of repression.

International organizations have paid attention to the phenomenon of the brain drain , where granted, "UNESCO" special granted special attention to the migration of minds, and considered it as a unique kind of flow in the direction of the developed countries or the so-called reversed transport of Technology,(Megalat El Parleman El Arabi,2001: P.3). while the brain drain is a direct transfer to one of the most important factors of production namely the human capital which technology is usually transported to not the opposite.(UNESCO-2013)

The Organization of Economic Cooperation and Development (OECD) statistics also noted that one of every nine people received a degree in Africa migrate to a state from 34 countries of the Organization for Economic Cooperation and Development (OECD) countries. (OECD, 1999)

United Nations Economic and Social Council report confirmed that there are 30 million African migrants of the total 232 million international migrants moving to those countries.(ILO,2012) According to 2010-2011 statistics, the brain drain in the Sub-Saharan countries rates have exceeded 20 times the average rate of emigration, especially in the countries of Burundi, Lesotho, Malawi, Maldives, Mozambique, Namibia, Niger, Papua New Guinea, Tanzania, Zambia and Zimbabwe. (Wachira Kigotho, Acute Report, 2003)

These "alarming" statistics make the traditional approach in studying demographic movements (push and pull factors) despite its scientific powerful explanation- is not the only proper approach to answer the puzzling question: Why minds remain in the north and refuse to come back? is there a reverse flow of the minds occurred in the north to the south with the expansion of activity of multinational companies and the existing of economic surpluses and benefits in the south countries, within wide attracting spaces for living and investing ? The wave of brain drain and the migration of skilled labor and those of outstanding educational level no longer is confined and limited to developing countries only, but the phenomenon is now spreading worldwide, leaving behind a package of economic losses exceeding billions of dollars on both sides. Outstanding brain migration is no longer limited to the Arab scientists only, there is a migration of the outstanding minds from India, Pakistan, China, Japan and some African countries, but the direction always remain from developing countries to industrialized nations such as Britain, France and Germany, in particular the United States, all of which was the result of several aspects that the study at hand will analyze.

1. THEORETICAL CONCEPT

1.1 The acceleration of Minds immigration from the third world countries towards Europe has contributed to the emergence of more than one paradox and crises that agitate more philosophical, political and cultural debates regarding the mind immigrant and his way in integration with his new society that be concerned academically and intellectually (Saad Hafez, Econometric, 2010, P. 14) . It is difficult to say that the brain drain is going in one direction with no return, since the expansion of the movement of construction and trade, and the escalating political international crisis on the different diversity necessitated to overcome the traditional cognitive contexts related to this phenomenon. Some indicators are to follow to demonstrate continuous uninterrupted movement - but intermittent- of the brain drain to the North, West and East as well..the World Health Organization (WHO) reported that the African Sub-Saharan Africa suffer from a lack of workers in the area of health care where they need more than a million people. The BBC reported that the

excessive use of the developed countries of members of the medical profession from developing countries and the provision of various incentives to encourage them to migrate, make these countries suffer severely where there is an urgency and pressing need for those who takes care of health affairs in these countries. The BBC also reported an amazing fact that 1 to 3 of doctors in Britain come from other countries. Because of the use of this vast amount of side members of the medical profession, there are some countries where large areas are deprived of workers in the field of health care. The British Medical Association described this case «the illegal hunt because the migration of members of the medical profession from developing countries has led to the deaths of millions and the increasing suffering because of poverty». Also, WHO experts describe that Africa has 2.3 people in the field of health care for every 1,000 people while the case is different in America, where there are 24.8 specializing in health care for every 1,000 people. It is reported that doctors in Africa are dealing with 10 times the diseases that their colleagues are dealing with in other regions (Smair Fouad, Kuwaiti Watan Newspaper, 2014)

1.2 It is worth mentioning that a report by the Chinese Academy of Social Sciences titled “International Politics and Security in 2007” pointed that in some sections of Beijing University about 76% of the students emigrated to the United States of America. The report added that since 2002, went more than 100 thousand people to study abroad, but they chose not to return to China, which constitutes a material loss as well as loss of the qualifications and experiences needed for the labor market. Also, the former Soviet Union republics suffer from the problem of brain drain in the fields of science, management and culture, where large numbers of citizens migrated to America, Europe, Japan, China and Latin American countries because of the economic and political crises that the countries have. In addition, Eastern Europe countries suffer from brain drain to Ireland and the United Kingdom. For example, Lithuania has lost 100 thousand of scientific and technical talents since 2003; also this phenomenon occurred in Poland after joining the European Union since 1991, where million Poles emigrated to Western Europe, 90% of them aged 35 years.

1.3 It should be noted that these countries suffered losses as a result of spending on education. Average and university education is fully supported by the government in Russia and Eastern Europe. Therefore, the amount of money spent by the government on education in these two phases is wasted as a result of the displacement of a lot of educated people to countries. At the same time Germany is experiencing brain drain in the last five years, where one million and 44 814 thousand people emigrated from the country in 2005 due to economic problems, which records the highest immigration rates since World War II. (Veronica Aguilar, Addressing the Implications of Emigration, Migration Policy Institute, 2015)

2. BRAIN DRAIN FROM ARAB COUNTRIES

2.1 It is indisputable that the Arab world has long been witnessing a brain drain of its physical, economic and social energies, a drain that weakened the societies 'dynamics and movement, and ripped its social and cultural entities, and disrupted the development of the mind and the development of science and human. The loss of the community by the communities' attrition took place due to the existence of stagnant society institutions, lack of effectiveness in crisis management, innovation and scientific methods to confront them in the foreseen future.

2.2 Historically, the phenomenon of the Arab brain drain began since the nineteenth century, particularly from Syria, Lebanon, Algeria, where the Syrian and Lebanese Scientific competencies headed to France and Latin America, while immigration from Algeria headed to France accompanied by forces of attraction which outweighed other driving away forces. At the beginning of the twentieth century, the migration has increased, especially during the first and second World Wars. Since the middle of last century, between 25-50% of the Arab competencies emigrated from the Arab world, and has become one of the most important factors affecting the Arab economy and the structural composition of the population. About 100.000 of various professions including, employers,, scientists, engineers, doctors and experts migrated annually from eight Arab countries which are Lebanon, Syria, Iraq, Jordan, Egypt, Tunisia, Morocco and Algeria. Also, 70% of the scientists who travel to capitalist countries to specialize do not return to their home countries and since 1977 until the beginning of the new millennium more than (750,000) Arab scientists migrated the United States of America. (Conference of Emigrant Arab Scientists, League of Arab States, 2013)

2.3 According to the 2014 statistics of the Arab League and the Arab Labor Organization, the Arab world accounts for 31% brain drain from developing countries, where 50% of doctors, 23% of engineers, 15% of the scientists of the total Arab competencies migrate to Europe and the United States and Canada, in addition to the fact that 54% of Arab students who study abroad do not return to their home countries and that Arab doctors in Britain constitute about 34% of the total employed doctors. It is also worth mentioning that the three richest Western countries: the United States, Canada, Britain are hunting for about 75% of the

Arab immigrants.(Migration, Arab League,2014)

2.4 Regarding Egypt, it is considered the biggest loser of the brain drain process in the absolute quantum. There is about 318 Egyptian professionals in the United States of America, 110 in Canada, 70 in Australia, 35 in the UK, 36 in France, 25 in Germany, 14 in Switzerland, 40 in the Netherlands, 14 in Austria, 90 in Italy, 12 in Spain and 60 in Greece. The United States enjoys the biggest share of Arab efficient migrated minds by 39%, followed by Canada 3.13% and Spain by 5.1%. The figures include groups in several professions and different disciplines. The threat of numbers are highly reflected in those working in the most critical and strategic disciplines such as precision, nuclear medicine surgery, radiation therapy, electronic engineering, micro- electronics, nuclear engineering, laser science, tissue technology, nuclear physics, space science, microbiology, genetic engineering and 15% of NASA scientists are Arabs. There are 600 Egyptian scientists of rare specialties residing in the West, and the number of migrated minds of Egypt alone reached 854 thousand scientists and experts, where from all the Arab countries, the numbers are exceeding 4 million of the world's finest scientific talents. In addition to specializations in the field of humanities such as market economies and international relations. The material cost is marked by the inertia of human thought in the Arab world.

2.5 In 2003, the Central Agency for Public Mobilization and Statistics (CAPMAS) estimated the Egyptians which have migrated "drained" to 824 thousand, including about 2,500 scientists. Statistics indicate that Egypt has provided about 60% of Arab scientists and engineers to the United States, compared to the contribution of both Iraq and Lebanon, which amounted to 10%, while the share of each of Syria, Jordan and Palestine about 5%.

In 2014 CAPMAS showed a rise in the number of Egyptian migrants who have acquired the status of an immigrant to 505 versus 430 migrants during 2013, which constitute an increase of 17.4%. Italy has acquired the first place in the number of Egyptians who have received the approval of migration abroad by 37.2% (188 migrants)

CAPMAS also pointed out that the number of Egyptians who have obtained approval for the migration abroad reached 446 by 88% male migrants and 59 female migrants by 11% of the total Egyptian migrants in 2014. The number of Egyptians who have acquired foreign citizenship amounted to 1928 immigrants in 2014 compared to 1704 migrants in 2013, an increase of 13.1%. The first place of destination comes the group of European countries with 1055 migrants the number of immigrants 54.7%, followed by 448 migrants to American States by 23.2% and then the group of Arab States with 341 migrants at a rate of 17.7% of the total.

The number of Egyptian immigrants with university degrees (Bachelor degree) who obtained the approval to migrate abroad reached 245 immigrants by 50.5% of the total number of indigenous and accompanying immigrants at school age (10 years and over) totaling to 485 immigrants, noting that immigrants in the age bracket (39-35) came in first place in terms of the number of Egyptians who have obtained approval for migration abroad 117 the number of immigrants by 23.2% followed by the age bracket (40-44) with 100 migrants by 19.8% of the total. (Central Agency for Public Mobilization and Statistics, Annual Bulletin, Migration,2014)

3. THE ARAB CASE: THE OVERLAP OF PUSH AND PULL FACTORS

3.1 It has become absurd in the Arab case to discuss the issue of brain drain away from being a cause and a consequence of certain factors that push and pull, and the slow path and failures of modernization and development processes in the Arab world in one way or another. It is true that the brain drain, which includes the most prominent and rare scientific disciplines such as minute surgery, nuclear medicine, radiation therapy, electronic engineering, nuclear engineering, laser science, space sciences, and genetic engineering, in addition to the humanities and social sciences deprives their states of origins of modernization and development, but on the other hand the continuation of their stay abroad is also the result of the absence of dynamic community policies of modernization and development in those countries.

3.2 In countries where intolerance and extremism and rejecting of other opinions exist, and where chaos and the absence of political, social and economic security is recently spreading across such as in the Arab region, it is important to discuss the eligibility of the "brain drain", or "Heads"- invented by the British - to stay in repellent environments? The former does not deny the fact the British loss of scientists, engineers and physicians due to migration from Britain to the United States.

4. THE DANGER OF THE PHENOMENON: THE ECONOMIC COST AND THE PRICE OF GROWTH

4.1 International migration has worked to strengthen global economic growth, and contributed to the development of countries and communities. It also helped to enrich a lot of cultures and civilizations.

4.2 Notwithstanding the foregoing, statistics incur the Arab countries huge losses due to the brain drain amounted to 11 billion dollars in the seventies, and more than \$ 200 billion in the millennium first century. It is true that the brain drain is securing billions of hard currency in the countries of origin of migrants and is improving the social situation for poor families, making some writers not considering brain drain as entirety evil. However, these competencies being far from their country of origin means inevitably widening the gap between rich and poor countries, and impacting economic, political and social development plans in mother countries.

4.3 In order to estimate the value of these losses and money wasted, the Arab social losses reached about \$ 200 billion with an estimate of four million Arab residing abroad. On the other hand, Arab doctors constitute nearly 34% of physicians employees in Britain, in addition to two Western rich countries that attract 75% of the Arab immigrants and are the United States of America and Canada. (UNESCO, P:3)

4.4. In contrast, a World Bank report issued in 2012 indicated that 7 % of high degrees acquirers in Africa live in countries of the Organization for Economic Cooperation and Development (OECD) draining existing scarce human resources of the African continent and affecting growth and development in their countries.

5. THE POSITIVE SIDE OF A RELATIVE PHENOMENON: FLOWS AND REMITTANCES

5.1 Despite the negative effects of brain drain on development, the phenomenon has relative pros. The World Bank's 2006 report on international economic outlook and economic implications of remittances and migration has stated that there are about 200 million people living outside their home countries, and estimates of remittances to those countries reached about \$ 225 billion in 2005, which exceeds foreign aid received by developing countries. (World Bank, 2006)

"Francois Bourgojnon" chief economist and senior vice president of the World Bank's Economic Development Affairs stated that the evidence contained in this report shows the direct link between migration and poverty reduction in the original home of migrants. Public opinion surveys which were implemented on families in the Philippines – for example- show that remittances received by Filipino families means: reducing child labor and increasing school attendance and rates of persons who starts investment-intensive projects using capital.

5.2 Taking into account current estimates of the increase in labor markets in industrialized countries, which amounts to 3% per year, it is expected that it would be compensated with the increasing number of immigrants, which will result in about \$ 356 billion by 2025. This number is considered more than the trade gains in those countries. Also, a United Nations report indicated that every 10% increase in conversions per person lead to a decline in poverty rates by 3.5%, and that the financial transfers are also linked to an increase of investments in the field of family education, health and other services.

5.3 Apart from the former evidence, the subject is not free from the presence of the risks surrounding the major financial transfers operations, and that is the increase of the value of the currency, which negatively affect exports. Also, remittances may cause some lulled into a life of laziness and lethargy and complacency dependent on remittances that come easily without the trouble of leading funds, which leave a negative impact on economic growth in the country. At the same time transfers are sometimes used in money laundering and terrorist financing. Until the year 2011 there were 200 million migrant remittances that amounted to \$ 225 billion around the world and rose to \$ 601 billion in 2015. Developing countries received remittances worth 441 billion dollars, which clearly demonstrates the economic influence.

The report showed that the United States was the largest source of remittances, estimates of inflows reached about \$ 56 billion in 2014, followed by Saudi Arabia (\$ 37 billion), and Russia (\$ 33 billion). India was the largest recipient country of remittances, it is estimated that it had received \$ 72 billion in 2015, followed by China (\$ 64 billion), the Philippines (\$ 30 billion). (World Bank, KNOMAD, 2015)

Thus, the issue of brain drain raises more than a discussion aspect without ignoring the most important issue in that regard which is the issue of accurate statistics that describes the number and characteristics of migratory minds whether in the transmission states or the recipient countries. Surprisingly, the issue of

accurate statistics and the classification of which of the patterns is called brain drain and which is not, goes beyond a debate in developing countries alone. (William J. Carrington and Enrica Detragiache. How Extensive Is the Brain Drain?, 1999)

5.4 In addition to the statistical dimension the discussions will be focusing on the following:

5.4.1. Moral and value dimensions of brain drain, which is scientifically related to more than of North and South relationship, since this dimension raises the issue of "justice". It could be explained that rich countries exhausted the human element in poor countries after it has exhausted its natural resources. It caused those countries to suffer distortion in the education and health sectors because of the injustice practiced internally and injustice practiced domestically and internationally.

5.4.2. Brain drain between the imperatives of development and market dynamics: market dynamics require the maximum possible gain by bringing scientists from anywhere in the world, and at the same time makes it imperative to draw actual conscious development policy that secure the internal market needs. This policy impose restrictions on the migration of rare disciplines, and pays special attention to education and health care issues, as well as migration policies that intersects with improving employment policies.

5.4.3. Brain drain and education policies: The transmitting state has spent money on those minds, however those minds did not pay the debt back, which means high economic cost and a continuous thought of rather privatizing education in the countries of origin, or making it free of charge. In addition to raising questions on its efficiency, and if there should be an economic model in Egyptian universities? And whether imposing to work for certain number of years for those students who benefited from the state budget to travel abroad and learn is enough to keep the migratory minds at home, or is there an urgent necessity to rewrite the moral contract based on citizenship rights between the student and his government?

5.5.4. Engendering brain drain:

It is well known that the flight of African minds is always linked to males, although the proportion of migrant women is approaching 1% for each of two men, or 49%, and their migration is linked to the household family, and to some extent related to people who are not qualified. (Le Monde, 2010)

Statistics show that between 1990 and 2000, the number of qualified migrant women from Africa to Europe doubled by 73%. As the number rose from 5.8 million to 10.1 million, the migration of non-qualified women did not exceed 22%. In all parts of the world, with the exception of Central Africa, the proportion was higher in migrant men. The reason for this, is partly due to the fact that women access to education is progressing faster than men in the countries of origin. On the international level, the population proportion of educated women increased from 68% to 105% in poor countries, while the proportion of men in the same countries increased to 42%.

Therefore, the phenomenon of brain drain has affected more heavily women than men. If we add to that that African women with higher education constitute the most changeable factor at the international level group, we could realize the importance of studying the migration of women brains in African countries. In some countries such as the Democratic Republic of the Congo, Nigeria and Tunisia, qualified women migration recorded ten times higher than of qualified men ratio, as well as the migration rate of Moroccan women to the OECD countries which accounted for 5.4% of gross national product of those countries, where 11% of the population in family benefit from the migration. Among the migrant workers, there are 20% of qualified women compared to 18% of the men. (Le Monde, 2010)

6. REPELLANT FACTORS: / ATTRACTIVE ENVIRONMENT

6.1 Several inter-related factors have accounted for brain attraction and repellent environment:

6.1.1. Societal - political environment in the Arab world - which unfortunately – is not occupied with science and scientists and innovators. Creativity - itself - may sometimes cause panic among governments in the Arab world, unless if it is focused to praise officials. In addition to the existence of some laws and regulations and commitments that are harmful to expertise, as well as the negative bureaucracy, administrative corruption and narrow freedoms to create, not to mention problems plaguing some Arab democratic experiences. In Syria, Libya, Yemen, Tunisia, the intellectuals are captured between regime's political oppression if they oppose or from the oppression of fanatics misusing religion if they performed the message of awareness. Either they suffer from political tyranny or from the intellectual rigidity that is considered worse than Authoritarianism.

6.1.2. Economic environment, and the absence of social justice in the mother countries which simply could

be defined as equal access to opportunities, empowerment and its sustainability. On the social level, independent intellectuals were not recognized in their countries compared to artists, dancers, and intellectuals serving the authority. This caused atomic scientists and others to immigrate. It is also noticed that immigrated students are not able to adapt with the life in foreign countries, and sometimes they get married to foreign women which put immigrants' fate as it is difficult for an immigrant to leave his wife and children behind, and most important is the fact that his wife and children may not be able to live in the country of origin, and they may not be ready to accompany him, especially since much of the legislations pose obstacles to his desire to return to the country of origin, like for example, some legislations do not allow citizens married to foreign women to reach high positions in some Arab countries. This could hinder him from providing privileges to his family. Hence, putting an end to the immigrant's idea of returning back to the motherland.

6.1.3. The weakness of scientific research in the Arab world, since there is lack of real government support. Universities in the Arab world turned to benefit financially on the expense of students, or turned to be security barracks in some cases, or gatherings of regional and sectarian teachings in other cases. A lot of professors gave away the academic ethics for the benefit of rapid gains. Regarding the private sector, it is not interested in the support of scientific research unless it has an economic benefit! Arabs spend an average of 0.14% of GNP on scientific research, compared to between 4-6% in Western countries, and 2.4% in Israel alone, the highest ratio in the world. As for translation and reading it scored its lowest levels.

6.1.4. The weakness of social and political mobility and its disconnection with education, which missed its role in the delivery of the values of citizenship and nation-building. Education by its very nature is supposed to lead to social mobility, but under dictatorships, scientists find no choice but to leave their countries to other countries where they find room for a fair balance of equal access to opportunities.

It is true that Arab migration –legitimate or non- legitimate- was the most important factor that formed the value system of Arab societies in the past decades. Also, Arab regimes lost a lot as a result of brain drain, but the Arab reckless political systems and dictatorships made it celebrate its immigrants once achieving success, despite the fact that these immigrants have decided to let the countries of destination ripe the fruits of their experience.

6.2 With all these aspects of the repelling environment, there exist philosophies in the recipient states to attract these scientists through packages of laws that compensate them for life outside their mother countries. The most important law is obtaining a residence card for foreign graduates in the fields of advanced technology which was advocated by the US Congress in 1423 AD.

As well as huge financial inducements for professionals in the scientific and technical branches due to the low percentage of scientific minds in industrialized countries because of the low birth rates which make them looking for foreign minds and competencies. That explains how the concept of brain drain entered new generations of related concepts, and has become a contextual concept that relate to other contexts such as the economic, political, cultural and educational context in any country. It also calls for the dismantling of this concept and tracking the emergence of new generations of concepts like: brain gain, brain waste, care drain and youth drain, and investigate whether all these concepts have an impact on the methodology dealing with brain drain and building a brain drain model or are they just theoretical concepts driven from realistic experience.

7. A STRATEGIC VISION

7.1 The philosophical dimension:

The Philosophical dimension of the issue of brain drain may be more important than the terms of the proposed strategy. It is a must in any strategy to involve main functioning related actors; and since development strategies "give a voice to the poor", the proposed strategy calls for giving " voice to scientists ". This could happen through further empirical studies that are looking for whether the causes of the " the Call of Minds" is due to the financial remuneration, or quality of life, or saving scientists, or providing their children with better social services, or a security work, or a desire to deal with each other outside the border within a similar scientific community that enable thinking and breaking the barrier of alienation within the immigrant? And whether this immigrant bears in mind the missed opportunity for the other citizens inside the mother state which he/she did not get? The strategy may also question the reason for the attraction to the " Call of Minds" and whether it is because of the perception of the legendary "North" countries, or the disengagement between education and duties of citizenship in the south? Thinking of all those points may be useful in drawing a theoretical strategy that will not be transmitted into reality unless there is a general will to

discuss and implement it according to each appropriate context.

7.2 The four-dimensional vision:

7.2.1. Legal dimension, Arab countries need to develop sophisticated laws to attract migrant brains, and stop the economic bleeding. It needs to create a legal link between the relevant authorities to protect the minds of Arab migrant and coordinate with international institutions, and protect them from exploitation. Not mentioning the importance of the formulation of a central policy of the Arab labor force to enable the integration of Arab countries facing bottlenecks in the labor force, and allow other Arab countries facing a deficit in this field to close the gap.

7.2.2. The economic dimension: requires reconsideration of the wage scales and salaries which gives Arab scientific competencies, and provide them with financial incentives linked to research results, and raise the upper wage limits to reward prominent qualifications and provide incentives and tax facilities to meet particular requirements, in addition to ensure the provision of adequate housing and the provision of basic needs and services to carry out their work in a satisfactory manner.

7.2.3. The administrative dimension: it is the capability of organizing the brain drain and linking it to the needs of society and its institution. The most important aspects of management is to find a base of accurate information regarding numbers and disciplines of Arab scientists abroad. It is also creating networks of communication between them and the scientific institutions in their countries and regionally. In this regard, Arab scholars in the West, established a network of Arab scholars in the Diaspora called "Scientists and Technical Arabs Network Abroad", known simply as (ALSTA), the network has emerged as a result of the first conference of Arab scientists and technologists abroad, which was held in Amman in 1992 with the aim to detect efficiencies in Western countries and monitor their contributions towards modern scientific progress. It was a step towards preparing an integrated guide about them to be available for political, academic, industrial decision makers and those responsible for economic growth in the Arab world, not to mention the importance of raising the public awareness of the existence of such minds of outstanding contributions. (Ayman Zahry, Egyptian Association for Migration Studies,2015)

The administrative dimension is also associated with administrative excellence and the culture of managing innovation, since many developing countries do not often distinguish between privileged and others. In rigid regimes everyone is similarly treated according to the same measures, not giving the outstanding person what encourages him to accomplish more, not to mention that the research and development field is limited. Therefore, scientists finding themselves between two options: either submissiveness and accepting the status quo and this method has wasted thousands of distinguished scientists till now, and the second option is to accept the tempting offers from scientific centers in the West, for each distinct creative person. Those temptations are money and prestige and a lot of features that he could not dream of in his mother/ home country.

It is also becoming increasingly difficult for accepting that the least efficient is responsible for the management and planning of work in scientific centers such as universities and research centers.

7.2.4. Scientific dimension: deals with the development of scientific research and the development of education, a policy that will activate citizenship and values at home, and lead to respect academic freedom and maintain it and not to politicize education, and to respect human rights and the subordination of the state and individuals to the law, and grant members of the academic and scientific bodies free access to various science knowledge and scientific developments, and enable the exchange of information and ideas.

In this context it should be noted that the problem of Arab world in general and its states, in particular, is that scientific work and research institutions work in isolation from each other. There is not a thoughtful program, nor a specific goal and a clear vision to monitor all activities and to accomplish the goal to take advantage of migrated minds. As well as the lack of a uniform source of the decision in the relevant Arab organizations and institutions to make them complementary rather than competitive in appearance, not substance. Therefore, any Arab state seeking to benefit from the Arab migrated minds or seeking resettlement and the transfer of technology in general, needs to rehabilitate the university institutions and centers of scientific research and develop it outside it to be able to transfer scientific and technological knowledge. In addition to networking with research and industrial centers and link graduate studies and scientific research to the industry, and make the university a consultative body, and urge Arab countries to allocate a higher percentage of its national income ratio of expenditure on research and development rather than 1 % of the national income.

CONCLUDED REMARKS

There exist the fact that the localization of technology and knowledge transfer from industrialized countries such as America, Japan, Southeast Asia, Europe needs a channel, which the human element constitute its basis. The presence of Arab relevant expertise and unique capabilities in the developed countries help to speed up the transfer process. For example, India and China make advantage of its brain immigration. The presence of Arab minds immigrants constitute a partnership between the West and the Arab world element since it was planted in the Arab world and paid off in Western countries. The Arab area is in need to re structure a comprehensive policy that helps in achieving a reverse brain drain that will help in the desirable development process in those countries. It will not be true without real changes in the negative attitudes towards those moving brains and considered them as disloyal citizens. Sticking those people to their own homes is the biggest challenges for the forthcoming governments especially after the waves of instability in this area.

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