



Munich Personal RePEc Archive

Mobility of Students from Arab Countries and Internationalization of Higher Education with Application to Medical Studies

driouchi, ahmed and akehboune, amale

ieaps al akhawayn university, ifrane, Morocco

26 September 2014

Online at <https://mpra.ub.uni-muenchen.de/58858/>
MPRA Paper No. 58858, posted 25 Sep 2014 16:45 UTC

Mobility of Students from Arab Countries and Internationalization of Higher Education with Application to Medical Studies

By:

Ahmed Driouchi & Amale Achehboune

Institute of Economic Analysis & Prospective Studies (IEAPS),
Al Akhwayn University (AUI), Morocco

Abstract

With the international liberalization of services, both education and medical care are becoming global. Medical education is consequently subject to changes in education and to reforms taking place in the health systems. The Arab world is not insulated from these international trends. The mobility of students from this part of the world accounts for the constraints related to accessing medical education in the countries of origin but also for the benefits provided by studying abroad. The current paper describes the costs and benefits related to medical education and to the incentives related to the mobility of students. It shows that while the medical educational system is changing in the Arab world, mobility of students is increasingly attractive as larger benefits are expected while studying abroad.

Keywords: Migration of Students- Internationalization of Education-Medical Education

Introduction

This paper aims at describing the costs and benefits related to medical education in both Arab and European economies. A theoretical framework is introduced to show the type of decisions faced by students and the type of new challenges related to the new globalized health system. Economic variables do intervene to support these changes. Financial incentives such as scholarships provided either by the sending or receiving countries are also attractive to potential students migrating for education abroad. The data from UNESCO and OECD show that this mobility is important.

Another version of this paper is published by Achehboune and Driouchi (2014a) and can be found in Driouchi (2014a). Another paper related to the economics of migration of students is also produced (Driouchi, 2014b).

The present article is composed of three sections. The first one is a literature review. The second introduces the theoretical framework. The third section provides a description of the trends taking place in the medical educational systems in Arab economies with comparisons with the European countries.

I. Literature Review

According to Altbach and Knight (2007), the main motivation behind the internationalization of education concerns a commercial advantage. The framework of the internationalization of higher education has been developed with the liberalization of economies, but primarily with the development of trade in services and the extension of privatization. The creation of international branch campuses, and cross border programs for internal students are the main initiatives undertaken.

For Wilkins and Huisman (2010), the number of international university campuses that are outside their country of origin amounts to 183 worldwide. Almost half of them are located in the United States of America (USA). And the other half goes to Australia and the United Kingdom. The major importers of these services are countries from Asia and the Middle East. One third is located in the United Arab Emirates (UAE). Besides that, other countries concerned by trading higher educational services are Canada, Malaysia, Belgium, France, Italy, Mexico, the Netherlands, Russia, South Korea, and Switzerland.

Miller and Hanauer (2011) centers their study on the international higher education in the Middle Eastern region with the recent opening of branch and offshore academic institutions that foreign universities have established in the region. Nearly one third of the branch campuses present worldwide are located in the Arab region. The authors focused in their study on the reasons behind the rapid expansion of the international higher education systems in the Arab countries and examine different theories in this subject.

Mahani and Molki (2011), in their report, have studied the effects of globalization in many fields, including tertiary education. Indeed, the growing international competitiveness, the willingness to attain superior ranking among global universities and the chase toward creating cross-border institutions are factors that had a significant influence on tertiary education programs and universities. Many universities worldwide react to these challenges by seeking the internationalization of higher educational programs. Over the last decade, the United Arab of Emirates was mainly an importer of this kind of trade. However, recently, it is striving to become a leader in educational hubs in the Middle Eastern region. For many years, the UAE was mainly concerned with making education available and accessible to all students and offering them

quality programs; however, today the UAE is working hard to become a world-class educational hub by inviting outstanding universities to establish their branches in the country.

Kinser, Levy, Casillas, Bernasconi, Slantcheva and Otieno (2010) look at the growing presence of private higher education centers worldwide, but focusing on case studies of Bulgaria, Chile, Dubai, Mexico, Kenya, Thailand, and the United states. One chapter in this study entitled: "Private Higher Education in Dubai: Growing Local Versus Importing Local Campuses" gives a general idea of the largest importers of international branch universities. The other chapter "The Private Nature of Cross-Border Education" discusses the global issues related to the internationalization of higher education.

Kinser and Lane (2010) examine the phenomenon of the internationalization of higher education as a more complex depiction of privatization. This report studies the concept of privatization through international initiatives, and claims that the full understanding of the public and private form of international universities requires the consideration of the relationship with the home and host countries. The study is based on an analysis of how governments in Qatar and the Malaysian state of Sarawak use foreign educational programs to achieve government objectives.

According to Becker (2009), Qatar is among the very active importers of foreign education worldwide. At present, Qatar disposes of nine international campuses namely from the United States, Canada, and the Netherlands. Qatar's main intention behind the importing of foreign education is to promote the educational, economic and cultural development of its young population. Among the actions pursued by the nation as to promoting the international of higher education, one could mention the creation of the Qatar foundation in 1995. The main objective of this foundation is to improve the quality of life of its nation through promoting the creation and

sharing of knowledge. One important project of the foundation was the establishment of Education city that offers prominent academic programs from six American universities. As stated by a representative of the Qatar foundation, Qatar is more concerned with the importation of specific programs that go along with the special needs of its nation. Such projects aim to give the opportunity to Qatar's citizens to have access to outstanding international academic programs.

As for the United Arab Emirates, a recent study by Mahani and Arman (2011) looks at the contemporary trends in the internationalization of higher education and studies the relative outcomes of this issue in the UAE. In their study, Mahani and Arman argue that the United Arab Emirates is making considerable efforts to become a leading education center in the Middle Eastern region. To achieve its end, the UAE is not only providing its citizens with quality education, but is also welcoming well-regarded institutions to build their branches in the country. Regarding the future of the emirates, and according to the Abu Dhabi Council, the UAE educational system suffers from a lack of coordination that affects the quality of education given to students. In this sense, the government considered a reform strategy that will place an investment of \$1.3 billion in the higher education by 2018. This reform is intended to enhance research and coordination between universities as a way to facilitate the access and integration of graduates in the current competitive job market.

The UAE made considerable efforts to improve of the quality of its higher educational system through creating proper public facilities, attracting qualified faculty members, offering outstanding programs and many other actions that contributed to building a regional and international standing. However, the UAE higher educational system faces challenges when it comes to gathering the necessary funding needed to satisfy the increasing number of enrolled

students. To deal with the current challenges, the UAE needs to consider offering new programs and disposing of additional institutional space in order to be able to achieve its objectives of social and economic development of the nation.

Godwin (2006) shows how the United Arab Emirates has encouraged both public and private higher education under the Commission for Academic Accreditation. The author considers that this has contributed to the growth and globalization of education besides increasing the number and quality of private education, including that offered by international institutions entering the country. This has allowed private educational universities to provide qualifications but also new values while generating revenues with the development of new markets. According to the author, these efforts have allowed the country to embark in linking employment and career aspirations.

Wilkins, Balakrishnan, and Huisman (2012) consider that there exists a fairly substantial body of studies about the motivations of international students to select countries and institutions but to date, there is little research on student motivations for studying at an international branch campus in a home country. The authors use a push-pull model of choice involving 320 undergraduate and postgraduate students in branch campuses in the United Arab Emirates (UAE). They find that the main motivations of students who choose to study at an international branch campus are different from those of students in internationally located campuses. The authors propose a revised model of international student destination choice, which incorporates two distinct sets of push and pull factors—one that applies to the home campuses of Western universities and one that applies to international branch campuses.

Wilkins and Balakrishnan (2013) seek to identify the determinants of student satisfaction at international branch campuses in the United Arab Emirates (UAE). The study involves 247

undergraduate and postgraduate students at branch campuses. The attained results show that the levels of student satisfaction at UAE branch campuses are generally high. The factors that are reported to be most influential in determining whether or not a student at a UAE branch campus was satisfied overall with their institution are the quality of lecturers, quality and availability of resources, and effective use of technology. The findings indicate that there remains scope for UAE branch campuses to further increase levels of student satisfaction.

In addition, Wilkins, Balakrishnan, and Huisman, (2012) aim also to identify the major stakeholders that might take advantage of transnational higher education in the Arab Gulf states and also determines how those stakeholders are currently benefiting from it. It was concluded that transnational higher education is crucial to the economic, social, and cultural advances of the Arab Gulf States.

Knight (2010) focuses on the important changes that the field of internationalization has known recently, especially in the area of education. He actually focused on one recent development, Education hub. Knight argued that this concept is being used by nations that are concerned with building a center of education that combines both local and international parties, including students, education universities, companies, knowledge industries, science and technology centers. It is argued that nations have different priorities, purposes and adopt different strategies to become a well-known center for higher education brilliance, expertise, and economy.

Tahar (2011) examines the case of Tunisia concerning the allocation of funding necessary to finance higher education. Over the years, Tunisia placed important investments to finance education, especially through public funding. Though, lately, Tunisia starts facing some challenges hindering the process. In fact, the number of student enrollment as well as the

difficulty to gather the necessary budget represented a challenge for Tunisia. Thus, the need for a public policy is unquestionable in order to find ways to enhance quality of education, and at the same time minimizing related costs. This article studies the spending of Tunisia on higher education relative to its quality and effectiveness. Also, the paper looks at the challenges facing the financing and the strong need for education of a higher quality. Finally, the paper analyzes some approaches that will eventually support and increase financing, and studies some ways that will rise private funding.

Kabbani and Salloum (2011) discuss the issue that the outcomes of the efforts made by the Syrian government for the sake of enhancing both the access to education and equity over the past ten years. The article says that significant progress has been achieved in terms of enhancing access to superior education. In this context, the number of students enrolled in universities has doubled over the ten last years. Concerning equity, the gender gap in both student enrollment and achievement has vanished.

Fahim and Sami (2011) claim that in order to overcome the potential challenges faced toward the financing of higher education, Egypt has no other alternative than to look for different ways to rise funding. This article identifies the means by which funds will be raised and making sure to keep fair access to education with good quality for people who cannot manage to pay for schooling. First, this paper evaluates the respective spending on higher education in Egypt, relative to its effectiveness. Then it moves to examine the consequences of demographic changes on the demand for quality education, and also on how the financing of higher education will be impacted by the private provision. Finally, the article proposes new strategies that will eventually solve the problem faced concerning the financing of higher education in Egypt.

Galal and Kanaan (2011) on financing higher education in the Arab region, consider the idea that higher education contributes significantly to the present knowledge economy. In fact, its contribution consists in offering skilled and competent employees to the labor market who will contribute to economic development. Thus, one could say that higher education is a measure of a country's development level. Placing high investments in higher education allows developing countries learn from the developed ones and have the opportunity to compete at the international level. In the present world, where innovation, globalization, and rivalry govern, the wealth as well as the opulence of nations is mostly determined by the quality and quantity of their human assets. That is to say, globalization will be benefiting only countries with competent talents.

Lightfoot (2011) claims that in 2010, the number of students enrolled in higher education programs, in the Arab region, has reached six million students, an increase of 66 percent over the last decade . Although the general growth rate is slowing, countries such as Syria and Morocco still faces an increasing demand for higher studies. The increase in the demand transformed higher education since it serves a wider cross-section of society. Despite the evolvement of the Arab region countries, the demand for university graduates is not increasing in the majority of countries. In fact, the supply does not cover all the fields and is instead concentrated in some restricted ones, such as Humanities and Social Sciences and in Engineering and Construction. In order to be able to meet the needs of a knowledge-based economy and also attain the objectives for economic advance, the necessity for a diversified set of tertiary studies is indisputable. A number of universities respond to this issue by offering some diversified programs including technical and professional studies.

It is also argued in the chapter that for nations whose tertiary education systems do not meet the high demand necessary for the economic development and progress, the internationalization of higher studies is a good opportunity that can positively influence their economies. This is achieved through the mutual exchange of concerned parties, including students, faculty, and also academic programs.

The most universal form of international mobility of tertiary education consists of partnerships between universities and institutes of higher education. This kind of joint ventures goes hand in hand with the mobility of both students and academic programs. Though, profit-making international institutes have a significant role in the Asia Pacific, and are now emerging in the Arab region, where they take the form of franchising. Currently, the Arab region disposes of forty branch campuses, representing a percentage of 35 percent of the overall campuses present worldwide.

Regarding student mobility, it has increased significantly over the last two decades. At present, more than three million students enrolled in higher studies continue their studies outside their home countries. As for the outbound mobility, students, when choosing the country in which they will pursue their studies, their decision is determined by a number of factors including the language of the host country, history, culture, perceived economic return, and immigration policy. Students from the Arab region often choose France. The latter hosts nearly 30% from them, followed by the US (11%) and the UK (9%).

The International student mobility has increased significantly over the past decades. Bessy (2007) discusses at first some empirical evidence on international student mobility to Germany which represents one of the most attended destination countries worldwide. Unlike previous researches attempting to explain the internationalization of higher studies as a form of

international trade in educational service, Bessy (2007) uses a different approach that analyzes student mobility as a form of migration. The results of the study demonstrate the importance of distance. It is argued that the importance of disposable income in the country of origin is not too big for students, and student flows are significantly lower in countries with political restrictions.

González, Mezanza and Mariel (2010) in their study on the determinants of international student mobility, show that the Erasmus student migrations have attained a significant level of two million ever since 1987 especially with the expansion of the program to the Eastern Region. Later on, the student flows have had a hard time to follow the same rate. Within this framework, the article investigates the determinants of Erasmus student migration using a number of hypotheses resulting from the migration theory and gravity models. The results of the study suggest that the most important determinants consist of country size, cost of living, distance, educational background, university quality, the host country language and climate.

Kondakci (2011) examines student mobility using a two- dimensional framework in order to figure out the logic behind in-bound student migration in the specific case of Turkey. The outcomes of the study say that private rationales are the most significant for students in public universities of Turkey. On the contrary, economic and academic rationales are proved to be the most significant for students from Western and economically developed countries. The study proposes three approaches that would help to understand the position of the countries in the periphery in international student mobility. The first approach consists of the nature of cultural, political and historical proximity between the country of origin and the host country as a determinant of the in-flowing student mobility, for developing countries. The second one says that for developing countries, private rationales are showed to be more significant than public

ones. Finally, the study says that regional hubs are starting to attract a number of students originating from other countries of the periphery.

Teichler (2009), in his article on the internationalization of higher studies defines “Internationalization” and “Globalization” as two different concepts with different meanings. The author suggests that student mobility is the most prominent component in Europe with ERASMUS program as the major system of provisional mobility. The author also evoked the “Bologna Process” as an initiative aiming to attract students from other parts of the world toward higher studies and to ease the intra-European mobility.

Narayan, Kumar and Russel (2005) look at the short-run and long-run factors behind the migration from Fiji to Australia in the period between 1972 and 2001. The results show that the prominent long-run determinants consist of the real wage differential and the political instability in Fiji. Conversely, in the short-run, lagged migration and political instability are proved to be the most prominent determinants.

Soon (2011), looks at the determinants of the country of destination from a sample of students in New Zealand universities in order to figure out the directions of emigration upon completion of studies. They actually consist of the initial return intention, family support, and length of stay in New Zealand, work experience, and level and discipline of study. Other factors mentioned are the work environment, the opportunities of applying the learned skills, the lifestyle, and the family binds.

A recent study by Hamilton, McNeely and Perry (2012) looks at the particular issue of natural sciences Doctoral attainment by foreign students at U.S. universities. The authors analyze the issue of highly-skilled migration through the sixty thousands foreign students with natural sciences doctorates in the period of 1980-2005. The results reveal that highly-skilled migration

paradigms related to natural sciences doctoral studies at US universities become free from political control with the end of the Cold War, allowing U.S. universities to become the principal suppliers of miscellaneous and gifted doctoral students for the U.S. scientific labor force.

Docquier, F., Faye, O. and Pestieau, P. (2008) have looked both in theory and empirically to migration in relation to education provided by the home countries. Their theoretical analysis shows that developing countries can benefit from skilled emigration when educational subsidies entail high fiscal distortions. But, when taxes are not too distortionary, it is desirable to impede emigration and subsidize education. The empirical investigations looking at the relationship between educational subsidies and migration prospects show a negative relationship over 105 countries.

But, the most recent paper by Beine, Noël and Ragot (2012) analyzes the determinants of the choice of location of international students. Building on the documented trends in international migration of students, a simple theoretical model accounting for various factors related to migration is suggested with inclusion of costs. Using data of students from a large set of origin countries studying in 13 OECD countries, the importance of the various factors identified are assessed based on the theoretical model. The results show a significant network effect in the migration of students besides a significant role for cost factors such as housing prices. Attractiveness variables such as the reported quality of universities are also found to be playing an important role.

Students not only focus on the returns of higher education in the future, but also take into account the context in which they will study.

This section has shown that both movements of students and of universities are developing in the Arab economies. This is a way of further opening these economies to internationalization of

higher education. But, in order to account for the development of the knowledge economy in the Arab economies, other conditions are needed. The following parts describe the issues related to medical education, length of studies, costs of medical studies as well as the graduation rates for health related schools in different countries.

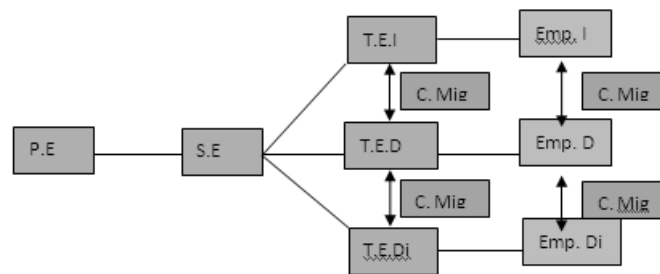
But, most of the above contributions consider that those that emigrate possess already a skill or talent that can be considered in the emigration decision.

II. Theoretical Framework

Most of the literature recognizes that students constitute a large share in the emigration patterns. They will get the skills after emigration while they may stay in the country of destination or may return to their country of origin. Movements of students have been encouraged under financial incentives from destination or source countries but they have been accelerated under the development of trade in services where education is becoming an important area of exchanges.

Potential university students have pursued their primary and secondary education before getting to choose their tertiary education. Among the choices offered, a student can choose to study abroad (TEI), domestically (TED) or in a school that is relocated locally (TEDi). Some potential students may have pursued their high school abroad or in an international system that is relocated domestically. After graduation from the tertiary systems, students are faced with making decisions about employment. Here again, they can choose to work abroad or domestically. When they do that they can decide to stay, return or migrate. The decision tree that may face most of students and then graduates can be shown to be as in the figure below (figure 1).

Choice options for students



P.E: Primary Education S.E: Secondary Education T.E: Tertiary Education
 T.E.I: Tertiary Education International T.E.D: Tertiary Education Domestically
 T.E.Di: Tertiary Education Domestically international Emp. I: International Employment
 Emp. D: Domestic Employment Emp. Di: Domestic International employment
 C.Mig: Circulatory Migration

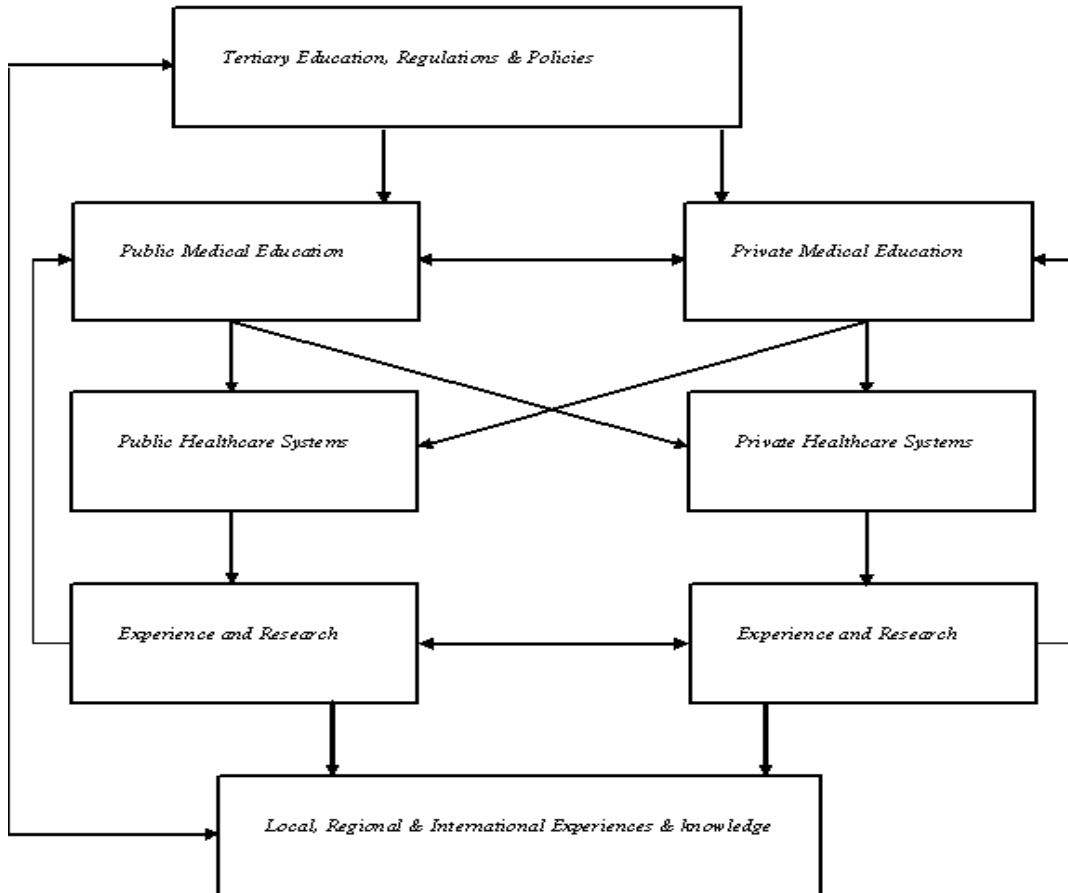
Figure 1: Options for Students

This means that potential students have to make major decisions with regard to where to study and after that they are faced with decisions about where to work. If they decide to study abroad they can decide to stay there after graduation and to return or not to their home country. When studying at home, they can decide to migrate and then to return or not. These decisions are referred to in the above graph as circulatory migration decisions (C.Mig).

But, others decisions do face students in relation to course selection, programs and specialties. It is expected that some sectors of tertiary education are under-going major changes in relation to new government and business policies. Such is the case of medical studies with further introduction of private education in the medical sector in some countries that have been mainly operating under public medical education system. The furthering of private clinics and hospitals besides the development of public health systems will be at the origin of more segmented health system with the related medical education in and outside the country of origin. This new system as it is already operating in developed economies and as it is increasing gaining momentum in

the developing world is progressively adopted in Arab countries. The features of this newly segmented process are introduced below (figure 2).

Figure 2: Choices for Students and in Health and Related Disciplines (Medical Education)



III. Empirical Analysis of Medical Education

Given that one of the determinants of physicians' emigration is related to the quality of medical education provided in the country, a description of the medical school systems through their inputs and outputs is pursued under this empirical analysis. For purposes of comparisons, European and Arab countries are introduced.

1. Inputs of Medical Education

1.1: Eastern and Central European countries

Starting from the ECE countries, it has been found that the duration of education in these countries is around 6 years for a degree as a medical doctor. The number of universities or medical institutes differs per country with the largest number in Russia, Ukraine, Poland and Romania. However, the large number of universities in Russia is explained by the equally large total population compared with the countries in the group (Table 1). Besides that, the costs of education are lower when compared to the remaining European countries and costs of living are affordable for students.

Table 1: Cost of Medical Education in ECE Countries

Country	Number of Med. Schools	Total Fees Per Year (USD)		For Students	Duration (Yrs)
		MIN	MAX		
Eastern European Countries					
Belarus	4	4374	5204	All	6
Bulgaria	6	9000	12000	All	6
Czech Republic	6	12544	18119	International Students	6
Estonia	1	6307	7795	All	6
Hungary	4	20539	21039	All	6
Latvia	2	4778	16828	All	6
Lithuania	2	14505	18005	All	6
Poland	12	12038	20571	All	4/6-year MD
Romania	11	6551	13894	All	6
Russia	58	3280	8600	All	6
Slovakia	3	15928	16625	All	6
Slovenia	2	8341	14704	All	6
Ukraine	23	5650	7500	All	6

Sources: www.bma.org.uk/international/working_abroad; List of references for ECE.

There are advantageous costs for students coming from other European countries in case they want to join an ECE medical university whose country is member of the European Union. Table 20 provides data about the cost of education for the ECE countries.

Based on different websites related to different countries, valuable information is gathered and synthesized to describe different aspects of medical education.

Russia has 58 medical schools listed in its directory of medical schools. The first stage of medical studies lasts for six years for an MBBS (Bachelor of Medicine & Bachelor of Surgery) and five years for a BDS (Bachelor's in Medical Studies). Russian medical degrees are recognized globally and have good rankings from the WHO and the UNESCO. The Russian medical education is more affordable than other European countries. It provides studies in both Russian and English and offers well-equipped, multi-profile hospital clinical practice. Admission to medical schools is easy since the no entrance test is required.

There are four medical universities in Belarus. To enter the medical school, students need to have completed two years and ten months of secondary medical education. As for foreign students, they need to study at the Preparatory Departments of the Faculties for Foreign Students the necessary subjects to enter the University, including Russian, biology, chemistry, mathematics and physics. After graduation, students go through a one-year qualification apprenticeship where they work as doctors-probationers supervised by skilled doctors.

Bulgaria has six medical schools, offers a six-year course of medical study and the official language of education is primarily Bulgarian but many Bulgarian medical schools started offering programs in English except for clinical years where Bulgarian is required. European candidates are required to pass an exam in biology and chemistry. The prerequisites for joining a Bulgarian medical school include completing high-school. The first two years of education are pre-clinical, the following three years are clinical training and the sixth year is the hospital internship year. The student is provided with the degree of physician after the successful completion of the six years of study and the state exams. For specialization, graduates have to take tests and interviews in order to obtain a place in a specialization program either in internal medicine (5 years), general practice (3 years), cardiology (4 years) or general surgery for 5 years.

Estonia has only one medical school at the Tartu University. Medical studies last for six years that can be followed by specialty training that lasts for four to five years. Training for general practice generally takes three years. Hungary has four medical schools that provide a six-year medical program to obtain a physician degree. The first two years are about theory, followed by a third year about the theoretical foundations of disease and preliminaries in medicine and surgery, the fourth and fifth years focus on pharmacology and training in various clinical subjects and during the sixth year, students take their final examinations preceded by internship periods. Entry to Polish medical schools requires the completion of secondary/ high school while honors in biology, chemistry and physics are highly recommended. Medical education in Poland lasts either four or six years including practical training.

In Romania, there are eleven medical schools that provide six years of full-time study. To get admission to the medical school, candidates need to pass a human biology, organic chemistry and/or physics test. The first three years of study are dedicated to pre-clinical curriculum while the following three years focus on clinical general medicine and surgery. In order to obtain the physician degree, students should pass the final exam and present a dissertation on a chosen subject. Besides, the junior doctor needs to pass a National Residency Exam in order to enter medical training and practice medicine. The graduate can register for specialization according to the pass mark on the exam. The specialization can last from three to seven years.

Slovenia has two medical schools and studies last for six years followed by two years supervised practice for students to obtain their degree. Ukraine has 23 medical schools and institutes that provide a six-year course of study. Ukrainian universities are recognized by international organizations such as the WHO and the UNESCO among others. The advantages of these

universities are the cost differential in terms of education and living compared to other European countries and the offering of education in different languages such French, Russian and English.

1.2: Other European Countries

The other European countries include Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United kingdom. Medical studies require five to seven years of studies and are expensive for some countries when education is not public except for France. The total fees reported in US dollars include the approximate cost of living in a given country for ten months per year. For some countries, the fees seem to be huge while it is rather the expensive living costs in that country that enlarge the figure (Table 2). There are countries that have many medical universities in various national regions and countries providing advice for foreign students. Spain has the largest number of medical schools in this group while Luxembourg does not have any medical school.

Table 2: Cost of Medical Education in the Other European Countries

Country	Number of Med. Schools	Total Fees Per Year (USD)		Duration (Yrs)
		MIN	MAX	
Other European Countries				
Austria	4	4215	12452	6
Belgium	9	10586	14781	7
Denmark	4	6450	31616	6.5
Finland	5	5125	6075	6
France	33	14168	34845	7 / 6 + 2.5 / 4 to 5
Germany	37	8463	12126	Min 6
Greece	7	10063	19680	6/5 to 7
Iceland	1	3448	12569	6
Ireland	6	12405	33591	6
Italy	29	6690	20210	6
Luxembourg	0	-	-	-
Netherlands	8	11805	26259	6
Norway	4	8911	15326	6 / 6.5
Portugal	8	6993	17832	6

Spain	38	6000	27701	6
Sweden	6	35699	47442	5.5
Switzerland	5	14615	28092	6
United Kingdom	32	26769	44718	5

According to series of information available on different websites, a synthesis about the characterization of medical education is set below.

Belgium has nine universities that provide medical training for seven years including clinical training starting from the fifth year. The first three years are theoretical and lead to a bachelor degree. Students are allowed to enroll in a master in medicine courses which consist of four years of theoretical and clinical studies. Then, the graduates can join general practice that lasts for three years starting from the seventh year of undergraduate training or choose a specialty training that starts after undergraduate training. Denmark has four medical schools that provide a six-and-a-half-year medical course of study followed by eighteen months pre-registration training to qualify for the doctor degree. Six months are dedicated to surgery, six months in medicine and six months in general practice. Then, the graduate can be registered and practice as a doctor but general practice requires further specialist training.

Finland has five medical universities and studies last for six years. Admission is regulated by entrance examination. The first two years involve pre-clinical theoretical courses followed by a four-year clinical period including work in various hospitals and health care centers. Medical students experience a problem based learning and have contact with patients early in their studies. Depending of the specialization, students have the choice between five and six-year specialist training. The National Board of Medico-legal Affairs (NBMA) and the five medical faculties regulate training. To be a general practitioner, doctors must complete two years of training in basic healthcare and hospital practice, with a minimum of six months in each.

France has more than 30 medical universities and basic medical education lasts for 6 years followed by general practitioner training or specialization (6 + 2.5 years or 6 + 4 or 5 years). Admission to medical schools is controlled by competitive exams. Medical education is based on three steps: (1) the first two years, (2) four years and (3) then two years and a half to train for general practitioner or four to five years to train as a specialist. Germany has 37 medical universities and studies last for a minimum of six years. Admission is based on the final GPA score of the applicant on the secondary school diploma. The first two years of medical studies involve pre-clinical courses completed by a federal medical exam that students should pass. This is followed by the three-year clinical stage and then the last year of medical school that is also called the 'practical year'. This is followed by four months of clerkships (two in a hospital, one at a doctor's office and one elective). Then, a final federal exam takes place before graduates receive the degree of physician with a license allowing them to practice medicine or a license of Doctor of Medicine when, in addition, the graduate successfully completed a scientific dissertation. The German government subsidizes medical education, leaving a minimal tuition amount for students to pay.

Greece has seven medical universities and medical training lasts for six years that can be followed by postgraduate training for 5 to seven years. There is a final examination at the completion of the training that precedes the award of the specialist status. Greece has a high ratio of physicians per 1000 people but the majority of doctors are located in Salonika and Greater Athens. Thus, the medical programs require periods in rural practice as a way to address the problem of physicians' distribution. Iceland has only one medical university and studies last for six years. Admission to medical school is based on passing an organized test, controlled by the University of Iceland. Before being registered as practitioner at the ministry of health, students

should undertake 12 months of pre-registration training. Then, the doctor is allowed to start specialist training that can last for four and a half years.

Ireland has six medical schools and provides medical studies in the form of a four-, five- or six-year program depending on the satisfaction of prerequisites. Admission is based on secondary school qualifications for the six-year program while the four-year program accepts candidates with previous university degrees. Medical courses include pre-clinical and clinical courses. The Irish Medical Council regulates medical education. Thus, after receiving a BMBS (bachelor of medicine and bachelor of surgery) and before registration is pronounced, the graduate is required to undertake a training year as an intern under supervision. In order to obtain membership of the appropriate royal college, doctors have to take an examination. Italy has 29 medical universities and studies last for six years. Since there are few restrictions to entry to Italian universities, Italian medical schools produce more physicians than the health system can employ. The quality of education has been criticized for being too theoretical and classed for being too crowded. Besides, post-graduate training is highly competitive and medical doctors' unemployment is high. Admission to medical school test is supervised and administered by the ministry of education, universities and research (MIUR). The first three years of the program are based on 'biological' subjects while the following three years are devoted to 'clinical' subjects. Over the six-year program, most medical schools require taking 36 exams in addition to compulsory rotations and elective activities. Students should also defend a thesis by the end of the program before a board of professors. This thesis is usually prepared during the same year the student starts the internship program by the fifth or sixth year.

Luxembourg lacks its own medical school. In this case, every physician wishing to practice in the country should be registered with the Minister of Health free of charge. Thus, applicants who

complete the requirements of directive 93/16/EC must finish an application form obtained from the Health Ministry and provide their original medical diploma, certificate of nationality and a certificate of good standing. In the Netherlands, there are eight medical schools and studies last for six years (three in pre-clinical and three in clinical studies). Admission to medical schools is based on the completion of the highest level of secondary school. Graduates can specialize immediately after graduation after passing an interview to join a training program that lasts for a minimum of 5 years. They will work under the supervision of a senior medical specialist. Research experience and publications are expected from these trainees. General Practitioners complete a three year specific training program before being allowed membership to the Royal Dutch Medical Association's register of general practitioners.

Norway's four universities provide a six-and-a-half year medical program that is followed by 18 months of supervised clinical training (12 months hospital based and six months with a general practitioner). Admission to medical schools is based on a relatively high GPA from secondary school. Once the six-year program is completed, students receive a "candidatus medicinae" degree and are granted a medical license after completing the 18-month training by the Norwegian Registration Authority for Health Personnel. Then, the doctor can apply for specialist training and choose among the 43 recognized medical specialties in Norway. Specialist training programs last for 5 to 6 years and specialist approval is granted after 9 years and is the prerequisite for application for consultant positions. Specialist training for general practitioner lasts for 5 years including a two-year vocational training program.

Portugal has eight medical universities and studies last for six years followed by a pre-registration training. After registration, doctors choose a career among hospital medicine, general practice and public health. Specialization as general practitioner includes a three-year vocational

training program that leads to a 'generalist' diploma. Spain has 38 medical universities and studies last for six years (three in pre-clinical and three in clinical course). At the end of the program, the graduates receive the Licenciado en Medicina y Cirugia degree. The specialist training is accessible to Spanish citizens and citizens of other European economic area (EEA) states after a competitive examination that is conducted in Spanish only. Successful candidates undertake a three to a four-year or even longer residency program. Concerning, the general practitioners, they spend their final year in training practice after they pass a separate exam.

Sweden has six medical universities and undergraduate medical courses last for five and a half years followed by an 18-month internship (6 months in family medicine and one year in rotation of various major specialties). After completion of internship and award of registration, the doctor can undertake a specialist training that lasts at least five years. Sweden has 52 recognized medical specialties. General practitioners should complete a five-year program that leads to the title of specialist in family medicine. Switzerland has six medical universities and studies last for six years followed by general and specialist trainings. Medical education is regulated by the Federatio Medicorum Helveticorum (FMH).

The UK has 32 medical universities that offer medical education and award the degree of Bachelor of Medicine and Bachelor of Surgery after the completion of the medical program. Admission to UK medical schools is based on A-levels, a good performance in various skill tests or an interview. The UK methods of education vary between problem-based learning, traditional pre-clinical/ clinical program and integrated approach combining different methods. UK doctors enter a two-year foundation program after qualification and are awarded full General Medical Council (GMC) registration at the end of the first year and can apply for specialist training after the second year. Besides, medical schools in the UK offer accelerated graduate entry programs

(four years). Medical education lasts for five years and students begin medical school as college undergraduates.

1.3: MENA Countries

These countries include Algeria, Egypt, Iran, Iraq, Israel, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia, Turkey and Yemen as MENA countries. Medical studies require between four in Lebanon and seven years of study in Morocco and Iran and tuition fees differ among a majority of public medical schools and some private ones. Table 3 describes the total fees incurred per year in US dollars. It is observed that Morocco, Tunisia and Yemen have the lowest fees in the group while Lebanon, Jordan, Iran, Turkey and Israel have the highest fees. However, in Turkey, for example, the minimum fee is considered low. This is explained by the low level of fees required by public universities and the difference in the amount of tuition fees between local and international students.

Table 3: Cost of Medical Education in MENA Countries

Country	Number of Med. Schools	Total Fees Per Year (USD)		Duration (Yrs)
		MIN	MAX	
MENA Countries				
Algeria	11	3680	15180	6 / 7
Egypt	18	7251.23	21466.27	6 / 7
Iran	49	6000	29800	7
Iraq	13	9000	20000	6
Israel	4	20250	23250	6 yrs/ 7 yrs
Jordan	4	6617.5	34745.9	6
Lebanon	7	9430	36020	4 to 7 yrs
Libya	4	4060	16747.8	6
Morocco	5	683.4322	4309.931	7
Syria	6	6199.29975	18406	6
Tunisia	4	1877.516	7218.32	5 or 7 yrs
Turkey	50	6100	26460	6 or 7 yrs
Yemen	6	2920	8310	6 or 6.5 yrs

A large set of documents besides reports and websites have been used to provide the basic information related to medical education in MENA countries.

Algeria has eleven medical schools and the duration of basic medical education lasts for six or seven years including medical training. At the completion of this latter, the student is awarded the degree of 'Docteur en Médecine' (Doctor of Medicine) and granted the license to practice medicine by the Algerian ministry of health and population. Egypt has 18 medical universities and studies last for six years to obtain a degree of bachelor of medicine and bachelor of surgery. Admission to Egyptian medical schools is based on the applicant's score on the last two-year secondary school. There is a very strict quota to the number of students accepted by the admission office which regulates entry into public universities but this is not applicable to private universities. The first three years of medical school cover the basic medical sciences, while the last three years involve clinical sciences. After the end of the program, the graduate is required to undertake a year of full-time internship at one of the University or Government Teaching hospitals. Then, a medical license as a General Practitioner (GP) is received, followed by registration with the Ministry of Health and the Egyptian Medical Syndicate.

In Iran, there are 49 medical schools and basic medical education is provided for seven years including practical training while additional two years should be spent in government service before the degree is awarded. It is compulsory for the physician to register with the Medical Council of Iran in order to get a medical license to practice. Iraq has thirteen medical schools that provide medical education for six years. Medical registration is compulsory with the Iraqi Medical Association. The medical license to practice is delivered to holders of a Bachelor of Science in Medicine and General Surgery from a recognized medical school in the country. The license is granted after completion of a two-year internship (rural and national service) by the

graduate. Graduates who received their degree from abroad should get it validated by the Ministry of Higher Education and Scientific Research. On the other hand, foreigners can practice in Iraq if they hold a contract with a government agency or if a reciprocal agreement exists between their country and Iraq. Besides, work in government service after graduation is compulsory for Iraqi graduates over 25 years old.

Israel has four university medical schools and studies last for six years. As of 2009, Tel Aviv University has introduced a four year program for students with a bachelor's degree in biological sciences-related fields. Admission to medical schools requires an elevated high school baccalaureate average and psychometric examination high grade. Israel is experiencing a growing demand for medical education while there is a lack of doctors. Jordan has four medical institutes inside state universities and studies last for six years followed by the award of the bachelor of medicine and surgery (MBBS). The program includes three years of medical sciences and three years of clinical practice. After completion of medical education including an 11-month internship in the four main departments of a teaching hospital, the graduates are awarded the degree of Bachelor of Medicine and Surgery. Medical registration with the Jordan Medical Association is necessary and license to practice is granted by the Ministry of Health to graduates. Graduates of foreign medical schools must validate their degree and foreigners must hold a residence permit to practice in Jordan.

Lebanon has four medical schools and medical education is provided for four to seven years including practical training. The graduates are awarded the degree of Doctor of Medicine. Libya has four medical schools and studies last for six years with an additional year of supervised clinical practice. The degree of Bachelor of Medicine and Bachelor of Surgery (MB, BS) is awarded after completion followed by a compulsory medical registration with the General

Medical Syndicate of the Libyan Arab Jamahiriya. The license to practice medicine is granted by the General Directorate for Health Affairs, Ministry of Health and Social Security, Tripoli, to graduates of a recognized medical school after fulfillment of the 1-year internship. Libya has agreements with universities in other Arab countries and in Eastern and Western Europe. Graduates who obtained foreign degrees need special authorization to practice. Besides, it is necessary for Libyan graduates to work in government service after graduation.

Morocco has five university hospital centers (public universities) where medical education is provided for seven years including practical training and an additional 1-year internship that is required before the degree of 'Docteur en Médecine' (Doctor of Medicine) is awarded. Medical registration with the Conseil national de l'Ordre des Médecins is compulsory. The license to practice medicine is granted by the Secrétariat général du Gouvernement to graduates of a recognized medical school. Besides, Morocco established agreements with French and Spanish universities. In Syria, there are six medical schools (4 public and 2 private) and education lasts for six years including practical training. The degree of Doctor of Medicine is awarded after completion of medical education requirements.

Tunisia has four medical schools located in the major cities and studies last for five years. Admission is based on the success and on the score in the high school degree. The first two years include medical theory while the last three years consist of clinical training involving all medical specialties. During the last three years, the student has the status of 'Externe', has to attend at the university hospital every day, rotating around all divisions and then has to take clinical exams to test knowledge in a particular specialty tried. Then, there are two years of internship during which the student is basically a physician under the supervision of the chief doctor. The student can choose between taking the residency national exam or extending his internship for another

year that will allow him to gain the status of family physician. The residency program consists of four to five years in the specialty of qualification and the choice depends on the national residency examination score. Besides, a doctorate thesis to defend in front of a jury is required from the student to be awarded the degree of Doctor of Medicine. Medical education is free for all Tunisian citizens and foreigners usually have scholarships.

Turkey has 50 medical schools and studies last for six years where the first three years include pre-clinical courses and the last three years involve clinical training. Admission is based on passing the MCQ exam that covers most of the high school and secondary school curricula. After graduation, students can either work as general practitioners or pass the Medical Specialization Examination (TUS) to be able to undertake residency in a given department of a hospital. There are both public and private medical schools and the language of instruction is mainly Turkish with English for few universities. These are among the reasons that make Turkey a famous place to study medicine for students from the MENA, the Balkans and less often from North Africa. Yemen has six medical schools that provide six to six and a half years of medical education including practical training. After completion, the degree of Bachelor of Medicine and Surgery (MB, BS) is awarded.

1.4: Other MENA Countries

This group includes countries with emigration history as receiving countries from the region and outside. They are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and The United Arab Emirates as other MENA countries. Medical studies require between six and seven years of study and tuition fees are very expensive especially for private medical schools. Table 4 shows, that Saudi Arabia has the largest number of schools in the group. Kuwait and Qatar have only one each. The cost of

living in these countries is very high as described in the table. In addition, tuition fees for medical student have increasing trends especially for private universities.

Table 4: Cost of Medical Education in other MENA Countries

Country	Number of Med. Schools	Total Fees Per Year (USD)		Duration (Yrs)
		MIN	MAX	
Other MENA Countries				
Bahrain	4	43430	112045	6
Kuwait	1	25415	31607	7
Oman	2	22500	41500	7
Qatar	1	63753	85625	6
Saudi Arabia	25	23500	46500	6
United Arab Emirates	4	41294	71046	6 or 7 yrs

Bahrain has four medical schools that provide education for six years with an additional year of supervised clinical practice required before the degree of Doctor of Medicine (MD) is awarded. Medical registration and license granting are compulsory with the Licensure Office, Ministry of Health, to graduates of a recognized medical school who have successfully completed an internship year and passed the license examination. Besides, Bahrain established agreements with all Gulf States and the Arab Board of Medical Specialties. Kuwait has only one medical school, the Health Sciences Center (HSC) in Kuwait University, which provides studies for seven years. The degree of Bachelor of Medical Science, Bachelor of Medicine and Bachelor of Surgery (BMedSc, BM, and BCh) is awarded after the completion of the seven years.

In Oman, two medical schools exist and provide education for seven years including practical training with an additional required year of supervised practice. Upon completion of this latter, the degree of Doctor of Medicine (MD) is awarded. Medical registration with the Ministry of

Health is compulsory and the license to practice medicine is granted to graduates of a recognized medical school who have completed a 2-year internship. Besides, graduates of foreign medical schools must pass a local qualifying exam to validate their degree. Bahrain has an agreement for limited registration with the General Medical Council of the United Kingdom. Qatar's only medical school is Weill Cornell Medical College (WCMC-Q). It provides education for six years. The first two years include five consecutive integrated basic science courses (Molecules, Genes and Cells, Human Structure and Function, Host Defenses, Brain and Mind, and Basis of Disease) and year-long "patient-doctor" courses known as Medicine, Patients and Society I and II. The following two years are based on a clinical curriculum that introduces students to the clinical years. The fifth year is about traditional clerkship rotations in the principal clinical disciplines. The sixth year involves selective and elective courses.

Saudi Arabia is considered among the other MENA countries in this chapter. It has 25 medical schools, all free of charge for Saudi citizens and studies last for six years. There are 21 nonprofit and four private medical schools in Saudi Arabia. Admission to medical schools requires passing an entrance examination and completing a 1-year pre-medical course containing basic medical material. Passing this latter is considered most challenging. Then, there are five medical years of study and one training year. The schools offer an MBBS (Bachelor of Medicine & Bachelor of Surgery) degree. As for the United Arab Emirates, it has four medical schools. They provide education for six or seven years including practical training.

2. Outputs of Medical Education

There are other variables that can be used to define the trends influencing the number of physicians per 1000 people. They include GDP per capita, retirement rates, income growth, number of graduates from health education and other factors. The number of graduates in health

(1000s) includes all human resources for health and is taken from the World data bank (WB) as shown in Table 5.

Table 5: Number of graduates in health (1998-2009)

Country	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Eastern European Countries												
Belarus							6871	7568	6777	4501	4744	4652
Bulgaria		5695	3966	3561	3551	3096	2886	3032	0	2814	3698	
Czech Republic		5625	6709	6660	6305	6451	5729	5996	8587	8063	7958	
Estonia		406	596	821	906	1315	1358	1279	1339	1378	1154	
Hungary		3289	4330	4519	5219	5085	4738	5653	6151	0	6493	
Latvia		835	774	446	633	792	926	1254	1375	1542	1917	
Lithuania		2102	2774	2764	3064	3851	4265	4183	3896	4226	4387	
Poland				8199	8675	8760	11261	35679	39457	43818	47654	
Romania		5910	5229	5474	5656		17531	17770	16810	24512	22526	
Russia							101588	108070	108088	120580		
Slovakia		3421	3098	3622	4144	4302	5100	5065	6873	8767	11135	
Slovenia		1015		1283	1416	1432	1357	1723	1703	1312	1335	
Ukraine		33118		32128	32985	34038	34746	35707	36731	38189	39671	
Other EU Countries												
Austria			2399	2811		3218	3148	3335		3503	4868	
Belgium			13880	14510	15123				15386		20002	
Denmark		8621	9611	10262	10149	11184	11359	12097	11313	11026	11187	
Finland	9339	8596	8120	8011	8226	7305	7317		7743	8144	8607	
France		35306	38357		38141	44248	80714	83474	86973		90312	
Germany		84823	79890	81446	79098	79387	80678	82859			85082	
Greece							3982	5827		9600		
Iceland		193	236	224	233	254	277	325	398	450	498	
Ireland	2694	3718	3442	4292	4821	6684	7250	6339	6490	7359	6601	
Italy	27090	32229	35536	28004	39735	47871	49947	53440	55960	59991		
Luxembourg												
Netherlands		16036	17097	17606	18218	18351	18298	18013	19361	21252	22528	
Norway		6917	6636	7227	7272	7661	7974	8214		8681	8306	
Portugal			7790		9988	10612	10761	12534	14811	15903		
Spain		29129	30439	33174	35387	37680	38421	40690	40726	40533	44669	
Sweden		8837	9032	8961	9798	11306	14592	14038	15344	15007	14845	
Switzerland		7013	6656	6621	6978	6391	6849	6190	7557	10698	10936	
UK		83269	64004	100681	105019	114584	105860	115686	117155	118823		
MENA												
Algeria										6243		6898
Egypt												
Iran							29463	31445	32134	25990		36073

Iraq			3059				8695					
Israel			3026									
Jordan							3860	4731		6459		
Lebanon			1669	1644	1756		2383	2890	3365	3822	4546	4576
Libya												
Morocco				1810				2505	2631	4074	4442	4705
Syria												
Tunisia												
Turkey				16840	17976	18630	19511	22840	21271	25148	26014	
Yemen												
Other MENA												
Bahrain							309		317	270		
Kuwait												727
Oman										918	981	1035
Qatar			24	56	39	49				69	133	299
Saudi Arabia							4836	4479	6738	9072	9888	10779
UAE										680		

The raw numbers presented in Table 5 cannot shed light over the quality and effectiveness of graduates in health unless it is relative to the total population in each country. However, from an initial observation the number of graduates is highest in the other European countries.

It has been observed that some countries lack qualified physicians and others happen to have more graduates than needed nationally. The theory is to explain these inequalities by the medical schooling system in different countries, the number of schools per country, the differentiation between public and private universities, the costs of medical schools and selection criteria behind the enrollment of students into medical institutes.

Conclusion

This article has introduced series of facts about medical education besides figures about costs and graduation rates. These elements have been showing the prevalence of an important trend in the migration of students with an on-going delocalization of universities originating from developed economies. These trends have been expressed at the levels of Arab countries but

also in other economies. The case of medical education has been also been concerned with major changes taking place at the levels of the provision of medical care but also the educational programs in health sciences and applications. Within this context, the migration of students to foreign medical schools appears to be motivated by both the country of destination and also the likely implications about future careers and living conditions.

References

- Achehboune, A. and Driouchi, A. (2014). Potential Skilled Labor Migration, Internationalization of Education with Focus on Medical Education: The Case of Arab Countries. In A. Driouchi (Ed.), *Labor and Health Economics in the Mediterranean Region: Migration and Mobility of Medical Doctors* (pp. 83-122). Hershey, PA: Medical Information Science Reference. doi:10.4018/978-1-4666-4723-7.ch004
- Altbach, P., & Knight, J. (2007). The Internationalization of Higher Education: Motivations and Realities. *Journal of Studies in International Education*, 11(3-4), 290-305. Retrieved from <http://jsi.sagepub.com/content/11/3-4/290>
- Becker, R.F. (2009). *International Branch Campuses: Markets and Strategies*. London: Observatory for Higher Education.
- Beine, M., Noël, R., Ragot, L. (2012). *The determinants of international mobility of students*. CESifo Working Paper: Economics of Education, No. 3848, <http://hdl.handle.net/10419/61013>
- Bessy, D. (2007). *International student migration to Germany*. *Empirical Economics*, 42: 1, 345-361.
- Docquier, F., Faye, O., Pestieau, P. (2008). *Is migration a good substitute for education subsidies?*. *Journal of Development Economics* 86 (2008) 263–276.
- Driouchi, A. (2014a). *Economics of Migration of Students from the Arab Region to OECD countries*. MPRA Munich 58830.
- Driouchi, A. (2014b). *Labor and Health Economics in the Mediterranean Region: Migration and Mobility of Medical Doctors* (pp. 1-358). Hershey, PA: IGI Global. doi:10.4018/978-1-4666-

4723-7, <http://www.igi-global.com/book/labor-health-economics-mediterranean-region/78250>

Fahim, Y., & Sami, N. (2011). *Adequacy, Efficiency and Equity of Higher Education Financing: The Case of Egypt*. UNESCO IBE, 1: 157, 47-67.

Galal, A. & Kanaan, T. H. (2011). *Access and Equity in Financing Higher Education in Arab Countries*. UNESCO IBE, 1: 157, 2-179.

Godwin, S.M. (2006). *Globalization, Education and Emiratization: A case Study of the United Arab Emirates*. The Electronic Journal of Information Systems in Developing Countries. ISSN: 1681-4835 www.ejisdc.org.

González, C, R., Mezanza, R, B. & Mariel, P. (2010). *The determinants of international student mobility flows: An empirical study on the Erasmus Programme*. Higher Education, 62:4, 413-430.

Hamilton, R, V., McNeely, C, L., Perry, W, D. (2012). *Natural sciences doctoral attainment by foreign students at U.S. universities*. George Mason University.

Kabbani, N. & Salloum, S. (2011). *Implications of Financing Higher Education for Access and Equity: The Case of Syria*. UNESCO IBE, 1: 157, 97-113.

Kinser, K. & Lane, J.E. (2010) 'Educational hubs: Archipelagos & acropolises', International Higher Education, 59, 18–19.

Kinser, K., Levy, D., Casillas, J.C.S., Bernasconi, A., Slantcheva Durst, S., Otieno, W., et al. (2010). *The global growth of private higher education*. ASHE Higher Education Report Series, Wiley, San Francisco.

Knight, J. (2010). 'Regional education hubs- Rhetoric or reality', International Higher Education, 59, 19–20.

Kondakci, Y. (2011). *Student mobility reviewed: Attraction and satisfaction of international Students in Turkey*. Higher Education, 62:5, 573-592.

Lightfoot, M. (2011). *Promoting the Knowledge Economy in the Arab World*. University of London, England.

Mahani, S. & Molki, A. (2011). *Enhancing the quality of teaching and learning through action research*. Journal of College Teaching & Learning, vol. 9, no. 3, pp. 209-216, 2012.

Mahani, S & Arman M, (2011). Globalization of Higher Education in the United Arab Emirates. The 2011 New Orleans International Academic Conference, <http://conferences.cluteonline.com/index.php/IAC/2011NO/paper/viewFile/210/214>

Miller, C. and Hanauer, E. (2011). *Exporting Higher Education: Offshore Campuses in the Middle East*. Comparative Education, 47(2): 181-207.

Narayan., Kumar, P. and Russel, S. (2005). *Modeling immigration flows: An application of the bounds test to Fiji*. Australian migration. Pacific Economic Bulletin, 20:2, 104-116.

Soon, J, J. (2011). *Home is where the heart is? Factors determining international students' destination country upon completion of studies abroad*. Journal of Ethnic and Migration Studies, 38:1, 147-162.

Tahar, A. (2011). *Scope, Relevance, and challenges of financing higher education: The Case of Tunisia*. UNESCO IBE, 1: 157, 135-155.

Teichler, U. (2009). *Internationalization of higher education: European experiences*. Asia Pacific Education Review, 10: 1, 93-106.

Wilkins, S. and Balakrishnan, M.S., (2013). *Assessing student satisfaction in transnational higher education*. International Journal of Educational Management, 27(2), 143-156.

Wilkins, S., Balakrishnan, M.S. and Huisman, J. (2012). *Student Choice in Higher Education Motivations for Choosing to Study at an International Branch Campus*. Journal of Studies in International Education, November 2012 vol. 16 no. 5 pp: 413-433.

Wilkins, S. & Huisman, J. (2010). *Student recruitment at international branch campuses: Can they compete in the global market?*. Journal of Studies in International Education, published online December 6, 2010, 1-8.