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Economics of Migration of Students from the Arab Region to OECD countries

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Abstract:

Economic studies on migration of skilled labor are mainly related to those trained in the country of origin but are increasingly including students trained abroad that return or not to their home countries. There are incentives and constraints that are provided by both origin and destination countries but the living conditions and the expected relative wages appear to be the most important sources of attraction of students to migrate. The restrictions of access to some schools such as those of medical sciences and architecture could be also driving further migration. The internationalization of the education system and the delocalization of universities in relation to globalization and trade in services are also encouraging these movements. These directions are likely to be expanded under the high levels of unemployment and the expected low local wages. This paper expands early models of skilled labor migration to account for students. Empirical investigations based on Arab countries are pursued. They show clearly the importance of this movement and its determination mainly by the differences in relative expected wages and the anticipated living conditions.

Keywords: Migration, students, Arab World, OECD, theory, applications.

Introduction

The new economics of migration of skilled labor has emerged following the contributions of Mountford (1997), Vidal (1998), Beine, Docquier and Rapoport (2003), Stark, Casarico, Devillanova, and Uebelmesser (2005) besides Schiff (2005) and others. According to Beine, Docquier and Rapoport (2001), the human capital migration can be globally beneficial to the country of origin when the brain effect dominates the drain effect for the country of emigration. Stark et al., (2005) point out to the fact that the prospect of migration may result in the formation of a socially desirable level of human capital. The expected higher returns to human capital in the destination country influence the decisions about the acquisition of skills in the country of origin (Stark et al. 2005).

The present paper looks at the emigration of students in relation to international offers and to the trends of international and delocalization of education in the Arab countries. This paper attempts to investigate the trends in the emigration of students in the Arab countries and seeks to identify the major determinants of this mobility in relation to the above theoretical and empirical studies. This paper is composed of a literature review, a theoretical model and an empirical part with movements of students analyzed in the context of Arab countries.

I. Literature Review

Several reports and publications have been devoted to the migration of students. These contributions cover cases of sending countries but also destinations. They cover the period 2000-2010. Hawthorne (2008) considers that this type of migration is large and growing in developed economies. The author focuses on the benefits implied by international students to destination countries. Besides the skills, they contribute to offset the demographic decline in the talented labor force. Kumar and Kumar (2010) do also emphasize the competition taking place among OECD countries to attract talented post-secondary students. The authors underline the increasing role played by Brazil, Russia, India and China (BRIC) in also

attracting international students, increasing thus, the level of competitiveness for students from developing economies. There also different publications by the International Labor Organization (ILO) that focuses on similar issues (Khadria, 2002). King and Findlay (2010) deal with the case of United Kingdom (UK) where the imbalance between UK students abroad and the international students in the UK. A well documented report discusses the case of international students in Belgium (Caestecker, 2012). From this report, Belgium has vastly increased the opportunities for students from developing economies at Belgian institutions of higher education in the last decade. But the author recognizes that only limited use has been made of these opportunities.

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 services, this article uses a different approach that analyzes student mobility as a form of migration.

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. 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.

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 relatively 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 allowing these universities to become the principal suppliers of gifted doctoral students for the U.S. scientific labor force.

But the most recent and complete paper is by Beine, Noël and Ragot (2012). The authors analyze 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 is used with the inclusion of costs. The suggested model is tested empirically using data of students from a large set of origin countries studying in 13 OECD countries. 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.

Finally, a more recent paper by Nour (2014) uses both descriptive and comparative approaches to provide an overview of migration of international students from the Middle East and North Africa and mobilization of skills in the MENA Region. This paper adds to the literature on migration of students and introduces a more comprehensive and updated analysis of migration of international students from the region. The findings support the hypothesis that the number of international students from this region has increased substantially over the past years. These results corroborate also the hypothesis that international students from the MENA region are concentrated in few countries.

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.

II. Theoretical Model

The model used in this paper is not that different from the one developed in Driouchi, Baudassé, Boboc and Zouag (2009). It is a modification of this latter but the basic features of this model are from Stark et al., (2005) and Driouchi et al. (2009).

In this model, each emigrant (given the static nature of the model) seeks a level of education h (considered as an individual investment in human capital) under the linear cost function ch with c being the unit cost of education. Furthermore, the level of education h is valued through a production function $g(h) = ah^\gamma$ (the output of human capital) where $0 < \gamma < 1$, $g'(h) > 0$, $g''(h) < 0$ and a is the talent of individuals.

Labor productivity in a given economy is represented by β . It is equivalent to private returns to labor, as in Stark et al. (2005). In the context of this model, β takes values β_S in the source and β_D in the destination countries. The private returns in the destination countries are considered to be higher than those in the sending countries ($\beta_D > \beta_S$). It is assumed here that emigration decisions are uniquely based on the levels of β that can be either β_D or β_S with respective probabilities m and $(1-m)$.

Each agent is consequently assumed to get (as a student) a level of education h (after graduation) based on the maximization of an objective function $V(h) = \beta_S g(h) - ch$ in the absence of emigration (closed economy) and his expected utility in case of emigration (open economy).

Under the above assumptions, each potential student is assumed to emigrate with probability m in order to achieve an overall net benefit in relation to the realization of the random variable β (β_D and β_S respectively with probabilities m and $(1-m)$).

This implies that the overall objective function in case of risk neutrality is given by the expected earnings related to this choice:

$$V(h) = m\beta_D g(h) + (1-m)\beta_S g(h) - ch \quad (1)$$

In case of risk aversion, a constant relative risk aversion (CRRA) function is used as:

$$U(x) = \frac{x^{1-r}}{1-r} \text{ or } U(x) = \frac{x^\alpha}{\alpha}, (\alpha \in]0, 1]), \text{ where } \alpha = 1-r \text{ and } r \text{ is the CRRA coefficient.}$$

Under the above assumptions, the objective function is formulated as:

$$V(h) = mU(\beta_D g(h)) + (1-m)U(\beta_S g(h)) - ch \text{ or:}$$

$$V(h) = \frac{m}{\alpha} \beta_D^\alpha a^\alpha h^{\gamma\alpha} + \frac{(1-m)}{\alpha} \beta_S^\alpha a^\alpha h^{\gamma\alpha} - ch \quad (2)$$

Given the concavity of $V(h)$, the necessary and sufficient condition for a maximum leads to the maximal level of education to be:

$$h^* = \left[\frac{c}{\gamma a^\alpha [m(\beta_D^\alpha - \beta_S^\alpha) + \beta_S^\alpha]} \right]^{\frac{1}{\gamma\alpha-1}} \quad (3)$$

The aggregate stock of skilled human capital in case of risk aversion under emigration is given by:

$$H_T = N \cdot h^* = N \left[\frac{c}{\gamma a^\alpha [m(\beta_D^\alpha - \beta_S^\alpha) + \beta_S^\alpha]} \right]^{\frac{1}{\gamma\alpha-1}}$$

where N is the total labor force in the economy.

The human capital remaining in the source economy, in case of emigration under risk aversion is given by:

$$H_R = (1-m)H_T \quad \text{Or:}$$

$$H_R = (1-m)N \left[\frac{c}{\gamma a^\alpha [m(\beta_D^\alpha - \beta_S^\alpha) + \beta_S^\alpha]} \right]^{\frac{1}{\gamma\alpha-1}} \quad (4)$$

$$H_{R0} = N \left[\frac{c}{\gamma a^\alpha [\beta_S^\alpha]} \right]^{\frac{1}{\gamma\alpha-1}}$$

$$H_R / H_{R0} = (1-m) \left[m((\beta_D^\alpha / \beta_S^\alpha) - 1) + 1 \right]^{(1/(1-\alpha\gamma))} \quad (5)$$

These equations are tested empirically after the introduction of a descriptive part.

III. Empirical Investigations

This empirical part introduces both a description of the major trends related to the mobility of students and a regression analysis based on the above theoretical model.

1. Descriptive Analysis:

The number of foreign students in different developed economies has been increasing over the period 2000-2009. A large share of these students is in OECD countries.

	Algeria				
Countries of Destination	2005	2006	2007	2008	2009
Belgium	328	323	227	240	318
Canada	0	1932	2499	2769.57	3766.35
France	22228	21641	20125	18780	19171
Germany	473.68	446.64	428.95	350.82	354.82
Italy	84	84	123	119	134

Spain	199	98	249	314	485
Switzerland	474	395	352	264	244
United Kingdom	1306	1159	1202	898	756
United States	149.35	136.68	148.2	179.19	169.17
Total Students in OECD	25395.03	26365.32	25476.15	24066.58	25586.34

On the basis of OECD data, it appears that the Algerians students in tertiary education go basically to France with respectively 22228, 21641, 20125, 18780, 19171 in 2005, 2006, 2007, 2008 and 2009 respectively.

Countries of Destination	Bahrain				
	2005	2006	2007	2008	2009
Australia	183	210	256	253	234
Canada	0	210	213	209.2	207.73
Ireland	23	23	18	34	128
New Zealand	32	36.94	58.26	102.66	152.6
United Kingdom	1849	1858	1812	1865	1870
United States	393.76	386.24	400.66	394.42	423.91
Total Students In OECD	2581.76	2794.18	2835.92	2954.28	3122.24

The total students coming from Bahrain to OECD Countries was 2582 in 2005 to attain 3122 students in 2009. The main destination of these students is the United Kingdom with 1870 in 2009, besides 1849 students in 2005, followed by the USA destination with a total number equivalent to 42 in 2009, and 394 in 2005.

Countries of Destination	Egypt				
	2005	2006	2007	2008	2009
Australia	85	109	121	149	160
Austria	94	98	107	138	178
Belgium	73	72	65	54	131
Canada	0	1404	1539	2127.45	2863.3
France	886	926	862	1032	1190
Germany	2157	1909	1940	2104	2342
Greece	40	123	166	168	0
Italy	170	216	305	392	469
Japan	234	216	250	288	312
Spain	72	79	100	81	170
Sweden	44	38	33	99	151
Switzerland	131	127	163	163	203
United Kingdom	1761	2079	2715	3059	3210
United States	1643.99	1562.56	1700.79	1767.89	1883.53
Total Students In OECD	7619.99	9181.56	10298.79	11904.15	13628.92

The Egyptian students in tertiary education choosing the OECD countries as a destinations are 13628 in 2009 and 7619 in 2005. The main destinations of the Egyptian students are the United Kingdom and Canada; in 2009 the total number of students going to these countries respectively is 3210 and 2863 in 2009 comparing to 2079 and 1404 students in 2006. Other destinations are as well targeted, basically Germany and the USA with a total number of 2342 and 1883 in 2009 comparing to 2157 and 1643.99 in 2005.

Countries of Destination	Iraq				
	2005	2006	2007	2008	2009
Australia	40	30	30	72	118
Canada	0	387	447	548.46	574.43
Denmark	171	220	238	228	258
France	199	192	202	197	200
Germany	811	897	989	888	936
Norway	190	219	232	189	185
Sweden	408	311	228	239	410
Turkey	209	236	246	267	293
United Kingdom	1193	1429	1677	2084	2336
United States	148.31	196.74	267.79	307.32	353.1
Total Students In OECD	3912.31	4694.74	5257.79	5753.17	6410.12

Iraqi students in OECD are raising, they were 6410 in 2009 and 3912 in 2005. The United Kingdom represents the main destination for these students with a total number in 2009 and 2005. Germany, Canada, Sweden and United States are targeted after the UK with an increasing flow; 936 in 2009 811 in 2005 for Germany, 574 in 2009 and 387 in 2005 for Canada, 410 in 2009 and 408 in 2005 for Sweden and 353 in 2009 and 148 in 2005 for the USA.

Countries of Destination	Jordan				
	2005	2006	2007	2008	2009
Australia	240	233	269	271	322
Canada	0	1092	1182	1300.76	1341.05
France	229	199	209	201	186
Germany	1524.77	1467.73	1358.55	1164.73	1296.58
Greece	65	242	237	229	0
Italy	144	146	159	0	144
Spain	52	96	106	99	124
Sweden	44	41	43	80	114
Turkey	167	166	185	202	171
United Kingdom	2736	2859	3232	2771	2871
United States	1832	1794.51	1764.16	1800.92	2188.44
Total Students In OECD	7346.77	8655.24	9067.69	8452.41	9166.18

Jordanian students are in a number of 9166 in 2009 and 7346 in 2005 in the OECD countries. The major destinations chosen by these students are United Kingdom, United States, Canada and Germany; where the total number was respectively 2871, 2188, 1341 and 1296 in 2009 however in 2006 it was respectively as well 2859, 1794, 1092 and 1467.

Countries of Destination	Kuwait				
	2005	2006	2007	2008	2009
Australia	147	191	232	240	264
Canada	0	381	420	525.87	496.55
Ireland	244	254	229	304	350
Slovak Republic	45	48	87	827	509
United Kingdom	1691	1865	2279	2472	3010
United States	1796.49	1763.45	1669.1	1824.95	1997.62
Total Students In OECD	4152.49	4701.45	5122.1	6391.62	6831.09

The Kuwaiti's students are present in OECD countries for higher education with a total number of 6831 in 2009 and 4152 in 2005. Main destinations of these students are United Kingdom, United States, Slovak Republic and Canada with a total number in 2009 for each country respectively equivalent to 3010, 1997, 509 and 496 besides 1865, 1763, 48 and 381 students in 2006.

Countries of Destination	Lebanon				
	2005	2006	2007	2008	2009
Australia	225	228	247	264	251
Belgium	154	120	117	135	184
Canada	0	2865	2523	2394.23	2654.71
France	4695	5083	5391	5609	5254
Germany	1630.28	1816.47	1955.11	1939.85	2076.58
Italy	590	626	649	702	783
Spain	68	63	75	70	104
Sweden	38	51	59	105	120
Switzerland	189	204	222	278	310
United Kingdom	1335	1415	1530	1299	1250
United States	2130.72	2019.22	1892.94	1808.93	1793.04
Total Students In OECD	11360	14844.69	14996.71	14971.42	15042.81

International students from Lebanon available in OECD are reaching the number of 15042 in 2009 and 11360 in 2005. Most attractive destinations for these students are France, Canada, Germany, United States and United Kingdom where the number of total students in each country is respectively equivalent to 5254, 2654, 2076, 1793 and 1250 in 2009 however in 2006 they were as follow: 5083, 2865, 1816, 2019 and 1415.

	Libya				
Countries of Destination	2005	2006	2007	2008	2009
Australia	54	57	64	76	114
Canada	0	411	411	648.77	567.33
France	246	223	228	235	245
Germany	496	539	479	411	407
United Kingdom	2837	2711	3667	3578	4613
United States	40.73	39.34	95.05	155.16	656.04
Total Students In OECD	4359.73	4520.34	5405.05	5549.93	6995.37

Libyan's students studying abroad mainly in OECD countries achieved in 2009 a total number of students equivalent to 6995 and was 4359 in 2005. The first destination of these students is United Kingdom with a flow of 4613 students in 2009 and 2837 in 2005. Other basic destinations for Libyan's students are United States where the number of students was 656 in 2009 and 40 in 2005, Canada; where the number of students was 567 in 2009 and 411 in 2006, and Germany was attracting a number of students of 407 in 2009 and 496 in 2005.

	Mauritania				
Countries of Destination	2005	2006	2007	2008	2009
Canada	0	141	123	104.24	179.66
France	978	1079	1128	1119	1222
Germany	404	427	409	356	340
Total Students In OECD	1639.57	1957.23	1914.41	1850.3	2012.69

Students coming from Mauritania to OECD countries for tertiary education were in a total of 2012 in 2009 and were 1639 in 2005. The first destination for these students remain France with a flow of 1222 in 2009 and in 2005 was equivalent to 978, the second destination is Germany; where the total number of students was 340 in 2009 and it was 404 in 2005.

	Morocco				
Countries of Destination	2005	2006	2007	2008	2009
Belgium	3687	3086	1783	1671	1813
Canada	0	5166	5421	5173.72	6067.32
France	29859	29299	27684	26998	27051
Germany	12785.54	13211.25	12463.99	10616.99	10396.51
Italy	776	813	1017	1207	1398
Netherlands	1448	1206	994	1178	1028
Spain	6064	6326	7110	7266	9167
Switzerland	857	773	715	659	669
United Kingdom	489	513	541	558	628
United States	1640.86	1555.31	1228.57	1133.21	1149.79
Total Students In OECD	57916.4	62275.56	59262.56	56825.92	59777.44

Moroccan students available in OECD countries for tertiary education are in a total number of 59777 in 2009 and they were in 2005 equivalent to 57916. Basic destinations for Moroccan students are France and Germany with a total number of students in 2009 respectively equivalent to 27051 and 10396, where they were 29859 and 12785 in 2005. After these principals destinations comes other ones such as Spain and Canada; the repartition of students was 29859 in 2009 and 6326 in 2006 students in Spain and for Canada they were equivalent to 12785 in 2009 and 5166 in 2006. More countries are attracting Moroccan's students mainly Belgium, Italy, Netherlands and United States, the flow of students in these countries is achieving respectively 1813, 1398, 1028 and 1149 in 2009 and in 2005 they were in a total number of 3687, 776, 1448 and 1640.

Countries of Destination	Oman				
	2005	2006	2007	2008	2009
Australia	479	491	559	522	546
Canada	0	300	279	347.75	315.14
New Zealand	98.74	201.6	245.28	306.14	313.46
United Kingdom	2200	2151	2512	3397	2352
United States	369.74	348.96	259.61	361.38	266.54
Total Students In OECD	3350.48	3633.56	4001.89	5074.27	3958.14

The Omani's students are choosing as well the OECD countries as destinations for the tertiary education; the total number of students was 3958 in 2009 3350 in 2005. The main destination of Omani's students is United Kingdom with a total numbers of student's equivalent to 2352 in 2009 and 2200 in 2005, followed by Australia, where the flow of students was 546 and in 2005 it was 479.

Countries of Destination	Qatar				
	2005	2006	2007	2008	2009
Australia	149	169	167	122	117
Canada	0	132	141	113.16	110.36
United Kingdom	906	896	1078	1283	1737
United States	302.89	263.01	302.54	345.36	455.39
Total Students In OECD	1463.89	1554.01	1814.54	1994.52	2507.75

Students coming from Qatar to OECD destination for tertiary education are reaching a number of students of 2507 in 2009 and they were 1463 in 2005. The basic destination of Qatari's students is United Kingdom, where the number of students was of 1737 in 2009 and 906 in 2005, followed by the United States with a flow of students' equivalent to 455 in 2009 and 302 in 2005.

Countries of Destination	Saudi Arabia				
	2005	2006	2007	2008	2009
Australia	439	782	1244	1929	3676
Canada	0	1734	1602	2140.55	2587.24
France	127	100	208	263	403
Germany	145	172	189	184	238
Hungary	4	5	8	15	102
Ireland	24	23	21	56	118
New Zealand	106	163.76	213.72	334.56	739.2
Slovak Republic	28	24	36	94	170
United Kingdom	4525	5213	6265	7032	10280
United States	3169.97	3570.39	8060.36	9883.58	12452.97
Total Students In OECD	8740.97	11990.15	18062.08	22196.69	31180.41

Saudi Arabia export a good number of students to OECD Countries for tertiary education, they were 31180 in 2009 besides 8740 in 2005. Main Destination of Saudi's students are United States and United Kingdom, where the total number of students in these two countries is respectively as follow 12452 and 10280 in 2009 besides 3169 and 4525 in 2005.

Countries of Destination	Sudan				
	2005	2006	2007	2008	2009
Canada	0	354	306	433.17	406.43
Germany	760	672	620	535	496
Sweden	44	63	60	98	137
United Kingdom	1224	1158	1252	1239	1288
United States	302.89	319.96	328.09	224.24	213.43
Total Students In OECD	2855.89	3091.96	3097.09	3050.4	3083.11

Students from Sudan choosing to study in OECD countries are representing a number of 3083 in 2009 and 2855 in 2005. The main destination of these students is United Kingdom with a number of 1288 in 2009 and 1224 in 2005. Other destinations are as well targeted they are Germany, Canada, United States and Sweden; where the total number migrating for study is equivalent respectively to 496, 406, 213 and 137, and for the year 2006 they were as follow 672, 354, 319 and 63.

Countries of Destination	Syria				
	2005	2006	2007	2008	2009
Canada	0	462	525	582.39	639.54
France	2323	2517	2618	2334	2252
Germany	2536.41	3130.55	3458.51	3548.6	3944.47
Greece	143	283	309	316	0

Italy	92	119	105	98	127
Spain	145	159	208	190	261
Turkey	291	279	264	260	291
United Kingdom	1119	1128	1340	1276	1292
United States	520.14	461.83	472.21	517.55	446.54
Total Students In OECD	7625.55	9018.38	9801.72	9657.54	9899.41

Syrian Students going to OECD countries for tertiary education were 9899 students in 2009 and 7625 in 2005. The main destination for them is Germany with total number of student's equivalent to 3944 in 2009 and 2536 in 2005; this destination is followed by France, the total number of students in this country was 2252 in 2009 and 2323 in 2005. United Kingdom comes in the third rank, where the flow attained 1292 students in 2009 and 1119 in 2005. Far destinations are as well receiving Syrian's students such as Canada and United States with total number of student respectively in each country as follow 639 and 446 in 2009 and 462 and 461 in 2006.

Countries of Destination	Tunisia				
	2005	2006	2007	2008	2009
Belgium	186	239	181	201	265
Canada	0	2316	2346	1890.48	2427.76
France	9750	10386	10533	10812	11177
Germany	3947.19	4649.25	5122.29	5171.51	5520.39
Italy	252	302	493	611	834
Spain	50	71	90	76	167
Switzerland	583	630	681	637	701
United Kingdom	160	169	219	213	220
United States	279.91	286.83	280.05	402.43	300.97
Total Students In OECD	15403.1	19242.08	20193.34	20269.42	21877.12

Tunisian's students are well available in OECD countries with the total number of 21877 in 2009 and 15403 in 2005. The main destination of Tunisian students is France where a number of 11177 students in 2009 and 9750 in 2005 is found, after this destination comes Germany and Canada this two countries received respectively in 2009; 5520 and 2427 students and in 2006 they received 4649 and 2316 students.

Countries of Destination	UAE				
	2005	2006	2007	2008	2009
Australia	944	1002	1120	1184	1342
Canada	0	513	837	521.45	520.03
France	40	70	78	166	194

Germany	99	95	157	108	93
Ireland	134	85	132	176	242
United Kingdom	2693	3033	3220	3379	3889
United States	1209.49	1012.71	904.56	984.05	1197.98
Total Students In OECD	5266.49	5951.13	6604.44	6679.58	7676.79

Students coming from the UAE to OECD for tertiary education are representing a number of 7676 in 2009 and 266 in 2005. The main destination of Emirati's students is United Kingdom with the total number of student's equivalent to 3889 in 2009 and in 2005 it was 2693. Australia and United States are located in the second and third place as countries of destinations with the total number of students' equivalent respectively to 1342 and 1197 in 2009 and 944 and 1209 in 2005.

Countries of Destination	Yemen				
	2005	2006	2007	2008	2009
Canada	0	201	195	318.12	324.1
Germany	432	540	676	787	946
United Kingdom	535	452	508	483	455
United States	248.58	254.73	253.48	233.24	244.9
Total Students In OECD	1446.58	1687.73	1850.48	2083.36	2281

The total number of students in OECD from Yemen was in 2009; 2281 persons and in 2005 they were 1446. Basic destinations of these students are Germany in the first rank with 946 in 2009 and 432 in 2005, in the second rank it is United Kingdom with 455 students in 2009 and 535 in 2005, followed by Canada in the third rank with 324 students in 2009 and 201 in 2006, and in the fourth rank it is United States with the total number of Yamani's students equivalent to 244 in 2009 and 248 in 2005.

2. Trends of migrating students from Arab countries

The table below shows the annual flows of students from different Arab Countries. These data are obtained from UNESCO (UIS estimations).

The estimated annual trends are shown in the following table where only Morocco and Sudan exhibit constant flow yearly while they have relatively large numbers of students that are in foreign universities. The other countries show increasing trends of those studying abroad.

Country	R ²	Intercept	Trend
Algeria	0.626	15909.36 (12.49)	801.51 (4.09)
Bahrain	0.976	1201.37 (16.97)	220.52 (20.22)
Egypt	0.810	5804.28	328.96

		(17.74)	(6.53)
Iraq	0.697	1910.08 (3.37)	418.46 (4.79)
Jordan	0.803	7713.77 (40.04)	189.43 (6.39)
Kuwait	0.851	8680.58 (36.90)	273.60 (7.55)
Lebanon	0.866	7491.45 (15.46)	599.32 (8.03)
Libya	0.891	1211.12 (5.52)	305.27 (9.03)
Mauritania	0.962	1432.12 (22.71)	153.78 (15.84)
Morocco	0.009	43634.50 (13.42)	152.22 (0.30)
Palestine	0.914	5020.30 (16.36)	488.56 (10.34)
Oman	0.769	3188.76 (12.31)	229.77 (5.76)
Qatar	0.895	812.01 (9.37)	123.16 (9.23)
Saudi Arabia	0.710	6202.35 (2.98)	1585.06 (4.95)
Sudan	0.077	3017.95 (14.56)	29.11 (0.91)
Syria	0.968	7946.33 (31.34)	677.20 (17.34)
Tunisia	0.985	8655.33 (36.30)	937.23 (25.52)
UAE	0.904	3505.72 (16.56)	316.99 (9.72)
Yemen	0.959	3667.32 (18.73)	459.69 (15.25)

3. Regression Analysis

The above descriptive statistics are here completed with a regression model that investigates the main drivers of the mobility of students from Arab countries to foreign universities of developed economies. Based on the data available data on education expenditures, GDP and relative wages (domestic versus foreign) in each country using world Bank data besides country risks as given by Euromonitor (June, 2012), emigration rates of students is used as dependent variable. The outputs show that relative wages are the most important drivers of the demand for studying abroad.

These outputs are given in the following table where a total sample including both Arab and Eastern European Economies (EEE) is used. The respective statistics for each regression are

as indicated. The results show that each set of countries has migration rates responding statistically and significantly to the relative wages only. Similar results are shown with the total sample. But, the F-test does not show a statistically significant difference between the three estimated models (Arab, EEE and total).

Drivers of the mobility of students

	constant	Log w	Logrisk	R ²	SSR	Observations
Arab countries	-2.241 (-4.419)	-0.921 (-2.118)	-0.061 (-0.307)	0.246	11.747	16
EEE countries	1.657 (1.075)	-5.377 (-3.178)	0.032 (0.146)	0.449	4.749	16
Total	-2.182 (-5.780)	-1.304 (-2.869)	-0.097 (-0.670)	0.221	18.897	32
F test (2, 18)	2.040					
Critical F (at 5% SL)	3.340					

Discussion

The results attained so far show that students at different stages of their schooling, do have possibilities of joining higher education abroad or in international universities that are progressively locating in the Arab World. While this is a trend that contributes to enlarging the choice set among the potential segments of the skilled population, this also creates opportunities for skills to be developed outside the countries of origin. Local unemployment and risks in the country of origin could be among the reasons accelerating these trends related to the mobility of students. The expected wages in future jobs seem to be behind the development of such a trend.

Conclusion

This paper has provided background information on both migration of students and internationalization of education with focus on Arab countries. The paper has shown the prevalence of an important trend in the migration of students originating from Arab countries. Even with limited data, the empirical assessment undertaken based on the theoretical model suggested shows the attractiveness of “studying abroad” through the future benefits expected after graduation. But, is the delocalization of international universities in the countries of

origin of the mobility of students, going to change the pattern of motivation and attractiveness? More data are needed to capture the complexities taking place in the area of higher education and international migration of students. This paper 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.

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