



Emerging Demographic Patterns across the Mediterranean and their Implications for Migration through 2030

Philippe Fargues

**Center for Migration and Refugee Studies, the American University in Cairo
Robert Schuman Centre for Advanced Studies, European University Institute,
Florence**

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I. Executive Summary

The Middle East and Northern Africa (MENA) and Europe appear to be an ideal demographic match: the former has a large supply of young, active workers, and the latter has a shortage of the youthful, skilled or unskilled labor it needs to sustain its economic competitiveness. MENA is the source of 20 million first-generation migrants, half of them now living in another MENA country and most of the rest in Europe. The region also hosts around the same number within its borders.¹ In addition, the size of MENA's working-age population will continue to rise sharply in the next two decades while the corresponding segment of the population in Europe will soon start to decline.

The sizeable labor shortages that will affect Europe could be mitigated by migration from the MENA region, whose population is exceptionally young and mobile, more educated, and less fettered by family responsibilities than preceding generations. However, while we can forecast future changes in population size with relative accuracy, it is a much greater challenge to predict the conditions under which migration will occur.

Four triggers could lead to emigration from MENA. First, MENA's "youth bulge" might boost domestic economic growth since most MENA countries have a large enough working-age population to support the nonworking, older population. Second, young workers, particularly the well-educated, face poor employment conditions at home in part due to failed economic policies. Third, population density is growing to untenable levels in several MENA countries, and pressure on freshwater reserves will exacerbate this problem. Finally, unresolved conflicts may continue to cause migration within and from the region.

MENA's economic and demographic circumstances, combined with its location, make it a promising source of flows to Europe, particularly circular-migration flows that are temporary and comanaged. But the level of migration from MENA to Europe will depend on how these factors combine with social and economic development in the region.

II. Introduction

Europe has a deficit of young, educated workers while the Middle East and North Africa (MENA) — a region that spans 21 countries, all but three Arabic-speaking — is developing a surplus (see Sidebar). Europe's aging population and below-replacement fertility are demographic challenges the continent will face in the next two decades. The future prosperity and economic vitality of European nations will increasingly depend on their ability to identify and recruit sources of skilled and needed labor from other parts of the world. MENA is the developing region closest to Europe, and it has a booming population and an abundant supply of workers. At first sight it appears obvious that MENA will play a pivotal role in Europe's competition for skilled workers.

¹ Philippe Fargues, "International migration in the Arab region: trends and policies" (United Nations Expert Group Meeting on International Migration and Development in the Arab Region, Beirut, May 2006), 35, http://www.un.org/esa/population/publications/EGM_Ittmig_Arab/P09_Fargues.pdf.

However, the stark contrast between an aging population in Europe² and a persistently youthful one in the MENA region is not by itself a reliable predictor of migration. Demographic realities must be combined with an understanding of political and social trends and an assessment of the policy architecture in place to paint a full picture of likely migration flows. The 27 countries of the European Union (EU-27) are not the sole destination for MENA migrants. The EU-27 must compete with the MENA region itself, in particular the prosperous Arab countries bordering the Persian Gulf, as it attempts to attract workers.

Furthermore, forecasting future migration patterns is not synonymous with projecting population changes. Unlike the classic building blocks of demography — population, mortality, and fertility — migration is not a phenomenon that can be neatly subdivided into proximate and remote determinants that accurately predict future flows. Population trends and structures, particularly the number of working-age people in a given country, can be projected with satisfactory accuracy from now until 2030.

Migration flows cannot be forecast with equivalent accuracy.³

Although we cannot predict migration flows with certainty, this paper seeks to forecast the characteristics and magnitude of the *likely* flows from the MENA region to the EU-27 through 2030, looking specifically at the political, demographic, and environmental factors that will shape them. We will begin with an overview of past and current demographic and migration patterns to set the stage for an analysis of which economic, environmental, and political factors are likely to trigger future migration. The conclusion will speculate on how policymakers can capitalize on likely demographic developments.

MENA Geography: A Guide

Middle East and North Africa (MENA):

Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestinian territories (the West Bank and Gaza Strip), Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates, and Yemen.

Note: Turkey is also included in this paper as it shares a border and many demographic patterns, including migration, with MENA.

Within MENA

Maghreb (Western Arab states): Algeria, Libya, Mauritania, Morocco, and Tunisia

Machrek (Eastern Arab states): Egypt, Iraq, Jordan, Lebanon, the Palestinian territories, and Syria

Southern and Eastern Mediterranean (SEM):

Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestinian territories, Syria, Tunisia, and Turkey

Gulf Cooperation Council (GCC) countries:

Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates

² For the purposes of this paper, “Europe” refers to the 27 current Member States of the European Union: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.

³ The conditions that will actually spur migration depend on economic, political, and social circumstances that no social scientist knows how to project. We would be required “to know the unknowable: how people of diverse countries and their governments will respond to future experiences with international migration.” See Michael Teitelbaum, “International Migration: Predicting the Unknowable,” in *Demography and National Security*, eds. Myron Weiner and Sharon Stanton Russell (New York: Berghahn Books, 2001), 35.

II. Demographic Changes in the MENA Region

Three key demographic trends in the MENA region have the potential to affect migration patterns: the surge of youthful workers entering the labor market, the change in the gender balance of workers, and higher levels of educational attainment in the working-age population.

The MENA Youth Bulge: A Growing Supply of Young Workers

Until recently, high fertility rates and rapid population growth constituted the biggest demographic challenge facing MENA. During the 1980s, policymakers attempted to curb runaway population growth by encouraging birth control and promoting family-planning programs,⁴ which were effective in stabilizing, and even decreasing, the number of annual births. This transition from a period of high to low fertility has altered the age structure of the population, creating a “youth bulge” of 96 million people between ages 20 and 29 in 2010, and an estimated 104 million in 2030. This means that the composition of the largest generation has changed from newborn infants to the young adults born 20 to 25 years ago. Consequently, the largest generation ever born in the MENA region is now entering the workforce.⁵

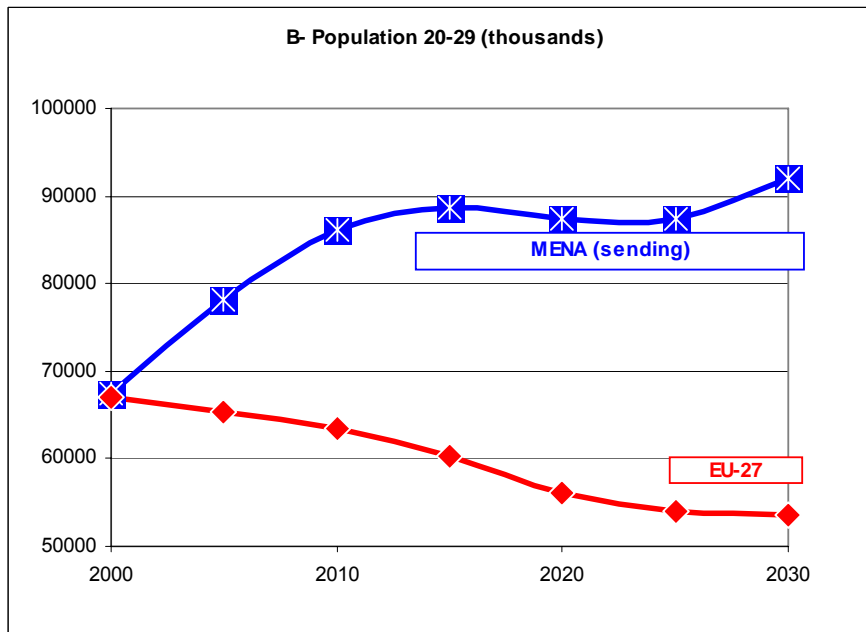
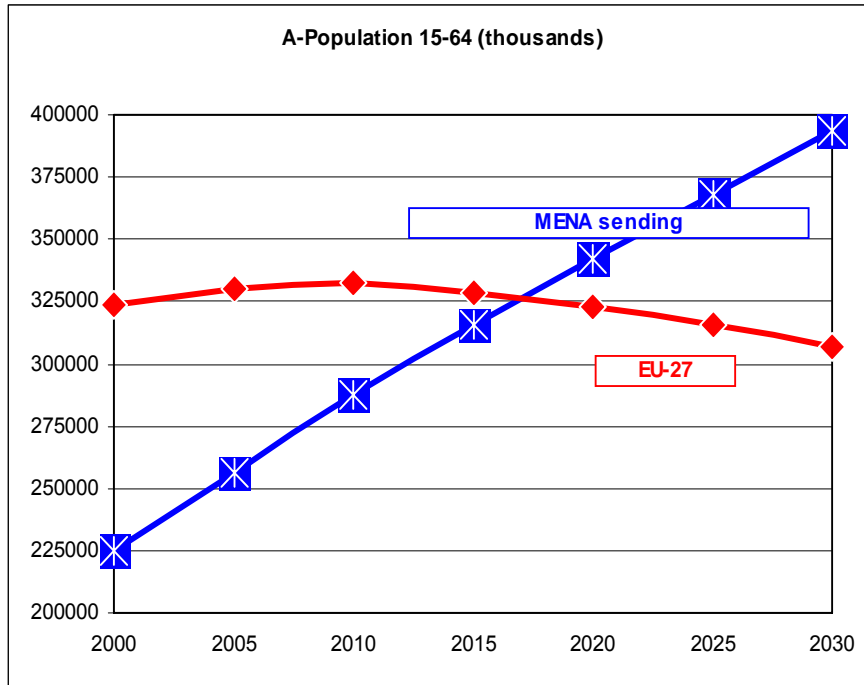
Until at least 2030 in MENA, the generation reaching working age will be much larger than that reaching retirement age. Even though the number of new additions to the labor market has stagnated and will even slightly decrease between 2015 and 2025, the size of the total working-age population will continue to rise sharply during the next two decades compared to the EU-27 (see Figure 1). Europe will be subject to the opposite trend, as its total working-age population will start to shrink in 2010 while the numbers of new entrants to the labor market will steadily decline over the next 20 years due to low fertility in the last decades (see Table 1 and Figure 2).

The huge increase in MENA’s working-age population (those ages 15 to 64) has created a new policy challenge for MENA governments, which do not have the resources to accommodate the volume entering the labor market. Without the means to earn an income and thus the ability to contribute productively to society, these young adults may become a pool of discontent, social protest, and political unrest.

⁴ All MENA governments adopted these policies, with the exception of the gulf countries, whose leaders still encourage population growth as a means of addressing labor needs.

⁵ When the fertility transition starts, i.e. historically high birth rates begin to decline, we can expect to see decreasing numbers of new entrants in the labor market around 20 years later or, in other words, rising numbers until then. In the MENA region, numbers of new entrants in the labor market are expected to peak somewhere between 2005 and 2030 depending on when fertility started to decline (see Appendix 1).

Figure I. The Working-Age Population in the MENA* Region and the EU-27, 2000 to 2030



*MENA (currently) predominantly sending countries: all MENA countries except Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, the United Arab Emirates, and Libya.

Source: United Nations Population Division (UNPD), "World Population Prospects: the 2006 Revision Population Database" (online database, September 2007), <http://esa.un.org/unpp/>.

Table I. The Demographic Dynamics of MENA and EU Labor Markets, 2005 to 2030

Year	MENA		EU-27	
	Numbers	Change (t,t+5)	Numbers	Change (t,t+5)
Total working-age population (ages 15 to 64) in thousands				
2005	286,836	+ 35,587	330,137	+ 2,227
2010	322,423	+ 32,029	332,364	- 3,934
2015	354,452	+ 30,196	328,430	- 5,598
2020	384,648	+ 30,048	322,832	- 7,032
2025	414,696	+ 28,458	315,800	- 9,329
2030	443,154		306,471	
Total 2005 to 2030		+ 156,318		- 23,666
Annual numbers of new entrants (age 25) in thousands				
2005	8,744	+ 818	6,533	- 185
2010	9,562	+ 293	6,348	-3 26
2015	9,855	- 85	6,022	- 417
2020	9,770	+51	5,605	- 216
2025	9,821	+ 530	5,389	- 25
2030	10,351		5,364	
Average 2005 to 2030	9,684	+ 321	5,877	- 234

Source: UNPD, "World Population Prospects."

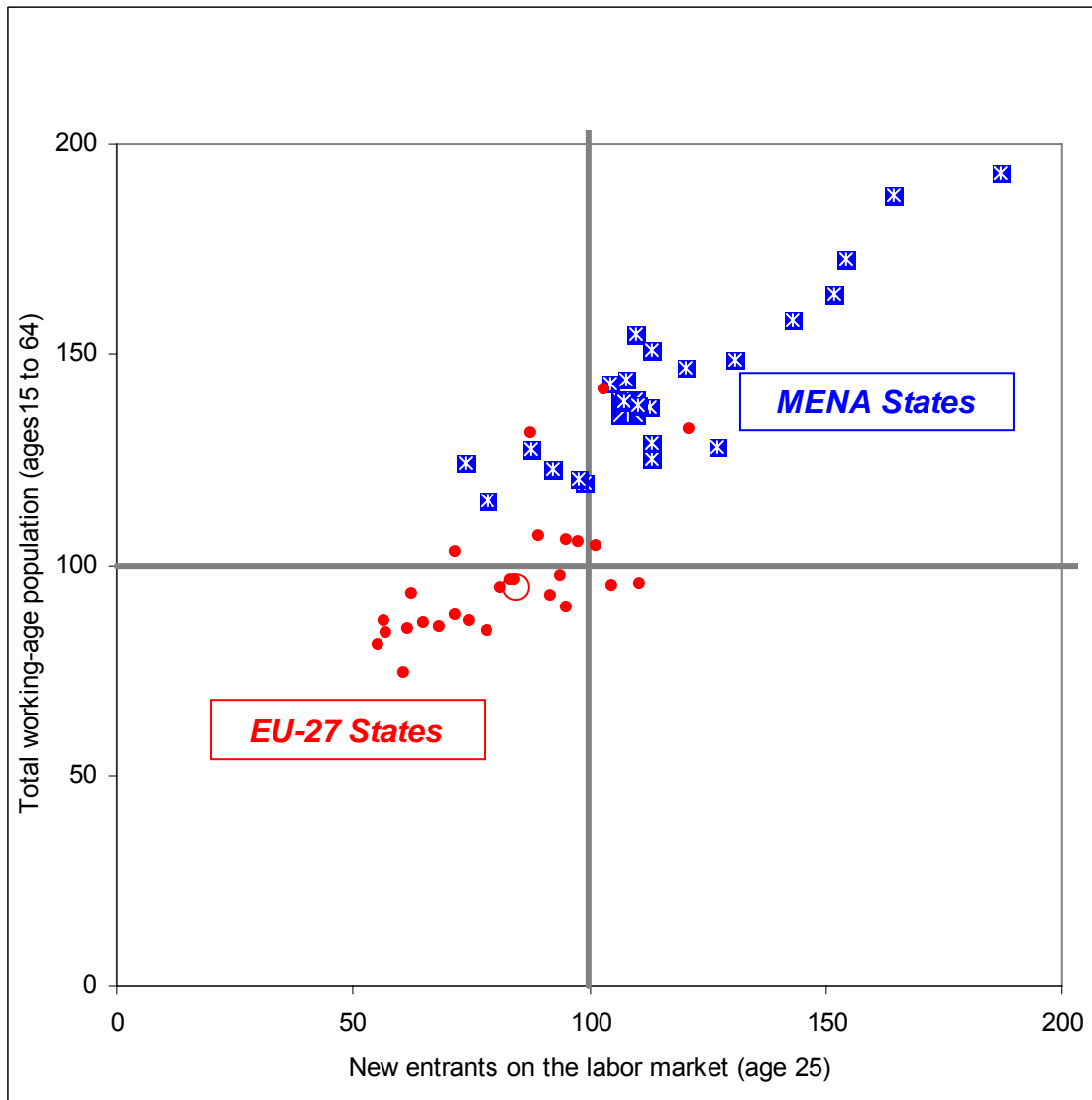
The Role of Women in the Labor Market and Educational Attainment

The changing age structure of the MENA population is not the only demographic development that will affect the labor market in the next two decades. While the youth bulge presents the most obvious challenge, the recent drop in birth rates has also strained the labor market. This drop is linked to two corollary trends — increased female employment and expanded educational opportunities — that have sharpened the competition for employment, primarily because they have fundamentally altered the role of women and education in society.

In the past, high fertility was linked with early marriage and low participation of women in economic activities, particularly outside the household. As total fertility rates decreased from 7.0 children per woman in 1960 to 2.9 in 2008,⁶ women in MENA countries became more likely to delay marriage and join the workforce, a trend particularly significant in the MENA region, which has the world's lowest rate of female participation in the workforce. One result of increased female participation will be a period when the demand for jobs exceeds the supply.

⁶ United Nations Population Division (UNPD), "World Population Prospects: the 2006 Revision Population Database" (online database, September 2007), <http://esa.un.org/unpp/>.

Figure 2. New Entrants on the Labor Market and Total Working-Age Population, Relative Change 2000 to 2030



Note: Base is 100 in the year 2000.
 Source: UNPD, "World Population Prospects."

More people in MENA have access to formal education because families and governments invested enormously in education during the last decades.⁷ Despite the insufficient quality of the expanded educational offerings and mismatches between education and employment,⁸ education has boosted human capital in the region.⁹

⁷ Estimates of the amount spent by families on education in MENA are not available.

⁸ United Nations Development Program, *Arab Human Development Report 2003, Building a Knowledge Society* (New York: UNDP/RBAS, 2003), http://hdr.undp.org/en/reports/regionalreports/arabstates/Arab_States_2003_en.pdf.

⁹ Human-capital measurements for any MENA country or the region are not available.

However, new workers face a labor market that cannot accommodate them all. While current population growth rates are 1.7 percent per year for the total population, they are as high as 3 percent for the working-age population; 4 to 5 percent for the actual demand for labor (in which a growing proportion of women must be included); and 6 to 8 percent for the quantity of human capital (measured as the aggregate number of years spent at school among those entering the labor market minus that number among those leaving the workforce).¹⁰ In addition, older workers leaving the labor market through retirement or death are vacating jobs not suited to the educational profile of the new working population.

Key Demographic Trends: Conclusions and Implications

To summarize, MENA labor markets are currently faced with unprecedented rates of growth, but it is not clear there will be enough jobs of sufficient quality to satisfy the new generation of workers.

The question for MENA policymakers is whether part of the region's labor can be exported to fill the needs of Europe's aging population and declining workforce. This solution could potentially mitigate the demographic problems in both MENA and the EU-27. At first glance, the two trends are not of the same magnitude. From 2005 to 2030, the total working-age population in the MENA region is expected to increase by 156.3 million while the EU-27 population will decrease by 23.7 million.

However, if one considers only new entrants to the labor market¹¹ as potential migrants, surpluses in the MENA region and shortages in the EU-27 are much closer in size. From 2005 to 2030, the number of individuals reaching their 25th birthday will increase by 321,000 per year in MENA and decrease by 233,000 in the EU-27. From a quantitative point of view, it seems that migration could help alleviate future demographic imbalances in the two regions.¹²

III. Where We Are Now: Migration in the MENA Region

MENA countries as a whole are home to just as many first-generation international immigrants as emigrants — around 20 million of each (see Table 2).¹³ Although no reliable estimate of flows can be provided for the MENA region, this section will examine baseline migration flows, addressing both volume and type, and look closely at where potential migrants are located and where they are likely to go in the next two decades.

¹⁰ Author's calculation based on data from the International Labor Organization's Bureau of Statistics.

¹¹ Schematically equated to the 25-year-old population in Table 1 and Figure 1.

¹² One should note that were Turkey to be admitted to the European Union, its younger and faster growing population would curb the decrease in the young active population on an aggregate EU level but have no impact on the demography of individual Member States. In this respect, enlargement is not a substitute for migration.

¹³ Philippe Fargues, "International migration in the Arab region."

Table 2. Migrants Originating from Selected MENA Countries by Region of Residence				
Country of origin (year for data)	Region of residence			
	Europe	MENA	Other	Total
Algeria (1995)	991,796	66,398	14,052	1,072,246
Mauritania (2004)	26,000	31,000	193,000	250,000
Morocco (2005)	2,718,711	213,034	253,641	3,185,386
Tunisia (2005)	779,200	128,900	25,800	933,900
Egypt (2000)	286,000	1,912,729	538,000	2,736,729
Lebanon (2001)	157,030	123,966	325,816	606,812
Iraq (2007)	150,000	2,000,000	150,000	2,300,000
Yemen (1999)	n/a	810,000	n/a	1,000,000
Iran	n/a	n/a	n/a	750,000 to 1,500,000
Palestinian territories 2004**	n/a	4,435,273	n/a	4,983,354
Total	5,108,737	9,721,300	1,500,309	18,1093,427

*First-generation migrants. No estimates based upon solid records were found for Jordan, Sudan, and Syria.

**Palestinian refugees; most of them are not first-generation but second- or third-generation migrants.

Sources: Consular records and other national sources compiled in Fargues, Philippe, "International Migration in the Arab Region: Trends and Policies" (United Nations Expert Group Meeting on International Migration and Development in the Arab Region, Beirut May 2006, 35 p.),

http://www.un.org/esa/population/publications/EGM_Iitmig_Arab/P09_Fargues.pdf

Emigration from MENA Countries: Changing Patterns

All MENA countries, except for the Gulf Cooperation Council (GCC) countries and Libya, are both origin and destination countries for international migrants. This represents a marked shift from the 1960-1990 period, during which the MENA region was sharply divided between destination countries, namely the capital-rich, oil-producing states in the gulf and Libya, and migrant-origin countries, the rest of the region.¹⁴ This distinction based on economies no longer works. Today, nearly all MENA countries produce oil,¹⁵ but this does not imply that they have created enough jobs to employ nationals. In fact, even large oil-producing countries, including Saudi Arabia and Kuwait, are now faced with domestic unemployment. Countries like Morocco and Egypt, which are not large oil producers, have become unwilling recipients of migrants while remaining major origin countries.¹⁶ In the section about Southern and Eastern Mediterranean (SEM) countries, we will discuss the origins of these migrants and their reasons for migrating.

After slowing down in the 1990s, emigration from Arab countries regained momentum in the early part of this decade. The 20 million migrants from MENA countries represent about 5 percent of the

¹⁴ Algeria, Iraq, and Iran were both oil and labor exporters between 1960 and 1990.

¹⁵ Except Morocco, Jordan, Lebanon, and the Palestinian territories.

¹⁶ This paper is limited to emigration from MENA countries and will touch immigration to, or through, these countries only to the extent as it affects the former. It will not deal with gulf states and Libya except for the purpose of comparing them with the West.

region's total population. Four source countries have more than 2 million first-generation emigrants each: Turkey, Morocco, Iraq, and Egypt. Next are Iran, Algeria, Yemen, and Sudan, with 1 to 2 million emigrants, followed by Tunisia and Lebanon with 500,000 to 1 million emigrants.

Migration from Morocco has increased at an annual rate of 6.0 percent, which is almost quadruple the annual growth rate of Morocco's population (1.4 percent).¹⁷ Other Arab countries, such as Lebanon, Egypt, Tunisia, and Algeria, have also experienced an upsurge in emigration, in particular to Southern Europe. In Spain, the number of Arab nationals nearly quintupled between 1998 and 2006, representing an annual growth rate of 21.9 percent. By contrast, emigration from Turkey and Iran has continuously decreased as a result of economic successes in Turkey and political stabilization in Iran.

Where Do the Migrants Go?

Those originating from the Maghreb and Turkey are found mainly in Europe, whereas those from the Machrek and Iran tend to reside in other MENA countries (where Asian migrants have outnumbered them) or in North America. To a certain extent, gulf states and the West compete for Eastern Arab migrants.¹⁸ In Machrek countries, the popular as well as the administrative terminology classifies migration to the gulf states and Libya as "temporary" whereas emigration to the West is classified as "permanent." However, no solid empirical evidence supports this division. Like the West, oil-producing states host both short- and long-term migrants, including second-generation migrants.

Immigration into Southern and Eastern Mediterranean Countries

Southern and Eastern Mediterranean countries (SEM) that used to exclusively send migrants have turned into receivers of migrants over the last decade. Three groups account for the majority of flows into the SEM region. The first is labor migrants who are attracted to the employment opportunities — both legal and illegal — in SEM labor markets. Their numbers are rising because of the widening economic disparities between SEM countries and their less-developed neighbors in sub-Saharan Africa and Central and Southern Asia. The second category is refugees who come from other MENA countries, namely Iraq and Sudan, as well as sub-Saharan Africa (mainly Somalia, the Democratic Republic of the Congo, and Eritrea) due to conflicts in their countries of origin. The last category is transit migrants who are delayed on their way to their intended destination — usually Europe or the gulf states — because they lack the appropriate visa. Refugees and transit migrants are "stuck" in the region against their will. Local governments generally do not want to integrate them because they strain resources, compete with natives for jobs, and are sometimes seen as a threat to security.

¹⁷ The rise of Moroccan emigration in recent years is reflected in the increase in numbers registering with their consulates: 92,195 per year from 1993 to 1997 (an annual growth rate of 5.4 percent); 132,804 per year from 1997 to 2002 (an annual growth rate of 5.9 percent); and 201,107 per year from 2002 to 2005 (an annual growth rate of 7.0 percent). From 1993 to 2005, the number of Moroccans registered with their consulates abroad doubled, increasing from 1.5 million to 3.2 million.

¹⁸ This is also true of Turkish migrants, whose preferred destinations have become the gulf states and Russia. See Ahmet Icduygu, "Turkey, the demographic dimension of international migration," in *Mediterranean Migration Report 2007* (Italy: European University Institute, 2007), 305-314, <http://www.eui.eu/RSCAS/e-texts/CARIM-AR2007.pdf>.

Since SEM is the part of MENA closest to Europe, one might be tempted to assume that transit migration plays a pivotal role in the region. However, of the total 5.6 million immigrants in SEM, 4 million are labor migrants employed in local labor markets (nearly equally split between legal and unauthorized workers). Another 1.5 million are non-Palestinian refugees (the majority lacking regular permits of stay), and 100,000 are transit migrants mostly trying to reach Europe (see Table 3). Reliable data on these migrants — their education levels, skills, ages, and gender, to name a few — are difficult to track down since they are in countries where statistics are lacking.

Table 3. Legal and Illegal Immigrants in Southern and Eastern Mediterranean Countries, Early 2000s

Country	Legal immigrants ¹	Illegal immigrants ²				Ratio illegal/legal (minimum)
		Labor	Refugees ³	Transit	Minimum total	
Algeria ⁴	80,238	Tens of thousands	95,121	Tens of thousands	≥ 10,000	0.1
Egypt	115,589	Tens to hundreds of thousands	104,390	n.a.	≥ 100,000	0.9
Israel	189,000	100,000	1,700	n.a.	≥ 100,000	0.5
Jordan	392,273	100,000 or more	519,477	n.a.	≥ 600,000	1.5
Lebanon	302,315	400,000 to 500,000	22,743	n.a.	≥ 400,000	1.3
Libya	449,065	1.0 to 1.2 million	4,754	Tens of thousands	≥ 1,000,000	2.2
Mauritania	48,000	Few thousands	861	Tens of thousands	≥ 10,000	0.2
Morocco	62,348	Thousands to tens of thousands	1,878	Tens of thousands	≥ 10,000	0.2
Palestinian territories		422,000	0	n.a.	≥ 422,000	n.a.
Syria	55,000	Thousands to tens of thousands	707,422	n.a.	≥ 700,000	12.7
Tunisia	35,192	Thousands to tens of thousands	161	n.a.	≥ 10,000	0.3
Turkey	272,943	Hundreds of thousands	8,852	Tens of thousands	≥ 300,000	1.1
Total SEM	2,001,963	2 to 3 million	1,467,359	≥100,000	≥ 3,662,000	1.8

¹ Noncitizens or born-abroad residents according to most recent official records (census, survey or residency statistics). See Philippe Fargues, ed., "Appendix Table 7," in *Mediterranean Migration Report 2006-2007* (Italy: European University Institute, 2007), <http://www.eui.eu/RSCAS/e-texts/CARIM-AR2007.pdf>.

² Various academic sources for labor migrants and United Nations High Commissioner for Refugees (UNHCR) for refugees.

³ United Nations Relief and Works Agency (UNRWA) Palestinian refugees are not included because most of them are not migrants.

⁴ In Algeria, Sahrawi refugees are included in the residing population; most of them are not migrants.

Source: Philippe Fargues, *Work, Refuge and Transit: An Emerging Pattern of Irregular Immigration South and East of the Mediterranean*, forthcoming.

In short, illegal migration is twice as common as legal migration,¹⁹ and the vast majority of migrants are attracted to local labor markets, not to those in Europe. Most of the refugees, who make up the next-largest category, are arguably expecting to return to their home countries once they become safer. SEM is not simply a waiting room for illegal passage to Europe, but a destination in its own right.

While different factors motivate unauthorized workers, refugees, and transit migrants, these groups have similar experiences. They have limited legal access to labor, welfare, and state protection, and they subsist rather than prosper. SEM governments, faced with massive illegal migration, have responded with policies that separate or exclude, but rarely integrate, immigrants. As a result, immigrants form an underemployed, underprotected, but often overskilled workforce whose availability likely contributes to keeping wages low. As long as large segments of SEM economies escape state control, illegal immigration to SEM countries will probably keep growing.

Migration to SEM Countries and Mounting Pressure on the European Union

Although EU governments fear that unauthorized migrants living in SEM countries will continue on to Europe, current trends do not support this scenario. Most unauthorized migrants in the European Union do not get there via a SEM country. Instead, most arrive at airports with proper paperwork and then overstay or violate the terms of their visas; they do not transit through SEM countries.²⁰ This does not mean that migrants never enter the European Union illegally after transiting through SEM countries, only that the phenomenon is not as common as some would think. In Spain in 2007, 33,237 irregular migrants coming from African or North African countries were detained, including 8,574 migrants detained in African waters by Frontex, the EU agency tasked with border security.²¹ Greece and Italy may have smaller numbers, which brings a maximum estimate to below 100,000. While smugglers and migrants are continuously inventing new routes to bypass patrols and military controls across the Mediterranean Sea, there is no evidence that the volume of illegal migration from SEM countries to Europe is growing.

IV. Migration Triggers

MENA's demographic trends and past migration patterns do not imply an automatic infusion of workers into labor-scarce regions of the EU-27. What we need to analyze now are the main factors that can potentially trigger large-scale migration.

Four interlinked migration triggers are crucial to forecasting flows effectively: the demographic youth bulge; the employment and social situation in MENA countries; environmental conditions, including pressures on land use and natural resources; and political instability and conflict.

¹⁹ One should not automatically view unauthorized status as a deliberate breach of the law, since in many cases it is the law that has changed, transforming formerly regular migrants into irregular ones.

²⁰ Hein de Haas, "Irregular Migration from West Africa to the Maghreb and the European Union: An Overview of Recent Trends," *IOM Migration Research Series*, no. 32 (2008).

²¹ Asociación Pro Derechos Humanos de Andalucía, *Informe Derechos Humanos en la Frontera Sur 2007*.

The Demographic “Gift”

Because birth rates remained high until the 1980s and then declined sharply, the proportion of young, active, working-age individuals in the current MENA population is exceptionally large, as already discussed. Those born between 1975 and 1995 (now young adults) are providing their home societies with a demographic “gift.” In other words, young people entering the labor market today do not have to mortgage the future benefits of their work to support either numerous children (as they did in the recent past), or the elderly (as they will in the near future). This situation, favorable to savings and investment, can theoretically yield a dividend for the entire population. However, the gift is temporary: the youth bulge will eventually pass from the working age to the retirement age (see Appendix 2).

One might be tempted to argue that the demographic gift will slow migration flows. The rationale is that low dependency rates will enable greater savings, thus fueling development. This development in turn will reduce the root causes of labor-driven emigration, namely unemployment and underemployment. The problem with this hypothesis, however, is that young people need to be able to save money, for which they need to first earn a sufficient income. But earning money is not an easy task in countries still confronted with high unemployment, underemployment, low wages, and poor returns on education. On average, it takes a young educated person two to three years to find a first job, followed by another two to three years to accumulate enough savings for marriage. Transition to adulthood occurs at the price of a long period of expectation and exclusion, first from the labor market and then from the marriage market.²²

Employment and Social Conditions: A Lack of Labor-Market Opportunities

MENA countries have not been able to turn their demographic “gift” into tangible development gains. Unemployment has risen everywhere in the region, particularly among young educated people, in part because of failed economic policies.

In Algeria, where oil wealth has never translated into job opportunities for its entire population, unemployment is rampant. Thirty-one percent of young adults ages 20 to 24 and 26 percent of young adults ages 25 to 29 are unemployed.²³ In Morocco, unemployment is highest among young people in urban areas (33 percent of 15-to-24-year-olds, and 26 percent of 25-to-34-year-olds) and the highly skilled (24 percent of those with a university degree are unemployed, compared to only 9 percent of those with no diploma). From 1999 to 2004, unemployment rates decreased in every category except among those with a university degree. The higher the level of educational attainment, the greater the probability of being unemployed. Also, unemployment starts as soon as education ends, and the higher the education level, the longer unemployment lasts: two out of three first-job seekers with a university diploma are unemployed for one to three years.²⁴

²² Paul Dyer and Tarik Yousef, “The Tyranny of Demography: Exploring the Fertility Transition in the Middle East and North Africa” (working paper 08-11, Dubai School of Government, 2008). See also Philippe Fargues, “Women in Arab countries: challenging the patriarchal system?” *Reproductive Health Matters* 13, no. 25 (2005):161-65.

²³ Office National des Statistiques Alger, “Enquête sur l'emploi de septembre 2004,” 2007.

²⁴ Centre d'Etudes et de Recherches Démographiques, *Formes d'activités économiques, emploi et chômage des jeunes* (Rabat: CERED, 2005).

Morocco and Algeria are representative of the circumstances in all MENA countries. The 2004 World Bank MENA development report observes that “the dynamics of demography in MENA have created some of the most intense pressures on labor markets observed anywhere in the post-WWII period. Unemployment is highest for groups in the middle and upper end of the education distribution.”²⁵ Regarding unemployment among the educated, the 2008 MENA development report states that “the impact on development of the considerable education progress recorded in the region has been less than expected.”²⁶

When jobs are lacking — especially for the university educated — and educational attainment is not rewarded, young people do not have the means nor the incentives to make the most of their demographic “gift.” Furthermore, they cannot convert their talents into development gains that benefit the whole population.

Environmental Conditions

In addition to the three categories of migrants discussed earlier, environmental migrants — defined as people who are forced to leave their homes because the environment has become inhospitable — could play a role in MENA migration. This relatively new idea has received attention in the context of rising concerns about global climate change, but researchers disagree on its relevance and likelihood. Some argue that desertification, droughts, rising sea levels, and flooding, to cite only a few anticipated disasters, will produce massive population movements, including cross-border migration and major humanitarian crises. They warn that environmental migration will mainly occur in less developed countries where people do not have the financial or technical means to defend against environmental changes.²⁷

Others are skeptical and respond that there is no evidence to suggest that natural disasters alone can cause massive, permanent migration; natural disasters occur within a political context, such as a government failure or an open conflict. Climate change may influence the push factors of migration but not the pull factors, which many scholars view as the main drivers of migration. Consequently, mass migration spurred by climate change may prove a frightening but groundless scenario. Short-distance migration, circular migration, and innovative coping strategies are the more likely responses to future climate change.²⁸ Critics argue this view downplays the risks because it is based on the lack of past environmental migration while climate change is unprecedented in human history. Analysts are struggling to forecast the impact of a situation that is not yet fully manifested.

²⁵ World Bank, *Unlocking the Employment Potential in the Middle East and North Africa: Toward a New Social Contract* (Washington, DC: World Bank, 2004), 9.

²⁶ World Bank, *The Road Not Traveled: Education Reform in the Middle East and North Africa* (Washington, DC: World Bank, 2008).

²⁷ Norman Myers, “Environmental Refugees: An Emergent Security Issue” (paper presented at the 13th Economic Forum, Prague, May 23-27, 2005), http://www.osce.org/documents/eea/2005/05/14488_en.pdf; Rafael Reuveny, “Environmental Change, Migration and Conflict: Theoretical Analysis and Empirical Explorations” (paper presented at a workshop on Human Security and Climate Change, Oslo, June 21-23, 2005).

²⁸ Richard Black, Dominic Kniveton, Ronald Skeldon, Daniel Coppard, Akira Murata, and Kerstin Schmidt-Verkerk, “Demographics and Climate Change: Future Trends And their Policy Implications for Migration” (working paper T-27, Development Research Centre on Migration, Globalisation and Poverty, University of Sussex, June 2008).

Major reports on climate change point to MENA as the most vulnerable region in the world.²⁹ Rapid population growth in a region known for its scarcity of inhabitable land and fresh water could put an extraordinary strain on the environment. First, population growth may result in an untenable population density. Egypt and the Palestinian territories already face this danger. Egypt is projected to grow from a density of 73 people per square kilometer in 2005 to a density of 104 people per square kilometer in 2030 (see Figure 3). On paper, this does not appear particularly problematic, but if one considers that 95 percent of the country is desert and the entire population is concentrated in the remaining 5 percent, then Egypt would have an actual density of 2,080 inhabitants per nondesert square kilometer — the highest in the world.³⁰

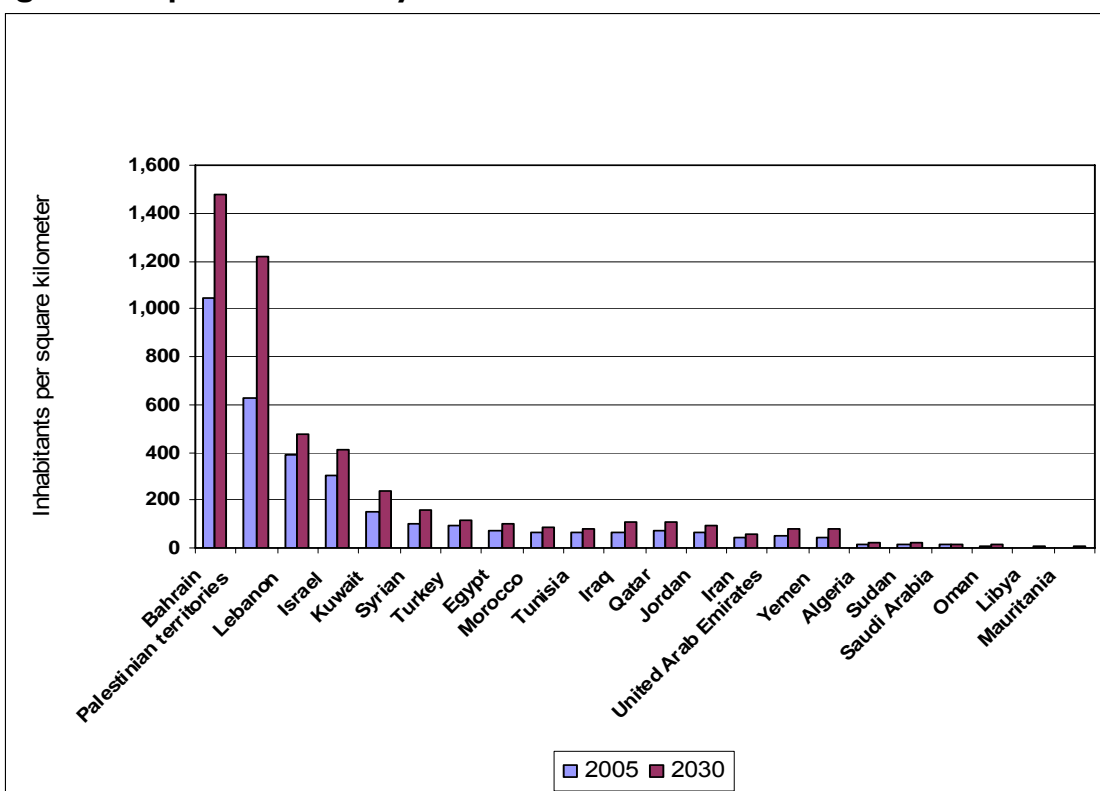
The Palestinian territories will also face a dire space shortage soon. The already high population density (625 people per square kilometer in 2005) will double in the next 25 years due to record birth rates, reaching an unbearable 1,216 people per square kilometer in 2030. By way of comparison, Japan and the Netherlands, among the most densely populated countries in the world, have population densities of 313 and 413, respectively. In some ways, high density can be an asset. It fosters the interconnectedness of economic actors and allows for scale economies as investments benefit greater numbers of people. However, this model does not apply to the Palestinian territories, where internal and external communication and mobility are hampered by Israel's military occupation. Gaza will have the population density of Singapore (6,500 people per square kilometer) but will likely lack its economy, freedom of movement, and openness to the outside world. One may anticipate a mass emigration from the Palestinian territories unless a viable solution is found.

Pressure on land is not limited to Egypt and the Palestinian territories but affects all Arab countries and will only worsen in coming years because of demographic growth on one hand and desertification on the other, causing Algeria, Morocco, Tunisia, and Libya each to lose around 1,000 square kilometers of arable land per year.

²⁹ Intergovernmental Panel on Climate Change, *Impacts, Adaptation and Vulnerability* (New York: Cambridge University Press, 2007), <http://www.ipcc.ch/ipccreports/ar4wg2.htm>.

³⁰ Other MENA countries have an extreme scarcity of inhabitable land, in particular the gulf states and Libya. However, their oil wealth has made them countries of immigration with an almost entirely urban population. Therefore, density is not as problematic as it is in rural Egypt.

Figure 3. Population Density in MENA countries in 2005 and 2030



Source: UNPD, "World Population Prospects."

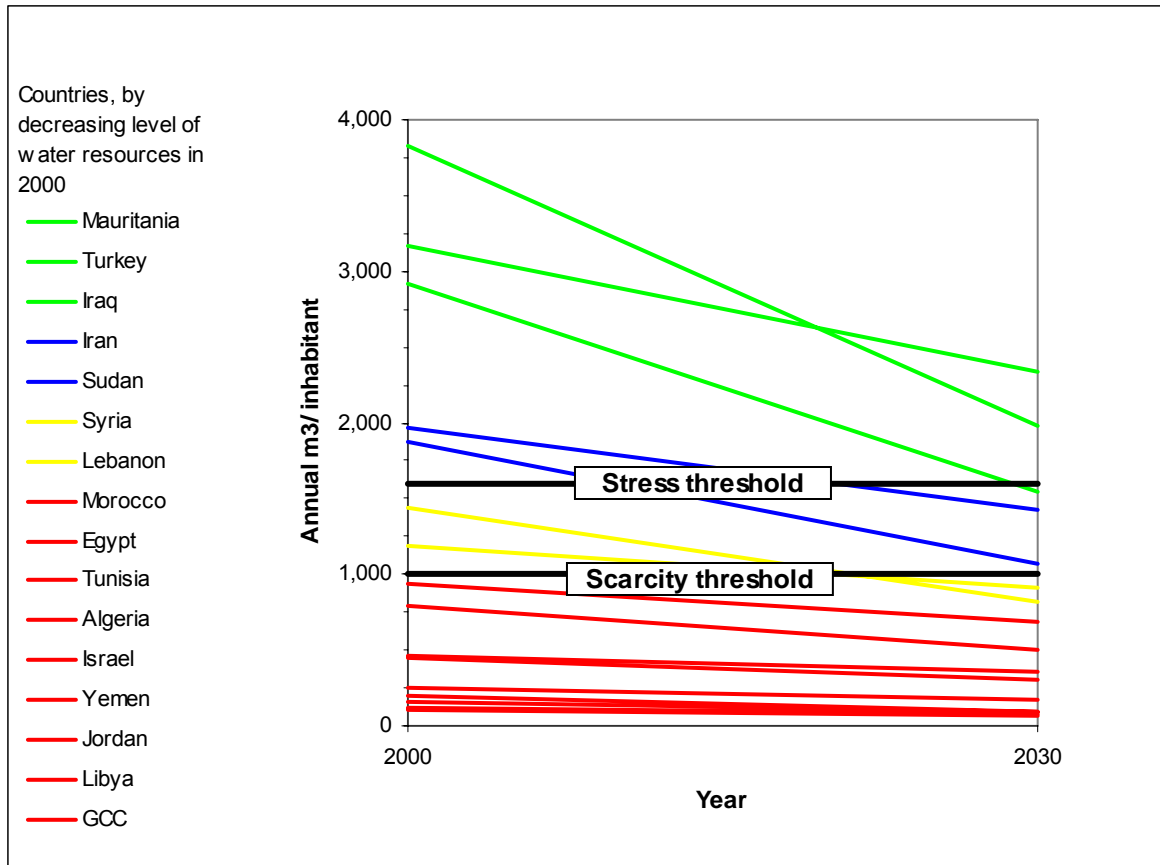
Most MENA countries must also deal with freshwater scarcity. Only five countries in the MENA region have renewable freshwater resources above the stress threshold (defined as more than 1,600 cubic meters per capita per year): Iran, Iraq, Mauritania, Sudan, and Turkey. Lebanon and Syria have resources that fall between the stress threshold and the scarcity threshold (1,000 cubic meters per capita per year). The remaining MENA countries were already below the scarcity threshold in 2005. With the forecasted population increase alone, two additional countries, Iran and Sudan, will face water stress, and Syria and Lebanon will fall under the scarcity line (see Figure 4). Some MENA countries may partly respond to freshwater scarcity with oil and use low-cost energy to desalinate sea water, but all of them already tap nonrenewable resources.

The situation in Egypt illustrates these trends. Water-wasting practices, such as surface irrigation, have not receded despite the strain on the Nile River. As a result, Egypt already taps deeply into its renewable freshwater resources while its population continues to grow at 2 percent per year. The Nile may soon turn into a point of conflict, as it is shared by ten countries with fast-growing populations, including Sudan, an oil-rich country with ambitious irrigation plans.

Other potential or actual conflicts over water exist between Syria and Turkey (Euphrates River), Israel and Jordan (Jordan River), and Lebanon and Syria (Oronte River), but no one can predict which nations will go to war over water appropriation or if water disputes could catalyze migration.³¹

³¹ Jack Goldstone "Demography, Environment and Security: an Overview," in *Demography and National Security*, eds. Myron Weiner and Sharon Stanton Russell (Berghahn Books: New York, 2001): 38-61.

Figure 4. Freshwater Renewable Resources per Capita in MENA, 2000 to 2030



Source: Author’s calculation based on United Nations Food and Agriculture Organization freshwater statistics and UNPD, “World Population Prospects.”

Political Instability and Conflict

Will conflicts and wars produce more migrants in the coming decades? One has to acknowledge that they have continuously done so in MENA over the last 60 years. Some of the most notable examples include the following:

- The Israeli-Palestinian conflict (open wars of 1948-1949 and 1967 and low-intensity war in the early 2000s) has caused a great deal of migration. Directly and locally, it produced the Palestinian exodus. Indirectly, it had a remote impact on the whole Arab Middle East. The protracted conflict bolstered Arab authoritarian regimes with two contrasted outcomes: states raised administrative barriers to emigration during the cold war period and political repression combined with poor economic performance to foster emigration.
- The October 1973 war between Israel and Egypt indirectly triggered a massive wave of Egyptian migration to the gulf states: soaring oil prices led to high demand for imported

labor while then President Anwar Sadat's open-door policy made the emigration of Egyptian workers possible.

- The Gulf War of 1990-1991 resulted in 3 million legal immigrants being driven out of Iraq, primarily Arab citizens attempting to escape persecution on the basis of their citizenship, but also hundreds of thousands of Asian migrant workers fleeing the battlefield.
- The American invasion of Iraq in 2003 resulted in the largest flow of refugees in the Middle East since 1948, with over 2 million refugees at the end of 2007.³²

A number of dangerous situations in the MENA region could potentially escalate and trigger large-scale emigration: the unresolved Israel-Palestinian conflict; the foreign occupation of Iraq; ethnic conflicts in Sudan; religious tensions between Muslims and Christians in Sudan, Lebanon, Iraq, and potentially Egypt; religious tensions between Shia and Sunni Muslims in Iraq and Lebanon; and the exposure of migrant workers to changing legislation on entry, stay, and labor in GCC countries and Libya.

V. Predictions for Future Migration

The question of whether the demographic gift of millions of young people will be a boon to or a burden on MENA labor markets has produced competing answers. And much of the forecasting of migration flows depends on the answer one favors.

Several international agencies view demographic change as a gift because it can catalyze endogenous economic development.³³ As the World Bank puts it: "The demographic burden becomes a demographic gift...the growth of economically active population will exceed that of the economically dependent population by a much greater magnitude than in any other region."³⁴

The alternative interpretation of demographic change is more realistic because it acknowledges another outcome of low birth rates: fewer family burdens. Due to their own (expected) low fertility, they no longer bear the burden of numerous children; due to their mothers' high fertility, they still have numerous siblings with whom they share the burden of the older generation.

From a demographic point of view, MENA is now witnessing the birth of the individual. For the first time, there is personal freedom of movement. Demography sets the backdrop against which young and often educated adults now participate in other MENA countries' labor markets, freed

³² United Nations High Commissioner for Refugees, "The Continuing Needs of Iraq's Displaced," <http://www.unhcr.org/cgi-bin/texis/vtx/iraq?page=intro>.

³³ David E. Bloom, David Canning, and Jaypee Sevilla, *The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change* (Santa Monica: RAND Corporation, 2003), http://www.rand.org/pubs/monograph_reports/2007/MR1274.pdf; World Bank, *Take advantage of MENA's demographic "window of opportunity"* (Washington, DC: World Bank, 2007), http://siteresources.worldbank.org/INTWDR2007/Resources/1489782-1158076403546/WDR2007RegionalHighlights_MENA_Aug29_draft6.pdf; Ragui Assaad and Farazneh Roudi-Fahimi, *Youth in the Middle East and North Africa: Demographic opportunity or challenge?* (Washington, DC: Population Reference Bureau, 2007), <http://www.prb.org/pdf07/YouthinMENA.pdf>.

³⁴ World Bank, *MENA's demographic "window of opportunity."*

from family charges. The freedom of movement gained through demographic change also entails a certain level of individual risk.³⁵

The influx of human capital into the labor market grants more opportunities but also unleashes higher expectations. If expectations are frustrated, then the response can be anything from voice, in which the frustrated demand political change, to exit. The voice response falls beyond the scope of this paper. Suffice it to say that MENA political regimes do not show many signs of democratization. A statistical analysis of political violence in Egypt in the early 1990s showed striking correlations among the rise of education, the speed of birthrate decline, urban growth, and the rise of violent extremism.³⁶

The exit response to frustrated expectations may take the form of emigration. Surveys of Middle Eastern youth reveal that the proportion of young people who wish or intend to emigrate ranges from one-quarter to an enormously high three-quarters of an age group. In the second half of the 1990s, a Eurostat-coordinated survey from 1998³⁷ already found high percentages of people who had considered leaving their countries of origin: 14 percent in Egypt, 27 percent in Turkey, and 20 percent in Morocco. More recent surveys reveal that this is a massive phenomenon, exemplified by Tunisia, a country with a successful economy but a stalled democratization process. In a representative national survey from 2006, 76 percent of 15-to-29-year-olds (compared to 22 percent in 1996 and 45 percent in 2000) declared that they considered emigration an option.³⁸ They may simply dream without making concrete plans or taking actual steps, but their dreams illustrate the deep discomfort that is now common among MENA youth.

If one can comfortably predict that emigration from MENA countries will increase in the coming decade, one can also affirm that its profile will change in conjunction with the demographic transition. Future patterns of migration will not resemble those of the past and not even of the present day. Family profiles of young MENA migrants are going through radical changes. Yesterday, male migrants left their families behind so they could feed and educate them. Remittances were the main reason for leaving, and, in many cases, return was part of the migration project. Tomorrow, all young emigrants will typically have no children or spouses at home, and their ambition and the desire for self-accomplishment will drive them, whether they contemplate staying abroad permanently or returning to their country with increased capital and skills.

³⁵ This interpretation goes against the “new economics of labor migration,” which views individual migration as a choice made collectively by the family for one of its members as an insurance against risk.

³⁶ Philippe Fargues, “Violence politique et démographie en Égypte,” in *Le phénomène de la violence politique: Perspectives comparatistes et paradigme égyptien*, ed. Baudoin Dupret (Cairo: CEDEJ, 1994), 223-243.

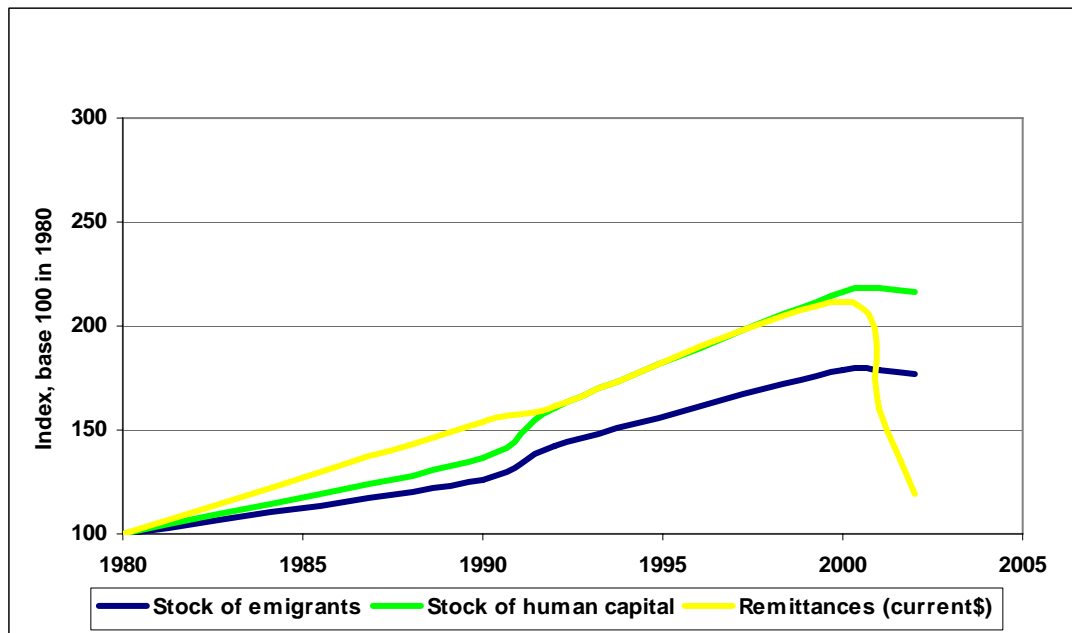
³⁷ EUROSTAT, *Push and Pull Factors of International Migration, A comparative Report*, (Luxemburg: EUROSTAT, 2000).

³⁸ Habib Fourati, *Consultations de la jeunesse et désir d’émigrer chez les jeunes en Tunisie 1996-2005* (San Domenico di Fiesole (FI): European University Institute, 2008).

From a Remittances-Oriented to an Education-Oriented Migration

Remittances paid to MENA countries increased from US\$8.8 billion in 1980, to US\$13.4 billion in 1995, and up to US\$28.5 billion in 2007 (current prices).³⁹ Remittances increased by the largest percentage in Morocco and by the smallest margin in Turkey. However, not only have remittances multiplied, but human capital has increased as well. In both cases, the rise in human capital⁴⁰ has exceeded the rise in remittances (see Figures 5A and 5B). In other words, the average amount remitted per unit of human capital has decreased from the original level of 100 in 1990 to 66 in Morocco and 55 in Turkey. A shift from a remittances-driven to a human-capital-driven pattern of migration is underway.

Figure 5A. Remittances and Human Capital of Turkish Migrants, 1980 to 2002

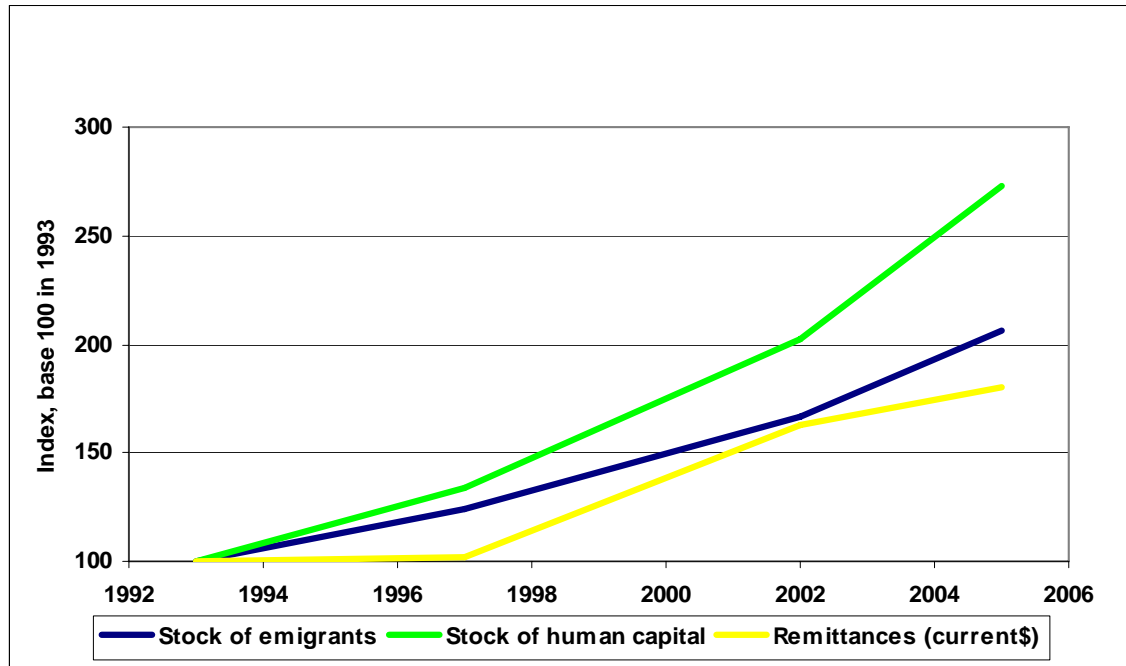


Source: Author's calculations based on World Bank remittances data and average number of years of schooling among Turkish immigrants by generation in Germany and Belgium.

³⁹ World Bank, "Middle East and North Africa," in *Migration and Remittances Factbook*, eds. Dilip Ratha and Zhimei Xu (Washington, DC: World Bank, 2008), <http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1199807908806/MENA.pdf>.

⁴⁰ Human capital is measured as the aggregated number of years of schooling among current stocks or first-generation emigrants of all destination countries together.

Figure 5B. Remittances and Human Capital of Moroccan Migrants, 1993 to 2005



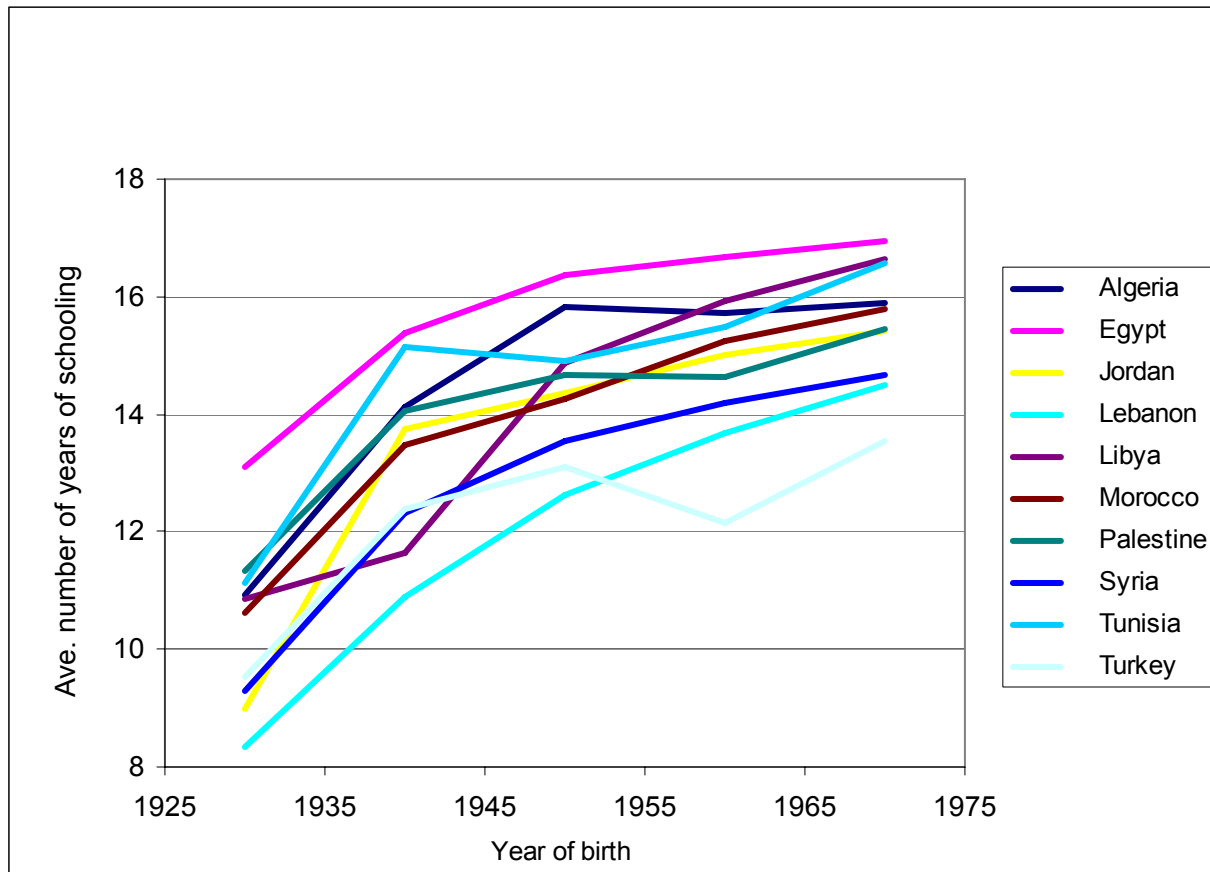
Source: Ministère des Affaires étrangères et de la Coopération, Maroc, 2006.

If tomorrow's migrants choose to send remittances, they will be motivated primarily by their own return plans, not by the need to maintain the family left behind. They may also have an increasing propensity to invest in their own education and to accumulate human capital in addition to financial capital. Figure 6 illustrates the radical change with regard to education from one generation of MENA immigrants to the next. Whatever the country of origin, young MENA migrants in Canada are highly educated and do not resemble earlier migrants. Because of its points system, which favors highly educated migrants, Canada may be a good predictor of trends in other destination countries. Spain, itself a recent destination for MENA migrants, does not show the same clear-cut generational divide as Canada, and the level of education of its migrants is much lower. According to the 2001 population census, MENA migrants (all countries of origin together) with a higher education represented 15 percent of Spain's 15-to-64 age group and 13 percent above age 65. The immigration survey of 2007 found that 13 percent of Moroccans in Spain ages 15 and older had a higher education and 59 percent had only a primary education or no education.⁴¹

Today, the links MENA states establish with their diasporas are aimed at maximizing remittances and economic investments in the home country. Tomorrow, states will have to channel the diaspora's knowledge and skills. For that purpose, they will have to manage another shift, from creating an environment favorable to investment to creating one favorable to flows of ideas and knowledge.

⁴¹ Instituto Nacional de Estadística, Encuesta Nacional de Inmigrantes, *Resultados por continentes y países más representados* (Madrid: INE, 2008).

Figure 6. Level of Education among First-Generation Migrant Stocks in Canada Originating from MENA Countries, 2001



Source: Author calculations using primary data from Statistics Canada, Census of 2001.

Future Policies on Migration

Migration from MENA is expected to grow in the next two decades. Built-in demographic factors (sharply rising numbers of working-age adults) will combine with sociological changes (working women; educated youth nurturing great expectations) to produce unprecedented pressures on labor markets. The long waiting period between the end of college or university and the first job, then marriage and the founding of a family, may generate desperation or revolt at home or instead a strong will to try an experience abroad — which an astonishingly high proportion of young people seem to wish for themselves.

Unless governance dramatically improves, political circumstances may amplify emigration if the long-lasting conflicts that currently plague MENA persist, or if new ones emerge as a result of latent ethnic and religious tensions or environmental stress.

Opportunities for Circular Migration

In Europe, demographic losses at working ages will soon be so large that the only realistic option will be to reopen channels for legal economic migration. Preference will be given to circular-

migration schemes in which migrants must return to their home countries after working for a designated period, with the possibility of coming back for a second or even multiple periods. Circular migration is currently promoted by the European Union and some of its Member States as a way to address their labor shortages while avoiding the social and cultural problems arising from permanent migration.⁴² It is also seen as a way to relieve pressures on developing countries' saturated labor markets while fostering migration-induced development; a means of offering migrants an alternative to illegal migration; and a way of establishing a three-party commitment among migrants, origin-country governments, and destination-country governments. Circular migration, however, works better when migrants keep a strong link with their country of origin.

The EU neighborhood is made up of former Soviet states, Russia, and MENA. The former Soviet states and Russia are facing aging populations, which means they will not be able to sustain any significant circular-migration flows. Thus, MENA is the only candidate in the EU neighborhood for a circular-migration scheme. Geographic proximity appears to contrast sharply with cultural distance, as EU public opinion reveals some hesitation about welcoming large flows from their Muslim neighbors. However, public opinion may change if EU populations are properly informed. They must know that migrants are not only economic but also social actors; that in addition to remitting monies, they convey ideas and models to their countries of origin.⁴³ If European governments wish to export the values and ideals in which they believe, they will have to consider opening their borders wider to MENA migrants. This would be a better strategy than leaving them no choice but to go to the gulf countries, with which they share a culture, and making migration reinforce rather than mitigate global cultural divides.

Procircular-migration policies in Europe should target young MENA adults whose long waiting period for employment opens a window for a qualifying experience abroad. MENA countries have a long and diverse history of temporary migration, which is the norm for Syrian workers in Lebanon; cross-border workers from the former Soviet Union in Turkey; Egyptian farmers in Jordan; African and Arab migrant workers in Libya; non-Jewish migrant workers in Israel; female domestic workers from Southeastern Asia and the Horn of Africa in Eastern Arab countries; and above all the millions of migrants from Egypt, Yemen, and other Arab countries in the gulf states.

Migrants view multiple and two-way mobility as serving their own interests, since leaving their country permanently is always a difficult choice. However, in its current forms, temporary migration is plagued by risk, lack of protection, and more often than not the denial of rights. The experience of circular migration in the gulf teaches us that importing workers who do not have a path to citizenship, or even a way to become a full-fledged actor, produces a dual society in which nationals and nonnationals share very little. In tomorrow's competition for migrants' skills, Europe's comparative advantage over the gulf will depend first and foremost on promoting migrants' rights.

⁴² European Commission, "Circular migration and mobility partnerships between the European Union and third countries" (COM(2007) 248 final), <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0248:FIN:EN:PDF>.

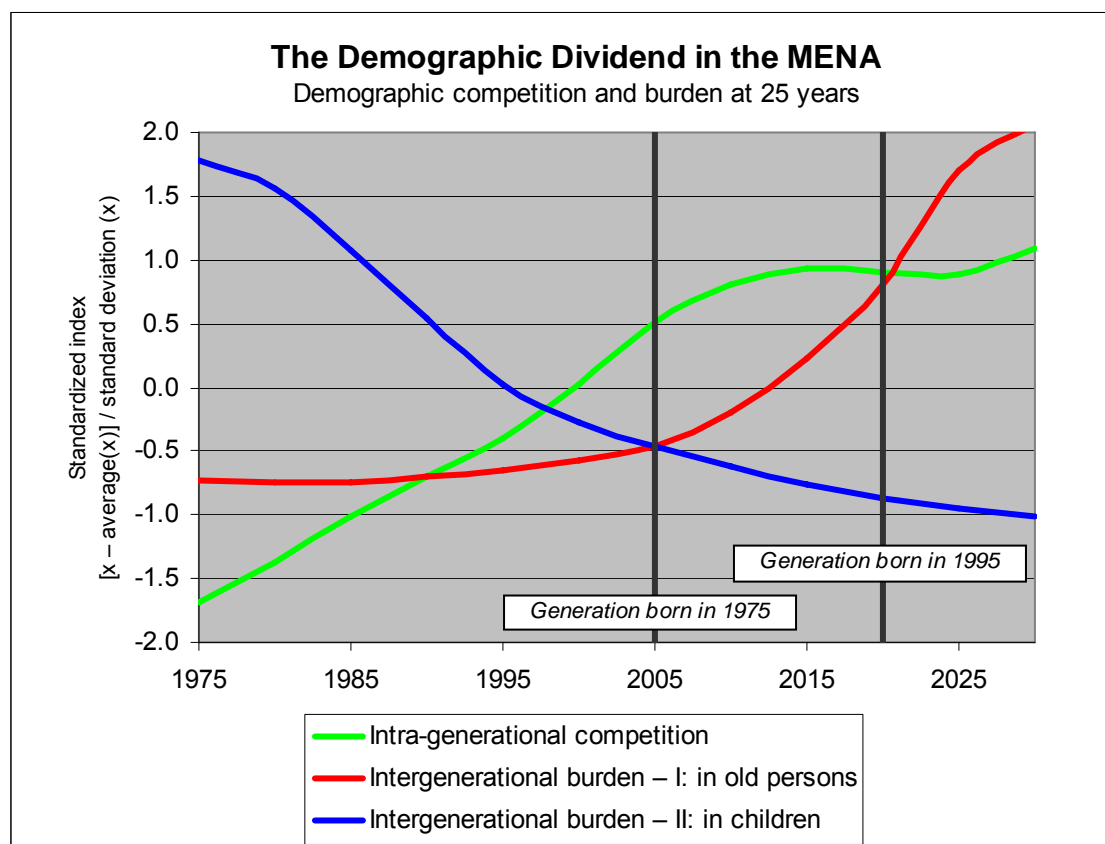
⁴³ Peggy Levitt, "Social Remittances: Migration Driven Local-Level Forms of Cultural Diffusion," *International Migration Review* 32, no. 4. (1998): 926-948.

Appendix I

Year in which Number of 20-to-25-year-olds Peaks		
Year	Mostly origin countries	Mostly destination countries
2005	Morocco	
2010	Algeria, Iran, Tunisia	
2015	Lebanon	Bahrain
2020	Jordan, Turkey	
2025	Egypt	
2030 +	Iraq, Mauritania, Palestinian territories, Sudan, Syria, Yemen	Kuwait, Libya, Oman, Qatar, Saudi Arabia, United Arab Emirates

Source: UNPD, "World Population Prospects."

Appendix 2



Source: Author calculations using the UN Population Database.

This figure shows three lines for the aggregate MENA population:

- The green line (intragenerational competition) represents the size of the generation born 25 years earlier (which roughly equals the number of new potential entrants to the labor market each year). It climbs steadily until 2010 then stabilizes for around 15 years before climbing again, but at a slower pace.
- The blue line (intergenerational burden in children) shows the total fertility of the young adult generation described above. It has been steadily declining since 1975, and it is expected to continue to decrease through the whole period.
- The red line (intergenerational burden in old persons) represents the average number of living parents per sibling in a family.⁴⁴ It is stable until 2005 (corresponding to the generation born in 1975) then climbs sharply and continuously until 2025.

⁴⁴ Computed as the product of the number of parents at birth (two) by their probability of surviving 25 years later (survival probability from 30 to 55 if the mean age at childbearing is 30) and divided by the number of siblings surviving at 25: $2 [l(55,g-30)/l(30,g-30)] / ISF(g) l(25,g)$.

VI. About the Author

Philippe Fargues is on the faculty of the Center for Migration and Refugee Studies at the American University in Cairo. Dr. Fargues was the Founding Director of the Euro-Mediterranean Consortium for Applied Research on International Migration (CARIM) at the European University Institute in Florence; he has been Co-Director of the Florence School on Euro-Mediterranean Migration and Development since 2004. Before that, from 1999-2004, he was a Senior Researcher at the French National Institute for Demographic Studies in Paris, France, and from 1998 to 1999, was a Visiting Professor at Harvard. He served as the Director of the Centre for Studies and Economic Legal and Social Documentation in Cairo from 1992 to 1998. Dr. Fargues obtained his PhD in Sociology from the Sorbonne in 1974. He has lectured and researched at the University of Paris I, the Institut d'Études Politiques de Paris, the Lebanese University in Beirut, the UN Institute for Demographic Research and Training in Yaoundé, the French Centre of Modern Middle Eastern Studies in Beirut, and the Ivorian University in Abidjan. His publications include *Mediterranean Migration-Report 2005* (EUI), *Génération Arabes* (Fayard 2000), *Christians and Jews under Islam* with Youssef Courbage (Tauris 1997), *The Economy of the Middle East in a Prospect of Peace* (2 vol., Maisonneuve et Larose 1995), and *The Atlas of the Arab World: Geopolitics and Society* with Rafic Boustani (Bordas 1990).

Works Cited

Abu-Taleb, M.F. 2000. Impacts of global climate change scenarios on water supply and demand in Jordan. *Water International* 25: 457-463.

Assaad, Ragui and Farazneh Roudi-Fahimi. 2007. *Youth in the Middle East and North Africa: Demographic opportunity or challenge?* Washington, DC: Population Reference Bureau.
<http://www.prb.org/pdf07/YouthinMENA.pdf>

Black, Richard, Dominic Kniveton, Ronald Skeldon, Daniel Coppard, Akira Murata, and Kerstin Schmidt-Verkerk. 2008. Demographics and Climate Change: Future Trends and Their Policy Implications for Migration. Working Paper T-27, Development Research Centre on Migration, Globalisation and Poverty, University of Sussex, June 2008.

Bloom, David E., David Canning, and Jaypee Sevilla. 2003. *The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change*. Santa Monica: RAND Corporation.
http://www.rand.org/pubs/monograph_reports/2007/MR1274.pdf.

Bou-Zeid, E. and M. El-Fadel. 2002. Climate change and water resources in Lebanon and the Middle East. *Journal of Water Resources Planning and Management* 128: 343-355.

Centre d'Études et de Recherches Démographiques. 2005. Formes d'activités économiques, emploi et chômage des jeunes. Rabat: CERED.

European Commission. 2007. Circular migration and mobility partnerships between the European Union and third countries. COM(2007) 248 final.
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0248:FIN:EN:PDF>

Eurostat. 2000. *Push and Pull Factors of International Migration, a Comparative Report*. Luxembourg: Eurostat.

- Fargues, Philippe. 1994. Violence politique et démographie en Égypte. In *Le phénomène de la violence politique: Perspectives comparatistes et paradigme égyptien*, ed. Baudoin Dupret. Cairo: CEDEJ.
- . 2005. Women in Arab countries: challenging the patriarchal system? *Reproductive Health Matters* 13(25):161-65.
- . 2007. *Mediterranean Migration Report 2006-2007*. San Domenico di Fiesole (FI): European University Institute. <http://www.eui.eu/RSCAS/e-texts/CARIM-AR2007.pdf>.
- . 2008. Circular migration: is it relevant for the South and East of the Mediterranean? CARIM-AS2008/40, Robert Shuman Centre for Advanced Studies. San Domenico di Fiesole (FI): European University Institute. http://www.eui.eu/RSCAS/e-texts/CARIM_AS&N_2008_40.pdf
- Fourati, Habib. 2008. *Consultations de la jeunesse et désir d'émigrer chez les jeunes en Tunisie 1996-2005*. San Domenico di Fiesole (FI): European University Institute.
- Goldstone, Jack. 2001. Demography, Environment and Security: an Overview. In *Demography and National Security*, eds. Myron Weiner and Sharon Stanton Russell. New York: Berghahn Books.
- Intergovernmental Panel on Climate Change. 2007. *Impacts, Adaptation and Vulnerability*. New York: Cambridge University Press. <http://www.ipcc.ch/ipccreports/ar4-wg2.htm>
- Levitt, Peggy. 1998. Social Remittances: Migration Driven Local-Level Forms of Cultural Diffusion. *International Migration Review* 32 (4): 926-948.
- Myers, Norman. 2005. Environmental Refugees: An Emergent Security Issue. 13th Economic Forum, Prague, May 23-27, 2005. http://www.osce.org/documents/eea/2005/05/14488_en.pdf.
- Office National des Statistiques. 2007. Enquête sur l'emploi de septembre 2004. ONS: Alger, 2007.
- Raleigh, Clionadh, Lisa Jordan, and Idean Salehyan. 2005. *Assessing the Impact of Climate Change on Migration and Conflict*. Washington, DC: World Bank. http://siteresources.worldbank.org/EXTSOCIALDEVELOPMENT/Resources/SDCCWorkingPaper_MigrationandConflict.pdf.
- Reuveny, Rafael. 2005. Environmental Change, Migration and Conflict: Theoretical Analysis and Empirical Explorations. Paper presented at a workshop on Human Security and Climate Change, Oslo, June 21-23, 2005.
- Shiva, Vandana. 2002. *Water Wars*. Cambridge, MA: South End Press.
- Teitelbaum, Michael and Jay Winter. 1998. *A Question of Numbers: High Migration, Low Fertility and the Politics of National Identity*. New York: Hill and Wang.
- Teitelbaum, Michael. 2001. International Migration: Predicting the Unknowable. In *Demography and National Security*, eds. Myron Weiner and Sharon Stanton Russell. New York: Berghahn Books.
- United Nations Development Program. 2003. *Arab Human Development Report 2003: Building a Knowledge Society*. New York: UNDP/RBAS. http://hdr.undp.org/en/reports/regionalreports/arabstates/Arab_States_2003_en.pdf.

United Nations Population Division. 2007. World Population Prospects: The 2006 Revision Population Database. <http://esa.un.org/unpp/>

Weiner, Myron and Sharon Stanton Russell. 2001. *Demography and National Security*. New York: Berghahn Books.

World Bank. 2004. *Unlocking the Employment Potential in the Middle East and North Africa: Toward a New Social Contract*. Washington, DC: World Bank.

———. 2007. *Take advantage of MENA's demographic "window of opportunity."* Washington, DC: World Bank. http://siteresources.worldbank.org/INTWDR2007/Resources/1489782-1158076403546/WDR2007RegionalHighlights_MENA_Aug29_draft6.pdf.

———. 2008. *The Road Not Travelled - Education Reform in the Middle East and North Africa*. Washington, DC: World Bank.