INTRODUCTION
For Arab countries or for the whole of the Middle East and North Africa (MENA), the demographic and family transitions, in their broadest sense\(^1\) a universal phenomenon, have recently encompassed, at varying degrees of intensity, the whole region. This is a well-established phenomenon documented by individual researchers and a body of International Organizations. The descriptive phenomenon of this transition almost raises no doubts.

Yet, an attempt is presented here to go beyond descriptive demography, to include politics, particularly with an eye on the recent Arab upheavals, trying to pinpoint the significant role of demographic and family transformations as factors of political transformations. There must be, indeed, a connection between behavioural changes, be they cultural or demographic, and politics. This is not a recent discovery. The British historian, Lawrence Stone, almost half a century ago, established the correlation between educational progress – a pre-condition of demographic and family transition - and political revolution in the English setting\(^2\), in a major book published (by pure coincidence?) one year after the French and European revolutions of May 1968. Stone's "law" postulates that when the threshold of 50% literacy among young males is reached, inevitably this is the start of political troubles.

Stone was mainly concerned by literacy and education and omitted in his book the political impact of demographic and family changes, which although deriving from educational metamorphosis could play also a significant role on their own.

The trend towards increasing education has been, is still and will remain an element of social disruption. Especially, when youth is and will remain dominant for some decades to come, this is case in Arab and MENA countries from Morocco to Iran.

FROM DEMOGRAPHIC-FAMILY TRANSITIONS TO POLITICAL TRANSITION
Since December 2010, the scope of events in North Africa and the Middle East has taken everyone by surprise. We are now four years after the spark of Sidi Bouzid (December, 2010), which triggered the outbreak of the so-called “Arab spring” or revolutions. Today, assessments are very mixed, from full enthusiasm to hostile rejection, passing by mere skepticism. We do not claim to rule on their

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\(^1\)That is the historical cycle consisting of the increase of a young male’s ability to read and write, followed by the female’s ability, which paved the way to family transformations and fertility decrease, through contraception and rising age at marriage.

\(^2\)Here the execution of King Charles the First in 1649, but Stone does not include demographic developments in his analysis, Lawrence Stone, "Literacy and education in England, 1640 – 1800”, Past and Present, February 1969, p.61–139.

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http://dx.doi.org/10.5339/difi.2015.3
achievements – a mission almost impossible\textsuperscript{3} – but to explain their rationale in light of the cultural, demographic and family transformations of Arab societies.

These events were to occur, although their timing was largely unpredictable. This statement stems from the postulate of the universality of the human being. Basically, there are no differences in essence among the different populations of the world, but in their level of development. Hence, the processes that took off in England in the XVIIth century, then burgeoned in France in the XVIIIth century, before spreading throughout Europe in the XIXth century, and the rest of the world by the XXth century, would have inevitably reached the Arab countries by the beginning of this century.

For the past four decades, depending on their level of advancement, Arab countries have been experiencing cultural, demographic, anthropological and family transformation resembling those that Europe had been through since the English (1640–1660) and French Revolutions (1789–1793). Contrary to frequent essentialist or culturalist views, the Arab world does not stand as an exception. To think the opposite would qualify it as intrinsically averse to human progress, which is obviously contradicted by its current history, as will be shown thereafter.

EDUCATIONAL ACHIEVEMENTS

The process of multiple transitions in Arab countries was triggered by access to education for boys, then for girls. Most of the youth, largely dominated by illiterates few decades ago, have conquered reading and writing by 15–24 years, the initiation of union and reproduction, and the ages of the turbulent “youth bulge”. The demographic outcome of education is well-identified and well-studied, (such as the link between education and fertility), but a holistic vision is still to come, linking multiple stages, from education to political transition.

Figure 1 displays the proportions of Arab youngsters aged 15–24 years, able to read and write (2005). Some 10 years ago, universal education was already a reality in a large number of Arab countries, with few inequities between the sexes. Since then, the situation is still improving, namely in countries where illiteracy was more acute. The gender gap in education has receded, and has sometimes disappeared. In Egypt, the young female proportion of the population able to read and write has increased from 79% to 84% in 5 years. This is not yet universal education, but the improvement is significant. In Yemen, the proportion of young females able to read and write is currently 74%. In just

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure1.png}
\caption{Proportion of Arab youngsters by sex (15–24 years) able to read and write, by country, 2005.}
\end{figure}

\textsuperscript{3}Arab revolutions are still young (2010–2013), three years are ludicrously insufficient to evaluate how these phenomena will evolve. In France, for instance, from the French revolution of 1789 to the – still incomplete implementation of a democratic rule – a century almost has elapsed, until 1870, with the proclamation of the third Republic.
one generation, roughly from the seventies until present day, the Arab world has moved from a situation where illiteracy almost impregnated the whole society, to one where it is residual. This a Copernican change, likely to undermine the foundations of traditional societies, since the acquisition of the ability to read, and especially to write, is a major step for the individuation of the human being and the acquisition of autonomy⁴.

**SUBSEQUENT DECLINE OF MORTALITY AND FERTILITY**

In the wake of educational progress, fertility has been the paramount transformation factor in the family and in society. Fertility indicators are known to be major indicators for demographers, since fertility, expressed as average number of children per woman (or its companion the birth-rate as the ratio of the number of births to the total population), is the first component of population growth. This importance should go beyond demography to reach any observer of societies: sociologist, anthropologist, political scientist… since, more than other demographic indicators, fertility levels and trends encapsulate the mentality and behaviors of a large collection of individuals. As such, they reflect the collective psyche and common attitudes towards modernization, versus tradition.

But the shift from natural to controlled fertility was preceded and conditioned by the transition from an ancient mortality regime where life expectancy at birth was lower than 30 years to a modern one where this life expectancy might reach 80 years. This can be dated to the XVIIth century when advances in medicine contributed also to lowering mortality rate in Europe, a major precondition to fertility decrease.

Similarly, but with a certain delay, mortality in the Arab world has witnessed intense changes in level and structure: life expectancy at birth has increased from some 40 years in the 1950’s to over 75 years at present. Fertility by itself would not have fallen if mortality did not take the lead. Mortality reduction had decisive effects in boosting the rate of population growth, before fertility has subsequently started to fall. Yet the significance of mortality collapse goes beyond mere demographics. Arab populations are much too often described as fatalistic, even by themselves. A reason of this pessimistic perception of the world is probably due to the fact that they were so accustomed to death, which was such a banal phenomenon, a sword of Damocles over their head in every moment, at every corner. Therefore, mortality rate decrease is akin to a mental revolution with the reshaping of the psyche of populations, moving away from fatalism.

Similarly to the populations of Europe in the XVIII – XIXth century, but more recently, with a significant delay, the Arab family has espoused attitudes that apparently contradict their most rooted traditions: the delay in the age at marriage and the widespread practice of contraception. Fertility control became ineluctable, in order to cope with mortality decrease and otherwise ever-growing populations. Hence, the average number of children in the family has fallen from 7.55 children per woman in pre-transitional years (the seventies), to only 3.45 in 2005 – more than four children less in just four decades, with some countries around or below replacement level, such as Tunisia and Lebanon. In the MENA region, current Iranian fertility (1.93) is also below replacement level, which is also the case for Turkey (2.05). Many countries, like Morocco (TFR= 2.19) are just a few decimal points from the French *beau mode`,* 6

Hence results from figure 2 could not but inspire optimism. First, by showing the Arab countries were no more overwhelmed by ever-increasing populations and were soon to reap the demographic bonuses of this transition and by proving that family modernization, measured through demographic indicators, was an irreversible phenomenon⁵.

The increase of female age at marriage, and the spread of birth control practices has reduced total fertility rates to levels as low as those in developed countries, in the most advanced countries of the region; These include North Africa, Lebanon (across all its denominational groups⁶), Turkey and Iran, in the larger MENA ensemble.

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FAMILY TRANSFORMATIONS

Marriage is no more the sacred and social obligation it used to be. In Morocco, 2010, 42% of males and 33% of women in the critical age bracket, 30–35 years, remained bachelors and spinsters, sometimes by personal choice. In Algeria, Tunisia and Lebanon, female mean age at marriage approaches or exceeds 30 years, almost twice what is used to be in the 1960’s.

Increasing age at marriage has gone hand in hand with exogamy. Endogamy, the so-called “Arab marriage”, which implied a sealing of the extended family and a closure in social groups was halved. Beyond mere demographics, it is remarkable that when society shifts to exogamic marriage, for example in Morocco, where marriage between relatives has fallen from 30% to 15% between 1995 and 2010, its potential to openness increases; an openness that might challenge common values and established order. The choice of a spouse outside the enlarged family stimulates the emergence of a citizen of a nation-state, rather than a man belonging to his tribe. Hence a complex combination of demographic changes, all inter-connected (mass education, mortality collapse, marriage and fertility, free choice), might well act behind the scene of many political upheavals of the past worldwide and of the Arab present.

Patriarchal social structures and mentalities are no longer resist to family and demographic changes. In many Arab countries, if not all, women are progressively becoming heads of households for varying motives: by personal choice preferring to remain single and by rejection of arranged marriages, by rising divorce rates; increasingly requested by females, by widowhood (in diminution), and emigration; either internal or outside the country. For those countries, where the emigration rate is high the proportion of women heading households are also high, such as Morocco, where this proportion has nearly doubled, from 11% in 1960, to 15% in 1982 and 19% in 2010.

In Morocco, Tunisia, Lebanon, Iran, Turkey, and in some areas of Syria, such as the coastal region or the Jabal el Arab, fertility is now close to or below 2 children per woman. As shown in figure 3, the odds of not having a son in the family increase sharply with the fall of fertility. Negligible or low when family size was above 4 children, it becomes highly significantly when family size approaches 2 children or less. At present, 25% or more heads of family in Morocco, Tunisia and Turkey, an even larger proportion in Lebanon and Iran, and in coastal and mountainous Syria, accept they will breed only 2 daughters, with no male heir. These families stop breeding, in contradiction of the teachings of the deeply rooted patriarchal ideology from times immemorial (Figure 3).

The nuclear family is replacing traditional extended families, either horizontally or generally vertically, with three generation households. The classical nuclear family: a father, a mother and their children are becoming a dominant situation, which was not the case some decades ago. In Morocco, for
instance, nuclear families were just 51% in 1982, to reach 63% in 2004 and extended families 41% in 1982, were only 28% in 2004.

In extended vertical families, before the demographic transition, authority was normally bestowed to the older male, henceforth the less educated and more conservative. The mother-in-law, when she was living with her son and his spouse rather than in a separate household, tended to undermine the authority of her daughter-in-law and to interfere in the education of the children. Hence, the present structure of a nuclear household: a couple and their children (although less numerous), favours egalitarian values in the family, and therefore in society at large.

Supposedly confined to their reproductive and domestic roles, Arab women (and Iranians), have burst onto the scene during last events from Casablanca to Dera’a and even in remote Sana’a. This sort of purdah is receding, as an outcome of educational and demographic transitions, which are reshuffling Arab societies, preparing for the enhancement of the role of women. Nothing as explicit as their access to the upper degrees of education: secondary and university (Figure 4) can prove this. In secondary education, net enrolment ratios are now higher for girls than for boys in a majority of Arab countries, from Algeria (68/65) to Palestine (87/82), including the Arabian Peninsula and some emirates (Kuwait (92/88)).

Figure 3. Probability (%) to remain sonless by average number of children.
Source: Youssef Courbage and Emmanuel Todd, A convergence of civilizations, op.cit.

Figure 4. Enrolment ratio at university level (18–24 years) by sex and country, approximately 2010.
Even more impressive is their penetration of universities, with the astounding result that almost everywhere Arab girls are now better educated than boys. These achievements might soon spill over to other sectors, media, politics and hopefully, the labour force.

The role of education in family (and social) disruptions is increasing:

- First the son could read and write but not his illiterate father, who was still on hold of absolute power in patriarchal societies,
- Now the sisters are becoming as or more educated as their brothers, accessing in larger numbers the critical stage of university, the most discriminating (Figure 4)
- Hence spouses are becoming as educated (sometimes more so) than their husbands.

The increasing use of birth control, which follows literacy, contributes to undermine the traditional domination of males over females. Thus, the spread of education might imply directly a destabilization of traditional relations of authority in the family, indirectly through contraception. These disruptions might contribute to a mental disorientation in the society.

All in all, contraception is a welcome development, since limiting the number of children allows the family to focus more on each child, who is then better fed, better educated, better medically treated and receives more affection. Parenting in a smaller family, particularly with regard to father-mother interactions, becomes more democratic and freer, with an overall positive impact on society and governance.

Empirical data, although limited, helps to illustrate this major shift in family attitudes. Forty years ago, the first surveys on attitudes toward procreation in the Arab world were taken. One question was: “What is your ideal number of children?” An important number of women gave non-numerical responses. Instead of answering two, three or ten children, they would respond: “It is God’s will”, “It depends on what my husband desires”, or “I don’t believe in spacing births, it is not me who decides”. Today, such non-numerical responses have almost completely disappeared from surveys, signifying more rational attitudes on reproduction.

THE ARAB YOUTH BULGE

The effects on the age composition of the population and its youth segment are of prime importance.

The “youth bulge”, a concept coined by political scientists7, is measured as the expansion of people in the 15-24 years of age population related to the total population8. It is the outcome of demographic transition: the earlier fall of mortality compared to fertility, that increases the most “turbulent” segments in the family and society. For many political scientists, foremost amongst them the late Samuel Huntington, this inflation of young adults, males especially, paves the way to social unrest, upheavals and terrorism. Hence, demography is supposed to be a major determinant in the “clash of civilizations”9.

Many explanations were offered by political scientists on reasons why the youth, be they Arab or not, are more inclined to violence than mature people10. But, family demography plays a role: in larger families, where youngsters are in large numbers which can lead to congestion and deprivation,

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9Population growth in Muslim countries and particular expansion of 15–24 year olds, provides recruitment for fundamentalism, insurgency and migration. Economic growth strengthens Asian governments; demographic growth threatens Muslim governments and non-Muslim societies 1. There is a direct connection with increasing levels of education: Islamist activists include a disproportionately large number of the best educated and most intelligent young people in their respective populations, including doctors, lawyers, engineers, scientists … Samuel Huntington, The clash of civilizations and the remaking of world order, New York Simon and Shuzter, 1996, p. 113.
10The death concept among youth is presumably less developed, this would be due to an underlying physical basis: brain’s prefrontal lobe, which inhibits inappropriate behaviour, does not reach its full development before maturity. Statistically, there are more homicides and crimes against property committed by youngsters than by the older population. The lumpen youth class, street idlers with nothing to do due to high unemployment, are tempted by riots, violence and radicalism.
violence tends to be higher than in smaller families. Hence, it is relatively easy to conclude that violence and terrorism are closely associated with youth, and therefore, with populations where youngsters are the dominant group.

The main problem with this Huntingtonian school of thought is that it considers a rapidly moving reality as static, and attributes this transient phenomenon to civilizational factors, which means that Arabs have a built-in reluctance to modernity, namely modern fertility behaviour. The youth bulge, end-result of an ephemeral high fertility and decreasing mortality, is considered as ‘built-in’ their mind. Hence, there is an inability in this school of thought to acknowledge diversity among Arab societies and of their family structures.

However, Figures 5 and 6 show that there was, are still and will remain in the future, significant differences among countries of the region. And that the youth bulge is a transient phase in demographic transition. Hence, if the youth bulge is indeed a key explanation to political violence, why not try to forecast accordingly more peaceful societies, after these phases of political radicalization?

Looking at eight Arab countries of the Near East: Egypt, Syria, Lebanon, Palestine, Jordan, Saudi Arabia, Iraq and Yemen, four from the Maghreb: Morocco, Algeria, Tunisia and Libya\(^{11}\), only four decades are required to reach convergence with the developed world. In 2050, the situation in more advanced countries will be similar to that of developed regions: Europe, North America, Australia, with 12.8% aged 15–24 year olds and a ratio of 15–24/25–64 of 23.4%.

This will be the case in Lebanon, Morocco, Algeria and Turkey. Iran will be even more advanced. Yet, these countries have been through severe youth bulges, which belong to what we can call the ‘dark’ side of the demographic transition. These figures show after these difficult phases the worst is behind them.

The peak of the youth bulge belongs as part of the history of most countries. The only exceptions are Palestine (2020) and Yemen (2010). The most advanced countries are Lebanon (1985) and Turkey (1995). Morocco, Algeria and Saudi Arabia reached the peak of their youth bulge in 2000 and Syria and Egypt, two laggards of fertility transition, in 2005.

\(^{11}\)The Emirates of the Arabian Gulf: Oman, Kuwait, Qatar, Bahrain, UAE are not represented. Figures would be meaningless due to the heavy foreign population presence.
The Arab region is in the middle of a universal process of modernization, a long cycle in which differential family transformations, under the influence of improved literacy, first accentuate the differences between countries, then lead to a convergence. Some have already joined the most developed countries by low fertility standards, for example Lebanon, Tunisia, Morocco, Iran. Others are still on this journey, such as Yemen and Palestine. However, family size is also sharply declining and there are grounds for optimism.

Henceforth, there is a decrease of pressure on family resources. This segment of the population, the youth (aged 15–24 years) is often very demanding and unable to satisfy its own needs. Youngsters, generally remain overwhelmingly unmarried and largely unemployed, thus increasing tensions inside the family and society at large. The domestic labor market, mainly because of this booming young population was unable to cope with the supply of labor.

Thus, a reshaping of the age structure, a straightforward, yet delayed, outcome of fertility decrease, will accommodate an expansion of the economic sphere. Labor productivity will be the winner in this shift from quantity to quality. The changing age-structure translates into an increase of the adult share to the young people inside the family and society, thus altering the ratio of producers to consumers. The falling fertility rate is generating an expansion of the age-groups with higher propensity to save, thus increasing the abilities of the family to increase its savings, consequently leading to an enhancement of the national saving-rate.

Reduced wealth disparities, a fairer distribution of knowledge, give fresh impetus to the middle classes and favor pluralism. Therefore, it is not an exaggeration to equate demographic transition to democratic transition.

THE FAMILY ROOTS OF DEMOCRATIC TRANSITION

The exact timing of the Arab revolutions was undetermined. Social scientists and demographers can ascertain, on the basis of levels and trends of indices such as literacy, urbanization, fertility, marriage, exogamy, youth bulge, unemployment, gender equity, etc. that political shifts may occur in these countries, but not when or how. It is easy to rationalize these events \textit{a posteriori}, but not to forecast them \textit{a priori}.

Comparative history enables one to understand that Arab countries are in the midst of a universal process, where demographic transition is a key component and leads societies from literacy to political changes. This process was triggered in Europe and had no reasons to stop at the gates of the Arab world. Besides, its concentration in just four decades, is yet another example of the acceleration of history. If Arabs have adhered to demographic and family transitions in all
phases, initiated by educational development\textsuperscript{12}, they are ready to continue their way to political democracy.

In-depth transformations at the individual and family level cannot go without a reshuffling of long-established hierarchies, such as the absolute paternal authority of the father over his children, which has become less acceptable since the seventies, with the uneasy cohabitation of educated children living under the yoke of illiterate fathers. Becoming as educated and sometimes more educated than their husbands, women are less supportive of a passive submission to the will of their men. This is the same type of authority that traditionally the brother holds over his sisters.

Henceforth, starts the inevitable questioning of the once immutable family structure. But what is occurring at an individual and family level inevitably will spill over at societal level. Since after all, society is but the projection from the micro family level to the macro social level. The questioning of authority never stops at the micro level. A simple man or woman, who dares to challenge the authority of his or her father, will soon go to the street to contest the legitimacy of the “Father of the nation”.

Demographic transition is dotted with many obstacles and multiple risks. One risk derives from the ultimate resistance opposed by the patriarchal (\textit{macho}) subconscious impregnating the Arab mind. It requires more than a few decades to change the nature of relations between genders, from male domination to peaceful and quieter interactions.

Yet for growing parts of the family, contraception and delayed age at marriage are now the norm. The small-size family, the pattern to which Arab societies have adhered, relations among spouses and between parents and children are becoming more egalitarian and less tense, because of the decrease of pressure on family resources. The \textit{pater familias} reigns no more with an iron fist to impose discipline in an overcrowded household, cluttered with offspring numbering into almost two digits.

All of which produces a beneficial input on societal and political spheres. Although this line of reasoning is not frequently investigated, usually because of the segmentation of social sciences, demography studies population and family matters, political scientists studies politics, it is rarely looked at how individual and family transformations do affect politics. Changes at an individual and family level should be placed at the roots of transformations at upper levels\textsuperscript{13}.

On a global scale\textsuperscript{14} or in the Arabic world\textsuperscript{15} there are exceptions, however a correlation exists between the stage of demographic transition and the stage of democracy. In other words, in societies where family size is still similar to the ancient regime, the odds for autocrats or despot to rule are high. Therefore, the transition of the demographic regime to a small family size appears to be a necessary—although not sufficient—condition to get away from authoritarianism and on the route to democracy.

It does not come as a surprise that there are unavoidable gaps between the tempos of demographic and political transitions. Tunisia, in every respect, the most advanced Arab country: literacy, fertility and marriage, urbanization, gender gap etc, on top of a religious and ethnic homogeneity had to wait until January 2011 to deliver the “jasmine revolution”\textsuperscript{16}. At the opposite end of the scale, Yemen, the most backward on the list, with the worst demographic (a TFR still high) and socio-economic indicators far from those of Tunisia, could get rid of its autocrat of three decades just a few months after Tunisia. Between those two extremes, Egypt, Libya and Syria are at the same stage of their demographic and family transitions, but with diverging political itineraries.

\textsuperscript{12}The acquisition of basic education has been an element of the Arab revolutions, more than the so-called “new technologies”, including internet, facebook and twitter, which were only instruments that spread knowledge and the necessity of political changes, but were not at its roots. The internet cannot be conceivable without an ability to read and write.

\textsuperscript{13}A research on this matter still unpublished is Jaak Valge, ‘Demographic modernization of societies and the road to democracy’, 2007, for the Arab world, Hisham Sharabi, \textit{Neopatriarchy: A theory of distorted change in Arab society}, New York, Oxford University press, 1988. Sharabi establishes the linkage between the individual, the family and the State. But his book written 25 years ago could not envisage all the aspects of demographic and family transitions in the Arab world.

\textsuperscript{14}China with a TFR of 1.5 only and an authoritarian regime, being the most famous example.

\textsuperscript{15}Tunisia had a TFR of 2.05 only when still a dictatorship.

\textsuperscript{16}Youssef Courbage and Emmanuel Todd, \textit{A Convergence of Civilizations}, op.cit.
DISCUSSION

What would be the view today? Six years after 2007\textsuperscript{17} conveying an optimistic message on the Arab family and demographic transition is it still possible to display the same optimism, namely, in view of the current fertility trends? Are there reversals? Fertility increases succeeding to a long period of fertility decline? Are these reversals, oscillatory trends or do they go deep into the psyche of the Arab family, reflecting profound behavioral changes of perceptions and attitudes?

This issue is of utmost importance and requires a thorough assessment of the data at hand. One should generally rely on national data, now available from most websites of the statistical offices, or on international estimates, those of the United Nations Population Division (presently the 2012 assessment), the Population Reference Bureau (PRB) (World Population Data sheet (2013)) or the International Database of the US Census Bureau (2013). A major issue is that there is not always agreement on the figures, which do differ, often very significantly.

In Egypt\textsuperscript{18}, the largest Arab country with over 85 million inhabitants, fertility is measured by the crude ‘birth rate’ on the website of CAPMAS, this was decreasing until 2005. However, more recently, it has started to increase (Figure 7, Table 1). Since 2005, from 25.5 to 32 per 1000 in 2012, thus an absolute increase of 6.5 per 1000 and a relative increase of 25%, this would mean a TFR of 3.49, hence a significant increase from an already high level in 2005, when it was 3.36. Interestingly, the real figure is significantly higher than estimates from the Population Division, 2.79; the Population Reference Bureau, 3.0; and the International Database, 2.94.

In the second largest Arab country, with over 40 million inhabitants, Algeria’s fertility has also been steadily increasing from 2.40 to 2.81 between 2000–2008, 2.84 in 2009, 2.87 in 2010 and 2011 passing the 3 children mark to reach 3.02 in 2012 (Figure 8). This reflects a 26% increase since 2000, higher than the Population Division estimated for Algeria, 2.82, and although in line with the PRB estimate, 3.0; and the International Database estimate of 2.78.

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\textsuperscript{17}The year when A Convergence of Civilizations . . ., op.cit. was first published in French.

\textsuperscript{18}The countries are presented according to their population size.
Unfortunately, less can be said about Sudan (TFR: 4.2–4.6) and Iraq (3.6–4.3), where disruptions caused by wars have left their mark on statistical data collection. The large variations in international estimates show how difficult it is to appraise fertility and other demographic trends, as their statistical apparatus is so unstable.

In Morocco, the last national panel survey in 2009/2010 of over 100,000 households has shown the persistence of a sharp fertility decrease to 2.19, compared to the 2005 estimate of 2.43. However, the Population Division and the PRB, inflate the Moroccan fertility to 2.78 and 2.70, this appears odd. Only the US Bureau of the Census accredits the reality of fertility transition in Morocco at 2.19, which is consistent with national statistics but contrary to the Population Division and the PRB.

In Saudi Arabia (national fertility, excluding expatriates) the TFR estimated was 3.3 in 2005, seemed to have been confirmed at the same value in a 2007 survey. Note that the Population Division and PRB estimations, 2.68, 2.9 and 2.26 respectively, refer to the total population (this is not a fair measure, due to the large expatriate population – some 8 million or a quarter of the population – whose fertility is very low due to their age-sex structure).

In Yemen, where fertility has always peaked over other Arab countries, the estimate based on census material in 2005 was 6.23, relatively high. The present UN Population Division estimate of 4.15 seems more likely and probably more convincing than the PRB and IDB estimates of 4.9 and 4.45, respectively, since the previous estimate is based on a representative survey (MICS3, 2006).

On the other hand, Syria appears as an illustration of stalling fertility, 3.50 in 2005 and 3.47 in 2009. Therefore UN, PRB and IDB estimates of 3.00, 3.1, 2.85, respectively all seem to underestimate fertility.

In Tunisia, national sources of excellent quality show increasing fertility, but at very low levels. From 2.02 in 2005 to 2.15 in 2011, these were slightly higher than the UN and IDB estimates of 2.02 and 2.01, but close to the PRB estimate of 2.05. A preliminary estimation based on registered births show the number of births in 2012 increased from 192 to 215 thousand, thus signaling yet another increase in birth rate from 18.8 to 19.9 per thousand, and an accompanying fertility increase to 2.27.

In Jordan, fertility has increased from 3.55 to 3.85 between 2005 and 2009. Yet, UN, PRB and IDB estimates of 3.27, 3.5 and 3.36, respectively, are lower. In Lebanon, fertility has continued to decrease from 1.69 in 2005 to 1.5 in 2009, according to UN and PRB estimates. IDB does not accredit this quick fertility decline, with an estimate of 1.78.

In Palestine, the estimated level of fertility in 2005 was 3.70, this was probably too low as confirmed subsequently. The present level of 4.17 from the MICS3 survey by the Palestinian Central Bureau of Statistics is slightly higher, but is in line with the UN, 4.05 and PRB, 4.1 estimates. The US census Bureau provides separate estimates for the West Bank (2.98) and the Gaza strip (4.57), hence 3.96 for the whole of the occupied Palestinian territory.
As for the national populations of the Gulf States, the UN, PRB and IDB estimates are of no use, due to the high proportion of their expatriate population. In the United Arab Emirates, national fertility stood at 3.69 in 2005. Since then, a drop in fertility seems to have materialized, although, births registered by citizenship and year were not available on the statistical office website (except for the Emirate of Abu Dhabi). A survey taken in 2008 has confirmed fertility decline.

In contradiction with most large Arab countries, fertility has continued to decrease in Oman from 3.56 in 2005 to 2.67 in 2009. This is the same in Kuwait, where fertility rates among Kuwaiti nationals, estimated at 4.14 in 2005, have continued to decline. The results are mixed depending on the source: surveys or civil registration. The most reliable, registered births show a reduction of the birth rate, from 32.6 in 2005 to 29.7 per thousand in 2011, a 9% decrease that might imply the fertility rate of Kuwaiti nationals stands at 3.77.

In Qatar, a statistical combination of births at civil registration, census and survey, show that the fertility rate among Qatari nationals, which stood at 4.44 in 2005, has continued to decrease to 3.39 in 2011. Finally, Bahrain fertility rates amongst nationals were estimated at 3.10 in 2005 and have continued to decrease to 2.78 in 2009.

The changes in TFR in Arab countries are generally the result of fertility levels, rather than to changes in its tempo. It is difficult to disentangle these two effects in Arab countries as refined data, (by birth order), is rarely available.

Table 2 summarizes the fertility situation in 19 Arab countries. For four countries: Sudan, Iraq, Libya and Mauritania, it was virtually impossible at this phase of analysis to estimate recent fertility trends. For the fifteen remaining countries, for which estimates since 2005 were deemed possible, the large

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<tr>
<th>Present population</th>
<th>Fertility trend from 2005 until now</th>
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<tbody>
<tr>
<td></td>
<td>Increase or stalling</td>
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<tr>
<td>Egypt</td>
<td>84.7</td>
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<tr>
<td>Algeria</td>
<td>38.3</td>
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<tr>
<td>Sudan</td>
<td>34.2</td>
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<td>Iraq</td>
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<td>Morocco</td>
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<td>Saudi Arabia*</td>
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<tr>
<td>Yemen</td>
<td>25.2</td>
</tr>
<tr>
<td>Syria</td>
<td>21.9</td>
</tr>
<tr>
<td>Tunisia</td>
<td>10.9</td>
</tr>
<tr>
<td>UAE*</td>
<td>9.3</td>
</tr>
<tr>
<td>Jordan</td>
<td>7.3</td>
</tr>
<tr>
<td>Libya*</td>
<td>6.5</td>
</tr>
<tr>
<td>Lebanon</td>
<td>4.8</td>
</tr>
<tr>
<td>Palestine</td>
<td>4.4</td>
</tr>
<tr>
<td>Oman*</td>
<td>4.0</td>
</tr>
<tr>
<td>Mauritania</td>
<td>3.7</td>
</tr>
<tr>
<td>Kuwait*</td>
<td>3.5</td>
</tr>
<tr>
<td>Qatar*</td>
<td>2.2</td>
</tr>
<tr>
<td>Bahrain*</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>360.8</strong></td>
</tr>
</tbody>
</table>

NB. Fertility refers to national population only.

As for the national populations of the Gulf States, the UN, PRB and IDB estimates are of no use, due to the high proportion of their expatriate population. In the United Arab Emirates, national fertility stood at 3.69 in 2005. Since then, a drop in fertility seems to have materialized, although, births registered by citizenship and year were not available on the statistical office website (except for the Emirate of Abu Dhabi). A survey taken in 2008 has confirmed fertility decline.

In contradiction with most large Arab countries, fertility has continued to decrease in Oman from 3.56 in 2005 to 2.67 in 2009. This is the same in Kuwait, where fertility rates among Kuwaiti nationals, estimated at 4.14 in 2005, have continued to decline. The results are mixed depending on the source: surveys or civil registration. The most reliable, registered births show a reduction of the birth rate, from 32.6 in 2005 to 29.7 per thousand in 2011, a 9% decrease that might imply the fertility rate of Kuwaiti nationals stands at 3.77.

In Qatar, a statistical combination of births at civil registration, census and survey, show that the fertility rate among Qatari nationals, which stood at 4.44 in 2005, has continued to decrease to 3.39 in 2011. Finally, Bahrain fertility rates amongst nationals were estimated at 3.10 in 2005 and have continued to decrease to 2.78 in 2009.

The changes in TFR in Arab countries are generally the result of fertility levels, rather than to changes in its tempo. It is difficult to disentangle these two effects in Arab countries as refined data, (by birth order), is rarely available.

Table 2 summarizes the fertility situation in 19 Arab countries. For four countries: Sudan, Iraq, Libya and Mauritania, it was virtually impossible at this phase of analysis to estimate recent fertility trends. For the fifteen remaining countries, for which estimates since 2005 were deemed possible, the large

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19Some of the coming estimates are provided by ESCWA, Bulletin on population and vital statistics in the Arab Region, United nations economic and social commission for Western Asia, New York, 2012.


21According to the Vienna Institute of Demography and IAASA, "The conventionally reported indicator of the level of fertility in a given calendar year, the period Total Fertility Rate or TFR, reflects the interplay of two components: tempo (timing) and quantum (level) of fertility. When the age at which women give birth changes, the TFR is affected by this shift. In Europe many countries have been experiencing a postponement of births (especially of first births) for several decades, which has been also reflected in an increasing mean age of childbearing. Childbearing postponement results in a decline in the number of births in a given year and therefore depresses the period TFR, even if the number of children that women have over their life course does not change". See also: Bongaarts, J. and G. Feeney. 2006. "The quantum and tempo of life cycle events." Vienna Yearbook of Population Research 2006(Vol.4): 115–151.

22Excluding some officially Arab countries, members of the Arab League: Somalia, Djibouti, Comoros
majority (10) have pursued their fertility transition, whereas in five cases fertility decline has stalled or reversed. Hence a majority of Arab countries have continued to embark in their demographic and family modernization process. Interestingly, among the modernizers, we find the countries of the Gulf area and the Arabian Peninsula, thus Saudi Arabia and Yemen. However, this optimism must be tempered. Countries where fertility transition has been stalling or was reversed are often the heavy weights of the Arab world, i.e. Egypt, Algeria, Syria, not to mention Tunisia and Jordan. Hence, only a minority amongst Arabs, 42%, were still experiencing fertility transition.

Does this mean our views on demographic, family transition and modernization and what they imply in terms of “convergence of civilizations”, should be considered obsolete? Previously, we were confident that the Arab demographic transition meant more than just numbers: TFR decrease and reduction of rate of population growth. It went beyond this, ultimately signifying democratic transition in the family, the society and the political sphere. Does a stalling or reversal of demographic transition signals halt modernization, paving the way to the persistence or the return of traditional families, rigid social structures and authoritarian regimes?

There are many counter-arguments that suggest this demographic setback, if any, might not constitute a symptom of reversal in the overall trend towards modernization, ultimately leading to freer families and altered political regimes. It is important to consider some of these related issues.

First, from a theoretical viewpoint, there is the ‘ratchet effect’, a phenomenon that prevents flashback of a process after a certain stage is attained, an analogy to the ratchet mechanism that prevents a system going backwards, and implicitly forces it to go ahead. Hence, a halt to demographic transition in Arab countries does not necessarily signify a halt to democratic transition. Other factors may relay this demographic and family transition.

Second, it is quite surprising to observe that among the countries where demographic transition was still in progress after 2005, Saudi Arabia, Yemen and the Gulf countries appear in a good place. In spite of their richness, in spite of the population structure dominated by expatriates, advocating for a high national fertility, the transition was not halted. There was no reversal in their population policy.

Third, fertility trend reversal does not mean other demographic or family factors are also reversed, such as mortality, age at marriage, exogamous marriages, nuclearization and women as the head of the household. Important as it is, fertility is not the sole criteria of modernization.

Fourth, the reasons behind fertility increases, or its stalling, are complex and diverse from one setting to another. A superficial explanation would attribute this phenomenon to the “return of Islam”, not only at the political level (Muslim brotherhood in Egypt, An Nahda in Tunisia, PJD in Morocco etc.) but more importantly at the family level: return to tradition, family values, to the humbling in the status of women, to breeding (including early marriage and many offspring). However, there are few points in common between this group of five countries that have undergone recent fertility increases.

In Egypt, an increase in birth rate has been erroneously put on the account of the January 2011 revolution; because uncertainty would have pushed the Egyptians to return to family values. The behavioral shifts are due to “people being under pressure” or because “no one talks about the population problem like before.” However, the Egyptian birth rate started to increase in 2005, years ahead of the revolution. This implies the limited weight of these explanations. A more promising avenue of research should look at the labor market situation, particularly female employment. Fertility decrease might be ephemeral, if female educational progresses, even at secondary and university level, are not supported by the entry of women into the labor force with rewarding jobs. Women could soon return to the status of housewives, with the temptation to marry early and have more children. In Egypt, female participation rate is still low: 24% of women aged 15 years and above are in the labor force. Many are unemployed (officially 19%), under-employed or employed as family employees.

And even less if we had considered the national populations of Saudi Arabia and the Gulf states, only excluding expatriates.

A very well known example is the responsiveness of fertility to the price of oil in the Gulf countries. When it was high fertility oil price was high too. After the oil shocks, fertility has declined. Yet, when oil prices recovered fertility did not increase in parallel because it was no more under the dependence of economic prosperity; other social factors took the lead.

These are the opinions expressed by Hisham Makhlouf, professor of demography at Cairo University.
(agriculture accounts for 46% of females). This leaves only a handful of women for whom the cost of childbearing is significant enough to encourage them to limit their breeding.

In Algeria, the marginalization of women in the labor market and an improvement in security and living conditions after the end of the second Algerian war, boosted marriages and nuptiality. The number of marriages more than doubled, increasing from 177 to 371 thousand from 2000 to 2012. Marital fertility decreased but not sufficiently, hence the increase of fertility rate from 2.40 to 3.02. There are a different combination of factors than in Egypt, but female exclusion from the labor force plays a role.

In Syria, fertility has stalled during the first decade of this century, mainly because fertility transition only concerned a tiny proportion of the population: the coastal region, the Jabal el Arab and the capital, Damascus. These areas are relatively privileged regarding social, economic and cultural achievements, where fertility has dropped to replacement level. The large majority of the country, where economic progress or redistribution of wealth was low, kept fertility at a high level.

In Tunisia, the fertility increase from 2.02 in 2005 to 2.27 in 2012 is puzzling in that this country was the forerunner in family and population issues in the Arab world. An increase to 2.1 would not have raised concern and could have been the outcome of tempo effects or slight behavioral adjustments. At 2.27, the issue is more serious and as yet has not received any explanation.

In Jordan, it is plausible, yet difficult to prove with hard data, that the peculiar population composition of Jordanians and Palestinians, may have played a hidden role in the persistence of relatively high fertility.

Why this stalling of transitions for 6 out of 10 Arab citizen? Figure 9 shows the extreme marginalization of Arab women in the labor force, whose participation rate in 2012 is just 21%, thus, a gap of 53% with males employment rate.

In a single generation, Arab populations went into a series of transitions: cultural with almost universal access to young people to learn to read and write, and the remarkable penetration of females into primary, secondary and university education. In its wake, came the demographic transition thanks to the widespread use of contraception and the decline of early marriage, with behind the scene increasing individuation, even if they do not emerge spontaneously, propagated by media images. In the wake of these demographic and family changes, the disruption of traditional family hierarchies: husband - wife, father- children, brother-sister, could only have a positive impact on the social and

![Figure 9. Employment rate by sex of the population aged 15 years and over by large regions, 2012 (x-axis, region, y-axis, proportion of active population aged 15 years and over the total population ages 15 years and over). Source: International Labor Organization, Global Employment Trends for Women, 2012, Geneva, ILO, 2012.](image-url)
political sphere. Hence the cycle of Arab uprisings, since December 2010, which swept the best-rooted political hierarchies. Women’s status was vigorously enhanced.

The last stumbling block is the labor market, which, for the time being, resists women. Employment improvements for the female workforce are below expectation. Hence the question: What are the chances of maintaining the durability of family and demographic transition, if Arab women are permanently excluded from the labor market? What would be the political repercussions of this kind of exclusion of one out of every two citizens?
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2. Shingo Hamanaka. 2017. Demographic change and its social and political implications in the Middle East. *Asian Journal of Comparative Politics* **2**:1, 70-86. [Crossref]