

## ***Population extrapolation of the 48 algerian wilayates until 2029***

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### ***Introduction***

This paper was prepared when the author participated to the Pew Research Center project “Mapping the Global Muslim Population”, dealing with World Muslim Population prospects. We will estimate the present overall Muslim population in Algeria, and its age-sex distribution by wilaya (in 5 years age-group), including birth, death and growth rates and projected Muslim population by 2019 and 2029

### ***Methods and data***

We have used the 2008 revised United Nations projections for Algeria. The United Nations work with 4 variants: medium, high, low, and constant fertility variant. The hypotheses are available at the website of the Population Division. We have compared the total population figures of these variants to our own estimates based on simple extrapolations of the wilayates’ total population, using the intercensal growth rate 1998-2008. Of course the available data at the wilaya level cannot be used for a projection exercise: Age specific fertility rates, life tables and age specific migration rates by wilaya are lacking and this paper has provided the first indirect estimations of these indexes for Algeria by Wilaya.

However, it would be disputable to build a projection on these indirect estimates. For example, ADJMX does provide a lifetable but the only correct index is the life expectancy at birth, deaths rates are not useable. (See Kouaouci A. & al. « Indirect estimation of life expectancy at birth in subpopulations: an assessment of the US Bureau of the Census worksheet ADJMX », *Genus*, LXI, 2: 35-53.

## ***Results***

### **1. Demographic Trends and Trajectories.**

Between 1966, year of the first census in independent Algeria and 1987, the Algerian population grew by more than 3% per year, almost doubling from 12 to 23 million. This post-war baby-boom was also accompanied by free medical care policy adopted in 1974 that made life expectancy gain 13 years in a decade, from 53 to 66 years. Birth and death rates both plummeted between 1970 and 1987.

In 1986, a national fertility survey (ENAF) showed tremendous change since 1970: women age at marriage went up from 18.3 to 24 years, total fertility rate declined from 7.8 to 5.4, and contraceptive prevalence increased from 7% to 35% of married women of reproductive age (15-49).

Between 1970 and 1986, the crude birth rate fell from 48.3 to 32.4 per 1000. Changes in nuptiality accounted for 65% of this decline and marital fertility for 40%. On the other hand, the age structure increased the birth potential by 5%. (Kouaouci, 1993)

In 1988 youth riots exploded and transformed radically the political scene bringing Algeria in social unrest, violence, and political transition. From a so-called socialist regime with state subsidies for practically every basic need, the country entered a period of Structural Adjustment Programme under the control of the International Monetary Fund. As a result, about 400000 workers lost their jobs and food subsidies were suppressed. The country entered a 10 year 'black' period that ended around 2000. During this period, marriage and birth rates continue to fall and in 2006, the total fertility rate was as low as 2.27 with a female age at first marriage at about 30 years and a contraceptive prevalence at 60%. (MICS, 2006)

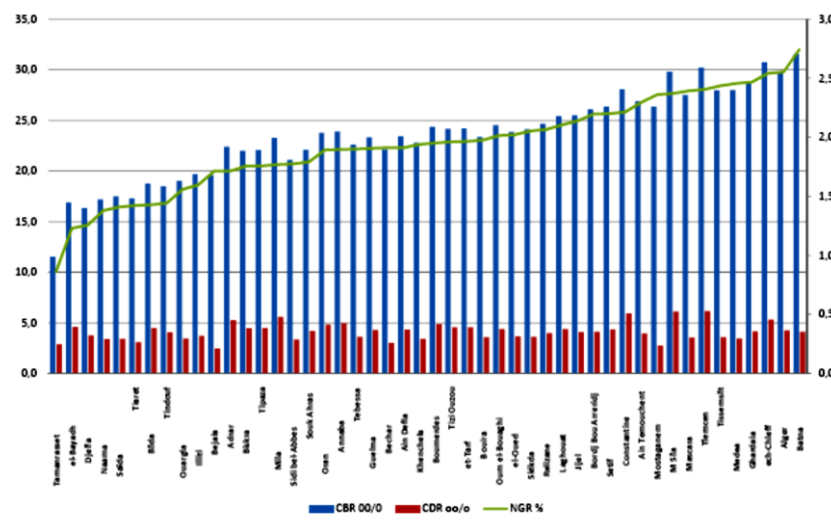
According to University de Sherbrooke website using World Bank Data, the crude death rate in independent Algeria was the highest in 1962 (at around 20 ‰) and the lowest in 2008 at about

5 %. The crude death rate decline was regular despite the 10 year period of social unrest but it has reached a plateau in 2002 and only minor decrease has been recorded after 2002.

Age structure of all wilayate at the 2008 census has been released recently and when we examine pyramids we note that for all wilayate, the 0-4 years old age group is larger than the 5-9 years old, demonstrating a rise of births these 10 last years.

The 2008 census results came as a surprise since the country seems to recover quickly from this terror decade with marriages and births on the rise these last 5 years or so. The country may be living a baby-boom following the terror decade that prevented many marriages and thus births to occur.

According to the National Board of Statistics (Office National des Statistiques) the natural growth rate was 1.57% in 1998 and declined until 2002 with a level of 1.53%. From that year the rate is on the rise and it reached 1.86 % in 2007. (ONS, 2008)



**Figure 1 Birth, death and natural growth rates by wilaya in 2007**

The total number of births has been declining until 2000 when it reached 589000. From that year the trend is on the rise with 783000 births in 2007

Mainly because their limited population size, most Southern wilayates have had the lowest numbers of marriages and births (2007 data). Only 2 of them Ghardaia and Ouargla had more than 10000 births during 2007.

Wilaya	
More than 30000 births	Algiers - Oran – Setif
20000 - 30000	Djelfa – Tiaret – Msila – Constantine – Chlef – Tlemcen – Batna
10000 – 20000	Ghardaia – Ouargla – Jijel – El Oued – Tebessa – Sidi Bel Abbes – Annaba – OEB – Biskra – BBA – Bouira – Relizane
Less than 10000	Illizi – Tindouf – Naama – Adrar – El Bayadh – Bechar – Tissemsilt Laghouat – Saida - Khenchela – Tarf – Ain

Tableau 1 Number of births in 2006 by wilaya

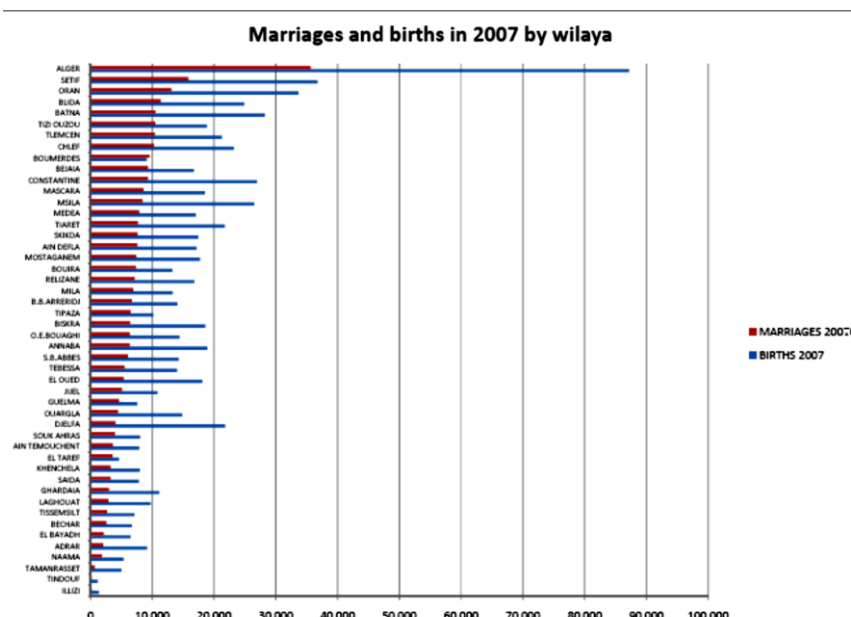


Figure 2 marriages and births by wilaya 2007

Regarding age at marriage, according to MICS 2006, The Singulate Mean Age at first marriage is increasing since 1966, from 23.8 years to 33.5 years in 2006, for males and from 18.3 years to 29.8 years in 2006, for females According to Papfam

these figures were 33 years men and 29.6 years for women in 2000

- 2006 rural male dwellers marry in average at 32.6 years marriage whereas those living in urban environment, do so at 34,2 years. Among females, the difference is less important (30 years in urban environment compared with 29.7 years in rural environment). At the regional level, differences are also noticed: females living in Southern Wilayates marry earlier than those from the west (29.6 years), while females from the Center of the Easter part of the country marry later at 30.2 years
- Looking at geographical areas, females from the south marry earlier (28.4 years) than those from the west (29.6 years). For males, age at first marriage varies between 34 years, in the central region and 32 years, in the south.

Education level is also a determinant factor of age at marriage (28.7 years for women without education against 33.2 years for those having a higher level).

marriage between blood relations in Algeria remains relatively important; a woman on three stated to have unspecified family ties with her spouse; 22% are married to first cousins and 11.3% with couple presenting another family ties.. The proportion of women who have family ties with their husband accounts for 39% among the illiterates whereas it accounts for only 12,8% among the women of secondary level and more.

The data of the investigation emphasize that polygamy remains a marginal phenomenon in the Algerian company, indeed the share relative of the women married to a polygamous spouse accounts for only 3.1% of the whole of the old married women from 15 to 49 years.. The proportion of the women married to polygamous is of 1,4% for the group of age 20 to 24 years whereas it reaches 4,7% for the old women from 45 to 49 years.

The data on death rates published by the National Board of Statistics show that this index has reached a first plateau in 2002 at 4.41 ‰. After that year, the rate increased then decreased then increased again to reach 4.38 ‰ in 2007.

When we examine this rate at the wilaya level we notice that it for most wilayates the figure is around 5 ‰, birth rates show rather large differences from 10 ‰ (Tamanrasset) to 30 ‰ (Batna).

The natural growth rates follow the crude birth rates pattern, ranging from 1% (Tamanrasset) to 2.7% (Batna)

Wilayates	
1- 1.75 %	Tamanrasset –Ouargla – Illizi – Adrar – Tindouf – Naama – El Bayadh
1.75- 2.25%	Sidi Bel Abbes – Relizane -Tebessa – Annaba – Souk Ahras – Guelma – Khenchela – Tarf – OEB - Skikda – Msila
2.25 – 2.75 %	Alger – Oran – Constantine - Batna

**Tableau 2 Growth rates by wilaya**

We can notice that the largest cities are yet the most growing (Alger, Oran, Constantine and Batna). At the opposite, most southern wilayates exhibit the lowest growth rates (1- 1.75%).

Projecting population is not an easy task with all these changes. It is especially difficult to distinguish between Muslim population and non-Muslim if we base our estimations at the wilaya level: no source available provides this information. We have decided to ignore this distinction and just extrapolate wilayates' populations until 2019 and 2029 based on 1998-2008 population size of each wilaya.

Between the last 2 censuses (1998 and 2008) the ranking of the most populated wilaya according to their population size have greatly varied and more changes are expected by 2029 and 2029, based on 1998-2008 trends.

As an example, Djelfa a wilaya from Central Algeria will probably show the most spectacular growth since it will move from the rank 11 in 1998 to the second most populated wilaya in 2029 if it can maintain its 1998-2008 growth rate. This high growth is mainly due to immigration since Djelfa's natural growth is rather moderate. Tlemcen will also gain many positions from 15<sup>th</sup> to 6<sup>th</sup> as well as Biskra from 22<sup>nd</sup> to 19<sup>th</sup> position.

Gardaia, the wilaya home of most Ibadites will also improve its ranking from 40<sup>th</sup> to 38<sup>th</sup>. At the opposite, many large wilayates will loose positions like Constantine from 8<sup>th</sup> to 12<sup>th</sup>, Jijel from 23<sup>rd</sup> to 31<sup>st</sup>, Setif from 2<sup>nd</sup> to 3<sup>rd</sup> and Oran from 3<sup>rd</sup> to 4<sup>th</sup>

However, the 1998-2008 trends might not be sustainable since the beginning of the period coincided with the end of the terror decade 1990-2000 that have seen large population movements for security reasons.

We have compared our total projected population in 2019 and 2029 to the projected population of Algeria by the United Nations (2008 Revised version).

Year	Medium variant	High variant	Low variant	Constant-fertility variant
2005	32 855	32 855	32 855	32 855
2010	35 423	35 423	35 423	35 423
2015	38 088	38 487	37 689	38 263
2020	40 630	41 690	39 570	41 149
2025	42 882	44 747	41 017	43 895
2030	44 726	47 364	42 089	46 360

**Tableau 3Algerian Population (thousands) All Variants 2005-2030**

	Medium	High	Low	Constant-Fertility	Wilaya based extrapolation	
	1	2	3	4	5	6
<b>2019</b>	<b>40108</b>	<b>41028</b>	<b>39186</b>	<b>40554</b>	<b>40091</b>	<b>0,999</b>
<b>2029</b>	<b>44351</b>	<b>46828</b>	<b>41872</b>	<b>45856</b>	<b>47649</b>	<b>1,017</b>

**Tableau 4 Comparing UN projections and population extrapolation in Algeria**

While for 2019 our estimation based on 1998-2008 trends is very close to the UN medium variant (40091873 compared to 40108400), we notice that for 2029, the extrapolation based on wilayate is closer to the high variant but overestimates the UN figure by 1,7%

Ten years ago, a team of the London School of Hygiene and Tropical Medicine conducted an exercise comparing Algeria and Tunisia (the author was a member).

‘The population of Algeria in 1965 was taken as the baseline for the projection; this is about the time that fertility in Algeria and Tunisia started to diverge. Population growth was then projected forward using the observed fertility and mortality rates of Algeria until 1992 and then using projections until 2050. This exercise suggests that in 2025, the population of Algeria will be 48 million and in 2050 the population will have grown to over 60 million. The second projection was then made using the fertility and mortality rates from Tunisia for the same period... if Algeria were to have experienced exactly the same fertility and mortality schedule as Tunisia over the period, its population would have reached 36 million by 2025 and, by 2050, it would be 43 million. The figure also shows that, under neither set of assumptions would population growth have stabilised by 2050, suggesting that



this difference in population size of 17 million in 2050 would continue to grow further into the future. '(Lee, 1999).

At the 1998 census, there were 113,000 foreign born persons in Algeria, but most of them declared themselves Algerians: they may be of dual citizenship or Algerians born abroad. Most of those born in France (90%) declared themselves Algerians, as well as those born in Tunisia (90%) and Morocco (80%). Foreign born persons in Sub-Saharan countries have also declared the Algerian citizenship like those born in Mali (80%) or Niger (40%).

'Algeria choices for industrialization with a view to international competition compelled decision-makers to favor capital-intensive techniques of production at the expense of labor-intensive ones. Yet, the latter are more relevant to fast growing populations.

This policy was feasible thanks to the oil revenue. But in 1986, when oil prices collapsed, Algeria was obliged to reduce food imports that caused riots and social unrest. Due to the fall of oil price, the debt service increased from 35% to 80% of total exports, forcing the country to seek IMF financial assistance. It was only then that Algeria was compelled to engage in economic reforms to meet IMF conditions. A significant aspect of the reform concerned the labor market. Algeria had to deregulate hiring and firing and liberalize wage bargaining. In a population used to having jobs for life, these reforms led to the firing of around 400,000 workers.

However, trade unions obtained salary increases for virtually every sector, protecting their workers but, at the same time, making it difficult to hire new workers, especially when the minimum wage is overestimated as argued by economists like Kada Akacem.<sup>1</sup>

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<sup>1</sup> 2002, Kada Akacem, 'Economic reforms in Algeria: an overview and an assessment', Conference on 'Islam, Democracy and the State in Algeria: Lessons for the Western Mediterranean and Beyond', Center for Middle Eastern and North African Studies, University of Michigan, Ann Arbor, September 26-29, 2002.

In general, privatization warrants a disengagement of the state. In practice, this did not happen in Algeria. For decades, the state represented the first employer thus creating a lot of expectations amongst the population in general and the workers.

With a transition to a multiparty political system, economic reforms at a high social cost are very hard to implement as illustrated by the regular strikes, riots and protests the short-term effects and potential long-term impact of such riots.

In Algeria, Chinese firms have obtained 60% of the housing construction programme. Nonetheless, the decision-makers still accept that these firms use Chinese workers when an estimated more than 2 million Algerians are unemployed' (Kouaouci, 2004-B).

Again, no data on emigration or immigration based on religion are available. But given the fact that 99% of the Algerian population is Muslim, this will hardly significantly modify any important trend.

According to the World Bank (Université de Sherbrook) the net migration has diminished regularly from a top of (-493761) for the 5 year period 1960-64 (1962 is the year of independence with about 1 million French leaving Algeria and returning Algerians) to (-205228) in 2000 and after. The same source estimates the foreign-born population living in Algeria. The figures show a decrease from a top of 430447 persons in 1960, to 214319 persons for 2006 and after. Finally, the same source provides estimates of the Algerians with a refugee status. Very strangely, the number of refugees increases after 2000, while violence was decreasing. The peak is observed in 2002 and 2005 with 12100 refugees.

## 2. Family, Fertility, Mortality, and Maternal and Infant Health

Life course development, including marriage and divorce

A Hadith from the Prophet encourages capable Muslims to marry. But the degree of obligation varies from School of Thought to

School: from authorized (Mainly Shafiits) to recommended (Mainly Malikits) to mandatory (mainly Hanbalits). However in contemporary Algeria marriage is considered a must, although late age at marriage are observed for both males and females. (Kouaouci, 1983)

Norms commanding divorce in Islam are designed to limit it by imposing the 'iddah a period of cohabitation without sexual contact for a period of 3 months to make sure that the wife is not pregnant. During this period, spouses can decide to stop the divorce process and resume their marital relationships. Divorce is the most disliked 'halal/authorized', and it is unlawful to divorce a pregnant woman until she delivers her baby. However, in Algeria this rule is rarely respected. Although polygamy is authorized under certain conditions including equity, it is very rare in Algeria (2-3%).

Re-marriage is permitted in Islam provided that a period of iddah is observed to make sure that the woman is not pregnant. The duration of this period varies from 3 months in case of divorce to 4 months and 10 days in case of widowhood. However, this norm is rarely observed in Algeria.

The traditional norms of family and quasi-universal and precocious marriage that characterised Maghreb society until recently are in evident decline, foretelling important changes at the level of individual behaviour. This behaviour, as it gradually becomes aggregated and generalised to the population, reduces the population growth that bore it, thereby completing the circle. However, in Algeria and elsewhere, population growth did not evolve in isolation.

Specifically, structural adjustment programmes implemented in Algeria and other countries through agreements with international financial institutions magnify the difficulties of daily survival and hasten the diffusion of the alternative family model to the culture. In addition to structural adjustment, this cultural diffusion, population policies and the Malthusian pressures of poverty must

be taken into account not only as consequences or results of population growth, but also as variables that intervene directly at various points in the cycle.

Algeria is involved in other transitions as well: economic (toward liberalisation and adjustment), political (toward a multi-party system) and sociocultural (toward alternative family and matrimonial models). The main factors are population growth, the size of the population of 15–24-year-olds, the postponement of marriage age, the evolution of employment opportunities for youth as well as household structure, and the role of structural adjustment. More importantly, the essay tests the extent to which these aggregate phenomena are translated at the level of culture, or the individual

attitudes and behaviours that are indicators of the magnitude of the ‘cultural diffusion’ of demographic change, with important consequence structures exert new and formidable pressure on the labour market, further modifying not only the family and other sub-systems, but also national level economic and, perhaps, political arrangements. In particular, the traditional norms of family and quasi-universal and precocious marriage that characterised Maghreb society until recently are in evident decline, foretelling important changes at the level of individual behaviour. This behaviour, as it gradually becomes aggregated and generalised to the population as a whole, reduces the population growth that bore it, thereby completing the circle.

Algeria, which are subsequently involved in other transitions as well: economic (toward liberalisation and adjustment), political (toward a multi-party system) and sociocultural (toward alternative family and matrimonial models). (Kouaouci, 2004-A)

Current fertility levels and its correlates

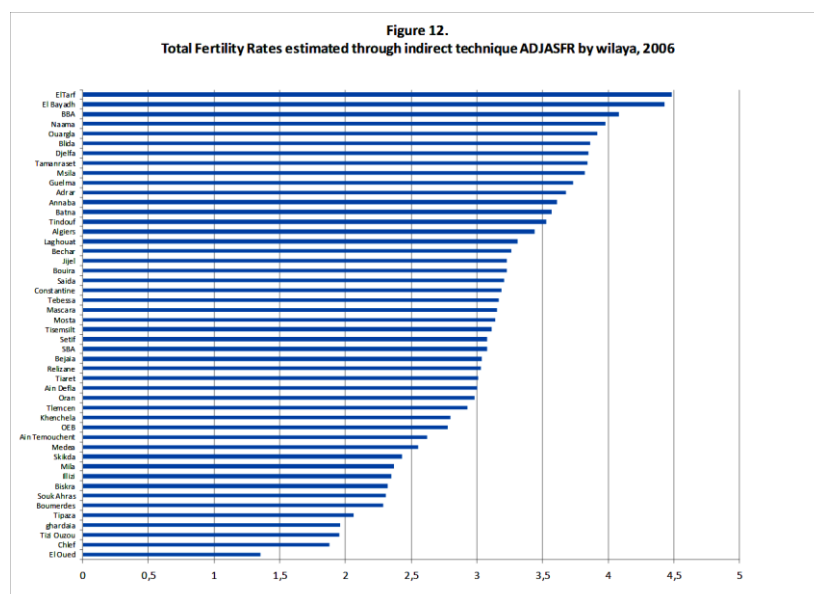
Ulemas/Muslim scholars have different views on fertility and birth control. Some of them opposed family planning on the ground that it is a plot of the West against Muslims like Mawlana Al Mawdudi a well respected Pakistani scholar, while others

allowed birth spacing like in Algeria where 2 fatwa have been released in this regard by the High Islamic Council, the first one as soon as 1968.

Around 1970, the Algerian birth rates reached a record high of some 50 per 1,000. Three factors were responsible for this situation: the large proportion of women of reproductive age, very early marriage and very high marital fertility. The results of the Algerian national survey conducted at the time can be used to define 'natural fertility' and to measure its components. A survey taken in 1986 provided information on the changes which had emerged during these fifteen years and the mechanisms underlying the Algerian fertility decline from 8 to 5.3.

'Most of this decline in marital fertility occurred among older women, suggesting increased contraceptive uptake was responsible. No decline occurred in the 20-24 age group and, in the 15-19 age group, there was actually an increase. Using a proximate determinants analysis in urban and rural areas separately, Kouaouci (1992) shows that breastfeeding durations in urban areas shortened over the period 1970-86, having a potentially positive effect on fertility. However, increases in contraceptive uptake more than compensated, resulting in an overall decline in marital fertility. In rural areas, breastfeeding also declined but contraceptive use did not increase enough to compensate. In addition, during this period, use of abortion declined in Algeria and rates of secondary sterility decreased, factors which tend to lead to an increase in marital fertility, although

their effect is difficult to quantify' (Lee, 1999).



**Figure 3 Total fertility rates by wilaya in 2006**

Then in 2006 the Total fertility rate reached 2.6 (MICS, 2006)

Using the ADJASFR technique developed by the US Bureau of the Census we have been able to estimate current Total Fertility Rates for all wilayates based on the pattern provided by MICS 2006.

At least 5 wilayates are already below the replacement level of 2.1: El-Oued (1,35), Chlef (1,88), Tizi Ouzou (1,95), Ghardaia (1,96) and Tipaza (2,06). Among these wilayates, Tizi-Ouzou and Ghardaia are usually identified as Tamazight (Kabyles and Mozabites) and endogamic marriages may be suspected as underlying factors of low fertility, while Boumerdes and Tipaza are wilayates of extension for Algiers and most workers are daily commuters to Algiers.

On the other hand, many wilayates still show high fertility, like El Tarf (4.48), El Bayadh (4.43) and Bordj Bou Arreridj (4,08)

- Current adult, infant-child and maternal mortality

According to the National Board of Statistics, infant mortality has decreased from 38.7 to 27.9 ‰ births for boys between 1998 and

2007, and from 36 to 24.4 ‰ births for girls during the same period.

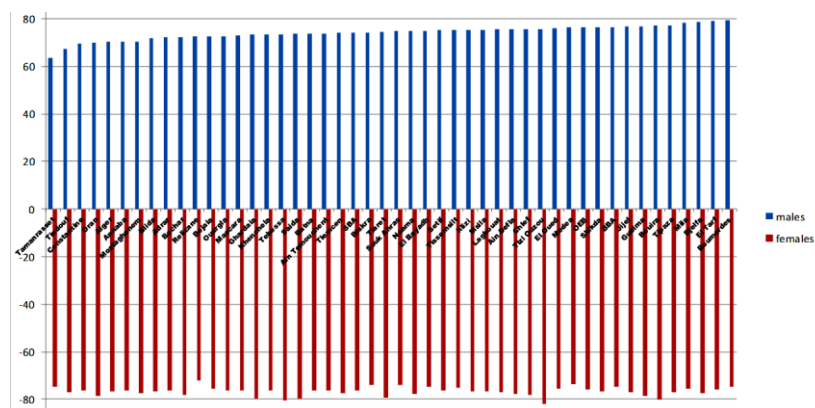
#### 1999 figures

Life expectancy at birth is increasing regularly in Algeria from 70.5 in 1998 to 74.7 in 2006 for males that is ½ year gain per year and from 72.9 to 76.8 for females. Gender differentials in life expectancy at births is diminishing from 2.4 to 2.1 years 1995 and 2007.

For males, infant mortality has been almost divided by 2 in 14 years. It is the largest decrease excepted at 70 years. Between 1-20 years, we see modest improvement. The same trend is observed among females: large decrease in infant mortality then modest decrease for all ages between 1993 and 2007 expected 70 years

Using the ADJMX technique developed by the US Bureau of the Census we have been able to estimate life expectancy at birth for all wilayates based on the pattern provided by the 2007 life table published by the National Board of Statistics. At the national level, life expectancy for males in 2007 was 74.7 and for females 76.8.

Comparing wilayates we found large differentials. Tamanrasset and Tindouf, two southern wilayates presented the lowest life expectancy at birth (63,64 for males and 74,44 for females and 67,27 and 76,95 respectively) followed by Constantine (69.49 and 76,18). On the other hand, the 3 wilayates with the highest life expectancy at birth are Boumerdes (79,45 and 76,43), El Tarf (79,12 and 75,75) and Tipaza (77,31 and 76,93).



**Figure 4 Life expectancy at birth by gender and wilaya 2007**

According to the National Board of Statistics, infant mortality has decreased from 38.7 to 27.9 ‰ births for boys between 1998 and 2007, and from 36 to 24.4 ‰ births for girls during the same period. Papfam estimate for 2002 was 31,2‰, down from 44‰ in 1992. Differentials in infant mortality rates did exist according to:

mother's level of education: 40 ‰ for illiterate mothers against 12 ‰ for mothers of secondary level or higher

Mother's age: 40.2 ‰ for mothers less than 20 or older than 35 against 30 ‰ for mothers between 20 and 34 years.

Household sanitation: 42.2 ‰ for household not covered by sewerage system against 29.4 ‰

Two important causes of infant morbidity and mortality are acute diarrhoea and respiratory infections. Between 2000 (Papfam) and 2006 (MICS) acute diarrhoea in children less than 5 during the two weeks preceding, the proportion of children having suffered from acute diarrhoea has declined from 15% to 8.8%. For infants between 6 and 1 month, it declined from 30% to 17.3%.

In 2006, some differentials did exist:

- by gender: 9% among boys and 8,6% among girls
- by residence: 9,3% in rural areas against 8,5%. in urban areas,



- by region: highest in the East of the country (12,3%), and followed by the South (11,6%), the Center (6,6%) then the West (5,9%)
- by level of living standard: 10, 1% for the lowest level of living standard, against 7,5% for the highest level of living standard.

Regarding infant mortality, the National Board of Statistics has released infant deaths by wilaya as well live births by wilaya for 2007. We have calculated infant mortality rates by wilaya but we must be very cautious since there are many errors still needing to be corrected before we can trust these estimates. (ONS, 2008)

For 2007, national estimates gave a level of 27.9 ‰ births for males and 24.4‰ for females. We notice large differentials by wilaya.

For males, Saida (16.6), Guelma (17.2), Oum El Bouaghi (17.3) and Oran (17.7) have the lowest level of infant mortality and Medea (47), Tiaret (40.1) and Tamanrasset (39.1) the highest.

But for females, the picture is quite different: El Bayadh (11.5), Ouargla (12.7) and Bejaia (13.2) show the lowest level of infant mortality and Illizi (35.8), Ghardaia (32) and Tipaza (31.2) the highest.

We would have expected a rather different pattern especially for the southern wilayates with difficult access to health structures. It came as a surprise to see El Bayadh and Ouargla with the lowest levels of infant mortality. More scrutiny and data checks are needed.

Regarding maternal mortality, a special methodology is needed in order to estimate its level. In 1999, a survey was conducted in Algeria about maternal mortality exploring death rates and causes of death. 7757 files of deceased women in age of childbearing (15-49 years) have been used with visits to both medical structure and residence. Among these deaths, 697 were declared maternal

deaths after screening, 556 occurred in health structures (80%) and 141 at home (20%) (Bouisri, 2001)

Maternal death remains still high (697 cases), that is to say a maternal death rate of 117,41 maternal deaths for 100.000 live births.

In 2004, another estimate for maternal mortality is provided in the Algerian Report on Human Development: 99.5/100.000 live births. According to the authors, this index should be below 50/100.000 live births given the proportion of medically assisted deliveries

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According to MICS 3, ALGERIE 2006, Antenatal visits are on the rise among young generations from 64.9% for mothers aged more than 40 to 78.1% for those less than 30. Because of the huge distances involved, southern pregnant women are less monitored than others (64.2% compared to 80.9% for mothers from the central region) Urban/rural divide is less clear-cut 72.4%/77.5%

At the opposite, education is a discriminator factor since highly educated women exhibit 92.1% while illiterate women are monitored in a proportion of 65.1% only

### 3. Socioeconomic Issues

- **Gender and race,**

Regarding gender, Algerian women have not yet taken their share in the labor market or even in the social and political scene, but this is likely to change very rapidly since more females students are now in universities than males in many disciplines and because of the delay in age at first marriage.

‘Following its war of independence from France (1954-62) Algeria aligned itself strategically with the Soviet Union. It was as part of this anti-imperialist stance that the need to limit population growth was rejected as a western-imposed issue aimed at weakening rather than assisting developing countries. This

wariness towards western domination was reflected in a motion adopted by the National Union of Algerian Women (UNFA) in 1966 which stated that FP be provided with strict medical control and training of qualified personnel...in order not to fall into the problem met by several countries where foreigners have themselves implemented the family planning structures, in place of nationals, neglecting both medical control and human contact (quoted in Kouaouci 1994:14). It was in this unreceptive environment that FP was initially introduced in Algeria in 1966, in support of maternal and child health (MCH) (Kouaouci 1994:9), but later dropped from public policy as President Boumedienne became increasingly vocal against "false solutions like birth control" for the problems of development (quoted in Kouaouci 1994:6).'' (Lee, 1999)

Following efforts by United Nations women organizations efforts, Algeria has set up a centre to collect, collate, analyze, store, and disseminate relevant information on women. Such centers are also responsible for compiling gender-disaggregated data that is central to meaningful planning and policy formulation.

Algeria formulated in 1998 a policy to enable those working at home to subscribe to the social security and retirement program. Algeria have also instituted flexible working hours and home-based work (Kouaouci, 2001-B)

Following the new development trend in Africa, Algeria has devised funds, credit schemes, savings and credit societies and micro-finance institutions providing loans, grants and training in business and management skills.

Regarding race, Algeria faces many conflicts, two of them challenging its central authority if not its integrity: armed opposition of the so-called Islamists, and the Berberist movement that is a long-lasting form of civil disobedience.

Many other dichotomies exist and may involve latent conflicts, but we will not

deal with them here: French-speaking/Arab speaking intellectuals and journalists, regional

rivalry, laic/religious, Ethnic Berbers/Arabs,

Eradicators/dialogists within the government

and even Salafists/Algerianists within the Islamic movement. (Kouaouci, 2007)

Regarding race, it is no secret that a political movement has been asking for autonomy for years, based on ethnic considerations. For decades, the official stance was Algerian people are Arabs and Muslims. Many troubles occurred fueled by frustrations in Kabylie a major Berber-Tamazight region. The government has retreated from its old attitude to recognize only Arabic identity and language in Algeria. There is now a TV channel in Tamazight as well as a radio channel. Tamazight has been recognized as a national language, but not yet as an official language.

- **Educational attainment by gender**

At 2006 Multiple Indicators Cluster Survey 2006 (MICS 2006), 15% of males were without any education and 30% with a primary level, 45% of secondary level and 5% were highly educated. Among 60 and plus, 75% were uneducated while this proportion falls to 3% among 10-19 years

Among females, 30% were without education, 25% with a primary education and 37% with a secondary education and about 5% with high education.

Among 60 years and plus: 90% were without any education and the proportion falls to 3% for 10-19 years old.

Most of the differences by gender have diminished. The Algerian educational system produced for many years big numbers of

excluded students. During 1991, a year before a decade of violence started, about 400,000 youth were excluded from the system: 16,000 before finishing the elementary cycle ('basic') of 9 classes, 197,000 oriented 'towards' the job-market, 159,000 before finishing the secondary cycle. That year, the vocational training system objective was to absorb 100,000 youth. A question that can be asked: how about the remaining 300,000 excluded youth? Not so surprisingly in 1992-armed violence exploded and the largest part of the engaged troops were young males... At the 1991 survey, only 22% of the 15-29 years had a job and about 36,7% were interested by a vocational training. The proportion of youth aged 15-19 years engaged in such training was about 10%, higher than in Tunisia and Morocco, but much lower than in Europe for example: 64% in Germany (1992), 65% in Sweden (1992), 48% in France (1992). Vocational training should receive more political interest and more resources. This sector could absorb most of the excluded students aged 15-19 and give them better chances in the job-market. However, programs, admission conditions, regional location will have to be re-considered. Training has to be directly linked to the needs of the job-market. It has to be more than a way to absorb educational failures.

#### Occupation, unemployment, and economic development

The most recent official statistics on employment are hard to believe: unemployment rate that was as high as 26,4% in 1997 is down to 11,3% in 2008 based on results of the Labor Survey, while the social situation is rather worsening day after day.

Unemployment was 24% for Algeria according to the before-last census (1998) down from 30%. However, for youth 16-24 the figure was higher: 71% (68% for males and 84% for females). According to UNDESA data, unemployment was 25.8% among males and 2% among females in the 15-19 age group in 1992 and 33.1% among males and 4.9% among females in the 20-24 age group.

In fact, the way unemployment rates are calculated can be misleading for certain age-groups, as 15-19 or 20-24 precisely. At these ages many are still engaged in training or family formation for females and are not really concerned by unemployment. ILO suggested a way to calculate the true unemployment rate by multiplying the activity rate by the unemployment rate. We used this method for Algeria and the results are: about 34% for 15-19 and 17% for 20-24.

An in-depth analysis of youth unemployment warrants a comparison of the weight of the 15-24 cohorts with those aged 55-64 years to show the tension on the job market. In fact, these two groups can be considered as representing the 10 generations entering into (15-24 years) and exiting from (55-64 years) the working population. These groups' ratio was 5.4 in 2000 and is expected to progressively decrease to 4.83 in 2005 and 3.6 in 2010 to reach 2.07 in 2020.

In 2000, for every 10 retirees an estimated 54 first time young job seekers were waiting to fill those retirement vacancies because of the past demographic growth. This single indicator cannot be considered as the only root cause of the conflict in Algeria, but it does indicate its social and demographic factors illustrated in the high proportion of youths that were both available to engage in informal activities including terrorism as a way out of the vicious circle of idleness, frustration and poverty. (Kouaouci, 2004-B)

Many of them can be forced to engage in these deviant activities by use of drugs, or even coercion. A UN figure estimates to 300,000 the number of youths aged 10-24 engaged in arm conflicts. Indeed, without a job, these youths have no hope for social integration through economic activity, social and marital status because they can neither afford to get married nor have their own home. In Arab societies where marriage have been the only recognized institution for affective and sexual life for centuries, it is the objective of most young people to build a family when they can afford to sustain a family. Facing this bleak

future were the promises by the terrorist leaders to have socio-economic status, wealth and everything that a normal youth aspires to.

- **The rural/urban divide including internal migration**

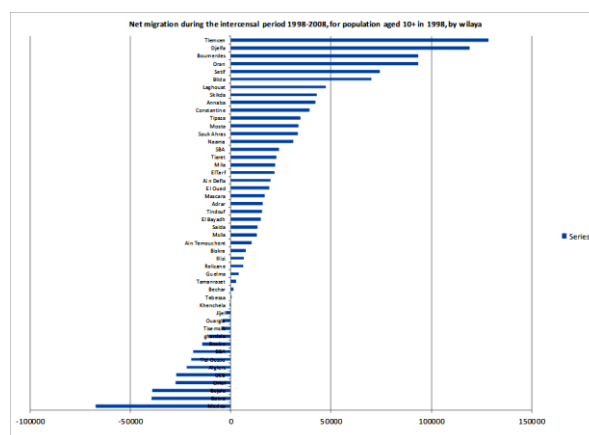
The rate of urbanisation in Algeria has grown rapidly after independence in 1962 from France. In 1954, at the inception of the independence war, the proportion of urban population was 20%, then 31% in 1966, 40% in 1977, 48% in 1987, 58% in 1998 and more than 60% presently.

At the wilaya level, some Southern wilayates, mainly South-West, Central North, are attracting migrants, while North East, North West are losing migrants.

Between the first census of independent Algeria in 1966 and the third one in 1987, it was estimated that more than 1 million of migrants moved between wilayates, excluding children less than 10 and intra wilaya movers as well as return migrants.

1966-1977: 415275 persons (aged more than 10) moved between wilayates, representing 6.3% of the population with a female dominance 214553 compared to 200722 for males. Female migration was mainly by marriage (Kouaouci, 1992).

During this period, Algiers was the first destination with 112953 migrant (13% of its population over 10) followed by Oran (26%), Blida (20%), Annaba (23%) and Ouargla (18.8%)



#### **Figure 5 Net migration by wilaya (1998-2008)**

1977-1987: 580780 persons (aged more than 10) moved between wilayates, representing 5.6% of the population with a female dominance 308748 compared to 272032 for males. Female migration was mainly by marriage.

During this period, Blida was the first destination (winning 8.3% of its population by migration) followed by Boumerdes (6.2%), Tipaza (5.5%), Oran (2.3%) and Mostaganem (3.5%). Algiers presented the highest negative migration balance (-120734) representing 11% of its population. However we have to mention that many workers living in Blida, Boumerdes and Tipaza were in fact daily commuters working in Algiers. Besides, many slums in Algiers have been eradicated and their residents transported by force to their wilaya of origin.

#### **1987-1998**

Positive net migration by absolute net migration: Oran – Boumerdes – Blida - Tipaza- El Tarf- Ouargla – Djelfa- Biskra –

Negative net migration by absolute net migration: Algiers - Medea – Adrar -Jijel – Relizane -

1998-2008 Internal migration estimated through indirect technique CSMIGR (US Bureau of the Census)

Positive net migration by absolute net migration: Tlemcem – Djelfa — Boumerdes – Oran – Setif - Blida - Laghouat- Skikda – Annaba – Constantine –Tipaza – Mostaghanem – Souk Ahras – Naama – SBA – Tiaret –Mila - El Tarf – Ain Defla- El Oued- Adrar -Tindouf – El Bayadh- Saida – Msila –Ain Temouchent – Biskra -Illizi – Relizane- Guelma - Tamanrasset –Bechar – Tebessa

Negative net migration by absolute net migration : Medea – Batna Bejaia – Chlef – OEB - Algiers – Tizi Ouzou – BBA – Bouira- Ghardaia – Tissemsilt – Ouargla – Jijel – Khenchela -



These ranking are based on absolute net migration figures. If we use net migration rates, the picture will be different: the Southern wilayates will be among the most attractive ones (Illizi taking the lead followed by Tindouf) but with small population size.

- **Youth and elderly**

Based on the medium variant for Algeria, the number of elderly (60+) will grow from 2.12 millions in 2005 to 12.06 millions in 2050, while the number of youth (5-29) will decrease from 10.5 millions in 2005 to 9.2 millions in 2050. The curbs will cross in 2045, and at that date Algeria will count more elderly than youth. The share of the proportion aged 60 years and more will account for 24% of the total population in 2050.

This tremendous change will come as a surprise as Algeria is always depicted as a youth population. Ageing is coming very fast. Unemployment of youth has been such a nightmare that little attention has been given so far to elderly.

Their relative weight of elderly will be reinforced considerably in the years 2030-2050 with the arrival at the retirement age of the generations of the baby-boom of the seventies.

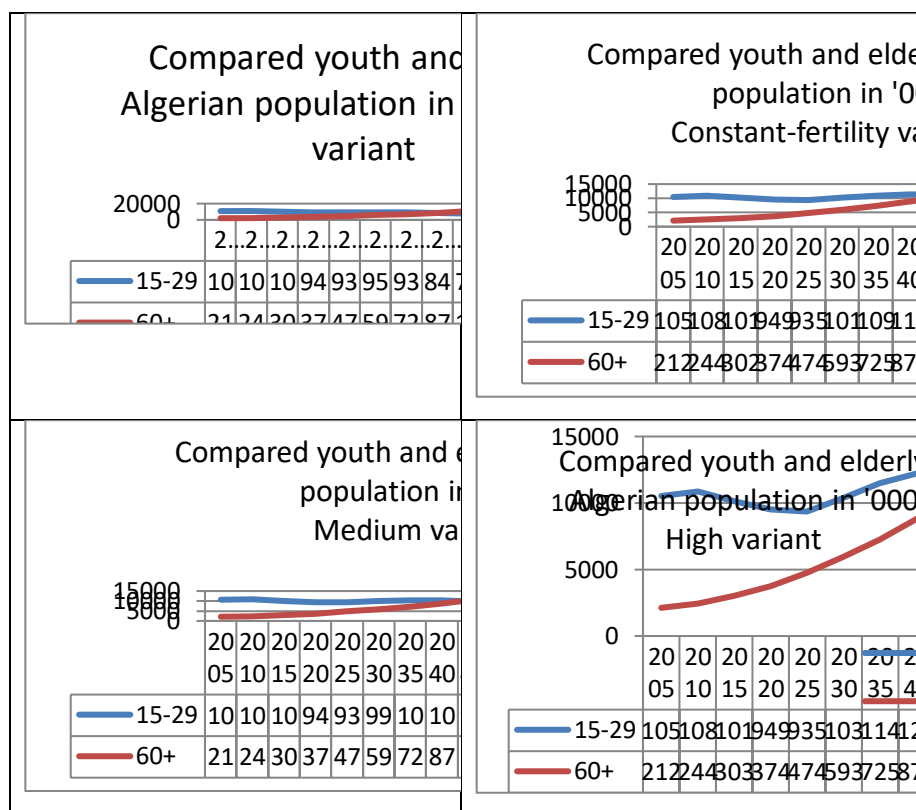
Algeria will know a potentially favourable phase for its development. A phase generated by the expected decline of fertility. However, many indicators show that marriage and fertility may still rise. In fact, the decrease of the proportion of young children (0-4 years) that has been documented by the 1998 census does no longer exist in the 2008 age structure.

Some demographers have spoken of `` a demographic golden age`` for Algeria with less children because the society could direct more funds to development and less funds to feeding, schooling and other demographic investments.

Even if this demographic golden age may be coming, new needs will quickly appear as ageing population with about half only will be financially autonomous.

PAPFAM in 2002 did include a specific questionnaire on the elderly and provide many data on elders.

- State of employment of the elderly: 7,9% of the elderly declared that they have an economic activity (remunerated) at the time of the investigation (13,9% of men and 2,0% of women). Regarding occupation in the past, 45,5% of the elderly stated that they did work in the past (82,0% of men and 11,7% of women).
- By residence, elders working at the time of the survey in rural area are 10,3% compared to 6,3% for the whole population
- About half of the elderly are financially independent and even stated that they provide help to other members of the household.
- The relative share of the elderly who are dependent financially of others increases with age (from 39,4% among 60-64 years to 47,5% among 80 year and over).
- According to the source of income: 52,3% of elderly live primarily from their retirement pensions. In addition, 27,8% stated that they receive a financial aid on behalf of their children. However only 23,3% declared that their income is sufficient to meet their needs.
- According to residence, retired people live generally in urban areas.
- Elderly are mainly illiterates: 83% of the elderly are illiterate (72% of men and 94% of women)
- 94% of the elderly live with other members of their family and less than 2% live alone
- The respective proportions of men and women engaged in a commercial economic activity are respectively 14% and 2%.
- 71,1% of men live from their retirement pension and 34,4% of women live from their children assistance.



**Figure 6 Youth and elderly compared by UN variant**

### ***Discussion and Conclusions***

It is not easy to speculate about the political game in Algeria because of its opacity. We are used to hearing about divergent views between the generals and the successive Presidents these last 18 years: one has been killed by his bodyguard, two have resigned.... Terrorism seems weakened but still recruits youth...and the question is: are Algerians still willing to live by the Islamic rules? After 18 years and many elections, referendums, and political moves to refute the idea, an unexpected answer came from an international survey of the University of Michigan conducted in some Arab countries including Algeria (in 2002). This survey was carried out as part of the World Values Survey that has covered already about 80

countries all over the world. In Algeria, the sample consisted of 1,282 individuals, including 650 men and 632 women.

To the question whether the government should only implement the laws of the Shari'a,

36.7% strongly agree and 34.9% agree, while 28.4% were neutral or disagree.

To the question relating to the political democratic system, 60.4% find it very good,

32.3% good and only 7.3% bad or very bad.

Interestingly, the author is puzzled with what he considered contradictory trends, taking for granted that democracy cannot go along with shari'a, while a comparison of Algeria, Morocco and Egypt supports the same trends.

After more than 10 years of all-out war against armed groups, youth are still being recruited. The most urgent task of the government is to provide them with jobs and training. Algeria has re-paid most of its external debt and can avoid the IMF-World Bank conditions, especially those related to job creations. If the government fails to do so, the country will have to go through a long period of violence even if terrorism is over: delinquency is already on the rise in Algeria.

Unfortunately, the oil-rentier state of mind makes decision-makers think only of easy solutions for difficult problems. Me Farouk Ksentini, chair of the government Human Right League, recommended compensating the families of the disappeared up to '1 million Dinars (~US \$13,800) plus a death certificate to close the file.'

The future of Algeria will be determined by the fate of its youth...if they remain excluded the worst is yet to come.

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## Annex

Ranking wilaya by size in 1998										Ranking wilaya by size in 2009									
	Pop. 1998	Rank t	Pop. 1998	Wilaya	Pop. 1999	Pop. 2008	Pop. 2009	Pop. 2015	Pop. 2025		Rank by size	Pop. 2025	Wilaya		Rank by size	Pop. 2025	Wilaya		
Adrar	311562	1	2557347	Alger	319543	401234	411533	529952	682479	Adrar	1	3696870	Alger						
Ain Defla	659660	2	1311110	Setif	669992	770577	782646	914243	1067966	Ain Defla	2	2520006	Djelfa						
Ain Temouche	327291	3	1213789	Oran	330629	362242	365936	405014	448265	Ain Temouch	3	2292726	Setif						
Alger	2557347	4	1106540	Tizi Ouzou	2587929	2880162	2914605	3282516	3696870	Alger	4	2015481	Oran						
Annaba	557707	5	962261	Batna	565014	635243	643566	733039	834951	Annaba	5	1698445	Blida						
Batna	962261	6	856837	ech-Chleff	973698	1082947	1095819	1233255	1387929	Batna	6	1408359	M Sila						
Bechar	275484	7	855582	Bejaia	229326	266987	271536	321516	380694	Bechar	7	1387929	Batna						
Bejaia	855582	8	841930	Tlemcen	859793	898641	903064	948513	996249	Bejaia	8	1385621	Boumerdes						
Biskra	575706	9	810702	Constantine	587544	705663	720173	882742	1082007	Biskra	9	1288737	ech-Chleff						
Blida	783142	10	805266	M Sila	802945	1005300	1030721	1325111	1698445	Blida	10	1218030	Sikida						
Bordj Bou Arre	555162	11	800986	Medea	540118	606759	612175	669071	731255	Bordj Bou Ar	11	1199691	el-Oued						
Bouira	628767	12	796924	Djelfa	636071	705750	713949	801361	899475	Bouira	12	1184551	Constantine						
Boumerdes	646326	13	783142	Blida	662423	826586	847172	1083448	1385621	Boumerdes	13	1162135	Tiaret						
Constantine	810702	14	777600	Sikida	820680	916195	927472	1048159	1184551	Constantine	14	1136316	Tizi Ouzou						
Djelfa	796924	15	725805	Tiaret	827076	1155320	1199032	1738266	2520006	Djelfa	15	1103146	Tlemcen						
ech-Chleff	856837	16	676093	Mascara	867755	972500	984892	1117841	1268737	ech-Chleff	16	1082007	Biskra						
el-Bayadh	168757	17	674239	Mila	173643	224502	231002	307308	408821	el-Bayadh	17	1067966	Ain Defla						
el-Oued	503485	18	659660	Ain Defla	517786	666233	685157	906629	1199691	el-Oued	18	1056271	Mila						
et-Tarf	352485	19	646326	Boumerdes	357371	404507	410114	470641	540102	et-Tarf	19	1055867	Mostaganem						
Ghardaia	298974	20	642150	Relizane	304546	359609	366311	440603	529962	Ghardaia	20	1035305	Mascara						
Guelma	429833	21	630992	Mostaganem	433525	468215	472237	514405	560339	Guelma	21	1028175	Oum el-Bouaghi						
Illizi	33425	22	628767	Bouira	34958	52333	54733	85694	134170	Illizi	22	996249	Bejaia						
Jijel	572928	23	575706	Biskra	577971	625406	639911	688700	751783	Jijel	23	974567	Laghouat						
Khenchela	327809	24	572928	Jijel	31624	368018	372301	417967	469235	Khenchela	24	947949	Relizane						
Laghouat	316282	25	557707	Annaba	327975	454707	471517	677883	974567	Laghouat	25	899475	Bouira						
Mascara	676093	26	555162	Bordj Bou Ar	685451	775718	786455	902342	1035305	Mascara	26	895833	Tebessa						
Medea	800986	27	548948	Tebessa	802058	811771	812857	823802	834895	Medea	27	868175	Ouargla						
Mila	674239	28	525573	Sidi bel-Abb	684074	779300	790667	913870	1056271	Mila	28	860923	Tipaza						
Mostaganem	630992	29	519060	Oum el-Bou	641559	744986	757461	894303	1055867	Mostaganem	29	834951	Annaba						
M Sila	805266	30	505568	Tipaza	819919	964392	981940	1175978	1408359	M Sila	30	834895	Medea						
Naama	127279	31	503485	el-Oued	132667	192678	200835	304029	460246	Naama	31	757634	Sidi bel-Abbes						
Oran	1213789	32	444350	Ouargla	1233808	1429509	1453086	1711335	2015481	Oran	32	751783	Jijel						
Ouargla	444350	33	429833	Guelma	454055	551516	563562	699478	868175	Ouargla	33	731255	Bordj Bou Areridj						
Oum el-Bouag	519060	34	367324	Souk Ahras	530632	647106	661533	824725	1028175	Oum el-Boua	34	682479	Adrar						
Relizane	642150	35	352485	et-Tarf	650269	726116	737322	836028	947949	Relizane	35	664436	Souk Ahras						
Saida	279511	36	327809	Khenchela	283737	324771	329602	383066	445094	Saida	36	560339	Guelma						
Setif	1311110	37	327291	Ain Temoud	1334061	1570123	1598686	1914510	2292726	Setif	37	540102	et-Tarf						
Sidi bel-Abbes	525573	38	316282	Laghouat	531810	591381	598399	673326	757634	Sidi bel-Abbe	38	529962	Ghardaia						
Sikida	777600	39	311562	Adrar	788839	890777	911832	1053869	1218030	Sikida	39	469235	Khenchela						
Souk Ahras	367324	40	298974	Ghardaia	374414	444716	453300	548807	664436	Souk Ahras	40	460246	Naama						
Tamanrasset	136758	41	279511	Saida	140831	183409	188872	253300	339706	Tamanrasset	41	448265	Ain Temouchent						
Tebessa	548948	42	264206	Tissemsilt	557689	642899	653136	764919	895833	Tebessa	42	445094	Saida						
Tiaret	725805	43	225484	Bechar	736910	844826	857753	998411	1162135	Tiaret	43	408821	el-Bayadh						
Tindouf	27039	44	168757	el-Bayadh	28965	53798	57629	114662	228136	Tindouf	44	380694	Bechar						
Tipaza	505568	45	136758	Tamanrasset	514324	600282	610679	725085	860923	Tipaza	45	351796	Tissemsilt						
Tissemsilt	264206	46	127279	Naama	266658	289771	292460	320759	351796	Tissemsilt	46	339706	Tamanrasset						
Tizi Ouzou	1108540	47	33425	Illizi	1107488	1116059	1117015	1126625	1136316	Tizi Ouzou	47	228136	Tindouf						
Tlemcen	841930	48	27039	Tindouf	849301	918614	926656	1011057	1103146	Tlemcen	48	134170	Illizi						

Tableau 5 Population extrapolation by wilaya