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Projections of Ageing Migrant populations in France: 2008-2028

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Abstract

As migrant populations are ageing, migration is becoming less a factor of demographic rejuvenation than in the past. Ageing migrant projections provide data for social and health services that will have to serve linguitiscally and culturally diverse populations. Although migrants tend to return less than they planned, return migration is the main component of old age migration, but migrants will engage more and more in back and forth moves in the future, due to easier and cheaper travel. Old age immigration is also significant, mostly for females: late family reunification, zero generation (migrants' parents coming to help in child care), etc. These flows will tend to rebalance the sex ratios of migrants - who were mostly males - from labour sending countries. However, the main determinant of migrant ageing is the shape of their age pyramids that vary according to origin, following migration history: pre- and post-independence migration, economic booms and crisis. Migration policies, like the closed border policy following the first oil shock in 1974 and subsequent family reunification will also impact on trends in migrant ageing.

Keywords: migrant ageing, old age migration, projections, France

Résumé

Alors que la population des migrants vieillit, l'effet de rajeunissement démographique de la migration devient moins important que par le passé. Les projections de migrants âgés ont pout but de fournir des données pour les services sociaux et de santé qui vont se trouver confrontés à des populations linguistiquement et culturellement variées. Les migrants tendent à rentrer au pays moins souvent qu'ils ne le prévoyaient, mais la migration de retour reste la principale composante de la migration aux âges élevés. Cependant, les migrants vont de plus en plus faire des allers-retours, en raison de la facilité accrue et des coûts en baisse des transports. Par ailleurs, l'immigration aux âges élevés n'est pas négligeable, surtout pour les femmes : réunification familiale tardive, génération (les parents des migrants venant aider à la garde des enfants), etc. Ces flux tendent à rééquilibrer les rapports de masculinité des migrants - originellement surtout des hommes - venus de pays pourvoyeurs de main d'œuvre. Cependant, le principal facteur du vieillissement des populations migrantes est leur structure par âge qui varie beaucoup selon l'origine, suivant l'histoire des migrations : migrations pré- et postindépendance, migrations liées aux booms et crises économiques, etc. Les politiques migratoires, telles que « la fermeture des frontières » à la suite du premier choc pétrolier en 1974 et le développement de la réunification familiale qui suivit auront aussi un impact sur le vieillissement des populations migrantes.

Mots clés : vieillissement des migrants, migration aux âges élevés, projections, France

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1.- Introduction

While the ageing of European countries is abundantly documented, migrant ageing has not been much addressed and is still little documented, except for England and Wales (Lievesley 2010). The large waves of migrants who arrived from 1960 to 1975 are now reaching retirement ages and, in the near future, migrant ageing will significantly contribute to population ageing in older immigration countries of Western and Northern Europe[1]. It is no longer expected that most migrants will return after retirement. Surveys show that, after retirement, migrants return much less than they intended to.

The issue is important, because health and social services will have to serve larger numbers of linguistically and culturally diverse elderly. Migrants often have low pensions and resources due to life histories of unstable employment. They visit less frequently health services than natives. As labourers, sometimes in unhealthy environment, they are affected by specific diseases. Migrant ageing also has implications on intergenerational transfers and support. Older migrants with small resources will rely on their children, but they will be able to assist them for child care. Migrant ageing has also implications for household composition, lifestyles, informal activities, culture transmission, etc.

Migration projections are just a component of national population projections. They draw little attention due to large uncertainties, because natives' migration is usually not well documented. And the projection of foreign-born populations, mostly at young and mid-adult ages, bears large uncertainties, because work migration is very sensitive to economic situations and policy changes that are difficult to forecast. This can strongly affect migrants' projection results. However, at older ages, migration is much smaller than at young and mid-working ages. Moreover, most of future older migrants are already in country. Thus, projections of ageing migrants can be reliable.

This paper will present projections of older migrants in France from 2008 to 2028, using the component method. Baseline populations by age and sex in 2008 will be presented and commented to show ageing potentials of the various migrant origins. We shall estimate in- and out-migration rates at ages above 45 years from 2006 and 2008 census data and three migration scenarios will be done. Results will show trends in numbers of older migrants by sex, age and origin. Special attention will be devoted to the different situations according to origin and sex.

2.- Methodology

2.1.- General issues

We project only migrant populations at ages 65 years and over for two main reasons. The first reason is the difficulty to project migration rates at working ages that are strongly affected by economic booms and crisis and changes in migration policy. This would bring large uncertainty on projection results, as soon as five or ten years after the beginning of projections. The second reason is that most of migrants' children were born in host country and they do not appear on foreign-born migrants' age-pyramid. This causes particular age-structures:

[1] Immigration to Southern European countries is more recent and large migrant flows are not reaching retirement ages, except for migrants from former colonies, mostly in Portugal and Spain.

specifically a narrow basis of the age-pyramid. Therefore, the proportions of large age groups and dependency ratios of foreign-born populations are not comparable with national averages or with those of natives and, thus, are difficult to use.

Projections of older migrant populations are much less affected by uncertainties than projections of total migrant populations, because migration at older ages is rather small and will not much be affected by economic changes over time. However, the projections of migrants 65 years and older will neither provide the distribution of the population by large age groups, nor dependency ratios. But, it will provide reliable growth rates of elderly migrants by age groups and sex ratios. Growth rates by age and sex are the most useful indicators to adjust services delivery to population trends.

2.2.- Projection of older migrants

We use the component method. Census data by sex, age and country of birth[2] are the baseline data. We project the population 65 years old and over to 2028 from the population aged 45 and over in 2008, using survival rates and migration rates.

Mortality[3]

Migrants' mortality is difficult to assess due to various bias. It is naively assumed that migrants' mortality is higher than national average, but the contrary is often observed. Selections occur at different times in the migration process. It is well acknowledged that migrants are positively selected for qualification, health status, etc. Once in host country, migrants experience often hard work conditions that are usually associated with high mortality. They also have poorer diet than national average. But this has some advantages, like less fats and alcohol consumption (Courbage, Khlat 1995). These authors also show that migrants benefit from their cultural differences, with less smoking, drinking and other risky behaviours. Return migration is also selective. Many handicapped migrants (often from injuries on the work place) return to home country. Older migrants may also return when they suffer from terminal medical conditions, because they want to be buried in homeland. Late emigration decreases mortality rates in host countries, because deaths are not registered while these people have been enumerated. Thus, there are various factors affecting positively and negatively migrants' survival rates, and, without precise data, it is not possible to tell what global effects are. They may well be different according to origins of migrants.

Survival rates by origin should be used in migrant population projections, but they are not available for France. Therefore, we use national averages. National survival rates increase migrant ageing if survival rates of ethnic minority populations are lower than national average, and decrease migrant ageing if they are higher.

Migration estimates

French immigration data provide only immigrant figures and no information is available on those who leave. As France has no population file to record departures, and as surveys of return migrants have to be carried out in origin countries[4], we use censuses to estimate the migration of foreign-born in France.

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[2] French by birth born outside of France have not been included because most of them are former European colonists.

[3] We do not need using fertility rates as we project only the population at ages above 65 years.

[4] Moreover, survey data could be affected by random variations due to small numbers.

We estimated net migration at ages 45 years and over as the difference between the 2006 population projected to survive[5] to 2008 and the enumerated population in 2008[6] - this is sometimes called the 'expected population method'. Then, we calculated net migration rates by 5-year age groups, sex and origin in 2006-2008.

Although they are more difficult to estimate than net migration, we calculated in- and out-migrations. Information on the components of net migration is necessary to understand its levels and trends and it is also useful to design scenarios.

In- and out-migration rates can be estimated from the information on residence 5 years prior to census date. The question on previous residence provides the number of migrants who entered in the last 5 years and are still present at census date. The estimated numbers of net migrants minus enumerated numbers of immigrants gives an estimate of out-migrants (see box).

Net migration, immigration and emigration rates

All calculations are done by birth cohorts.

Net migration rates (M) are estimated by the expected population method:

$M_{2006\text{-}2008,x,x+n} = P_{2008,x+n} / P_{2006,x} * S_{x,x+n}$
With : P = enumerated population; x = age ; n = 2008 - 2006 = 2;

In-migration rates (IM) in 2006-2008 are calculated as a fraction[a] of the number of arrivals in the 5-years-period before 2008, as reported in the question on residence five year before census date:

$arrivals_{2006\text{-}2008,x}$ = 0.44 * arrivals in the five years prior to 2008
$IM_{2006\text{-}2008,x,x+n} = arrivals_{2006\text{-}2008,x,x+n} / P_{2006,x}$

Then, out-migration rates (OM) are estimated as:

$OM_{2006\text{-}2008,x,x+n} = (P_{2008,x+n} - arrivals_{2006\text{-}2008,x,x+n}) / P_{2006,x} * S_{x,x+n}$

Single-age rates calculated for 2006-2008 have been averaged for 5-year age-groups.

a) We used INSEE recommendations. For the two-year period before census, INSEE uses 0.44 instead of 0.40 to account for survival and departures of those who entered at the beginning of the 5 year period.

The major concern with estimates of in- and out-migration is reporting errors on previous residence. Errors are obvious when out-migration rates are positive, but lesser errors are not easily visible. Positive out-migration rates have been set to 0. Hectic age patterns have been smoothed or replaced by averages of neighbouring countries. After smoothing, in-migration rates have been adjusted so that net migration rates remain unchanged.

Migration hypotheses

We have no long time series to estimate trends. But, we have clues that return migration rates will decline. Most probably, lone males experience higher return migration after retirement than migrants who came or reunited with their family. Given that the share of lone males is

[5] As regards migration estimates from census data, using national survival rates reduce immigration rates and increases emigration rates, if rates of ethnic minority population are smaller than national average, and vice versa if they are higher.
[6] We assume the completeness of 2006 and 2008 censuses is similar. If this is not the case, migration estimates are affected by the differences in censuses' completeness.

declining in cohorts that will reach retirement age from 2018, return migration is expected to decline then (see below). However, in the frame of increasing circulation, return could become more frequently temporary, resulting in a kind of bi-residence of couples as well as of lone migrants. In this case, more migrants would spend only part of the year in host country resulting in smaller numbers of older migrants being present and enumerated by censuses – which would appear like increased return migration. It is difficult to estimate the balance between less permanent return – due to less lone males - and more frequent back and forth moves of migrants alone or in couples. Longer times series of inter-censal migration estimates will enable us to better project trends in the future.

In this exercise, we did three scenarios[7]. Scenario A assumes migration rates will be stable at their 2006-2008 level. Scenario B is similar to scenario A until 2018; then emigration rates decline by 15% for non-EU European, Algerian and Turk males (10% for Moroccans, Tunisians, 'other Africans' and 'other countries') and 10% for all females (except for 'other countries' - stable) in 2018-2023 and respectively for each sex by 40% (20% for Moroccans, Tunisians, 'other Africans' and 'other countries') and 20% (stable for 'other countries') in 2023-2028, comparatively to 2008-2018. These trends are based on changes in the proportions of lone males and females in migrant cohorts (see below). In scenario C, migration rates are nil. It is an assumption aiming to show the relative impacts of population structures and migration by comparing scenarios A and C.

3.- Data

3.1.- Age-structures in 2008

The shapes of age-pyramids are very different according to countries of origin of migrants. They mostly reflect the history of migration from the various countries of origin to France. The most ancient migratory flows are from Italy and Spain, starting before WW2, and Portugal[8]. Italian, Spanish and secondarily Portuguese migrants are old populations due to little recent flows of young adults from these countries, unlike for non-EU Europeans. Migration from EU member states tended to halt or even reverse after these countries accessed the EU due to increasing economic opportunities in home countries. Among non-EU migrants, Europeans and Northern Africans, mostly Algerians who started to migrate before independence, show already significant numbers of migrants in their 60s and 70s (figure 1). The most recent migration flows: 'other African', Turks and 'other countries'[9] show much smaller numbers of migrants at ages above 65 years.

These very different migration histories are translated in the proportions of population 65 years and above, with more than half of Italian and 45% of Spanish migrants in this age group (table 1). The oldest non-EU migrants: Algerians, Tunisians and Europeans, show 15% or more population 65 years and older, against around 5% for recent migrants: 'other Africans', Turks and migrants from 'other countries'.

[7] We did not do scenarios for EU migrants, because free movement will result in more frequent bi-residence the effect of which is difficult to assess.
[8] The public census data file provides only four national categories for EU member states: Italy, Portugal, Spain and 'others'. There was also significant migration from Poland in the early 20th century, but data are not available separately from 'other EU countries'.
[9] At older ages, mostly South-East Asians and Chinese.

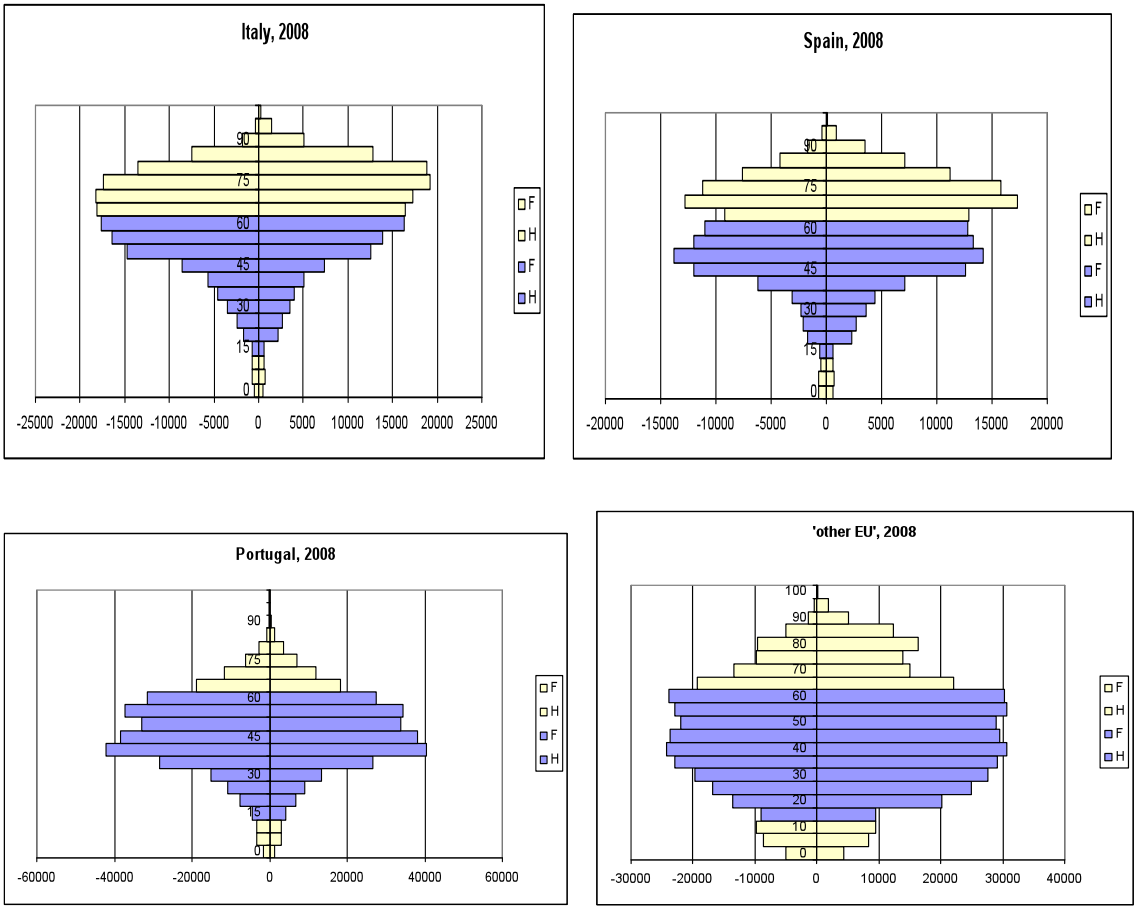
Table 1: Proportion (percent) of migrants 65 years-old and above by country of origin, France 2008.

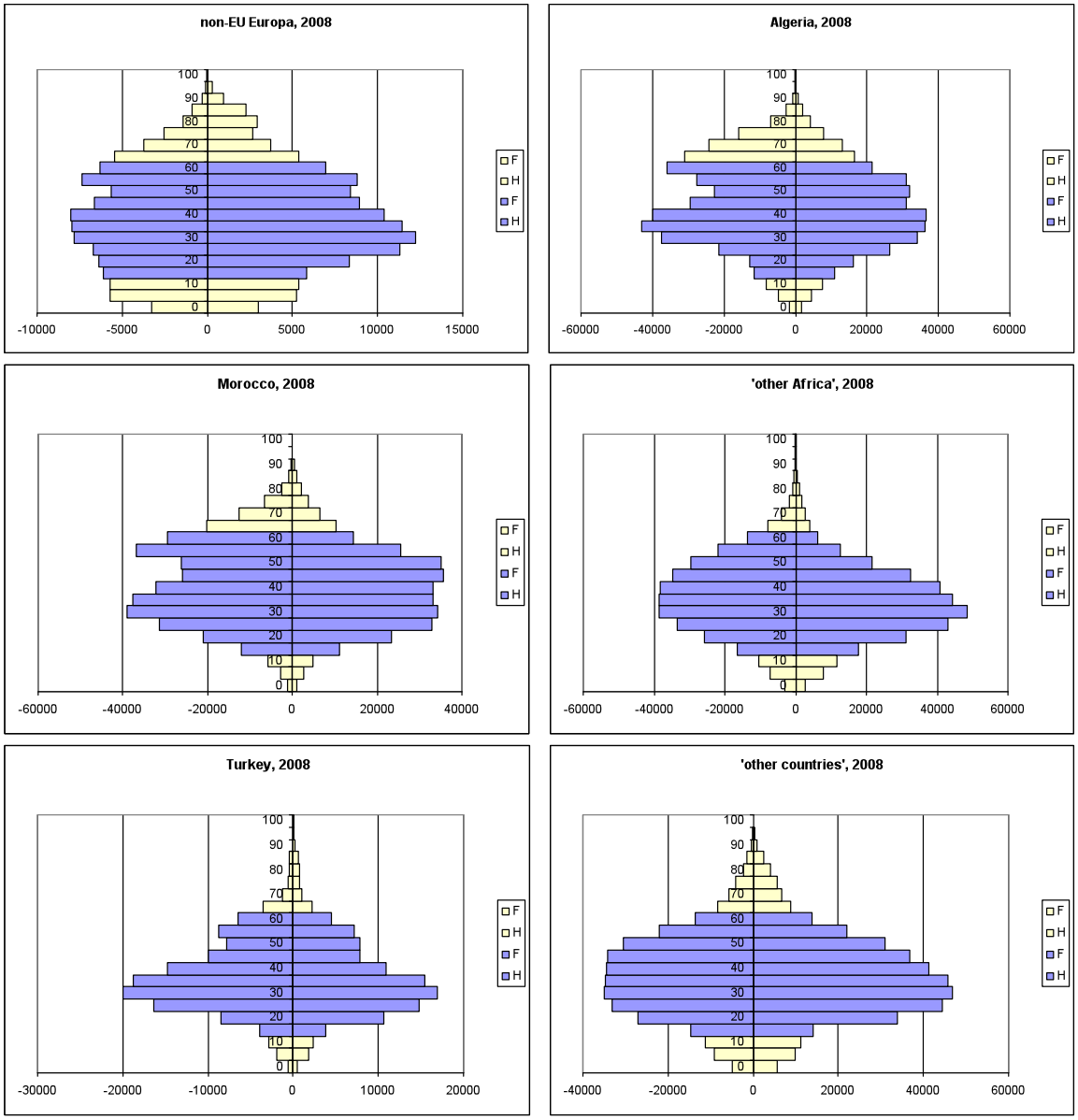
Italy	Portugal	Spain	'other EU'	Non-EU Europa	Algeria	Morocco	Tunisia	'other Africa'	Turkey	'other countries'
53,2	14,3	44,9	22,4	14,7	17,8	10,3	15,9	3,8	5,1	7,2

A closer look at the age-pyramids from age 40 shows the potential for ageing in the next 20 years. Except for Italians and Spanish, cohorts are much larger at ages 55-64 than at older ages. However, except for Italians, Spanish, 'other Africa' and 'other countries', age-pyramids show a surprising indentation for males at ages 45-54, and up to 55-59 for Algerians. This is the result of the closed border policy following the 1974 oil-shock. Workers migration came nearly to a halt for a decade or more. Young adults from North Africa and non-EU European countries arriving at working ages - which are also the main migration ages - had more difficulty to migrate to France. Therefore, these male cohorts are smaller. Later, some males entered at older ages and in smaller numbers than their elders who could migrate younger and with less restriction; some used other channels. It is the case for Moroccans who entered in large numbers, often illegally, between the 1975 and 1982 censuses. There is no similar irregularity on female age-pyramids. The closed border policy was soon followed by the development of family reunification. Thus, larger numbers of females entered from the mid 1970s.

Thus, current population ageing varies greatly according to migrants' origins due to migration histories. Future ageing will also vary for the same reasons, but migration policies enacted from the mid-1970s will also have an impact.

Figure 1 : Age-pyramids of migrants by origin, France, 2008 census.





3.2.- Migration flows at older ages

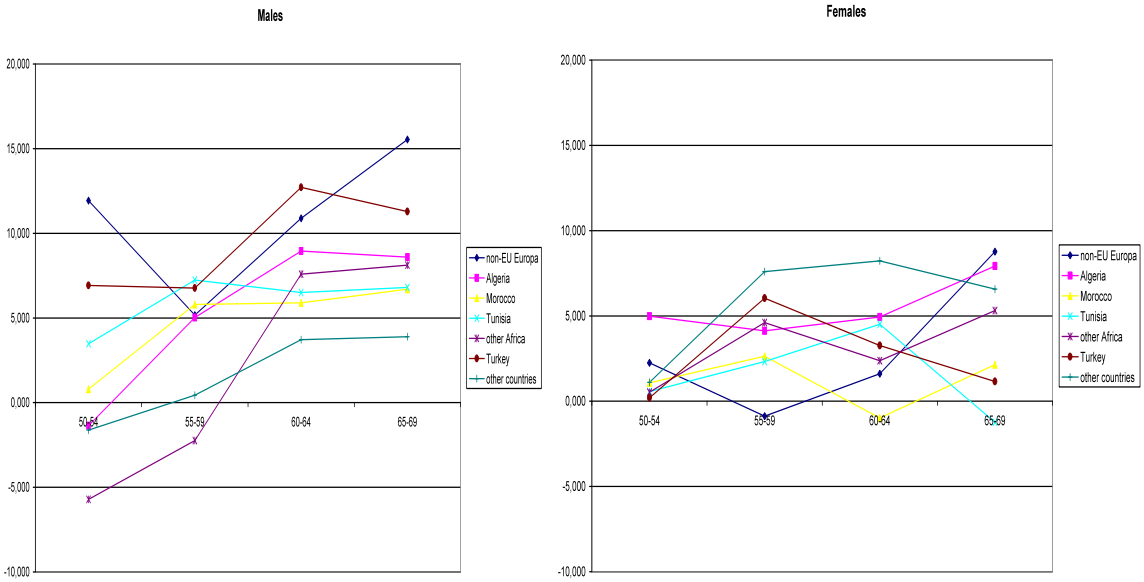
Among EU migrants, Italians and Spanish show nearly nil both in- and out-migration. Errors in reporting previous residence for Portuguese and 'other EU' migrants result in unreliable estimates of in- and out-migration. Therefore, net migration rates have been projected for EU migrants. Portuguese show net migration of 1% yearly until age 54, followed by rates of -2.0% to -2.5% until age 70. 'Other EU' migrants show very high net migration by 4% to 5% yearly from age 40 to 70. Such high levels will probably decline in the future. However, given free-movement of EU citizens in the Schengen area, migration of EU natives will be more and more temporary and difficult to assess from information on previous residence.

Emigration consists mainly of return migration, more rarely of migration forward to other destinations. Emigration rates of non-EU migrants tend to increase from age 50-54 to 65-69[10], mostly for males (figure 2). At ages 60-64 and 65-69, that are retirement ages, males'

[10] Out-migration rates at ages 45-49 are very small and rates decline and become hectic from age 70, therefore, they are not shown.

emigration rates are mainly in the range of 1.1% to 2% per year[11], and somewhat higher for Turks and non-EU Europeans. The main component of these flows is return migration of workers after retirement. Rates are usually lower for females, except for migrants from 'other countries'. They are most often below 1% yearly, and they do not show as steep increases with age as for males. Older female migrants were less frequently workers than males. But the main reason of the gender differences is probably that males are more likely to return to their country of origin if they are alone, while couples are less likely to return[12]. Thus, male emigration rates are higher than for females, because males are more often alone than females, mostly among older Africans and Turks. However, the proportion of lone male workers will decline in the future due to increases in family reunification and more frequent family migration from the mid 1970s. Among the 60-64 years-old males in employment, 30% of the Algeria-born and Sub-Saharan Africa-born, and 17% of the Turkey-born were living alone, against 15%, 25% and 10% respectively among the 50-54 years-old. Lone workers were less frequent among 60-64 years old Moroccans (17%) and migrants from 'other countries' (18%), and these figures will only decline by 3 to 5 percentage points in younger cohorts.

Figure 2: Five-year out-migration rates (unsmoothed[a]) for 50-69 years-old birth cohorts by sex and origin, France, 2006-2008.



a) and not corrected for errors, therefore rates can be < 0

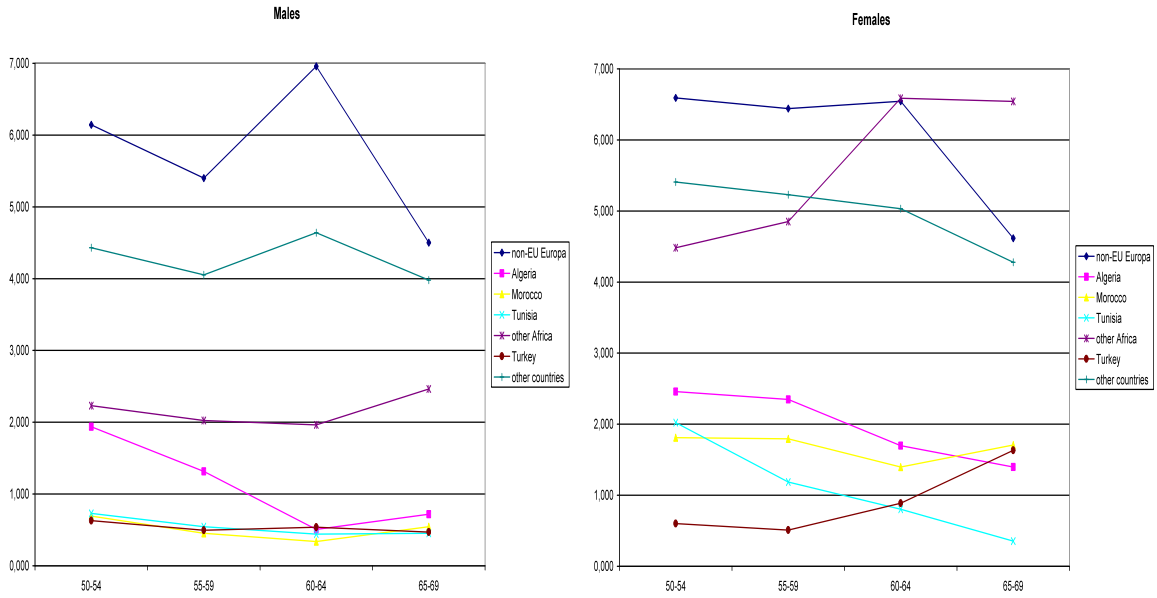
Thus, the gap between male and female return migration rates is, to some extent, structurally related to household situation. Therefore, we made assumptions that emigration rates, mostly for males, will decline from 2018 (see above). Actually, it is likely that retired migrants will more and more move back and forth between France and their countries of origin.

Immigration consists mostly in late family reunification, including migration of migrants' parents: the so-called 'Generation Zero', coming to spend time with their children, often for short periods. There are also small numbers of non-EU nationals migrating after retirement to enjoy better way of life. In-migration rates of older migrants are most often much smaller than out-migration rates. They also vary much more than out-migration rates according to origin of migrants. In-migration rates of older migrants are above 1% yearly[13] for non-EU Europeans only, and just below 1% for 'other countries'. They are much lower: below 0.5%, for 'other

[11] or in the range of 5.6% to 10.4% for five years rates, as presented on figures.
[12] Survey data would be necessary to assess precisely the patterns of return migration after retirement by sex, work histories and family situation.
[13] Or 5.1% over 5 years.

Africans' and often below 0.2% for North Africans and Turks. Female in-migration of non-EU Europeans and from 'other countries' is rather high, about at the same level or slightly higher than for males, while 'other African' females show much higher migration than males. Rates are much lower for North African and Turk females, but they are significantly higher than for males at almost all ages. This is probably due to cases of family reunification after retirement and very secondarily to migration of the generation zero.

Figure 3: Five-year in-migration rates (unsmoothed) for 50-69 years-old birth cohorts by sex and origin, France, 2006-2008.



Altogether, net migration is positive at ages 45-59 for Algerian and 'other African' males and up to age 64 for 'other countries'. But it is negative for other males from age 50, and even from age 45 for non-EU Europeans, Tunisians and Turks.

Net migration is most often positive for females. Thus, female migrant populations are still building up at ages between 50 and 65 years, mostly for non-EU Europeans and 'other Africans', and secondarily up to age 60 for 'other countries'. At ages where it is positive for both sexes, female net migration is always higher than for males.

4.- Results

4.1.- Trends in older migrant populations

Below, we present results of scenario B that seems to be the most realistic. Then, it will be later compared with scenario A and C.

Ages 65 and above

The numbers of elderly migrants will increase by 38% by 2018 and 79% by 2028 in scenario B. However, trends will vary considerably according to origin.

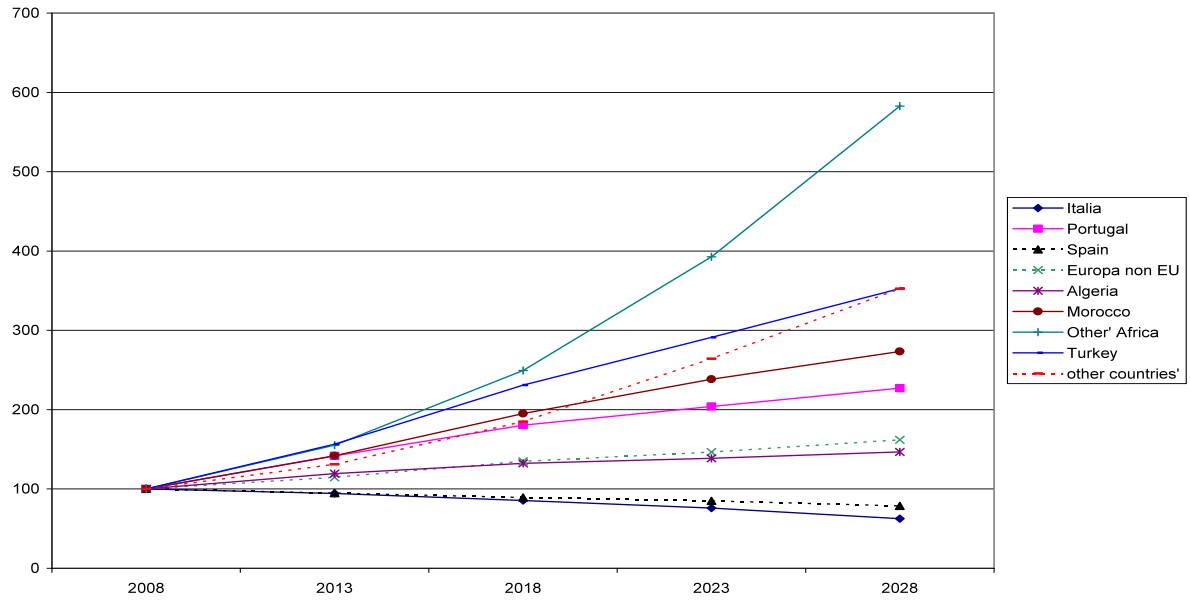
Except for the earliest migrant groups: Italians and Spanish whose numbers are declining, tremendous increases in elderly migrant populations will occur in the future. However, in the next 10 to 15 years, increases in the numbers of 65 years-old male migrants will be tempered by the indentations seen on the age-pyramids following the restrictive migration policies from

1975. Older non-EU Europeans and Algerians, the most affected by the closed border policy, will increase by a little more than 30% by 2018 and by around 50% by 2028 (table 2 and figure 4). This is still rapid change, but less than for Portuguese and other EU migrants who entered freely after they joined the EU, erasing the effect of the closed border policy. A similar phenomenon appears for Moroccans who migrated, often undocumented, until late adult ages in the second half of the 1970s and the 1980s. The numbers of older Portuguese and Moroccans will nearly double by 2018 and will increase respectively between 2- and 3-fold by 2028. The number of 'other Africans' will more than double by 2018 and increase nearly 6-fold by 2028. Increases will also be important for Turks and migrants from 'other countries' (table 2).

Table 2: Projected trends in older migrant populations by origin, scenario B, France, ages 65 years and over, 2008 = 100

	Italy	Portugal	Spain	'other EU'	non-EU Europa	Algeria	Morocco	'other Africa'	Turks	'other countries'	total
2018	86	180	89	145	135	132	195	249	231	185	138
2028	63	227	79	206	162	147	273	583	353	352	179

Figure 4: Projected trends in older migrant populations by origin, scenario B, France, ages 65 years and over, 2008 = 100



Ages 75 and above

The numbers of migrants 75 years-old and over will increase by 29% by 2018 and by 82% by 2028. Thus, increase until 2018 will be slower than at ages 65 years and over, except for Portuguese, Spanish, Algerians and Moroccans (table 3). But, they will be faster for all migrant origins, except Spanish, between 2018 and 2028. The different trends by age groups are mostly the result of the sizes of the cohorts arriving at ages 65 and over and at 75 and over. It reflects variations in the timing and intensity of migration by origin as well as changes in migrants' ages at arrival in the past. These different trends sometimes reflect random variations in migration flows, especially for origins with little ancient migration.

Table 3: Projected trends in older migrant populations by origin, scenario B, France ages 75 years and over, 2008 = 100

	Italy	Portugal	Spain	'other EU'	non-EU Europa	Algeria	Morocco	'other Africa'	Turks	'other countries'	total
2018	87	230	98	108	123	178	237	235	174	143	129
2028	69	396	79	174	179	226	457	604	454	278	182

Ages 85 and above

For the oldest-old, increases will be by 41% by 2018 and by 76% by 2028. Trends are mostly due to the various sizes of the age-groups already in-country in 2008, as migration rates are very small at older ages. Thus, the number of Italians at ages 85 and over will still increase by 20% by 2018 before declining. Spanish will increase by 35% by 2018 and by 14% by 2028 (a decline comparatively to 2018) (table 4). Portuguese, Moroccans, 'other Africans' and Algerians will see the most rapid increases by 2028: respectively 7-, 6-, 5- and 4-fold. 'Other Africans' do not show the highest increase at these ages. The reason is that their migration is more recent and large migrant cohorts will not yet reach oldest-old ages in 2028. The numbers of oldest old will double for Turks[14] and for migrants from 'other countries' by 2028. Non-EU Europeans show slow increases.

Table 4: Projected trends of the oldest old migrants by origin, scenario B, France ages 85 years and over, 2008 = 100

	Italy	Portugal	Spain	'other EU'	non-EU Europa	Algeria	Morocco	'other Africa'	Turks	'other countries'	total
2018	121	329	135	99	105	251	276	193	90	159	141
2028	91	712	114	113	136	416	630	459	194	219	176

4.2.- Trends by sex

Projections show very different trends for males and females. For any migrants' origin, except 'other EU' and 'other countries'[15], the increase is faster for females than for males (table 5 and figure 5). This is due to declining male cohorts during the closed border policy after 1975, whereas female cohorts increased steadily. Moreover, female migrants have recently experienced lower return migration and higher immigration than males. Thus, while the increase by 2018 is very small (12%) for Algerian males, with even a decline between 2018 and 2028 - resulting in stable numbers over the 2008-2028 period, the number of Algerian females will double by 2028. A rather similar pattern is seen for non-EU Europeans, and for Moroccans. After an increase by 80% by 2018, numbers of Moroccan males are nearly stable from 2018 to 2028, but, between 2008 and 2028, the number of Moroccan older females will increase more than twice as fast as for males, with an index of 433 against 184[16]. Increases will also be much faster for Turk and 'other African' females than for males, with the latter seeing the fastest increase. Sex differentials are moderate for migrants from 'other countries', with males

[14] For Turks, the decline in 2018 results from the erratic shape of their age-pyramid at older ages, due to small numbers.

[15] For other countries, this is due to higher emigration of females than males ; for 'other EU' this is due to much smaller numbers of male than female older 'other EU' migrants in France in 2008; therefore, the increase is relatively much higher for males than for females. Due to errors in reporting previous residence, 'other EU' is projected from net migration rates. For citizenships with free movement in the Schengen area, migration is more difficult to assess.

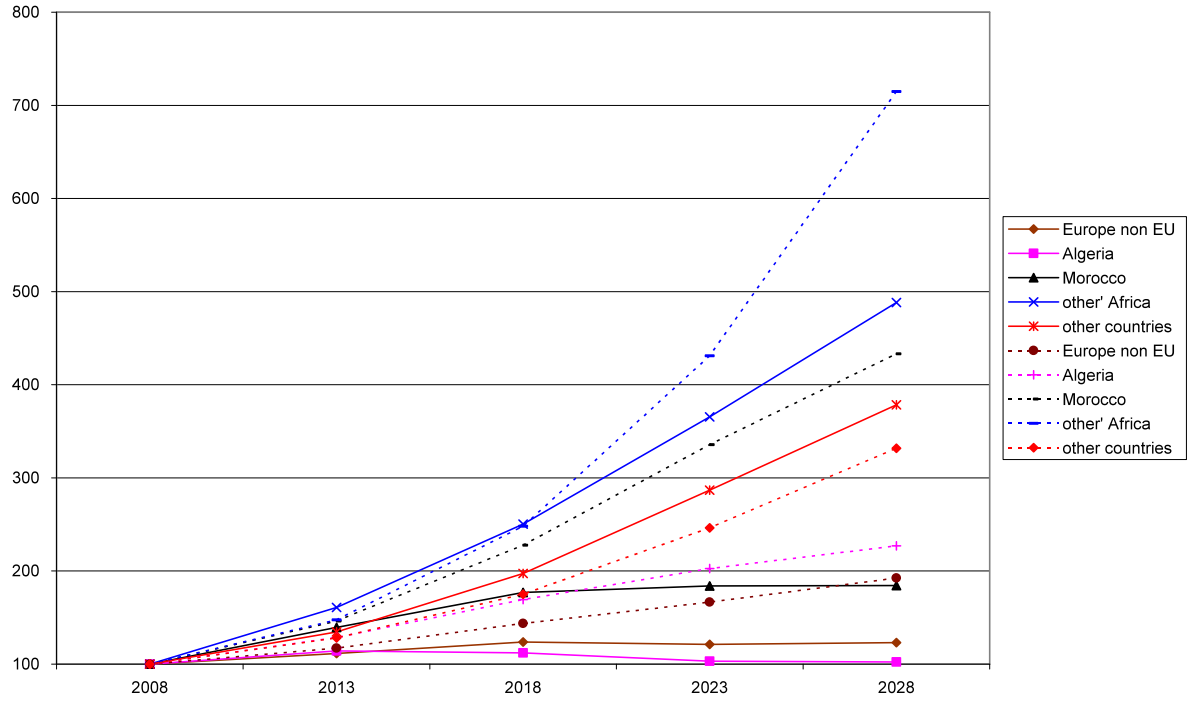
[16] This is consistent with trends observed between the 1975 and 1982 censuses.

increasing slightly faster than females, due to different age structures[17] and higher emigration of females than males.

Table 5: Projected trends in older migrant populations by sex and origin, scenario B, France,
ages 65 years and over, 2008 = 100

	2018	2028	2018	2028	2018	2028	2018	2028	2018	2028
	Italy		Portugal		Spain		'other EU'		non-EU Europa	
total	86	63	180	227	89	79	145	206	135	162
M	87	65	174	210	87	79	163	251	124	123
F	84	61	186	243	91	79	133	176	144	192
	Algeria		Morocco		'other Africa'		Turks		'other countries'	
total	132	147	195	273	249	583	231	353	185	352
M	112	102	177	184	250	488	216	291	197	379
F	169	227	228	433	248	715	248	424	175	332

Figure 5: Projected trends in older migrant populations by sex for selected origins, scenario B, France, ages 65 years and over, 2008 = 100



4.3.- Comparing scenarios

Comparatively to stable rates (scenario A), declining out-migration increases the numbers by 3% or less in 2028[18] (Table 6). Changes are more important for males who emigrate more than females, reaching 6% for non-EU Europeans and Turks, while they are below 1.5% for females.

[17] This is mostly due to smaller numbers of elderly males than females in 2008 and subsequently cohorts of similar size for both sexes arriving at ages above 65.
[18] Rates in scenario B being different only from 2018, figures for 2018 are the same as in scenario A.

Table 6: Changes in 2028 due to declining emigration from 2018 (Scenario B/scenario A)

	Non-EU Europa	Algeria	Morocco	'other Africa'	Turkey	other' countries
total	1,027	1,025	1,011	1,025	1,029	1,007
M	1,058	1,038	1,017	1,041	1,060	1,007
F	1,011	1,014	1,006	1,011	1,006	1,007

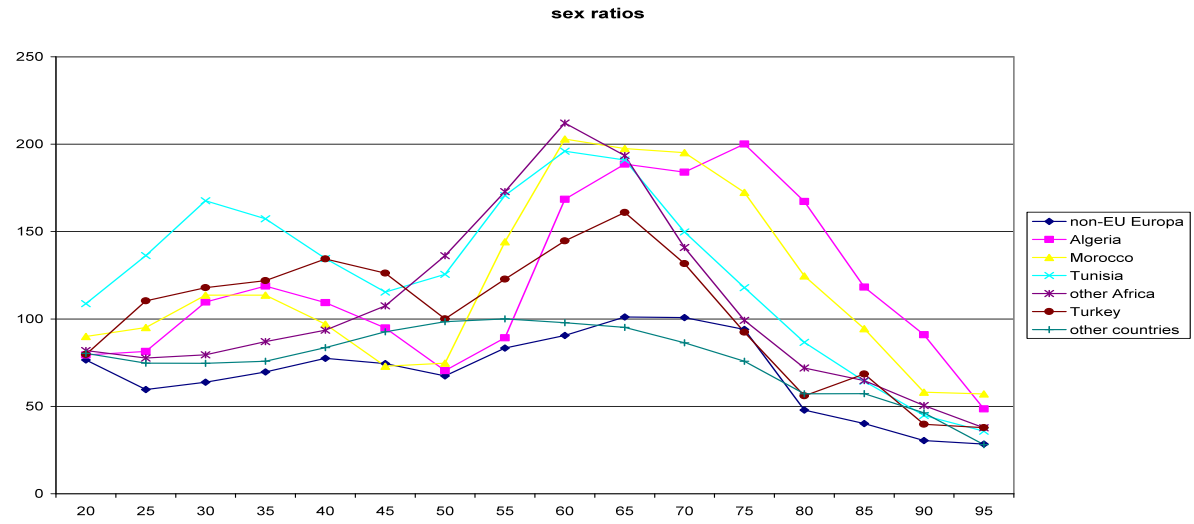
Comparing scenario C (no-migration) with scenario A, shows important differences in 2028: sometimes above 20% and up to 40% for males (Table 7). Thus, return migration, the main flow for males, significantly reduces the numbers of elderly in the long-term. The impact of migration is less important for females. But, they usually experience higher immigration than emigration rates, resulting in smaller numbers of elderly females in scenario C than in scenario A for non-EU Europeans and 'other' Africans. Altogether, differences are most often under 10% or 15%, showing that age structures (cohort sizes) are the main component of ageing trends.

Table 7: Change due to no migration (Scenario C/scenario A)

	2018	2028	2018	2028	2018	2028	2018	2028	2018	2028	2018	2028
	Non-EU Europa		Algeria		Morocco		'other Africa'		Turkey		'other countries'	
total	1,051	1,059	1,115	1,175	1,077	1,097	1,054	1,022	1,139	1,226	1,028	0,995
M	1,137	1,278	1,149	1,222	1,121	1,204	1,107	1,126	1,231	1,438	0,996	0,940
F	0,993	0,954	1,074	1,138	1,015	1,016	0,979	0,925	1,045	1,068	1,056	1,044

4.4.- Sex ratios of older migrant populations

Figure 6: Sex ratios of migrants in France, 2008 census.



At ages 55 to 75, migrants from Northern and 'other' Africa, and secondarily Turkey, still exhibited high sex ratios in 2008, with between 150 and 200 males per 100 females (figure 6). The early waves of labour migrants are still often lone males because their nuptiality was disrupted by migration, and many of those who are married have not reunited with their wives in France, because of their precarious economic condition.

Sex differentials in migration[19]: higher emigration of males than females and higher immigration of females than males will have significant impact on sex ratios of older migrant

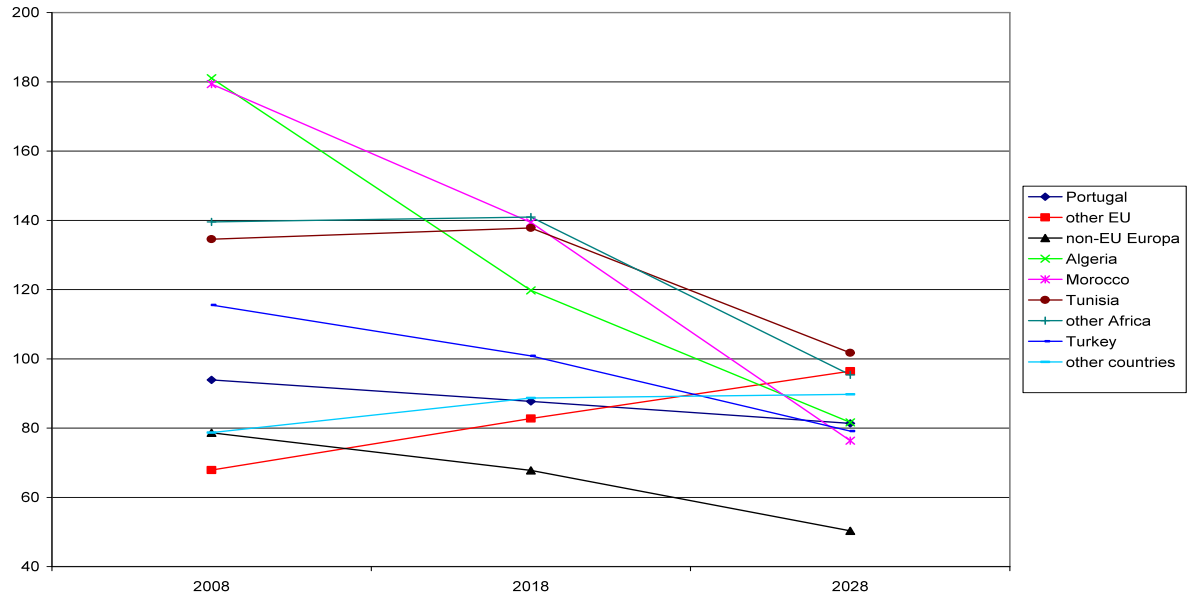
[19] Combined with higher death rates of males than females.

populations in the future. Sex ratios will decline from 98 males for 100 females in 2008 and 2018 to 85 males for 100 females in 2028. Trends vary greatly according to origin.

Table 8 : Projected trends in sex ratios of the 65 year olds and over, Scenario B

	Italy	Portugal	Spain	other EU	non-EU Europa	Algeria	Morocco	Tunisia	'other Africa'	Turkey	others
2008	84	94	68	68	79	181	179	135	140	116	79
2018	87	88	65	83	68	120	139	138	141	101	89
2028	89	81	69	96	50	82	76	102	95	79	90

Figure 7: Projected trends in sex ratios of migrants in France.



The sex ratio of migrants is affected by specific factors in relation with male and female migration in the frame of family reunification. A man has to be alive to bring his wife under family reunification. This partly erases the effect of male excess mortality and tends to raise sex ratios of older migrants. Widowed women can also enter through family reunification. But, they need to fulfil several conditions: have a French (native or naturalized) child living in France to be eligible for family reunification or be allowed to enter as visitors.

Due to more balanced sex ratios of younger migrant cohorts and to higher immigration of females than males, the sex ratios of elderly African migrants will decline from above 140 males per 100 females in 2008 to between 80 and 100 males for 100 females in 2028 (table 8 and figure 7). This will result in nearly balanced numbers of males and females for Tunisians and 'other Africans' and in deficits for Algerians, Moroccans and Turks. However, these levels are still above national average of 71.5 males for 100 females, because the effect of male excess mortality is compensated for by sex structures specific to migrant populations: high sex ratios of migrant cohorts in the past, and because males have to be alive to allow their wives to enter through family reunification.

For non-EU Europeans, higher emigration of males than females increases sex imbalances with a projected sex ratio of 50 males for 100 females in 2028. On the opposite, female migrants from 'other countries' emigrate more than males, increasing the sex ratio to 90 by 2028. 'Other EU' migrants' will experience similar trends due to higher sex ratios of the cohorts arriving at ages 65 years and above, and higher male than female net migration.

The impact of declining out-migration rates on sex ratios is very small. However, trends in sex ratios are very different in the 'no migration' scenario, because of the large differences in out- and in-migration rates by sex. Sex ratios decline much less when there is no migration, mostly for Africans and Turks whose males show higher out-migration and lower immigration than females.

Conclusion

Projections of ageing migrants are more reliable than projections of migrants, because most of the migrants who will reach 65 years and over in the next 20 years are already in-country and immigration is much smaller at ages above 45 years than at young adult ages. Moreover, return migration is less frequent as expected. However, estimating flows, and secondarily survival rates of migrants, are the main issues in ageing migrant projections, with important differences according to origin and sex.

Age-pyramids of migrants by country of origin show very different shapes that translate the history of migration flows to receiving countries. The date of the onset of migration, pre- and post-independence migration, the size of flows and their pace of increase, as well as migration policies of host countries can be read on the age-pyramids of migrants and will determine future ageing of migrant populations. Migration has been rapidly increasing from 1950 to 1975 and migrant ageing will be very fast in the next decades. However, the closed border policy from 1975 will slow migrant ageing in the next 10 to 15 years for non-EU migrant males, whereas, increased family reunification from that date will result in rapid increase of elderly migrant females. Then, the arrival of larger cohorts at age 65 will result in rapid increases in the numbers of older migrants: between 2- and 3-fold for most origins, except non-EU Europeans and Algerians. 'Other Africans' will show the fastest ageing, their numbers increasing 6-fold by 2028.

Although relatively small, out-migration after retirement and old-age in-migration, in the frame of family reunification and secondarily arrivals of the 'generation zero', will have impacts in the trends in older migrants. Return migration is the main component of old age migration, but immigration is also significant for some origins, mostly for females. While males usually return more than females, women immigrate more than men at older ages. These flows tend to rebalance the sex ratios of migrants, mostly from Africa and other labour sending countries.

Projections show varied patterns of migrant ageing by origin. Thus, at the level of host countries, the speed and intensity of migrant ageing will be determined by the history of migration and the size of flows by origin. Past policy changes will also impact on the timing and speed of migrant ageing. This implies to use data by origin for international comparisons so that the different situations, the speed of migrant ageing and its variations are well understood. Social and health services will also need data by origin to serve linguitiscally and culturally diverse populations.

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Table annex 1: Projected trends in numbers of older migrants by origin, scenario B, France,
ages 65 years and over.

	2008	2013	2018	2023	2028
Italy	168,161	158,736	143,846	127,653	105,309
Portugal	83,282	117,894	150,249	169,923	189,130
Spain	116,089	110,064	103,576	98,708	91,440
'other EU'	146,042	175,319	212,000	251,812	301,404
Non-EU Europa	32,717	37,511	44,144	47,966	52,994
Algeria	126,707	151,145	167,742	175,612	185,811
Morocco	67,284	95,423	131,283	160,306	183,973
Tunisia	37,315	45,269	56,571	66,272	71,911
Other' Africa	25,019	38,843	62,398	98,280	145,817
Turkey	12,173	19,046	28,107	35,450	42,934
other countries'	51,124	66,952	94,507	135,042	180,143
Total	865,913	1,016,202	1,194,423	1,367,023	1,550,867

Table annex 2: Projected trends in numbers of older migrants by origin, scenario B, France,
ages 75 years and over.

	2008	2013	2018	2023	2028
Italy	98,220	94,120	85,572	77,048	68,208
Portugal	22,581	35,682	51,893	72,069	89,378
Spain	63,790	68,614	62,325	55,726	50,582
'other EU'	76,244	73,210	82,549	105,817	132,410
Non-EU Europa	14,478	15,583	17,777	21,036	25,978
Algeria	41,831	59,622	74,587	86,630	94,729
Morocco	18,013	28,563	42,627	59,648	82,381
Tunisia	14,238	18,568	21,981	26,095	33,006
Other' Africa	6,698	10,119	15,710	24,593	40,470
Turkey	4,082	4,525	7,104	12,034	18,530
other countries'	21,551	25,322	30,740	41,001	59,818
total	381,726	433,927	492,865	581,697	695,492

Table annex 3 Projected trends in numbers of older migrants by origin, scenario B, France,
ages 85 years and over.

	2008	2013	2018	2023	2028
Italy	29,143	35,431	35,357	30,618	26,546
Portugal	3,019	5,743	9,928	15,219	21,492
Spain	17,923	20,774	24,136	25,212	20,387
'other EU'	26,479	29,915	26,193	23,917	30,048
Non-EU Europa	4,921	5,261	5,164	5,572	6,711
Algeria	6,782	10,453	16,999	23,731	28,190
Morocco	2,743	4,433	7,566	11,763	17,282
Tunisia	2,957	4,239	5,746	7,232	8,086
Other' Africa	1,416	1,949	2,735	4,204	6,495
Turkey	1,540	1,512	1,391	1,618	2,995
other countries'	5,411	6,852	8,629	9,746	11,860
Total	102,336	126,564	143,843	158,832	180,093

Table annex 1: Projected trends in numbers of older migrants by sex and origin, scenario B, France, ages 65 years and over.

	2008		2018		2028	
	M	F	M	F	M	F
Italy	76,964	91,198	66,995	76,851	49,675	55,634
Portugal	40,337	42,944	70,209	80,040	84,835	104,295
Spain	47,126	68,963	40,774	62,801	37,173	54,267
‘other EU’	59,048	86,995	95,996	116,003	147,953	153,451
Europe non EU	14,402	18,315	17,834	26,309	17,745	35,249
Algeria	81,622	45,084	91,407	76,336	83,507	102,304
Morocco	43,198	24,085	76,444	54,839	79,654	104,318
Tunisia	21,406	15,908	32,784	23,788	36,262	35,649
‘other' Africa	14,575	10,443	36,503	25,895	71,177	74,641
Turkey	6,525	5,648	14,113	13,995	18,964	23,970
other countries	22,514	28,610	44,418	50,089	85,215	94,928
total	427,717	438,193	587,477	606,946	712,161	838,706

Table annex 1: Projected trends in numbers of older migrants by sex and origin, scenario B, France, ages 75 years and over.

	2008		2018		2028	
	M	F	M	F	M	F
Italy	40,690	57,531	36,015	49,557	29,891	38,317
Portugal	9,902	12,678	22,040	29,853	36,401	52,977
Spain	25,042	38,748	21,596	40,728	18,028	32,554
‘other EU’	26,419	49,825	32,490	50,060	57,421	74,989
Europe non EU	5,238	9,240	7,108	10,669	9,021	16,957
Algeria	26,363	15,468	44,088	30,499	44,592	50,137
Morocco	10,540	7,474	25,064	17,563	42,441	39,940
Tunisia	6,848	7,390	11,748	10,234	17,670	15,336
‘other' Africa	2,989	3,708	8,490	7,220	21,489	18,981
Turkey	1,646	2,435	3,429	3,675	8,015	10,515
other countries	8,392	13,159	12,392	18,347	26,335	33,484
Total	164,069	217,657	224,460	268,405	311,305	384,187

Table annex 1: Projected trends in numbers of older migrants by sex and origin, scenario B, France, ages 85 years and over.

	2008		2018		2028	
	M	F	M	F	M	F
Italy	9,727	19,417	12,256	23,101	9,638	16,908
Portugal	1,021	1,998	3,589	6,339	7,388	14,105
Spain	6,248	11,675	7,510	16,626	5,515	14,871
‘other EU’	6,915	19,564	7,552	18,641	10,266	19,782
Europe non EU	1,307	3,614	1,658	3,506	2,272	4,439
Algeria	3,454	3,328	9,548	7,451	14,270	13,920
Morocco	1,243	1,500	3,911	3,655	8,781	8,501
Tunisia	1,069	1,888	2,393	3,353	3,858	4,229
‘other' Africa	513	903	1,034	1,702	3,123	3,372
Turkey	569	971	468	923	1,270	1,725
other countries	1,857	3,554	2,745	5,884	4,062	7,798
total	33,922	68,414	52,663	91,181	70,443	109,650