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A Dynamic Long and Short Term Approach to Migration Between MPC's and the EU: Demographical Framework and the Role of Economic and Social Reforms

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UNE APPROCHE DYNAMIQUE À COURT ET LONG TERME DES MIGRATIONS ENTRE LES PTM ET L'UE: STRUCTURE DEMOGRAPHIQUE ET RÔLE DES RÉFORMES ÉCONOMIQUES ET SOCIALES

AGREEM

Résumé

La migration est devenue une priorité pour les politiciens européens. C'est aussi un élément crucial du Partenariat entre les PTM et l'UE. Cependant, le manque d'une Politique Migratrice européenne cohérente rend difficile le développement d'une politique migratrice efficace envers les PTM. Les politiciens européens centrent leur intérêt sur le contrôle et les mesures de retour, plutôt que sur des politiques actives d'intégration. L'objet de cette étude est d'analyser cette dynamique socio-démographique dans la région euro-méditerranéenne. Cette dynamique est si forte qu'elle génère une 'pression migratrice' considérable, définie par l'étude comme le résultat des conditions démographiques et socio-économiques.

Dans ce contexte, se concentrer exclusivement sur le contrôle des frontières et les mesures de retour est une stratégie clairement sous-optimale. Avec des scénarios différents, cette étude conclut que ces courants d'immigration en provenance des PTM (principalement le Maroc et la Turquie) resteront élevés à long terme. Cependant, il existe des différences importantes parmi les scénarios, et les simulations montrent que l'UE pourrait appliquer des politiques pour diminuer l'intensité des effets d'expulsion dans les PTM.

Les objectifs de cette étude peuvent être résumés comme suit:
· Fournir une mesure quantitative de la migration potentielle entre les PTM (émetteurs) et l'UE (récepteurs), si l'on tient compte de leurs tendances démographiques actuelles.
· Anticiper le futur démographique le plus fiable - scénarios migratoires qui surviendront à long terme
· Présenter un panorama quantitatif riche de la migration entre l'UE et les PTM sélectionnés, en identifiant leur passé, présent et les tendances futures.
· Mesurer le poids des principales variables macro -économiques et sociales- dans l'évolution courante des courants migratoires UE-PTM

Le but est d'apporter une base analytique:
· Pour la compréhension des mouvements migratoires réels et potentiels en provenance des PTM vers l'UE.
· Pour la formulation de politiques économiques et sociales qui directement ou indirectement affectent le phénomène migratoire.
· Pour la formulation de politiques de coopération et de programmes internationaux avec de vastes fondements socio-économiques.

L'hypothèse empirique est que dans les pays du nord de l'Afrique et la Turquie, les tendances démographiques et les changements dans les taux d'activité conduiront à une

augmentation rapide de la population active qui, ajoutée à une création insuffisante de postes de travail, augmentera le déséquilibre structurel du marché du travail. Pendant ce temps, le contraire se produira dans les pays européens. Ces tendances opposées pourraient être suffisamment complémentaires en fonction des différents scénarios démographiques, du marché du travail, du progrès socio-économique et des barrières migratoires. Dans cette structure conceptuelle, ce projet de recherche essaie de mesurer cet équilibre dans un scénario démographique et socio-économique de base, et d'identifier les variables clés qui pourraient être critiques pour changer cette tendance de base.

L'étude est organisée comme suit. Un premier chapitre est consacré aux politiques migratoires de l'UE, pour prévoir si une Politique Migratoire Commune pourrait émerger, et quelle pourrait être sa nature. Le deuxième chapitre porte sur les tendances démographiques, comme réalité qu'une telle politique devrait faire face. Le troisième chapitre développe un modèle pour identifier les causes principales qui expliquent les migrations Euro-méditerranéennes, et proposer alors des futurs différents d'après des scénarios alternatifs. L'objectif est de permettre aux responsables politiques de traduire dans des futurs différents, l'impact de stratégies alternatives. Etant donné que c'est un exercice à long terme, les scénarios alternatifs ne représentent pas de politiques à court terme, mais des stratégies plutôt générales qui devraient être idéalement implémentées par des politiques consistantes.

Les résultats de simulation des différents scénarios pour estimer l'immigration font ressortir les points suivants:
- L'addition de la période totale serait d'approximativement 2,400,000 immigrés qui entreraient dans l'UE 15, pendant les 45 années projetées. Dans le scénario inférieur, ce chiffre descend à près de 1,500,000 immigrés.
- Pour tous les scénarios, comme on s'y attendait, le plus grand nombres d'immigrés viennent du Maroc et de la Turquie, pays possédant un plus grand surplus de travail dû à leur potentiel démographique.
- Le Maroc subira un courant d'émigration entre 1.422.000-906.342 personnes dans les scénarios les plus élevés et les plus inférieurs, respectivement.
- Mettant en relation ce chiffre avec la population potentiellement émigrante estimée précédemment (3,8 millions de personnes pour la période 2005-2050), la migration en provenance du Maroc pourrait osciller entre 23% et 37% de ce segment de la population.
- Pour la Turquie, l'intervalle oscillerait entre les chiffres inférieurs de 481.000-318.000 migrants.
- Pour la Tunisie, les scénarios considérés projettent des chiffres plus modestes entre 52.000-37.000 migrants.
- Pour l'Egypte, les courants migratoires projetés vers l'UE 15 ne sont pas significatifs.
- Pour l'Algérie, les scénarios pointent vers une bande migratoire entre 432.000-290.000 personnes.

En ce qui concerne les scénarios:
1. le scénario '*business as usual*' est celui qui a tendance à montrer un nombre plus élevé d'immigrés sur la longue durée.
2. le scénario de 'convergence lente' réduit légèrement le nombre d'immigrés, en reflétant qu'un modèle de convergence modéré des économies des PTM n'implique pas une réduction considérable de l'immigration.

3. le scénario de ‘convergence rapide’ est celui qui projette les chiffres inférieurs d’immigration en provenance des PTM, mais même dans ce cas le nombre d’immigrants reste encore très considérable.
4. le scénario ‘politiques sociales’, entraînant une réduction de l'inégalité du revenu, projette aussi des chiffres d'immigration inférieures, mais ne change pas la tendance migratoire vers l'UE.
5. le scénario de ‘basse augmentation de l'emploi’ montre des chiffres d'immigration inférieurs que le « *business as usual* », mais les chiffres restent encore très élevés.
6. le scénario de ‘augmentation élevée de l'emploi’ projette une réduction supplémentaire des migrations des PTM vers l’UE, mais elle est moindre que dans les scénarios de convergence rapide ou de politiques sociales.

Donc, pour tous les scénarios, les courants d'immigration restent considérables et il est évident que la pression migratoire ne sera pas correctement affrontée, seulement par l’européanisation des politiques de contrôle et de retour. En bref, l’européanisation des politiques d'intégration est clairement exigée. Deuxièmement, les différences entre scénarios sont considérables dans les chiffres, même si elles ne le sont pas tellement dans les tendances. Les scénarios avec des chiffres d'immigration inférieurs sont ceux de la convergence rapide et des politiques sociales. Ceci suggère que l'UE doit rendre prioritaire l’accélération de la convergence rapide et la mise en oeuvre de politiques sociales re-distributives dans les PTM, pour ainsi soulager la pression migratoire qui implique leur dynamique démographique et socio-économique.

Cependant, ces mesures peuvent au mieux, réduire modérément le nombre d'immigrés. La logique socio-économique-démographique permet des futurs différents, mais dans tous les scénarios, l'immigration sera un vecteur clé des relations Euro-méditerranéennes, ainsi que des dynamiques démographiques européennes.

A DYNAMIC LONG AND SHORT TERM APPROACH TO MIGRATION BETWEEN MPC'S AND THE EU: DEMOGRAPHICAL FRAMEWORK AND THE ROLE OF ECONOMIC AND SOCIAL REFORMS

AGREEM

FEMISE RESEARCH PROJECT FEM32-06

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EXECUTIVE REPORT

Introduction

1. Migration has become a priority to European policy-makers. It is also a crucial dimension of EU-Mediterranean Partner Countries (MPC's) relations. However, the lack of a coherent European Migratory Policy makes it difficult to develop a consistent migratory policy towards MPC's. The focus of policy-makers is clearly on control and return measures, rather than in active integration policies. The argument of this study is that socio-demographic dynamics in the euro-mediterranean region are so strong that creates a significant 'migratory pressure', defined by the study as the result of demographic and socio-economic conditions.

2. Under this conditions, focusing exclusively in borders control and return measures is clearly sub-optimal as a policy formulation. Under different scenarios, this study concludes that immigration flows from some MPC's (mainly Morocco and Turkey) will remain high in the long run. However, there are significant differences among scenarios and simulations show that the EU can implement policies to diminish the intensity of push effects.

3. The purposes of this study can be summarized as follows:

- To provide a quantitative measure of migration potential of European (receiving) and MPC's (sending) countries given its current demographical trends.
- To anticipate the most reliable future demography – migration scenarios that will arise in the long term
- To present a rich quantitative described migration map between the EU and selected MPC's, identifying the past, current and future trends.
- To measure the relative weight of the main macro - economic and social – structure variables in the current evolution of EU-MPC's migratory flows.

4. The aim is to provide an analytical basis:

- For the understanding of real and potential migration movements from the selected MPC's to the EU.
- For the formulation of economic and social policies which directly or indirectly affect the migratory phenomenon.
- For the formulation of co-operation policies and international relations programmes with a broad socio–economic foundation.

5. The empirical hypothesis is that in North African countries and Turkey, demographic trends and changes in activity rates will lead to a fast increase in the working age population, which added to insufficient labour creation, will raise the structural imbalance of the labour market. Meanwhile, the opposite will occur in European countries. This opposite trends could be complementary enough to counterbalance or not, given the different scenarios of demography, labour market demand/supply evolution, socio-economic progress, and barriers removed or built up at both sides of the "board game". In this conceptual framework, this research project tries to measure this equilibrium in a baseline socio–economic–demographical scenario and, in addition, to identify the key variables that could be critical for changing this baseline.

6. The study is organized as follows. A first chapter is devoted to EU immigration policies, to foresee if a European Common Migratory Policy can emerge and what could be its nature. The second chapter focuses on demographic trends, as the reality that the policy framework should face. The third chapter develops a model to identify the main reasons that explain Euro-Mediterranean migrations, and then proposing different futures according to alternative scenarios. The purpose is to allow policy-makers to translate into different futures the impact of alternative strategies. Given that it is a long run exercise, the alternative scenarios does not represent short run policies, but rather broad strategies that should be ideally implemented by consistent policies.

I. Migratory Policy in the European Union

7. The study first analyse the nature of the European migratory regulation, and discusses the eventual emergence of a European Common Migratory Policy. The chapter shows

the unbalances between control and return measures and integration policies, as well as the inconsistencies it introduces in the formulation of a European Migratory Policy. Both control and integration face important difficulties, but given that no border is impassable, and that migratory pressure is important for some countries (as shown in chapter 3), integration seems a more fruitful approach in the long run. The role of development cooperation is assumed to be marginal in decreasing immigration flows, given demographic dynamics. This should be understood as a recommendation no to reduce development cooperation, but rather not focusing it directly on immigration, and not expecting having results in terms of decreased immigration flows.

8. Concerning the fight against illegal immigration, six points are highlighted:

- Fight against illegal immigration is directed against the irregular immigrants, not against those that generate their irregularity.
- The existence of employments in the destination country for illegal immigrants.
- A contradiction between the percentage of irregular manpower and States' permissiveness, because the possibilities of rigorous measures are limited.
- The difficulty of expelling from the territory those in irregular situation.
- Regularizations allows for a better management of immigrants but do not impede future illegal immigration
- Bilateral readmission agreements are not efficient instruments.

9. Among the inconsistencies of restrictive-biased immigration policies we can highlight:

- The difficulties to satisfy in a legal way EU's labor demand;.
- In spite of highly restrictive measures the entrance of immigrants keeps going.
- Emphasis is placed on control policies, fostering an inappropriate environment to integration.

10. The presence of irregular immigrants is an unavoidable consequence of tight immigration policies and a reality of the migratory phenomenon. A more flexible position in the regulation of migratory flows, in which small corrections in the restrictiveness of immigration legislation, without arriving to full freedom, could lead to important efficiency gains.

11. Concerning the emergence of a EU's common Migratory Policy, the study's main conclusion is that application by Member States of EU migratory norms may develop in a future European Common Migratory Policy. Some recent steps in that matter both point to this trend and reinforce the emphasis on control at the expense of not even mention integration policies. This is our second main conclusion, that perhaps the catalyser for a EU's Common Migratory Policy are control and repatriation measures, but that such a securitization is not consistent with socio-demographic trends. Moreover, Europeanization in migratory matters is proceeding by convergence to the more restrictive positions, but nothing is being said about financial resources to conduct effective integration policies.

II. Demographic Changes in the Euro-Mediterranean Region

12. This chapter shows the existence of markedly different demographic behavioral patterns in the EU and the MPC's region, leading to the conclusion that migration flows are and will remain a key determinant of the demographic evolution of the euro-mediterranean region over the next decades, with significant flows coming to Europe from the South. According to the forecasts, the consolidation of specific demographic trends in the MPC's region such as the decline in mortality under the age of five, improvements in life expectancy and fertility reduction will slow down population growth ratios in the next 40 years. However, it will remain higher than those of developed countries.

13. Population growth in developed countries is directly related to immigration flows. Immigration compensates the decrease in working age population. This effect is especially relevant in several members of the European Union. The contribution of foreign workers to European labor markets has increased significantly in the past years acquiring a special relevance in sectors such as the services sector. To conclude, the chapter sustains that immigration flows from MPC's area could contribute to ease the demographic disequilibria that the EU will suffer in the next few decades. Moreover, such flows could balance the markedly different demographic trends observed in both regions.

III. Determinants of bilateral immigration flows between the EU and some MPC's: projections and scenarios

14. This section constitutes the core of the study. Regarding the determinants of bilateral immigration, the network effect is confirmed as a fundamental factor in explaining annual immigrant flows to each destination. The two new variables included in the analysis are clearly significative (migratory potential and income inequality ratio), confirming our initial theoretical assumptions. Migratory potential is especially relevant in explaining immigration flows. By contrast to other studies that include a bigger country group, our results show that for MPC's this variable's trend is a very relevant factor in predicting migratory flows to be received by the EU-15.

15. The results of simulating different scenarios to estimate immigration flows highlight the following points:

- The total period summation would be of approximately 2,400,000 immigrants entering the EU-15 during the 45 projected years. In the lower scenario this figure goes down to close to 1,500,000 immigrants.
- For any scenario, as expected, the higher numbers of immigrants came from Morocco and Turkey, the countries with a higher labour force surplus due to its demographic migratory potential.
- Morocco will experience an emigration flow between 1.422.000-906.342 people in the higher and lower scenarios, respectively.
- Relating this figure with the potentially emigrant population previously estimated (3,8 million people for the 2005-2050 period), migration flows from Morocco could oscillate between 23% and 37% of this population segment.
- For Turkey, the interval would oscillate between the lower figures of 481.000-318.000 migrants.
- For Tunisia, the considered scenarios project more modest figures between 52.000-37.000 migrants.
- For Egypt, projected migratory flows to the EU-15 are not significant.
- For Algeria, the scenarios point to a migratory band between 432.000-290.000 migrants.

16. Concerning scenarios:

1. The business as usual scenario is, as stated before, the one that tends to show a higher number of immigrants over the long run.
2. The slow convergence scenario reduces slightly the number of immigrants, reflecting that a moderate convergence pattern in MPC's economies does not imply a significant reduction of immigrants.
3. The fast convergence scenario is the one that projects the lower figures of MPC's immigrants, but even in this case the numbers still very significant.
4. The social policy, income inequality reduction, scenario also projects lower immigration figures, but does not alter the trend of migration towards the EU.
5. The low employment growth scenario generally shows lower immigration figures than the business as usual one, but numbers still high.
6. The high employment growth scenario projects a further reduction of MPC's-EU migration, but a smaller one that the projected under the fast convergence or social policy scenarios.

17. So, from this perspective, under any scenario immigration flows remain significant and it is evident that migratory pressure will not be properly faced only by recurring to Europeanised control and return policies, and that Europeanised integration policies are clearly needed. Second, differences across scenarios are significant in the numbers, not in the trends. The scenarios with he lower immigration figures are the fast convergence and the social policy ones. This point to the EU should prioritising accelerating fast convergence and implementation of social redistributive policies in MPC's countries.

18. However, these measures will, at best, moderately reduce the number of immigrants. Socio-economic-demographic logic allow for different futures, but in any of them immigration will be a key driver of EU-MPC's relations and of internal EU demographic dynamics.

INTRODUCTION

Migration has become a priority to European policy-makers. It is also a crucial dimension of EU-Mediterranean Partner Countries (MPC's) relations. However, the lack of a coherent European Migratory Policy makes it difficult to develop a consistent migratory policy towards MPC's. The focus of policy-makers is clearly on control and return measures, rather than in active integration policies. The argument of this study is that socio-demographic dynamics in the euro-mediterranean region are so strong that creates a significant 'migratory pressure', defined by the study as the result of demographic and socio-economic conditions. Under this conditions, focusing exclusively in borders control and return measures is clearly sub-optimal as a policy formulation. Under different scenarios, this study concludes that immigration flows from some MPC's (mainly Morocco and Turkey) will remain high in the long run. However, there are significant differences among scenarios and simulations show that the EU can implement policies to diminish the intensity of push effects.

Even if new Member States' population is somewhat younger than that of the EU-15, the trend towards ageing of the European population as a result of decreasing fertility levels and increasing life expectancy is still present in the EU- 25. By contrast, demographic trends in Mediterranean Partner Countries (MPC's) point to the fact that the share of young people would be very high (30-40% of the population) and that the labour force growth rate would still be at 3-5% in the following years; in spite the evidences about demographic transition, demographic pressure in MPC's is not likely to ease for some time because its age structure is so young that tensions will decrease only in the long term, but increase in the short and medium term.

As a result of this demographic scenario, migration flows will be the main source of population growth in Europe and the only influence for demographic changes on the European aging process and low birth rates trend. First and foremost, flows of immigrants from new member states to former EU-15 countries seem to be a significant driving force of population dynamics. But, in particular in recent years, the flow of immigrants coming from North Africa has also notably increased (the EU is the chosen

destination for 78% of East Europeans, 79% of Middle Eastern migrants and 93% of immigrants from North Africa).

From a labour market perspective, immigration is valued as an essential production factor to ensure a firm and sustained economic activity in European countries. Migration is a potential benefit for the stressed European labour market, insofar migrant workers can help to fulfill shortages of less qualified labour force, reducing wage pressure, inflation and therefore, boosting economic growth. Other indirect contributions must be considered (increase of EU labour market mobility, for instance). For origin countries, emigration seems a short term "escape valve" for weakly developed labour markets, so the authorities in these countries consider the outflow of their workers as "necessary" and "profitable" for reducing unemployment, training future returned migrants and procuring remittances to finance development.

However, labour (economic) immigration is also perceived as a potential medium or long term threat for European countries' workers. Most developed receiving countries across Europe are facing migration pressures drawing up plans to match supply and demand and avoiding potential distortion of "native" salaries and employment. The labour market equilibrium could be then preserved in the short or medium term, but it can eventually turns into a serious unbalance in the long run if sound economic growth is not attained. For MPC's countries, a long run increase of potential migration is also a worrying structural issue. It reveals an increasing North – South gap emerging from an unbalanced or insufficient socio-economic development. Second, it hinders the chances of long term economic dynamism, even if structural economic and labour market reforms are implemented.

In short, migration flows from MPC's to the EU emerge as a critical variable for policy decision making process in a global socio economic framework. It seems clear that migration pressure and migration potential, together with the integration of immigrant population in the long term becomes a priority from a broader economic and political perspective within the framework of the Euro-Mediterranean Partnership. In this context, it seems necessary to analyze the relevance of the different determinants of potential migration ("pull" EU and "push" MPC's factors) from a short and long term

dynamic perspective. The detection and measurement of the relative influence of different factors that impact migration flows could help:

1. To anticipate the future of the migration scenario given the ongoing demographic trends and the economic and social evolution projections for EU and MPs in the absence of structural reforms in those countries

2. To evaluate the impact on this baseline migration scenario of different development policy strategies that could be adopted either in the national level or in the framework of EU & MPC's cooperation programs.

3. To obtain a relative measure of the contribution of short – term variables (adjustments) in the prospects of potential and flows of migration on both sides, and to distinguish them from long term changes and structural reforms.

The conceptual framework of the study consists on approaching immigration as one of the three main traditional components of demographical change. Demographical changes and migration flows are connected bi-directionally. On the one hand, demographical shortages can act as a "pull" factor for developed countries and population surpluses can also take effect as a "push" factor for developing countries. On the other hand, migration flows can eventually impact in population growth rates, nativity and/or fertility rates either in sending or receiving countries. In the last year, roughly 70% of the growth of the European population is due to the arrival of immigrants and somecountries compensate their negative demographic balances with the influx of foreign population.

The extent of migration potential between to countries could be linked to several variables of very different nature. It is very common to classify the causes of migration into "pull" (attraction from destination) and "push" (repelling from origin) factors. Broadly speaking, both "pull" and "push" sets of reasons can also be divided into economic, political, cultural and environmental categories. The concept of emigration potential is not equivalent to the effective (observed) migration: in first place, the macro concept of potential, must be completed with the micro concept of propensity to

emigrate, that is the individuals or families' inclination to take this decision. This propensity to emigrate is a consequence of the extent and nature of the existing migration barriers, obstacles appearing either in the origin or destination countries or areas.

In the context of our research proposal, we theoretically assimilate migration potential for the EU and MPC's countries to the surplus or shortage workforce in relation to national needs, given a closed economy. A closed labour market will be in equilibrium in terms of flow, if the number of native persons who enter for the first time into the potentially active population (given a demographical evolution) coincides with those who obtain employment for the first time; if the employment market in terms of flow is not balanced, there will be migration potential. Moving to the real open economy situation, we can now measure the effective migration flows that will be composed of persons who enter the active population of another country (legally or illegally). It comes reasonable that the comparison of migration potential and effective migration for a sending country roughly shows the propensity to migration; only in case where this propensity approaches to 1, could be said that migration potential is absorbed abroad and, thus, emigration guarantees the local labour market a situation of equilibrium in terms of flow. For a receiving country, labour market equilibrium is reached if the total labour additional demand for a given period, together with the number of migrants among persons of working age must be equal to the difference between potential entries into the labour supply and definitive departures from employment.

The empirical hypothesis is that in North African countries and Turkey, demographic trends and changes in activity rates will lead to a fast increase in working age population, which added to insufficient labour creation will raise the structural imbalance of the labour market. Meanwhile, the opposite will occur in European countries. This opposite trends could be complementary enough to counterbalance or not, given the different scenarios of demography, labour market demand/supply evolution, socio-economic progress, and barriers removed or built up at both sides of the "boardgame". In this conceptual framework, this research project tries to measure this equilibrium in a baseline socio–economic–demographical scenario and, in addition, to identify the key variables that could be critical for changing this baseline.

The study is organized as follows. A first chapter is devoted to the analysis of EU immigration policies, to foresee if a European Common Migratory Policy can emerge and what could be its nature. This first chapter tries to capture both the current immigration policy and its foreseeable evolution. The second chapter focuses on demographic trends, as the reality that the policy framework should face. A clear contrast between policies based upon return and control policies and a strong socio-economic-demographic mix that makes migration across the Mediterranean a long run reality. This gap between policy and reality clearly calls for a more consistent a coherent immigration policy.

The third chapter is the core of the project. It develops a model in order to identify the main reasons that explain Euro-Mediterranean migrations, and then proposing different futures according to alternative scenarios. While highly technical, the purpose is completely policy-oriented, insofar it allows policy-makers to translate into different futures the impact of alternative strategies. Given that it is a long run exercise, the alternative scenarios does not represent short run policies, but rather broad strategies that should be implemented by consistent policies. In this regard, the study does not deliver short run and precise policy answers, but it shows alternative paths and their impact.

I. MIGRATORY POLICY IN THE EUROPEAN UNION

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I.1. Introduction[1]

Today there is not a Common Migratory Policy in the European Union. The main vectors of migratory policy remain at the Member States' competence level. Member States just should take into account migratory related *acquis communautaire* in the formulation of their migratory policies. Until the entry into force of the Amsterdam Treaty (1-5-1999), there was no juridical base for the EU to create a common policy on migratory issues.

However, since the very beginning of European integration there have been joint initiatives through intergovernmental cooperation. In this respect we can highlight the creation of the Trevi Group[2] in the first step of the European Political Cooperation (1976-1986). The Trevi Group is considered the precursor of intergovernmental community cooperation in the justice and home affairs domains. In 1986 it becomes an ad hoc group of the ministers responsible, among other aspects, of migration affairs.

Concerns on the migratory phenomenon in the European community scene start to intensify with the freedom of movement introduced by the Schengen Agreements. The creation of a borderless European space introduced in the agenda the need to implement instruments to reinforce European external borders and to adopt measures to face migratory pressure. Fears about a massive inflow of immigrants led to mostly restrictive measures. It became evident that the migratory phenomenon could not be dealt with at a Member State level. So a common migratory policy was needed, insofar as third

[1] This chapter comes from a first background paper on EU migratory policy. It was finished before the last developments in EU migratory policy happened in 2008. So, even if the study as a whole has considered its implications, they are not dealt with in a specific way in the chapter.
[2] Terrorism, radicalism, extremism and international violence

country immigration towards a Member State affects the rest of the Schengen signatories.

The Maastricht Treaty (1993) implied an important step by including some migratory related aspects in the Third Pillar of intergovernmental cooperation (justice and home affairs). Treaty's Title VI points to cooperation among Member States regarding acceding conditions to Member States territory, third country citizens movements within the EU, residence conditions for third country citizens in the EU (including employment and family re-grouping), the fight against illegal immigration, and residence and employment for third country irregular immigrants in the EU territory. However, only a limited number of migration-related agreements were implemented, whose entry into force depended upon national ratification processes and not compulsory actions, like recommendations, resolutions and declarations.

The Amsterdam Treaty, since its entry into force, gave competences to the European Union in migratory matters, with migration being included in the First Pillar juridical framework. Passing from the Third to the First Pillar is important, because it means passing from the mere intergovernmental cooperation level to become a specific community competence. Title IV of the European Community Treaty contains its legal foundation. Article 63 says that the Council will adopt in five years after the entry into force of the Amsterdam Treaty measures on immigration policy in the following areas:

a) Entry and residence conditions and norms over specific long term visa and residence permit procedures, including those related to family re-grouping.
b) Immigration and residence of irregular immigrants, as well as repatriation procedures.

It also says that the Council will adopt in five years measures to define third country nationals' rights and the conditions for third country legal residents in a Member State to obtain resident status in another one. However, the Treaty leaves room to Member States to act independently in migratory issues.

The Treaty of Amsterdam incorporates the Schengen acquis to the European Union. With the Treaty of Amsterdam, the progressive organization of a Freedom, Security and

Justice Space became a high-priority objective to the European Union. The fourth paragraph of the article 2 of the Treaty of Amsterdam says that "to maintain and to develop the Union as a space of freedom, security, and justice in which the free circulation of people is guaranteed together with appropriate measures regarding the control of the external EU borders, asylum, immigration, and the prevention and the fight against delinquency." The European Council of Tampere (October 1999) adopted that objective as high-priority and fixed a program of political orientations and concrete proposals.

The Tampere European Council implied an important step in the establishment of a migratory policy in the European Union. It is necessary to highlight that it was in Tampere where the project of gradual approximation of policies and legislations among the Member States was put forward. In the Tampere European Council the main elements for a EU migratory policy were proposed: the approximation of the migratory policies of the Member States members; a fair treatment toward third country nationals; and the establishment of agreements with the origin countries of migratory flows.

Tampere also settled down that the attitude towards third country citizens would be:

- In the first place, the establishment of prevention mechanisms, by means of cooperation with the countries of origin.
- In second place, the setting-up of measures dedicated to control immigrants entry, by regulating legal immigration and fighting against illegal immigration. With regard to legal immigration in the EU, national legislation approximation on admission and residence conditions to third country nationals was highlighted. As for illegal immigration, the need to undertake actions in the visa and false documentation domains was emphasized, together with cooperation in EU external borders control and the fight against illegal immigration, acting against those responsible for human trafficking and the economic exploitation of the immigrants.
- In third place, the setting of integration measures, social policies that take into account the living and working conditions of foreigners and fight against racism and xenophobia.

The European Council has given an outstanding impulse to the EU migratory policies starting with the European Council of Tampere (1999) and continuing with the later European Councils, among those should be highlighted: Laeken (2001), Seville (2002), Salónica (2003) and Brussels (2007).

I.2. Main characteristics of the EU's migratory policies

I.2.a. Admission and stay in the European Community

The European Council of Tampere showed the intention of approximating Member States' legislation concerning admission and stay conditions of third country nationals. It also emphasised the necessity of guaranteeing an equal treatment to legal residents in the European Union. The section 21 of the Tampere conclusions states that every national from a third country that resides during a long time in a Member State should have a group of rights the most similar possible to those recognized to EU citizens.

Finally, regarding admission and entry, the Council of Tampere highlighted the purpose of applying a more ambitious integration policy that offers rights and obligations comparable to those of the EU citizens. In this sense, it is necessary to highlight family regrouping as a fundamental factor in facilitating integration of third countries immigrants in the Member States.

I.2.b. Admission policies regarding third country nationals willing to work in the EU

Regarding the admission and stay of third country nationals in the EU three groups are established:

- In the first place, the entrance of wage-earners workers in the EU; in the Council Resolution of June 20 1994 on the limitations for the admission of third country nationals to work in the territory of the EU shows that Member States should make an effort in conforming their legislation to the principles that regulate third

country nationals in the Member States members. These they are the following ones:

a) Admission criteria: the Member States will consider entry applications by third country workers only when the labour supply in its labour market cannot be covered neither with national manpower, neither with Member States workers, and neither with third country workers residents in a permanent and legal way and that belong to the regular labour market in of this Member State.

b) Duration of the admission: temporary workers will be admitted in the EU during a maximum of six months for every period of twelve months. Workers in practices will be admitted, in general terms, for a maximum period of one year. Other third country nationals will be able to be admitted initially in the Member States with working purposes for a period non superior to four years.

c) Continuation of the stay: In principle, people that are already in the territory of a Member State, like visitors or students, won't be authorized to prolong their stay with the purpose to work or to look for employment; neither will it be granted to people admitted as workers in practices, as lenders of services or workers for a lender's of services to prolong their stay to occupy a job legally. The only exception will be when his purpose is completing his formation or the activity under contract for whose realization he had been admitted; neither will it be allowed to temporary workers prolonging their stay to occupy an employment of another type. Also, it won't be granted to prolong their stay with the purpose of concluding the work for which the initial authorization was granted. Nevertheless, the total duration of its stay won't be over six months for every period of twelve months. However, the other workers would be permitted to prolong their stay to occupy an authorized job, but only if they continue to comply the applied criteria when the initial decision of admitting them was taken

- In second place, regarding the entrance of third country nationals to exercise a professional activity for their own account; the Resolution of the Council of November 30 1994 on the limitation of the admission of third country nationals

in the EU to exercise an independent professional activity, establishes that in the EU only third country nationals that can represent a value added for the economy of the Receiving Member State can be admitted for the exercise of an independent economic activity. In order to authorize the entrance in their territory to third country citizens that you/they want to develop a professional activity for their own account, EU Member States have to demand that it is properly proven that this independent profession will be beneficial for their economy. For that reason, the admission application will have to be accompanied by documentation (a) on the nature, the span and the duration of the activity projected by the person, (b) about the foreseeable necessities in manpower, and (c) a description of the places where the activity will be exercised.

- In third place, the admission and stay for conducting studies, not remunerated practices or volunteering services. The Directive of the Council 2004/114/CE, relative to the admission requirements for third country nationals to conduct studies, not remunerated practices or volunteering services intend to approximate Member States' national legislation concerning the entry and residence conditions of third countries nationals over a three months period. Besides the specific admission requirements in each one of the categories, this directive imposes, as main condition for admission, to have enough financial resources. Residence permits will have a variable validity period for the different categories: a) for students, it will be issued a residence permit of at least one year, renewable if their holder continues satisfying the required conditions; b) for not remunerated practices, the duration of validity of the residence permit will be the duration of the learning that cannot exceed one year; only in exceptional cases it will be renewed once and only for the necessary time for the obtaining of a professional qualification recognized by a Member State; c) regarding volunteers, the permission will be sent by a maximum period of one year; exceptionally and under determined conditions, if the duration of the corresponding program is superior to one year, the validity of the residence permit will be issued for the whole period.

Concerning permanency in the EU, the existence of a uniform residence permit model for third country nationals should be highlighted (CE n° 1030/2002 of the Council).

I.2c. Residence permits to third country nationals that are victims of human trafficking and that cooperate with the competent authorities

In the Tampere European Council, the Member States declared its determination of fighting against illegal immigration, and they accentuated the necessity to pursue those who traffic with human beings and practice the economic exploitation of immigrants. In this respect, it is necessary to mention the Directive 2004/81/CE of the Council, relative to the issuing of residence permits to third country nationals that are victims of human trafficking and that cooperate with the competent authorities. This Directive establishes a residence permit dedicated to these victims and settles down that, under the decision of each Member State, it can expand its implementation to third country citizens that were helped to immigrate secretly.

That directive specifies the conditions for the concession of residence permits to immigrants that cooperate in the fight against human trafficking and illegal immigration. The residence permit will have a minimum validity of six months and could be renewed if the necessary conditions to have this authorization continue being fulfilled. This will allow their holder to accede to the labour market, vocational training and education. Also, the Member States members will have the freedom of subordinating the permit delivery to the fact that the victim follows a program dedicated to his integration in the reception country or to favour his return to the origin country.

It is evident that this residence permit aim to encourage illegal immigrants to cooperate with the authorities of the receiving Member States. In the community domain, this directive complete a series of initiatives dedicated to fight against this phenomenon, like the Decision 2002/629/JAI of the Council, intended to fight against human trafficking.

I.2.d. Long duration resident's statute for third country nationals

The EU grants a European statute to third country residents in legal situation uninterruptedly during five years in the EU (Directive 2003/109/CE of the Council, relative to the statute of long duration third country residents). However, to obtain a long duration resident's statute, a third country immigrant will have to provide the necessary proofs that he has: a) stable and enough resources to cover her necessities without appealing to the Member State's social security system; b) illness insurance. Also, the Member States members ask demand to the immigrant to comply with some integration requirements (such as sufficient knowledge of the destination country language).

Member States can reject the issuing of the statute for public order or public security reasons. In the same way, there are reasons that justify the retreat of the statute, although they are limited and are specified in the Directive (among them, the absence from the European territory for more than twelve months or the fraudulent acquisition of the statute). The person that possesses resident's long duration statute will be protected against all expulsion decision; nevertheless, a behaviour that constitutes a sufficiently serious threat for public order or domestic security will justify an expulsion decision.

A third country national having acquired resident's long duration statute is entitled to several benefits under the same conditions that the national ones as regards to: a) conditions and access requirements to a salaried employment and an independent activity as well as the employment clauses (weekly rest, norms of hygiene, annual holidays, wage, firing conditions); b) education and vocational training, recognition of academic titles; c) social protection (family subsidies, retirement pensions) and sanitary assistance; d) welfare (minimum income, minimum retirement, free sanitary assistance); e) social and fiscal advantages, access to goods and services; f) association and affiliation freedoms and participation in trade unions or business organizations; g) free access to the whole territory of the concerned Member State.

Nevertheless, the Directive establishes that a Member State member will be able to restrict the equality of treatment: a) in the access to employment and education (for example, demanding the appropriate knowledge of the language); b) as regards social protection, since the community countries will be able to limit the equality of treatment as for the essential benefits. Member States are free to enlarge the list of aspects on which they are willing to grant equal treatment or benefits to long duration residents. Any Member State can issue a permission of permanent residence under more favourable conditions that the ones foreseen by the Directive. This residence permission for a Member State member won't give access to the right of long duration residence in the other Member States.

However, a long duration third country resident in a Member State will be entitled with residence rights in another EU country during a period over three months, if it comply with the conditions fixed by the proposal; especially, the requirement of exercising an economic activity, to study or to follow vocational training. The second Member State can reject his stay only in the event of a threat to public order, public security or public health. The resident of an EU country that lives in the second State member will conserve her statute of resident of long duration in the first Member State. Once lapsed five years of regular residence in the second Member State she will be able to present, if she wants it, an application to be considered as long duration resident in this Member State.

I.2.e. Family regrouping

This right is recognized by international juridical instruments. More precisely in the European Agreement for Human rights Protection and Fundamental Freedoms (1950). In the European Union, the Community Legislation has the Directive 2003/86/CE of the Council, on the right to family regrouping. It settle the conditions under which third country nationals that reside legally in the territory of the Member State are entitled to family regrouping. Third country nationals with a one year residence permit in a Member State with the real possibility to remain in the country can request family regrouping.

The Directive settles down that, in principle, can benefit from family regrouping: a) the spouse of the interested party; b) the smaller children of the couple (if they are not married). Only Member States members can freely adopt dispositions that allow family regrouping of: a) direct ascendant and first grade relatives; b) single children older than 18 years; c) not married cohabitants. Polygamous marriage is not recognized since only a wife will benefit from the regrouping right. Also excluded from that right are the children of wives that not been admitted, unless the minor's interest demands it (in application of the Children's Rights Agreement [1989]).

The entrance and stay of a family member can be refused for public order, public security or public health reasons. Retiring or not renewing a permission that had already been granted can be justified for these same reasons. The interested party can be ask that, before the members of their family can regroups with him: a) she has a lodging that is adjusted to the general safety and health norms, a illness insurance, and stable resources to cover their own necessities and those of their family members without having to appeal to the welfare system of the Member State; b) he adopts the integration measures of the welcome country; c) when she remains during a minimum period of two years in the Member State.

Once family reunification has been reached, all the family members will have a residence permission of the same duration, s well as access to education, employment and vocational training under the same conditions. After a five year maximum period, the spouse and the children over 18 years will be entitled to autonomous residence permit. This Directive is applicable without prejudice of the possible more favourable conditions recognized by the national legislation of Member States.

I.2.f. The expulsion of third country nationals

As for the expulsion of third country nationals, it is necessary to highlight a Directive relative to the mutual recognition of expulsion decisions and a Decision that refers to joint flights for the repatriation of immigrants.

1. The Directive 2001/40/CE on the mutual recognition of decisions regarding the expulsion of third country nationals. It pretend that the expulsion decision by a Member State against a third country national in the territory of another Member State is executed. This Directive is applicable to expulsion decisions founded on: a) a serious threat to public order or security, b) the non-fulfilment of national dispositions relative to foreigners' entrance and stay. In any event, the Member States should guarantee that human rights and fundamental freedoms are respected.
2. The Decision 2004/57/CE of the Council, relative to the organization of joint flights for the expulsion from two or more States members' territory of third country nationals for which expulsion resolutions have been issued. This Decision settles the norms for the organization of repatriation flights. More precisely, it defines the specific tasks of the authorities designated by the Member States of organizing joint flights, as well as the participant Member States common tasks. The participant Member State will inform the national authority of the organizing Member State about its intention of being part in a joint flight, indicating the number of third country nationals it want to reapatriate and providing enough escorts for the persons that will be expelled.

I.3. Information and cooperation among Member States in migratory measures

In this respect we have to highlight three initiatives:

1. A Decision relative to the establishment of a mutual information mechanism on the Member States' measures regarding asylum and immigration
2. The European Migration Network
3. European migration statistics

I.3.a. Mutual information mechanism

Member States continually adopt new immigration measures, decisions that may have important repercussions for other Member States as well as for the European Union as a

whole. In the European Union it is being promotes the establishing of an official information procedure among Member States and the Commission, with the purpose of fostering policy coordination as regards immigration and asylum. In this regard, the Decision (CE) nº 2006/688 of the Council, relative to the establishment of a mutual information mechanism aims at facilitating the exchange of information between the Commission and the Member States on the national legislation regarding immigration and asylum. This Decision also establishes an Internet network administered by the Commission devoted to facilitate the exchange of opinions on these measures. The Member States will notify the measures that intend to adopt or that have been adopted recently. This information should be communicated, as lately, at the moment it becomes public.

I.3.b. The European Migration Network

The European Migration Network has its origin in the Laeken European Council (2001). The Council intended to the Commission to develop a European system of information exchange on migration and asylum. The result was the creation of the European Migration Network, dedicated to collect, analyze and diffuse migration data with the purpose of facilitating the European Union's decision-making process in this domain. The current tasks of the European Migration Network are: a) to collect existent asylum and migration data; b) to conduct, in a limited manner, research studies; c) to guarantee data and documentation exchanges; d) to analyze available information and to prepare comparative reports.

The European Commission intends that in the future the general task of the European Migration Network should be to provide to the Community, Member States and the public opinion objective, reliable and comparable information as regards migrations and asylum, although certain information, given its confidential character, would be limited to some users. Also, the Commission considers that it is convenient that the European Migration Network establishes relationships with organisms in charge of collecting and analyzing data in related domains (among them, the Euro-mediterranean Consortium for Applied Research on International Migration; and the Agency of Fundamental Rights).

I.3.c. European migration statistics

European Union statistics regarding asylum and migration refers to immigration, emigration, residence, international protection, illegal migration and non admission. In the first place, the Member States provide Eurostat with statistics on the number of: a) immigrants that enter the Member State territory; b) emigrants that leave the territory; c) naturalized physical persons. Second, Member States communicate statistical data on the volume of residence permits issied and the number of long duration residents, according to the Directive CE/2003/109 relative to the statute of long duration third country residents.

In third place, the Member States send to Eurostat statistics on the number of: a) people that have presented an application for international protection; b) people whose application is being examined by the national authorities; c) rejected applications; d) not accompanied minors; and) applications and transfers regulated by the Dublin Regulation II; f) people installed in the Member State. In the same manner, the Member States communicate statistics on concession decisions, denial or retreat of refugee's statute. In fourth place, the Member States send to Eurostat statistics on non admitted third country nationals and on the number of detainees in irregular situation in its territory. Also, they contribute statistics relative to the number of third country nationals that return to their origin country, transit country or other third country, according to an administrative or judicial decision that forces him to abandon the territory.

However, the Commission has declared that although the quality of Euroepan statistics on migration has improved, the sources, the definitions, the collection of data and the practices continue being different across Member States. In the Salónica European Council (2003), the necessity of more effective mechanisms to collect and to analyze migration data was underlined. In this respect, it is necessary to highlight the Proposal of Regulation of the European Parliament and the Council relative to migration and international protection European statistics. This is the continuation of the Commission's 2003 Action Plan concerning migratory community statistics. In the proposal common norms are imposed for the collection of statistical data by Member States on: a) Member States immigration; b) the emigration flow coming from a Member State toward another one or toward a third country; c) the nationality and

country of birth of residents in Member States; d) administrative and judicial procedures regarding migration.

I.4. The integration of immigrants

Regarding integration, it is necessary to highlight the following events:

- In the first place, the European Council of June 2003, at the request of the Council of Justice and Home Affairs, proposed to the Commission to present an Annual Report on migration and integration. The result was the presentation of the Communication on migration, integration and employment, where the Commission carries out a global approach to integration.
- Second, the publication of the first edition of the Integration Manual for policy makers and professionals in November 2004.
- In third place, "The Hague Program", adopted by the European Council of 4 and 5 November 2004, which highlights the necessity of a higher coordination across national integration policies and related European Union level initiatives.
- Fourth, the approval of some Basic Common Principles by the Justice and Home Affairs Council (November 2004); these Principles are aimed to support a coherent integration European framework.

The Commission argues that one of the main objectives of the European Union is to reinforce third country nationals' integration that reside legally in the Member States, and emphasizes that to reach integration it is necessary to carry out several tasks at a national and European levels. In the Communication of the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Regions Committee (September 2005) «Common Program for Integration - Framework for third country nationals' integration in the European Union» it is expressed that the integration is a bidirectional and dynamic mutual adjusting process on the part of Member States' immigrants and residents, and highlights that employment constitutes a fundamental part of the integration process. The Commission also declare that the European Strategy for Employment provides the fundamental framework for the integration of immigrants in the labour market.

I.5. Solidarity and Migratory Flows Management Framework Program for the 2007-2013 period

The Framework Program is intended to improve EU's migration management and to reinforce solidarity within Member States. It is included in the 2007-2013 financial perspectives framework. It focuses on four aspects: 1) the integrated management of external borders' control and surveillance; 2) asylum policies, 3) social, civic and cultural integration of immigrants in regular situation; and 4) the fight against illegal immigration and the return of immigrants that reside illegally in the EU's territory. Concerning the management of the external borders, the Hague Program shows the necessity to distribute external borders' control and surveillance responsibilities among Member States in an equal way.

This Program sets mechanisms of financial solidarity that cover these four domains. The creation of a European Fund for external borders, the integration Fund, the return Fund, and the continuation of the refugees' European Fund. Regarding integration, the Fund will be applied to the attainment of six policy objectives: a) to facilitate admission procedures for immigrants; b) to organize activities of basic training for immigrants; c) to increase civic, cultural and political participation of immigrants in the receiving society; d) to strengthen the capacity of national institutions to respond in a more appropriate way to the necessities of immigrants; e) to promote receiving society adaptation to a growing cultural diversity; f) to foster Member States' capacity to develop integration policies.

I.6. Fight against illegal immigration

The fight against illegal immigration has become a priority in EU's immigration policies, as shown in the Seville summit (2002). The Commission intends that the fight against illegal immigration should occupy a central place in the EU's migratory policy. It points out that it is necessary to establish preventive measures and to suppress its main incentives, such as the existence of irregular jobs. It supports the development of repatriation policy to their country of origin or residence for illegal immigrants; and it

emphasizes the necessity to reinforce cooperation with origin and transit countries in order to reduce illegal immigration flows. The Communication by the Commission (July 2006) on the political priorities in the fight against illegal immigration propose some measures to be implemented in different EU domains to face illegal immigration.

The domains and the measures to be implemented are:

1. Cooperation with third countries. The proposal is to reinforce dialogue and cooperation with third countries in the sphere of the immigration, especially with the countries of sub-Saharan Africa and with Mediterranean Partner Countries included in the Neighbourhood Policy. The Commission sustains that cooperation with third countries is decisive to reduce illegal immigration flows. In this regard, it is necessary to point out that police cooperation and border surveillance agreements, as well as readmission commitments have turned out to be effective.
2. Borders security, integrated management of the external borders, and security of travel and identity documents. It is necessary to highlight the FRONTEX role, as well as the Council decision of inserting biometric elements in the passports and travel documents issued by the Member States, considering that the incorporation of such elements allows to improve the protection of these documents and to impede its falsification.
3. Fight against human beings trafficking. The Community will have to settle and finance measures to act over the factors that make certain people more vulnerable to become victims human trafficking, such as poverty, discrimination and obstacles to access education.
4. Fight against illegal employment. The EU projects the adoption and effective application of measures by the Member States to force employers to check the legal situation of immigrants before proposing them a job.
5. Return policies. Common norms should be applied concerning immigrant's return to their countries of origin or residence.
6. Improving information exchanges among Member States. Greater cooperation among immigration officials should be facilitated and intensified.

7. Transporters responsibilities. In this respect, there are the Directive 2001/51/CE on transporters' responsibility, and the Directive 2004/82/CE on the transporters' obligation of communicating transported people data.

I.6.a. Study on legal-illegal immigration linkages

In the Salonica European Council (June 2003), a study on the linkages between legal and illegal immigration was requested to the Commission. The study concludes that it is very difficult to know with accuracy the width of illegal immigration in the Member States. The number of irregular immigrants is estimated according to the number of rejected entrances, expulsions, border detentions, applications of asylum, rejected demands for national protection, and of course, regularization applications. However, it should be considered that an outstanding number of people don't request any form of international protection.

The Study results may be outlined as follows:

1. The impact of illegal migration bilateral agreements: it concludes that for most Member States there is no direct link between the signature of bilateral commitments and a reduction of illegal immigration.
2. Visa policies repercussion on illegal migration: the Commission pointed out that nothing allows affirming that the retreat of the Visa obligation for a certain country increases the flows of illegal immigration coming from this country.
3. Regularization effectiveness in fighting illegal migration: it concludes that they are an incentive to illegal immigration, states that regularizations should not be considered as a way to manage migratory movements and that the massive regularizations should be limited to completely exceptional cases.
4. Finally, the Study highlights that a certain level of illegal immigration will always subsist in the European Union.

I.6.b. Repressing entrance and irregular stay help

The Tampere European Council showed EU's interest in fighting human beings traffic harmonizing Member States' criminal legislation. In order to discourage the help to the entrance and residence of irregular immigrants two initiatives were presented. A Directive to define help to irregular entry, circulation and stay, and a Decision aimed to harmonize the applicable sanctions to such infractions. According to the Directive 2002/90/CE, Member States should consider as infraction: a) the direct or indirect help to the entrance, the circulation or the irregular stay of a third country national; b) the participation, as accomplice or instigator, in this help. According to the Decision 2002/946/JAI, the Member States guarantee that the help to entrance, circulation or illegal stay will be punished by effective and proportionate penal sanctions.

I.6.c. Pecuniary sanctions to transporters

The Directive 2001/51/CE which complete the dispositions of article 26 in the Schengen Agreement of June 1985, harmonizes the pecuniary sanctions imposed to transporters that introduce in the territory of the Member States immigrants that are not provided with travel documents or Visa. According to the legal, regulatory and administrative dispositions of the Member States, the transporters should guarantee that any third country national entering the EU territory has a travel document or a Visa. Equally, the Directive specifies the obligations concerning to the transporters when the entrance of an immigrant is rejected. In general terms, the transport company should pay for the stay and return expenses.

I.6.d. Immigration Liaison Officials Network

The Regulation (CE) n° 377/2004 of the Council on the creation of an Immigration Liaison Officials Network reflects the management plan for the EU's external borders, that establishes a immigration liaison officials network destined in third countries. This

Regulation is aimed to harmonize these officials' tasks, especially those that are in a third country. Immigration officials are representatives of the Member States designated to a third country to maintain contacts with the domestic authorities with the purpose of facilitating EU action in the prevention and fight against illegal immigration. Each Member State has to designate an immigration liaison official to its consular authorities in third countries.

These officials will maintain direct contacts with the domestic authorities with the purpose of exchanging information on: a) the flows of illegal migration coming from or transiting that country; b) operative methods regarding migratory flows; c) the existence at their borders of criminal organizations implied in the traffic of migrants; d) the incidents that could give place to a new evolution of migratory flows; e) the utilized methods regarding false identity and travel documents; f) the means of helping the domestic authorities to prevent these migratory processes; g) the measures to facilitate illegal immigrants return to their countries of origin.

The immigration liaison officials destined to the same country form a network in which: a) they exchange information and practical experiences; b) they adopt common approaches to information collection methods; c) they coordinate the positions that should be adopted in contacts with commercial transporters; d) they organize common specialized training sessions for Member States consular agents.

I.6.e. Visas

After the Treaty of Amsterdam (1999), the European Union has the competence regarding Visa policies in the Member States (except for the United Kingdom and Ireland). In the European Community it is necessary to highlight two Regulations regarding Visa procedures. On the one hand, the Regulation that fixes the list of third countries whose nationals have the obligation of presenting a Visa to cross the EU borders, and the countries whose nationals are exempted of this requirement; and on the other hand, the one that decrees a uniform model of Visa. Finally, it is indispensable to highlight, the Proposal of Regulation of the European Parliament and the Council by which a Visa Community Code is settled.

I.6.f. Uniform model of Visas

A European Regulation establishes a common Visa model for all the Member States (CE nº 1683/95 of the Council, May 1995). It defines the term Visa as the authorization issued by a Member State, demanded to enter its territory with the aims of: a) to remain in this Member State or in other EU country, for a period whose total duration doesn't exceed three months, b) to transit this or other's Member State territories, with exclusion of international airports transit and transfers among airports of a Member State. Each Member State member has to designate a unique organism responsible for the impression of the Visa and to communicate its name to the other Member States and the Commission.

I.6.g. Visa obligations for third country nationals

The European Union specifies a list of third countries whose nationals should present a Visa when crossing the external borders of the Member States. In the Regulation (CE) nº 574/1999 of the Council (March 1999) and in its successive modifications (Regulation (CE) nº 539/2001, nº 2414/2001, nº 453/2000, nº 851/2005, nº 1932/2006) determine the third countries whose nationals should be provided of a Visa when crossing the external EU borders. However, the Member States have the power of demanding or not a Visa to a third country national that don't figure in the list; this decisions will be notified to the Commission. Also, the EU countries can apply exceptions to the obligation of obtaining a Visa for: a) civil airplanes and ships crew; b) the accompanying personnel of airplanes in salvage missions; c) holders of diplomatic passports, service passports and other official passports.

Finally, concerning Visa procedures have to be highlighted the following tools:

-The creation of the European Visa Information System

-The Proposal of Regulation by the European Parliament and the Council on the Visa Information System and short duration Visa's data exchange among

the Member States. This proposal defines the objectives and the functions of the System, and determines the conditions and procedures of data exchange among the Member States about the applications of Visa of short stay and denial, extension, annulment or retreat of Visa decisions.

I.6.h. Visa Community Code

The Visa Community Code (Proposal of Regulation of the European Parliament and the Council by which a Visa Community Code is settled down), has as purpose integrating in a single Code all the juridical instruments that regulate Visa decisions. It specifies the harmonized practices and procedures those that should follow the Diplomatic Missions and Consular Offices of the Member States in processing Visa applications.

I.7. A critical reflection on EU's migratory policy

Once having analyzed the main aspects of the EU migratory domain, it is indispensable to outline some detailed considerations for some of the previously exposed aspects.

I.7.a. The difficulties of control policies

In the Brussels summit of December 14 2007, the Council declared that it was necessary to restrict the number of admitted third country nationals, keeping in mind that reception capacity by European societies is not limitless, highlighting that control policies play an indispensable part. Cooperation with origin and transit countries was considered fundamental, s well as to empower the role of FRONTEX. However, regarding control policies, it is necessary to establish a difference between entrance control and permanency policies. The receiving countries have to control not only entrance but also permanency, what is even more complicated.

Concerning entrance control policies, no democratic State can achieve the full control of people that cross its frontiers, and it is impossible to avoid a certain number of illegal

immigrants, either that entering by unauthorized places or through border positions using a false documentation or hiding in vehicles. The purpose of the Schengen Agreement is the suppression of the internal borders in the EU, but at the same time it has another restrictive nature: the reinforcing of external borders. However, as Arango (2001) argues, paradoxically the Schengen system implementation is contributing to the difficulties of controlling borders. We should not forget the high number of immigrants that enter the EU through countries different to those in which they seek to settle down.

Nevertheless, for the control of migratory flows borders control is not enough. Permanency control policies are also needed. Most of the irregular immigrants enter legally and they become irregular later when its circumstances change, that is to say, many enter with permits of short duration stay, like tourist's or student Visa and when they remain beyond the expiration of the Visa they become irregular. Finally, with regard to control policies, it is necessary to highlight that Member States must have present that no frontier is completely impassable and no regulation is invulnerable.

Keeping in mind the objectives that must accomplish immigration policies, their two main vectors are control policies and integration measures. Both are closely related, since there are constant interactions among them (Hammar, 1985). Concerning Member States, control and integration policies started almost simultaneously. By the mid-seventies, considering the international situation, the European receiving countries decided to apply restrictive policies. By that time they became conscious that a significant number of immigrants had opted to remain, giving place to ethnic minorities in their societies. In the face of this scenario they realized that it was necessary to implement integration policies.

I.7.b. Problems of integration

In Europe, positive experiences of integration in Member States' societies coexist with others of segregation, discrimination, social exclusion and xenophobia. Integration policies face important difficulties that have their origin in the historical context and the existence of significant reluctance in destination countries to the full incorporation of immigrants in their societies. When designing integration policies, community

institutions should take into account that integration depends more upon structural characteristic of receiving societies than upon the policies that promote it. Regarding European integration policies there is risk of incurring in an abusive generalization, since they are in charge of peculiar realities in each country and they are influenced by historical traditions, political structures and diverse civic cultures, therefore it is necessary to consider their extraordinary diversity.

To reach integration and social cohesion in the Member States it is necessary to appropriately manage multicultural realities. It is necessary to develop a constructive intercultural dialogue. However, some integration matters require a bigger legislative harmonization at community level. In this regard it is necessary to mention family regrouping, that facilitates the integration of immigrants in receiving countries, and that represents one of the main channels of admission of third country nationals in the EU, but that it is characterized by the discretion that leaves to the Member State to legislate.

Also, it is necessary to eradicate discrimination in the labour market, foster the recruiting of immigrants and support third country nationals in the creation of companies. It is necessary to push Member States to elaborate integration policies in the labour market, and to make a following of the impact of the reforms carried out to reach the integration of immigrants in the labour market. At the same time, it is important to facilitate the recognition of academic levels and of immigrants' specialization in receiving countries. Currently, the EU simply offers facilities for the entrance of highly qualified immigrants, like has been shown in the Brussels summit of December 2007 when proposing a " blue card". For the admission of students, it has been recognize that they mean a reciprocal enrichment and contribute to a better understanding among cultures.

The emphasis in temporary immigration should also be highlighted. It is intended to cover transitory labour needs. The project of circular immigration has also received an important impulse in the December 2007 European Council. Regarding long duration immigrants, although in the EU it is considered that integration of immigrants is an essential aspect of a coherent immigration policy, and that fundamental rights are increasingly imposed as elements of a Resident's of Long Duration Statute, there are many legislative measures promoted by the community institutions that can harm the

non discrimination principle if it is considered the theoretical will of equal the Statute of long duration third country nationals with Member State citizens that exercise free movement of persons.

In the EU integration arena, it is necessary to highlight, on the one hand, the creation of the European Observatory for Racism and Xenophobia with the purpose of providing information and objective, reliable and comparable data at a community level about the phenomena of racism, xenophobia and anti-Semitism, so that European institutions can take measures against these phenomena; and on the other hand, the establishment of an European Fund for financing integration projects of third country nationals in regular situation (financial perspectives 2007-2013).

However, it is necessary to consider the scarce advances in the integration objective compared to the other objectives outlined in Tampere, such as migratory flows control and the fight against irregular migration. A considerable number of EU initiatives there are several initiatives aimed at strengthening immigration control and a few proposals dedicated to foster immigrants' integration in the receiving society. An integration deficit is related to what is denominated the immigration – integration linkage: the fact that the integration depends a lot upon how immigration takes place and that they are not isolated spheres (Stalker, 2002). The integration of immigrants is a primordial aspect of any coherent immigration policy. The entrance of immigrants can give place to an assimilated integration that implies the fusion among different social groups, or the establishment of ethnic groups as social units in the receiving society.

I.7.c. The role of development cooperation

Although the two main vectors of immigration policies are control and integration policies, in the EU's immigration policies have three axes. The third axis is the elimination of causes that promote emigration from origin countries through development cooperation. Migration constitutes a strategic priority for the EU in its international relations. The Communication of the Commission of 3.12.2002 to the Council and the European Parliament on the integration of migratory questions in EU's external relations is divided in two parts. The first one focus in assistance being directly

tied to migrations management by benefited third countries, and it underlines that migration constitutes a field for EU development cooperation programs.

However, looking at development cooperation as an alternative to migratory flows is unrealistic. In the first place, the linkage between migrations and development offers multiple complexities. In general, poorest countries do not emigrate, but rather medium development countries. So, the magnitude that international cooperation should reach to influence the causes that originate migrations would be several times higher than today, in case development cooperation could solve push effects (see the last chapter of this study). In second place, development cooperation would have to be design at a world level, otherwise, other countries would become new issuing States.

Trying to rely on development cooperation as a pressure instrument to developing countries, with the purpose of forcing them to adopt tight emigration policies deserves a negative opinion. For two reasons: first because this is a way to denaturalize development cooperation from its genuine purpose of combating poverty and becomes an instrument of donor's interests; second, because it is not a very effective instrument, given the gap between the resources managed by development cooperation and the needs of origin countries population (Alonso, 2004). This third axis seems then more rhetorical than effective. The complex relationships between emigration and development should be taken into account (Appleyard 1992). It is not reasonable to suppose that assistance to developing countries will contain immigration. International development assistance is not an alternative to migratory processes.

I.7.d. The complexities of fighting irregular immigration

We have already exposed that fight against illegal immigration is a priority in the EU's immigration policy. Bigger attention should be paid to the following aspects:

1. Fight against illegal immigration is directed against the irregular immigrants, not against those that generate their irregularity. In general, irregular immigration goes associated to the presence of mafias that had become a powerful engine of illegal migration that generates impressive benefits.

2. The existence of employments in the destination country for illegal immigrants. Some Member States has a true demand of irregular workers, because some companies look for irregular workers and obtain important benefits from employing them. The existence in the receiving country of a demand and labour supply gap that originates a labor demand of that is not covered with native manpower.
3. A key contradiction consists in the conflict between the percentage of irregular manpower and the unavoidable permissiveness of the State, because the possibilities of rigorous measures are limited. In this respect Sagarra (2002) describe the figure of the irregular, registered immigrant, working and with an expulsion order.
4. The difficulty of expelling from the territory those that are in irregular situation. Besides the complications and costs that this would imply, the expulsions of immigrants require a country willing to admit those expelled, something that doesn't always happen.

Concerning the fight against illegal immigration, the Brussels summit in December 2007 intended to achieve two objectives: first, the twenty-seven Member States urged the European Parliament so that the sanctions are increased to companies or people that employs workers with irregular residence (they want this proposal to materialize in 2008); second, the Council approved a proposal for a common policy regarding the return of immigrants. This regulatory scheme has the objective to unify the different Member States' legislations on the return of third country nationals that reside illegally.

Regarding regularization measures, it is necessary to highlight that from the mid-nineties regularizations have been increasing. Member States apply them with the purpose of facing the increasing of irregular immigrants that work illegally. A study carried out by the Commission analysing the effectiveness of regularizations concluded that regulations, although allows to better manage population, solve the problem of the undeclared work and increase government receipts, constitute an incentive to illegal immigration. Arango (2007) puts it in the following way: "the effectiveness of regularizations is more than doubtful; they always seek to be the last one and they turn out to be the penultimate one. They aspire to start from zero, but their results use to be ephemeral."

Another important point is the significance that the EU grants to Readmission Agreements with origin countries. These are bilateral agreements between the EU and a third country designed to facilitate the expulsion of illegal immigrants, introducing the obligation for the third signatory country of readmitting without formalities both its own nationals and those foreigners that come from its territory.

I.7.e. The costs of restrictive migratory policies

At the present time, migratory policies are so restrictive that our age has been denominated " the era of involuntary immobility" (Carling, 2002). Tight migratory policies don't only have a limited effectiveness; they also generate considerable and growing costs and produce important unexpected results. It is necessary to consider that the desire to cross borders ends in countless human tragedies. From an economic perspective (although the migratory processes don't respond only to economic reasons), Hamilton and Whalley in the eighties, and later on Moses and Letnes at the beginning of the current century, analyzed the benefits from suppressing all restrictions to migrations. Both studies concluded that the benefits of free circulation are remarkable. These researches show the potential efficiency gains that could be reached with a less restrictive immigration policy.

Restrictive migratory policies have been legitimated before European public opinion. They find support in security related arguments that manifest the necessity of Europe protecting itself against terrorism. Restrictions on the general admission of workers are not being questioned, insofar as they are related to the national employment situation, also known as community preference. However, Europe wants to facilitate the entrance of highly qualified foreigners. In this respect, it is necessary to point out that one of the most outstanding proposals is the " blue card ", residence permission for highly qualified immigrants in sectors where Member States need manpower. This is at least questionable for the damages this brain drain can cause in their origin countries.

Among the inconveniences of applying tight immigration policies, it is necessary to highlight, in the first place, the difficulties to satisfy in a legal way the labor demand; in

second place, it looks like if Member States have lost control over immigration, since in spite of the restrictive measures the entrance of immigrants keeps going on; in third place, the emphasis is placed on control policies, while integration policies are given less attention, fostering an unappropriate environment to integrate immigrants in the receiving society. The presence of irregular immigrants is an unavoidable consequence of tight immigration policies and a reality of the migratory phenomenon. A more flexible position in the regulation of migratory flows, in which small corrections in the restrictiveness of immigration legislation, without arriving to full freedom, could lead to important efficiency gains.

I.8. Conclusions: Will a EU's Common Migratory Policy emerge?

Our main conclusion is that application by Member States of community norms concerning the migratory phenomenon may develop in a future European Common Migratory Policy. Some recent steps in that matter both point to this trend and reinforce the emphasis on control at the expense of not even mention integration policies. This is our second main conclusion.

The political intentions to deepen common migratory policies may be good, to the extent that it is increasingly being recognised that immigration matters should be approached at a European level. The reality is that to develop such a project implies overcoming important obstacles at the present time, even if limited to control policies. The negotiating capacities of Member States' representatives in the Council are limited, because competences remain at the national level. In the negotiations and discussions to develop EU's migratory policy, each representative intends that its content is not contradictory with his migratory legislation, what hinders reaching a coherent and consistent commitment at the EU level.

Here we have two inconsistencies. A first one relates to the fact that control policies are prioritised at the expense of integration policies, so that the policy mix is clearly suboptimal. The second inconsistency consists on the implementation of common control policies itself. Because the emphasis is on control and repatriation issues, convergence in Member States norms typically occur towards more restrictive positions.

So, the trend of securitising migratory issues becomes self-sustained, while the Europeanization of integration policies remains out of the question.

Governments are reluctant to transfer authority to community institutions, preferring the application of national policies in such a sensitive issue as immigration. A European Common Migratory Policy implies for Member States losing competences that not all Member States are willing to accept. However, it is necessary to keep in mind that EU Member States are characterized by the contradiction between the existence of strong and extensive social, cultural and political reticence toward immigration that are translated in restrictive migratory policies; and on the other hand, the recognition of political and moral obligations that derives from their condition of democratic societies subjected to the rule of law, that materialize, among other aspects, in the recognition of right to asylum, family regrouping, permanent residence, and the acquisition of nationality.

In some immigrant receivers Member States, there start to appear some uneasiness regarding immigration; restlessness that frequently moves to governmental policies dealing with migratory flows (Castles, 2000). This defensive and negative vision of immigration is a real shame. Migratory flows are part of humanity's history and there will always be with us. In general terms and in spite of its rootlessness costs, migrations have improved opportunities, dynamism and progress. In a speech making the balance for the 2000-2005 period, the Commissary of Justice and Home Affairs Antonio Vitorino declared that the European Union had been quite successful in the fight against illegal immigration, and very little in the promotion of legal immigration.

In the Summit of Brussels of December 14 2007 it was reiterated that the immigration is an engine of wealth and progress in the EU. Also, the EU demographic perspectives have made the EU to recognize the growing labor necessities of European societies, not only highly qualified workers but also the rest of them. In the Communication on immigration, integration and employment, the Commission states that immigration won't solve the problem of population aging, for which it would be necessary to conduct structural reforms; however, at the same time, it declares that immigration will be increasingly needed to respond to the necessities of Member States labor markets.

The clauses on "national employment situation" or "community preference" implies the lack, slowness and bureaucratization of labor market provision mechanisms. It is evident that in some EU countries exists a manpower demand that is not covered with the domestic labor market. The contradiction between the demand of foreign manpower and the political restrictions to the entrance of immigrants has been synthesized with the expression "State versus market" (Hollifield, 1992), that reveals the existence of contradictory interests between government and companies.

The fact is that the EU requires the presence of immigrants to maintain its development and growth levels; and anyway, want it or not, they will come. In the coming years, the number of foreign citizens in the EU will be increased whatever political or juridical decisions, as argue in the last chapter of this study. As Alonso (2004) has put it "emigration is born of a conscience of relative lack, of the contrast among the possibilities that offers the environment and those that are attributed to the destination scenario". Sutcliffe (1998) even asks why so many people remain in her birthplace or stable residence, since it would be very easy to elaborate a list of reasons for which a person will take the decision to emigrate.

In this situation, perhaps the best thing will be to accept it and to be endowed with a rational and realist system so that the arrival of foreigners takes place in the best possible way as much for the immigrants as for the welcome societies. On the other hand, it should not be forget that the non-existence of controls within the Schengen space and narrow economic and social relationships among Member States. This makes the immigration measures not covered by European normative being adopted by a Member State (for example great scale regularizations or bilateral readmission agreements), having consequences for other Member States.

Having considered arguments like the ones previously outlined, the Commission pleads for the adoption of a Common Migratory Policy, in coherence with the Treaty of Amsterdam, and asserts that it became a reality as soon as possible. However, the final decision is at Member States' hands, and this doesn't allow to have many hopes. For this to happen, the attitudes of wide segments of Member States societies should change. While the political and security logic prevails over the demographic and economic arguments, the situation won't change. The securitised EU is opposed to the free

circulation EU. The EU undergoes a rigid approach concerning the crossing of their external frontiers (Fortress Europe) while internal controls are diluted.

A very important point is that a European Common Migratory Policy requires a global and multidisciplinary focus. The EU has to establish a coherent migration policy that develops legal migration flows, diminishing the incentives to illegal migration; that fights against human trafficking; that responds to the economic and demographic challenges of the Member States; and that puts special emphasis in the social, cultural and political integration of immigrants, supporting it with policy measures and economic resources. This is another key point: a European common migratory Policy will need financial resources. Therefore, it should be included in the financial perspectives. When establishing a common migratory policy it will be fundamental a wider analysis that will not only include all the financial instruments already applied, but also all those that are necessary for the development of European Common Migratory Policy.

It is difficult to reach any common international policy among twenty-seven Member States. There are many homogeneity factors across EU countries but there is also a lot of diversity, governments with different political orientations, and different national traditions in dealing with immigration. In the Treaty of Amsterdam negotiations two different concepts on the EU emerged. A European model supported by the Commission and the European Parliament that seeks Europeanised measures leading to an open society. And a European model supported by the Member States in which the countries are reluctant to the surrender of sovereignty in migratory affairs.

After the Treaty of Amsterdam, the EU has been planning to elaborate a common policy regarding immigration. However, Member States continue playing a very outstanding part of it. So, sovereignty concerns, securitization convergence and over-emphasising control policies, and a lack of consistent and Europeanised integration policies are the main characteristics of today's European migratory policies.

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II. AN ANALYSIS OF DEMOGRAPHIC CHANGES IN THE EURO-MEDITERRANEAN REGION

Ramón Mahía and Rafael de Arce[3]

II.1. Introduction

This document introduces a summary of the evolution of the principal demographic trends displayed by the Mediterranean region[4] and for each of the 11 countries that it encompasses. We analyze population projections for 2050 using the fertility rate, mortality under the age of five and life expectancy.

An analysis of the main parameters reveals a slow increase in the future working age population (15-64 years) of these countries in contrast with the forecast for the developing countries. We anticipate, therefore, a scenario of increased migratory pressure in the next coming decades.

Developed countries will experience dramatic changes in their demographic trends. The retirement of the wide baby-boom generations, the increase in life expectancy and the decline in fertility ratios are likely to modify the size and the age-structure of their populations. Recently, migration has received a widespread attention as a solution to expected population decline and ageing in these countries.

Over the last century, world population increased from 2 to 6 billion people. Since 1990, the 15-29 age group, which constitutes the main source of new entrants on the labor markets, has been decreasing rapidly. Furthermore, the average age of the labor force, which had remained quite stable at around 40 years over several decades, has started to increase since 1995 at a speed of 1 year every 7 years. Finally the 65-years and older cohort is expected to grow rapidly in the next few years. As a result, labor

We thank Martha Carro Fernández (Universidad CEU San Pablo) for reviewing and translating this paper.
[3] Universidad Autónoma de Madrid.
[4] We refer to the Mediterranean region as the EU defines it, i.e. encompassing those non EU member states countries which border the Mediterranean (Morocco, Algeria, Tunisia, Libya, Egypt, Jordan, the Palestinian Territories, Israel, Lebanon, Syria and Turkey).

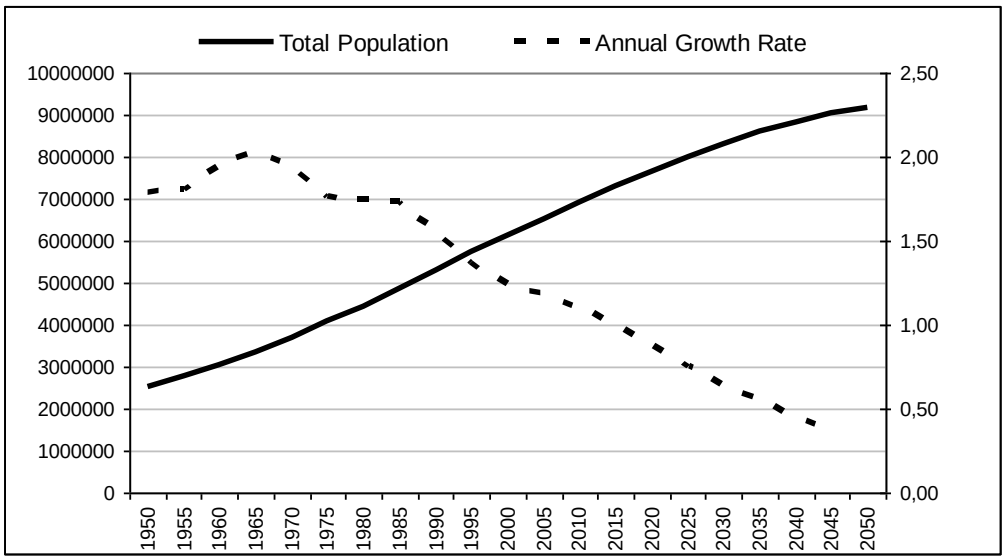
capacity will be considerably reduced in the EU over the next decades, particularly after 2015.

A brief analysis of past and future demographic trends underlines the importance of international migration in population growth and working age population growth.

II.2. Increase in world's population until 2050 and differential population growth between developed and less developed regions

According to the "medium variant" review of the 2006 UN World Population Prospects, that assumes a sharp fertility decrease, the world's population could increase by 2,5 billion people in the next 43 years. Even tough the annual growth rate is decreasing, it still results in a population increase by the same amount as the total number of people living in 1950 or today's population in China or India.

Graph 1. Increase in World's Population until 2050

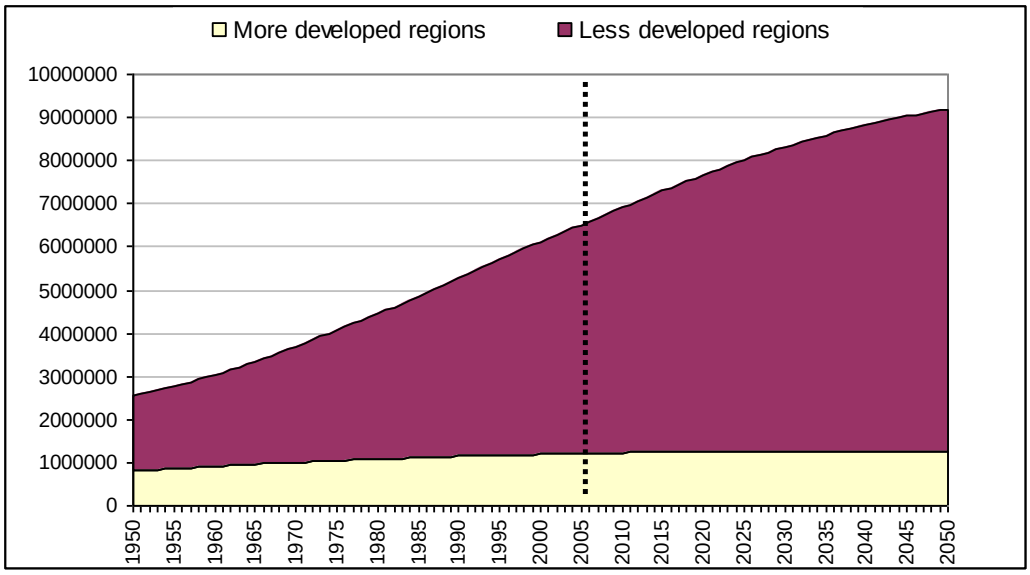


Source: World Population Prospects. Estimates 2006 revised. UN Population Division.

Global population growth is the result of the combination of two unbalanced demographic trends: a rapid increase in population growth in developing and less developed countries and stagnation in developed countries.

This well-know disequilibrium would sharpen in the global scenario that we have projected as a result of the persistent slow down trend, and even decrease, observed in many developed countries. Estimates indicate that in 2050 86% of the world's population will live in areas considered nowadays as relatively less developed. This percentage is 82% today and it was 68% 50 years ago.

Graph 2. Differential population growth between developed[5] and less developed regions[6]



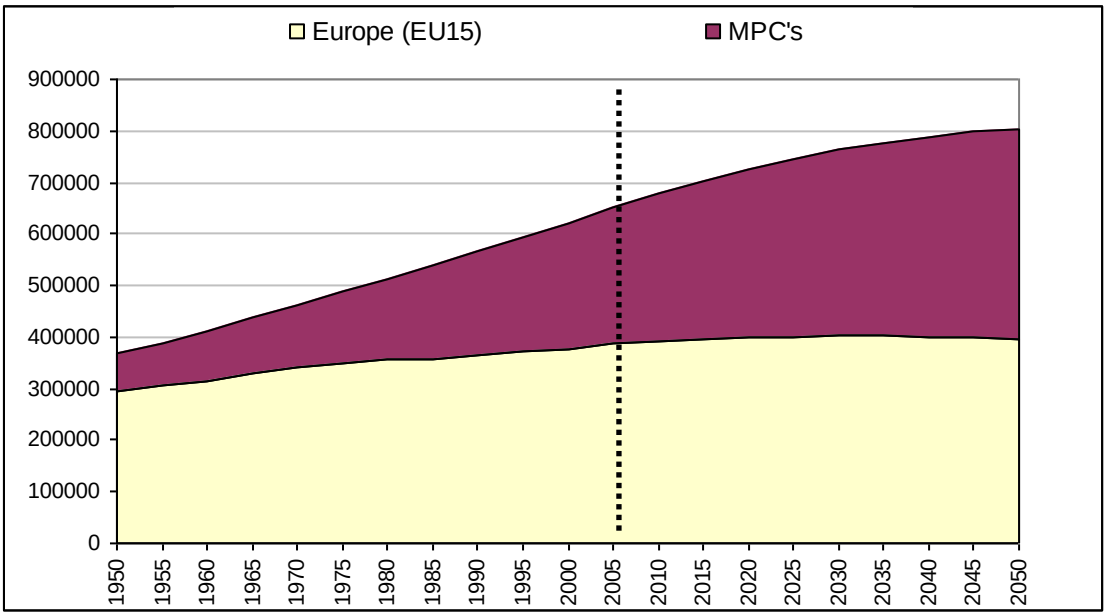
Source: World Population Prospects. Estimates 2006 revised. UN Population Division.

The European continent and the Mediterranean region are an excellent example of this sharp contrast between regions. As shown in Graph 3, population growth for the 15 more developed countries of the European Union is null between 2007 and 2050. This contrasts with the estimated increase of more than a 133 million people for the Euromed

[5] They comprise all regions of Europe plus Northern America, Australia/New Zealand and Japan.
[6] They comprise all regions of Africa, Asia (excluding Japan), Latin America and the Caribbean plus Melanesia, Micronesia and Polynesia.

region over the same period for the "medium variant" scenario. It is worth noting that the projected increase from now to 2050 equals the total amount of population living in the region in 1975.

Graph 3. Population growth in the EU (15) – MPC's

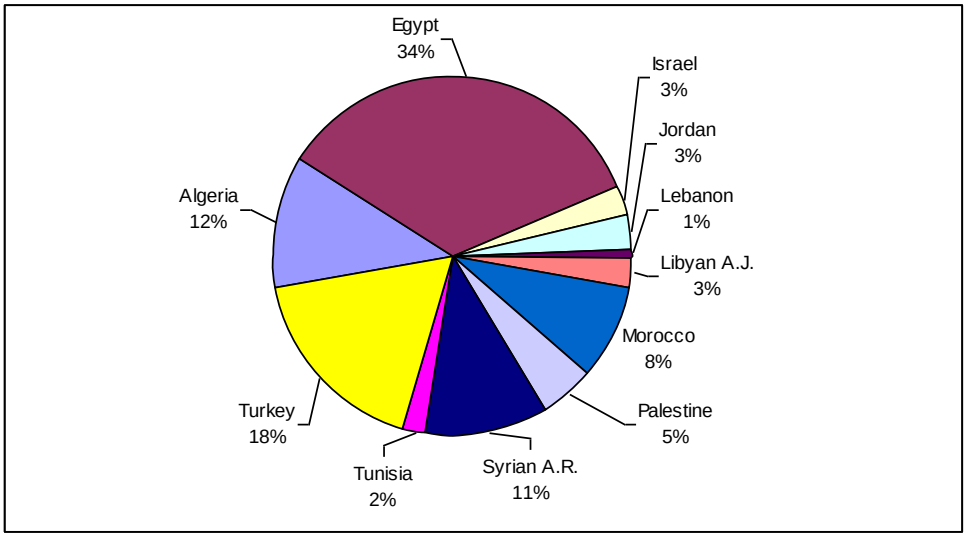


Source: World Population Prospects. Estimates 2006 revised.UN Population Division.

II.3. Evolution of the main demographic trends in Mediterranean Countries

The distribution of population growth projected for the different countries of the Mediterranean region up to 2050 is obviously related to the relative size of each country. More than half of the population growth will take place in Egypt (34%) and Turkey (18%). This proportion reaches 75% if we add up Algeria (12%) and Syria (11%).

Graph 4. Percentual distribution of projected population growth up to 2050: Mediterranean countries

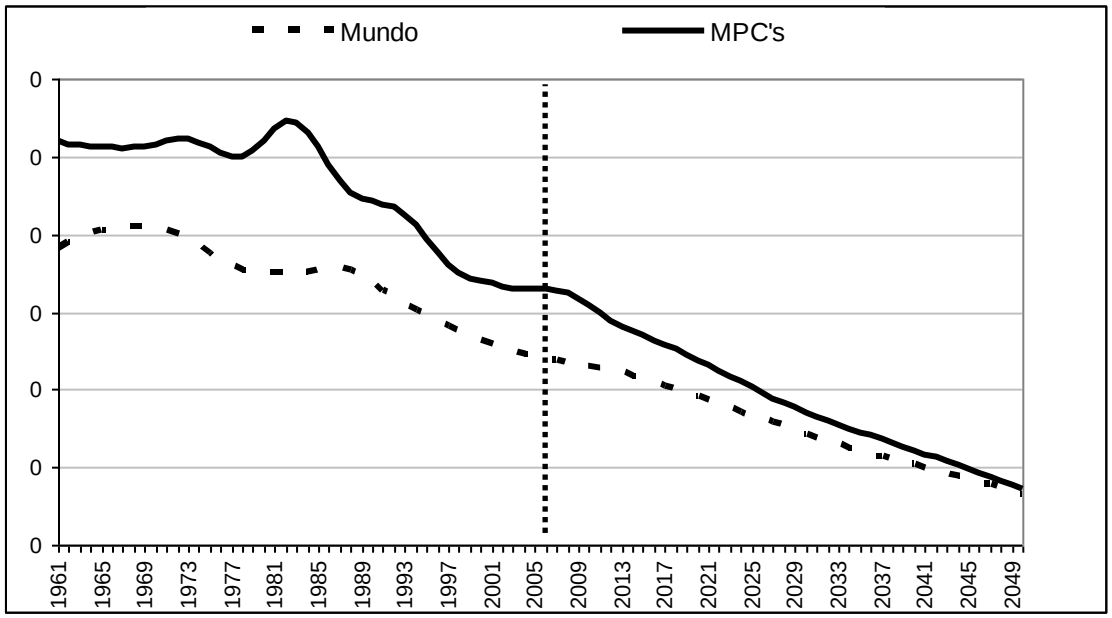


Source: World Population Prospects. Estimates 2006 revised. UN Population Division.

When disregarding its size, we observe a large disparity in the evolution of each country. Table 1 in the annex shows that the estimated population growth between 2005 and 2050 is explosive for Palestine (with an average growth above 2.2%) and very high for Syria and Jordan (1.3% for both countries). Below the region's average (0.9% yearly growth between 2007 and 2050), we find countries such as Turkey (0.7%), Tunisia and Lebanon (both countries display a 0.6% yearly average growth rate).

In general terms, the Mediterranean population will continue to grow above the world's average up until the end of the projection period. It is worth noting, however, that the yearly growth differential for the Mediterranean countries that reached an average of 0.93% between 1980 and 1985 will gradually slow down until almost converging at the end of the projection period.

Graph 5. Population Growth: World and Mediterranean Area



Source: World Population Prospects. Estimates 2006 revised. UN Population Division.

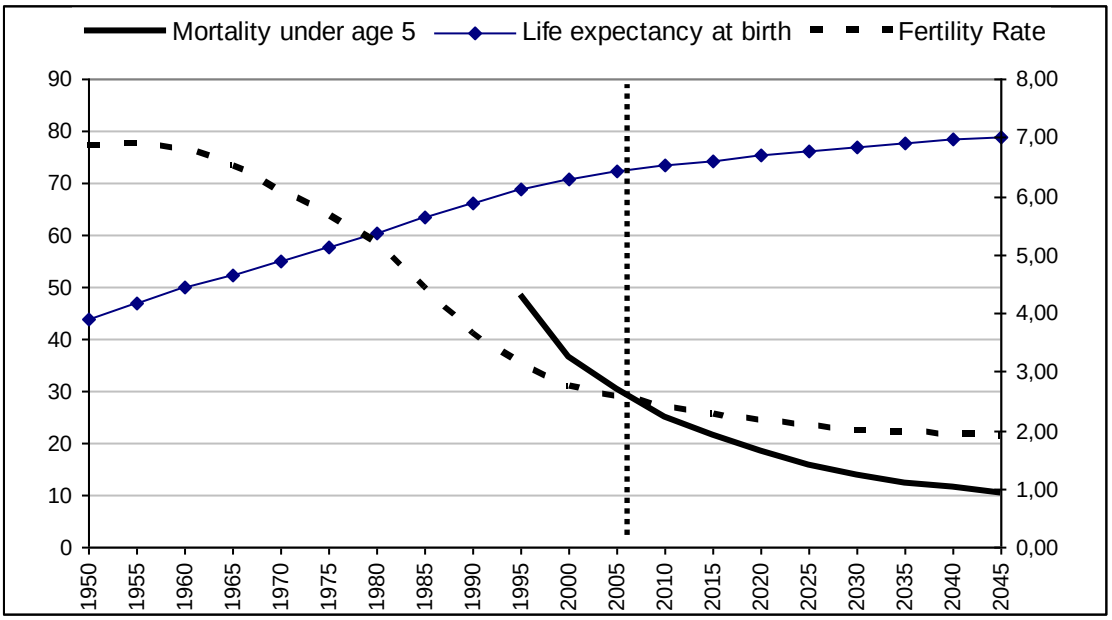
The population forecast for the Mediterranean area is the result of the consolidation of the trend observed for the principal demographic variables:

- On one hand, the average weighted fertility rate for the region[7] that started to slow down sharply in the first half of the 60s will gradually decrease over the following years and it will be below the world's average after 2010. At the end of the projected period the fertility rate will fluctuate around 1.9 children per female. This level is slightly lower than the average level for developing countries.
- Secondly, mortality under the age of five that already started to decline at the beginning of the XX century, will continue to decrease in the region at a weighted yearly average rate close to 4% until 2010, between 2.5% and 3% from 2010 to 2035 and between 1.7% and 2.5% from 2035 to 2050 when it will reach approximately 10.5 deaths per 1000 births.

[7] Weighted as a function of total population for each of the countries of the region.

- Finally, not only the mortality rate under the age of five will decline, but there will also be an improvement of life expectancy at birth of between 8 and 12 months each five-year period. In 2050, the region's population will reach a weighted average of life expectancy of 79 years.

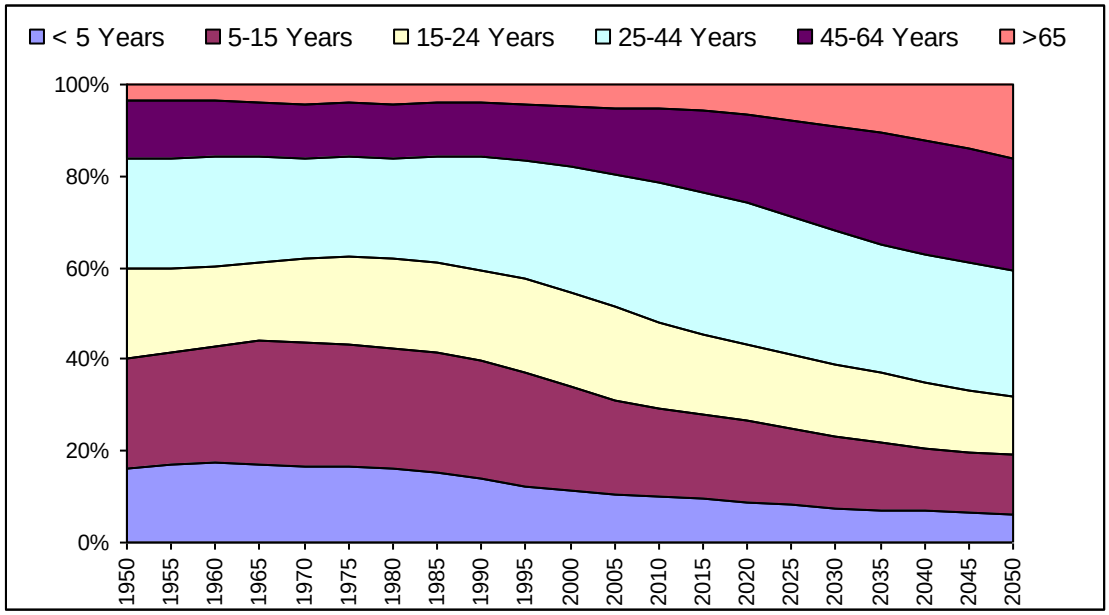
Graph 6. Fertility rate, mortality under age of 5, and life expectancy at birth: Forecasts for the Mediterranean region



Source: World Population Prospects. Estimates 2006 revised. UN Population Division.

The comparative chronological analysis of the development displayed by the principal demographical variables sheds light on the evolution of the region's demographic pyramid. The combination of an acute reduction of infant mortality together with a slower and later decline on fertility rates has widened the labor force section of the demographic pyramid. To be sure, a fertility rate above 6 children per female up to the mid 70s that decreases slowly generates that during the mid 80s, the percentage of the population aged between 5 and 15 years was 26% of the total. This results in a 21% of total population aged between 15 and 24 in the mid 90s which finally implies that 30% of today's total population is between 25 and 44 years.

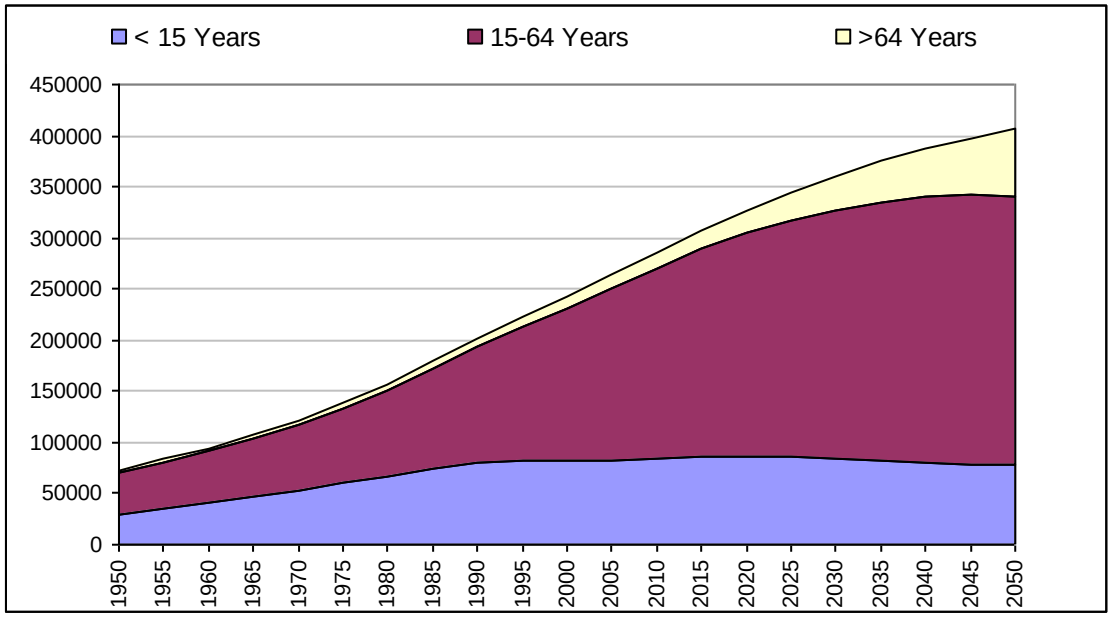
Graph 7. Population evolution by age sections in the Mediterranean



Source: World Population Prospects. Estimates 2006 revised. UN Population Division.

The percentage of potential working population reveals an abrupt demographic change regarding the relative composition of the population. The percentage of population potentially active has increased 12 percentual points since the mid 80s. Working age population is approximately 170 million people, equivalent to the total EU-15 labor force.

Graph 8. Evolution of Mediterranean potentially active population



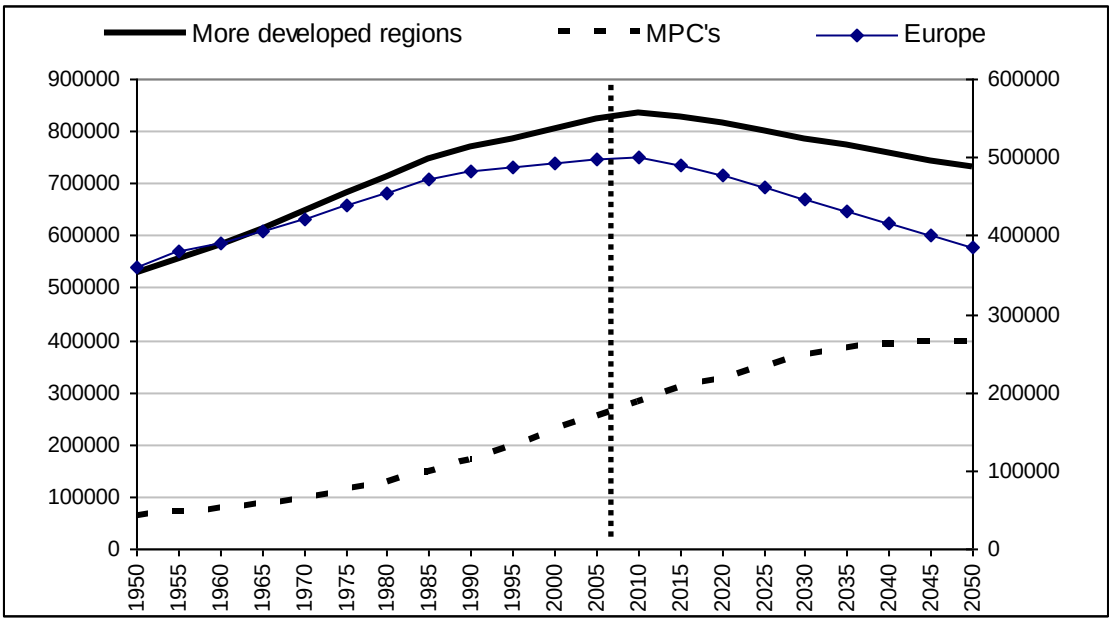
Source: World Population Prospects. Estimates 2006 revised. UN Population Division.

As displayed by the previous graphs, the vast majority of forecasts indicate that this process will become more acute in the next few years reaching its maximum point around the year 2035. In 2035 68% of the population, i.e., more than 250 million people will be between 15 and 64 years even with the improvement in life expectancy in the last few years and the gradual decrease in the fertility ratio.

This general trend described for the Mediterranean countries sharply contrasts with the demographic change in developed countries. In the following graph, we show the evolution of the potentially active population for the Mediterranean area compared with Europe[8] and developed countries (see definition of area countries in the footnote).

[8] Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Channel Islands, Croatia, Czech Republic, Denmark, Estonia, Faeroe Islands, Finland, France, Germany, Gibraltar, Greece, Holy See, Hungary, Iceland, Ireland, Isle of Man, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, Ukraine, United Kingdom of Great Britain and Northern Ireland.

Graph 9. Population 15- 64 in the Mediterranean, more developed regions and Europe



Source: World Population Prospects. Estimates 2006 revised. UN Population Division.

As displayed by the diagram, there are obvious contrasts between Europe and the Mediterranean. A simple calculation such as the ratio of 15 to 64 years old population in both areas resulted in 8.74 in 1950 declining to 2.95 in 2005. The ratio would decline even further by 2050 reaching 1.4. Thus, the potentially active population in Europe would only be 1.4 times higher than in the Mediterranean at the end of the projection period. These results enable us to design a clear analytical framework on the challenges that both areas will face in the next few years:

- A scenario of sustained economic growth in Europe will inevitably encourage a widespread immigration process that will compensate for the decrease in working age population.
- On the other hand, even tough population rejuvenation is potentially positive, if accompanied by poor economic performance and slow job creation in it could result in a sharp labor force crowd out effect towards more developed areas (Europe or other regions).
- Both regions will face the pressure of providing services for the older population. While this phenomenon is already well-known in Europe, it will become even more relevant given the large percentage of population aged 65 and older estimated for the near future. In the Mediterranean, this pressure will

be lower but newer and meaningful, from a quantitative point of view, for the first time in their history. A larger percentage of older population could jeopardize a weak social security system. To be sure, population over 65 has constituted less than 5% of total population in the last few decades. However, at the end of the projection period it could reach 16%, i.e. 65 million people, 5 times more than the current old population.

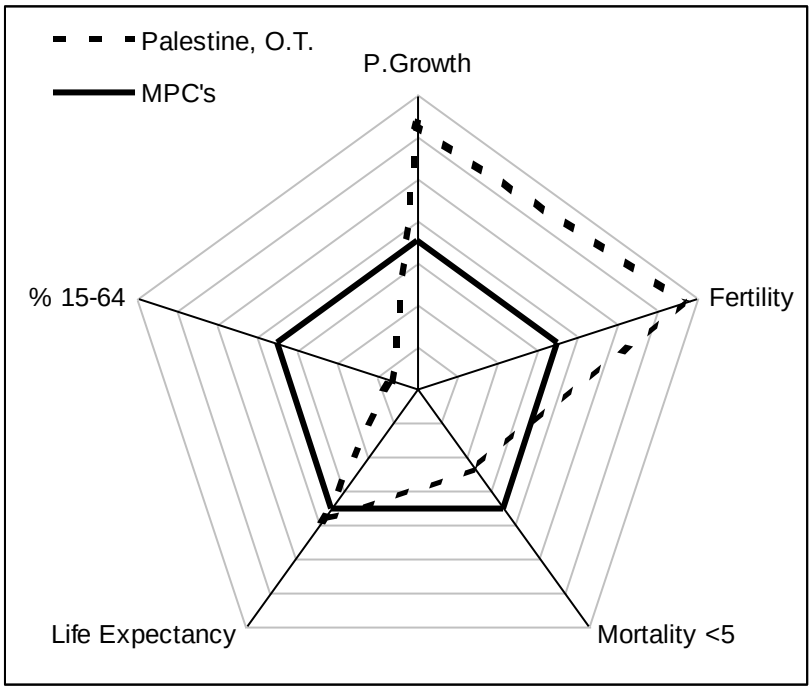
It is important to point out that the aforementioned projections are calculated under the "medium variant" projection carried out by the United Nations. This projection is based on an assumption of steep fertility decline. However, it is possible that fertility rates will display in the future levels similar to todays. For example, if we assume that the fertility rate ratio shows the average for the period 2005-2010 then the potentially active population could reach 320 million people in the Mediterranean area (a 20% more than under the "medium variant" projection) while in Europe could decline to 366 and even below 326 millions (15% of the projection under the "medium variant).

We now disaggregate the trends that we have described and analyze the likely evolution of each of the 11 countries in the region. While the general trend is shared by most of the countries, there are some individual particularities that are worth describing (see table 2 in annex).

II.4. Country analysis

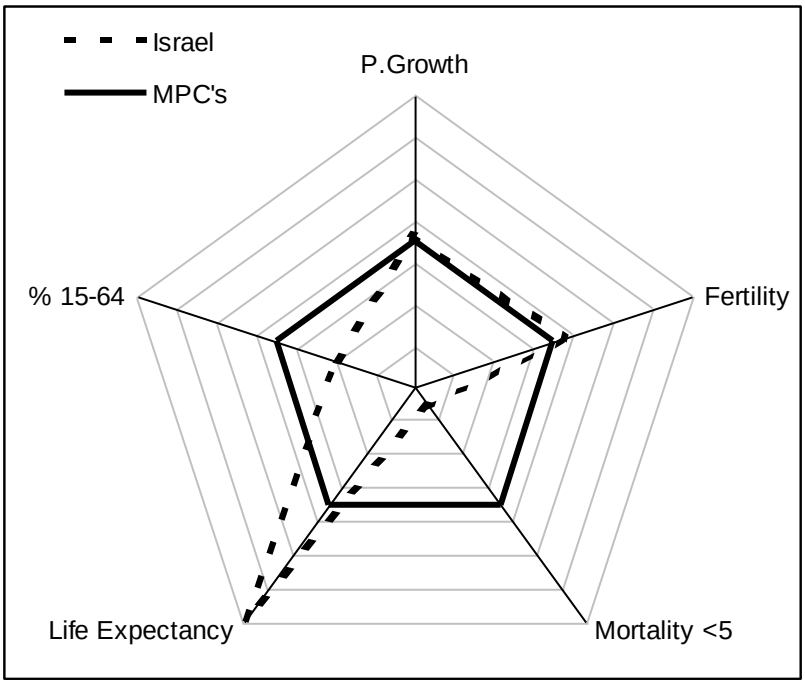
- **Palestine**
  - Palestine is, together with Israel, one of the countries that diverge from the rest of the Mediterranean region. Fertility rates are higher than the rest of the region (5.09 in 2005 vis-à-vis 2.56) and will continue to be higher despite the expected rapid decline. The projected number of children is an average of 3.17 for the period 2005-2050 while is 2.08 for the rest of the countries in the area.
  - Expected population growth, approximately 2.3% a year, is therefore higher than the region's average (more than double).
  - Mortality under the age of five is slightly lower than in the rest of the region while life expectancy is relatively similar. This will result in a relative decline in population growth in the segment 15 to 64 years of age reaching an average of 59% of the population for the period 2005-2050.

Graph 10. Main demographic parameters for Palestine vis-à-vis the Mediterranean – Average Values 2005 – 2050



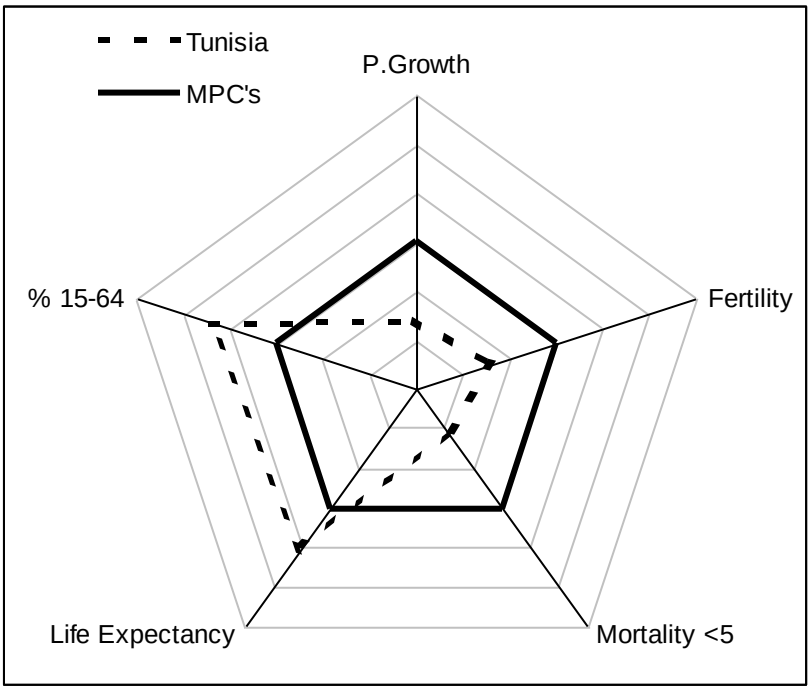
- **Israel**
    - Israel is, as we have already mentioned, the second exception in the region. What distinguishes Israel from the rest is a high life expectancy level that reached 80 years in 2005 in sharp contrast with the 72 years average of the rest of the Mediterranean region. Moreover, mortality under the age of five is currently even lower than the one observed in many developed countries.
    - The project population growth is similar to the one calculated for the region. Potential working age population for the period 2005 – 2050 will be approximately 62% of total population.

Graph 11. Main demographic parameters for Israel vis-à-vis the Mediterranean – Average Values 2005 – 2050



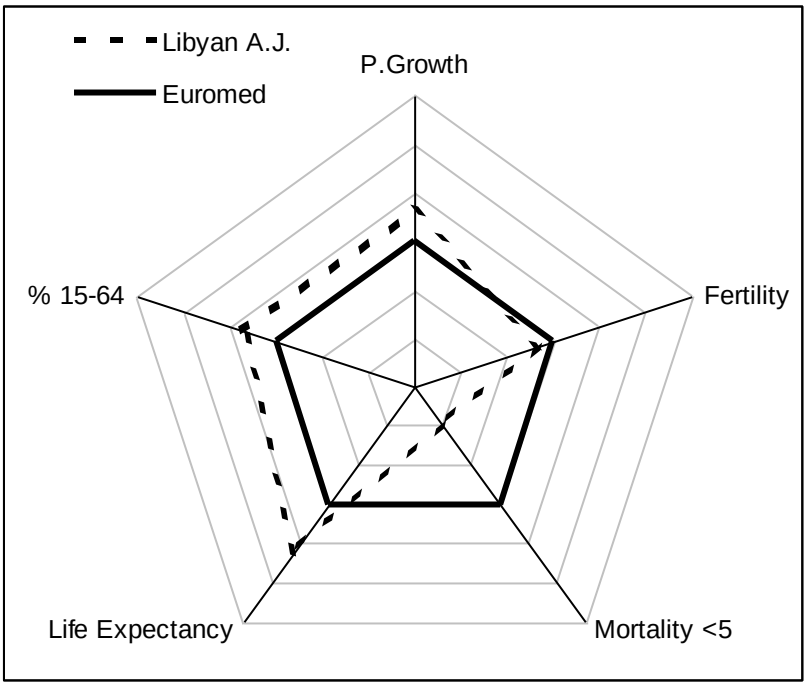
- **Tunisia**
    - Tunisia exhibits the lowest fertility rate of the area. This will result in little population growth that combined with a small rate of mortality under the age of five (the third lowest after Israel and Palestine) and a life expectancy ratio two points over the region's average will produce the largest average population rejuvenation for the period 2005-2050.
    - Population aged between 15 and 64 could reach 71% of total population around 2015. However, the gradual ageing of the population and the lack of generational replacement will gradually decrease the pressure until reaching 66% at the end of the projection period.

Graph 12. Main demographic parameters for Tunisia vis-à-vis the Mediterranean – Average Values 2005 – 2050



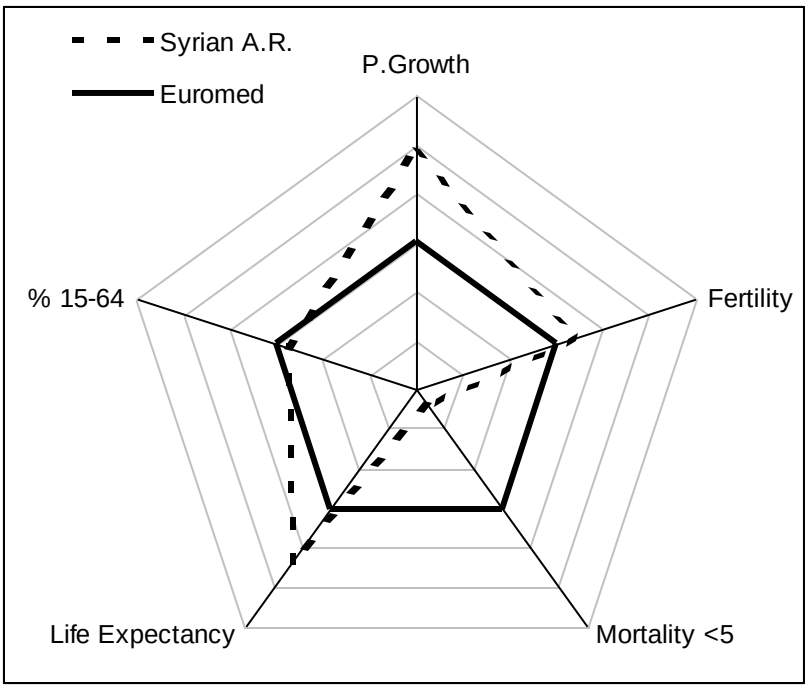
- **Libya**
    - Libya also displays a slow rate of mortality under the age of five and life expectancy relatively higher than the region's average. However, the fertility rate was in 2005 higher than in Tunisia; 2.7 children per female which is slightly higher than the average for the region. As a consequence, the projected population growth will be above the average and one of the highest in the region despite the expected gradual decline.
    - While the pressure that could be exerted by the potentially active population is not as high as in Tunisia, it could reach ratios of 70% around 2030 – 2040. It would later stagnate parallel to the evolution projected for the rest of the region.

Graph 13. Main demographic parameters for Libya vis-à-vis the Mediterranean - Average Values 2005 – 2050



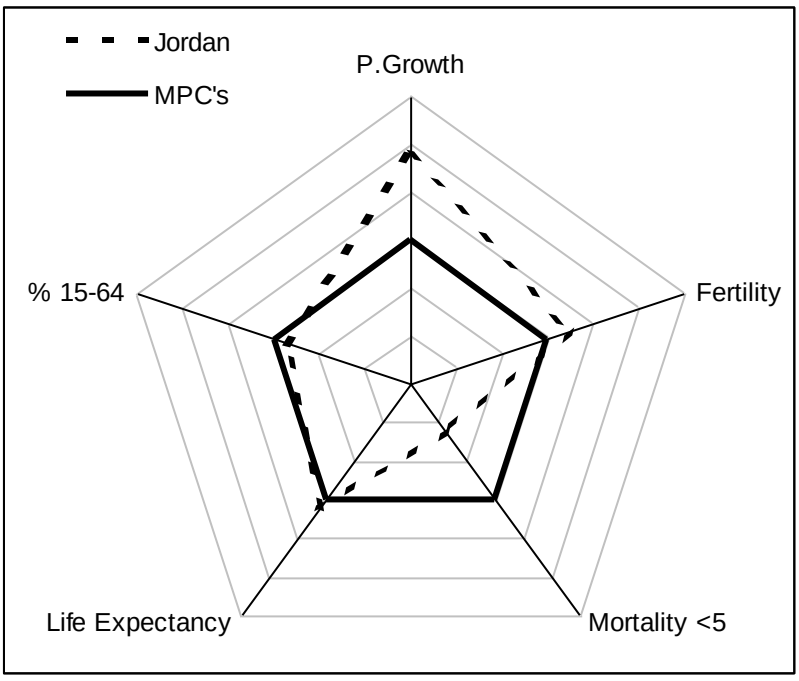
- **Syria**
    - Syria shares some of the features described for Libya. To be sure, Libya displays low levels of mortality under the age of five and a high life expectancy rate. The fertility rate is even higher than the Libyan one.
    - Population growth is, therefore, slightly higher than the region's average and it will continue to be higher during the projection period. With the exception of the unusual case of Palestine, Syria leads the region regarding population growth.
    - Syria displays one the highest population rates in relative terms for ages 15 to 64 during the projection period. As for Libya and Tunisia, Syria's population aged 15 to 64 will reach 70% of the total around 2035-2040.

Graph 14. Main demographic parameters for Syria vis-à-vis the Mediterranean – Average Values 2005 – 2050



- **Jordan**
    - Jordan displays similar key demographic features to those described for Syria; a relatively high life expectancy, high fertility rates, and mortality under the age of five clearly under the average.
    - Population growth in Jordan is, therefore, very similar to the Syrian one. Jordan will experience the highest rate of population growth in the area at the end of the current decade. It is also, together with Syria, the country that will exhibit the highest average population growth in the next 40 to 50 years.
    - Population aged 15 to 64 will be high although relatively lower than the Syrian one as a consequence of the relatively higher rate of mortality under the age of five and lower expectancy rate in Jordan.

Graph 15. Main demographic parameters for Jordan vis-à-vis the Mediterranean – Average Values 2005 – 2050

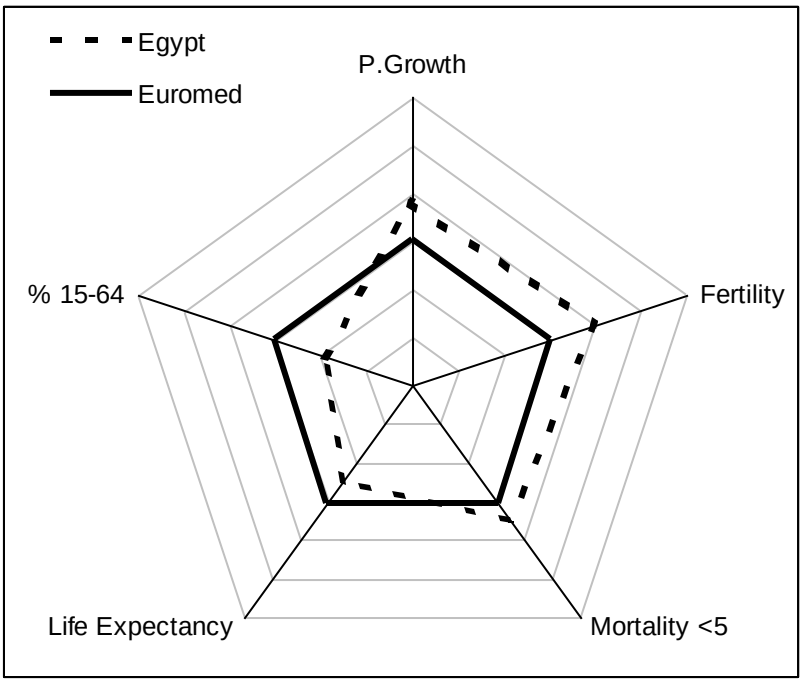


- **Egypt**
    - Egypt exhibits a completely different demographic profile. As it is the case in Syria, Jordan and Libya, Egypt displayed a fertility rate of 2.7 children per female in 2005. However, the Egyptian fertility rate will continue to be high

in the long-run and it has been projected that Egypt's fertility rate will be in 2050 even higher than the unusual Palestinian case. Furthermore, life expectancy in Egypt is, together with Morocco, the lowest in the region and will continue to be low in the next 35 to 40 years. Mortality under the age of five is above the region's average.

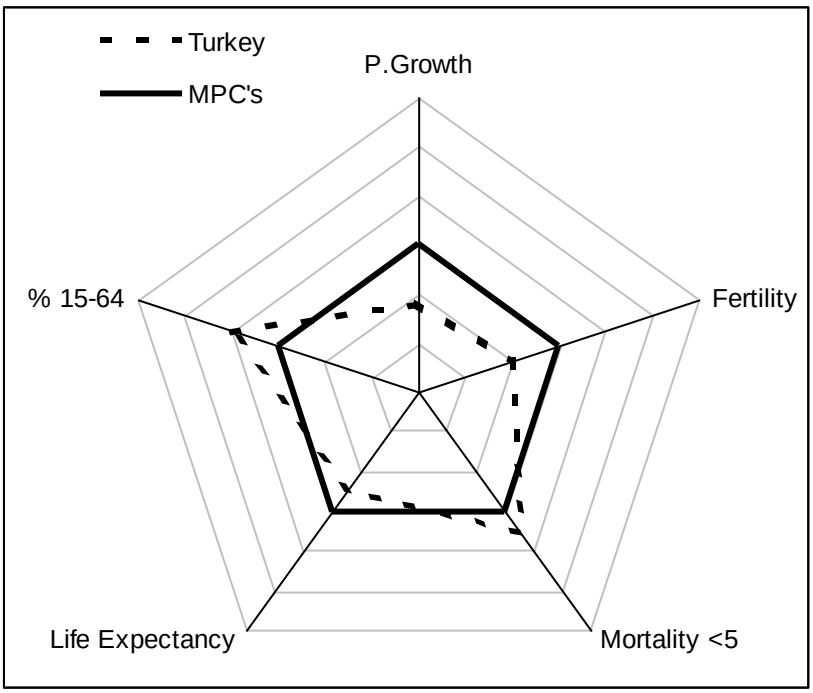
- High fertility rates will be compensated by low life expectancy rates and a higher mortality under the age of five. Thus, population growth even when is expected to be very high in the next few years y will not reach the amounts identified for Syria and Jordan.
- Population growth will exhibit replacement features and therefore pressure from potentially active population will be among the lowest in the region and only above Israel and Palestine.

Graph 16. Main demographic parameters for Egypt vis-à-vis the Mediterranean – Average Values 2005 – 2050



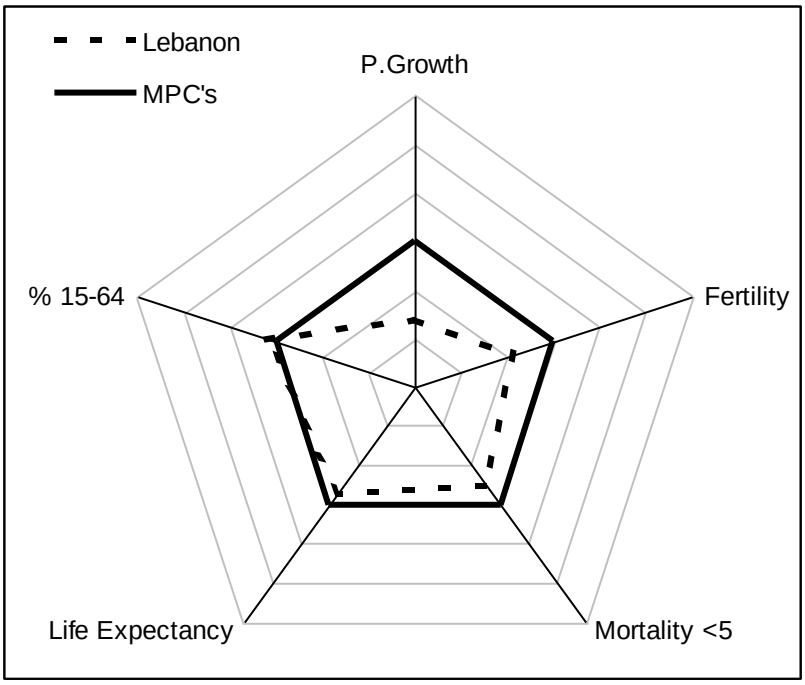
- **Turkey**
    - Turkey displays, as Egypt, a high mortality under the age of five rate and a low life expectancy rate. However, Turkey enjoys a relatively low fertility rate. Data from 2005 shows how Turkey, together with Tunisia, enjoys the lowest fertility rate.
    - In the medium term, however, forecasts show a marked improvement in mortality under the age of five and life expectancy, which together with the currently low fertility rate will result in fast population growth for the section 15 to 64. This percentage, which is currently 66%, could reach 69% of total population by 2015. At the end of the projection period it would decline to 64%.

Graph 17. Main demographic parameters for Turkey vis-à-vis the Mediterranean – Average Values 2005 – 2050



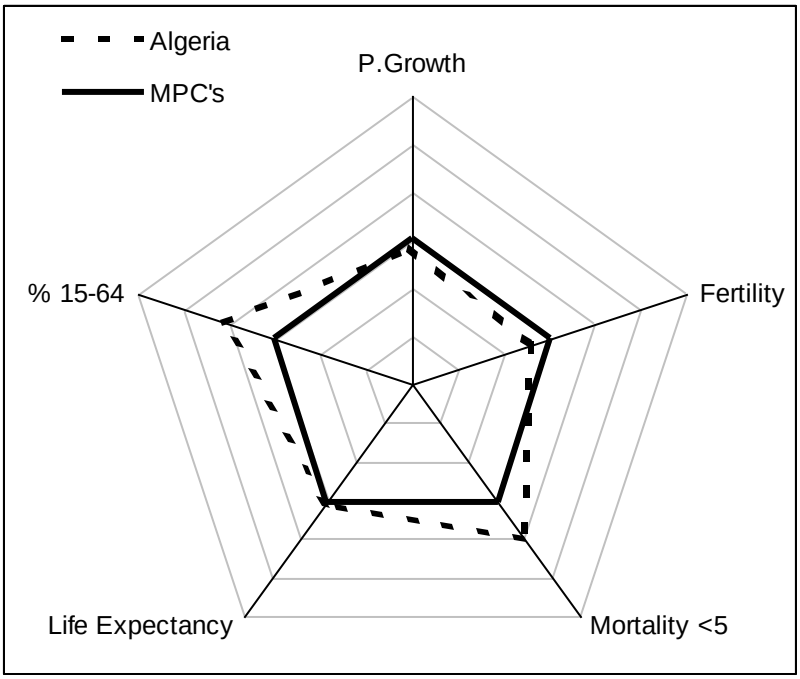
- **Lebanon**
    - Lebanon, as Turkey, exhibits a relatively low fertility rate and a life expectancy lower than some countries in the region. Mortality under the age of five has improved in recent years reaching levels under the region's average.
    - It is expected that Lebanon will keep a balanced population growth. The working age population group will reach a ratio of 68% for several years and will decline to 64% at the end of the projection period.

Graph 18. Main demographic parameters for Lebanon vis-à-vis the Mediterranean – Average Values 2005 – 2050



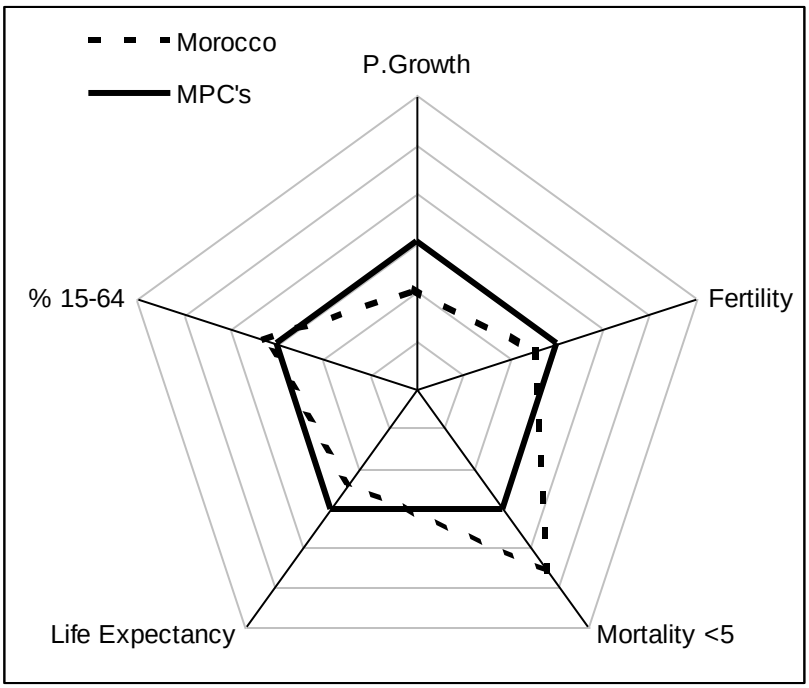
- **Algeria**
    - Algeria displays, as Turkey and Lebanon, a life expectancy ratio relatively lower than the region's one. As Lebanon, Algeria has enjoyed a significant improvement in mortality under the age of five in the last few years declining from 56 dead per 1000 births in 1990 to 33 in 2005).
    - Algeria's fertility rate is slightly higher than the Turkish and the Lebanese implying population growth rates of 1.5% until 2013. The combination of the fertility rate and the improvement in life expectancy could increase the pressure of the population aged 15 to 64 up to 68% of total in 2020. Then, the ratio would decline to 64% when population growth starts to slow down as fertility rates reach 1.85 children per female.

Graph 19. Main demographic parameters for Algeria vis-à-vis the Mediterranean – Average Values 2005 – 2050



- **Morocco**
    - Morocco exhibits the highest values for mortality under the age of five and the lowest life expectancy rate of the region. As in the Algerian case, there has been a relevant improvement in the last years; mortality under the age of five has dropped from 52.2 children per 1.000 births to 35.7 in less than 10 years (1995 and 2005 data respectively). Despite the improvement, mortality under the age of five and life expectancy are above (and below) the standard for the region and will continue to be until the end of the projection period.
    - Given that the fertility rate is not very high in Morocco, the expected population growth is lower than the region's average. Moreover, the improvement in mortality under the age of five will generate an increase in working age population from the current 64% of the total to 68% around 2035.

Graph 20. Main demographic parameters for Morocco vis-à-vis the Mediterranean – Average Values 2005 – 2050



II. 5. Conclusions

In this paper we have analyzed UN forecasts of population growth up to 2050 for the Mediterranean region and the whole of the developed countries. The existence of markedly different demographic behavioral patterns in the European Union and the Mediterranean region leads us to conclude that migration flows are and will be a key determinant of the demographic evolution in the next decades. Our results sustain that such flows will move to Europe and will originate in the South.

According to the forecast put forward by the latest UN World Population Prospects report, the consolidation of specific demographic trends in the Euromed region such as the decline in the mortality under the age of five, improvements in life expectancy and fertility reduction will slow down the population growth ratios in the next 40 years, even when they are still higher than those of developed countries.

Population growth in developed countries is directly related to immigration flows. Immigration compensates the decrease in working age population. This effect is especially relevant in several members of the European Union.

The contribution of foreign workers to European labor markets has increased significantly in the past years acquiring a special relevance in sectors such as the services sector. Immigrant workers generally have a lower educational level than native-born workers, especially in Southern European countries. They also tend to work in low-skilled sectors. In the past few years, however, their unemployment rate vis-à-vis that of native-born workers has decreased.

To conclude, we sustain that the immigration flows originating in the Mediterranean area could contribute to ease the demographic disequilibria that the European Union will suffer in the next few decades. Moreover, such flows could balance the markedly different demographic trends observed in both regions.

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Annex

Table 1. Population (2005 real data and 2050 projections) for Mediterranean countries

	1970-2007				**2007-2050**			
	Annual Average Growth				Population		Growth	
	70-80	80-90	90-00	00-07	2007	2050	Accumulated	Average
Palestine O.T	2,7%	3,8%	3,9%	3,6%	4017	10265	155,5%	2,2%
Syrian A.R.	3,5%	3,6%	2,7%	2,7%	19929	34887	75,1%	1,3%
Jordan	3,5%	3,8%	4,1%	2,9%	5924	10121	70,8%	1,3%
Egypt	2,2%	2,4%	1,9%	1,8%	75498	121219	60,6%	1,1%
Libyan A.J.	4,4%	3,7%	2,1%	2,0%	6160	9683	57,2%	1,1%
Israel	2,6%	1,8%	3,0%	1,9%	6928	10527	51,9%	1,0%
Algeria	3,2%	3,0%	2,0%	1,5%	33858	49610	46,5%	0,9%
Morocco	2,5%	2,4%	1,6%	1,2%	31224	42583	36,4%	0,7%
Turkey	2,5%	2,2%	1,8%	1,4%	74877	98946	32,1%	0,7%
Tunisia	2,3%	2,5%	1,6%	1,1%	10327	13178	27,6%	0,6%
Lebanon	1,4%	0,6%	2,3%	1,2%	4099	5221	27,4%	0,6%
Total Area	**2,6%**	**2,5%**	**2,0%**	**1,7%**	**272841**	**406240**	**48,9%**	**0,9%**

Source: World Population Prospects. Estimates 2006 revised.UN Population Division.

Table 2. Main demographic parameters for Mediterranean countries-Average values 2005 – 2050

	Average 2005-2050				
	Pop. Growth Rate[9]	**Fertility Rate[10]**	**Mortality Rate <5 years[11]**	**Life Expectancy[12]**	**% Pop. aged 15-64[13]**
Algeria	0,9%	2,00	19,16	76,00	0,68
Egypt	1,2%	2,24	18,09	75,33	0,65
Israel	1,0%	2,17	4,08	83,18	0,63
Jordan	1,4%	2,17	13,18	76,12	0,66
Lebanon	0,6%	1,93	15,93	75,59	0,67
Libyan A.J.	1,1%	2,02	12,57	77,24	0,67
Morocco	0,8%	2,00	20,46	75,24	0,67
Palestine, O.T.	2,3%	3,17	12,07	76,73	0,59
Syrian A. R.	1,4%	2,15	11,42	77,32	0,66
Tunisia	0,6%	1,84	12,87	77,06	0,68
Turkey	0,7%	1,90	18,21	75,32	0,68
Mediterranean[14]	**1,0%**	**2,08**	**17,08**	**75,91**	**0,66**

Source: Authors' own elaboration based on World Population Prospects. Estimates 2006 revised. UN Population Division.

[9] Average exponential rate of growth of the population over a given period. It is calculated as ln(Pt/P0)/t where t is the length of the period. It is expressed as a percentage.
[10] The average number of children a hypothetical cohort of women would have at the end of their reproductive period if they were subject during their whole lives to the fertility rates of a given period and if they were not subject to mortality. It is expressed as children per woman.
[11] Probability of dying between birth and exact age 5. It is expressed as deaths per 1,000 births.
[12] The average number of years of life expected by a hypothetical cohort of individuals who would be subject during all their lives to the mortality rates of a given period. It is expressed as years.
[13] De facto population as of 1 July of the year indicated and in the age group indicated and the percentage it represents with respect to the total population.
[14] Weighted Average (by total population in each country)

III. DETERMINANTS OF BILATERAL IMMIGRATION FLOWS BETWEEN THE EUROPEAN UNION AND SOME MEDITERRANEAN PARTNER COUNTRIES: ALGERIA, EGYPT, MOROCCO, TUNISIA AND TURKEY

Rafael de Arce and Ramón Mahía[15]

III.1. Introduction

The purposes of this research can be summarized as follows:

1. To provide a quantitative measure of migration potential of European (receiving) and Mediterranean Partners (MPs, sending) countries given the current trends of demographical changes in both areas.
2. To anticipate the most reliable future demography – migration scenarios that will arise in a long term perspective
3. To present a rich quantitative described migration map between EU and MPs areas, identifying the past, current and future trends.
4. To measure the relative weight of the main macro - economic and social – structure variables in the current evolution of the migratory flows between EU and Mps countries.
5. To anticipate a detailed baseline scenario of migration flows coming from MPs in relation with a consistent scenario of socio - economic evolution in this two countries for the next 25 – 30 years.
6. To provide political decision oriented advices about the effects of priority socio economic reforms in MPs on migratory potential and expected real migratory flows in the long term.

All these elements together will provide, in our opinion, a complete analytical basis:

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1. for the understanding of real and potential migration movements from the Maghreb to the EU,
2. for the formulation of economic and social policies which directly or indirectly affect the migration phenomenon and,
3. for the formulation of co-operation policies and international relations programmes in a broad socio – economic base

For achieving these ambitious goals, we propose to use a rich methodology approach that combines:

1. a country specific demographic base calculation of migration potential and propensity in each country and,
2. an econometric Dynamic Panel Data model for the analysis of vis-a-vis migratory flows in a mixed short – term & long – term basis

As pointed out in the introductory section of this study, the recent enlargement process of EU has increased the population by almost 20% (nearly 453 million inhabitants). Even if the population of the new Member States is somewhat younger than that of the EU-15 countries, the trend towards ageing of the European population, that stems from decreasing fertility levels and increasing life expectancy, is still present in the EU-25.

On the other side, demographic trends in MPs countries point out that the share of the young people would be very high (30-40% of the population) and the labour force growth rate would still be at 3-5% in the following years; in spite of kind of demographic transition evidences, demographic pressure in MPs is not likely to ease for some time in general terms so the age structure is such that the tension will ease only in the long term, and increase in the short and medium term.

As a result of this global demographic scenario, international migration flows are the main source of population growth in Europe (nearly 80% of 2006 population growth were estimated to be immigrants) and the only influence for demographic changes on the European aging process and low birth rates trend. First and foremost, internal migration flows of immigrants, going from new member states to former UE-15 countries, seems to be a significant driving force of population dynamics but, in

addition, and in particular in the recent years, the flow of migrants coming from North Africa has also notably increased (the EU is the destination of current choice for 78% of East Europeans, 79% of Middle Eastern migrants and 93% of those from North Africa).

From a labour market perspective, immigration is valued as an eventual essential production factor to ensure a firm and sustained economic activity in European countries; migration is undoubtedly a potential benefit for the stressed European labour market as it was reckoned in the "Green paper on an EU approach to managing economic migration"; "(…..) *given the impact of demographic decline and ageing on the economy, an economic migration strategy could have a positive impact on competitiveness and, therefore, on the fulfillment of the Lisbon objectives*". It is thought that, in general, migrant workers can help to fulfill shortages of less qualified labour market segments, reducing wages pressure, inflation and therefore, boosting economic growth; in addition, indirect contributions must be considered (increase of EU labour market mobility, for example).

At the same time, and for sending countries, migration seems a "escape valve", or at least an equilibrium energy, for weakly developed labour markets in the short term so the authorities in these countries consider the outflow of their workers as "necessary" and "profitable" for reducing the unemployment pressure, training future returned migrants and also procuring remittances in order to finance development.

On the negative side, labour (economic) immigration is also commonly perceived as a potential medium or long term threat in European Countries. Most developed receiving countries across Europe are facing migration pressures drawing up plans to match supply and demand for labour markets avoiding potential distortion of "native" salaries and level of employment. This cautious attitude is not only clearly revealed for third (non EU25) countries: following EU enlargement, national measures restricting free movement of labour were introduced by 12 of the former EU-15 Member States on the eight new eastern and central European Member States. The labour market equilibrium could be preserved in the short or medium term, but can eventually turns into an unbalance if a solid and sound economic growth could not be retained.

For MPs countries, and in the long term, the increase of potential migration is also a worrying structural issue First of all, growing migration flows reveals an increasing North – South gap arriving from an unbalanced or insufficient socio economic development (leaving apart that an increase in migration can also be a short term negative externality of necessary socio economic structural adjustments). In second place, labour force outflows hinders or reduces the chance of long term economic revitalization even if structural economic and labour markets reforms are planned.

In summary, migration flows from MPs to EU, emerge as a critical variable for policy decision making process in a global socio economic framework. It seems clear that migration pressure and potential, and the integration of immigrant population in the long term planning becomes a priority in a broader economical and political perspective within the framework of Euro-Mediterranean Partnership.

In this context, it seems necessary to analyze the relevance of the different determinants of potential migration ("pull" EU and "push" MPs factors) in a short term and long term dynamic perspective. The identification and measurement of the relative influence of different factors that impact migration flows could help:

1. To anticipate the future of the migration scenario given the ongoing demographic trends and the economic and social evolution projections for EU and MPs in the absence of structural reforms in those countries

2. To evaluate the impact on this baseline migration scenario of the different development policy strategies that could be adopted either in the national level or in the framework of EU & MPs cooperation programs.

3. To obtain a relative measure of the contribution of short – term variables (adjustments) in the prospects of potential and flows of migration on both sides, and to distinguish them from long term changes and structural reforms.

Given this global research framework, the research project presented in this paper will be handled in the following phases:

1. In a first stage, we will carry out an analysis of migration potential for the main MPs countries (including Turkey) and the EU25 members. For this section, we will try to measure the potential supply and demand labour force according just to demographic structure and evolution at national level in a theoretical basis of a closed and opened economy approach.

2. In a second stage, we will move to real data on migration flows in order to measure in detail and compare over time and cross country, the map of European labour migration.

3. In a third stage, we will use a model to try to understand these real migration flows between every country with the aim to reveal the contribution of a set of "push" and "pull" factors (including potential migration measured in stage 1) into the extent and speed of migration flows. This analysis, will also try to measure the influence of scale effects (distance, cultural or language affinity) and migration barriers in the composition of migration flow structure between every pair of countries.

4. In a forth stage, we will use the results of the model in phase 3 to clearly describe the most plausible scenario that we could expect given a consensus forecast framework for the main demographic, economic and social variables connected with migration dynamics.

5. In this last stage, we will evaluate the impact of changes in the forecast baseline scenario of migration coming from Turkey, Egypt, Tunisia, Algeria and Morocco to EU if socio – economic reforms in those countries produce significant changes in the critical "push" and "pull" factors of migration.

III.2. Modelling mathematically immigration determinants

When explaining the reasons to emigrate, and the choosing of destination, economic literature tends to centre basically on three kinds of theories (Hooghe et Al., 2008):

- For economic and labour-based theories, the key factor in deciding to emigrate is the relative differential living Standard between destination and origin (whatever it is measured by relative GDP per capita, wages, or possibilities of finding a better paid job).

- In the framework of cultural and hegemonic theories, and incentive to population flows are assumed from the periphery to the core on the basis of linguistic and cultural hegemony, among other related factors.

- In the social theories domain, the key issue is the so-called network effect, based upon the attractive factor to migrants that represent being called from individuals from a family or cultural entourage, which advise them on how to find employment in the receiving country.

It is common practice to differentiate between two kinds of migration determinants: those related to socio-economic characteristics of receiving countries that incentivate migration towards them (pull effects); and those related with the origin country context, which make its citizen to look for a better future outside its origin country (factors that are mainly linked to demographic trends and denominated push effects).

From the already classic models on the causes of international migration (Borjas, 1987 and 1989; Hatton, 1995), to more recent models by Hatton y Wiliamson (2004) or Mayda (2005), it is common practice to recur to the Roy model in order to mathematically specify its main micro-economic and non-economic determinants. Mathematically, the main factors that determine an individual decision to migrate can be formulated as follows:

$$d_i = W_{di} - W_{oi} - z_i - c$$

Where the decision to migrate of individual "i" (d_i) is conditioned by the difference between the wage he receives in the destination country (W_{di}) and the origin country (W_{oi}), sustracting the cost of migrating (c) and the personal loses of the migrant (z_i).

To this equation some determinants linked with the level of wage received as a function of qualification can be added. More specifically, the origin and destination wage perceived will depend upon the qualification of an employee. So, to the previous specification we can add such a precision on the salary in the following way:

$$W_{di} = \alpha_d + \beta_d * S_i$$
$$W_{oi} = \alpha_o + \beta_o * S_i$$

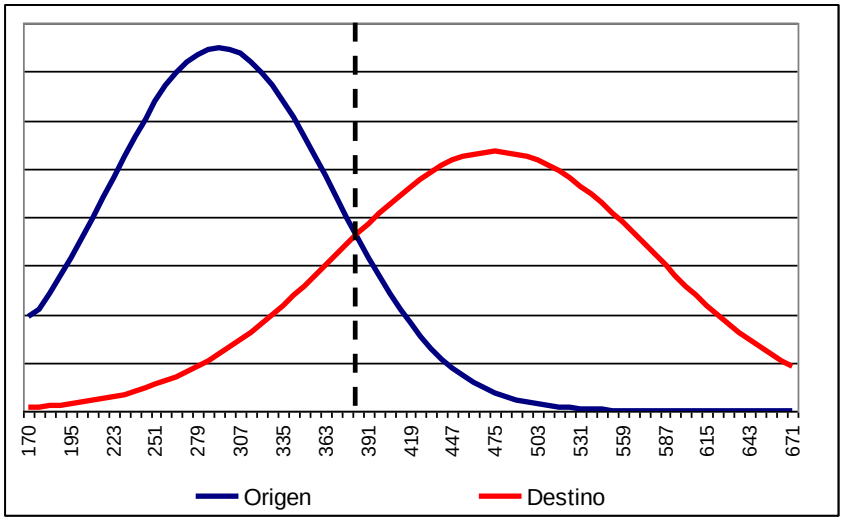
Where wages for each country (origin and destination) have to be modified by an initial value (*alphas*), and by a coefficient representing the qualification skill of the worker (S_i). Incorporating such discrimination by qualification level to the previous formulation, the decision to migrate of individual "I" will be motivated by:

$$d_i = \alpha_d - \alpha_o + (\beta_d - \beta_o)S_i - z_i - c$$

Following this mathematical postulate, it could be said that there will be a positive migration flow towards the destination country insofar the wage-qualification slope is bigger in the origin country (positive selection model) and to the point on which qualification earnings are equalize among both countries.

However, the former assertion should be nuanced or considered by the fact that migrants not only look at wage differentials, but also to the possibility of obtaining a job in the destination country once the decision to migrate has been taken. In short, to the previous formulation another variable that represents the possibilities of finding a job in the receiving country should be added. This variable could approximately be the employment growth rate related to its domestic unemployment rate.

Assuming a normal distribution of wages in both countries (origin and destination), the probability of finding a job with a pre-determined salary could be represented by the following graph:



In this context, there will be incentives to migrate depending on the saturation level of the labour markets. Until both situations cross each other, and meanwhile in the destination country there is a non covered labour demand, there Hill be a clear incentive to migrate: the probability of being better paid in the destination country is much higher than in the origin one.

Borjas (1989) shows that the immigration rate from the origin country to the destination one can be expressed as follows:

$$D = 1 - \Phi \frac{-\mu_{wf} + \mu_{wd} + \mu_z + c}{\sigma_d}$$

In this normal function, "mu" represents the averages for each of the previous variables, and "sigma" represents the standard deviation of the individual decision to migrate. It can be shown from the previous formulation that there is a positive effect to migrate when the wages standard deviation at the origin country is lower than in the destination country (that is, when the level of wage inequality is higher, as represented in the figure above).

Taking into account the variables contained in the term (z), the so-called personal determinants, the academic literature emphasises the importance of elements as the presence of family networks (both in the origin and destination country), historical

circumstances (like being a former colony of the destination country), having a common language, etc…

Concerning immigration costs (c), it is central to consider that variable as the minimum threshold in order to determine if it would be or not migration flow, irrespective of how the costs are to be calculated. These costs depend upon the existence or not of a land border, physical distance between origin and destination countries, access to credit for migratory purposes, immigration policies in destination countries-visas, quotas, previous employment pre-requisites, etc… Contrary to what could be expected, the poorest countries are those that generate less migration flows. This is so because, in many cases, the migration cost itself is unaffordable to its income level, a situation that is called "poverty restriction" by the academic literature.

In the Roy model commented above, the so-called push and pull migration effects have been introduced: the circumstances of the destination country that make it attractive to migrants and, in a less clear manner, the determinants of the origin country that makes its population to migrate away. Concerning the latter dimension, the push effect, the literature has developed a wide number of studies focused on demographic analysis and its relation with occupation in order to determine what it is usually known as "migratory pressure".

There is some controversy over the relative importance of push demographic effects within the migration literature. For authors like Wickramasekara (2001) or Bóhning (1991), these effects would be the more relevant ones when determining international migration flows. For them, migrations are caused by the unfavourable context of origin countries, irrespective of the destination countries socio-economic situation.

On the opposite side, more recent empirical studies find that the significance of the push effects is not the key point. However, it seems sensible to take them into account in a fair measure. To this end, it is advisable to briefly develop a methodology that allows for the determination of the economic-demographic push effect.

In this context, measuring migratory pressure can be attained from two completely different approaches:

- a micro-economic approach, considering the analysis of personal determinants that plot the individual utility function when choosing to migrate or not to do it,
- and a macroeconomic one, emphasising the gap between the demographic and economic variables (the domestic labour market capacity to absorb the new working force)

Following the second approach different OECD studies (Bruni y Venturini, 1995); Giubilaro, 1997), the number of immigrants can be divided across three categories:

- Those that are currently working at their origin country but abandon their jobs to emigrate,
- Those that do not work, but that would like to emigrate and to have the required resources to do so,
- Those currently based in a foreign country in irregular situation,

In order to obtain the number of people in each situation for each origin country, the following starting mathematical identities are proposed:

- The new demand in the origin country labour market is determined basically by new employment demand (linked to the country economic growth), and the replacement of the employees having retirement.

- The new labour supply in the origin country is determined by the population entering the legally fixed working age (over 16 years), multiplied by its corresponding activity rate (the ratio of those entering the labour market, either as occupied or not, but looking for employment). To this population immigrants in the origin country should be added, if any.

- The figure of potentially migrating population can be obtained as the difference between the former two magnitudes, that is, the population that do not find a job in its origin country. To be sure, not all of this population is willing to migrate. The ratio between those that actually migrate and the previous magnitude is the

country's migration propensity. In short, this is what could be named the relative push effect.

$$S_{employment} = D_{employment} + Unemployees + Emmigrants$$

$$S_{employment} = New\_employment\_force * Activity\_Rate$$

$$D_{employment} = D_{replacement} + D_{new} + D_{temporalwithdrawal} - D_{reincorporation}$$

$$Migrant\ Propensity_t = \frac{Emigrants_t}{(S_{employment} - D_{employment})_t}$$

$$Emigrants_{t+h} = Migrant\_Propensity_t \left[(S_{employment} - D_{employment})_{t+h}\right]$$

Estimating migration propensity can be very complex, because the real decision to leave the country may not be exactly temporally linked to the moment when the origin country surplus in the labour supply is taking place. In this context, it seems important to link this labour surplus in the origin country with the labour deficit in the destination country. That is, estimating the pull effect in the European labour market arising from a non covered labour demand.

About this question, it is important also to consider the kind of labour demand that takes place in the destination country labour market. For instance, in the recent past, those countries with a labour intensive growth model (mainly housing and services) are the ones that register higher immigration flows.

In the following sections a quantitative analysis of the issues detailed above is conducted, in order to determine international migratory flows. It is important to highlight from the beginning that even if the best available statistic information is used, it is sometimes not fully reliable.

III.3. Previous experiences in modelling immigration flow determinants

III.3.a. Previous econometric experiences in the macro modelling of international migratory flows

Notwithstanding the existence of different sociological, economic and geographic theoretical frameworks that try to explain the migratory phenomenon, those seem to be far too complex to be encapsulated in a single theoretical framework able to deliver the structure of an empirical model. Moreover, even taking into account a framework linked to the different theoretical paradigms (renouncing to verify specific theories), empirical migratory models seem to be operative ex-post. They are useful for the purpose of a posteriori explanations of migratory flow trends, but they do not perform well as a prognosis tool (Öberg and Wils, 1992).

In spite of this negative evaluation, of a generic nature, an impressive number of empirical migratory models can be found[16]. Among them, there are a good number of projective exercises of very different nature: macro and micro approaches, deterministic one (based upon the judgements of experts, based upon migratory polls in origin countries, supported by deterministic projections of demographic cohorts), as well as essentially stochastic approaches (Markov chaines[17], time–event models, etc…).

Concerning the aim of our study, the most interesting experiences are those related with the econometric domain, which centres on international migrations, mainly referring to population flows coming from developing countries[18], with a macro perspective[19] and supported by secondary data (results that do not derive from polling). Within this kind

[16] The empirical literature on international migration is revised generically, for instance, in Borjas (1989, 1994, 1999a, 1999b), Ghatak et al. (1996), and Mitchell and Pain (2002).
[17] A good typology and review of these models can be found in Bijak (2006).
[18] We exclude examples that refer to other kind of migrants (asylum seekers or highly qualified professionals, for instance).
[19] The análisis based upon micro-data can consider variables that are not significant in aggregated macro terms, or that simple cannot be measured at a macro level: on the one side, individual characteristics like education level, family composition, previous migrants in the family, social context; and on the other side, local geographic characteristics. A synthesis of results for 15 micro studies can be found in Bauer and Zimmermann (1999).

of models we have revised almost 20 studies[20] that have guided our model specification and whose basic features are summarized in the following table:

[20] Complete reviews of other experiences of an essentially econometric nature can be found in Bauer and Zimermann (1999), Alvarez-Plata et al. (2003), CPB (2004), and Brücker and Siliverstovs (2005). The posibilites offered by ARIMA time series models are reviewed by Alho y Spencer (2005).

Review of previous experiences in modelling immigration flows

Author/authors	General analytic context	Type of Model	Endogenous (explained) variable	Variables/Exogenous structure (Explicative)
Alho (1998)	Finland population forecast.	ARIMA Model	Logarithm of immigration and immigration in volume	- ARIMA (0,1,1)
Álvarez – Plata et al. (2003)	Immigrants coming from 10 Eastern European countries to each EU-15 country. It also analyzes the influence of using different estimators for the panel data model.	Panel data model approached with different estimations.	Percentage of immigrants from each origin country over the destination country population. Two set of data: (1) 33 years of migration from 19 origins to Germany; and (2) cross migration among 250 countries over 8 years.	- Real relative income origin/destination (logarithms) - Real absolute income in the origin country (logarithms) - Unemployment rate at origin country (logarithms). - Unemployment rate at destination country (logarithms). - Total origin country population (logarithms). - Specific dummy variables that reflect some geographic and/or cultural affinities between some origin/destination couples.
Bauer and Zimmermann (1999)	Migration to EU countries from Greece, Spain and Portugal, 1985-1997. Additionally, analysis of those migrations impact over EU labour market.	Semi-logarithmic panel data model with fixed effects. Three alternative sample selections referring to three different moments in migratory-labour policy in the EU.	Number of annual immigrants from each origin as a percentage of origin population from the previous year with annual data 1985-1997 (323 individual data).	- Relative unemployment rates - Real relative GDP per capita (origin/destination)
Boeri, T. and Brücker, H. (2001).	Immigration from Central and Eastern Europe (18 countries) towards Germany in the 1967-1998 period, in the context of Western-Eastern European integration.	Linear regression (with exogenous by levels and differences, similar to an Error Correction Model)	Change in the immigrant stock over origin population ratio.	- Per capita income origin/destination (in levels and differences and always in logarithms) - Origin employment rates (in levels and differences and always in logarithms) - Destination employment rates (in levels and differences and always in logarithms) - Institutional restrictions to migration - Immigrant stock over origin population in the previous period ratio

Author/authors	General analytic context	Type of Model	Endogenous (explained) variable	Variables/Exogenous structure (Explicative)
				- Dummy variables representing migratory agreements - Dummy variables representing free movement of workers - Dummy country specific variable
Borjas (1987)	Analysis of the origin composition of emigration towards the USA in the 1951-1980 period.	Cross-section regression (over cross section)	Average migration rates by origin country 1951-1980.	- Per capita income in origin country - Origin country inequality
Brucker and Siliverstovs (2005)	Immigration in Germany from 18 countries. Análisis of different estimation methods.	Panel data model with simple partial adjustment, estimated with 20 alternative estimators with annual immigration data coming from 18 origins between 1967 and 2001.	Percentage of immigrants over origin population.	- Logarithm of the origin/destination wage ratio measured in current exchange rates - Logarithm of origin wage - Logarithm of origin employment rate - Logarithm of destination employment rate - Lag value of the endogenous variable (% of immigrants over origin) - Dummy variables on the existence of bilateral migratory agreements - Dummy variables on the existence of free movement agreements - Logarithm of each origin country-Germany distance - Dummy for geographical proximity - Dummy for common language
Clark et al. (2002)	Analysis of total emigration and its origin composition from 81 different countries towards the USA in the 1971-1998 period	Ordinary Least Squares regression combined over complete panel of 2268 observations by country/year.	Logarithm of the ratio of immigrants admitted by country for each thousand inhabitants in the origin country.	- GDP per capita (PPP) 1985 ratio origin country / USA - Years of studies of over 15 years population ratio origin country/USA - Percentage of population between 15 and 29 years in the origin country - Family income Gini coefficient ratio of origin country/USA - Distance from Chicago - Dummy of common language at origin country (English) - Dummy for landlocked countries - Origin country immigrant stock per thousand inhabitants - Gini coefficient of origin country divided by square of origin country per capita income

Author/authors	General analytic context	Type of Model	Endogenous (explained) variable	Variables/Exogenous structure (Explicative)
				- Additional Dummy variables intended to capture USA migratory policy changes during the period.
De Beer (1997)	Immigration forecasting in the Netherlands	ARIMA Model	Volume of emigrants and immigrants and, alternatively, net migration	- AR(1) for emigration and immigration volumes - MA(1) for the net migration volume
Fertig (2001)	Migration to Germany (and the UK n a 2003 revision) from 18 European countries.	(1) GMM Estimation of endogenous with simple ortogonal error components country/period (AR(1) specification) in time resid and (2) same model adding some exogenous (relative yield and population)	Net immigration flow to Germany (and the UK) from each origin as % of origin population.	- Relative income per capita (PPP) - Percentage of population between 20-39 years in origin countries - Cross-section resides by each country (no time variant). - Time annual resid (no country variant) with autorregresive structure (AR(1)). - Additionally, other structures allowing for specific fixed effects by country were tested for some destinations.
Gorbey et al. (1999).	Migration between Australia and New Zealand	VAR model over quarterly data	The VAR structure do not distinguish between endogenous and exogenous	- Ratio of net migration - Annual differences of net immigration ratio - Real GDP growth for both countries - Real GDPper capita growth for both countries - Differences in country unemployment rates - Unemployment growth indexes for Australia and New Zealand - Growth in the ratio of wages between both countries
Hatton and Williamson (2002)	World immigration 1970 – 1975 and 1995 – 2000 between 80 countries grouped in 10 geographical zones.	Combined OLS Regression for 480 observations (country/period).	Net immigration per thouisand inhabitants and year (five year averages)	- Percentage of 15-29 years population, 5-years average - Percentage of foreign born in the country at the beguinning of the period - Percentage of civil war years over the period - GDP per capita (PPP) ratio over the weighted average of the sample less the average ratio years of study for population over 15 years to the average of years of study for the whole countries - Ratio relative regional GDP (same as befote but computed for each region

Author/authors	General analytic context	Type of Model	Endogenous (explained) variable	Variables/Exogenous structure (Explicative)
				separately) - Average ratio of the Gini coefficient over the square of per capita income
Jennissen (2004).	Several separated models (for regions and even country specific) in the general context of European migration. Finally a single aggregated model for Wetern Europe of special interest.	For the migration combined model in Wetern europe: OLS regresión combined with heteroskedasticity component and, alternative, SUR estimator	Net migration (computed as total population growth les natural population gorwth over total population) with 1960 and 1998 data for 13 countries (in the Wetern European aggregated model).	- GDP per – cápita - Unemployment as percentage of active population (in the origin, destination or both countries according to the chosen model) - Average education years for population over 25 years (at the origin, destination or both countries according to the chosen model) - Per capita immigrant stock (totals foreigners at the beginning of the year) - A high number of dummy, country or period specific variables, intended to capture relevant changes in entry regimes, bilateral conflicts, socio-political instability periods, etc… - In some specification it add an AR (1) structure
Kamemera et al. (2000)	Analysis of emigration to the USA in the 1976-1986 period.	Gravity model with panel data regression 1976 - 1986	Average emigration rates by origin country to the USA 1980-1986.	- Distance - Relative income origin / destination - Unemployment in the US - Political rights and individual freedom indicators - Political instability
Keilman et al. (2001)	Norway population forecast	ARIMA Model	Logarithm of immigration and logarithm of emigration.	- ARMA (1,1) for the immigration logarithm - ARIMA(0,1,0) for the emigration logarithm
Mitchell,J. y N. Pain (2003)	Determinants of UK entry migratory flows	Different alternative models tested: ARDL (autorregresive lagged errors) with Mean Group Estimators and Pooled Mean Group Estimator, Dynamic Panel Data with fixed Effects	UK annual immigration rate (immigrants from each area over origin population) for 10 geographical areas between 1980 and 2000. Gross immigrants entries.	- Real per capita income level UK/origin area (in logarithms) - Growth of real per capita yield UK / origin country (for short term) - UK Employment - UK relative per capita Yield/ alternative destinations - Share of population between 15 and 29 in origin countries - Trade volume between UK and each origin country, measured as percentage of GDP for the area - Lagged Migrants Stock
Orłowski (2000)	Immigration from Central and	Linear regression	Percentage of immigrants from	- Destination country population size

Author/authors	General analytic context	Type of Model	Endogenous (explained) variable	Variables/Exogenous structure (Explicative)
	Eastern Europe to the EU after enlargement.		each country over each destination country population.	- Geographical distance origin - destination
Sinn et al. (2000)	Germany immigration from 5 Eastern European countries.	Time trend model of partial adjust on which the volume of immigrants progressively converge towards a long run equilibrium level.	Total immigrants volume	- Each origin country income relative to the German income (PPP) - "Output Gap" in Germany - Lagged Endogenous (Proxy for migratory networks) - Proxy for EU membership for each origin country - Proxy for origin-destination free movement of workers
Willekens and Baydar (1986)	Internal migration model (domestic) between dutch municipalities (this is excepcionally included in this review for the shake of its model peculiarities	Linear General Model devoted to time modelization of each one of its three components (see variables details) and to identify, in addition to the effects on exogenous variables, the specific effects of origin, destination and interaction.	Emigration volume between municipalities grouped by urbanization rates for 24 years series.	- Distinguish deparately a 'level component' (total number of immigrants in the country), a generation component (the probability of emigrating from a destination (i) at time (t), and a third distribution component (the probability that an immigrant coming from (i) ends up at a destiny (j) at time (t).
Yang (1995)	Analysis of the origin composition of emigration to the USA for the 1980-1986 period.	Cross section Regression	Average emigration rates to the USA by country of origin 1980-1986.	- Origin country income - Previous immigrant stock by nationality
Zimmermann (1995a)	Migration to Germany from the main 6 origin countries	Lineal regression by Ordinary Less Squares.	Net annual migration from Italy, Greece, Portugal, Spain, Turkey and Yugoslavia	- German Real Gross GDP growth rate - Lagged net immigration - Time trend (in order to capture in a simple manner the push factors) - Dummy for 1973, the year on which Germany abandoned its policy of contracting at origin.

Most of the above researches study the migratory phenomenon in a specific way, focusing on a particular country or group of countries, at a given moment in time, or for a specific type of immigrants. The sample is in that respect fragmentary, but in any case there are some characteristics more or less common to most of these experiences:

- On the type of data and models:

  - Most studies try to explain volume or rates of immigration coming from different origins and with a single destination, either a country or a group of countries. It is quite rare finding models not considering origin as a relevant issue and therefore treating immigration as 'pull-push' theoretical framework, then recurring to data bases with origin and destination variables.

  - There are time series studies, both panel and cross section panel models. Its selection depends upon the analytical objective and it is also conditioned by data availability. If the model is constructed with prospective aims, its specification includes, logically, the time dimension insofar the migratory phenomenon has an important dynamic component.

  - Both cross section and panel data should be used in those studies where there is a marked heterogeneity in the migratory model, either because of its origin, destination or both of them. In those exercises that, for instance, only immigration to, and therefore origin factors are not relevant, panel or cross section panel data are not especially interesting.

  - However, this kind of models are not unusual, notwithstanding they do not explore cross heterogeneity; moreover, they recur to a cross specification or micro panel (few time observations) with clear time forecasting aims.

  - This lack of appropriateness between the analytical objective (markedly time oriented) and the kind of data available lead, in many cases, to forecasts inconsistent with other basic variables from the time reference framework. For instance, the forecasting of total immigrants resulting from aggregating cross

flow forecasts can easily be inconsistent with the demographic total or domestic evolution.

- Several studies associate appropriately panel data with the need to control heterogeneity (by origin, destination or both) in a more sophisticated manner than with the simple solution of recurring to dummies in time regressions. However, recurring to panel data implies facing several technical difficulties that, sometimes, are not adequately taken into account or are dealt with without the needed precautionary measures or without giving enough technical information to the reader.

- It is true that recurring to cross section panel data allows capturing heterogeneity, but most of the origin explicative variables handled in migration are invariant or quasi-invariant to time. This makes it difficult using panel data because of obvious problems of perfect multicollinearity. In order to solve that problem there are several alternatives that are chosen in many studies without justifying the decision in an appropriate or sufficient manner.

- In addition, even if controlling for heterogeneity is used as an argument for recurring to panel data, many times the models limit heterogeneity to estimating an associate coefficient to the simple cross unobservable heterogeneity (random or fixed effects). This is an excessive restrictive heterogeneity scheme when compared with other alternatives that allow for variable coefficients in treating exogenous variables, and an unrestricted cross behaviour in random resids.

- On the other side, migratory models have strong dynamic components (for instance, it is common practice to use lagged variables in order to capture migratory networks effects). Moreover, dynamic panel data models needs specific methods that depend upon important questions such as time and cross section sample sizes, or the hypothesis concerning modelling cross heterogeneity. All these questions are not always considered, recurring to different estimation techniques without a proper technical justification.

- For instance, it is possible to find dynamic analysis with panel data models estimated with pooled OLS that, unless extraordinary conditions, always deliver worst results than other more sophisticated alternatives, according to several technical comparative studies. It is also frequent to find fixed or Random effects estimation methods for models with a small cross section size and high time size, for which recurring to a GMM estimator would offer a better capacity to avoid bias in dynamic panels.

- In general, it could be sensible to conclude that panel data, by exploring together time and cross section dimensions offer higher possibilities for 'configuration' or restriction. In that respect, its results are more sensitive to specification selection and to estimation procedures, generating for the same analytical context very variable results.

- On the variables:

  - The endogenous variable depends upon the analytical context, varying from the measuring of origin-destination immigration flows to immigration over destination population, or more frequently origin population rates (see the comment on flows and/or stocks in the next section).

  - A widely used group of exogenous variables are, logically, different measures of income levels and job opportunities.

  - Income and employment are used as the basic attraction variables, according to economic theories that, in every case, highlight a leading role to comparing origin and destination wages. Usually there are not enough available or reliable information for wages, so it is common practice to recur to income (GDP) and employment/unemployment levels. That is, opportunities are associated to a higher employment level, not to a higher wage level.

  - The combined use of income and employment/unemployment aims to modelling income expectations instead of focusing on gross income differentials: even if both variables are closely linked, it is assumed that immigration is not fostered

by a high income level alone, but induced by the opportunities to access such an income level by finding a job. In that respect, employment rates are used as an aggregate measure of the probability to find a job.

- The most common feature is finding in the models income and employment variables in a separate way, with the exceptions of models in which both are combined in a single variable (income weighted by the inverse of unemployment rates), like Bowles (1997), Straubhaar (1998) and Fields (1991).

- One of the problems associated to using income as an aggregated measure to approximate wage income expectations (in addition to the above mentioned theoretical assumptions) is that it does not measure in an specific way the income received by immigrants, but the average aggregated income of all destination country workers. However, it is clear that the immigrant will get a salary adjusted for a specific sector and qualification level.

- The same happens with using aggregated employment and unemployment measures that may not reflect the specific access conditions to the labour market faced by immigrants. Perhaps because of that, using employment and/or unemployment rates as attraction and/or expulsion factors have not always yielded relevant conclusions concerning the sign of causality (as explained and reviewed by Bauer and Zimermann [1999]). This generally so due to problems in the aggregation procedure.

- Concerning the measuring of destination income, it could be useful to recur to disposable yield (quite rare in the reviewed studies), including taxes and social transfers, because these factors could be important in the selection of alternative destinations if there were significant differences or if those variables had been substantially modified over time.

- When using models that distinguish between different immigrant origins, recurring to the average origin income[21] (instead of a homogeneous wage measure for every country) makes necessary to consider also the average level of competences at origin countries, in order to correctly capture the partial correlation between income and emigration. Introducing inequality levels at the origin country aims to capture the yielding of competences and, in that extent, the positive or negative selection on immigrants according to its origin.

- However, using competences or average education levels (years of studies or any other approximation) is not very common at a macro level, even if its inclusion in some models seems very interesting. On one side, and in a direct way, education levels links with dual market theories, which establish that the bigger the education level, the higher would be the less qualified jobs deficit; and at the same time, the bigger the reluctance to employ them by the locals, because the level of perceived social punishment grows together with its education level. On the other hand, education level is also linked with origin, because a higher education level negatively affects to inequality, and according to relative deprivation theory this impacts emigration positively.

- Income inequality at origin country also appears quite frequently in migratory models. Inequality (usually measured in aggregate average terms) aims to measure poverty trends (filter measure): given an average income, an increase in inequality implies an increase of poverty.

- Inequality allows for the capturing of the deprivation effect (Stark and Taylor, 1989): the decision to migrate is taken at the origin by comparing income with other households. So, the higher income inequality at the origin country, relative deprivation wil rise and the bigger the incentive to emigrate.

- The existence of migratory networks is another of the key factors in the reviewed models. It is generally introduced by including the immigrant stock

[21] It is usually used an origin income measure together with the square income, allowing to keep the assumption of a non-linear emigration-income relation. See the theoretical explanation in Rotte and Vogler, Faini and Venturini (1994).

(usually lagged). An interesting and relatively frequent alternative is to compute the existing stock (total or by nationalities) relative to the origin country population. In any case, using the aggregates stock as a measure of the network is subjected to significant measurement errors, given that not all resident immigrants in a country act as a real migratory support for future immigrants.

- The theoretical models that include the network effect assume that immigration population is homogeneous. Therefore, the same behaviour model is valid for every individual, today and in the future. On the contrary, it may be assumed that emigration as a percentage of origin population is limited, so that a bigger population previously emigrated from a particular origin (over origin population), once it reaches a maximum level only grows by population increase. This hypothesis contradicts the idea that the stock of previous immigrants positively affects new immigration flows. However, it could be compatible with the inclusion of the immigrant stock in the models, assuming that the network effect is a short run effect, insofar as there is an immigration limit as a percentage of origin population.

- Some models recur to some measure of young population at the origin country in order to capture labour supply surpluses caused by the lack of adjustment of population and the labour market. When measuring young population at the origin country what it is being analysed is excess labour demand as well as the higher utility associated to emigration for youngster relative to adults'.

- Variables related to trade or investment relations between origin and destination countries are used to capture the higher employment probability of immigrants coming from economically linked countries. But this relation operates a two levels: (1) it is especially significant for immigrants with higher qualifications, that are able to profit from multinational companies networks, but not for the rest; (2) by contrast, if trade and migration are considered substitutive (Faini and Venturini, 1994), the aggregated effect could be mixed; and (3), there is a problem of cross endogeneity between trade relations and migration (Girma and Yu, 2002).

- None of the reviewed studies includes in a convincing manner questions related to migratory policies, apart from the consideration of dichotomic or scalar dummies in order to model free movement over restriction. One study recur to lagged entry flows to the reference country and other countries (not the immigrant stock, but rather previous years entries) as proxies to measure the ease or difficulty to entry the destination country and other alternative destinations (Mitchell and Pain (2003).

- None of the models clearly distinguish between legal and illegal immigration; many studies do not even mention this issue, and when it is mentioned as an analytical problem, no adjustment in the specification or implementation of the model is proposed.

- On the functional design:

  - Most models adopt a theoretical framework on which the utility fuction has a logarithmic structure, then proposing linear empirical models for the coefficients, but logarithmic or semi-logarithmic for the variables.

  - Many times, notwithstanding that the base empirical model is specified over the variable/s measures by levels, some dynamic adjustment structure is also proposed in order to combine (distinguish) short run and long run analysis: error correction models, simple partial adjustment models, etc.

  - In that respect, it is common to include lagged migratory flows in order to try to capture long run dynamics compared with short run adjustments in a partial adjustment model manner.

  - However, and with only few exceptions, none of the dynamic regression models with variables by levels conduct previous analysis on the stationarity variance of used series, perhaps due to the lack of enough time observations that do not allow carrying out the usual unit root tests.

- On using models for forecasting:

- For most of the reviewed studies, the forecasting exercise basically consist on a simulation exercise, for which some exogenous variables related scenarios are proposed, obtaining a migratory output. In that respect, the quality of the forecast depends upon the quality and plausibility of the proposed scenarios. However, it seems that not sufficient efforts are devoted to properly design such scenarios. The future values assumed for explicative variables are not justified, nor is its plausibility contrasted with other sources or supported with experts' judgements.

III.3.b. The difficulties of empirical migratory flows modelling

Following the analysis of the previously reviewed studies, and considering its modelling strategies and results, some general conclusions on the problems facing the empirical modelling of this phenomenon can be obtained. They are, obviously general questions which significance arises according to the analytical context on which each migratory model is formulated.

- The lack of a universally valid theoretical framework

As exposed before, the different migratory theories are unable of convincingly and wholly support to the reviewed simulation and forecasting models. Most of the studies, if not all of them, are only fragmentary based upon general theoretical paradigms. They postulate very basic relations between migrations and some very general economic, demographic and psycho-sociologic concepts, without a minimum degree of precision. These basic theoretical links, presented in a very general manner, should be formalised, being adjusted in an ad-hoc way to the specific circumstances of the analysed place or period, without any homogeneous specific criteria. The results are, quite often, an empirical exercise without a clear theoretical framework or with only fragmentary theoretical elements. These models are reasonably able to offer an ex-post explanation for a particular migratory dynamic or structure. But they are almost useless in conducting forecasting exercises in the same context for which they were prepared.

- The different nature of migratory flows and stocks

One of the most interesting issues lies in the difference between modelling entry immigration flows and the absolute or relative level of immigrant stocks for a country.

Most empirical models focus on explaining the level of immigrants, generally as a percentage of total destination or origin population. By contrast, other studies analyse temporary emigrant flows. The selection of levels (stock) or entry flows is not theoretically, nor empirically irrelevant. From a theoretical perspective (as we will show below) the determinants of a country entry migratory flows are not necessarily the same than the ones that explain the permanence (or return) of the already resident immigrants, and then of the total immigrant stock. On the other hand, and from an empirical perspective, it is evident that analytical objective of understanding and forecasting the flows (short run dynamics) is not the same as dealing with the migratory pressure issue (cumulative, long run dynamics). This needs to adequate the analytical approach to each different case.

Most of the reviewed studies prioritize stock versus flow analysis[22]. This may be due to the higher difficulty of finding entry migratory flow data (gross) instead of immigrant or foreign population data. Evidently, the mere difference between the immigrant stock for period "t" and "t+1" cannot be assimilated to the gross flow, but only to the net flow (entry less exit). The use of the net flow, instead of the gross one, can imply serious bias problems in the estimation of any model coefficients if there is some kind of significant correlation between entry and exit flows. This is so because when using aggregate data the analytical structure tend to mix entry and exit effects that can even result in opposite signs for the same variable[23].

- The distinction between factors explaining the beginning of migratory processes versus factors explaining its perpetuation.

[22] Some authors, like Brucker or Siliverstov (2005) do not share that opinion; it is possible that looking at the whole literature this might be the right conclusion, but according to the summary table included above, the predominance of stock analysis instead that of flows is evident.
[23] This problem is highlighted, among others, by Bauer and Zimmermann (1999)

In a similar manner as entry flows are distinguish from permanence (and therefore from the total stock), sometimes (for instance Massey et al., 1993) the beginning of the migratory process is also distinguished for a country from its perpetuation. So, for instance, some punctual events in origin countries (regime changes, military conflicts, severe economic crisis) as well as in destination ones (changes in the entry or regularization regimes) can serve as catalysers to the start of migratory processes that are then maintained even when those events are already disappeared.

This cumulative causation process is explained by different convincing arguments. First, a good deal of the theoretical models employed as reference framework includes expectations on the migratory decision. In that respect, even if one country's economic situation deteriorates, migratory flows can be sustained if a short or medium run economic recovery is expected. On the other hand, as explained before, the existence of previous migratory networks can perpetuate migratory flows even when the original starting factors have loose intensity. Additionally, there are other reasons (Massey et al., 1998) like the stigmatisation of jobs occupied by immigrants (that natives will never want to do anymore), or the emergence at origin or even destination of an emigration or immigration culture.

- The difficulty of capturing the heterogeneity of the migratory phenomenon

The reasons that motivate the migratory decision crucially depend upon the type of immigrant considered. Evidently, the reasons that foster forced emigration do not coincide with those that could be considered central in explaining voluntary migratory decisions. Even regarding voluntary immigrants, an evident distinction should be made between those who have considered vocational arguments attending to labour reasons; and within them, it is not possible to assimilate those who opted to emigrate as a mechanism of labour promotion (immigrants coming from developed countries) with those motivated by economic survival (coming from developing countries).

So, migratory flows of different kinds are not easy to aggregate as a whole, and should be studied separately. This makes it very complex from an empirical perspective. Even if in some occasions it is possible to find data for the stock or flow of different types of immigrants (the origin country should be enough to adequately differentiate across the

different categories), it is not easy task to make the election of the explicative variables fit this segmentation. In the Spanish case, for instance, the most recent data on resident foreigners distinguish with enough detail immigrants origin, but this detail is not avalaible for some interesting explicative variables.

On the other hand, and even when empirical analysis can focus on an specific category of economic immigration, differences related to origin country or geographical area can still quite significant in the causal migratory model. For instance, immigrants coming from Eastern Europe cannot easily be assimilated to those coming from Latin America, or these with the ones coming from Sub-Saharan Africa. This means that there are specific variables impacting in an isolated manner for each origin. Moreover, those fundamental variables explaining migration in an invariant manner related to origin can affect with a different intensity to immigration depending upon the area where this is originated.

In addition, even when being extremely specific (for instance considering only a single origin country), in fact it could be understood that any macro aggregate analysis contradicts the idea that the migratory decision is essentially a micro economic one. In that respect, some analysts defend the studies based on polls or micro data as the only way to model migratory behaviour, insofar as they permit to consider individual variables (civil status, education level, number of previous emigrant family members…) or variables related to very specific geographical areas.

In any case, and focusing exclusively on macro econometric models, there are several arguments on the necessity to choose modelling strategies that explicitly consider the treatment of heterogeneity according to origin. This especially so when the purpose of the study is explaining not only total migratory flows, but also its composition. Considering origin heterogeneity implies to generate separate models or to recur to econometric strategies that allow some degree of group variability in the estimated coefficients and/or in the variances (like for instance the different panel data model types).

Using panel data models needs more technical resources and makes dynamic modelling more complex. It also introduces the problem of selecting the adequate estimators

according to the source of variance that is being prioritised (time or cross section) and the degree of heterogeneity permitted (parametric restrictions and/or variance decomposition level)[24].

- The empirical complexities induced by illegal immigration

The existence of a high illegal immigration level derived from the imposition of strict entry controls in most 'attractive' countries implies that some of the main variables that can empirically be used to model migratory dynamics include inexact measures. This problem affects, in the first place, to the analysed endogenous variable itself, that is, to the total resident immigrant population. From an econometric perspective, it is obvious that recurring to an endogenous variable with measurement errors inevitably generates not very efficient estimations of the interesting coefficients. This can lead to errors when considering the statistic significance of the explicative variables contained in the model specification.

On the one hand, if endogenous variable measurement errors are related to any of the exogenous variables included in the specification there is the additional risk of bias and inconsistency, invalidating any empirical judgement conducted on the basis of the observed coefficients. This possibility is, on the other hand, relatively plausible if we imagine that measurement errors in immigrant population are linked to the magnitude of irregular immigrant population. This in turn can be connected with explicative variables as important as entry restrictions by particular destination countries.

In addition to the problems related with measurement errors in the endogenous variable, the presence of a high irregular immigration percentage generates also frequently measurement errors in the exogenous variables (for instance in the correct calculation of the unemployment rate offered by labour polls or by wages estimation). These measurement errors constitute a first order 'econometric risk' factor that expose any parametric estimation exercise to bias an inconsistency problems.

[24] Brucker and Siliverstovs (2005) illustrate how, in the panel data context, the selection of the different available estimators influence the estimation results and forecasting mistakes. Álvarez-Plata et al. (2003) argue that the significant differences obtained in the forecasting of migratory flows from Eastern Europe to the EU by different authors are not due to the selection of exogenous variables, but to a bigger extent to different estimation procedures, especially in panel data models.

- The difficulty of integrating migratory policies within empirical models

Evidently, migratory policy is an essential factor in order to understand the characteristics and composition of current international migratory dynamics. Wit some interesting exceptions[25], a good deal of the theoretical analytical proposals are built upon the base of free trans-national movements, which is a clearly unrealistic starting point. Moreover, it can be said relatively safely that international migration towards developing countries is currently strongly guarded. This is the only reason why migrations are so scarce when compared with others production factors mobility in the globalization age. So, empirically considering such a restrictions introduced by migratory policies is very important.

However, the complexities of integrating migratory policies in quantitative exercises are self-evident. In the first place, it is very difficult to demarcate something as diffuse as 'migratory policy'. Even defining it precisely, it is clear that it would be impossible to quantitatively measure its design and/or its implementation in order to include this kind of analysis in the previous econometric model. Secondly, migratory policy is an endogenous variable, influenced by the same forces that determine migratory pressure, making it difficult its econometric treatment as exogenous variable, and eventually introducing bias and inconsistency problems.

- The models endogeneity problem

The immigration phenomenon is usually related to factors or variables that are themselves strongly influenced by migratory flows, frequently inducing in causal models problems linked to endogeneity. For instance, it is evident that economic conditions in destination countries (that acts as an element of immigrants attraction) are in turn modified by immigrants arrivals.

[25] For instance Clark et al. (2002) and Cobb-Clark (1998).

III.4. 1995-2005 immigration flows in OECD countries originating from Algeria, Morocco, Tunisia, Turkey and Egypt

Before focusing on the modelling of bilateral flows between the countries covered by this research, a brief summary of the global results from the last 11 years of migratory flows between the EU-15 and some Mediterranean Partner Countries (MPCs) is offered.

From the perspective of destination countries, Germany, France and Spain represent over 75% of migration flows during this study's period. For Germany and France, Turkish and francophone areas immigration, respectively, have been a continuing reality since the beginning of the 1960's. For Spain, the strong Moroccan immigration flow has taken place during the last 5 years, and still presenting a relevant inflow rhythm today, notwithstanding that the trend has lowered since 2006.

Migratory flows to OECD studied countries 1995-2005 (thousand people)

		FROM					
		Algeria	Egypt	Morocco	Tunisia	Turkey	Total
TO	Belgium	5.974		65.544	4.074	31.225	106.817
	Canada					12.652	12.652
	Denmark			1.577		8.651	10.228
	Finland					2.259	2.259
	France	187.91		176.744	63.034	73.175	500.863
	Germany		18.754	54.529	25.301	588.118	686.702
	Greece		2.193			0.796	2.989
	Hungary					1.247	1.247
	Italy	1.642	26.451	125.418	34.53	6.254	194.295
	Netherlands	0.564	2.745	45.463	0.88	55.14	104.792
	NewZealand		2.101				2.101
	Norway			1.845		4.591	6.436
	Poland	0.513	0.656		0.501	3.012	4.682
	SlovakRepublic	0.018	0.049	0.013	0.041	0.196	0.317
	Spain	28.106	0.544	312.486	0.307	0.604	342.047
	Sweden					10.264	10.264

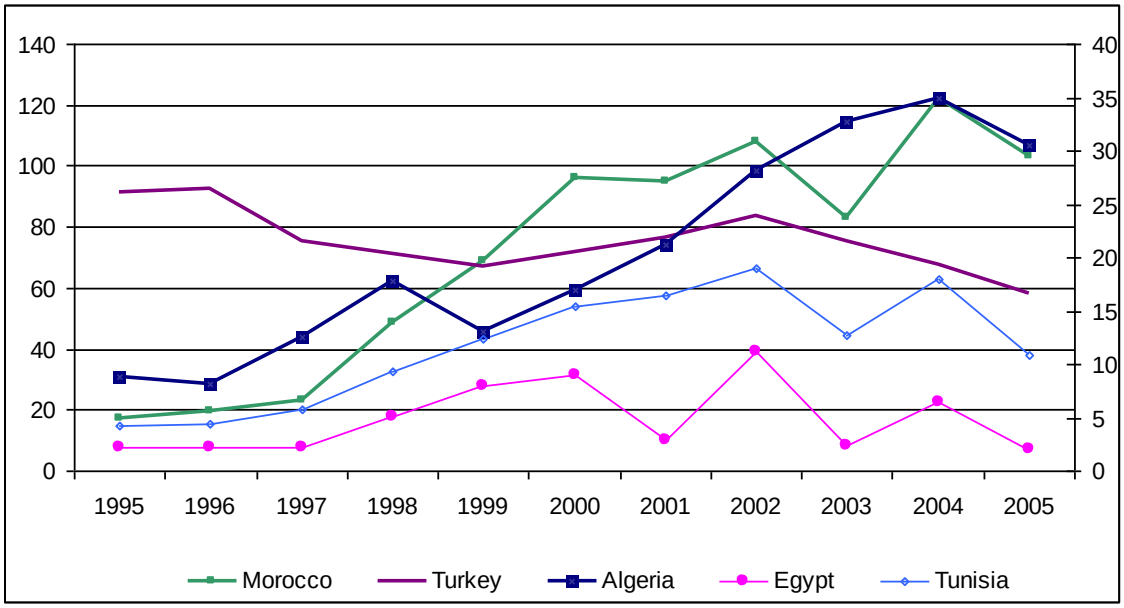
	FROM					
	Algeria	Egypt	Morocco	Tunisia	Turkey	Total
Switzerland					31.989	31.989
UnitedKingdom			0.675			0.675
Total	**224.727**	**53.493**	**784.294**	**128.668**	**830.173**	**2,021.355**

Source: OECD Migration dataset

From the origin country perspective, among the five countries considered in this research, Egypt's results are the ones that differ the most the general behaviour. Over the last eleven years emigration flows represents and outflow of 2,5% of Moroccan habitants and about 1% of its habitants for Tunisia, Algeria and Turkey. However, Egyptians emigrants during the last decade towards the EU represented only 0,1% of Egyptian population. If the analysis would be conducted at a regional level within each country, the results would be much more relevant, even for the Egyptian case.

Within the time horizon considered in this study, Morocco and Algeria present a growing trend, increasing year by year the number of emigrants sent to the EU-15. Turkey slightly decreases the rhythm of its emigration outflows, but remains at annual emigration levels close to 75.000 people by year. For the Egyptian case, taken into account that figures are much lower, there have been no significant changes over the last decade (see figure below).

Migratory flows towards the EU-15, 1995-2005 (thousand people)



Right axis: Algeria, Tunisia and Egypt. Left axis: Morocco and Turkey.

In short, this study deal with migratory flows that account for close to two million people, or around 1% of the Algerian, Egyptian, Turkish and Moroccan population taken together, that have migrated in the 1995-2005 decade to the EU-15. It is important to highlight this figure because if it seems a relatively low one, it refers to a single decade. Notwithstanding the fact that there are not available data for immigrant stocks by MPCs nationalities, it is obvious that this process implies a very significant loss of MPCs population when these figures are projected over a longer period.

III.5. Model characteristics

III.5.a. Specification

The models used in this research are based upon Hatton (1995) proposal, with a semi-logarithmic specification of the migration decision utility function. The short and long run models are based upon the Brücker and Siliverstov (2005) proposal. The specification includes the variables generally tested for immigration determinants analysis and widely used in the previously reviewed models.

The originality, together with a wide number of proposed cross migratory flows and the updating of information, consists in the inclusion of two variables not very common in the econometric models used to determine this phenomenon: demographic push effects and the variable for income inequality (tested as significative by Mayda [2005]).

The model is specified in the following manner:

$$\log(INMIG_{it}) = \mu_i + \beta_2 \log(GPULL_{it} / GPUSH_{it}) + \beta_3 \log(EMPHOS_{it}) + \beta_4 \log(POTMIG_{it}) + \beta_5 \log(GINHOS_{it} / GINORI_{it}) + \beta_6 \log(DISTAN_i) + \beta_7 \log(INMIG_{it-1}) + \beta_8 LANG_i + \beta_9 TREND_t + \beta_{10} TREND_t^2 + U_{it}$$

- Labour-economic pull effects:

    - GPULL/GPUSH: percentage of relative wealth, calculated as destination country over origin country GDP per capita. The coefficient of this variable is expected to be positive.
    - GINHOS/GINORI: inequality in relative income distribution, calculated as Gini income inequality index in the destination country over the origin country. According to the previous arguments, it is expected this coefficient to have a positive sign
    - EMPHOS: employment growth in the destination country (growth in the number of employees). This coefficient is also expected to have a positive sign, because it represents a higher probability of finding a job in the destination country.
    - POTMIG(-1): network or inertia effect from previous immigration flows. The expected sign is positive.
    - LANG: dummy variable that takes value 1 when origin and destination countries have the same language and 0 otherwise. The expected sign is positive.
    - DISTAN: distance in kilometres between origin and destination capital cities. As usual, the distance is taken as square, because over a given

distance a higher one is less important than in the first kilometres. The expected sign is obviously negative.

- GPUSH: labour-demographic push effects, compiled in a single variable generated from:

    - National employment growth in the origin country
    - National activity rate evolution in the origin country
    - Growth of active population: including new potential demand (people having 16 years) and workers exit by retirement or death.

The "i" sub-index refers to the cross of each pair of countries among which migratory flows are taking place (34). The "t" sub-index refers to the year (1995 to 2006). As is common practice in other studies, an equation is proposed in order to define a simple partial adjustment function that some authors call "Persistence habit model", specified as follows:

$$INMIG_{it} - INMIG_{it-1} = \delta(\hat{INMIG}_{it} - INMIG_{it-1}) + w_{it}$$

Substituting this equation in the previous one, short and long run effects of the migratory phenomenon are easily derived.

In the modelling process other widely used variables in migratory flows studies have been taken into account. More precisely, dichotomic variables have been used in order to distinguish if the origin country was a former colony of the destination country or if they share a common border. A variable related to immigration policy in destination countries was also included. None of them were significative, so they were finally excluded in the chosen model expression.

III.5.b Estimation methods and software

Recent econometric techniques have developed a huge quantity of alternative estimators in order to estimate panel data models in general, and in a particular manner models including dynamic elements in its specification. This is our case when introducing the network effects variable. Among others, we can consider the following ones:

- OLS estimators with stacked variables, with and without cross-section variables.
- Dynamic panel data estimators with fixed effects (and without cross-section variables), under homokedasticity or heteroskedasticity/autocorrelation assumptions.
- Random Effects estimators following Wallace and Hussain (1969), Swamy and Arora (1972) proposals or feasible GLS.
- Dynamic Panel Data estimators following the proposals of Hsiao (1992) or Arellano y Bold (1991).
- GMM estimators of Arellano and Bover (1995).

As stated in the section devoted to previous modelling experiences, almost generally econometric studies conducted to date have recurred to OLS estimators with stacked data methods. Only a few of them have recurred to fixed effects estimation methods. Brücker and Siliverstovs (2005) analyse in detail all the commented alternatives, testing its capacity to obtain closer estimated and real results. In this study the conclusions are the following:

- The differences obtained by using alternative estimation options are significant in estimating the relative importance of each explicative variable.
- They find that, for the models they work with (similar to ours), OLS estimators are clearly less precise than the one obtained by other alternatives.
- They observe that, in such a context, fixed effects estimators have clear advantages over the remaining options, including specific estimators for dynamic panel models, and that the high number of observations annulate the bias described by Arellano and Bold (1991).
- The authors find that Random effects estimators present goodness skills similar to fixed effects ones, showing that they are very close to dynamic panel data estimators.

Following these results, and beyond academic econometric fun, in our model we have opted for using Random effects estimators corrected by heteroscedasticity and autocorrelation. The reasons are the following:

- Economic literature shows the importance of specific effects in the bilateral relation between the different origins and destinations of migratory flows. Recurring to a fixed effect model would make it impossible its inclusion in the model. Moreover, as exposed below, these variables are significative.
- From the classical methodological perspective, apart from the specific effects of each bilateral flow computed through cross section variables in the model, it is obvious that unobservable Random effects persist, having to be considered in the specification of each country crossing.
- The obtained results are similar to the ones presented in other studies for different geographical areas, which have been widely tested.

The estimation has been conducted with the E-Views 5.1 software, which have capacity enough to compute this kind of estimators.

III.5.c. Data sources and data transformations

In order to analyse emigration macroeconomic determinants the following variable have been used:

GDP per capita in PPP, with IMF's World Economic Outlook (WEO – IMF) historical data to 2007 and estimations afterwards.

The demographic evolution of analysed countries has been obtained from population projections in the United Nations data base 2007 Project, with country five-year data available until 2050. In order to use this variable in the model, five-year observations have been interpolated to obtain yearly observations.

To measure wealth inequality between origin and destination countries, an index has been generated over the average of EU receiving countries. The base is data generated by the United Nations statistical division (World Development Indicators).Yearly data were interpolated through a geometric progression.

Occupied population data came from WDI, ILO and IMF data bases. The series were presented with some methodological changes, especially for Morocco and Algeria in the years 2000 and 1999, respectively. In order to homogenise historical series the bridge year between both methodologies was interpolated and its evolution was projected backwards maintaining yearly growth rates.

The evolution of this series to the year 2050 has been captured by three different scenarios: (i) maintaining average growth of the last 10 years; (ii) fixing an average annual growth of 5%; or (iii) keeping a 10% annual growth rate.

Physical distances between origin and destination migration capitals are obtained from the web page: http://www.chemical-ecology.net/java/lat-long.htm.

Shared border, common language and former colony status variables are dichotomic variables generated by the authors.

In order to measure the different receiving countries immigration policies we have used the recently created Migrant Integration Policy Index (MIPEX), available at http://www.integrationindex.eu/.

Bilateral origin-destination flows between countries came from OECD migrations data base. Unemployment rates came from the same source.

The evolution in the number of employees came from the IMF Monthly Statistics Bulletin, completed with the tendencies observed by the discontinuous ILO series. For the different simulations to year 2050 we have used a central scenario derived from the median of its growth in the last 15 years. Two other scenarios represent 10% higher and lower situations over this median value.

To determine the past activity rates we have used ILO interpolated data, and for the future, the observed trend over the last decade has been progressed.

III.6. Estimation results for the demographic push effect in Algeria, Morocco, Tunisia, Turkey and Egypt

As exposed in previous sections, the objective of estimating potential migratory pressure is not focusing the analysis in individual periods, but rather in the trends reflected by the series constructed to that end. It should be highlighted one more time that punctual time series intervening in the estimation of this indicator suffer from several interruptions and discontinuities in the past, so the results exposed here should be considered with some caution. Finally, we have to take into account again that for estimating these values we have recur to population by age projections offered by the UN statistical division. So, the results could experience drastic changes if these projections were not adjusted to reality.

The results showed are a keystone in the proposed migratory flow model. As exposed before, one of the main findings of this research is the relevance of this variable, at least in the context of the analysed countries in North Africa and Turkey.

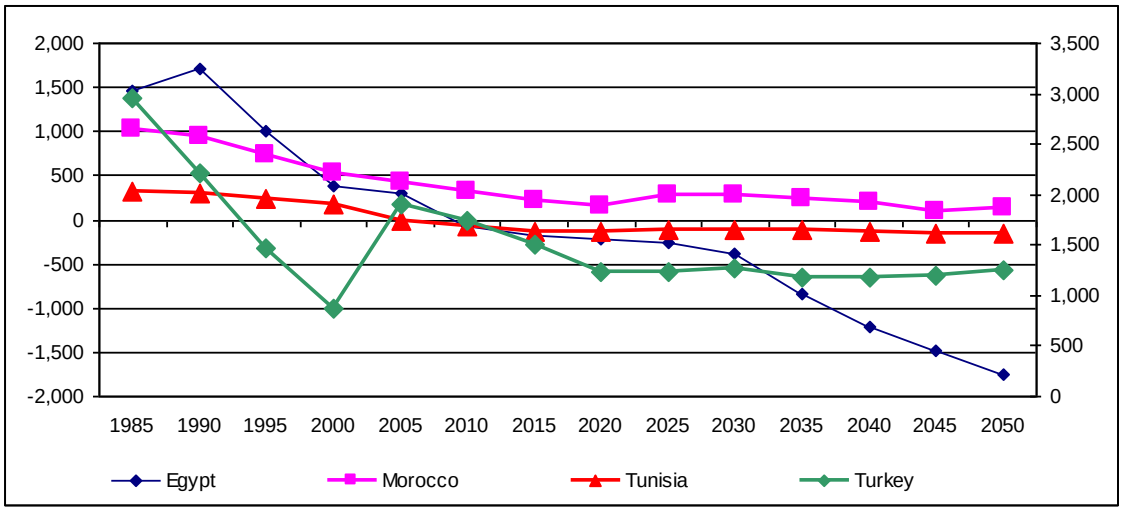
According to the estimation method employed (see above), migratory potentials are calculated from the perspective of new labour demand and supply flows for each country and year. Stocks are not being determined. In this respect, we talk about a "migratory potential" depending upon the unbalance in the internal labour market that would partially be covered by domestic unemployment and partially by emigration.

Subjected to these important considerations, the following table shows our results on the evolution of the potential emigrants' variable from each of the considered countries. They are some how 'forced' to emigrate given the demographic characteristics of its origin country (as a result of labour demand) and its capacities to absorb them (labour supply).

Estimation of potential migration (migratory pressure, thousand persons)

	Algeria	Egypt	Morocco	Tunisia	Turkey
1985	690	1,453	1,018	331	2,960
1990	-286	1,710	940	297	2,218
1995	-9	997	732	234	1,476
2000	-31	386	524	170	870
2005	-35	309	421	-11	1,897
2010	-8	-70	312	-64	1,740
2015	-197	-183	220	-131	1,510
2020	-107	-212	155	-131	1,226
2025	-58	-252	281	-117	1,225
2030	26	-374	290	-116	1,268
2035	35	-838	248	-118	1,173
2040	-37	-1,210	193	-133	1,183
2045	-104	-1,485	86	-146	1,188
2050	-18	-1,749	129	-148	1,260

Source: own calculations



Left axis: Egypt, Tunisia and Morocco; Right axis: Turkey

In the data above, positive signs should be understood as potential migrants for not finding jobs in their origin country. The negative sign would be associated to a higher

national labour supply than the one the country is able to generate by way of new workers entry into the labour market.

According to the obtained results, the following considerations can be made:

- For the whole countries analysed, migratory pressure shows a decreasing trend (with an inflexion point for the Turkish case in year 2000 that afterwards regain this increasing trend).
- Egypt and Tunisia show a clear labour deficit already from the current five-year period and for the whole prediction horizon.
- Algeria could present during the 2030's decade a slight gap between its labour supply and demand, but on the whole, the country will be net labour demanding, not a migrant supplier according to migratory pressure concerns.
- Morocco and Turkey are clear net emigration suppliers over the next 40 years, with a slightly negative trend during the considered prediction horizon; however, a strong surplus in the national labour market is still observed.

There are, for sure, other non economic determinants that are not being analysed here, but that could be consider in the future for cases like Tunisia or Algeria.

Focusing on the Turkish case, its potential accession to the EU after 2012 could drastically change its employment growth pattern, as well as its adjustment towards more industry-oriented productive structures, less dependent on agriculture. In that respect, employment growth dynamics in Turkey could experience serious changes derived from the very different apparent labour productivity in economies with an important agricultural base compared to a more industrial economic structure. So, these results should be taken cautiously, but it is clear that the opposite effect of these two effects (on the one hand, reduction of GDP agricultural weight and higher industry productivity, leading to a smaller labour demand; and on the other hand higher growth due to a potential accession to the EU, with the subsequent increase in labour demand) signal a path of strong demographic surplus even in the presence of profound changes.

For the Moroccan case, it does not seem that the reduction of the agricultural sector weight would be neither as imminent nor as important. In that respect, the results can be presented as more probable, both in trend and approximate quantity of the "population surplus".

For Algeria, the low data reliability asks for being especially cautious with the obtained results. Its historical data series still presenting a high degree of discontinuities a atypical observations that are difficult to reconcile when compared with other indicators for the same country.

III.7. Model main results at the 2006-2050 horizon

The model has been estimated for the 30 migration flows among Algeria, Egypt, Morocco, Tunisia and Turkey, on the one side, and the EU-15 countries on the other. The historical period goes from 1996 to 2005, and has a total of 34 crossings, then including 235 observations after having eliminated some data for which statistical data for some variable was not available.

The coefficients and the Random effects were estimated following the Swamy and Arora (1972) proposal, as well as the White correction of cross heteroscedasticity and autocorrelation in the coefficients estimation. The purpose is to adequately present data cross heterogeneity and avoid possible bias effects in the coefficients with a more efficient system that the usually implemented proposed by Multon.

Model regression results

(Estimated Random effects coefficients are presented in annex 1)

Dependent Variable: LOG(INMIG?)
Method: Pooled EGLS (Cross-section Random effects)
Sample (adjusted): 1996 2008
Included observations: 13 after adjustments
Cross-sections included: 31
Total pool (unbalanced) observations: 304
Swamy and Arora estimator of component variances
White cross-section standard errors & covariance (d.f. corrected)
Cross sections without valid observations dropped

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.081315	0.766822	-6.626456	0.0000
LOG(GPULL?/GPUSH?)	0.373841	0.150818	2.478752	0.0137
LOG(DISTAN?^2)	-0.213002	0.053415	-3.987698	0.0001
LOG(POTMIG?+1750)	0.880322	0.100151	8.789983	0.0000
LOG(EMPHOS?)	0.128432	0.028521	4.503021	0.0000
LANG?	0.098136	0.078265	1.253891	0.2109
LOG(INMIG?(-1))	0.894312	0.016437	54.40781	0.0000
LOG(GINHOS?/GINORI?)	0.762152	0.244610	3.115785	0.0020

Effects Specification

	S.D.	Rho
Cross-section random	0.079135	0.1224
Idiosyncratic random	0.211882	0.8776

Weighted Statistics

R-squared	0.962380	Mean dependent var	0.487679
Adjusted R-squared	0.961490	S.D. dependent var	1.189834
S.E. of regression	0.233491	Sum squared resid	16.13740
F-statistic	1081.737	Durbin-Watson stat	1.800898
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.981591	Mean dependent var	0.823460
Sum squared resid	17.82230	Durbin-Watson stat	1.630643

On the previous results the following considerations can be made:

- All the included explicative variables were significant at a 95% confidence level, with the exceptions of the relative income ratio (90%) and the common language variable (85%).
- The observed signs in every coefficient correspond to the expected ones.
- The model reaches a high explicative capacity (a 97% R-square)
- The common border and colonial past were discarded for not being statistically significant.
- For common borders, given that we have considered only flows from North Africa and Turkey towards the EU-15, this variable would be close to constant, precisely because most flows happen between countries with a common border. We are not discarding its real importance, but it is not possible to estimate an associate coefficient due to perfect multicollinearity problems.
- From the standardized common coefficients analysis can be inferred that the most relevant variables in the determination of migratory flows would be, in the first place, the 'network' effect, and in second term the 'push effect', far away from the relative importance of the remaining explicative variables.

	Coefficients	Standarized Coefficients
LOG(INMIG(-1))	0.894	0.985
LOG(POTMIG)	0.880	0.473
LOG(EMPHOS)	0.128	0.071
LOG(GINHOS/GINORI)	0.762	0.059
LOG(GPULL/GPUSH)	0.374	0.035
LOG(DISTAN^2)	-0.213	-0.083

- The two new variables included in the model are clearly significative (migratory potential and income inequality ratio), confirming our initial theoretical considerations. Of especial relevance is the migratory potential case in explaining the flows, showing that, for the considered countries, this variable trend is a relevant factor when trying to forecast the migratory flows that the EU-15 would receive, by contrast to what would be concluded from other studies that includes a higher number of countries.

- Comparing the coefficients obtained with a wider model for the whole OECD migratory flows (see annex II for the results of such an estimation), it can be seen that relative income (GDP quotient), employment growth and network effect coefficients are very stable.

Coefficients comparison: OECD as a whole and objective model

	Total	Objetivo
LOG(GPULL?/GPUSH?)	0.204568	0.373841
LOG(DISTAN?^2)	-0.014467	-0.213002
LOG(EMPHOS?)	0.122302	0.128432
LANG?	0.227818	0.098136
LOG(INMIG?(-1))	0.901104	0.894312

- On the opposite side we have the distance (that, in addition, are not significant for the whole OECD model) and the language variables. The importance of distance increases, but language is not statistically significant. Obviously, in this second modelling framework two important migration types are being considered: on the one hand, non-economic migration, led by completely different variables; and on the other hand, the migration component coming from Latin America, very important for Spain, the country which has received the higher number of immigrants during the last years. On the other hand, in the whole OECD model the income inequality was not statistically significant neither (however, the low reliability of these WDI data for such a wide sample of countries make it doubtful that this result originates from data quality instead of the real incidence of the variable).

It is well known that including a lagged variable is a practice that needs especial cautiousness in regression models (see previous section about literature models). It only make sense to the extent that there is strong theoretical support that confirm its applicability (such as the migratory models due to its strong and contrasted characteristics both concerning inertia and network effects). Anyway, it is interesting to test which part of the migratory phenomenon may be explained with the remaining explicative variables. In that respect, over 34% of the model explicative capacity is due

to the other considered variables, which helps to nuance to some extent the simple network behaviour.

The value of the network effect variable coefficient is close to 1 (it goes within the confidence interval between 0.85 and 0.93, at the 95% confidence level). The model shows a strong persistence habit for the analysed countries, at least during the considered period. This value is in contrast with the ones obtained by other migratory flow models in the literature that do not include migratory potential effects. Those models point to network effects coefficients between 0.65 and 0.75. It should be made clear that by widening the sample to a bigger group of countries and generally to a longer time period what it is being considered are mature migration destinations. These have almost no significant flows over the last years and they have an important resident foreign population for generations, so it is normal that network effects are diluted when origin country links start to vanish.

For the countries in this study, it is especially interesting to analyze the political change on the emigration issue in Morocco over the last years. The Moroccan government has greatly transformed its policy towards emigrants. While in the past it used to be considered as a waste of national human capital, lastly it has focused on fostering maintaining emigrants-origin areas relations. This is a bet to increase both the return potential and remittances. This strategy goes along the line of empowering network effects.

In the Turkish case, network effects are important given the existence of a significant immigrant colony in their preferred destination countries (mainly Germany). Not withstanding the existence of second generation Turks (then diluting origin country links), the strong concentration of immigrants in some places offers a definitive incentive to emigration.

For Algeria, recent French colonial past acts in a decisive manner after independence to de-link residents in the metropolis with its roots. However, again the strong concentration of Algerian citizens in France acts as a strong attraction factor to this destination.

III.8. Alternative socio-economic policy scenarios in origin countries

Six different scenarios are proposed in order to simulate immigrant flows to be received by each EU-15 country from the considered MPCs:

1. Business as usual: Median growth for all variables, similar to the one experienced as geometric average during the last eleven years.
2. Slow convergence: Relatively slow convergence of MPCs towards European per capita income levels, gaining 10 convergence points annually every coming year.
3. Fast convergence: Relatively fast MPCs convergence towards European per capita income, of 20 convergence points annually every coming year.
4. Social Policies: Social policy measures that reduce income inequality by 10 points in MPCs.
5. Slow employment growth in the origin country that would reduce potentially migrant population.
6. Fast employment growth in the origin country that would further reduce potentially migrant population.

The following table shows these simulations' results. The main points to be highlighted concerning countries are:

1. Scenario 1, being the closer in time does not seem to be the most probable one, because during the last decade Southern Member States have registered an unprecedented average immigration growth. A more plausible evolution points to a smoother growth scenario in the future. Anyway, the total amount of immigrants entering the EU-15 during the 45 projected years would be approximately 2.4000.000. The lower scenario points to 1.500.000 immigrants.
2. As expected, in any of the described scenarios the higher numbers of immigrants came from those countries with a higher labour force surplus during the projected period. These are Morocco and Turkey, due to its demographic migratory potential.
3. Morocco will experience an origin population reduction between 1.422.000-906.342 people in the higher and lower scenarios respectively.

4. For Turkey, the interval would be between 481.000-318.000 migrants.
5. For Tunisia, the considered scenarios obtain a much more modest figure for the 45 projected years, between 52.000-37.000 migrants.
6. For Egypt, projected flows are clearly insignificant.
7. For Algeria, the scenarios point to a band between 432.000-290.000 migrants.

Concerning scenarios:

7. The business as usual scenario is, as stated before, the one that tends to show a higher number of immigrants over the long run.
8. The slow convergence scenario reduces slightly the number of immigrants, reflecting that a moderate convergence pattern in MPC's economies does not imply a significant reduction of immigrants.
9. The fast convergence scenario is the one that projects the lower figures of MPC's immigrants, but even in this case the numbers still very significant.
10. The social policy, income inequality reduction, scenario also projects lower immigration figures, but does not alter the trend of migration towards the EU.
11. The low employment growth scenario generally shows lower immigration figures than the business as usual one, but numbers still high.
12. The high employment growth scenario projects a further reduction of MPC's-EU migration, but a smaller one that the projected under the fast convergence or social policy scenarios.

Summarized simulation results of bilateral immigration flows for the 2006-2050 period (number of people)

From	To	scenario 1 Business as usual		scenario 2 Slow convergence		scenario 3 Fast convergence		scenario 4 Social policies		scenario 5 Slow employment growth		scenario 6 Fast employment growth	
		Annual average	Summation 2006 /50	Annual average	Summation 2006 /50	Annual average	Summation 2006 /50	Annual average	Summation 2006 /50	Annual average	Summation 2006 /50	Annual average	Summation 2006 /50
Turkey	**Austria**	5,292	68,801	4,392	57,101	3,601	46,819	3,843	49,958	4,090	53,168	3,455	44,918
Algeria	**Belgium**	565	7,341	460	5,974	369	4,798	396	5,154	515	6,696	520	6,761
Morocco	**Belgium**	3,166	41,161	2,677	34,804	2,241	29,127	2,375	30,871	2,778	36,120	2,648	34,418
Tunisia	**Belgium**	196	2,548	167	2,173	141	1,834	149	1,939	183	2,381	185	2,406
Turkey	**Belgium**	2,283	29,676	1,899	24,686	1,561	20,290	1,664	21,633	1,769	23,000	1,497	19,466
Turkey	**Finland**	376	4,883	301	3,909	237	3,082	256	3,331	277	3,606	228	2,962
Algeria	**France**	16,246	211,195	13,341	173,433	10,825	140,723	11,589	150,657	14,877	193,400	15,012	195,157
Morocco	**France**	11,412	148,362	9,549	124,140	7,900	102,704	8,405	109,266	9,940	129,219	9,448	122,828
Tunisia	**France**	3,148	40,930	2,686	34,921	2,269	29,497	2,398	31,170	2,942	38,246	2,973	38,648
Turkey	**France**	7,061	91,787	5,838	75,890	4,765	61,949	5,092	66,202	5,428	70,565	4,569	59,399
Egypt	**Germany**	492	6,398	429	5,573	370	4,808	388	5,046	457	5,945	455	5,914
Morocco	**Germany**	1,625	21,126	1,390	18,065	1,177	15,298	1,242	16,152	1,438	18,688	1,373	17,850
Tunisia	**Germany**	643	8,355	558	7,259	481	6,250	505	6,563	605	7,860	610	7,926
Turkey	**Germany**	18,436	239,669	15,568	202,386	13,003	169,037	13,791	179,285	14,568	189,389	12,483	162,278
Algeria	**Netherlands**	60	786	48	629	38	496	41	536	55	712	55	719
Egypt	**Netherlands**	154	2,002	133	1,724	113	1,470	119	1,549	143	1,857	143	1,856
Morocco	**Netherlands**	986	12,813	829	10,780	690	8,976	733	9,529	862	11,205	820	10,666
Tunisia	**Netherlands**	41	537	35	456	30	384	31	406	39	501	39	506
Turkey	**Netherlands**	2,293	29,815	1,896	24,642	1,547	20,115	1,653	21,495	1,763	22,919	1,485	19,299
Algeria	**Spain**	16,428	213,564	12,534	162,944	9,349	121,534	10,295	133,833	14,579	189,528	14,772	192,037
Morocco	**Spain**	92,263	1,199,425	73,554	956,200	57,711	750,237	62,480	812,239	77,736	1,010,563	73,177	951,297
Turkey	**Spain**	587	7,637	462	6,007	357	4,639	388	5,049	424	5,512	343	4,454
Turkey	**Sweden**	672	8,733	558	7,251	458	5,951	488	6,347	520	6,756	440	5,715

Source: own calculations

III.10. Conclusions

When incorporating this chapter's results to the previous sections of this research we can point out the following conclusions

The first conclusion is that network effect is confirmed as a fundamental factor in explaining annual immigrant flows to each destination in EU-MPC's migratory dynamics.

Second, the two new variables included in the analysis are clearly significative (migratory potential and income inequality ratio), confirming our initial theoretical assumptions. Migratory potential is especially relevant in explaining immigration flows. By contrast to other studies that include a bigger country group, our results show that for MPCs this variable's trend is a very relevant factor in predicting migratory flows to be received by the EU-15. Income inequality is also important as a migratory driver towards the EU by MPC's migrants.

Third, the results of simulating different scenarios to estimate immigration flows highlight the following figures:

- The total period summation would be of approximately 2,400,000 immigrants entering the EU-15 during the 45 projected years. In the lower scenario this figure goes down to close to 1,500,000 immigrants.
- For any scenario, as expected, the higher numbers of immigrants came from Morocco and Turkey, the countries with a higher labour force surplus due to its demographic migratory potential.
- Morocco will experience an emigration flow between 1.422.000-906.342 people in the higher and lower scenarios, respectively.
- Relating this figure with the potentially emigrant population previously estimated (3,8 million people for the 2005-2050 period), migration flows from Morocco could oscillate between 23% and 37% of this population segment.
- For Turkey, the interval would oscillate between the lower figures of 481.000-318.000 migrants.

- For Tunisia, the considered scenarios project more modest figures between 52.000-37.000 migrants.
- For Egypt, projected migratory flows to the EU-15 are not significant.
- For Algeria, the scenarios point to a migratory band between 432.000-290.000 migrants.

Fourth, from this perspective, under any scenario immigration flows remain significant and it is evident that migratory pressure will not be properly faced only by recurring to Europeanised control and return policies, and that Europeanised integration policies are clearly needed.

Fifth, differences across scenarios are significant in the numbers, not in the trends. The scenarios with he lower immigration figures are the fast convergence and the social policy ones. This implies that the EU should prioritise accelerating fast convergence and implementation of social redistributive policies in MPC's countries. However, these measures will, at best, slightly reduce the number of immigrants. Socio-economic-demographic logic allow for different futures, but in any of them immigration will be a key driver of EU-MPC's relations and of internal EU demographic dynamics.

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Annex 1: Random effects coefficients obtained from the migration flows model

Country flor	RAMDOM EFFECTS (CROSS)		CRUCE PAÍSES	RAMDOM EFFECTS (CROSS)
TURKEOSTER—C	0.029242		EGYPTITALY--C	0.112534
ALGERBELGI—C	-0.049932		MOROCITALY--C	0.07671
MOROCBELGI—C	0.019515		TUNISITALY--C	0.005139
TUNISBELGI—C	-0.015777		TURKEITALY--C	-0.048482
TURKEBELGI—C	0.038483		ALGERNETHE--C	-0.154799
MOROCDENMA—C	-0.011711		EGYPTNETHE--C	-0.078917
TURKEDENMA—C	0.038315		MOROCNETHE--C	-0.017747
TURKEFINLA—C	0.026014		TUNISNETHE--C	-0.079098
ALGERFRANC—C	0.036854		TURKENETHE--C	0.002839
MOROCFRANC—C	-0.046964		ALGERSPAIN--C	-0.027658
TUNISFRANC—C	0.056304		EGYPTSPAIN--C	0.042736
TURKEFRANC—C	0.014765		MOROCSPAIN--C	-0.020222
EGYPTGERMA—C	-0.122555		TUNISSPAIN--C	0.020458
MOROCGERMA—C	0.021539		TURKESPAIN--C	-0.051012
TUNISGERMA—C	0.074845		TURKESWEDE--C	0.072294
TURKEGERMA—C	0.036289			

Annex 2: Dynamic panel data model for migratory flows of OECD countries

Dependent Variable: LOG(INMIG?)
Method: Pooled EGLS (Cross-section Random effects)
Sample (adjusted): 1996 2005
Included observations: 10 after adjustments
Cross-sections included: 493
Total pool (unbalanced) observations: 3034
Swamy and Arora estimator of component variances
White cross-section standard errors & covariance (d.f. corrected)
Cross sections without valid observations dropped

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.883664	0.356707	-2.477283	0.0133
LOG(GPULL?/GPUSH?)	0.204568	0.101742	2.010654	0.0444
LOG(DISTAN?^2)	-0.014467	0.011911	-1.214529	0.2246
LOG(EMPHOS?)	0.122302	0.032677	3.742786	0.0002
LANG?	0.227818	0.057289	3.976649	0.0001
LOG(INMIG?(-1))	0.901104	0.024202	37.23232	0.0000
LOG(GINHOS?/GINORI?)	-0.048901	0.087626	-0.558071	0.5768
@TREND()	0.046840	0.019259	2.432044	0.0151
@TREND()^2	-0.004837	0.001641	-2.947015	0.0032

Effects Specification	S.D.	Rho
Cross-section random	0.137391	0.0958
Idiosyncratic random	0.422195	0.9042

Weighted Statistics

R-squared	0.912722	Mean dependent var	-0.178685
Adjusted R-squared	0.912492	S.D. dependent var	1.656077
S.E. of regression	0.489898	Sum squared resid	725.9999
F-statistic	3954.312	Durbin-Watson stat	2.120702
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.939869	Mean dependent var	-0.163892
Sum squared resid	789.0552	Durbin-Watson stat	1.951232

Annex 3: Detailed migratory flows from MPCs towards the EU-15

Scenario 1: Median

From	To	2006	2007	2008	2009	2010	2015	2020	2025	2030	2035	2040	2045	2050
Turkey	Austria	7,762	7,779	7,690	7,532	7,313	6,626	5,530	4,621	3,914	3,229	2,678	2,230	1,898
Algeria	Belgium	712	700	684	671	659	583	542	514	505	494	463	418	394
Morocco	Belgium	6,423	5,827	5,212	4,643	4,118	3,453	2,779	2,339	1,949	1,577	1,234	915	691
Tunisia	Belgium	438	387	339	297	259	212	170	134	103	78	58	42	30
Turkey	Belgium	3,438	3,439	3,383	3,296	3,185	2,866	2,372	1,963	1,644	1,340	1,097	900	755
Turkey	Finland	357	376	389	400	409	402	374	358	355	351	354	366	393
Algeria	France	23,458	22,363	21,295	20,368	19,561	16,892	15,298	14,138	13,524	12,873	11,732	10,288	9,405
Morocco	France	19,347	18,644	17,634	16,511	15,317	13,335	11,070	9,551	8,117	6,663	5,269	3,930	2,974
Tunisia	France	7,043	6,237	5,484	4,809	4,206	3,440	2,738	2,141	1,637	1,225	892	634	444
Turkey	France	9,399	9,779	9,975	10,040	9,983	9,193	7,745	6,492	5,485	4,490	3,679	3,013	2,513
Egypt	Germany	1,328	1,173	1,000	828	668	500	365	258	170	79	25	5	0
Morocco	Germany	3,794	3,310	2,864	2,470	2,124	1,714	1,319	1,055	831	633	464	321	225
Tunisia	Germany	1,863	1,500	1,211	981	798	606	449	326	232	161	109	72	47
Turkey	Germany	34,346	32,519	30,495	28,398	26,277	22,510	17,639	13,749	10,801	8,220	6,259	4,764	3,692
Algeria	Netherlands	58	60	62	63	65	60	59	58	60	62	61	58	58
Egypt	Netherlands	351	329	296	258	219	175	137	106	76	39	14	3	0
Morocco	Netherlands	1,899	1,734	1,565	1,407	1,260	1,072	880	759	650	543	440	339	266
Tunisia	Netherlands	89	79	70	61	54	45	36	29	23	18	14	10	8
Turkey	Netherlands	3,191	3,229	3,219	3,178	3,112	2,852	2,415	2,052	1,773	1,494	1,269	1,083	947
Algeria	Spain	6,222	7,406	8,637	9,992	11,476	12,012	13,346	15,301	18,341	22,077	25,657	28,909	34,189
Morocco	Spain	77,306	85,062	90,842	95,554	99,126	98,397	94,803	96,475	98,130	97,704	94,858	87,835	83,334
Turkey	Spain	347	416	483	550	616	651	640	636	646	644	650	663	696
Turkey	Sweden	1,064	1,022	971	921	870	780	654	557	487	419	366	325	297

Scenario 2: Slow convergence

From	To	2006	2007	2008	2009	2010	2015	2020	2025	2030	2035	2040	2045	2050
Turkey	Austria	7,414	7,128	6,784	6,420	6,042	5,320	4,327	3,531	2,928	2,369	1,930	1,582	1,327
Algeria	Belgium	680	641	604	572	545	468	424	393	378	363	334	297	275
Morocco	Belgium	6,136	5,339	4,598	3,957	3,402	2,773	2,174	1,787	1,458	1,157	890	649	483
Tunisia	Belgium	419	355	299	253	214	171	133	102	77	57	42	30	21
Turkey	Belgium	3,284	3,151	2,984	2,810	2,631	2,301	1,856	1,500	1,230	983	790	638	527
Turkey	Finland	341	344	343	341	338	323	293	274	266	257	256	260	274
Algeria	France	22,407	20,491	18,787	17,361	16,160	13,563	11,970	10,805	10,117	9,444	8,457	7,298	6,575
Morocco	France	18,481	17,083	15,557	14,073	12,654	10,707	8,661	7,299	6,072	4,888	3,798	2,788	2,079
Tunisia	France	6,728	5,715	4,838	4,099	3,475	2,762	2,142	1,636	1,225	898	643	450	311
Turkey	France	8,978	8,960	8,800	8,557	8,247	7,382	6,060	4,962	4,103	3,295	2,652	2,137	1,757
Egypt	Germany	1,269	1,075	882	706	552	401	285	197	127	58	18	3	0
Morocco	Germany	3,624	3,033	2,527	2,106	1,755	1,376	1,032	806	622	464	335	228	158
Tunisia	Germany	1,780	1,374	1,068	836	659	487	351	249	173	118	78	51	33
Turkey	Germany	32,808	29,796	26,904	24,206	21,707	18,074	13,801	10,507	8,080	6,030	4,512	3,379	2,581
Algeria	Netherlands	56	55	55	54	54	48	46	45	45	46	44	41	41
Egypt	Netherlands	335	301	261	220	181	140	107	81	57	29	10	2	0
Morocco	Netherlands	1,814	1,589	1,380	1,199	1,041	861	689	580	486	398	317	240	186
Tunisia	Netherlands	85	72	61	52	45	36	28	22	17	13	10	7	5
Turkey	Netherlands	3,048	2,959	2,839	2,709	2,571	2,290	1,890	1,569	1,326	1,096	915	769	662
Algeria	Spain	5,943	6,786	7,620	8,517	9,481	9,644	10,442	11,694	13,720	16,197	18,494	20,506	23,900
Morocco	Spain	73,844	77,939	80,142	81,447	81,888	79,006	74,176	73,730	73,409	71,683	68,376	62,305	58,255
Turkey	Spain	332	381	426	469	509	522	501	486	483	472	469	470	486
Turkey	Sweden	1,017	936	857	785	719	627	512	426	364	307	264	230	207

Scenario 3: Fast convergence

From	To	2006	2007	2008	2009	2010	2015	2020	2025	2030	2035	2040	2045	2050
Turkey	Austria	7,044	6,464	5,897	5,370	4,880	4,163	3,289	2,615	2,117	1,676	1,339	1,077	889
Algeria	Belgium	646	581	525	478	440	367	322	291	273	257	232	202	185
Morocco	Belgium	5,829	4,842	3,997	3,310	2,748	2,169	1,653	1,323	1,054	818	617	442	324
Tunisia	Belgium	398	322	260	212	173	133	101	76	56	41	29	20	14
Turkey	Belgium	3,120	2,858	2,594	2,350	2,125	1,800	1,411	1,111	889	695	548	435	354
Turkey	Finland	324	312	298	285	273	252	223	203	192	182	177	177	184
Algeria	France	21,289	18,582	16,331	14,522	13,052	10,612	9,098	8,000	7,314	6,681	5,865	4,971	4,406
Morocco	France	17,558	15,492	13,523	11,772	10,220	8,377	6,584	5,404	4,389	3,458	2,634	1,899	1,393
Tunisia	France	6,392	5,183	4,205	3,428	2,807	2,161	1,628	1,212	885	636	446	307	208
Turkey	France	8,530	8,126	7,649	7,158	6,661	5,775	4,606	3,673	2,966	2,330	1,839	1,456	1,177
Egypt	Germany	1,206	975	767	590	446	314	217	146	92	41	12	2	0
Morocco	Germany	3,443	2,750	2,197	1,761	1,417	1,077	785	597	450	328	232	155	106
Tunisia	Germany	1,691	1,246	929	700	532	381	267	184	125	84	54	35	22
Turkey	Germany	31,170	27,021	23,387	20,247	17,533	14,142	10,490	7,780	5,841	4,266	3,129	2,302	1,730
Algeria	Netherlands	53	50	47	45	43	38	35	33	33	32	31	28	27
Egypt	Netherlands	318	273	227	184	146	110	82	60	41	20	7	1	0
Morocco	Netherlands	1,724	1,441	1,200	1,003	841	674	523	429	352	282	220	164	125
Tunisia	Netherlands	81	66	53	44	36	28	22	17	13	9	7	5	4
Turkey	Netherlands	2,896	2,683	2,468	2,266	2,077	1,792	1,436	1,161	959	775	634	524	444
Algeria	Spain	5,647	6,154	6,624	7,124	7,658	7,546	7,937	8,658	9,918	11,457	12,826	13,969	16,017
Morocco	Spain	70,158	70,679	69,666	68,127	66,141	61,816	56,383	54,590	53,068	50,706	47,421	42,441	39,040
Turkey	Spain	315	346	371	392	411	409	380	360	349	334	325	320	326
Turkey	Sweden	966	849	745	656	581	490	389	315	263	217	183	157	139

Scenario 4: Social Policy Measures

From	To	2006	2007	2008	2009	2010	2015	2020	2025	2030	2035	2040	2045	2050
Turkey	Austria	7,165	6,677	6,179	5,698	5,239	4,517	3,603	2,889	2,358	1,880	1,512	1,224	1,016
Algeria	Belgium	658	601	550	508	472	398	353	321	304	288	262	230	211
Morocco	Belgium	5,930	5,002	4,188	3,513	2,950	2,354	1,811	1,462	1,174	918	697	503	370
Tunisia	Belgium	405	332	273	225	186	145	111	84	62	46	33	23	16
Turkey	Belgium	3,174	2,952	2,718	2,494	2,281	1,954	1,545	1,227	990	780	619	494	404
Turkey	Finland	330	322	312	302	293	274	244	224	214	204	200	201	210
Algeria	France	21,654	19,196	17,110	15,411	14,013	11,515	9,967	8,841	8,147	7,496	6,624	5,648	5,033
Morocco	France	17,860	16,004	14,168	12,492	10,973	9,090	7,213	5,973	4,890	3,880	2,975	2,158	1,592
Tunisia	France	6,502	5,354	4,406	3,638	3,013	2,345	1,784	1,339	986	713	504	348	238
Turkey	France	8,676	8,395	8,014	7,596	7,152	6,267	5,046	4,060	3,304	2,615	2,077	1,654	1,345
Egypt	Germany	1,226	1,007	803	627	478	341	238	162	102	46	14	2	0
Morocco	Germany	3,503	2,841	2,301	1,869	1,522	1,168	859	660	501	369	262	176	121
Tunisia	Germany	1,720	1,287	973	742	572	413	292	204	140	94	61	39	25
Turkey	Germany	31,706	27,914	24,502	21,486	18,824	15,344	11,492	8,598	6,507	4,786	3,534	2,615	1,976
Algeria	Netherlands	54	52	50	48	47	41	38	36	36	36	35	32	31
Egypt	Netherlands	324	282	238	196	157	119	89	66	46	23	8	2	0
Morocco	Netherlands	1,753	1,488	1,257	1,064	903	731	573	474	392	316	248	186	143
Tunisia	Netherlands	82	68	56	46	39	30	24	18	14	11	8	6	4
Turkey	Netherlands	2,946	2,772	2,586	2,405	2,229	1,944	1,573	1,283	1,068	870	716	595	507
Algeria	Spain	5,744	6,357	6,940	7,560	8,221	8,188	8,696	9,568	11,049	12,856	14,487	15,871	18,297
Morocco	Spain	71,363	73,016	72,989	72,297	71,011	67,073	61,769	60,330	59,116	56,895	53,560	48,222	44,599
Turkey	Spain	321	357	388	416	441	444	417	398	389	375	367	364	372
Turkey	Sweden	982	877	780	696	623	532	426	348	293	244	207	178	159

Scenario 5: Slow Employment Growth

From	To	2006	2007	2008	2009	2010	2015	2020	2025	2030	2035	2040	2045	2050
Turkey	Austria	7,261	6,851	6,414	5,981	5,556	4,850	3,931	3,199	2,643	2,135	1,737	1,421	1,189
Algeria	Belgium	698	672	646	623	603	532	490	460	446	431	401	360	337
Morocco	Belgium	6,184	5,423	4,707	4,082	3,537	2,913	2,313	1,913	1,569	1,253	971	717	538
Tunisia	Belgium	429	372	321	276	238	194	154	120	92	70	51	37	26
Turkey	Belgium	3,216	3,029	2,821	2,617	2,419	2,098	1,686	1,359	1,110	886	711	574	473
Turkey	Finland	334	331	324	317	310	294	266	248	240	232	230	233	246
Algeria	France	22,973	21,485	20,098	18,911	17,887	15,391	13,822	12,644	11,934	11,217	10,142	8,860	8,036
Morocco	France	18,625	17,351	15,924	14,519	13,158	11,251	9,213	7,812	6,533	5,294	4,145	3,079	2,316
Tunisia	France	6,895	5,993	5,182	4,478	3,868	3,138	2,480	1,925	1,462	1,087	788	559	390
Turkey	France	8,792	8,613	8,319	7,972	7,584	6,730	5,506	4,494	3,704	2,969	2,386	1,920	1,574
Egypt	Germany	1,286	1,106	923	753	601	449	327	232	154	76	28	7	1
Morocco	Germany	3,653	3,080	2,587	2,172	1,825	1,446	1,098	863	669	503	365	252	176
Tunisia	Germany	1,824	1,441	1,144	914	734	553	406	293	207	143	96	63	41
Turkey	Germany	32,129	28,640	25,434	22,550	19,962	16,478	12,540	9,518	7,293	5,435	4,060	3,036	2,313
Algeria	Netherlands	57	58	58	59	59	55	53	52	53	54	53	50	50
Egypt	Netherlands	340	310	273	235	198	157	123	95	69	38	15	4	1
Morocco	Netherlands	1,828	1,613	1,413	1,237	1,082	905	732	620	523	431	346	265	207
Tunisia	Netherlands	87	76	66	57	50	41	33	26	21	16	12	9	7
Turkey	Netherlands	2,985	2,844	2,684	2,524	2,364	2,088	1,717	1,421	1,197	988	823	691	594
Algeria	Spain	6,093	7,115	8,152	9,277	10,494	10,944	12,058	13,684	16,184	19,237	22,179	24,896	29,213
Morocco	Spain	74,420	79,160	82,035	84,026	85,148	83,022	78,899	78,913	78,989	77,627	74,632	68,801	64,891
Turkey	Spain	325	367	403	437	468	476	455	440	436	426	422	423	436
Turkey	Sweden	996	900	810	731	661	571	465	386	329	277	238	207	186

Scenario 6: Fast Employment Growth

From	To	2006	2007	2008	2009	2010	2015	2020	2025	2030	2035	2040	2045	2050
Turkey	Austria	6,928	6,267	5,648	5,090	4,586	3,908	3,113	2,494	2,030	1,620	1,304	1,056	874
Algeria	Belgium	699	674	648	625	605	539	498	469	453	436	406	367	342
Morocco	Belgium	6,085	5,263	4,515	3,877	3,331	2,733	2,167	1,782	1,453	1,156	895	663	498
Tunisia	Belgium	429	373	322	278	241	197	157	123	95	72	53	38	27
Turkey	Belgium	3,068	2,771	2,485	2,228	1,997	1,690	1,335	1,059	853	672	534	426	348
Turkey	Finland	319	303	286	270	256	237	211	193	184	176	173	173	181
Algeria	France	23,007	21,538	20,162	18,977	17,951	15,603	14,070	12,887	12,127	11,363	10,280	9,018	8,173
Morocco	France	18,328	16,840	15,274	13,787	12,391	10,553	8,631	7,276	6,050	4,884	3,821	2,847	2,145
Tunisia	France	6,902	6,008	5,205	4,508	3,904	3,186	2,531	1,973	1,504	1,122	817	581	407
Turkey	France	8,389	7,878	7,326	6,785	6,261	5,422	4,360	3,504	2,845	2,254	1,792	1,427	1,158
Egypt	Germany	1,273	1,089	907	741	594	448	330	238	161	85	35	11	3
Morocco	Germany	3,594	2,989	2,481	2,063	1,718	1,356	1,029	804	620	464	337	233	163
Tunisia	Germany	1,826	1,445	1,149	920	741	562	415	300	213	147	100	66	43
Turkey	Germany	30,656	26,197	22,398	19,192	16,478	13,275	9,930	7,420	5,601	4,125	3,048	2,257	1,701
Algeria	Netherlands	57	58	59	59	60	56	54	53	54	55	54	51	51
Egypt	Netherlands	336	305	268	231	195	157	124	97	72	42	19	7	2
Morocco	Netherlands	1,799	1,566	1,355	1,175	1,019	849	686	578	485	398	319	245	192
Tunisia	Netherlands	88	76	66	57	50	41	34	27	21	17	13	9	7
Turkey	Netherlands	2,848	2,601	2,364	2,148	1,952	1,682	1,360	1,108	919	750	618	513	437
Algeria	Spain	6,102	7,133	8,177	9,310	10,532	11,095	12,275	13,947	16,447	19,488	22,482	25,339	29,710
Morocco	Spain	73,236	76,829	78,684	79,792	80,189	77,868	73,920	73,496	73,148	71,627	68,785	63,631	60,091
Turkey	Spain	310	335	355	372	386	384	360	343	335	323	317	314	320
Turkey	Sweden	950	823	713	622	546	460	368	301	252	210	178	154	137