FEMISE RESEARCH PROGRAMME

2010-2011

The Trade creation effect of Immigrants: Characterising Socioeconomic opportunities arising from linkages between People´s and Goods´ flows inside the MENA region

Research n°FEM34-01
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September 2012

Ce rapport a été réalisé avec le soutien financier de l'Union Européenne au travers du Femise. Le contenu du rapport relève de la seule responsabilité des auteurs et ne peut en aucun cas être considéré comme reflétant l'opinion de l'Union Européenne.

This document has been produced with the financial assistance of the European Union within the context of the FEMISE program. The contents of this document are the sole responsibility of the authors and can under no circumstances be regarded as reflecting the position of the European Union.

Forum Euroméditerranéen des Instituts de Sciences Économiques

"The Trade creation effect of Immigrants: Characterising Socioeconomic opportunities arising from linkages between People´s and Goods´ flows inside the MENA region"

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FEMISE RESEARCH PROGRAM 2010

RESEARCH PROJECT FEM 34-01

"THE TRADE CREATION EFFECT OF IMMIGRANTS: CHARACTERISING SOCIOECONOMIC OPPORTUNITIES ARISING FROM LINKAGES BETWEEN PEOPLE´S AND GOODS´ FLOWS INSIDE THE MENA REGION"

EXECUTIVE SUMMARY RESEARCH PROJECT FEM 34-01

The Trade creation effect of Immigrants: Characterising Socioeconomic opportunities arising from linkages between People´s and Goods´ flows inside the MENA region.

The present "Executive Summary" synthetises all research findings included in the Technical Report of FEMISE Research Project FEM 34-01, on "*Trade creation effect of Immigrants: Characterising Socioeconomic opportunities arising from linkages between People´s and Goods´ flows inside the MENA region",* corresponding to FEMISE RESEARCH PROGRAM 2010-2011. People´s flows within the Mediterranean (MED) region constitute a quite relevant social and economic process, with net benefits for both the origin and destination countries. In 2010 more than 15 million of nationals born in the southern basin of the Mediterranean were living in EU countries, this being a very important corridor for people´s flows in the world. The rapid increase in immigrant population arising to the EU is one of the most challenging political and sociological issues of today, with salient economic consequences. Although most economic studies have focused on the effects of immigration on host-country labour markets and its welfare state, literature has also begun to focus on another relevant aspect of immigration: the link between immigrant population and bilateral trade. In fact, there is a recently growing literature arguing that **immigrants can have a positive effect on bilateral trade between immigrants' host and home countries**. Along this research project, we have focused on exploring such an issue for the MED region, building on quantitative analysis.

Despite the widespread extension of ICTs, information costs still play a crucial role in shaping world trade patterns. Social and business transnational networks are likely to alleviate some information failures that are limiting trade exchanges. Cross-border networks are prone to substitute for organized markets in matching international buyers and sellers. Immigrants' ties to their home country may promote trade for at least three reasons: First, immigrants have a good knowledge of the customs, language, laws, as well as business practices in both the host and home countries. Accordingly, their presence helps bridging the information gap between sellers and buyers on both sides, hence promoting bilateral trade opportunities, and establishing lasting ties based on trust and mutually understood culture. Second, immigrant networks may provide contract enforcement through sanctions and exclusions, which substitutes for weak institutional rules and reduces trade costs. As the literature has shown, these two types of trade-enhancing effects are relevant in pushing both import and export flows between destination and home countries of immigrants through network effects. And third, immigrants bring their taste for homeland products, leading to the correspondent preference effect, which promotes imports from the home country towards the destination country. In general, studies focus on the different impact of immigration in generating new trade flows at home and abroad in order to disentangle the socioeconomic impact of trade creation effects.

The first contribution in our FEM 34-01 research project explores the trade-migration linkage for the cases of Portugal, Italy and Spain as relevant cases in the MED area,

given the importance that immigration flows have shown for those countries. In the recent period 2001-2010 all three countries have accumulated stocks of migrants of more than 10 million people, mainly coming from Morocco, Algeria and Tunisia, what makes our results of pivotal relevance for the EU-MED region. The investigation builds here on subnational (province level) data, this being a novelty for the MED region and providing important gains in robustness of econometric results. Estimation output shows clear trade creation effects, in both exports and imports, through the network channel for all three countries, with the preference channel appearing just slightly in imports from some geographical areas historically closer to the receiving countries of immigrants (Latin America, Western Europe, and Mediterranean countries).

Empirical results show that the more distant the countries of origin and destination of immigrants are, in terms of institutions, development levels, and cultural terms, the higher the pro-trade effects of people´s networks become. The degree of differentiation of traded goods also seems to be important, with networks of immigrants promoting more trade in manufactures than in traditional primary products, as one would expect, given that this kind of products require more investment in getting the necessary information to accomplish the entrance in new markets, precisely the type of information that circulates through migrants´ networks. All these findings allows us to highlight the positive trade-enhancing effects of people´s movements within the MED region, leading to some relevant conclusions: First, MED countries do not show the highest role of their immigrants´ networks in promoting new trade flows for the EU countries. North African (NA) immigrants have an old history of arrivals to the EU space, so networks are not yet so necessary for bilaterally sharing new information about trade opportunities. We observe these effects to be of greater importance for more distant populations, such as Asian and Sub-Saharan countries. Second, notwithstanding some opportunities arise for MED-MENA immigrants´ networks in creating new trade flows in the area, particularly for manufactures and some primary products. Identified trade creation effects are pushing both imports and exports of the home and destination countries of immigrants, this being a very important output of the project, because all trade partners appear to be winners in this process. Estimated elasticities show that for those particular countries an increase of 10% in immigrants´ stocks leads to trade creation effects of 2%-3% for MED countries, and up to 6% for more distant (Asian) countries. These amounts appear to be quantitatively important, especially regarding the one of EU trade flows with such more distant areas. Taking into account the linkages revealed in this first paper, it could be anticipated that Migration and Trade EU Common Policies should be viewed as complementary tools of a shared development strategy for the MED region, where flows of people, goods, and capital, could be pushed to provide net benefits for all partners.

The second contribution of the research project is focused on case studies for France and Egypt for the trade-migration linkage. The French case is of special relevance for the EU-MED region and policies, given that together with Spain and Italy comprise the bulk of immigrants´ arrivals from NA to the southern MED area. The Egyptian case is an extraordinary laboratory for pursuing empirical exercises focused on estimating if there exists a different behaviour of the trade-migration link between different partners, in this case the EU countries versus other MENA (the Gulf) countries. French

results are shown to be closer to what one would expect for a developed country case study. Network effects predominate in econometric output, with some 10% additional numbers of immigrants leading to trade creation of about 2%-5%. Although the specific trade creation effect of migrants coming from MENA countries seems to be lower than those of more remote regions, the observed effect is still significant, particularly for the network channel. Results also show that the pro-trade effect of migrants is significant for imports but also for exports, and inside those flows for differentiated products, while not that high for homogenous products. As the paper explains, the lower trade effects of migration encountered for the MENA countries could be a result of the higher share of homogenous trade flows in the France-MENA trade, compared to other trade exchanges of this country, or a consequence of the lower impact of network effects between France and MENA, given the lasting tradition of arrivals from that destination. Such a result, together with those of the preceding paper supports the launch of a Free Trade Area for EU-NA countries as a necessary complement of migrants´ networks in promoting new trade flows. Networks appear to be more important for creating new trade with more distant areas, with Asian countries emerging as the main focus of this policy.

In the case of Egypt, results have shown that Egyptian migrants are able to create trade with major EU receivers of people´s flows. However, the effect appears just to work for specific type of products and not with all countries. Particularly, our study revealed that migration enhances trade between Egypt and the EU through both preference and network channels, but with a predominant role of the former over the later channel, as in usual South-North studies. The type of trade enhanced by Egyptian migrants differs on the exports and imports side, where Egyptian emigrants help to enhance Egyptian homogenous and differentiated exports to the EU (clear preference channel), and European homogenous and reference-priced imports to Egypt (more closer to network effects and market opportunities in Egypt). This is an important finding for policy makers on both ends of the Mediterranean, as it concedes an important role for migrants that has been often neglected, and shows that migration currents can be also view as a tool for promoting development in both, southern and northern countries. It is also shown to be important in fostering manufactures industries, of differentiated products, in the south, another pivotal result of this part of the FEM 34-01 research project. Regarding the Gulf countries, results have shown no great trade effects of migrants´ networks of Egyptians arriving to these countries. Similarities between people in this area, in cultural and social terms, appear to be reducing trade gains derived from flows of information through MENA networks. Moreover, migration to Gulf countries is majorly temporary, so networks do not seem to play the same role than they do in the EU and other destination countries of Egyptians´ emigrants (as North America, for example).

Results regarding the Tunisian case have shown the existence of preference and network effects of migrants on trade. As pointed out along the descriptive study attached in the Final Report of FEM 34-01, more than 900 000 migrants are currently living in the EU, with France being their main destination with 600 000 Tunisian working in the country. Immigrants show trade creation effects with elasticities between 29%-65% interval for imports and exports.

Further in our investigation we have analysed the relationship between migration and remittances for the MENA area. In running such an exercise, we have prepared a paper on main determinants of remittance inflows to MENA countries for the period 1990-2010, with interesting results and policy recommendations emerging. Our interest here has been to focus on the role played by three sets of explanatory variables in driving remittances flows: Macroeconomic and business-cycle variables of origin and destination countries of MENA migrants, as reflecting conditions of destination countries in economic terms; institutional factors, including voice and political participation of people in MENA countries, regulatory quality, rule of law, government effectiveness and other measures developed by the World Bank; and a focus on the situation of poverty and inequality at home countries of migrants. Remittance entrances for the MENA region are of capital relevance for their population as a complementary source of income, higher in volume than FDI and Aid-related capital inflows and less affected by the shortcuts derived from the international financial crisis. Studies on the factors explaining migrants´ remittance inflows accruing to developing countries have traditionally highlighted the role that macro variables play in this process, including exchange rates, income levels at the recipient countries, or the degree of development of the financial sector. New contributions of the literature provide an interesting focus on the relationship between poverty, education and the volume of remittances entering the home countries of emigrants. In this paper we have followed a comprehensive macro approach in order to distinguish which of all these factors better explain that capital entrances. As main novelties, first we have applied panel data estimation techniques to a fully assembled data set for the countries of MENA region along the period 1990-2010. And second, we have also introduced in a country-level setting a wide range of institutional factors as explanatory variables, testing their role in influencing remittances. Our results indicate the relevance of country level of income, education endowment of migrants, and the economic conjuncture in destination countries as main drivers of remittance inflows of MENA countries. Institutional factors seem to play a role in this process, although at a minor extent. We have also observed the existence of a positive co-variance between remittances, FDI and Aid-related capital flows arriving to the region.

Abounding in our results, this part of the investigation have shown the relevance of three main factors in determining the volume of remits per capita received for every country of the MENA region: it is necessary to reach a minimum threshold of income in the country of origin of migrants in order that this collective become able to migrate; the management of education content of migrants have been also shown to be important when one wants to control entrances of remits; and third, the role of economic conjuncture at receiving countries is of pivotal relevance in influencing such capital flows, as one could easily understand. All three factors have been emerging as main drivers of per capita entrances of remittance flows in MENA countries in the last twenty years, the period when remits significantly accelerated. We have also seen how better institutions and political participation in MENA countries affect the behaviour of remitters living abroad. Another result refers to the question of social inequality, showing that remittances increase such an undesirable issue even in region like MENA characterised by relative higher levels of GDP per capita. Finally poverty issues do not

seem to be well addressed from a macroeconomic approach in the remittances debate, as the literature has been also showing. We do not find conclusive results regarding the poverty variables in our empirical work, what seems to be pointing that it is better to cope with such an issue from a more detailed survey-based microeconomic research framework. Altogether, results of this part of the FEMISE project on remittances appear to be an interesting complement of the previous body of work on trade-migration relationships. **Moreover, contributions of both parts of the project have lead to important policy recommendations enriching the debate on EU-MED Trade and Migration issues, as we show in the following chapters of this *Technical Report* of *FEM 34-01 Research Project*.**

RÉSUMÉ EXÉCUTIF RAPPORT DE RECHERCHE FEM 34-01

L'effet de création d'échanges des immigrants : Une caractérisation des opportunités socio-économiques découlant du lien entre les flux d'échanges de biens et de personnes dans les pays méditerranéens.

Ce résumé présente une synthèse des résultats des recherches correspondant au rapport technique du projet de recherche FEMISE (FEM 34-01), sur le thème : « L'effet de création d'échanges des immigrants : Une caractérisation des opportunités socio-économiques découlant du lien entre les flux d'échanges de biens et de personnes dans les pays méditerranéens», dans le cadre du programme de recherche 2010-11. Les flux migratoires dans les pays méditerranéens (MED) constituent un processus économique et social pertinent, qui génère des bénéfices à la fois pour les pays d'origine et de destination. En 2010, près de 15 millions de nationaux nés dans les pays MENA vivaient dans les pays de l'UE, ce qui constitue un flux de personnes très significatif au niveau mondial. L'augmentation rapide de la population immigrée à destination de l'UE constitue aujourd'hui l'un des défis politiques et sociologiques majeurs, avec des conséquences économiques significatives. Bien que la plupart des études économiques se soient concentrées sur les effets de l'immigration sur les marchés du travail du pays d'accueil et le rôle de l'Etat providence, la littérature a aussi commencé à s'intéresser à un autre aspect pertinent de l'immigration, à savoir la relation entre la population immigrante et le commerce bilatéral. En fait, il existe une littérature émergente qui montre que **les migrants peuvent générer des aspects positifs sur le commerce bilatéral entre le pays d'accueil et de destination des migrants**. Ce projet de recherche se concentre sur l'exploration de cette question dans les pays MED, à partir d'une analyse quantitative.

En dépit du développement des technologies d'information et de communications (TIC), les coûts d'information continuent à jouer un rôle important dans les relations d'échanges internationaux. Les réseaux sociaux et d'affaires transnationaux sont susceptibles de réduire les défauts d'information qui limitent les échanges commerciaux. Les réseaux transfrontaliers sont aussi de nature à se substituer aux marchés organisés pour la rencontre des offreurs et des demandeurs internationaux. Les liens des immigrants avec leurs pays d'origine permettent de promouvoir les échanges pour au moins trois raisons. Premièrement, les immigrés ont une bonne connaissance des coutumes, des lois, de la langue ainsi que des pratiques commerciales à la fois du pays d'origine et de destination. En conséquence, leur présence contribue à combler l'écart d'information entre les acheteurs et les vendeurs

des deux pays, en favorisant ainsi les opportunités de commerce bilatéral et en établissant des liens durables fondés sur la confiance et une culture comprise mutuellement. Deuxièmement, les réseaux des migrants peuvent faciliter l'application des contrats à travers des sanctions et exclusions qui se substituent aux règles institutionnelles souvent insuffisantes. Ceci réduit les coûts d'échange. Comme l'a montré la littérature, ces deux types d'effets de création d'échanges sont pertinents pour augmenter à la fois les importations et les exportations entre les pays d'origine et de destination des migrants à travers les effets de réseaux. Et troisièmement, les migrants apportent leurs goûts pour les produits de leur pays d'origine, ce qui crée un effet de préférence qui favorise les importations du pays d'origine vers le pays de destination. D'une façon générale, les études se concentrent sur l'impact différencié de l'immigration dans le pays d'origine et d'accueil afin de mieux cerner l'impact socio-économique et les effets de création d'échanges.

La première contribution du programme de recherche FEM 34-01 réside dans l'exploration de la relation commerce-migration pour les cas du Portugal, de l'Italie et de l'Espagne, compte tenu de l'importance de l'immigration dans ces pays. Durant la décennie 2001-2010, ces trois pays ont accumulé des stocks de migrants supérieurs à 10 millions de personnes, principalement en provenance du Maroc, de l'Algérie et de la Tunisie, ce qui rend nos résultats cruciaux pour la région euro-méditerranéenne. Le champ d'étude s'appuie sur des données régionales fines, ce qui constitue une nouveauté pour la région MED tout en procurant des gains substantiels de robustesse économétrique. Les résultats montrent clairement des effets de création d'échanges, à la fois au niveau des exportations et des importations, à travers le canal des réseaux pour les trois pays, le canal des préférences apparaissant simplement légèrement pour les importations en provenance de zones historiquement plus proches des pays d'accueil des migrants (Amérique latine, Europe de l'Ouest et pays méditerranéens).

Les résultats empiriques montrent que plus les pays d'origine et de destination des migrants sont distants, en termes d'institutions, de niveaux de développement ou de culture, plus les effets de création d'échange des réseaux de migrants sont importants. Le degré de différenciation des biens échangés semble également important avec des réseaux de migrants qui facilitent davantage le commerce de produits manufacturés que de biens primaires, dans la mesure où ce type de produits demande davantage d'investissement pour obtenir l'information nécessaire pour arriver dans les nouveaux marchés (information qui circule dans les réseaux des migrants). Ces résultats permettent aussi de mettre en lumière les effets positifs de la création d'échange des flux migratoires de la zone MED, avec les conclusions suivantes : premièrement, les pays MED ne figurent pas parmi ceux ayant le rôle le plus élevé des réseaux de migrants dans la promotion des échanges commerciaux pour

les pays de l'UE. Les migrants d'Afrique du Nord sont en effet arrivés depuis déjà longtemps dans l'espace européen. En conséquence, les réseaux ne sont aujourd'hui plus aussi nécessaires pour partager l'information bilatérale concernant les opportunités de commerce. On peut noter que ces effets sont d'autant plus importants pour des populations distantes, par exemple an provenance d'Asie ou d'Afrique sub-saharienne. Deuxièmement, il reste cependant encore des opportunités réelles pour les réseaux d'immigrants méditerranéens dans la création de nouveaux flux d'échanges dans la zone, pour les produits manufacturés et certains produits primaires.

Les effets de créations d'échanges identifiés concernent à la fois les exportations et les importations, ce qui constitue un résultat très important de ce projet de recherche, dans la mesure où tous les partenaires apparaissent gagnants dans ce processus. Les élasticités estimées suggèrent que pour ces pays particuliers, une hausse de 10% du stock de la population immigrée génère des effets de création d'échange de l'ordre de 2 à 3% pour les pays MED, et jusqu'à 6% pour les pays plus distants (Asie). Ces valeurs sont très significatives d'un point de vue quantitatif, en particulier concernant les échanges entre l'UE et ces pays distants. La prise en compte de ces résultats permet de conclure que les politiques migratoires et commerciales de l'UE peuvent être considérées comme des outils complémentaires pour une stratégie de développement partagé dans la région MED où les flux de biens, de personnes et de capitaux pourraient être favorisés dans une logique de bénéfice net pour tous les partenaires.

La seconde contribution de ce projet de recherche réside dans les études de cas relatifs à la France et l'Egypte concernant la relation commerce-migration. Le cas français est particulièrement intéressant pour la région et les politiques euro-méditerranéennes, dans la mesure où, avec l'Espagne et l'Italie, la France concentre la plus grande partie des migrants originaires d'Afrique du Nord. Le cas égyptien constitue également un cas d'étude particulièrement intéressant en matière de relation commerce-migration dans la mesure où il permet d'identifier les spécificités éventuelles de cette relation avec différents partenaires (UE, MED ou pays du Golfe) par rapport aux autres cas étudiés. Les résultats pour le cas français sont proches de ceux attendus pour un pays développé. Les effets réseaux sont prédominants et une hausse de 10% du stock de migrants génère une hausse des échanges de 2 à 5%. Bien que les effets de création d'échanges spécifiques aux pays MENA semblent plus faibles que ceux des pays plus éloignés géographiquement, l'effet observé reste significatif, en particulier à travers l'effet réseau. Les résultats montrent aussi que les effets pro-commerce des migrants est significatif à la fois pour les exportations et les importations, bien qu'ils ne soient pas aussi importants pour les produits homogènes

que pour les produits manufacturés. Le plus faible effet de création d'échanges enregistré pour les pays MENA pourrait s'expliquer par une part plus importante des produits homogènes de ces pays dans leur commerce avec la France. Il pourrait aussi être une conséquence du plus faible impact des effets réseaux compte tenu du fait que les premiers migrants d'Afrique du Nord sont arrivés il y a longtemps en France. Ce résultat permet néanmoins de confirmer le fait que la mise en place d'une zone de libre-échange entre l'UE et les pays d'Afrique du Nord est complémentaire à l'effet réseau des migrants pour encourager les échanges commerciaux. Les effets réseaux sont cependant plus importants pour créer de nouveaux flux d'échanges avec des pays plus distants, comme les pays asiatiques.

Dans le cas de l'Egypte, les résultats montrent que les migrants égyptiens permettent de créer de l'échange avec la plupart des pays d'accueil de l'UE. Toutefois, ces effets existent seulement pour certains produits et certains pays. En particulier, cette étude démontre que les migrations augmentent le commerce entre l'Egypte et l'UE à travers à la fois les effets réseaux et les effets préférences mais avec un rôle prédominant du premier effet, comme d'ailleurs dans la plupart des études Sud-Nord. Le type de commerce favorisé par les migrants égyptiens diffère néanmoins entre les exportations et les importations, avec une création d'échanges pour les exportations de produits homogènes et différenciés entre l'Egypte et l'UE (effet préférence), alors que pour les importations, la création d'échanges concerne les produits homogènes et à prix de référence (effets réseaux et d'opportunité de marché). Ce résultat est important pour les décideurs politiques des deux côtés de la Méditerranée dans la mesure où il accorde un rôle important des migrants, parfois négligé dans le passé. Il montre aussi que les migrations actuelles peuvent également être considérées comme un outil de développement des deux rives de la Méditerranée, notamment à travers leur impact sur les industries manufacturières ou les produits différenciés au sud. Concernant les pays du Golfe, les résultats montrent peu d'effets de création d'échanges des migrants égyptiens arrivant dans ces pays. Les similarités entre les personnes de ces deux zones, notamment culturelles et sociales, peuvent être des facteurs qui réduisent les gains à l'échange découlant des flux d'information à travers les réseaux. Par ailleurs, les migrations à destination des pays du Golfe sont le plus souvent temporaires. En conséquence, les réseaux ne semblent pas jouer le même rôle que pour l'Europe et les autres pays de destination des migrants égyptiens (comme par exemple l'Amérique du Nord).

Les résultats concernant le cas tunisien montrent l'existence d'effets de préférences des migrants sur le commerce. Comme tenu de l'accès limité aux données et de la situation en Tunisie en 2011, nous avons étudié ce pays du point de vue de l'accueil de

migrants tunisiens dans l'UE, en particulier la France, l'Italie et l'Espagne. Comme indiqué dans la partie descriptive du rapport FEM 34-01, plus de 900000 migrants tunisiens vivent actuellement dans l'UE, la France étant leur principale destination avec 600000 tunisiens travaillant dans ce pays. Le rôle principal des réseaux dans la création de commerce concerne les importations françaises, dans la mesure où les immigrés tunisiens vivant en France permettent d'augmenter les importations de produits alimentaires et de textile. Cependant, les échanges de produits manufacturés ne sont pas caractérisés par une importante création d'échanges et les élasticités restent faibles pour tous les produits échangés (1 à 1,5%).

Les investigations supplémentaires permettent d'analyser la relation entre les migrations et les transferts financiers des migrants dans la région MED. Sur ce point, l'étude 34-01 propose une analyse des déterminants des transferts financiers sur la période 1990-2010, avec des résultats et des recommandations de politique économiques intéressants. Notre intérêt principal a porté sur le rôle de trois séries de variables principales permettant d'expliquer les flux de transfert : les variables macroéconomiques et du cycle des affaires dans les pays d'origine et de destination des migrants ; les facteurs institutionnels, les règles de droit, la qualité de la règlementation, l'efficacité gouvernementale et d'autres mesures développées par la Banque Mondiale ; et enfin des variables liées à la pauvreté et aux inégalités dans le pays d'origine des migrants. Les entrées de transferts pour les pays MENA revêtent une importance capitale pour leur population puisqu'elles constituent une source de revenu complémentaire, plus importante en volume que les IDE et l'aide relatifs aux flux de capitaux. Par ailleurs, les transferts des migrants sont moins affectés par les baisses faisant suite à la crise financière internationale.

Les études sur les facteurs expliquant les flux de transfert de migrants concernant les pays en développement ont traditionnellement mis en lumière le rôle que les variables macroéconomiques jouent dans ce processus, en particulier les taux de change, les niveaux de revenu des pays bénéficiaires des transferts ou encore le niveau de développement du secteur financier. Certaines nouvelles contributions dans la littérature s'intéressent aussi à la relation entre pauvreté, éducation et le volume des transferts entrant dans les pays d'origine des migrants. Dans ce programme de recherche, nous avons suivi une approche macroéconomique cohérente afin de distinguer lequel de ces facteurs explique le mieux les entrées de transferts. La principale innovation de cette recherche réside dans l'application de modèles en données de panel correspondant à une base de données couvrant simultanément tous les pays de la zone MENA sur la période 1990-2010. Deuxièmement, nous avons également introduit au niveau pays une large palette de facteurs institutionnels en

variables explicatives, en testant leur rôle sur les transferts. Les résultats démontrent la pertinence de ces variables pays comme le revenu, le niveau d'éducation et la conjoncture économique dans le pays de destination, qui sont les forces principales permettant d'expliquer les transferts vers les pays d'origine. Les facteurs institutionnels semblent également jouer un rôle dans ce processus, bien qu'à un degré moindre. Nous observons également l'existence d'une covariance positive entre les transferts, les IDE et les flux de capitaux liés à l'aide qui arrivent dans cette région.

Les résultats démontrent clairement la pertinence des trois facteurs principaux qui déterminents le volume des transferts par habitant reçus pour chaque pays de la région MENA : il faut atteindre un seuil minimum de revenu dans le pays d'origine des migrants afin que les groupes d'individus deviennent capables de migrer ; la question de l'éduction des migrants est également un facteur important pour expliquer l'origine des transferts ; enfin troisièmement, le rôle de la conjoncture économique dans les pays d'accueil est déterminante pour influencer de tels flux de capitaux, comme on peut facilement le comprendre. Ces trois facteurs ont émergé comme les forces principales permettant d'expliquer les transferts par habitants vers les pays MENA ces vingt dernières années, époque pendant laquelle ces transferts ont considérablement augmenté. Nous avons vu également comment de meilleurs institutions dans les pays MENA peuvent affecter le comportement des migrants vivant à l'étranger concernant leurs transferts. Un autre résultat concerne la question des inégalités sociales, ce qui indique que les transferts augmentent l'intérêt de cette question, même dans les régions comme les pays MENA, caractérisés par des niveaux de PIB par habitant relativement élevés. Enfin, les questions de pauvreté ne semblent pas très bien prises en compte à partir de l'approche macroéconomique dans le débat sur transferts, ainsi que l'a montré la littérature économique. Nous ne trouvons pas non plus de résultats concluants concernant les variables de pauvreté dans notre travail empirique. Ceci suggère qu'une telle question pourrait être plus avantageusement traitée dans un cadre micro plus détaillé reposant sur des enquêtes.

Dans l'ensemble, les résultats de cette partie du projet FEMISE sur les transferts semblent être un complément intéressant aux travaux précédents sur la relation commerce-migration. De plus, ces deux contributions ont abouti à des recommandations importantes de politiques économiques, qui ont permis d'enrichir le débat sur les questions de commerce et migration dans la zone UE-MED. Tous ces résultats sont expliqués en détail dans le rapport final correspondant au projet de recherche FEM-34-01 faisant suite à ce résumé.

CHAPTER 1:

IMMIGRANTS´ NETWORKS AND TRADE CREATION INSIDE THE MEDITERRANEAN REGION: THE CASE OF ITALY, SPAIN AND PORTUGAL

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Abstract

Neoclassical trade theory, following Mundell (1957), assumed that goods´ and people´s flows appear as subtitutes in the international arena. Recent contributions, employing a gravity approach, demonstrate that both flows could positively covariate. Immigrants tend to form ethnic (and business) networks across borders, reducing fixed trade costs. They also retain some preference for their home-produced goods. These two channels, network and preference, provide the rationale of the immigration trade-enhancing linkage. In this paper we investigate that issue from a subnational perspective for the provinces of Italy, Spain and Portugal. Our results allows us to observe that, first, the network effect is the predominant one. Second, networks are created inside the provinces, not usually spilling over nearby territories. Third, panel data estimation, with province-by-country effects, provides the most accurate (causal) estimate of the trade-migration link. Fourth, the more distant the territories (in terms of geography, culture, income per capita, or institutions), the bigger is the trade creation effect. All these results could be relevant for prescriptions in terms of EU and MED countries policies of migration and trade.

Keywords: Trade-migration link, panel data approach, subnational dataset.

JEL classification: F14, F22, L14

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1. Introduction

People´s flows within the Mediterranean (MED) region constitute a quite relevant social and economic process, with net benefits for both the origin and destination countries. In 2010 more than 15 millions of nationals born in the southern basin of the Mediterranean were living in EU countries, this being one of the most important corridors for people´s flows in the world, which are mainly supported by the nearness of African and European continents and their dissimilar level of wealth and employment opportunities. The rapid increase in immigrant population in the EU is one of the most challenging political and sociological issues of today, being also important for its economic consequences (Farges et al., 2011).

Although most economic studies have focused on the effects of immigration on host-country labour markets and its welfare state, literature has also begun to focus on another relevant aspect of immigration: the link between immigrant population and bilateral trade. In fact, there is a recently growing literature arguing that immigrants can have a positive effect on the bilateral trade between immigrants' host and home countries (Gould, 1994; Head and Ries, 1998). Despite the widespread extension of ICTs, information costs still play a crucial role in shaping world trade patterns. According to Rauch (2001), social and business transnational networks are likely to alleviate some information failures that are limiting trade exchanges. Cross-border networks are prone to substitute for organized markets in matching international buyers and sellers. In this respect, co-ethnic networks are of particular interest, as illustrated for instance by Casella and Rauch (2003). Immigrants' ties to their home country may promote trade for at least three reasons. First, immigrants have a good knowledge of the customs, language, laws as well as business practices in both the host and home countries. Accordingly, their presence helps bridging the information gap between sellers and buyers on both sides, hence promoting bilateral trade opportunities, and establishing lasting ties based on trust and mutually understood culture. Second, immigrant networks may provide contract enforcement through sanctions and exclusions, which substitutes for weak institutional rules and reduces trade costs. As the literature has shown, these two types of trade-enhancing effects are relevant in pushing both imports and exports flows between destination and home countries of immigrants. And third, immigrants bring their taste for homeland products, leading to the correspondent preference effect, which is more likely to promote imports from the home country towards the destination country. In general, studies began focusing on the different impact of immigration in generating new exports and imports in order to disentangle the importance of *preference* and *network effects* (White, 2007; Felbermayr and Toubal, 2008).

Some authors have also investigated from a subnational perspective if the volume of immigrants in a particular territory and their (geographical) proximity are questions of matter in generating those networks, and consequently if the trade creation effect is constant or varies with the size of the foreign community (Peri and Requena, 2010). From a methodological point of view, this literature has shown that there are many reasons to suspect that, at the country level, the correlation between trade and immigration flows may arise from omitted common determinants

(such as colonial ties, language or cultural proximity), pointing to the possibility of a reverse causality if immigrants prefer to settle in countries that have (previous) good trade relationships with their home country (Wooldridge, 2002). Complementarily, Bandyopadhyay, Coughlin and Wall (2008) explore the temporal scope of data and regress the 1990-2000 time variation in trade on the related time variation in immigrants' settlements. This approach bears the advantage of controlling for (all) pair-specific unobserved characteristics, then ruling out all possible omitted bias problems affecting pioneer studies in this literature, accounting for unobserved heterogeneity as recommended by Baier and Bergstrand (2007). All of these contributions generally point out two important questions to be addressed: First, in order to avoid spurious correlations, it is important to study the relationship between trade and immigration at the lower geographical scale that data availability permits. The regional and province scales are identified as an optimal approach. Second, it is also important to account for specification and selection biases due to the existence of zero flows (Briant et al., 2009). In this paper we assume these new contributions, employing province data on trade and migration flows for establishing causal migration-trade relationships, and accounting for new estimation methods in order to deal with heterogeneity present in data.

The present paper explores the trade creation effects of migration flows for the MED region. We study the cases of Portugal, Italy and Spain as relevant cases in the MED area, given the importance that immigration flows have shown for such countries in the recent period 2001-2010, where stocks of immigrants have grown by a factor of two, three and fourth respectively, yielding an immigrants rate to total country population of 4.3%, 7.0% and 12.2%, respectively, at the end of the period. Only these three countries provide provincial data for trade and migration flows in the area (and around the world and over time, to the best of our knowledge), so we decide to employ here a subnational approach in order to gain in robustness. Anticipating some results, we observe clear trade creation effects, in both exports and imports, through the network channel for all three countries, with the preference channel appearing just slightly in imports for some geographical areas historically closer to the receiving countries of immigrants (Latin America, Western Europe, Mediterranean countries). Cultural distance, the level of development of countries of origin and the institutional distance are directly related to the level of new trade flows. The higher bilateral differences in such variables, the higher the trade effect appears to be.

The degree of differentiation of traded goods also seems to be important, with networks of immigrants promoting more trade in manufactures than in traditional primary products, as one would expect, given that this kind of products require more investment in getting the necessary information to accomplish the entrance in new markets. All these findings supported by subnational data and the use of new techniques (in this context) allow us to highlight the positive trade-enhancing effects of people´s movements within the MED region.

The remainder of the paper is as follows. In section 2 we describe the present and recent past of good´s and people´s flows for the MED countries, while in section 3 we review the main contributions of the related literature. In section 4 we develop the empirical model and its theoretical anchor that will inform the research. In section 5 we perform the three objectives of the investigation: estimating the general gravity-type equation, splitting up the trade vector by heterogenous groups of countries and products, and observing the role of geography and economic development in driving the trade-migration linkage. This section also includes the discussion of the research findings. Finally, section 6 concludes and suggests policy implications derived from our results.

2. An overview of people´s and good´s flows for the MED region

People´s flows are very important inside the MED region, with historical linkages between Northern African (NA) and EU countries. According to previous research findings, total (official and unofficial) migration flows originating in the Mediterranean account for approximately 10-15 million people, what represents some 3%-5% of total MED population. The main people´s flows arriving to the EU region were those from Turkey, Morocco, Algeria and Tunisia, with immigrants mainly establishing in Spain, France, Italy and Germany (Eurostat, 2011). Whereas the Turkish-Germany link has been analyzed already by previous contributions (see, e.g., Sliversstov (dir.), 2007), obtaining a positive relationship between migration and (total) trade flows, this research focuses on the Morocco-Algerian-Tunisian, given that these currents of people account for the bulk of migration flows in the region, apart from the Turkish case.

2.1 Recent trends of immigration and trade flows for Italy, Spain and Portugal

Italy, Spain and Portugal have historically been emigration countries, sending people towards Latin American and European destinations from the very beginning of the past century, until the decade

of the 60´s. Nowadays, however, they have become net receptors of migration flows, given labour shortcomings faced in their economic expansions at the end of the 20th century and the beginning of the 21st century, as well as for recent structural changes characterizing their demographics.

Table 1. Foreign born residents in Portugal, Spain and Italy, 2002-2010

	Portugal	Italy	Spain	PRT+ESP+ITA
Number in 2002	208 198	1 334 889	1 370 657	2 913 744
Number in 2010	454 151	4 235 059	5 747 730	10 436 940
Growth (%) 2002-2010	118%	217%	319%	258%
% population in 2002	2,0	2.6	3.3	3.1
% population in 2010	4.3	7,0	12.2	10.8
Florence index 2002	0.80	0.52	0.58	0.66
Florence index 2010	0.64	0.44	0.42	0.54
Change 2002-2010	-0.16	-0.07	-0.15	-0.11

Source: Own elaboration with SEFSTAT, ISTAT and INE data.

Table 1 shows the remarkable growth in immigrants arriving to these three countries along our period of study, 2002-2010. The period is characterised by high volumes of (in some cases government-promoted) regular entrances of immigrants, resulting in an annual increase of 23% between 2000 and 2007, and causing a structural change in the foreigners´ presence on the countries. Immigrant population grew by a factor of 2 in Portugal, of 3 in Italy and of 4 in Spain, between 2002 and 2010, recording a rate of immigrants to total national population of 4.3%, 7.0% and 12.2%, respectively at the end of the period. Moreover, geographical concentration of new entrants, led to increases of stocks for particular nationalities in certain provinces of the countries, as shown by the reduction of the geographical (dispersion) index of Florence reported in Table 1.

Table 2 shows a detailed picture of migration flows arriving to these three countries, and their evolution along our period of study 2002-2010. For Portugal, panel A reveals that immigrants arriving in this period are basically from countries with historical ties with that country (e.g., Brazil, Cape Verde or Angola), whereas, from MED-MENA countries, main entrances are those from Morocco (2 000), Egypt (400) and Turkey (300), all of them of quite a modest volume. For Italy (panel B), main arrivals are from Romania and Albania; if we turn to flows from MED-MENA

countries, the most significant is that from Morocco (430 000), and then from Tunisia (105 000), Egypt (82 000), Algeria (24 000) and Turkey (17 000). All these countries of origin have clear historical ties with Italy, so again networks appear to be leading people´s flows inside the MED region. For the case of Spain (panel C in Table 2), main stocks of immigrants are those from Romania, Morocco (754 000) and some Latin American countries as Ecuador, Colombia or Bolivia, all with evident linkages with Spain, except for Romanians, whose arrival could have been supported by regularization offered by the Spanish government in recent times, as well as for their recent accession to the EU space. The difficult life conditions and limited working opportunities characterising Romania explain the great presence of its nationals in many EU countries, particularly in both Spain and Italy. Furthermore, nationals from EU partners chose Spain along the past decade, taking advantage of nice conditions for retirement (gastronomy, weather, security issues), as well as of the period of economic boom that characterised the Spanish economy between 1997 and 2007. These factors explain people´s flows arriving from the UK, Italy, Portugal and France. Finally, also the Chinese community has a recently built and important representation in Spain, mainly in charge of a myriad of small businesses.

Apart from the data on the absolute numbers of migrants, it deserves to be highlighted that particular ethnicities are not randomly distributed across national space, so networks appear to be important in bringing new entrants, then reinforcing intra-provincial networks and potentially promoting trade.

Table 2. Main immigrants´ groups of origin and provinces of destination in Portugal, Italy and Spain, 2002-2010

Panel A. Portugal

A1

				Share of immigrants by home country residing in Portugal province (>5%) in 2010							
				Brazil	Ukraine	Cape Verde	Romania	Angola	Spain	Italy	France
Portuguese	Province´s	Share imm	[G10]	[35.6 ▲]	[29.3]	[54.4]	[43.9]	[52.2]	[24.3]	[33.5]	[25.4]
Districts	share of	residing	N10	116220	52293	48854	32457	26557	8060	4499	4483
	Portugal pop	in province	N02	23541	196	49930	507	22630	13584	3370	7771
Lisboa	21,06	43,32		45.8 ▲	28.8	62.4	38.8	65.2	35.6	44.1 ▲	29.7
Faro	4,04	16,13		10.8 ▲	18.9 ▲	6.7 ▲	24.4 ▲		7.0 ▲	10.6 ▲	17.9 ▲
Setubal	8,09	10,85		12.1	7.7				13.3 ▲	5.5	8.8 ▲
Porto	17.16	6,19		7.8▲	6.1 ▲	18.5	11.9 ▲	16.3 ▲	6.4	10.0 ▲	
Leiria	4,51	3,74			10.1						6.5
Santarem	4,38	3,41			7.2		5.2				
Aveiro	6,92	3,13									
Coimbra	4,07	2,55									
Braga	8,13	2,15									

A2

				Share of immigrants by home country residing in Portugal province (>5%) in 2010									
				Algeria	Egypt	Israel	Jordan	Lebanon	Libya	Morocco	Syria	Tunisia	Turkey
Portuguese	Province´s	Share imm	[G10]	[30.6 ▲]	[46.3]	[29.5]	[34.2]	[28.3]	[29.7]	[26.1]	[28.5]	[27.5 ▲]	[24.6]
Districts	share of	residing	N10	242	401	86	52	60	29	1933	36	146	324
	Portugal pop	in province	N02	104	72	105	80	192	43	565	78	37	103
Lisboa	21,06	43,33		25.2 ▲	59.1 ▲	36.8	40.3	40.0	20.6	15.2	16.6	34.9 ▲	29.9
Faro	4,05	16,13		22.7	12.2 ▲	9.2 ▲		6.6	6.3	23.7	5.5	13.0	6.1
Setubal	8,09	10,86		10,3	6.3	9.2		6.6		6.3	11.1		
Porto	17,16	6,19		13.2	8.7	13.1		6.6		18.0 ▲	5.5	12.3	20.0 ▲
Leiria	4,52	3,74						10.1		9.1			
Santarem	4,38	3,17									8.3	6.8	
Aveiro	6,92	3,13					7.7					5.4	
Coimbra	4,07	2,55											9.8
Braga	8,13	2,15										5.4	10.4

Panel B. Italy

B1

				Share of immigrants by home country residing in Italian province (>5%) in 2010										
				Romania	Albania	Morocco	Ukraine	Phillipines	Tunisia	Poland	India	Ecuador	Egypt	Bangladesh
Italian	Province´s	Share imm	[G]	[27.8]	[31.8 ▲]	[33.5 ▲]	[26.6]	[49.9]	[36.2 ▲]	[29.1]	[52.9 ▲]	[62.1▲]	[61.8▲]	[49.5]
Province	share of	residing	N10	883379	466449	430072	173827	123554	105039	105039	105829	85876	82031	73934
	Italy pop	in province	N02	93330	188855	185405	12531	67657	55001	33230	31729	14324	34181	20768
Milan	6,6	9,6		5.2	5.8 ▲	5.5	7.5	30.6 ▲				33.5 ▲	49.1▲	8.5
Rome	6,9	9,6		15.8	5.0	6.5 ▲	7.4	23.2		19.3 ▲	7.0	9.9 ▲	9.9	17.2 ▲
Turin	3,8	4,7		10.4 ▲		5.1								
Brescia	2,1	3,8									13.1 ▲		6.1▲	
Bergamo	1,8	2,6									7.7 ▲			
Florence	1,7	2,5												
Verona	1,5	2,4												
Treviso	1,5	2,3												
Bologna	1,6	2,2												6.8 ▲

Table 2 (cont.)

B2

Italian Province	Province´s share of Italy pop	Share imm residing in province	[G10] N10 N02	Share of immigrants by home country residing in Italian province (>5%) in 2010									
				Algeria [30.9] 24531 12374	Egypt [61.8▲] 82031 34181	Israel [46.8] 2478 1724	Jordan [26.6] 2632 2081	Lebanon [44.8] 3857 2677	Libya [53.6] 1468 1547	Morocco [33.5▲] 430072 185405	Syria [48.8] 3846 2232	Tunisia [36.2▲] 105039 55001	Turkey [61.8▲] 17690 6567
Milan	6,6	9,6		6.0	49.1▲	21.2	15.4	9.8	14.3▲	5.5	26.5▲		12.1
Rome	6,9	9,6			9.9	15.8	11.9	15.3	44.4	6.5 ▲	13.0		
Turin	3,8	4,7				5.1▲				5.1			
Brescia	2,1	3,8		5.2	6.1▲								
Bergamo	1,8	2,6											
Florence	1,7	2,5				7.6▲	7.7▲						
Modena	1,2	2,0										5.5 ▲	14.6▲
Perugia	1,1	1,7							5.6▲				

Panel C. Spain

C1

Spanish Province	Province´s share of Spain pop	Share imm residing in province	[G] N10 N02	Share of immigrants by home country residing in Spanish province (>5%) in 2010											
				Romania [36.8] 831235 67277	Morocco [30.4] 754080 307458	Ecuador [36.2] 399586 259522	Reino U. [61.2] 387677 128118	Colombia [19.9] 292641 191018	Bolivia [34.1] 213169 13516	Italy [35.3] 184277 46220	Bulgaria [39.4] 169552 29739	Argentina [27.4] 132249 56713	Portugal [28.5] 158244 52056	China [28.5] 158244 37650	France [29.6] 123870 59809
Madrid	13,7	18,8		25.4	11.5	31.4		23.6	23.8	14.6	19.3	13.5	12.3	27.1▲	14.4▲
Barcelona	11,7	14,0			18.5▲	17.4▲		11.4▲	22.2▲	21.3		17.3▲	7.10▲	23.8▲	18.8▲
Alicante	4,1	8,1				5.4▲	33.6▲	6.6		5.8	7.5▲	7.5▲			9.1
Valencia	5,5	6,0		6.4▲		6.1▲		6.6▲	9.4▲	6.5	13.8	5.8▲		5.4	6.7
Malaga	3,4	4,8					18.2					9.1▲			5.6
Baleares	2,4	4,2					6.0			9.1	5.3▲	8.2			6.9▲
Murcia	3,1	4,2			9.1▲	11.4	5.8		7.8						
Girona	1,6	2,8			5.1▲										
Tenerife	2,2	2,7					6.8			9.4					

C2

Spanish Province	Province´s share of Spain pop	Share imm residing in province	[G] N10 N02	Share of immigrants by home country residing in Spanish province (>5%) in 2010									
				Argelia [43.3] 58743 28921	Egypt [35.9] 3142 1703	Israel [40.1] 1936 933	Jordan [26.6] 1389 1076	Lebanon [33.2] 1128 1417	Libya [32.3] 304 109	Morocco [30.4] 754080 307458	Syria [48.8▲] 2467 2019	Tunisia [29.3] 1977 1080	Turkey [32.0] 2640 883
Madrid	13,7	18,8			26.4	19.8	26.2	26.2▲		11.5	30.0▲	19.8	23.0
Barcelona	11,7	14,0		6.0	15.9▲	36.6▲	16.5▲	16.5	13.8	18.5▲	19.2▲	19.3▲	25.3▲
Alicante	4,1	8,1		14.6▲									7.9▲
Valencia	5,5	6,0		12.3▲		5.3	10.0▲	10.0			10.4▲	8.2	
Malaga	3,4	4,8				6.9	9.1	9.13	5.6		8.3		6.0▲
Baleares	2,4	4,2				5.2							
Murcia	3,1	4,2		5.1						9.1▲			
Girona	1,6	2,8								5.1▲			

Source: Own elaboration with SEFSTAT, ISTAT and INE data.

How to read the Tables:

[G] (concentration ratio) between 0 and 100

Value of zero means that shares of immigrant population are equaly distributed across Italian provinces, 100 all concentrated in one province

The greater G, the more concentration of the population in that province is observed

Symbol INCREASE ▲ means that the concentration of that ethnicity in that particular province has increased with respect to the 2002 values

Lisboa and Faro concentrate most of the immigrant population in Portugal (43% and 16%, respectively, on the third column of Panel A)

There are 116220 Brazilian immigrants living in Italy in 2010

45,8% of Brazilians are living in Lisbon, and concentration of such origin of immigrants in that province has increased since 2002

Higher levels of concentration of immigrants in Portugal are shown for natives of Cape Verde (62.4) and Angola (65.2)

Table 3. Composition of trade flows by regions (in percentages)

PANEL A. EXPORTS

	2002			2010			Variation share 2002-2010		
	SPAIN	ITALY	PORTUGAL	SPAIN	ITALY	PORTUGAL	SPAIN	ITALY	PORTUGAL
Western Europe	77,4	58,9	83,6	70,43	54,3	76,6	-6,94	-4,55	-7,03
Rest of Europe	4,6	10,7	1,5	6,59	13,9	3,7	1,94	3,14	2,20
Rest of rich OECD	6,7	15,4	8,3	6,66	10,8	4,8	-0,05	-4,58	-3,55
MENA	4,9	7,4	1,2	7,80	10,7	3,5	2,86	3,32	2,28
Africa	0,5	0,8	3,2	0,83	0,8	7,2	0,31	0,06	4,01
Latinamerica	4,5	2,5	1,1	5,08	3,3	3,1	0,60	0,71	2,02
Central Asia	0,3	0,8	0,1	0,82	1,9	0,3	0,54	1,12	0,21
Eastern Asia	1,0	3,5	1,0	1,79	4,3	0,9	0,75	0,78	-0,12
Total	100,0	100,0	100,0	100,0	100,0	100,0			

PANEL B. IMPORTS

	2002			2010			Variation share 2002-2010		
	SPAIN	ITALY	PORTUGAL	SPAIN	ITALY	PORTUGAL	SPAIN	ITALY	PORTUGAL
Western Europe	75,0	67,2	86,0	62,6	58,4	81,8	-12,43	-8,80	-4,17
Rest of Europe	3,2	8,6	2,1	6,5	12,2	3,6	3,39	3,55	1,50
Rest of rich OECD	9,8	10,7	6,2	8,4	7,2	4,4	-1,47	-3,50	-1,78
MENA	2,7	3,8	0,8	4,33	4,7	1,6	1,67	0,82	0,80
Africa	0,3	0,5	0,5	0,3	0,5	0,5	-0,05	-0,04	-0,02
Latinamerica	2,8	2,4	2,0	3,7	2,9	2,5	0,86	0,56	0,49
Central Asia	1,0	1,3	0,7	1,9	2,0	1,1	0,87	0,72	0,39
Eastern Asia	5,2	5,6	1,7	12,3	12,3	4,6	7,15	6,69	2,81
Total	100,0	100,0	100,0	100,0	100,0	100,0			

Source: Own elaboration with SEFSTAT, ISTAT and AEAT data.

Regarding trade flows (see Table 3), exports and imports of Spain, Italy and Portugal are directed mainly to the EU countries and, to a lesser extent, the rest of the OECD. However, for the period of study, 2002-2010, it must be underlined the increase in the relative weight of other geographical areas, with more economic dynamism than those of the EU and the OECD. Across these "new" partners, Eastern Asia, the rest of Europe and the MENA region are those that scale positions inside the trade ranking by regional areas. Eastern Asian countries show a remarkable increase as the origin of new imports, particularly for Spain and Italy, while the MENA region gains relevance as destination of new exports from all the three countries.

3. Literature review: Studies concerning MED countries for the trade-migration linkage

Looking at the volume and geographical distribution of immigrants inside the MED region, four countries appear as the main origin of people´s flows: Morocco, Algeria, Tunisia and Turkey, which account for more than 90% of total departures towards EU countries from NA citizens. Main destinations for immigrants coming from the first three countries are Spain, Italy and France, while Germany represents Turkish people´s favourite destination (see CARIM, 2005 and Eurostat, 2011, for detailed data). Blanes and Martín-Montaner (2006) analyze the salient case of Spain, with some 4.3 millions of (legal and legalized) immigrants arriving at this country along the first decade of the new century. Original contribution of the authors starts by identifying the relevant trade creation effect of immigrants for intra-industry (IIT) trade exchanges. Blanes (2008) shows again that the main mechanisms behind the link migration-trade rely on the information effect, that is, immigrant's additional information about products and social and political institutions, together with the social or ethnic network effect, showing that immigrants with a medium level of education and those related to business activities are the ones who have a significant positive effect on bilateral trade.

Another contribution is that of Murat and Pistoresi (2009), who study the relationship between emigration, immigration and trade, employing data for Italy. The sample splits for 51 foreign trading partners and time focus spans from 1990-2005. Their results suggest that networks of Italian emigrants in foreign countries clearly boost trade, but this pro-trade effect does not depend on institutional and cultural dissimilarities of the trading partners. Immigrants arriving to

Italy are shown to reduce imports, finding a substitution effect of factor-and-goods´ flows. The paper applies to a country, instead to a subnational level, so we will complement and update their results, and pursue a robustness (causal) check of them, as we follow a subnational (provincial) approach for the Italian case. White and Tedesse (2007) also study the Italian case for the period 1996-2001, and observe that immigrants increase trade flows by exploiting superior information regarding host country and home markets and/or by acting as conduits that bridge cultural differences between their host and home countries. Greater cultural bilateral distance is also found to positively estimulate pro-trade effects.

Regarding the analysis for Portugal, Faustino and Leitão (2008) tests the relationship between immigration and Portuguese bilateral trade, considering the fifteen European partners (EU15), and using a static and dynamic panel data analysis, showing that the stock of immigrants has a positive effect on Portuguese exports, imports and bilateral intra-industry trade. Their results also show that immigration affects all types of trade positively by decreasing trade costs. Static and dynamic results do not confirm their hypothesis of a negative effect of immigration on exports. In the static model, a 10% increase in immigration induces a 6% increase in exports and a 5.5% increase in imports. The effect on the Portuguese trade balance is then positive, what can be considered a static welfare social gain, although dynamic results show a negative one in the long run. Authors´ findings also suggest that when immigrants to Portugal originate from a Latin partner country, the effects on trade are stronger than in the case of immigrants from non-Latin countries.

For the case of France, a relevant and recent contribution is due to Briant et al. (2009), who found an important trade creation effect for immigrants arriving to France; particularly, the trade-enhancing effect of immigrants is investigated along two intertwined dimensions: the degree of complexity of traded goods, and the quality of institutions in partner countries. The trade-enhancing impact of immigrants is, on average, more salient for countries with weaker institutions. However, this positive impact is especially large on the imports of simpler products, so the preference channel seems to be acting in this case. When we turn to complex goods, for which the information (fixed-costs) channel conveyed by immigrants used to be the most valuable, immigration enhances imports regardless of the quality of institutions in the partner country. For exports, immigrants substitute for weak institutions on both simpler and complex goods. The results are interesting, but again cover a very distant period, 1972-1999. Also for France, the

previous contribution of Combes et al. (2005) shows that within-country migration flows also positively affect the volume of inter-regional trade flows.

Foad (2010) examines the immigration-trade linkage separately for migrants moving from the Middle East and North Africa (MENA) to both Europe and North America, in order to test how differences in income and education (by selection issues in migration) existing between these two groups affect such pro-trade effect, given that MENA migrants to North America are observed to be less numerous, but more educated. The author expects that the fact that these migrants going to North American used to show more cultural assimilation in that area should weaken both network and preference effects, then affecting the trade-enhancing effect. What he founds is that the migration-trade link is shown to be stronger for migrants in Europe, with the strongest output for imports. He also observes that the migration-trade link is stronger for differentiated goods than for homogeneous goods, especially for differentiated goods´ imports into Europe. These results suggest that while network effects matter, immigrant preferences for native country goods are the key factor driving the migration-trade link. The results in this study also provide quantitative evidence of weaker assimilation among MENA migrants to Europe with respect to North America, a widely accepted result that has had little empirical support in the existing literature.

Finally, regarding studies that pursue the more general approach for the trade-migration link for developing and developed countries, for example Betin and Lo Turco (2009) analyze the general case of North-South countries, finding heterogeneous responses of trade to migration according to different goods typologies. In general, they find more clear effects for imports than for exports, although assertting that more evidence on the topic is needed.

As a whole, studies on the MED region are still scarce, based on old data that not used to cover the recent important wave of people´s flows of the new century, not applying all tools provided by the last developments of the literature, and with unclear results from a regional perspective. Moreover, none of them applies a time span for the subnational approach, and builds on cross-section analysis. So it seems clear that more research is needed for this important North-South corridor, in order to generate more evidence informing the EU Trade and Migration Common

Policies, as well as the EU Neighbouring Policy. In such context, the present paper is directed to start filling some of these existing gaps.

4. Research methodology and data issues

4.1 Empirical model and underlying theory

In this study, we follow an econometric approach based on subnational data in order to capture the trade creation effects of immigration. All data details, sources and construction of variables are included in the Appendix. The basic gravity-equation we estimate to identify the impact of immigrants on exports (imports) describes the logarithm of aggregate exports (imports) X_{ijt} (M_{ijt}) from (to) province *i* to (from) country *j* for period *t* as:

$$\ln(X_{ijt}) = \phi_{jt} + \theta_t + \delta_{ij} + \beta \ln(Y_{it}Y_{jt}) + \alpha \ln(IMM_{ijt}) + \lambda Z_{ijt} \text{ -Exports equation} \quad (1)$$

$$\ln(M_{ijt}) = \phi_{it} + \theta_t + \delta_{ij} + \beta \ln(Y_{jt}Y_{it}) + \alpha \ln(IMM_{ijt}) + \lambda Z_{ijt} \text{ -Imports equation} \quad (2)$$

where the term ϕ_{jt} represents a set of importing (exporting) countries-by-time effects, θ_t is a set of year dummies, δ_{ij} are province-country pair dummies, Z_{ijt} includes explanatory variables capturing bilateral ties between territories, as contiguity, colonial ties, geography and distance, relative institutional quality measures and other joint/disjoint characteristics of the province-country pairs, while Y_{it} and Y_{jt} are, respectively, the country and province gross output and IMM_{ijt} is the total stock of immigrants from country *j* in province *i* for year *t*. One of the advantages of employing such specification of the trade equation is that it is directly derived from the recent model by Chaney (2008), what supposes the methodological frontier in the field. For each sector, Chaney's model delivers the following equation describing the determinants of exports X_{ijt} (imports M_{ijt}):

$$\ln(X_{ijt}) = Const + \ln(w_{it}^{-\gamma}Y_{it}) + \ln(Y_{jt}\theta_{jt}^{\gamma}) - \gamma \ln(\tau_{ijt}) - (\frac{\gamma}{\sigma - 1} - 1)\ln(f_{ijt}) + \lambda Z_{ijt} \text{ -Exports equation} \quad (1')$$

The term $\ln(w_{it}^{-\gamma}Y_{it})$ captures the exporting province wages w_{it} and the exporting province income Y_{it}, as a proxy of the competitiveness and the domestic market size of that exporting province.

The term $Y_{jt}\theta_{jt}^{\gamma}$ reflects the importing country aggregate income Y_{jt}, weighted by a remoteness measure from the rest of the world, θ_{jt}^{γ}, based on relative distances and GDPs between trading partners in the sample. The term τ_{ijt} captures iceberg (proportional) transport costs (per unit of export) and f_{ijt} proxies fixed costs of firms located in province *i* when exporting to country *j*. Now we can operate and define our empirical model. In order to do so, we assume that bilateral variable costs, τ_{ijt}, remain relatively constant over time, what allows us to absorb the term $\gamma \ln(\tau_{ijt})$ into a set of country-province dummies δ_{ij}. We can also absorb the effect of remoteness $\ln(\theta_{jt}^{\gamma})$ into the country-by-time effects ϕ_{jt}, and the term $\ln(w_{it}^{-\gamma})$, assumed common to all provinces, will be captured by the time effect θ_t. Hence the first four terms of equation (1´) reduce to the corresponding four terms of equation (1).[1] Once we account for these factors, the last term of equation (2), $(\frac{\gamma}{\sigma-1}-1)\ln(f_{ijt})$ is the channel through which immigrants affect trade, *through reductions in fixed trade costs*. The presence of immigrants from country *j* in province *i* allow firms located in that destination to be aware about the rules and opportunities operating in the origin country, thus reducing information costs and the costs of setting up business bilaterally. Immigrants may themselves become exporters (importers) and face much lower set-up costs in exporting (importing) to their countries of origin. As a result trade will increase with immigration due to a reduction of (information and other trade) fixed costs, what remains the theoretical variable of interest. On the other hand variable costs τ_{ijt}, proportional to the value of observed exports, are usually associated with transport and tariff-costs, which are less susceptible of being affected by immigration.

Once defined the methodology regarding the trade equations to be estimated in the first stage of the investigation, we start by estimating trade equations (1) and (2) separately, what will allow us to test for the existence of a direct link between immigration and trade and for the relevance of the two channels causing this relationship: *preference* and *network* effects. If we obtain a positive effect of immigration on imports but not on exports, it will reveal that only the *preference effect*

[1] The same procedure applies for obtaining an "Imports equation", say (2´), and reducing it to the form of equation (2). For the sake of simplicity, we focus here on the "Exports function", although both trade equations will be estimated along the study.

explains the link between immigration and trade. If we obtain a positive effect for both trade flows, but bigger for imports, *both channels* will explain that link and the preference effect will account for the difference. If the effect appears to be bigger or even similar for exports than for imports, the *network effect* will be the prevailing one.

Additionally, the main advantage of using Chaney (2008)´s model is that it allows us to test two further implications of reducing fixed costs that would differ from those of reducing variable costs. First, the model predicts that the elasticity of total trade to fixed bilateral costs depends inversely on σ, that is, the elasticity of substitution across goods. Second, the elasticity to variable costs depends only on γ, a measure of the dispersion of productivity across firms. So, if we separate trade flows into *differentiated* and *homogeneous* goods, and estimate two new trade equations, we would expect a larger coefficient on $\ln(f_{ijt})$ in the first case, given that more differentiated goods face higher information and other fixed trade costs, while the coefficient on $\ln(\tau_{ijt})$ would remain the same for the two types of goods (for the two new equations).

5. Results

In our empirical specification, we focus on two additional effects of immigrants on trade flows: First, we explore if immigrants living in region or province *i* increase exports of that particular province to the home country of immigrants. Second, and as a novelty, we observe the effective spatial extent of ethnic networks, by observing the role of adjacent (or non-adjacent) networks in pushing trade of a particular province; that is, we explore if immigrants of the same national origin living in adjacent provinces of *i* promotes exports (imports) of that particular province *i* by increasing network effects (reducing fixed trade/transaction costs in trade exchanges).

Results are included in Table 4 for pooled data of Italy, Spain and Portugal, including dummy variables for country, province and time effects (columns 1 to 4) and panel data (columns 5 to 8). We start by employing an OLS model with dummy variables for country, province and year effects in equations (1) and (2) of Table 4. Dummies specification allow to partially control for omitted variables bias and fixed effects problems arising in the estimation procedure in OLS and Poisson models (1 to 4), given the existence of possible correlations between some of the covariates and the own characteristics´ of the origin/destination country/provinces, as well as existing

correlations with time effects (see Baldwin and Taglioni, 2006). For Equations (3) and (4) a Pseudo-Maximum Poisson Likelihood (PPML) estimation procedure is proposed, because it could improve estimations of our empirical model while dealing with excess of zeros in trade flows not accounted by OLS procedure. After that, we apply panel data modelling in equations (5) to (8), including interaction of dummies. This allows introducing additional controls by employing country-province fixed effects, that capture all bilateral ties between origin and destination territories, and country-year fixed effects capturing other remoteness variables, such as transport costs derived from geographical distance, existence of trade informal barriers, changes in trade regulations, etc. As the literature has shown (Bandyopadhyay et al., 2008) it must improve our parameter estimations, while also permits controlling for time-invariant unobserved heterogeneity in data (Foad, 2010).

In general, we observe positive and significant effects of immigrants on trade, exports and imports, for all estimation method employed in the analysis (OLS-Poisson-Panel data). Panel data technique is superior in controlling for additional factors influencing trade and correspondingly in isolating the individual migration effect on trade creation, this being one of the major objectives of the investigation. After depuration, the variable of interest in the model (immigrants stock) has a coefficient value of around 2%-3%, which appears to be also highly significant. It is of the same magnitude for exports and imports, what seems to show that the network channel is leading the process, in comparison with the preference one that does not seem to be present in a similar way in our data. The effect of surrounding stocks in the country for particular nationalities disappears in the exports equation when control variables are getting more accurate, what resembles to show that the network effect is esentially an intra-provincial matter, not spilling over nearby or more distant provinces inside a country. This result is interesting, as the only paper that we can compare to (Herander and Saavedra, 2005) found significant effects of inter-state networks in shaping new trade relationships for the US case, although certainly of second-order in value. Our geographical breakdown of data is no doubt much more precise than the one in the refered paper (NUTS III EU provinces vs US states), so it seems reasonable to expect more robustness in our results at this regard. In the case of imports, networks of particular nationalities with adjacent provinces seem to positively stimulate newer trade relationships, showing a coefficient of 4%, what is a non-negligible one. The rest of the variables in the model show the expected signs for

columns where we include the full specification of the gravity model (1 to 4), while dummy variables capturing bilateral ties between territories, such as common language or EUEFTA membership, show a negative and significant coefficient, what seems to be indicating that (controlling for all other factors) the higher the mutual knowledge, the lower the trade effects. Goodness-of-fit is shown to be high for all estimations, as expected in a gravity framework, and even improves in the panel data specification, that use to render greater accuracy of results in comparison with previous methods as noted by the pioneer work of Bandyopadhyay et al. (2008). As we have remarked, the latter is an important methodological result of the paper, since applying data panel techniques in a subnational framework is a novelty in this area of research.

Table 4. Trade equations for Portugal, Italy and Spain, 2002-2010

	EXPORTS	ols_1	ols_2	poisson_1	poisson_2	panel_11	panel_12	panel_21	panel_22
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Country fixed effects		yes	yes	yes	yes				
Province fixed effects		yes	yes	yes	yes				
Year fixed effects		yes	yes	yes	yes	yes	yes		
Country-Province fixed effects						yes	yes	yes	yes
Country-Year fixed effects								yes	yes
GDP country * GDP province	lyy	0.709***	0.660***	0.596***	0.531***	0.792***	0.780***	0.693***	0.675***
		[0.0295]	[0.0292]	[0.0374]	[0.0373]	[0.0209]	[0.0215]	[0.0278]	[0.0291]
	ldist	-1.043***	-0.957***	-0.484***	-0.492***				
		[0.0194]	[0.0195]	[0.0227]	[0.0221]				
	contiguity	0.427***	0.445***	0.650***	0.524***				
		[0.0367]	[0.0362]	[0.0399]	[0.0378]				
	euefta	0.0848***	0.0297	-0.0820***	-0.136***				
		[0.0255]	[0.0255]	[0.0285]	[0.0280]				
	language	0.939***	0.682***	-0.425***	-0.400***				
		[0.0267]	[0.0261]	[0.0443]	[0.0410]				
Immigrants from country j	lMij	0.241***	0.138***	0.237***	0.154***	0.0512***	0.0372***	0.0283***	0.0235**
living in province i		[0.00386]	[0.00494]	[0.00582]	[0.00867]	[0.00834]	[0.00984]	[0.00928]	[0.0100]
Immigrants from country j	lMborder		0.0680***		0.0409***		-0.0229*		-0.0207
living in adjacent provinces of i			[0.00593]		[0.00966]		[0.0124]		[0.0125]
Immigrants from country j	lMout		0.144***		0.171***		0.0162		0.0293
living in non-adjacent provinces of i			[0.00645]		[0.00989]		[0.0153]		[0.0184]
	Constant	-3.411***	-0.937	-1.220*	-1.431*	-10.03***	-10.17***	-7.712***	-7.702***
		[0.438]	[0.791]	[0.734]	[0.735]	[0.423]	[0.424]	[0.534]	[0.539]
	Observations	155439	155439	155439	155439	155439	155439	155439	155439
	R-squared	0.817	0.818	0.872	0.874	0.924	0.924	0.925	0.925

	IMPORTS	ols_1	ols_2	poisson_1	poisson_2	panel_11	panel_12	panel_21	panel_22
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Country fixed effects		yes	yes	yes	yes				
Province fixed effects		yes	yes	yes	yes				
Year fixed effects		yes	yes	yes	yes	yes	yes		
Country-Province fixed effects						yes	yes	yes	yes
Country-Year fixed effects								yes	yes
GDP country * GDP province	lyy	0.0878**	0.125***	0.511***	0.494***	-0.0128	-0.0252	0.424***	0.425***
		[0.0341]	[0.0342]	[0.0513]	[0.0516]	[0.0232]	[0.0238]	[0.0323]	[0.0415]
	ldist	-1.293***	-1.227***	-0.690***	-0.717***				
		[0.0220]	[0.0220]	[0.0301]	[0.0301]				
	contiguity	0.208***	0.223***	0.760***	0.724***				
		[0.0382]	[0.0375]	[0.0719]	[0.0725]				
	euefta	0.317***	0.276***	0.132**	0.119**				
		[0.0336]	[0.0335]	[0.0568]	[0.0563]				
	language	0.0870***	-0.107***	-0.294***	-0.291***				
		[0.0298]	[0.0308]	[0.0526]	[0.0544]				
Immigrants from country j	lMij	0.217***	0.149***	0.218***	0.213***	0.0779***	0.0598***	0.0274***	0.0263**
living in province i		[0.00453]	[0.00587]	[0.00831]	[0.0128]	[0.00933]	[0.0105]	[0.0102]	[0.0121]
Immigrants from country j	lMborder		0.0144**		-0.0422***		0.0565***		0.0407***
living in adjacent provinces of i			[0.00682]		[0.0135]		[0.0130]		[0.0143]
Immigrants from country j	lMout		0.138***		0.0801***		-0.0143		0.0134
living in non-adjacent provinces of i			[0.00741]		[0.0130]		[0.0167]		[0.0159]
	Constant	9.530***	21.79***	1.382	1.517	5.138***	5.282***	-3.520***	-3.074***
		[0.504]	[0.922]	[0.989]	[0.992]	[0.473]	[0.475]	[0.623]	[0.639]
	Observations	155439	155439	155439	155439	155439	155439	155439	155439
	R-squared	0.772	0.773	0.895	0.893	0.913	0.913	0.916	0.924

Table 5. Pro-trade effect of immigrants by control variables, 2002-2010

EXPORTS			
RULES OF LAW- INSTITUTIONS		**POOR**	**GOOD**
Immigrants from country j	lMMij	**0.0627*** **	-0.00451
living in province i		**[0.0173]**	[0.0149]
CULTURAL DISTANCE		**LOW**	**HIGH**
	lMMij	0.0217	**0.0232** **
		[0.0197]	**[0.0117]**
LEVEL OF GDP per capita		**LOW**	**HIGH**
	lMMij	**0.0372** **	-0.00405
		[0.0172]	[0.0149]

IMPORTS			
RULES OF LAW		**POOR**	**GOOD**
Immigrants from country j	lMMij	**0.0442** **	0.00168
living in province i		**[0.0179]**	[0.0187]
CULTURAL DISTANCE		**LOW**	**HIGH**
	lMMij	0.00358	0.0207
		[0.0264]	[0.0210]
LEVEL OF GDP per capita		**LOW**	**HIGH**
	lMMij	0.0171	0.0117
		[0.0159]	[0.0198]

Table 6. Pro-trade effect of immigrants by geographical origin, 2002-2010

EXPORTS

	WEST_EUR	EAST_EUR	REST_OECD	MED	AFRICA	AMERICA	WEST_ASIA	EAST_ASIA
Portugal								
EXPORTS OF MANUFACTURES								
lMMij				0.339***	0.111*		0.182***	
				[0.0910]	[0.0622]		[0.0414]	
EXPORTS OF PRIMARY PRODUCTS								
lMMij		0.0626**					0.0442**	
		[0.0280]					[0.0189]	
Italy								
EXPORTS OF MANUFACTURES								
lMMij					0.0606**			
					[0.0268]			
Spain								
TOTAL EXPORTS								
lMMij							0.130**	
							[0.0578]	
EXPORTS OF MANUFACTURES								
lMMij		0.136***			0.0642*			
		[0.0451]			[0.0385]			

IMPORTS

	WEST_EUR	EAST_EUR	REST_OECD	MED	AFRICA	AMERICA	WEST_ASIA	EAST_ASIA
Portugal								
IMPORTS OF MANUFACTURES								
lMMij	0.110**			-0.227**		0.155**		
	[0.0514]			[0.106]		[0.0716]		
Italy								
IMPORTS OF MANUFACTURES								
lMMij	0.0913**							0.114***
	[0.0366]							[0.0422]
IMPORTS OF PRIMARY PRODUCTS								
lMMij	0.112*	0.0538*				0.0508**	0.0401*	
	[0.0596]	[0.0299]				[0.0225]	[0.0234]	
Spain								
IMPORTS OF MANUFACTURES								
lMMij		0.123**		0.133*			-0.127***	
		[0.0481]		[0.0705]			[0.0473]	
IMPORTS OF PRIMARY PRODUCTS								
lMMij		0.156***		0.104*				
		[0.0427]		[0.0605]				

Followingly, we breakdown our data on countries of origin of immigrants by employing several variables of interest as control variables, in order to exploit the heterogeneity of the sample in Table 5. Such variables include the existence of weak or more robust institutions in the country (what we term as Rules of Law, following Kaufmann, et al., 2010), cultural distance (Dow and Karunaratna, 2006), levels of GDP per capita, and the relative volume of immigrants (to local population) in a certain province of destination. In table 5 we include our results for the trade equations for all those control variables, defining three segments for every one of them. In general, we can observe that the more distance (defined as existing differences) exists between the country of origin of migrants and destination locations, the higher the trade effect appears to be. So, countries characterised by weak Rules of Law, high cultural distance with destination provinces, and low relative development level (low GDPpc) present the highest gains of migrant networks in affecting exports, with elasticities for the corresponding explanatory variable of 6%, 2% and 3%, respectively, for the exports function. For imports results are less clear-cut, as we find prominent trade effects only for Rules of Law, with a coefficient of 4%. On the other hand, networks with non-adjacent provinces for particular migrants coming from countries with high cultural distance tend to reduce imports and exports of the receiving province. Further, we investigate in this Table 5 if the (relative) volume of immigrants establishing in a certain territory affects the pro-trade effect, observing that it could be the case after a threshold of 10%, although the result is not as robust as we expect given the relevance of immigrants´ entrance in Spain and Italy during our period of analysis.

Table 6 presents a break down of our sample of immigrants by geographical blocks of origin countries. As a whole, the results seem to prove the existence of general pro-trade effects arising for exports for those countries more (geographically) distants, the ones which clearly should be benefiting from informational and institutional (enforcement, commercial laws) packages transferred by migrants´networks, as the theory points out. We also observe some preference effects leading increases of imports arriving from geographical areas historically linked to the countries of reference in the study, as America (mainly Latinamerica), the Mediterranean and Western European countries, together with some other effects on imports from more

distant countries (in geographical and cultural terms), such as those of Eastern Europe and Asia. Finally, some substitution effects between trade and people´s flows arise just in a few cases, as for the arrival of immigrants from Western Asia seems to reduce Spanish imports of manufactures, and new entrances of migrants from the Med countries in Portugal reduces imports of manufactures from that markets. In terms of the size of elasticities observed in Table 6, in general, greater trade effects seem to appear for the Portuguese economy, with an intense increase in exports of manufactures following the arrival of immigrants from MENA countries (coeff. of 0.33), together with an increase in imports after the arrival of people from Western Asian (0.19) or from America (0.21). Also for the MENA countries, is quite significant the pro-trade effect on imports of manufactures and primary products towards Spain (elasticity of 13% and 10%, respectively.

6. Conclusions and policy concerns

Economic growth and globalization of the world economy have been pushing migration flows in the past decade, with relevant net benefits for both origin and destination countries, benefits proved by the existing economic literature, even if these effects are not acknowledge by several groups in developed countries. Immigrants have benefited from access to employment in EU countries, sending significant amounts of money to their countries of origin. Such financial flows have also contributed to alleviate capital and credit constrains at the firm level in Southern countries, then fostering economic growth. On the other side of the borders, immigrants provide a key flow to cover labour (and, in some cases, human capital) needs in destination countries, and their arrival delays the aging process of Western populations, widening the avalaible period to develop the required reforms to deal with that process. Notwithstanding, the present economic crisis has stopped flows of people inside the MED region, thus hardening conditions for immigrants living in many EU countries and consequently reducing remittances towards North of Africa (NA) countries. Rising levels of unemployment have recently increased the protectionist behaviour of EU societies and on-going political and social changes occurring in NA area have lead migration flows to become a hot issue again. In this paper we have shed

more light on benefits arising from immigration arriving to three EU countries, basically through trade creation, both in the home countries of the new comers (new imports of Portugal, Italy and Spain) and in their host countries (new exports).

Complementarily, literature on how migration enhances trade volumes has heavily relied on empirical findings, not usually guided by formal underlying theory. This fact begs for caution in generalising its results as if showing causal relationships between the trade and migration variables. Our findings have been the following: In our empirical analysis we have observed clear migration-creating-trade effects, mostly explained by immigrants networks, although some modest preference effects appear in data. Such networks were basically confined at the intra-provincial space, not spilling over nearby or more distant territories inside the countries of analysis. Moreover, those networks have been reinforced along our period of analysis, 2002-2010, with new entrants choosing the main destinations of the country to settle themselves, and a clear concentration pattern of immigrants emerging inside some preferred spatial clusters of the countries. Empirical results have also shown that the more distant the countries of origin of immigrants are from those of destination, in terms of institutions, development levels, or cultural terms, the higher the pro-trade effects of people´s networks become. Additionally, the trade-creation effect of immigrants seems to proceed as a lump-sum effect for a country, not increasing gradually when the number of immigrants significantly increases in that country. In terms of geography and trade partners, in general, pro-trade effects concentrate in more distant, and then more dissimilar, partners of Portugal, Italy and Spain, as Eastern European, Western and Eastern Asian and Sub-Saharian countries by the side of export flows. For the imports side, closer countries with tighter ties with the countries of reference seem to provide some preference effects enhancing trade, mainly those of Latinamerica, the Mediterranean region and Western Europe. For some particular goods, MENA countries have also shown very intense effects in fostering Portuguese exports of manufactures, as well as Spanish total imports, both for manufactures and agricultural products, what opens new grounds for pushing trade exchanges inside the MED area.

This research has also shown very appealing results for our three sample countries inside the MED region. In contrast with the results of Foad (2010) for MENA immigrants, that observes the migration-trade link being basically led by preference-channel effects, with smaller room for the network one, we found the preminence of the latter against the former, with preference effects slightly appearing in our data set. He also found quantitative evidence of weaker assimilation among MENA migrants to Europe, in comparison with those arriving to the US. Our results somehow qualify this idea, as we find some evidence of a certain degree of North African immigrants´ assimilation at least in Spain, Italy and Portugal. In this respect, that evidence comes from noting the smaller trade effects appearing here for the MENA region, in comparison with those linked to people flows from more distant places, such as Asian and Sub-Saharian countries. From our perspective, it is a relatively high level of North African immigrants´ assimilation what would be explaining the lower, although existing, trade-enhancing effects appearing in data for such nationality. It would be the evidence also of less fix-trade cost earnings derived from networks with NA countries (Moroccan, Algerian and Tunisian entrances in Spain and Italy that are leading those flows of people coming from the NA-Southern EU countries´ corridor).

Regarding trade policy, some more specific results are of interest, In that regard, the composition of trade has been splitted by primary and manufacturer goods, and the results are not homogeneous, as we observe that some MENA immigrants promote more deeply imports to their receiving countries (Spain), while other increase exports (Portugal). Even in the case of Portugal, some flows of immigrants reduced imports of manufactures, in a clear substitution effect. In this case, a more detailed work for the MENA region, particularly in terms of the types of goods, is needed to get more accurate results. Even so, taking into account the linkages revealed in this paper, it could be anticipated that Migration and Trade Common Policies, as well as the promotion of particular industries in the North of Africa, should be viewed as complementary tools of a shared development strategy for the MENA region, where flows of people, goods and capital could be pushed to provide net benefits for all partners.

Finally, apart from the MED region, our results show the relevance that immigrants´ networks could have in providing a support for EU trade policies with distant Asian countries when good commercial (mutual) institutions lack, an important characteristic that could be easily generalised for all North-South trade flows. We must keep in mind that ethnic networks not only were important for informational failures limiting potential exchanges, but also for the lack of good bilateral procurement procedures, an aspect that is also reducing the potential gains from trade exchanges occurring between North-South countries, or even Eastern-Western relationships inside the EU space. The relevance observed in the people´s flows coming from less developed regions of the EU ensures vital increases in intra-EU trade exchanges, and not only for primary products, but also for manufactures produced by new multinational companies now located in the Eastern Europe countries. As we must remember, trade gains come from specialisation inside the EU area, but dynamic gains are basically those who make the bulk, although taking its time to become a reality.

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APPENDIX

Data description

We construct a new trade-immigration database using regional data for Italy, Portugal and Spain over the period 2002-2010 using three sets of variables: (1) Bilateral exports and imports between the provinces of Italy, Portugal and Spain and a particular country; (2) Bilateral stocks of foreigners residing in a province in Italy, Portugal or Spain; (3) A number of observed characteristics at both country level and province level, including the standard gravity variables (GDP and distance) and other variables required specifically to examine the trade-migration relationship.

The database contains information on bilateral trade flows and immigration for 103 Italian provinces that existed until 2006 (the 4 provinces created after 2006 have been excluded), 18 Portuguese inland districts (the islands of Azores and Madeira have been excluded) and 50 Spanish provinces (the African territories of Ceuta and Melilla have been excluded).

(1) Trade data: Trade data are taken from the publicly available database of the Italian Institute of Statistics (www.coeweb.istat.it), the Portuguese Institute of Statistics (www.ine.pt), and the Spanish Customs (www.aeat.es). Trade flows refer to the value of exports and imports of 107 Italian provinces (NUTS-III), 30 Portuguese provinces (NUTS-III) and 52 Spanish provinces (NUTS-III) with around 200 trading partners around the world. Data are measured in such a way that exports and imports are associated with the province of shipment, i. e. the province where the custom transaction was registered. Data on country bilateral trade flows are taken from UN COMTRADE in US current dollars and then import and export shares from each province are applied to scale trade flows for each province. For Portugal we have matched the 30 NUTS-III provinces with the 20 districts in the following way: 1 Lisboa (Gran Lisboa), 2 Leiria (Oeste, Pinhal Litoral), 3 Santarém (Medio Tejo, Leziria Do Tejo), 4 Setúbal (Setúbal), 5 Beja (Alentejo Litoral, Baixo Alentejo), 6 Faro (Algarve), 7 (Evora, Alentejo Central), 8. Portalegre (Alta Alentejo), 9 Castelo Branco (Cova de Beira, Beira Interior Sul, Pinhal Interior Sul), 10 Guarda (Serra de Estrella, Beira Interior Norte), 11 Coimbra (Baixo Mondego, Pinhal Interior Norte), 12 Aveiro (Entre Douro e Vouga, Baixo Vouga),13 Viseu (Dao Lafoes), 14 Braganza (Douro), 15 Vila Real (Alto Tras os Montes), 16 Oporto (Gran Oporto, Tamega), 17 Braga (Ave, Cávado), 18 Viana do Castelo (Minho-Lima), 19 Azores (Azores), 20 (Madeira).

(2) Immigration data: Foreign-born residents data are taken from the public available database of the Italian Institute of Statistics (http://demo.istat.it/), the Portuguese Servico de Estrangeiros e Fronteiras (Anuario de Extranjeria, Annual Report, http://sefstat.sef.pt/) and Spanish Institute of Statistics ((www.ine.es). Data on foreign-born residents at the end of the year by province are taken from 2002 to 2010.

(3) GDP and population: Data on country Gross Domestic Product and population are taken from the World Development Indicators, and are expressed in current US dollars and thousands, respectively. The GDP and population of Italian, Portuguese and

Spanish provinces are taken from EUROSTAT and then rescaled to match the value of national GDP and population of each country, as reported in WDI.

(4) Bilateral distance: We follow Head and Mayer (2000) to construct the distance variable between each province and each foreign country. We calculate a weighted average of the great circle distance (in kilometres) from the capital of each province to the five most important cities of each partner country, in which the weights are the respective populations of the latter. The great circle distance between i's and j's cities is calculated as follows. First we transform the latitude φ and the longitude λ into radians (x π /360). Second, the formula used to calculate the distance between the pair of cities is $\Delta_{ij} \equiv \lambda_j - \lambda_i$, $d_{ij} = \arccos\left[\sin\varphi_i \sin\varphi_j + \cos\varphi_i \cos\varphi_j \cos\Delta_{ij}\right] z$, with z= 6367 for km. Third, we calculate the population-weighted average distance between the capital of the province and the cities of the foreign countries using the formula $D_{i,cou} = \sum_{j \in cou} w_j d_{ij}$, $w_j = pop_j / pop_{cou}$.

(5) Quality of institutions (governance): The governance indicators of the World Bank reflect the statistical compilation of responses on the quality of governance given by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries, as reported by a number of survey institutes, think tanks, non-governmental organizations, and international organizations. The indicators are constructed using the unobserved components methodology described in detail in the paper of Kaufmann, Kraay, and Mastruzzi (2010), "The Worldwide Governance Indicators: A Summary of Methodology, Data and Analytical Issues". *World Bank Policy Research*. Here we use the rule of law index as a measure of the quality of institutions. Rule of law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. The index is decreasing in the quality of institutions and stands between −2.5 and 2.5.

(6) Cultural distance. We have created a formative index based on five of the major dimensions included in Dow and Karunaratne (2006), which are differences in language, religion, industrial development, education and degree of democracy. The specific scores for the five variables are publicly available (Dow, 2010) and have been converted in to a single composite index using the same methodology as for the Hofstede index:

$$CD_{DK} = \Sigma_k (I_{ijk})^2 / V_k / 5$$

where I_{ijk} is the distance between countries i and j for the k^{th} dimension of cultural distance, and V_k is the variance of the k^{th} dimension of cultural distance across 120 countries.

Table A1. Pro-trade effect of immigrants by control variables, 2002-2010 (complete results)

EXPORTS

RULES OF LAW		poor	poor	med	med	good	good
Immigrants from country j	lMij	0.0483***	0.0627***	0.0240	-0.00148	-0.00353	-0.00451
living in province i		[0.0153]	[0.0173]	[0.0168]	[0.0181]	[0.0143]	[0.0149]
Immigrants from country j	lMborder		-0.0269		-0.0131		-0.0264
living in adjacent provinces of i			[0.0208]		[0.0228]		[0.0195]
Immigrants from country j	lMout		-0.0228		0.106***		0.0429
living in non-adjacent provinces of i			[0.0281]		[0.0354]		[0.0325]
CULTURAL DISTANCE		low	low	med	med	high	high
	lMij	0.0270	0.0217	0.0106	-0.00610	0.0245***	0.0232**
		[0.0184]	[0.0197]	[0.0162]	[0.0175]	[0.0112]	[0.0117]
	lMborder		-0.0372		0.00644		-0.0147
			[0.0294]		[0.0208]		[0.0265]
	lMout		0.0748		0.0711**		-0.0824**
			[0.0461]		[0.0320]		[0.0418]
LEVEL OF GDP per capita		low	low	med	med	high	high
	lMij	0.0490***	0.0372**	0.0310*	0.0239	-0.0117	-0.00405
		[0.0153]	[0.0172]	[0.0169]	[0.0182]	[0.0141]	[0.0149]
	lMborder		-0.0534***		0.0126		-0.0246
			[0.0202]		[0.0236]		[0.0193]
	lMout		0.119***		0.0253		-0.0466
			[0.0274]		[0.0359]		[0.0332]
PRESENCE OF IMMIGRANTS (SHARE IN POPULATION)		<4	<4	[4,10]	[4,10]	>10	>10
	lMij	0.0328**	0.0274*	0.0360**	0.0226	0.0365**	0.0426**
		[0.0149]	[0.0162]	[0.0155]	[0.0163]	[0.0179]	[0.0197]
	lMborder		-0.0114		-0.0405*		-0.0583*
			[0.0172]		[0.0238]		[0.0298]
	lMout		0.0440*		0.160***		-0.0175
			[0.0255]		[0.0420]		[0.0402]

IMPORTS

RULES OF LAW		poor	poor	med	med	good	good
Immigrants from country j	lMij	0.0358**	0.0442**	0.0440**	0.0124	-0.0126	0.00168
living in province i		[0.0162]	[0.0179]	[0.0182]	[0.0190]	[0.0182]	[0.0187]
Immigrants from country j	lMborder		0.0770***		0.0835***		-0.0858***
living in adjacent provinces of i			[0.0206]		[0.0230]		[0.0249]
Immigrants from country j	lMout		-0.131***		0.0835**		-0.0321
living in non-adjacent provinces of i			[0.0312]		[0.0400]		[0.0388]
CULTURAL DISTANCE		low	low	med	med	high	high
	lMij	-0.00866	0.00358	0.0296	0.0534**	0.0302	0.0207
		[0.0243]	[0.0264]	[0.0211]	[0.0227]	[0.0206]	[0.0210]
	lMborder		-0.0661*		-0.0267		0.109***
			[0.0359]		[0.0273]		[0.0245]
	lMout		0.0257		-0.0779*		-0.0808*
			[0.0526]		[0.0418]		[0.0425]
LEVEL OF GDP per capita		low	low	med	med	high	high
	lMij	0.0425***	0.0171	0.0282	0.0403*	0.000165	0.0117
		[0.0150]	[0.0159]	[0.0197]	[0.0209]	[0.0189]	[0.0198]
	lMborder		0.0909***		0.0223		-0.0452*
			[0.0184]		[0.0261]		[0.0252]
	lMout		-0.0139		-0.110***		-0.0597
			[0.0295]		[0.0411]		[0.0399]
PRESENCE OF IMMIGRANTS (SHARE IN POPULATION)		<4	<4	[4,10]	[4,10]	>10	>10
	lMij	0.0324**	0.0281*	0.0103	0.00991	0.0390*	0.0498**
		[0.0156]	[0.0165]	[0.0181]	[0.0187]	[0.0211]	[0.0230]
	lMborder		0.0567***		0.0145		-0.0149
			[0.0174]		[0.0268]		[0.0311]
	lMout		-0.0562**		-0.0170		-0.0385
			[0.0274]		[0.0537]		[0.0470]

Table A2. Pro-trade effect of immigrants by geographical block of origin, 2002-2010 (complete results)

Portugal								
TOTAL EXPORTS	WEST_EUR	EAST_EUR	REST_OECD	MENA	AFRICA	AMERICA	WEST_ASIA	EAST_ASIA
lMij	0.104**	-0.0389	-0.00789	0.320***	0.110*	0.00345	0.196***	0.0233
	[0.0440]	[0.0514]	[0.0860]	[0.0906]	[0.0631]	[0.0662]	[0.0430]	[0.105]
EXPORTS OF MANUFACTURES								
lMij	0.0729	-0.0606	0.00852	0.339***	0.111*	-0.00134	0.182***	0.0175
	[0.0561]	[0.0512]	[0.0811]	[0.0910]	[0.0622]	[0.0664]	[0.0414]	[0.105]
EXPORTS OF PRIMARY PRODUCTS								
lMij	0.0489	0.0626**	-0.0419	-0.108	0.0562*	-0.0421	0.0442**	0.0991
	[0.0823]	[0.0280]	[0.0765]	[0.0747]	[0.0336]	[0.0351]	[0.0189]	[0.0677]
Italy								
TOTAL EXPORTS								
lMij	0.0146	0.0350	0.0390	-0.0323	0.0577**	-0.0215	0.0182	0.0277
	[0.0332]	[0.0237]	[0.0285]	[0.0372]	[0.0269]	[0.0293]	[0.0345]	[0.0461]
EXPORTS OF MANUFACTURES								
lMij	0.00215	0.0319	0.0298	-0.0293	0.0606**	-0.0255	0.0165	0.0299
	[0.0346]	[0.0242]	[0.0289]	[0.0372]	[0.0268]	[0.0293]	[0.0344]	[0.0462]
EXPORTS OF PRIMARY PRODUCTS								
lMij	0.0776	0.00288	0.0483	-0.0186	-0.000645	0.00454	-0.0116	0.0163
	[0.0521]	[0.0254]	[0.0438]	[0.0372]	[0.00671]	[0.00990]	[0.0190]	[0.0340]
Spain								
TOTAL EXPORTS								
lMij	-0.0124	0.124***	0.138***	0.0215	0.0542	-0.0259	0.130**	0.0917
	[0.0416]	[0.0449]	[0.0485]	[0.0595]	[0.0408]	[0.0431]	[0.0578]	[0.0713]
EXPORTS OF MANUFACTURES								
lMij	-0.0616	0.136***	0.161***	0.0121	0.0642*	-0.00880	0.0535	0.0592
	[0.0590]	[0.0451]	[0.0605]	[0.0613]	[0.0385]	[0.0456]	[0.0547]	[0.0711]
EXPORTS OF PRIMARY PRODUCTS								
lMij	0.0461	0.0521	0.105*	0.0239	-0.00362	0.0253	0.0563	-0.0215
	[0.0601]	[0.0446]	[0.0618]	[0.0765]	[0.0351]	[0.0360]	[0.0471]	[0.0875]

Portugal								
TOTAL IMPORTS	WEST_EUR	EAST_EUR	REST_OECD	MENA	AFRICA	AMERICA	WEST_ASIA	EAST_ASIA
lMij	0.112**	0.0264	0.0375	-0.230**	-0.0508	0.216***	0.0727	0.153
	[0.0536]	[0.0554]	[0.0624]	[0.110]	[0.0625]	[0.0771]	[0.0515]	[0.115]
IMPORTS OF MANUFACTURES								
lMij	0.110**	0.0377	0.0310	-0.227**	-0.00654	0.155**	0.0552	0.0983
	[0.0514]	[0.0557]	[0.0636]	[0.106]	[0.0597]	[0.0716]	[0.0478]	[0.0956]
IMPORTS OF PRIMARY PRODUCTS								
lMij	-0.0250	0.0722	-0.0627	0.0467	-0.00924	0.0668	0.0390	0.0881
	[0.0795]	[0.0460]	[0.0810]	[0.0672]	[0.0379]	[0.0621]	[0.0270]	[0.140]
Italy								
TOTAL IMPORTS								
lMij	0.0751**	0.0277	-0.0370	0.0150	0.00249	0.0425	0.0614	0.108***
	[0.0353]	[0.0346]	[0.0461]	[0.0612]	[0.0222]	[0.0311]	[0.0413]	[0.0412]
IMPORTS OF MANUFACTURES								
lMij	0.0913**	0.0344	-0.0368	0.0448	0.0243	0.0235	0.0218	0.114***
	[0.0366]	[0.0349]	[0.0468]	[0.0607]	[0.0206]	[0.0299]	[0.0412]	[0.0422]
IMPORTS OF PRIMARY PRODUCTS								
lMij	0.112*	0.0538*	-0.00959	-0.0597	-0.0228	0.0508**	0.0401*	0.0448
	[0.0596]	[0.0299]	[0.0417]	[0.0375]	[0.0146]	[0.0225]	[0.0234]	[0.0436]
Spain								
TOTAL IMPORTS								
lMij	-0.000665	0.148***	0.108	0.127*	0.0381	0.0543	-0.109**	0.0188
	[0.0567]	[0.0506]	[0.0664]	[0.0691]	[0.0355]	[0.0496]	[0.0504]	[0.0455]
IMPORTS OF MANUFACTURES								
lMij	0.0226	0.123**	0.0348	0.133*	0.0175	0.0122	-0.127***	0.00824
	[0.0599]	[0.0481]	[0.0653]	[0.0705]	[0.0258]	[0.0400]	[0.0473]	[0.0475]
IMPORTS OF PRIMARY PRODUCTS								
lMij	-0.0431	0.156***	0.120*	0.104*	0.0203	0.0551	0.0505	0.0864
	[0.0954]	[0.0427]	[0.0685]	[0.0605]	[0.0305]	[0.0508]	[0.0326]	[0.0877]

CHAPTER 2:

THE TRADE-MIGRATION RELATIONSHIP: UPDATING THE CASE OF FRANCE

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Introduction

The trade-migration relationship has recently known an increasing interest for both economists and policy makers. The reasons for such a new interest are various. First, most Western countries, especially Europe, have faced in the past decades an increase in migration flows at a time when unemployment rates remained at relatively high levels. As a consequence, the inability of the labor market to absorb the new migrants led government to tighter their migration policy. In this regard, many EU countries have made more difficult for the foreign population to get residence permits, with the exception of particular types of migrants, such as qualified workers or students. In turn, this has increased illegal migration, especially in Southern Europe (for a detailed survey, refer to Khachani et al., 2011).

At the same time, both multilateral trade negotiations (Uruguay Round) and the development of regional arrangements in the Euromed area (the Barcelona Agreement and the Greater Arab Free Trade Area) facilitated trade relationship between the EU and its Mediterranean Partners (MPs).

Overall, the past two decades coincided with the rise of both migration and trade. But the question is: What is the relationship between migration and trade? In particular, what is the impact of migration on trade? Creating or diverting? From a theoretical standpoint, this problem is dealt with through the standard HOS theory. It states that, in a perfect competition framework, trade itself can ensure factor price equalization (FPE). As a result, as trade is liberalized, migration should decrease (substitution relationship). However, the new trade theory (Markusen, 1983) argues that in an imperfect competition framework, trade itself cannot ensure FPE. Consequently, trade and migration can be complement. Recent

[1] We are grateful to Abdelkarim El Fatimi, Albert Milogo (Université du Sud Toulon-Var) and Heba Eldeken (Cairo University) for helpful research assistance.

empirical articles generally support this last result (Wagner and al., 2002; Piperakis and al., 2002 ; Co and al., 2004; Péridy, 2010; Foad, 2010; Requena and Serrano, 2011).

Most of the studies mentioned before concentrated on migration into the EU or North America. However, within the EU, the various countries can be in very different situation, both in terms of immigration, policy migration and trade. In this regard, France is placed at a central position in Europe between Southern and Northern EU countries. Consequently, France has attracted migrants from North Africa who were willing to settle in France via Spain or Italy. In addition, France has also been faced by the inflow of migrants who wanted to settle further North, especially in the UK. In order to address the migration problem, the French governments tended to restrict the entry of migrants, especially through the Sarkozy Law II in the mid 2000s. Nevertheless, the question of illegal migration remains unsolved.

This study is aimed at highlighting migration patterns and trade in France. The first section provides data and stylized facts about migration, remittances and trade in the past decade. Then, Section 2 develops a trade model which explores the trade-migration relationship, following the last developments in the gravity equation (Anderson and van Wincoop, 2003) applied to migration (Foad, 2010, Briant et al., 2009)

Section 1: Migration, Remittances and Trade in France

I) Migration

Migration patterns and trends in the EU have considerably changed over the past 40 years. France has been particularly concerned with these changes. One crucial change coincides with the first oil shock in the mid-70s, which has given rise to a sharp increase in unemployment rates. As a result, migration policies have become much more restrictive. This global pattern is still valid now, since more recent migration policies (e.g. Sarkozy II) made it more difficult family reunification as well as asylum demand. It also reinforced the controls concerning

illegal migrants. However, it encouraged chosen immigration, like qualified workers or students (Kachani et al., 2011).

This crucial change has in turn led to new types of migration. First, migration as a means of family reunification has progressively replaced individual migration. This form of migration has been encouraged by bilateral country agreements, because the family is generally supposed to protect its members, to make their social integration in the destination country easier, and to improve their economic resources (ADRI, 1994). This process has mainly benefited migrants already settled in Europe. In addition, it has substantially changed the profile of the migrant population in the various destination countries in the EU. As a matter of fact, the proportion of children and woman has considerably increased.

In addition, since the reduction in legal migration from 1970 onward, illegal immigration has considerably progressed, especially toward Southern Europe, including France. This is due to several reasons: the collapse of dictatorships in Greece, Spain and Portugal; these countries' economic take off, their integration into the EC as well as the free move of people within the EC, especially since the Shengen agreement (Péridy et al., 2008).

Finally, the brain drain is the last type of migration change. This migration channel coincides with the growing importance of technical progress in Northern countries. Moreover, the baby boomers are increasingly retiring and the lack of skilled workers forces Northern countries to look for Southern skilled people (AMERM, 2002). As a result, the proportion of skilled migrants is equal to 15% for Morocco, up to 50% for Lebanon, Syria and Egypt (Carim, 2006).

a) Recent general trends

Figure 1 provides interesting trends about the inflow of migrants in France over the past 20 years. It is striking to observe that in spite of tighter migration

policies, the annual net number of immigrants has slightly increased since 1995, i.e. from about 40,000 to 100,000. Taking rough immigration data, Table 1 exhibits an annual number of about 210,000, of which 43% originating from Africa, 32% from Europe (mainly from the EU), 15% from Asia and 7% from America. These results are complemented by Tables 2a and 2b which provide a breakdown by country. The main countries migrants are originating from are Germany, Spain and the UK on the one hand as well as Algeria and Morocco on the other hand. These 5 countries account each for about 10,000 or more immigrants in France. This is half of the total number of immigrants who come to France.

Figure 1: Net migration flows into France
(thousands, 1990-2011, net immigration)

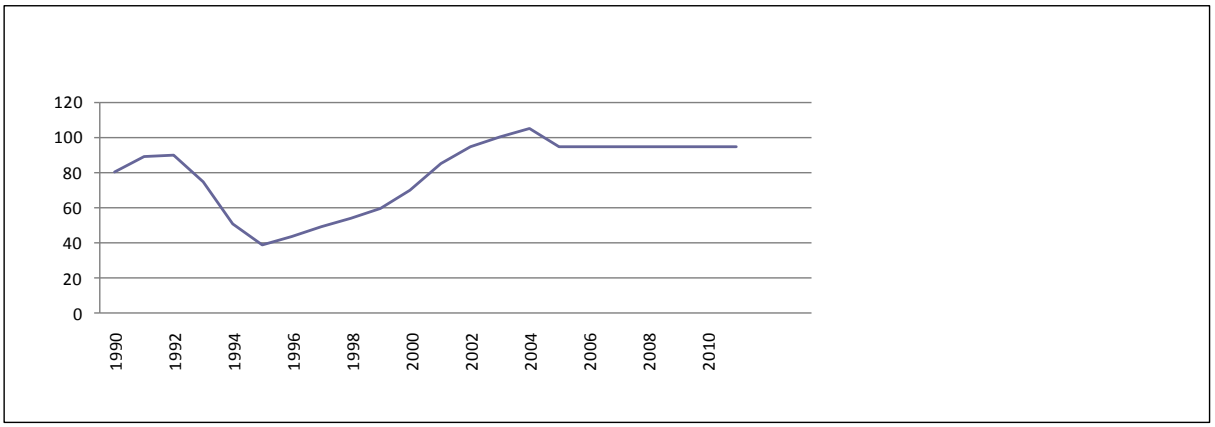


Table 1: Rough migration flows into France: breakdown by geographical areas

	2002	2003	2004	2005	2006	2007	2008
European Union (1)	50 540	50 274	46708	55 941	55 000*	55 000	55 000*
Other Europe (2)	16 438	17 518	18 529	21 063	19 328	16 720	17 656
Africa	94 317	101 658	100 567	95 309	92 194	83 606	90 582
Asia	29 070	30 346	30 458	29 274	29 918	29 196	31 700
América	14 682	14 958	14 941	14 941	15 454	14 272	15 154
Other	660	642	684	756	862	864	963
Total	205 707	215 396	211 863	217 284	212 720	199 658	211 055

Source: Thierry (2008) from INED and AGDREF.

(*)From 20058 onward, inward migration from the EU is estimated through annual enquiries.

(**1)** EU-15 until 2003 including Ireland, Liechtenstein, Norway), UE-25 from 2003 to 2006, UE-27 since 2007.

(2)includingTurkey.

Table 2a: Number of migrants into France originating from the EU (thousand, 1998-2009)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Belgium	-	-	-	-	-	-	-	-	-	12 269	-	-
CzechRepublic		21	17		333	451	388	215	163	409	286	-
Denmark	766	701	707	645	643	769	808	949	1 030	1 098	676	666
Germany (including former GDR from 1991)	14 298	15 261	-	13 451	12 747	12 324	12 488	12 260	12 705	12 874	12 979	-
Estonia	2	0	-	-	-	-	3	5	28	38	48	58
Ireland	-	-	-	-	-	-	-	-	-	-	1 975	-
Greece	424	-	-	-	-	-	-	-	11	292	-	-
Spain	2 690	3 346	4 231	4 948	5 459	8 975	9 912	11 127	12 717	12 986	10 146	8 898
Italy	2 309	2 012	2 255	-	2 154	1 791	1 752	2 347	2 195	2 668	2 497	2 345
Cyprus	87		63	105	35	89	127	244	115	128	133	-
Latvia	1	2	0	2	12	11	12	24	37	46	76	-
Lithuania	1	8	14	42	45	31	42	31	18	17	27	-
Luxembourg	1 959	2 185	2 271	2 123	1 895	1 866	1 957	2 227	2 510	2 799	3 201	2 730
Hungary	181	195	188	221	235	245	21	650	64	44	376	-
Malta	0	0	0	0	-	-	-	-	-	190	-	-
Netherlands	2 059	2 022	2 166	2 158	2 037	1 850	1 815	1 823	1 972	2 211	3 029	2 525
Austria	613	692	638	609	610	662	775	823	858	931	960	-
Poland	-	-	-	-	-	-	-	-	29	24	320	-
Slovenia	32	11	28	24	41	58	32	140	129	80	76	68
Slovakia	-	-	-	1	3	142	284	319	272	295	223	-
Finland	99	106	143	139	121	134	120	212	201	234	223	172
Sweden	601	559	591	661	547	487	570	618	756	890	957	847
United Kingdom	14 979	13 608	14 668	16 208	10 608	21 198	10 768	4 274	-	-	-	-

Source: Commission européenne, Eurostat, la migration et les statistiques de la population des migrants, 2011.

Table 2b: Number of migrants into France originating from non EU countries (thousand, 1998-2009)

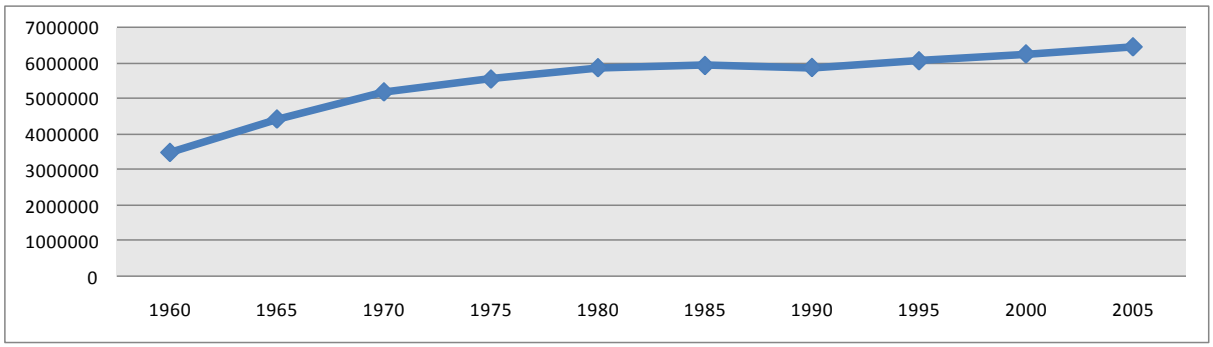
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Algeria	11,4	12,4	15.0	23,4	28,5	27,9	24,8	25,4	23,1	22,3	11,4
Morocco	14,3	17,4	19,1	21,8	22,6	22,2	20,0	19,2	17,9	19,2	14,3
Tunisia	4,0	5,6	6,6	7,8	9,4	8,9	8,0	8,2	7,8	7,9	4,0
Turkey	5,8	6,6	6,9	8,5	8,6	9,1	8,9	8,3	7,6	7,7	5,8
Mali	2,5	1,5	1,7	2,0	2,6	2,6	2,5	2,9	2,8	4,6	2,5
China	1,8	1,8	2,3	1,9	2,4	2,9	2,8	4,3	3,7	4,0	1,8
Cameroun	1,4	1,8	2,4	2,9	3,4	4,1	4,3	4,4	3,9	3,7	1,4
Roumania	0,9	1,2	1,5	1,5	1,6	1,8	1,7	1,9	2,4	3,7	0,9
Congo	1,6	1,8	2,3	3;3	3,8	4,1	4,1	4,0	3,4	3,6	1,6
Côte d'Ivoire	1,4	1,8	2,2	2,8	3,4	4,0	3,8	3,6	3,4	3,4	1,4
Sénégal	1,9	2,0	2,3	2,5	2,6	2,5	2,5	2,7	2,6	3,1	1,9
Russia	1,0	1,2	1,4	1,9	2,4	2,9	3,0	2,5	2,3	3,0	1,0
Sri Lanka	1,2	1,3	2,1	1,7	1,4	1,6	1,8	1,1	1,9	2,4	1,2
Congo (Dem. Rep.)	1,6	1,1	1,4	1,8	1,7	1,8	2,4	1,8	2,0	2,4	1,6
USA	2,7	2,6	2,6	2,4	2,3	2,6	2,4	2,3	2,0	2,3	2,7

Sources : OFII (Office français de l'immigration et de l'intégration), MIIINDS, OFPRA

As a last set of general trends, Figures 2a and 2b exhibit the stock of migrants, both in value and as a percentage of the overall population in France. It is striking to observe that the number of migrants sharply increased from 1960 to 1980, i.e. from 3.5 to 6 million. Then it has tended to stabilize or slightly increase since the early 2000. Migrants currently account for about 10% of the French population. This percentage has been stable since the mid 70s.

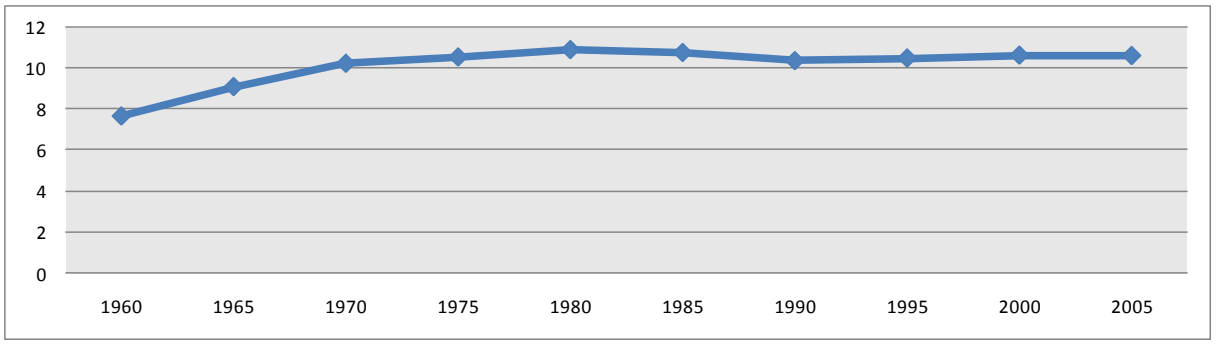
Figure 2a: Stock of migrants in France

(number of migrants originating from third countries)



Source: World Bank (World Development Indicators 2011)

Figure 2b: Stock of migrants in France (% of the French population)



Source: World Bank (World Development Indicators 2011)

a) Permanent migration

Table 3 provides a breakdown for the various motivations of the migrants. Family reunification still represents the great bulk of total inflows. As matter of fact, it accounted for 62% of total inflows in 2009. This proportion is however slightly declining, since it was equal to 73% in 2004. Conversely, migrations a motivation of work (which is the second migration motivation), has recently increased as a total number of migrants (i.e. from 5% to 18% over the same period). As a last point, the number of refugees remains stable, i.e. about 10,000 annually.

Tableau 3: Permanent inflows from 2004 to 2009 : Breakdown by motivation

	2004	2005	2006	2007	2008	2009
Work	7 625	9 410	10 872	17 638	23 786	22 450
Familyreunification	103 112	95 834	100 385	88 082	86 896	78 065
Visitors	5 147	4 335	4 505	4 050	3 604	4 162
Refugees	11 425	13 770	7 354	8 781	11 441	10 373
Other	14 245	12 517	11 968	10 331	10 227	11 110
Total	141 554	135 866	135 084	128 882	135 954	126 160

Sources : OFII, OFPRA, ministère de la justice et MIIINDS.

The following tables provide additional details concerning working migrations. A first set of interesting information provided in Table 4 is that the great bulk of these migrants are employees (20,655 over a total of 22.450). These employees are mainly originating from non EU countries, namely Africa (10,618) and Asia (5,160). Conversely, only 3.304 migrants are originating from Europe (Table 5). Finally, Table 6 provides a breakdown by skills. Interestingly, skilled employees account for 80% of the total number of immigrants in 2009. They include skilled workers (8,302) as well as technicians and skilled managers (8,197). Conversely, the number of unskilled employees amounts only to 3,304.

A breakdown by business sectors reveals that 70% of the permanents migrants are working in services, 18% in the building trade, 11% in industry and only 1% in agriculture. In addition, these migrants are mainly working in the Paris region (70%) as well as the Lyon's region and the South-East (5% each). Finally, 80% of these permanent workers are not new migrants but have enjoyed a change of migrant status (i.e. from student to permanent worker).

Tableau 4 : Permanent migration for work motivation : breakdown by categories of workers.

	2004	2005	2006	2007	2008	2009
Permanent employees	6 740	8 556	9 997	16 775	22 719	20 655
Non employes	885	854	875	863	370	903
- religious work	511	443	487	532	684	608
- Liberal profession	73	47	37	28	13	5
- Other	301	364	351	303	370	290
	-	-	-	-	-	892
Other	-	-	-	-	-	345
-special skilled workers						
- special scientist workers	-	-	-	-	-	547
Total	7 625	9 410	10 872	17 638	23 786	22 450

Source : OFII.

Tableau 5 : Permanent migration for work motivation : breakdown by countries of origin.

	2004	2005	2006	2007	2008	2009
EU	1 091	1 652	1 956	5 279	6 108	3 304
CIS	225	307	351	533	812	787
Asia	2 144	2 710	2 716	3 660	4 858	5 160
Africa	2 732	3 164	4 182	6 049	9 485	10 618
America	1 320	1 473	1 559	2 004	2 375	2 405
Oceania	84	99	103	105	140	170
n.a.s.	2	5	5	8	8	6
Total	7 625	9 410	10 872	17 638	23 786	22 450

Source : OFII.

Tableau 6 : Permanent migration for work motivation : breakdown by business sector.

	2004	2005	2006	2007	2008	2009
Qualification	719	732	721	1 414	2 308	3 359
Unskilled workers	2 760	3 603	3 502	6 972	9 474	8 302
Skilled employees	3 261	4 221	5 364	7 447	9 992	8 197
Skilled technicians and managers	-	-	410	942	945	797
Business sector	257	250	234	225	291	328

Agriculture	1 053	1 201	1 349	1 860	2 411	2 155
Industry	786	1 177	1 247	3 287	4 823	3 564
Building	4 644	5 928	7 167	11 055*	14 624	14 024
Services						
Location area						
Île-de-France	3 227	4 893	5 792	10 463	14 742	14 182
Rhône-Alpes	499	558	677	914	1 114	1 047
Alsace	135	94	154	243	248	274
PACA (South-East)	665	689	803	1 059	1 330	1 032
DOM	278	267	223	342	289	101
Entry type						
New migrant	3 053	3 347	3 154	4 089	5 253	3 744
Change in migration status	3 687	5 209	6 843	12 686	17 466	16 911
Total	6 740	8 556	9 997	16 775	22 719	20 655

Source : OFII.

b) Temporary migration

Several types of temporal migrants can be distinguished. A major distinction can be made between economic and non economic temporal migration. Economic migrations amount to about 10,000 and mainly include migrants who hold a temporary working permission (Table 7). It is worth mentioning that more than half of temporary migrants are not new migrants but have enjoyed a change in their migration status. These migrants are mainly originating from Africa, North America and Asia (Table 8).

Another category of migrants include seasonal workers who mainly work in agriculture. They are mainly originating from Morocco and Tunisia to a lesser extent (Table 9).

The final temporary migration category includes students (Table 10). They amount to a total of 50,000 and mainly come from Africa (40%), of which half

from Maghreb countries and the other half from sub-saharian Africa, Asia (40%), mainly from East-Asia as well as America (18%).

Table 7: Temporary economic migrants: breakdown by status type

	2004	2005	2006	2007	2008	2009
Workerswithtemporary permission	9 950	10 403	10 677	9 897	9 868	5 549
Temp. Residence permit	-	-	-	-	-	420
Trainee	535	422	491	438	606	597
Artists	55	54	37	39	45	293
Total	10 540	10 879	11 205	10 374	10 519	6 622

Source : OFII.

Table 8: Temporary economic migrants: breakdown by country of origin

	2004	2005	2006	2007	2008	2009
Europe other than EEA and CIS	1 674	1 712	1 789	1 925	1 530	789
New EU members 2004	1 091	978	1 015	983	406	0
New EU members2007	419	585	600	781	950	687
Other Europe	164	149	174	161	174	102
CIS	462	599	612	587	648	333
CIS Europe	394	525	503	524	609	302
CIS Asia	68	74	109	63	39	31
Asia	2 026	2 245	2 290	2 182	2 297	1 296
South-East	91	73	95	80	80	50
Oriental Asia	978	1 067	1 131	988	1 029	536
South Asia	365	493	556	539	617	403
OtherAsia	592	612	508	575	571	307
Africa	1 759	1 666	1 750	1 764	1 868	1 320
Maghreb	1 142	1 038	1 056	1 058	1 167	820
Sub-saharianAfrica	416	459	443	446	487	378
OtherAfrica	201	169	251	260	214	122
América	3 814	3 955	3 994	3 221	3 306	2 103
NothernAmerica	2 349	2 377	2 543	2 197	2 095	1 357
Central and Latin America	1 465	1 578	1 451	1 024	1 211	746
Océania	195	213	225	208	212	121
Countries n.o.s.	20	13	17	10	7	7
Total	9 950	10 403	10 677	9 897	9 868	5 969

Source : OFII.

Table 9: Seasonal economic migrants: breakdown by business sector

	2004	2005	2006	2007	2008	2009
Business sector						
Industry and Services	374	447	474	585	531	477
Agriculture	15369	15795	16730	18479	11114	7372
- Fruit and vegetable gathering	6169	6767	6820	7952	4161	1440
- vintage	2503	2597	3302	3544	224	156
- other	3928	3451	3905	3517	3670	4569
Countries of origin						
Morocco	7 457	6 941	6 169	5 651	5 916	5 774
Tunisia	582	682	713	657	811	922
Poland	7356	8 192	9 943	11 971	3 812	-
Bulgaria	0	0	0	74	294	294
Romania	7	15	13	222	443	545
Turkey	97	155	98	97	58	196
Other	244	257	268	392	311	224
Total	15 743	16 242	17 204	19 064	11 645	7 952

Source : OFII.

Table 10: Temporary non economic migrants: students

	2004	2005	2006	2007	2008	2009
Europe other than EEA and CIS	4 074	2 075	1 935	624	407	339
New EU members 2004	1 730	75	1	53	24	4
New EU member 2007	1 971	1 692	1 602	311	40	17
Other Europe	373	308	332	260	343	318
CIS	1 878	1 970	1 868	1 700	1 838	1 891
CIS Europe	1 557	1 642	1 541	1 375	1 447	1520
CISAsia	321	328	327	325	391	371
Asia	17 699	15 354	16 417	16 100	18 595	19 280
South-East	2 009	1 406	1 223	1 067	1 235	1 293
Oriental Asia	11 012	9 569	10 857	10 808	13 081	13 544
South Asia	1 087	1 097	1 176	1 236	1 331	1 519
OtherAsia	3 591	3 282	3 161	2 989	2 948	2 924

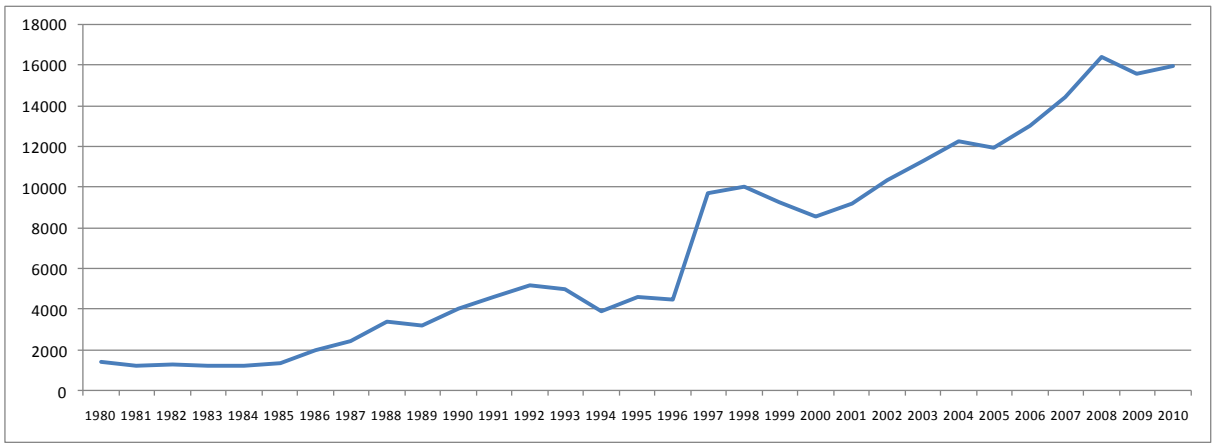
Africa	23 189	19 438	19 210	17 133	19 986	19 834
Maghreb	13 368	10 374	10 022	9 275	10 894	10 161
Sub-saharianAfrica	8 635	7 841	7 874	6 633	7 793	8 200
OtherAfrica	1 186	1 223	1 341	1 225	1 299	1 473
America	7 947	7 072	7 598	7 331	8 658	9017
NothernAmerica	3 378	2 870	2 852	2 505	3 006	3 127
Central and Latin America	4 569	4 202	4 746	4 826	5 652	5 890
Oceania	191	238	231	186	213	271
Countries n.o.s.	30	37	25	35	49	20
Total	55 008	46 184	47 284	43 109	49 746	50 652

Source : OFII.

II) Remittances

Figure 3 indicates the trends of inward remittances for France. These remittances have remained unimportant until the early 90s. They have sharply increased since 1995, i.e. from 5 million US$ to about 16 million in 2009. For this year, France was the 5th country in the world in terms of inward remittances, after India, China, Mexico and Philippines (World Bank, 2011). However, transfers still account for a small part of GDP, e.g. 0.6% in 2009. Table 11 provides more information by comparing inward and outward remittances. It is interesting to observe that outward remittances are almost three times lower than inward remittances.

Figure 3: Inward remittances in France since 1980 (million US$)



Source: CNUCED, UNCTADstat, World Bank, Migration and Remittances Factbook Data, 2011.

Table 11: Inward and outward remittances in France since 2002, million US$

Fiscal Year	InwardRemittances	OutwardRemittances
2001/2002	10.364	n.a .
2002/2003	11.311	4 388
2003/2004	12.277	4 262
2004/2005	11.945	4 182
2005/2006	13.031	5 511
2006/2007	14.445	5 998
2007/2008	16.408	6 334
2008/2009	15.551	5 224
2009/2010	15.939	n.a.

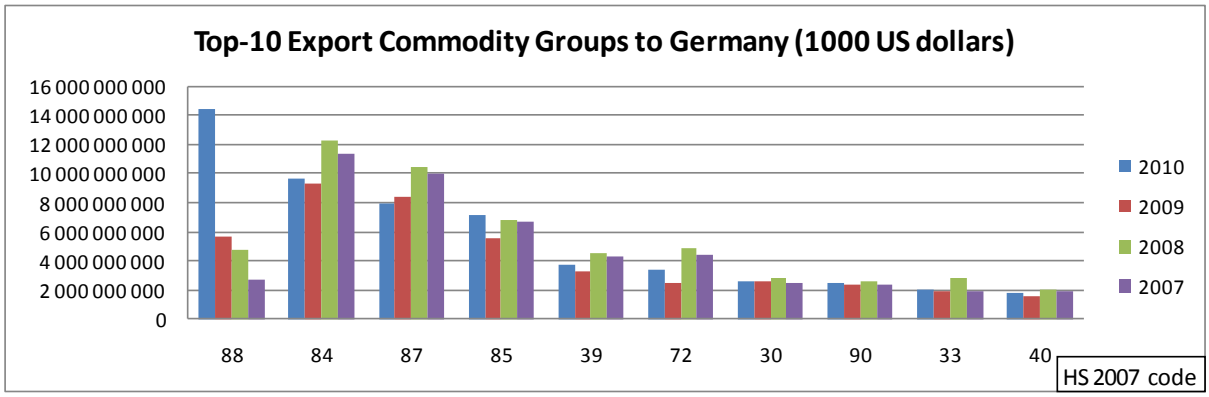
Source: CNUCED, UNCTADstat, World Bank, Migration and Remittances Factbook Data, 2011.

III) Trade

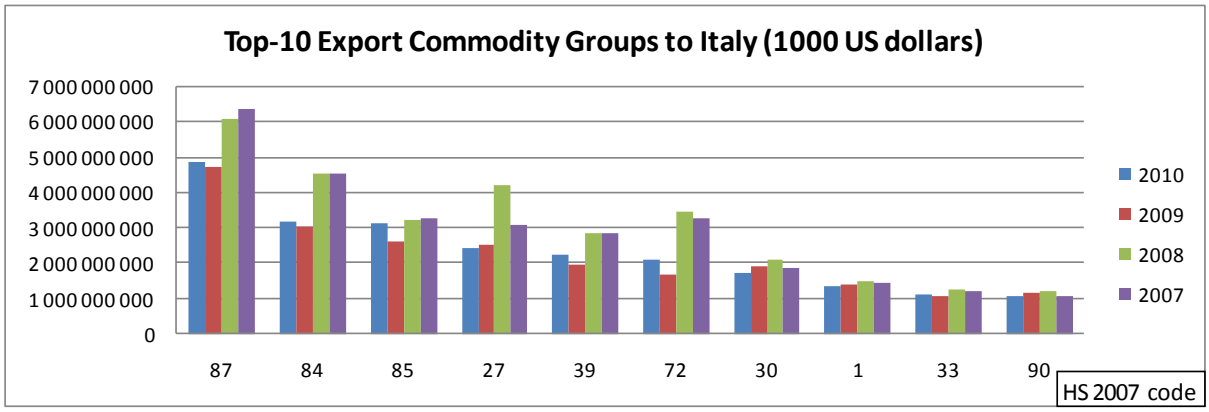
This section reports the trade flows between France and its five main trading partners. Data are presented at commodity level (digit 2). The source is Comtrade.

a) Exports

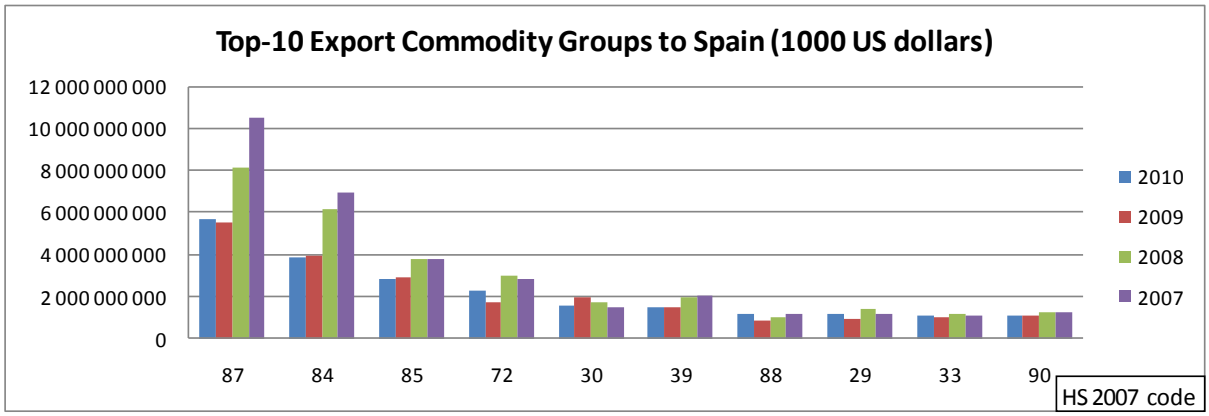
The five main export partners of France are EU countries, i.e. Germany, Italy, Spain, Belgium and the UK. For all these countries, the main French export commodities first include chapters 84, 85, 87 as well as 88 and 30 to a lesser extent. This mainly includes aircrafts, electrical machinery, mechanical appliances as well as motor vehicles. Plastics, pharmaceutical products, iron and steel as well as optical devices are following in the top-10 list of products.



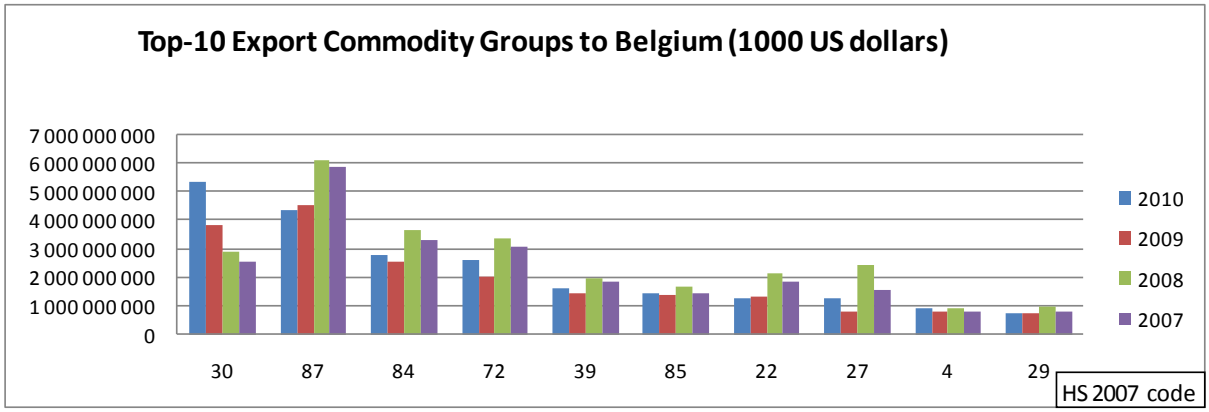
Commodity / Period	HS2007 code
Aircraft spacecraft and parts thereof	88
Nuclear reactors boilers machinery and mechanical appliances; parts thereof	84
Vehicles other than railway or tramway rolling-stock and parts and accessories thereof	87
Electrical machinery and equipment and parts thereof; sound recorders and reproducers television image and sound recorders and reproducers and parts and accessories of such articles	85
Plastics and articles thereof	39
Iron and steel	72
Pharmaceutical products	30
Optical photographic cinematographic measuring checking precision medical or surgical instruments and apparatus; parts and accessories thereof	90
Essential oils and resinoids; perfumery cosmetic or toilet preparations	33
Rubber and articles thereof	40



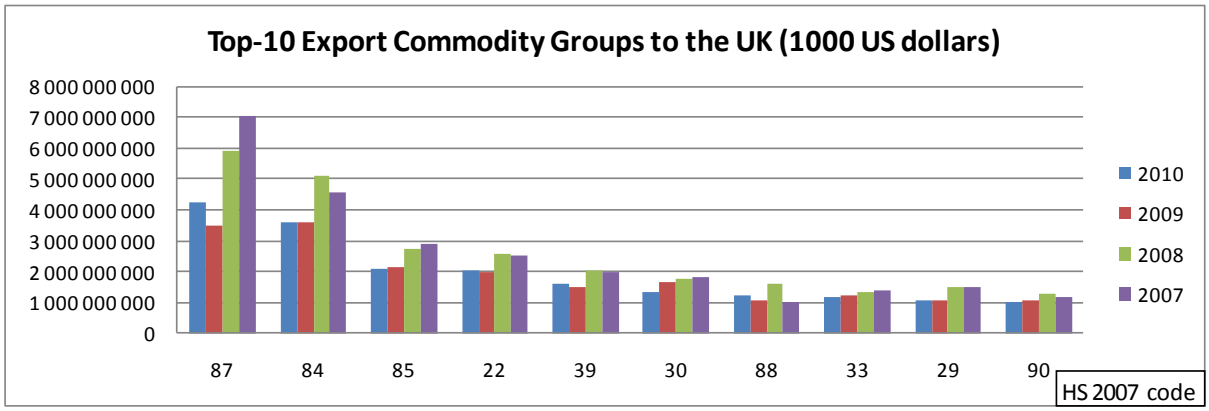
Commodity / Period	HS2007 code
Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof	87
Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	84
Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	85
Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	27
Plastics and articles thereof	39
Iron and steel	72
Pharmaceutical products	30
Live animals; animal products	1
Essential oils and resinoids; perfumery, cosmetic or toilet preparations	33
Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	90



Commodity / Period	HS2007 code
Aircraft spacecraft and parts thereof	87
Nuclear reactors boilers machinery and mechanical appliances; parts thereof	84
Vehicles other than railway or tramway rolling-stock and parts and accessories thereof	85
Electrical machinery and equipment and parts thereof; sound recorders and reproducers television image and sound recorders and reproducers and parts and accessories of such articles	72
Plastics and articles thereof	30
Iron and steel	39
Pharmaceutical products	88
Optical photographic cinematographic measuring checking precision medical or surgical instruments and apparatus; parts and accessories thereof	29
Essential oils and resinoids; perfumery cosmetic or toilet preparations	33
Rubber and articles thereof	90



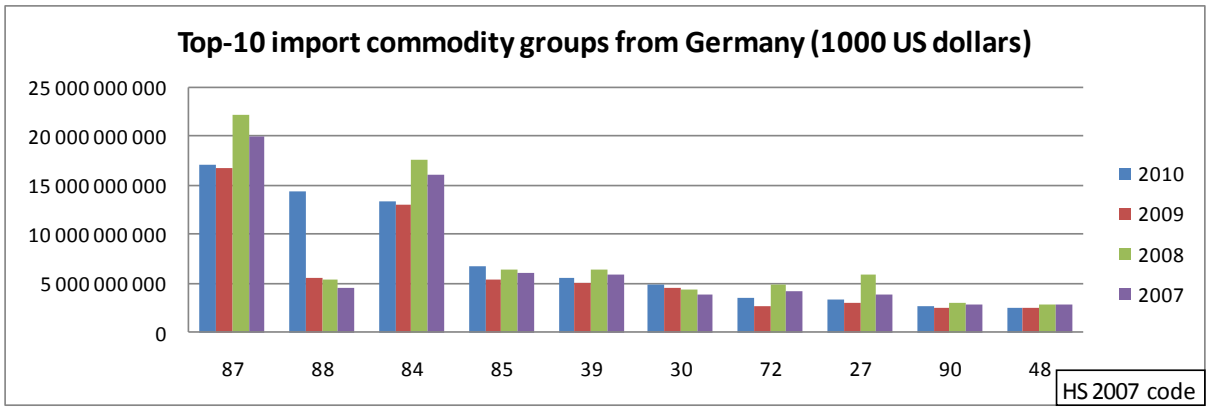
Commodity / Period	HS2007 code
Aircraft spacecraft and parts thereof	30
Nuclear reactors boilers machinery and mechanical appliances; parts thereof	87
Vehicles other than railway or tramway rolling-stock and parts and accessories thereof	84
Electrical machinery and equipment and parts thereof; sound recorders and reproducers television image and sound recorders and reproducers and parts and accessories of such articles	72
Plastics and articles thereof	39
Iron and steel	85
Pharmaceutical products	22
Optical photographic cinematographic measuring checking precision medical or surgical instruments and apparatus; parts and accessories thereof	27
Essential oils and resinoids; perfumery cosmetic or toilet preparations	4
Rubber and articles thereof	29



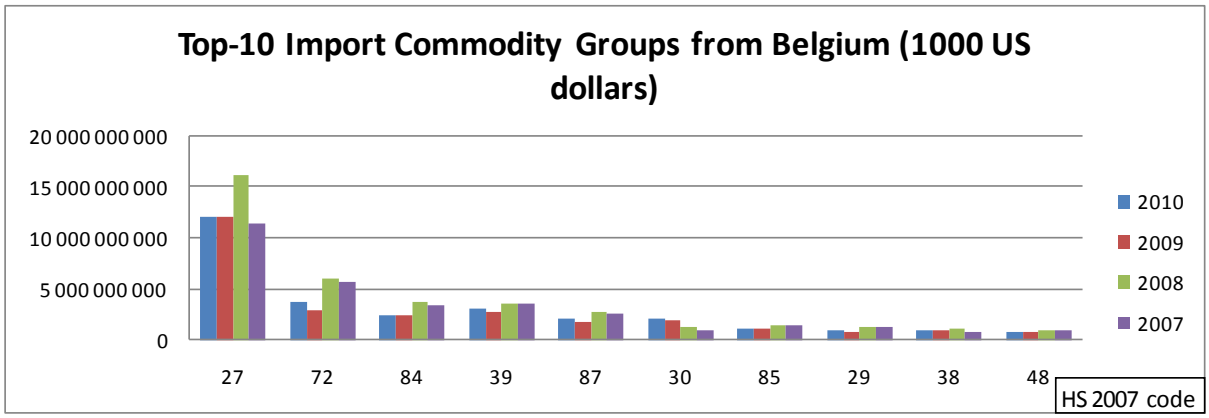
Nuclear reactors boilers machinery and mechanical appliances; parts thereof	87
Vehicles other than railway or tramway rolling-stock and parts and accessories thereof	84
Iron and steel	85
Pharmaceutical products	22
Plastics and articles thereof	39
Plastics and articles thereof	30
Pharmaceutical products	88
Essential oils and resinoids; perfumery cosmetic or toilet preparations	33
Rubber and articles thereof	29
Rubber and articles thereof	90

b) Imports

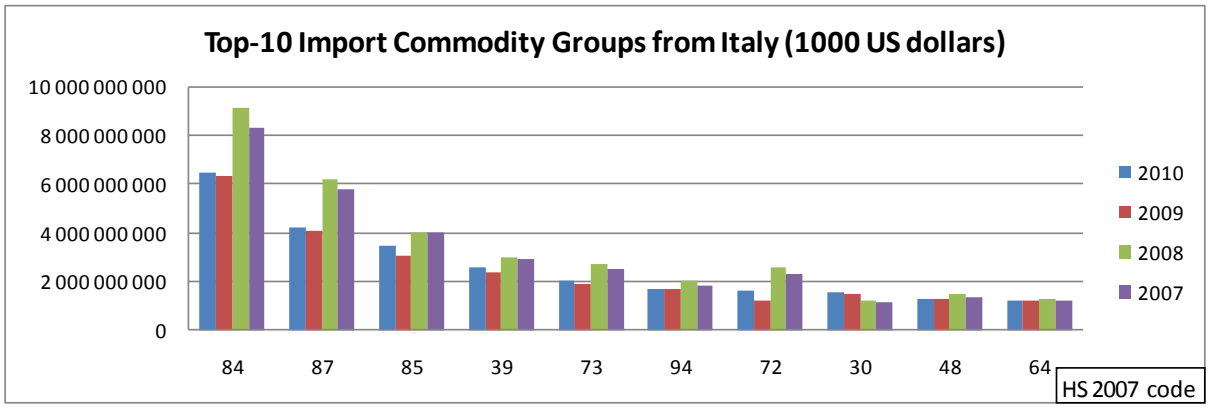
Contrary to exports, two non EU countries are included in the top-5 importing countries with regard to France. These are China and the USA. The other countries include Germany, Belgium and Italy. The import structure by product category mainly includes cars, electrical machinery and mechanical appliance as well as sound recorders and television (import from China).



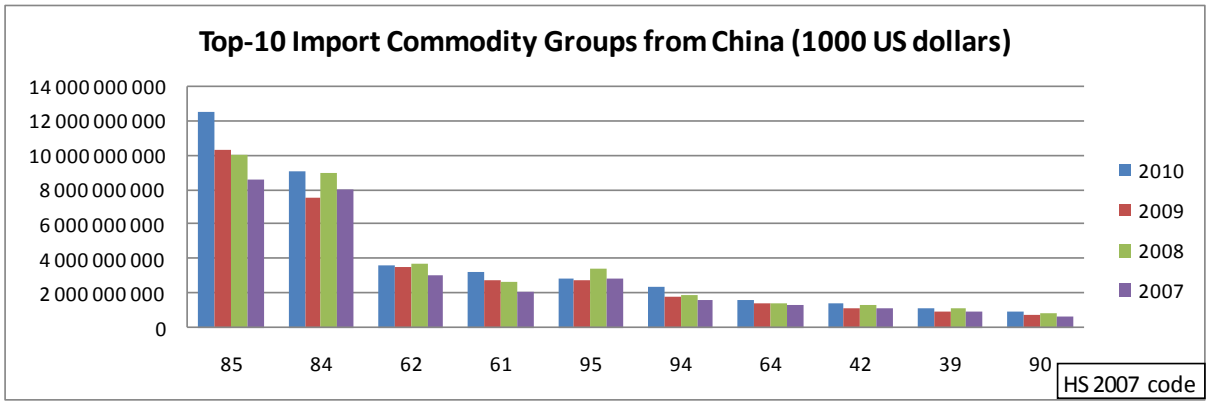
Commodity / Period	HS2007 code
Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof	87
Aircraft, spacecraft, and parts thereof	88
Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	84
Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	85
Plastics and articles thereof	39
Pharmaceutical products	30
Iron and steel	72
Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	27
Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	90
Paper and paperboard; articles of paper pulp, of paper or of paperboard	48



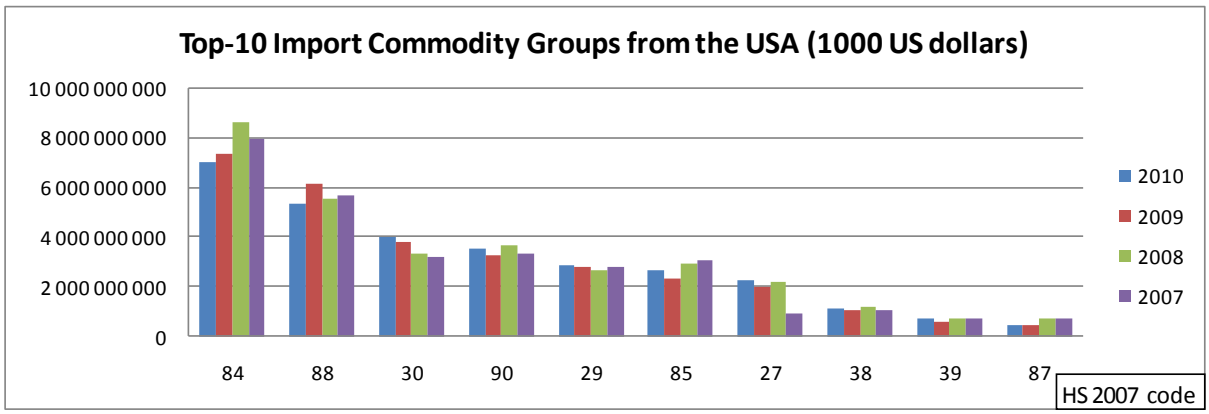
Commodity / Period	HS2007 code
Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof	27
Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	72
Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	84
Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	39
Plastics and articles thereof	87
Iron and steel	30
Pharmaceutical products	85
Live animals; animal products	29
Essential oils and resinoids; perfumery, cosmetic or toilet preparations	38
Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	48



Commodity / Period	HS2007 code
Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof	84
Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	87
Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	85
Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	39
Plastics and articles thereof	73
Iron and steel	94
Pharmaceutical products	72
Live animals; animal products	30
Essential oils and resinoids; perfumery, cosmetic or toilet preparations	48
Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	64



Commodity / Period	HS2007 code
Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof	85
Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	84
Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	62
Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	61
Plastics and articles thereof	95
Iron and steel	94
Pharmaceutical products	64
Live animals; animal products	42
Essential oils and resinoids; perfumery, cosmetic or toilet preparations	39
Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	90



Commodity / Period	HS2007 code
Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof	84
Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	88
Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	30
Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	90
Plastics and articles thereof	29
Iron and steel	85
Pharmaceutical products	27
Live animals; animal products	38
Essential oils and resinoids; perfumery, cosmetic or toilet preparations	39
Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	87

As a conclusion, data concerning migration and trade can be compared altogether. In this regard, it is worth mentioning that there is a certain correlation between the French import of products and the French imports of migrants. For

instance, it has been shown in section I that Germany, Italy and Belgium are three majors import partner for France, including both goods and migrants. However, the correlation is not perfect since some major migrant-exporting partners (Algeria and Tunisia) are not major good-exporting countries toward France. In the same way, some major good-exporting countries (China, the USA) are not major migrant-sending countries.

The correlation between migration and trade will be further investigated in the next chapter by using appropriate econometric modeling techniques.

Section 2: Testing the trade-migration relationship: An application of a gravity model to the case of France

In the past decades, many attempts have been made to include migration effects in a trade model (refer to references in the introduction). The basis of the trade modeling is mostly relying on specific forms of the gravity equation. From a theoretical point of view, this equation has been renewed by Anderson and van Wincoop (2003), who introduce the role of multilateral resistance for explaining bilateral trade. This means that bilateral trade not only depends on traditional mass variables (GDP) and bilateral trade costs (often proxied by distance), but also on multilateral trade costs and other trade barriers.

The model presented below takes into account these new developments in the gravity equation while also including a migration variable, in line with Foad (2010) for MENA countries and Briant et al. (2009) for France:

$$\ln(Trade_{ij,t}) = \alpha_0 + \beta_1 * \ln(Mig_{ij,t-1}) + \beta'_1 * \ln(Mig_{ij,t-1}) * MENA + \beta_2 * \ln\ GDP_{i,t} + \beta_3 * \ln\ GDP_{j,t} + \beta_4 * \ln\ GDP_{i,t}\ Pop_{i,t} + \beta_5 * \ln\ GDP_{j,t}\ Pop_{j,t} + \beta_6 * \ln\ Dist_{ij} + \beta_7 * Lang_{ij} + \beta_8 * Colony_{ij} + \beta_{ij} + \gamma_t + \varepsilon_{ij,t}$$

where

• $\mathrm{Trade}_{\mathrm{ij,t}}$ is the bilateral trade flow between country i (France) and country j at time t (imports, exports or the sum of imports and exports).

• $\mathrm{Mig}_{\mathrm{ij,t-1}}$ reflects bilateral migration (inflows in the receiving country) between country i and j with one period lag. The lagged migration variable helps to deal with endogeneity problems, and reflects the fact that trade enhancing effects could take some time to appear.

• $\mathrm{Mig}_{\mathrm{ij,t-1}}$*MENA is an interaction variable which is designed at capturing the special trade creation of MENA migrants compared to the other migrants (MENA is a dummy variable which is equal to one if country j is a MENA country, and 0 otherwise[2]. The corresponding parameter estimate shows whether or not the immigration effect on trade is stronger for MENA countries than for the other partners. As a result, the elasticity of migration to trade is $\beta_1+\beta'_1$ for MENA countries, whereas it is equal to β_1 for the other countries

[2] MENA countries include Algeria, Morocco, Tunisia, Egypt, Lebanon, Syria, Jordan, Israel and Turkey. Due to the lack of data, Libya is excluded from this study and Palestinian territories are taken together with Israel.

• $\mathrm{GDP}_{i,t}$ and $\mathrm{GDP}_{j,t}$ are the Gross Domestic Product of the two countries that trade;

• $Dist_{ij}$ is the bilateral geographical distance between countries *i* and *j*.

• $Lang_{ij}$ and $Colony_{ij}$ are two additional explanatory variables (dummies trying to capture differences in languages and the colonial relationship between the two countries).

β_0 is the constant term.

α_{ij} denotes bilateral country-specific effects which take into account multilateral resistance.

γ_t is a time-specific effect which captures business cycles.

These two specific effects also capture the omitted variables in the model (Egger, 2004). They can be considered as fixed or random depending on the final specification of the model.

The databases used for measuring the variables are the following: migrations stocks (and flows) are mainly derived from OCDE (2011) in the so-called SOPEMI report. Other data sources include the Eurostat database on migration and INSEE for French data. GDP and GDP per capita are from OECD database (www.oecd.stat), as from IMF (World Economic Outlook Database). Trade values are extracted from the COMTRADE dataset. The remaining variables employed in the empirical model, such as distance, language and colony, are downloaded from the CEPII database.

The model is estimated for the period 2001-2010 for bilateral trade between France and 65 partner countries, including OECD countries, MENA countries, South American countries, most Asian countries as well as Gulf countries. The total number of bilateral observations amounts to 650 (65*10). This represents enough information in the model to ensure a good fit.

Several estimators are presented in the next paragraphs. We start by introducing the pooled estimator in Table 12. Because of multicolinearity problems due to the simultaneous introduction of GDP and GDP per capita, the latter variable has been removed. This makes it possible to reduce the VIF statistics well below the authorized threshold of 10. The final table indicates that there are no remaining colinearity problems. Results are presented for three alternative trade variables: exports, imports and trade (exports plus imports). In

addition, two migration variables are used: migration flows and migration stocks into France, although following the literature we concentrate on results employing stocks, the one more closely related to network effects we are searching for.

Table 12: Estimation results: Pooled estimations

	MIGRATION FLOWS			MIGRATION STOCKS		
	trade	exports	imports	trade	exports	imports
migration	0.3092***	0.3240***	0.3931***	0.2882***	0.3045***	0.3574***
migration MENA	-0.1466***	-0.1547***	-0.1791***	-0.1220***	-0.1298***	-0.1533***
GDP France	1.8007***	1.7366***	1.7335***	1.7104***	1.6426***	1.6212***
GDP partners	0.4819***	0.4341***	0.5838***	0.4810***	0.4314***	0.5858***
distance	-0.3918***	-0.3438***	-0.3955***	-0.3924***	-0.3433***	-0.4042***
language	-1.7614***	-1.8436***	-1.6720***	-2.2221***	-2.3233***	-2.3058***
colony	0.4379***	0.5948***	0.2698	0.3781***	0.5352***	0.2243
intercept	-20.6975***	-20.3041***	-22.4410***	-19.4665***	-19.0434***	-20.7603***
nb observations	650	650	650	650	650	650
r-squared-adjusted	0.76	0,75	0.71	0.77	0.76	0.72
VIF	2.18	2.18	2.18	1.95	1.95	1.95

Results show that migration is clearly trade-creating in France. As a matter of fact, whatever the specification of the model, the parameter corresponding to migration is positive and significant at 1%-level. Basically, an additional 10% in the number of migrants leads to additional trade flows of about 3%-4%. This figure is slightly greater for imports (3.5%) than for exports (3%). In addition, it is also a little bit greater for migration flows as compared to migration stocks. As the literature shows, migration-enhancing effects for imports (for the receiving country of immigrants) used to be interpreted as a network effect plus a preference effect for domestic products of the immigrants (all both channels together), while the immigrant coefficient in the exports equation is more closely linked to (net) networks effects. The difference between coefficients for imports and exports are then pointed out as the (net) preference effect. In our particular case, we observe a net preference elasticity of 0.5%, indicating for the whole French migration and trade flows the coexistence of both effects: Network effects of 3% (in exports and imports) and preference for domestic products of 0.5% (just in imports). The predominant effect appears then to be the network channel.

Interestingly, when isolating the specific trade impact of migration from MENA countries, the corresponding parameter estimate is negative and statistically significant. This means that compared to migration originating from other countries, migration from MENA countries is less trade creating (an increase in migration from MENA countries leads to an increase in trade by 1.5%/2%), as indicated by the sum of the parameter estimates $\beta_1+\beta'_1$. Nevertheless, migration from MENA countries is still trade-creating, though the effect is observed to be *half the value* of that linked to migration arriving from the rest-of-the-world (RoW). Network estimated effect on net for MENA, accounted by exports enhancing effect, is of 1.8% (0.30-0.12), while network and preference composed effect, observed for imports, is of 2% (0.35-0.15), so net preference effect is of about 0.2%, half the value again than in the RoW case, but still remaining.

The other parameter estimates are also significant at 1% and show the expected sign. Indeed, there is a positive relationship between the French and partners' GDP on the one hand and trade on the other hand as one would expect. Distance and the differences in languages have a negative impact on trade whereas colonization has a positive impact, as shown by many other empirical studies.

As a sensibility analysis, several other estimators have also been used. First, the fixed-effects estimator has been tested but provides biased results since it cannot provide parameter estimates for time-invariant variables, such as distance, language and colony. An alternative is the random-effect variable but in this case, the Hausman test indicates a correlation between the error terms and some independent variables, especially migration. This is an indication about a remaining endogeneity bias. In order to address this problem, we used the Hausman and Taylor estimator that makes it possible to provide unbiased results (Egger, 2004).

Table 13: Estimation results: The Hausman and Taylor estimate

	MIGRATION FLOWS			MIGRATION STOCKS		
	trade	exports	imports	trade	exports	imports
migration	0.2848***	0.2150***	0.3111***	0.1681***	0.1944***	0.1977***
migration MENA	-0.1884*	-0.1678*	-0.2246	-0.1324	-0.1053	-0.1792
GDP France	2.2438***	2.1263***	2.4102***	2.2344***	2.1403***	2.3876***
GDP partners	0.7350***	0.0451*	0.0630	0.0586*	0.0374	0.0486
distance	-0.3909**	-0.4106***	-0.4339**	-0.4704**	-0.4978**	-0.5093*
language	-2.4947**	-2.8576**	-2.8229*	-3.0572**	-3.3251**	-3.4417*
colony	0.5081	0.5811	0.3461	0.2228	0.3091	0.0908
intercept	-19.8742***	-18.9274***	-23.8319***	-19.3548**	-17.3484***	-21.8769***
nb observations	650	650	650	650	650	650

Results are displayed in Table 13. It shows that the pro-trade effect of migrant is slightly lower than previously seen, since the parameter estimates range between 0.2 and 0.3, always significant at 1% level. However, the specific effect for Mediterranean countries is barely significant. This suggests that MENA countries do not always have smaller pro-trade effects of migrants than the other countries in the sample. In fact, if we concentrate in the most common case of migration stocks, we do not find now any preference effect on net, given that both coefficients for exports and imports became nearly the same (1.9%). Some other parameter estimates also become less significant (partner GDP) or non-significant (colony).

The final set of estimations provides parameter estimates that are corrected for heteroskedasticity (Huber-White-Sandwich estimator) and for autocorrelation (AR1 Cocrane-Orcutt transformation). Since the parameter estimates for the heteroskedastic model are very close to the pooled estimates, Table 14 presents only those results that take account of the autocorrelated errors.

Table 14: Estimation results: Cocrane-Orcutt transformation (Autocorrelated errors)

		MIGRATION FLOWS			MIGRATION STOCKS	
	trade	exports	imports	trade	exports	imports
migration	0.4191***	0.3541***	0.5219***	0.3768***	0.3032***	0.4068***
migration MENA	-0.2169***	-0.2296***	-0.2288***	-0.2442***	-0.1446***	-0.2905***
GDP France	2.0770***	1.9748***	2.1752***	1.9702***	1.9111***	2.0577***
GDP partners	0.1751***	0.1165***	0.2150***	0.1696***	0.1140***	0.2248***
distance	-0.2896***	-0.3015***	-0.2768**	-0.3011***	-0.3241***	-0.3443***
language	-1.8521***	-2.3576***	-1.7641**	-2.5776***	-2.9916***	-2.8752***
colony	0.6019*	0.8086**	0.4500	0.5408	0.7348**	0.4294
intercept	-22.2320***	-19.8596***	-25.9453***	-20.5372***	-18.4981***	-22.4621***
autocorrelation coeff.	0.3866	0.5038	0.1482	0.3964	0.5086	0.1531
nb observations	650	650	650	650	650	650

The pro-trade effect of (stocks of) migrants ranges now between 0.3 and 0.4 for the RoW case and 0.1 and 0.3 for MENA countries, and for exports and imports, respectively. Basically, these results do not differ so much from those of the pooled regression of table 12, suggesting the robustness of results. Table 14 also gives us the opportunity of studying the network and preference effects for (this) our preferred specification of the trade model. In this respect, we observe that preference effect for the RoW accounts on net for an elasticity of 10% (0.4-0.3) and disappears for MENA countries (0.1-0.16 = -0.06, showing non effect or a substitution effect on purity). Network effects accounted for (on net) by the exports equation are shown to be important for this trade-enhancing channel. Those coefficients are pointing to the relevance of opportunities open by networks of immigrants, such as information dissemination on supply and demand opportunities in source and destination markets, together with the presence of institutional failures that the communities of immigrants help to solve (procurement and arbitrage effects).

Table 15 provides additional estimation by splitting up the trade vector into three commodity categories, namely, differentiated products, reference-priced and homogenous products, when following the methodology developed by Rauch (1999).

Table 15: Estimation results by commodity groups

	EXPORTS			IMPORTS		
Pooled	different.	ref. priced	homogenous	different.	ref. priced	homogenous
migration	0.1805***	0.1210***	0.1724***	07614***	0.3267***	-0.6800***
migration MENA	-0.1010***	-0.1537***	0.1074**	-0.5649***	-0.0141	-0.1609
Autocorrelated	different.	ref. priced	homogenous	different.	ref. priced	homogenous
migration	0.2286***	0.1185*	0.1548	0.4622***	0.4082***	-0.3794
migration MENA	-0.0924**	-0.1746***	0.0943	-0.6245***	-0.0265	-0.0192
nb observations	650	650	650	650	650	650

Table 15 shows that the significance and values of the parameters of interest greatly differ depending on the category of commodities. Concentrating on the autocorrelated results for the whole sample, we observe the presence of pro-trade effects for exports in differentiated (0.22) and reference priced (0.11) goods, being of double value in the former than in the latter case . For imports we observe a similar result with related coefficients of 0.46 and 0.40, respectively, not appearing clear differences between effects for both types of goods. Homogenous goods do not show any pro-trade effect neither in exports, nor in imports equations when we control for autocorrelation in the residuals of the model. In the MENA case there is some substitution effect for exports of reference-priced goods, as well as for imports of differentiated ones, with migration reducing trade in both cases. By the contrary, in the cases of exports of differentiated merchandises and imports of reference priced goods, migration still enhances trade flows. Homogenous goods in the case of MENA are not influenced by immigrants´ flows, as shown in table 15.This result is not surprising since homogenous goods are widely traded on organized exchanges and thus do not benefit much from information flows through migrant networks.

In this regard, the results obtained in the present study share some similarities with those encountered by Foad (2010) for MENA countries, although also differing in some particular outputs. For the French data, we have shown that network effects appear to be the main channel leading the trade-migration relationship. Preference effects also arise in our data, but basically for the whole sample, being less (or even not) present in the MENA case. Results in the contribution due to Foad (2010) show, by the contrary, that the preference channel is the most important effect arising in MENA flows to the EU countries, with network effect not playing that prominent role, although also present in data. Further, the

study of Foad (2010) finds that the migration-trade link is stronger for imports, as we have seen for the French case, with the migration-trade link appearing even stronger for differentiated goods than for homogeneous ones, as in our case. In this way, as Foad (2010) yet states, trade in differentiated products is more likely to face the type of trade barriers that migrant networks are able to reduce. It leaves greater gains for migrants in promoting trade through informational flows between the origin and destination countries of immigrants.

Both investigations are nevertheless not strictly comparable, given that Foad (2010) employs a cross-section analysis for 1990 and 2000 through point estimates, and we employ panel data for the period 2001-2010, updating his results. Moreover, he employs an IV estimation approach, given the high probability of facing important endogeneity problems in corss-section estimates. However our empirical model, following Egger (2004), employs new types of estimators that ensure ruling out such important problems, given the time dimension that our data set can exploit. In that way, and after controlling for heteroskedasticity and autocorrelation in data, our coefficients for the variable of interest (immigrants' stock), show values twice or three times those of Foad (2010) for our period of estimation, implying surely that migration flows have been rising in importance between 2000 and 2010, as we have observed in descriptive data for the EU space, we also attain better fit of the model in capturing the pro-trade effects of immigration, updating in that way the results in Foad (2010).

Conclusion and policy implications

This chapter has showed that recent migration flows into France stabilize at about 100,000 new migrants each year. Although growing migration raises questions due to the absorption problem of the French labour market, especially in economic crisis periods, this chapter clearly states that migration creates economic activity by stimulating trade flows. As a matter of facts, a 10% additional number of immigrants lead to an additional trade of about 2%-5% depending on the specification of the model. Although the specific trade creation effects of migrants originating from MENA countries seems to be lower, this effect is still significant, particularly for the network channel. A final result also shows that the pro-trade effect of migrants is significant for imports but also for exports, and inside those flows for differentiated products, while not for homogenous products, all these results being in line with the literature trade-migration flows, as recently surveyed by Genc et al. (2010).

Consequently, the lower trade effects of migration encountered for the MENA countries can be simultaneously explained by i) the higher share of homogenous trade flows in the France-MENA trade, compared to other trade exchanges of this country, and ii) the lower impact of network effects between France and MENA compared to those arising for more distant regions, where immigrants´ networks play a greater role in reducing more drastically some existing impediments to trade (informational failures and institutional fragilities guaranteeing successful commercial treats). In this way, assimilation of MENA citizens in France, particularly for Algerian people, Moroccans, and Tunisians, seems to be a fact that the present study has again highlighted, in line with results of Foad (2010).

One major policy implication of our results is that the restriction of the number of migrants due to tighter migrations policies in France would shorten trade-creation effects, especially if less educated and qualified migrants arrive increasingly to the country as some authors have shown (Briant et al., 2009). This problem must be taken into account seriously when discussing future migration policies, both at the French and at the EU level, given existing interdependencies between migration and trade policies pointed out by the results of our investigation.

Another important result is that of closeness between cultures and societies of NA countries and France. The assimilation that our research points to makes also very interesting the launching of the FTA agreement for this area, as a way of pushing future trade enhancement and mutual development in general. In this way, the Common Trade Policies becomes a masterpiece of development policies versus MED area and for MPs, helping to improve the effectiveness and scope of resources employed in that particular branch of the EU actions. Finally, interdependence of Common Trade and Migration frameworks become evident as highlighted along our investigation, this being another important issue to be accounted for the designers of these two relevant EU policies.

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CHAPTER 3:

TESTING THE RELATIONSHIP BETWEEN TRADE AND MIGRATION FLOWS: CASE STUDY OF EGYPT WITH EUROPEAN UNION AND ARAB COUNTRIES

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The authors would like to thank professors Andres Artal, Chair Zaki, and Racha Ramadan for comments on an earlier version of this paper.

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Introduction

The relationship between trade and migration has attracted the attention of academics and policy makers extensively. The complexity of the relationship and the desire to understand whether there is a trade creating effect for migrants has recently centered efforts of the profession. This study aims at investigating the relationship between trade and migration for Egypt. The study tries to answer a number of questions including the main question which is whether there are trade creation effects for Egyptian emigrants or not?; and whether such effects differ when the destination of emigrants changes (EU or Arab countries). Further, the study analyses the trade-migration relationship and tests whether the type of product traded affects the magnitude of trade creation, showing whether network or preference effects are the main drivers of this relationship.

The main question that this study tries to focus on, and where there is lack of consensus in the empirical literature that have dealt with, is what kind of relationship, if any, exists between the migration and trade patterns: are they complements or they substitute one another? We focus on the relationship between Egypt and its main migration destinations and trading partners. According to the knowledge of the authors, the studies undertaken to answer this question for the Egyptian case were rather absent with the exception of a few studies that dealt with such issue as Shafik (1992), and Nassar and Ghoneim (2003). We apply a gravity model to test for this relationship using pooled and panel data for the period 2001-2010. We also use some descriptive measures to elaborate on the trend and type of trade and migration flows that have prevailed between Egypt and its main partners in migration and trade in the first part of the investigation.

The study is divided into three sections following this introduction, where in *Section One* we start with a selected literature review on the relationship between trade and migration. In *Section Two* we provide an overview on the relationship between trade and migration in Egypt.

In *Section Three* we run the gravity model and analyze its results. We then conclude and provide some policy implications.

Section One: Selected literature review

On the theoretical level, the relationship between trade and migration, though deeply investigated, has remained ambiguous. The conventional theoretical Heckscher-Ohlin-Samuelson model (factor-price-equalization theorem) identified a substitution type of relationship between trade and migration[3] (Mundell, 1957). Changing the assumptions of the model, and especially imposing imperfect competition and increasing returns to scale instead of perfect competition and constant returns to scale or incorporating migration costs and financing constraint features, might alternate the substitution type relationship into a complementary one. The Heckscher-Ohlin model, coupled with the assumptions of the North being abundant in capital and the South abundant in labor, provides a useful analytical framework for explaining the North-South trade. Adding international labor mobility, substitution between migration and trade is attained since trade liberalization in either the North or the South leads to more trade and through the mechanism of reducing the North-South wage differential it leads to less migration.

Developments based on the Heckscher-Ohlin-Samuelson theorem showed that if some of the assumptions underlying the Heckscher-Ohlin model are changed, trade and migration may be complements. This issue was examined, for example, by Markusen (1983) and Wong (1983). Markusen (1983) showed that complementarity between migration and trade is achieved if one imposes identical factor endowments in both countries but relaxes one of the following assumptions of the Heckscher-Ohlin model: (a) constant returns to scale, (b) identical technologies, (c) perfect competition, and (d) no domestic distortions. Then, free trade does not result in factor-price equalization. By relaxing the different assumptions and especially perfect competition and constant returns to scale different results are obtained. Moreover, whether trade and migration are substitutes or complements under economies of scale and imperfect competition depends on the specific model used (see for example Schiff, 2010 and

[3] According to the neoclassical model, international trade will bring about equalization in the relative and absolute returns to homogenous factors across nations. In that way, international trade is a substitute of the international mobility of labor. The original proof of the factor-price equalization theorem is found in Samuelson (1948) and Samuelson (1949).

references therein), and on the variables considered including the level of tariffs applied, migration costs, skills of migrants, etc. (Schiff, 2006).

On the empirical level, economic research did not reach a concrete relationship between the two variables. The problem is mainly embedded in the large number of variables that affect such type of relationship and cannot be controlled for either because of the absence of data or given the inability of the researcher(s) to quantify them. Among such variables we can find the technological and communication revolution which has facilitated the flows of people and goods all over the world. Other factors include the protectionist type of policies against trade and/or migration flows. Starting in the 1990s, several studies have been devoted to discuss the relationship between trade and migration, especially after the pioneering work of Gould (1994) that studied the link between migration and trade using American trade data from 1970 to 1986. The work of Gould (1994) was followed by other influential studies on other countries and migrants, including Canada and Chinese migrants as in Head and Reis (1998), Rauch (2001), and Rauch and Trindade (2002). Those studies concluded that migration leads to a trade creation effect. The positive impact of migration on trade is either due to the preference channel (of immigrants for domestic products, mainly in food stuff and differentiated final products), or through the network channel which operates by reducing transaction trade costs (communication barriers due to host and home countries language proficiency; better understanding of market information of home country; and trust developed between immigrants community and traders at home, as well as through the identification of business opportunities both in origin and destination markets of the immigrants). The literature has not been clear on which of both effects is the most important in driving pro-trade effects of immigrants, with different studies applying different approaches to the issue.

In empirical terms, there are several studies that have found a significant positive impact for migration on trade. The majority of them have applied the extended gravity equation approach in capturing such effects, and most of the studies have found that migration has a more substantial positive impact on imports of the host country than on exports. Some of the most

recent contributions in this literature have tried to better understand such positive relationship, where for example Foad (2010) identified that there are certain threshold for such positive impact of migration on trade to appear in data. So, if the level of migration is lower, then trade might not be profitable until a certain stock of migrants is available in the receiving country. Alternatively, if an immigrant community becomes large enough, production in the receiving country might substitute for imports, given a higher assimilation of immigrants to local culture and life style, hence observing a substitution effects on trade. This implies that the relationship between trade and migration is not so linear and that the failure to account for these potential non-linearities in the existing literature has led to biased estimates of the true migration-trade elasticity. The same was identified by Egger et. al (2011) that have shown the existence of an upper threshold, after which the trade creation effect of immigrants stops to function. Morgenroth and O'Brien (2008) identified also that the positive trade creation effect of migration is conditional on a number of variables including, as they have shown in the case of US as a host country, the level of immigrants and their origin. Foad (2010) investigated the relationship between migration and trade within the context of Middle East North Africa (MENA) migrants to both Europe and North America. Using a gravity model, he identified that the migration-trade link is stronger for migrants to Europe, with the strongest effect for imports. Moreover, his analysis showed that the migration-trade link is stronger for differentiated goods than for homogenous and reference price goods, which is evident more in the case of Europe. He concluded that preference effect is more evident than the network effect, which is still there but mild (as trade creation effect is much higher on the exports side of MENA to Europe and North America than the imports side).

Cesi (2011) applied a gravity model analysis to a set of 17 EU countries as host countries and 10 migrant sending countries with a time span from 1997 to 2006. Cesi (2011), contrary to Foad (2010) showed that the network effect is rather strong, especially on the immigrants trade with their home countries, increasing the exports from host country to their home country. She found little evidence for the network effect in the other direction, and for the preference effect. Murat and Pistoresi (2009) investigated the case of Italy over the period 1990-2005 for

immigrants from 51 countries using a gravity model and found that migration (both emigrants and immigrants) help to enhance imports, but immigrants have no significant impact on exports. Moreover, trade volume of Italy with its historical trading partners (US and rest of EU) despite being larger, tends to be slower in terms of growth when compared with Italian trade with new trading partners. Tai (2009) applied a gravity model to the relationship between trade and migration for Switzerland over the period 1995-2000. Tai (2009) applied a multi-sector analysis interacting migration with the elasticity of substitution, as his analysis focused on the role of market structure arguing that it has a determinant effect on how migration affects trade. His findings show that Switzerland's imports are more affected by migration than its exports, and that migration is found to influence preferences more in differentiated products and impact costs in an inverted U-shape, being more intense in products with an elasticity of substitution close to 6 and less intense as the elasticity approaches 1 or 7. Ivanon (2008), using detailed data on migration and trade, identified that the different classes of immigrants have different impacts on trade and that different classes of goods are affected differently by migrants (blue collars, white collars, self employed). Requena and Serrano (2011) tested both the trade effects of immigrants and emigrants and showed that both are of equal importance and that there is no difference between differentiated and homogenous goods. Bacarreza et. al (2006) tested the impact of Bolivian migrants on Bolivian trade over the period 1990-2003 and found a significant positive impact of Bolivian migrants on Bolivian exports and imports. Qian (2007) investigated the impact of New Zealand immigrants from 190 countries between 1980 and 2005. Qian (2007) results identified a significant trade creation effects for immigrants on trade, however the empirical results suggest that immigrants from low-income countries tend to create more trade than other groups. The same positive trade creation effect of immigrants was found by Bowen and Wu (2011) who investigated a panel data for immigration in 27 OECD countries over the period 1980-2009.

However, such positive relationship, which mainly operates through preference and network effects, has not been pervasive, as some studies have suggested that migration-trade link tends to decline over time and may not exist universally, since the pro-trade effect of immigration

varies across both countries and commodities. Girma and Yu (2002) investigated the impact of Commonwealth and non-Commonwealth immigrants in the UK on trade over the period 1981-1993. They found a robust trade (both exports and imports) creating effect of non-Commonwealth migrants in the UK, a negative impact for Commonwealth migrants on imports, and failed to find any significant effect for Commonwealth migrants on exports. Ramon-Munoz (2009) provided several explanations for this fading effect of migration on trade including the failure of migrants to overcome trade barriers and have better understanding of market information (network effect) or change of food and diet habits of immigrants preference effect), or adoption by immigrants for an import substitution type of policy hence replacing imports by domestic production in host countries. Other recent studies as Bettin and Lo Turco (2009), applying a gravity model and using panel data for three year (1995, 2000, and 2005) and bilateral data for OECD countries with 212 trading partners, reached similar conclusions. They classified trade data following the Broad Economic Categories (BEC) that arranges commodities according to "end-use" classes: final consumption, intermediate consumption, and capital formation. They then aggregated the data in 2 SITC digit level. Bettin and Lo Turco (2009) reached the conclusion that migration does not have trade creation effect whether on exports or imports, and if there is any sort of trace creation effect it is mild and only existing in Northern exports to the South. Moreover, Bettin and Lo Turco (2009) reached the conclusion that migration could have a negative impact on trade by reducing it when investigating a large dataset of pool data on immigration in OECD countries. Bruder (2004), who studied the case of immigration in Germany over the period 1970-1998, found that immigration does not have a significant impact on trade. The same is true in the study of Clarke and Hillbery (2009) who conducted an analysis of the impact of immigration on trade in Australia over the period 1981-2006 using a generalized method of moments estimator that allows to estimate the elasticity of trade to migration, while at the same time allowing country level fixed effects and persistence to affect the level of bilateral trade. Clarke and Hillbery (2009) found no significant effect for immigration on trade.

Other studies used alternative methods than gravity equations where Hassan (1998) showed using an Ordinary Least Squares (OLS) model and covariance analysis that migration has had a positive impact on the exports trade of Bangladesh. Hassan (1998) identified that there exists a number of determinants that affect such relationship including the level, concentration, and composition of migrants, as well as the duration of the process of migration. His analysis, though not using the same terms, pointed out that both network and preference effects exist where the complementarity relationship was high in specific products (e.g. food products and live animals). Nassar and Ghoneim (2003) applied covariance analysis for four MENA countries (Egypt, Morocco, Tunisia, and Jordan) in terms of their trade and migration relationship with the EU as well as Gulf countries and used data available on workers' remittances as a crude proxy for the number of migrants. A correlation index for the four countries under study has been calculated between such crude proxy and their exports to the world over the period 1992-1999. The results failed to reveal any clear trend: the correlation coefficient for Egyptian workers' remittances between 1992 and 1998 and its total exports was -0.7 , whereas that of Morocco was -0.15 and that of Jordan and Tunisia was 0.9. In other words, it was highly negative in one case suggesting substituibility, neutrality in another, and highly positive suggesting complementarity in two other cases. On a rather dissagreagted and a more accurate level where some data were available from SOEPMI on the number of net foreign population in one country by their nationality a correlation index between exports of a specific country (Morocco) to another country (France and the Netherlands) and net population flows from the former country to the latter was calculated. The results obtained were as follows: -0.2 in the case of France and 0.05 in the case of the Netherlands suggesting a rather neutral relationship between trade and migration which is compared to the neutral case obtained in the aggregated crude version of the correlation index. Insel et. al (2010) tested the relationship between Turkish migrants in a number of European countries and their impact on trade using Least Squares estimation technique under the assumption of the presence of cross section heteroskedasticity and the robust standard errors for the period 1980 to 2007. They found a significant positive impact of migration on trade through preference and network effects.

In general, there is growing empirical evidence in the literature pointing towards the existence of trade creation effect of migration that is mainly channeled through network effect of migrants. The network effect is highly associated with reduction of costs concerning trade that arise either due to weak legal systems governing trade or lack of information on foreign markets and different social institutions between origin and destination countries of immigrants.

Section Two: An Overview on Migration, Remittances and Trade Trends of Egypt

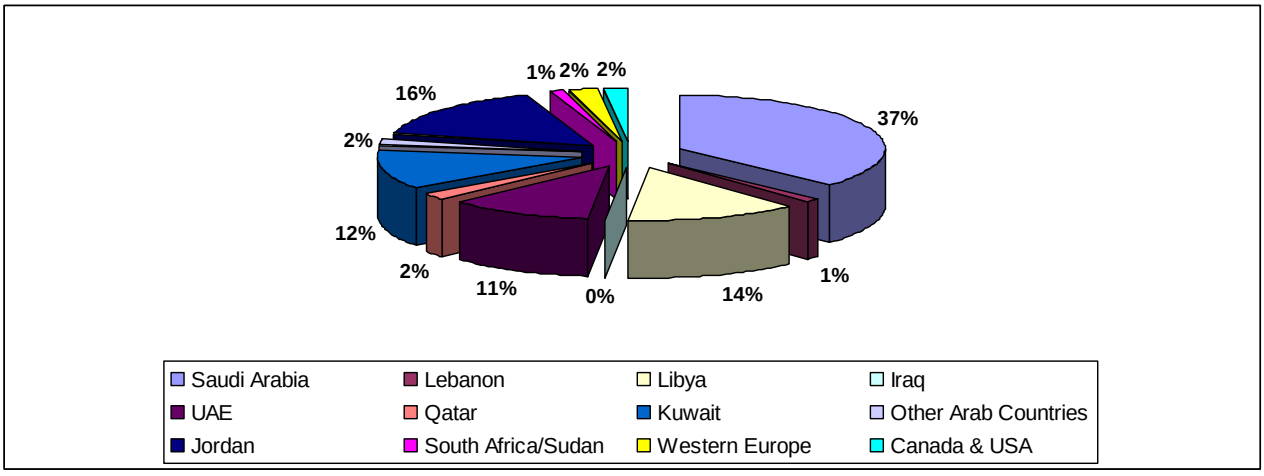
Migration

Migration in Egypt has always played a paramount role in its economic development. Egypt is one of the largest emigrating countries in the world and is one of the top 10 remittances receiving countries all over the world (World Bank, 2011). The existing figures of migrants abroad might be underestimated due to under registration of Egyptian migrants abroad especially in Europe as reported by some studies (de Hass, 2007), hence implying the existence of high tendency of irregular migration. Emigration has not followed a smooth increasing trend where the trend of emigration has experienced several fluctuations and set-backs, especially in the 1990s, as a result of external economic and political reasons. Egyptian emigration could be perceived as a long lasting phenomenon. Several phases of this phenomenon could be distinguished. Before 1971, emigration from Egypt was subject to many legal restrictions; this fact has limited the number of emigrants where only professionals, could migrate permanently to the US, Canada, Australia and Western European countries. Starting 1971, both "permanent" and "temporary" emigration was authorized. This step, accompanied by the soaring oil prices and increasing demand for migrant labor in Gulf countries, triggered massive emigration from Egypt to Saudi Arabia, Iraq and the other Gulf states as well as to Libya. The statistics[4] reveal that the number of Egyptian emigrants was around 70 thousand after 1973 war, and this

[4] It is worth noting that data on Egyptian migration could be drawn from different sources; among these are the Central Agency for Public Mobilization and Statistics (CAPMAS), Ministry of Manpower and Emigration, Ministry of Interior, and consular offices. Discrepancies of data from these different sources are a result of a number of factors; CAPMAS data on migration are actually estimates that are driven based on CAPMAS census data, hence they include a margin of error. Concerning consular records, the main limitation of data provided by these records is that they are of voluntary nature where individual migrants are free to register their arrival and cancel their registration upon departure; therefore, many migrants don't simply register themselves. In addition, many migrants do not inform the consular offices of any subsequent migration, so that, migrants may move to a third country without notifying their consulates. Also, irregular migrants refrain from registering themselves in consulates (Zohry, 2009). Other sources for migration data include international sources such as registers of immigrants in destination countries, as well as a number of international institutions databases which includes World Bank, International Migration Organization, and Organization for Economic Cooperation and Development (OECD). However, none of the aforementioned sources converge with the other; each database reveals different estimates.

number continued to follow an upward trend to reach 1.4 million in 1976, increasing to 3.28 million in 1983. However during the second half of the 1980s, several factors have influenced the emigration trends in Egypt, including the end of the first Gulf war, decrease in oil prices, and adopting the policy of substituting foreign labor with nationals in the Gulf countries. Those factors have led to a significant decrease in emigrants' number to record 2.25 million in 1986 (Ministry of Manpower and Emigration, 2009). In the beginnings of the 1990s, most of the Egyptian emigrants in both Kuwait and Iraq have returned back to Egypt due to the second Gulf war; however, after the end of these circumstances, the emigrants' number increased again to reach 2.8 million in 1996, remaining relatively constant since this date till 2000, to represent around 3.9% of the Egyptian population (Ministry of Manpower and Emigration, 2009). In the meantime, Egypt is witnessing the permanence of temporary migration whereby migration towards Arab countries is becoming less temporary (and more permanent) and outnumbers permanent (long term) migration to Europe and North America. Recently a rise in migration to Europe - mostly irregular - especially to Italy and France, has been recorded Consortium for Applied Research on International Migration (2010). There is a high concentration of both temporary and permanent emigrants in few countries with Saudi Arabia being on top of receiving countries as shown in Figure 1. (IOM, 2003; Wahba, 2007).

Figure 1: Overseas Destinations of Current Migrants

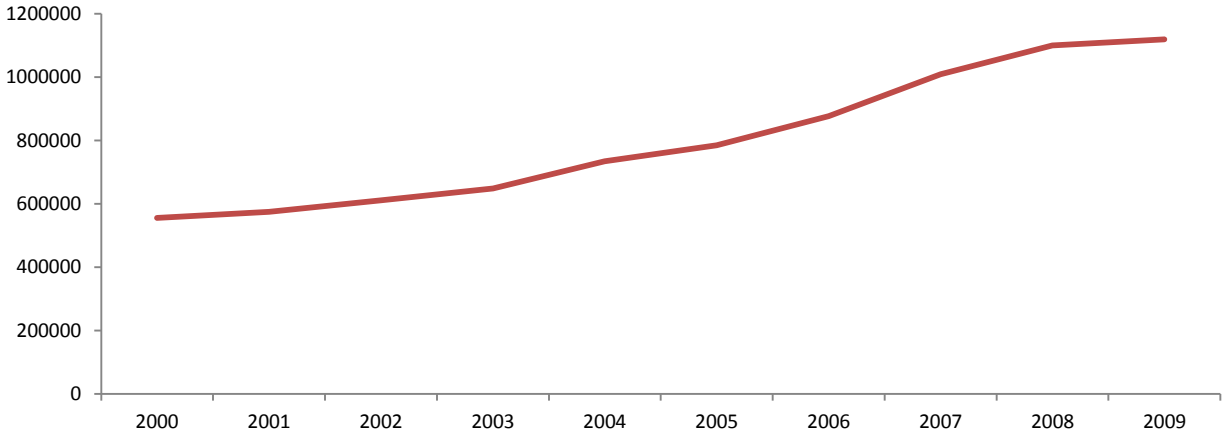


Source: Wahba, Jackline (2007), "An Overview of Internal and International Migration in Egypt", ERF Working Paper No. 703, Cairo: Economic Research Forum.

Temporary Migration

According to the Central Agency for Public Mobilization and Statistics (CAPMAS), the number of temporary migrants[5] in 2009 recorded 1.12 million compared to 1.10 million in 2008 with an increase of 1.82% (figure 2). It is worth noting that this number has witnessed a significant increase over the period 2000-2009; increasing from 0.6 million in 2000 to 1.12 in 2009. The Arab countries are considered the most attracting destination for this kind of migrants all over the highlighted period of time, comprising more than 95% of migrants. Egypt is the largest country of origin of the migrant workers to Arab countries. In some years 10% of Egyptian labor force migrated to Arab countries (Wahba, 2005). In 2009, the Arab countries were the destination for one million emigrants representing 96.25% of total temporary migration in 2009, of whom 50.2% are located in Saudi Arabia, and 16.69% in Kuwait. Migrants to European countries represented 3.03% out of total migrants for the same year, of whom 72.2% headed for Italy, and 17.39% for Greece. Males account for 97.1% of total migrants and only 29.9% of total migrants are tertiary educated, where the majority are either graduates of vocational schools or low level education.[6]

Figure 2: Number of Egyptian Temporary Migrants over the Period 2000-2009:



Source: CAPMAS, Bulletin on Temporary Migration, 2010.

[5] It is worth noting that the Title of "Bulletin on Temporary Migration" issued by CAPMAS changed in 2005 to be "Bulletin on Number of Contracts and Work Permissions Granted for Egyptians Abroad".

[6] Central Agency for Public Mobilization and Statistics (2010), Bulletin on Temporary Migration.

Permanent Migration

Regarding permanent migration, CAPMAS statistics differentiate between two types of permanent migrants; those who migrated to a foreign country with the intention of fully and permanently accommodating in that country by acquiring this foreign nationality and has applied for migration before traveling through the formal channels, and those who moved to a foreign country and turned into migrants after a period of accommodation in that country. The following statistics will treat the two types equally as permanent migrants. According to CPAMAS, these migrants have reached 4761 over the period 2000-2009, of whom 4272 resided in only three countries; namely, United States (1945), Canada (1327), and Italy (1000). This comprises more than 89% of Egyptian permanent migrants (table 1). Nevertheless, there is no common pattern for Egyptian permanent migration over the abovementioned period; number of migrants has been fluctuating to various destinations all over the world. However, number of migrants reached its peak in 2001 with a record of 764 migrants; where in 2003 this number decreased to reach only 310 migrants.

Table 1: Number of Permanent Migrants by Destination over the Period 2000-2009

Destination Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
USA	257	226	174	133	196	240	205	210	175	129	1945
Canada	152	185	137	104	118	141	126	97	126	141	1327
Italy	113	308	323	39	19	22	25	33	60	58	1000
Australia	26	22	20	19	35	49	30	36	49	40	326
New Zealand	14	10	8	6	1	..	2	3	..	4	48
Other Countries	11	..	..	..	2	..	3	3	10	1	30
United Kingdom	4	3	4	4	..	1	2	3	..	3	24
France	5	3	3	2	2	1	2	2	..	3	23
Germany	4	2	7	3	2	1	1	..	..	..	20
Netherlands	4	3	5	..	2	1	..	..	..	..	15
Austria	..	2	..	..	1	..	..	..	..	..	3
Total	590	764	681	310	378	456	396	387	420	379	4761

Source: Central Agency for Public Mobilization and Statistics, Bulletin on Permanent Migration, 2010.

Unlike temporary migration, the majority of permanent migrants are educationally qualified; those who have completed tertiary education represent around 50% of permanent migrants over the same period. In the second rank comes the segment of vocational schools graduates which comprises 40.5% of those migrants (table 2).

Table 2: Educational Status of Permanent Migrants over the Period 2000-2009

Year	Higher Education	Tertiary Education	Vocational Schools	Not qualified Educationally	Total
2000	28	243	233	32	536
2001	31	322	334	31	718
2002	31	274	323	24	652
2003	8	167	104	14	293
2004	28	200	115	14	357
2005	29	196	180	20	425
2006	23	210	124	11	368
2007	23	198	145	7	373
2008	26	213	148	21	408
2009	28	213	117	11	369
Total	255	2236	1823	185	4499

Source: CAPMAS, Bulletin on Permanent Migration, 2009.

Regarding the occupational profile of Egyptian migration, the data from CAPMAS reveals that graduates of business faculties represented more than 29% of total migrants over the period 2000-2009; 42% of them headed for the United States, and 31% in Canada. Followed by the business school graduates, came the graduates of faculty of engineering which comprised 23.8%, of whom 33% resided in the United States, and 53.7% in Canada over the same period 2000-2009.

In 2009, the total number of permanent migrants reached 379 migrants; this number comprises around 270 migrants residing in US and Canada. Highlighting the characteristics of this type of migrants reveals that 36% of them fall in the age category 30-39 years; 57.72% of them were highly educated; 68.8% of them are married (CAPMAS, 2010) (for data discrepancy issue see Annex 1).

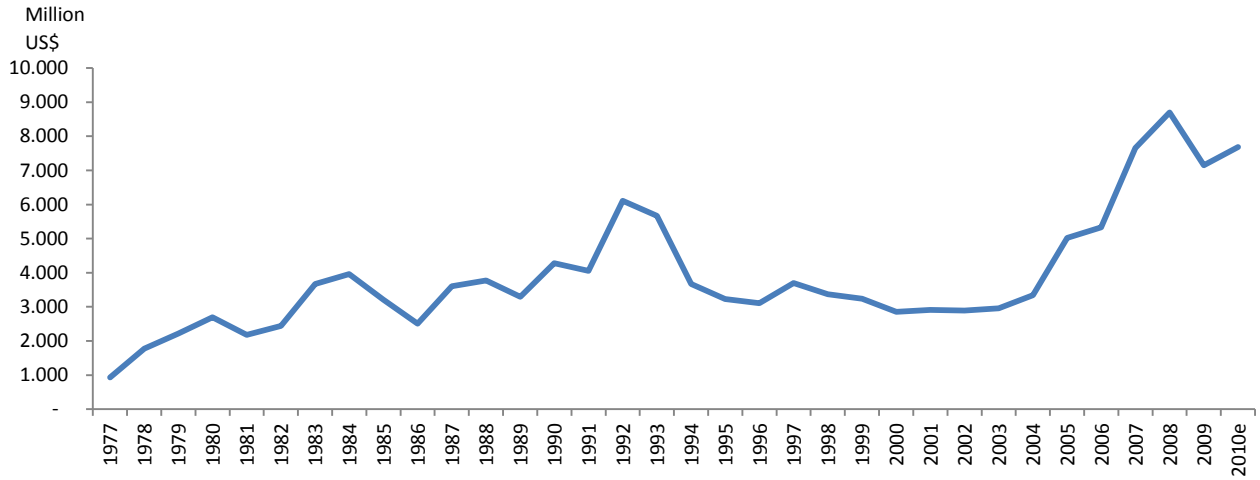
What is evident is that during the governments under the presidency of Mubarak irregular migration increased due to several political and economic reasons that have affected both Egypt and the world in general. The prospects for increasing the level of migration do not look promising from the demand side, where several Arab countries as well as many EU countries have adopted more restrictions on international migration. Security and cultural problems, besides the conventional political and economic problems of immigrants have created a lot of

concern and lowered the expectations on high migrant flows from Egypt among other migrant origin countries (de Silva and Silva-Jáuregui, 2004). As asserted by Girgis (2002), the replacement of Arab workers by Asian ones and the open unemployment among Gulf nationals have acted as major reasons behind the lessening of migration flows from Egypt, among other Arab countries to the Gulf. Moreover, the cyclical changes in world oil prices have a significant impact on the demand for Egyptian migrants especially in the Gulf countries. Such prospects of changing migration trends should be taken into consideration by the GOE and its partners when designing its migration policies (Ghoneim, 2010).

Remittances

The role played by remittances and returned migrants has always been significant in the context of economic development in Egypt. Remittances represented around 4% of Egypt's GDP in 2009 (World Bank, 2011). Egypt is considered the 13th largest receiver of remittances in the world and the second in MENA region. It comes directly after Lebanon with a slight difference. A sharp increase could be observed in 1992, where remittances increased by more than 50% over one year due to the first Gulf war, as most of the Egyptians working in both Kuwait and Iraq have left their jobs and returned back to Egypt (figure 3).

Figure 3: Egypt Inward Remittances Flow over the Period 1977-2010



Source: World Bank (2011), *Migration and Remittances Factbook* Data, 2011, available online at http://data.worldbank.org/data-catalog/migration-and-remittances

It is worth noting that remittances data, just like migration data, differs according to different sources. For example, according to the Central Bank of Egypt (CBE), remittances in 2008/2009 and 2009/2010 were US$ 7805.7 million and US$ 9753.4 million, respectively (table 3); however according to World Bank data remittances in 2009 and 2010 was US$ 7150 million and US$ 7681 million. The US ranked top among the countries from which Egyptians abroad send their remittances followed by Kuwait, United Arab Emirates and Saudi Arabia.

Table 3: Egypt Inward Remittances over the Period 2001/02-2009/10:

Fiscal Year	Remittances in Million US$
2001/2002	3029.5
2002/2003	2976.8
2003/2004	2999.6
2004/2005	4329.5
2005/2006	5034.2
2006/2007	6321.0
2007/2008	8559.2
2008/2009	7805.7
2009/2010	9753.4

Source: Central Bank of Egypt, Annual Report, Various Issues.

The rules and regulations dealing with remittances have experienced a lot of changes. The Government of Egypt (GOE) in the 1960s used to ask emigrants to repatriate part of their earnings to the government (whereby migrants had to transfer 25% of their income for single migrant households and 10% for family households into their own bank account), a policy that proved to be unsuccessful (Collyer, 2004). The end of 1960s changed exchange rates and the beginning of 1970s to encourage remittances and the government started issuing special bonds for emigrants to attract their remittances. In fact Egypt was one of the very few countries that has liberalized its capital account in its balance of payments (even before attempts to liberalize its current account) to attract remittances. None of these policies led to significant change of pattern in using remittances in productive investments[7] (ESCWA, 2006; Roman, 2006). The government changed its policy in the 1980s and induced migrants to send money to a foreign currency account in Egypt by offering favorable exchange rates. Also bonds for Egyptian

[7] By productive investment it is meant in that context establishing manufacturing or services projects that yield income and create employment. Since the majority of remittances is spent on buying or constructing houses or consumption, it is argued that this does not represent productive investment from the economy's point of view.

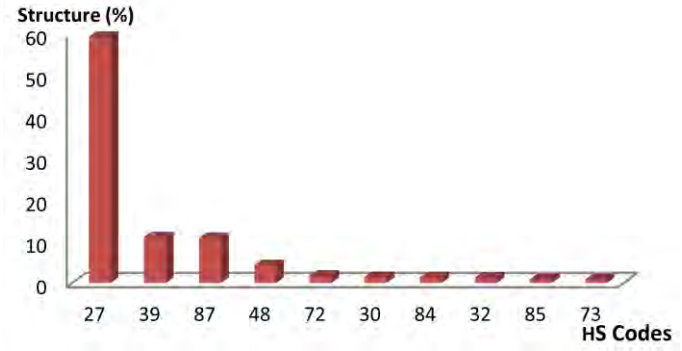
migrants were introduced. Law 111/1983 recognized some rights for Egyptians abroad, such as tax exemptions on the bank deposits of emigrants in banks operating in Egypt and the capital contributed by an Egyptian emigrant shall be treated on the basis of their enjoyment of all privileges prescribed for the foreign capital working in the same field. Since that date remittances have not been regulated by any means neither through obligations to repatriate part of the remittances back to Egypt, nor through provision of incentives for emigrants and Diaspora to send their remittances back home. An idea of taxing remittances was raised in the 1990s, but was soon abandoned as it was found to be an irrational decision (Ghoneim, 2010).

Trade Flows

According to the aforementioned major countries of destinations for Egyptian emigrants, the selected countries that have been chosen to trace their commodity exports to Egypt include three regions: i) Arab countries, mainly Saudi Arabia, Libya, Kuwait and Jordan; and ii) European countries, mainly Italy, France and Germany, and iii) US and Canada as benchmarks. However, due to data unavailability, within Arab region, Saudi Arabia and Jordan are the only available countries from COMTrade database as reporters exporting to the Egyptian market. The top 10 commodity groups Saudi Arabia exports to Egypt are shown in figure 4. It is clear that mineral fuels, mineral oils and products of their distillation commodity group is the most important import group Egypt receives from Saudi Arabia; it accounts for about 59% of total Saudi Arabian exports to Egypt (figure 4). Hence, there is a high concentration of commodity reference price imports from Saudi Arabia. We use the COMTrade database where we classify exports and imports using HS 2 digit level. Yet for the sake of analysis that will follow in section three we categorize products into homogenous, reference priced, and differentiated products[8].

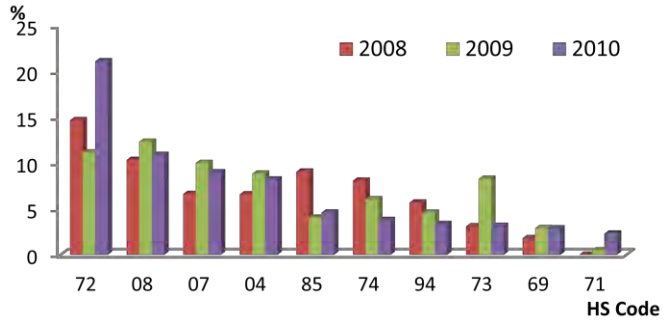
[8] Rauch (1999) divides goods into three groups: (i) those traded on an organized exchange, (ii) those with a reference price in industry journals, and (iii) those that fail to enter the first two categories.

Figure 4: Top-10 Saudi Arabia Exports to Egypt (2007)



Source: UN, COMTrade Database, online version.

Figure 5: Top-10 Egyptian Exports to Saudi Arabia (2008-2010)



Source: UN, COMTrade Database, online version.

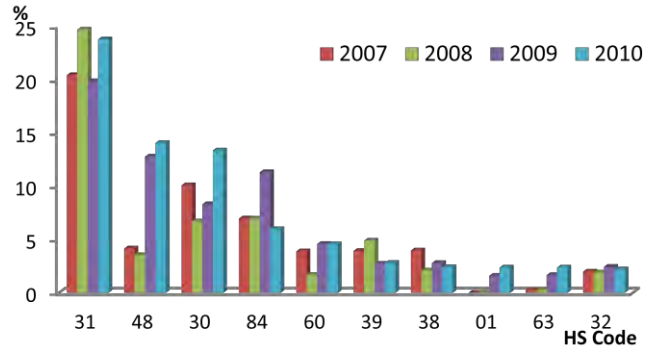
04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included
07	Edible vegetables and certain roots and tubers
08	Edible fruit and nuts; peel of citrus fruit or melons
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes
39	Plastics and articles thereof
48	Paper and paperboard; articles of paper pulp, of paper or of paperboard
69	Ceramic products
71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin
72	Iron and steel
73	Articles of iron or steel
74	Copper and articles thereof
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles
87	Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof
94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated name-plates and the like; prefabricated buildings

On the other hand, the major Egyptian exports to Saudi Arabia have been concentrated in iron and steel and processed food as shown in figure 5. The share of those exports in total Egyptian exports to Saudi Arabia has remained relatively stable, whereas the share of HS 85 (electrical machinery) has declined in 2009 and 2010 compared to 2010. This implies that Egyptian exports to Saudi Arabia are concentrated in differentiated goods.

Jordanian exports to Egypt are relatively more diversified than the Saudi Arabian exports. Figure 6 shows that fertilizers account for the highest share among the Egyptian imports from Jordan. Paper and paperboard, articles of paper pulp, paper, and paperboard recently represents the second group of Jordanian exports to Egypt. Apart from its historical low ratio,

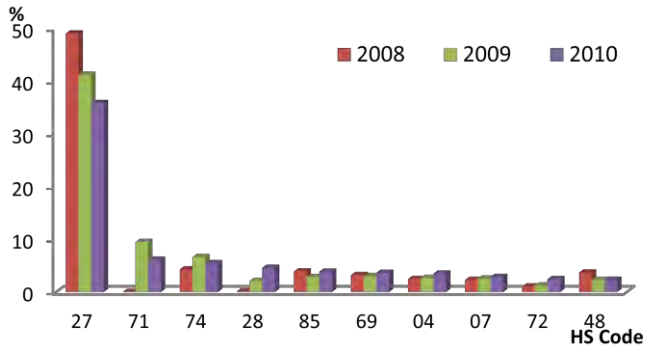
the share of such products has witnessed a significant increase during the last two years. The share of pharmaceutical products has fluctuated however it still remained higher than other group of commodity products other than fertilizers and paper products. Hence, Jordanian exports to Egypt are more of homogenous and differentiated products.

Figure 6: Top-10 Jordanian Exports to Egypt (2007-2010)



Source: UN, COMTrade Database, online version.

Figure 7: Top-10 Egyptian Exports to Jordan (2008-2010)



Source: UN, COMTrade Database, online version.

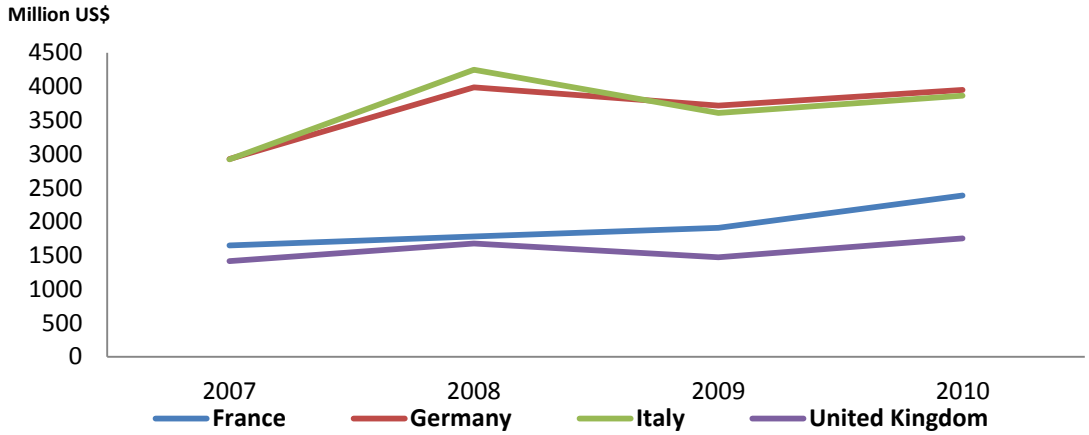
01	Live animals; animal products
04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included
07	Edible vegetables and certain roots and tubers
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes
30	Pharmaceutical products
31	Fertilisers
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks
38	Miscellaneous chemical products
39	Plastics and articles thereof
48	Paper and paperboard; articles of paper pulp, of paper or of paperboard
60	Knitted or crocheted fabrics
63	Other made up textile articles; sets; worn clothing and worn textile articles; rags
69	Ceramic products
71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals cladwith precious metal, and articles thereof; imitation jewellery; coin
72	Iron and steel
74	Copper and articles thereof
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles

Regarding Egyptian exports to Jordan there is high concentration when compared to Egyptian imports from Jordan and when compared to Egyptian exports to Saudi Arabia. The high concentration of HS 27 has declined where its share went down from 50% in 2008 to less than

40% in 2009 (figure 7). However, this decerase in the share of HS 27 could be a result of lower oil prices. Other major exports to Jordan are relatively diversified (comprising iron and steel, processed food, machinery, and chemicals). Yet, the shares of such other main products remained relatively stable. Hence, there is a tendency for Egyptian exports directed to Arab countries to be more concentrated in diffrentiated products, with no clear characteristics for imports from Arab countries as they include refernce priced, homogensnous and diffrentiated products.

Regarding European countries, we observe that as shown in figure 8, Italy and Germany have the highest trade values with Egypt; however, the in last two years the German exports to Egypt have exceeded those of Italy. The UK has the lowest export value among the selected group of countries.

Figure 8: Egyptian Imports form some selected European Countries (2007-2010)



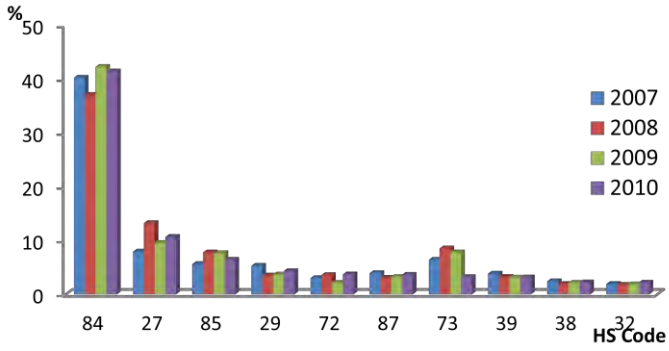
Source: UN, COMTrade Database, online version.

Figures 9, 11, and 13 reveal the most important Italian, German, and French exports to Egypt where there is high concentration in HS 84 (machinery, etc.) representing the major exports from those there countries to Egypt. Other major exports of those countries to Egypt constitute of HS 87. France major exports to Egypt constitute of cereals. Moreover, France exports to Egypt are more diversified and less concentrated compared to those of Germany and Italy. This

implies that Egypt's imports from European countries are more concentrated in differentiated products.

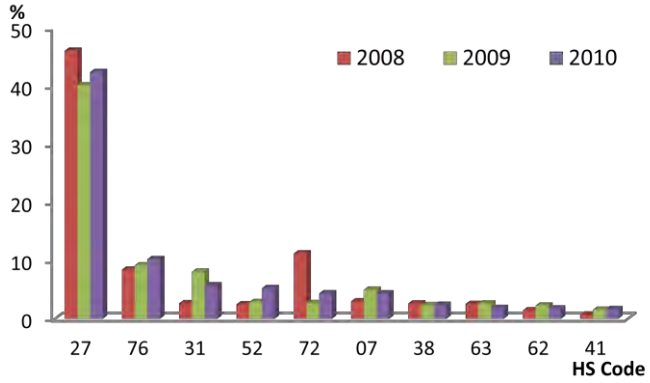
On the other hand figures 10, 12 and 14 reveal major Egyptian exports to Italy, Germany and France where the export structure is highly similar and HS 27 (mineral fuels) is the major export. Other major exports include fertilizers, edible vegetables, and iron and steel. Hence, there is high concentration of Egyptian exports to European countries in homogenous and reference priced products.

Figure 9: Top-10 Italian Exports to Egypt (2007-2010)



Source: UN, COMTrade Database, online version.

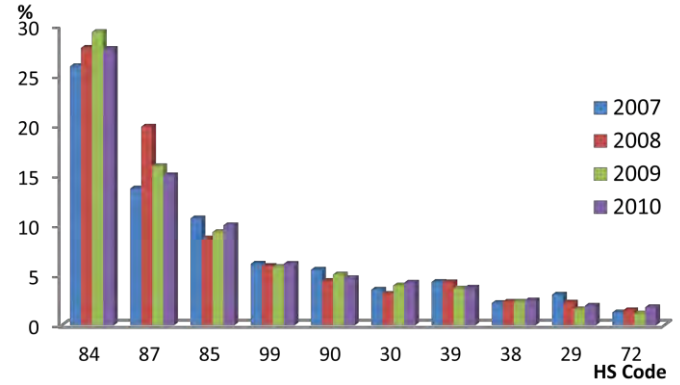
Figure 10: Top-10 Egyptian Exports to Italy (2008-2010)



Source: UN, COMTrade Database, online version

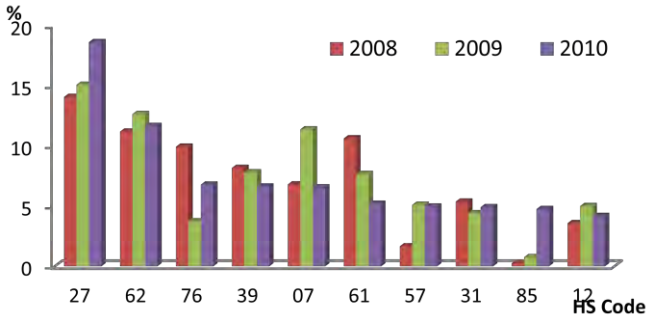
07	Edible vegetables and certain roots and tubers
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes
29	Organic chemicals
31	Fertilisers
32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks
38	Miscellaneous chemical products
39	Plastics and articles thereof
41	Raw hides and skins(other than furskins) and leather
52	Cotton
62	Articles of apparel and clothing accessories, not knitted or crocheted
63	Other made up textile articles; sets; worn clothing and worn textile articles; rags
72	Iron and steel
73	Articles of iron or steel
76	Aluminum and articles thereof
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof
87	Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof

Figure 11: Top-10 German Exports to Egypt (2007-2010)



Source: UN, COMTrade Database, online version

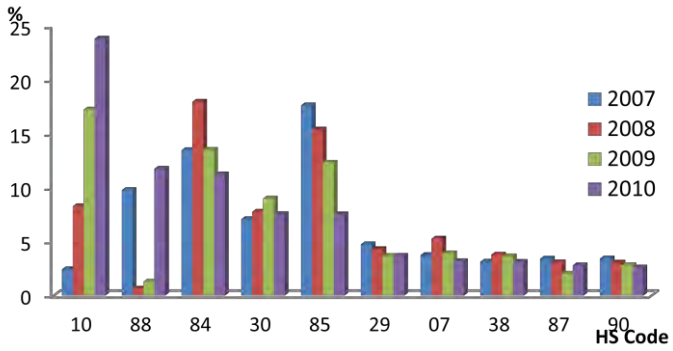
Figure 12: Top-10 Egyptian Exports to Germany (2008-2010)



Source: UN, COMTrade Database, online version

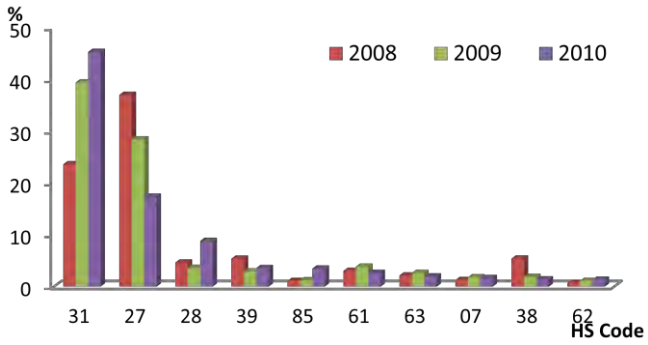
07	Edible vegetables and certain roots and tubers
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes
29	Organic chemicals
30	Pharmaceutical products
31	Fertilisers
38	Miscellaneous chemical products
39	Plastics and articles thereof
57	Carpets and other textile floor coverings
61	Articles of apparel and clothing accessories, knitted or crocheted
62	Articles of apparel and clothing accessories, not knitted or crocheted
72	Iron and steel
76	Aluminum and articles thereof
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles
87	Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof
99	Commodities not specified according to kind

Figure 13: Top-10 French Exports to Egypt (2007-2010)



Source: UN, COMTrade Database, online version

Figure 14: Top-10 Egyptian Exports to France (2008-2010)



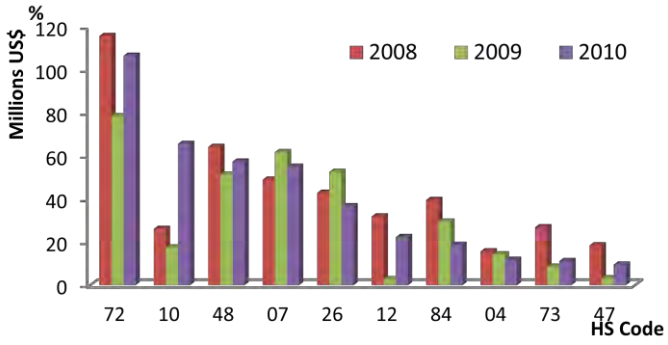
Source: UN, COMTrade Database, online version

07	Edible vegetables and certain roots and tubers
10	Cereals
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes
29	Organic chemicals
30	Pharmaceutical products
31	Fertilisers
38	Miscellaneous chemical products
39	Plastics and articles thereof
61	Articles of apparel and clothing accessories, knitted or crocheted
62	Articles of apparel and clothing accessories, not knitted or crocheted
63	Other made up textile articles; sets; worn clothing and worn textile articles; rags
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles
87	Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof
88	Aircraft, spacecraft, and parts thereof
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof

The trends of trade between Egypt and Arab countries on the one hand (at this level of aggregation) shows that that trade is more of a mixture of inter-industry and intra-industry trade, whereas on the other hand the trade with European countries (at this level of aggregation) shows that trade is of inter-industry type. Moreover, the structure of Egyptian exports to European countries is highly similar to the structure of Egyptian imports from Arab countries (reference priced and homogenous) whereas the structure of Egyptian exports to Arab countries is highly similar to Egyptian imports from European countries (differentiated products).

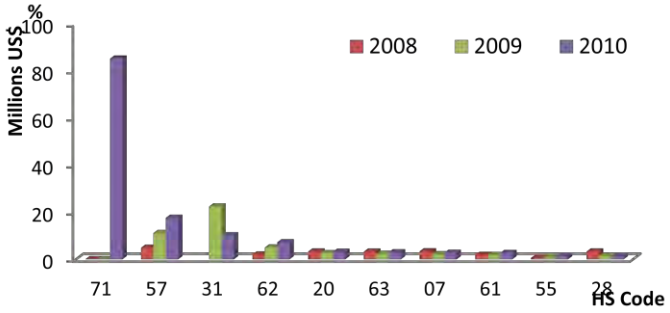
Figures 15, 16, 17, and 18 shows the main Egyptian exports and imports to and from the US and Canada revealing that type of trade with those two countries is highly similar to the one existing between Egypt and the EU countries.

Figure 15: Top-10 Canadian Exports to Egypt (2008-2010)



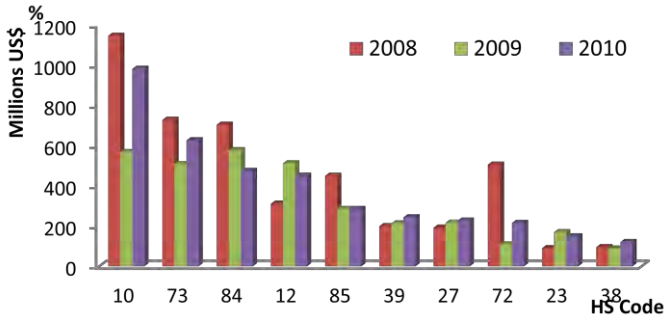
Source: UN, COMTrade Database, online version.

Figure 16: Top-10 Egyptian Exports to Canada (2008-2010)



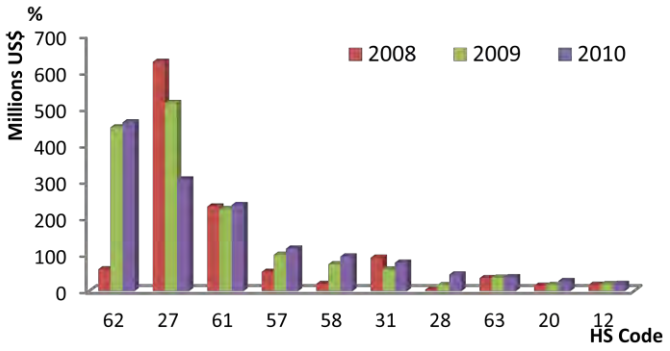
Source: UN, COMTrade Database, online version.

Figure 17: Top-10 US Exports to Egypt (2008-2010)



Source: UN, COMTrade Database, online version.

Figure 18: Top-10 Egyptian Exports to USA (2008-2010)



Source: UN, COMTrade Database, online version.

Section Three: Gravity Model Estimation

The limitations of detailed harmonized data on migrant flows from Egypt to EU and Arab countries have prevented us from using the Docquier and Marfouk (2007) database, which only contains data on migrant flows to OECD countries. Hence, we had to revert to other sources of data on migration flows where we used the Central Agency for Public Mobilization and Statistics (CAPMAS) database. However, the CAPMAS database differentiated between permanent migration (to EU and North America) that are mentioned in flows and temporary migration to Arab countries (which are mentioned as stocks). Data on migrants to EU and North America is available on yearly basis for the period 2000-2009, which is not the case for individual Arab countries, where data is available only for the aggregate of Arab countries as a region. Hence, we treat Arab countries for their migration data as one country and we aggregate the trade for the respective Arab countries, while taking distance to Saudi Arabia (the main recipient of Egyptian migrants) as a proxy to geographical distance for this group of countries. We also consider that Egypt has a border with Arab countries since Libya (the second major recipient of Egyptian migrants) is adjacent to Egypt.

We adopted the standard form of gravity model where we included the traditional explanatory variables including GDP per capita, income in Egypt and in receiving countries, distance, common language and number of migrants. The equation took the following form:
Following the literature, the model used for the study is a reduced-form gravity equation:

$$\ln(Trade_{ij,t}) = \alpha_{ij} + \beta_1 * \ln(Mig_{ij,t-1}) + \beta_2 * \ln\ GNI_{i,t}\ + \beta_3 * \ln\ GNI_{j,t}\ + \beta_4 * \ln\ GNI_{i,t}\ Pop_{i,t}\ + \beta_5 * \ln\ GNI_{j,t}\ Pop_{j,t}\ + \beta_6 * \ln\ Dist_{ij}\ + \beta_7 * Lang_{ij} + \beta_8 * Colony_{ij} + \varepsilon_{ij,t}$$

where

- $\mathrm{Trade}_{\mathrm{ij,t}}$ is the bilateral trade flow between country i and country j at time t
- α_{ij} represent cross-section specific heterogeneity;
- $\mathrm{GNI}_{\mathrm{i,t}}$ and $\mathrm{GNI}_{\mathrm{j,t}}$ are the Gross National Income of the two countries that trade;
- $Dist_{\mathrm{ij}}$ is the bilateral distance between country *i* and country *j*;

• $Lang_{ij}$ and $Colony_{ij}$ are two additional explanatory variables (mainly dummies trying to capture other measures of common language and colonial relationship between the two countries).

Our time horizon is (2001-2010) whereas the number of countries included in the equation are 14 including US, Canada, Italy France, Germany, UK, Greece, Spain, Australia, Austria, Denmark, Sweden , Netherlands, and Arab countries (counted as one group because annual data on migration stock statistics at regional level are more comprehensive than at each country individually which are available for three years only).

As evident from the equation, we apply one-year lag for migrants stock, to accommodate for any endogeneity problem, as shown by Egger (2011). Data on migrants' stock figures are collected from three main sources, namely: number of Egyptian migrants to the Arab countries was compiled from domestic sources (CAPMAS); number of Egyptian migrants in non-Arab countries was extracted from Eurostat and OECD databases. The Eurostat was used to extract data on the Egyptian immigrants in European countries; as well as other OECD (non-European) countries. OECD-International Migration Database was used to compile data on countries (Italy, Germany, and Greece) that are not available in the Eurostat database. Finally, data on Egyptian migrants to USA, Canada and France were estimated using immigration net inflows reported in OECD-International Migration Database where their immigrants stock in the base year (2000) were compiled from the World Bank 10-year migration dataset.

Data on bilateral trade has been extracted from COMTRADE database of UN for our period of study, 2001-2010. Data on GNI and GNI per capita were extracted from the World Development Indicators (WDI) provided by the World Bank for years (2001-2010). Data on other variables, including distance, common language and colonial relationship, are dummies were collected from the CEPII Institute's distance database.

We aggregated and classified the trade data at 4-digit SITC Rev.2 following Rauch (1999) where trade is divided into three main categories: (i) differentiated products; (ii) reference price; and (ii) organized (homogenous). We run several regressions with fixed effect and random effect. Testing for multicolinearity identified that the income and per capita income suffer from multicolinearity, so we decided to drop the per capita income variable.

We run several types of regressions including pooled, pooled with dummies, pooled sectoral, panel fixed effect (sectoral and country specific), and panel random. We report a number of such regressions below (regressions 1 to 8). We do not report regression with fixed effects as following Hausman test we rejected the null hypothesis and hence random effect regressions were the most appropriate[9]. Our results showed that Egyptian migrants do have a pro-trade effect, yet not on all types of product categories, which differs in the exporting and importing vectors. The pro-trade effect of migrants is clear and significant in the case of Egyptian exports and imports, suggesting the presence of mixed preference and network effects. By types of products, Egyptian migrants do show a trade creation effect on Egyptian homogenous and exports (preference+network) and on Egyptian imports (network on net) on reference priced products. Differentiated products show some network effect on net, with increasing imports arriving to Egypt from the country of destination of Egyptian emigrants (growth in Egyptian imports), while homogenous goods show a clear and enormous preference effect in Egyptian exports to those receiving countries. The magnitude of the coefficient in terms of migrants creating trade of such organized exports is much higher than in other studies in the literature showing some elasticity estimates (0.98 for homogenous exports and 0.44 for reference price imports) that are considered to be extremely high when compared to the average values in the literature, that range between 0.15 and 0.50 (Genç et al., 2011), 0.10 to 0.16 (Requena and Serrano, 2011) and even lower estimates as in (Casi, 2010). Hence, when we corrected for heteroskedasticity the coefficient of general trade decreased to 0.128 (down from 0.241 in pooled regression) and that of exports to 0.285 (down from 0.251 in pooled regression) which

[9]When undertaking the Hausman test for specific types of exports and imports we observe that fixed effect regression were the more suitable in some cases as we did not reject the null hypothesis. However, comparing the results of random and fixed effects regressions did not reveal any differences in significance and only minute differences in coefficients, hence for the sake of simplicity we reported only the random effect results.

is in line with the estimates found in the literature. This has also been the case with homogenous exports whose coefficient decreased to 0.8 and for reference price imports which decreased to 0.124. The coefficient of homogenous exports remains extremely high when compared with similar estimates in the literature, and hence in this case we should only focus on the trend of the results and not the magnitude. Correcting for heteroskedasticity resulted also in making some other specific imports and exports statistically significant, where we observe that the migration effect on differentiated exports become significant with a reasonable coefficient of 0.109. This has also been the case with differentiated imports which had a coefficient of -0.336 implying a negative relationship between migration and imports and a coefficient of 0.398 for homogenous imports. The results differ when digging into details where we find that the export creation effect of migrants holds only in a specific set of countries when the regression is run on country specific with fixed effects where it holds only for three countries namely Australia, Canada and Sweden. This could be a result of the type of migrants (skills or income) implying that there are threshold effects (based on skill level (education) or income), yet our data do not allow us to investigate it. Notwithstanding, all these giant elasticities found in the country analysis warns us from taking them with their values where we should take them just as an indication, given the important bias in estimation shown by other studies when employing these type of disaggregated data (e.g. Bandyopadhyay et al., 2008).

The overall result for our case study is that the pro-trade effect of Egyptian migrants is evident in the case of Egypt for imports, through network effects, as well as in the case of Egyptian exports to destination countries of emigrants, in a more clear preference driven effect. Generally, we also observe that the trade enhancement effect is country-and-product specific and evident in the case of homogenous and differentiated exports (implying a preference effect endowed in Egyptian exports). The country specific effect is in line with results of Foad (2010) who highlights the relevance of such preference channel for MENA emigrants going to EU countries in leading pro-trade effects of migrants, as we have found. The trade creation effect

of migrants on Egyptian imports is highly evident in homogenous and reference priced commodities implying a network effect.

Finally, the lack of significance of migrants' trade effect in the case of Arab countries observed in country specific table of results could be implying two tentative explanations. The first one is that with existing cultural similarities between Egypt and those countries, migrant networks would not be playing an important role, neither for the network channel, nor for the preference one. Given similarities in foodstuff supply in Arab countries, the products that Egyptians usually employ at home are readily available in the Arab foreign markets, and hence there is no specific preference effect. Also, and due to the similar language, culture and other traditions, no network effect is neither significant, which is not the case of Egyptian emigrants to EU or North America. The second interpretation become more related to the type of migration found in Egypt, where country specific regressions point out towards positive impact for permanent migrants on trade, but not in the case of temporary migrants, the ones characterizing the Diaspora to Arab countries of Egyptians.

Regression One: Pooled

Variable	Ln(Trade)	Ln(Exp)	Ln(Imp)
Ln(Migration)	0.241***	0.251**	0.151
	(0.0899)	(0.114)	(0.113)
Ln(Dist)	-0.839***	-2.276***	-0.560***
	(0.168)	(0.212)	(0.210)
Ln(GDP_EGY)	1.328***	0.818***	1.433***
	(0.232)	(0.294)	(0.291)
Ln(GDP_PRT)	0.935***	1.512***	0.857***
	(0.079)	(0.099)	(0.0989)
Language	0.166	0.367	0.473
	(0.359)	(0.454)	(0.450)
Colony	-0.922**	-0.875*	-0.857*
	(0.389)	(0.492)	(0.537)
Constant	3.567*	11.697***	1.558
	(1.987)	(2.512)	(2.491)
Observations	396	396	396
R-squared	0.580	0.666	0.4236

Standard errors in parentheses

*** p<0.01, ** p<0.05,p<0.1

Regression Two: Pooled Sectoral

Variable	Differentiated		Homogeneous		Reference Priced	
	Ln(Exp)	Ln(Imp)	Ln(Exp)	Ln(Imp)	Ln(Exp)	Ln(Imp)
Ln(Migration)	-0.091	0.152*	0.987***	-0.142	-0.143	0.443***
	(0.119)	(0.083)	(0.206)	(0.215)	(0.168)	(0.084)
Ln(Dist)	-2.299***	-0.363**	-1.833***	-1.097***	-2.695***	-0.221
	(0.222)	(0.155)	(0.383)	(0.401)	(0.312)	(0.156)
Ln(GDP_EGY)	1.544***	1.261***	-0.323	1.574***	1.233***	1.465***
	(0.308)	(0.215)	(0.531)	(0.556)	(0.433)	(0.216)
Ln(GDP_PRT)	1.465***	1.082***	1.192***	1.108***	1.878***	0.381***
	(0.105)	(0.073)	(0.180)	(0.189)	(0.147)	(0.073)
Language	1.935***	-1.534***	-2.075**	3.134***	1.243*	-0.179
	(0.476)	(0.332)	(0.821)	(0.859)	(0.669)	(0.334)
Colony	-1.327**	0.684*	0.562	-3.061***	-1.861**	-0.193
	(0.516)	(0.361)	(0.890)	(0.932)	(0.797)	(0.362)
Constant	12.035***	0.578	8.427*	4.561	14.63***	-0.463
	(2.634)	(1.839)	(4.541)	(4.753)	(3.702)	(1.846)
Observations	132	132	132	132	132	132
R-squared	0.820	0.827	0.708	0.553	0.758	0.753

Standard errors in parentheses

*** p<0.01, ** p<0.05, *p<0.1

Regression Three: Panel with Random Effect

Variable	Ln(Trade)	Ln(Exp)	Ln(Imp)
Ln(Migration)	0.247**	0.424***	0.088
	(0.116)	(0.156)	(0.148)
Ln(GDP_EGY)	1.479***	1.126***	1.573***
	(0.130)	(0.182)	(0.167)
Ln(GDP_PRT)	0.760***	1.036***	0.733***
	(0.122)	(0.165)	(0.155)
Ln(Dist)	-0.572*	-1.897***	-0.079
	(0.295)	(0.360)	(0.367)
Language	0.751	0.056	1.499
	(0.894)	(1.124)	(1.121)
Colony	-0.605	-.321	-0.269
	(0.683)	(0.829)	0.849
Constant	1.803	8.822***	-1.549
	(2.326)	(2.835)	(2.896)
Observations	396	396	396
R-squared	0.581	0.652	0.432
Number of Cross-Section Observations	42	42	42

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Regression Four: Hausman-Taylor Estimate

Variable	Ln(Trade)	Ln(Exp)	Ln(Imp)
Ln(Migration)	0.299**	0.550***	0.102
	(0.131)	(0.185)	(0.168)
Ln(GDP_EGY)	1.471***	1.140***	1.567
	(0.130)	(0.184)	(0.167)
Ln(GDP_PRT)	0.739***	0.938***	0.732***
	(0.125)	(0.176)	(0.159)
Ln(Dist)	-0.615**	-1.963***	-0.096
	(0.292)	(0.398)	(0.360)
Language	0.502	-0.501	1.429
	(0.925)	(1.278)	(1.157)
Colony	-0.638	-0.359	-0.283
	(0.669)	(0.910)	(0.822)
Constant	1.851	8.782***	-1.509
	(2.277)	(3.100)	(2.801)
Observations	396	396	396

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Regression Four: Regression with AR(1) Disturbance

Variable	Ln(Trade)	Ln(Exp)	Ln(Imp)
Ln(Migration)	0.169 (0.121)	0.344** (0.162)	0.042 (0.155)
Ln(GDP_EGY)	1.416*** (0.154)	1.088*** (0.212)	1.498*** (0.200)
Ln(GDP_PRT)	0.855*** (0.135)	1.195*** (0.179)	0.811*** (0.173)
Ln(Dist)	-0.553** (0.277)	-1.932*** (0.345)	-0.083 (0.349)
Language	1.038 (0.864)	0.316 (1.101)	1.626 (1.093)
Colony	-0.624 (0.638)	-0.381 (0.792)	-0.313 (0.803)
Constant	2.031 (2.193)	8.970*** (2.737)	-1.249 (2.764)
Observations	396	396	396
R-Squared	0.588	0.660	0.435
Autocorrelation Coefficient	0.357	0.317	0.371

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Regression Five: Regression with Panel-Corrected Standard Errors (Heteroscedastic)

Variable	Ln(Trade)	Ln(Exp)	Ln(Imp)
Ln(Migration)	0.127*** (0.026)	0.285*** (0.046)	0.062** (0.025)
Ln(GDP_EGY)	1.355*** (0.117)	0.815*** (0.166)	1.458*** (0.144)
Ln(GDP_PRT)	0.992*** (0.029)	1.495*** (0.054)	0.901*** (0.029)
Ln(Dist)	-0.616*** (0.064)	-2.085*** (0.065)	-0.174*** (0.046)
Language	1.156*** (0.166)	0.360** (0.182)	1.486*** (0.212)
Colony	-0.695*** (0.042)	-0.599*** (0.054)	-0.395 (0.088)
Constant	2.303*** (0.657)	10.025*** (0.971)	-1.121 (0.722)
Observations	396	396	396
R-Squared	0.5895	0.666	0.436

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Regression Six: Panel Sectoral with Random Effect

Variable	Differentiated			Homogeneous			Reference Priced		
	Ln(Trade)[1/]	Ln(Exp)	Ln(Imp)[1/]	Ln(Trade)	Ln(Exp)[1/]	Ln(Imp)	Ln(Trade)	Ln(Exp)	Ln(Imp)
Ln(Migration)	-0.067	0.135	-0.187	0.506*	1.000***	0.326	0.266*	0.155	0.141
	(0.108)	(0.184)	(0.124)	(0.273)	(0.324)	(0.368)	(0.153)	(0.254)	(0.119)
Ln(GDP_EGY)	1.593***	1.818***	1.688***	1.429***	0.529	1.399***	1.409***	1.079***	1.632***
	(0.122)	(0.209)	(0.136)	(0.315)	(0.372)	(0.435)	(0.180)	(0.289)	(0.154)
Ln(GDP_PRT)	0.816***	0.997***	0.743***	0.693**	0.072	1.047***	0.801***	1.965***	0.399***
	(0.113)	(0.193)	(0.129)	(0.288)	(0.341)	(0.389)	(0.162)	(0.267)	(0.127)
Ln(Dist)	-0.817***	-1.074**	-0.555*	-0.296	-2.294***	0.219	-0.590*	-2.291***	0.089
	(0.267)	(0.451)	(0.334)	(0.648)	(0.767)	(0.828)	(0.348)	(0.615)	(0.242)
Language	1.208	1.935	0.885	0.261	-2.252	1.366	0.931	0.457	2.179***
	(0.814)	(1.381)	(0.997)	(2.005)	(2.373)	(2.602)	(1.089)	(1.889)	(0.788)
Colony	0.024**	0.421	0.181	-1.128	-0.120	-1.018	-0.703	-1.215	0.023**
	(0.617)	(1.042)	(0.777)	(1.494)	(1.769)	(1.899)	(0.798)	(1.419)	(0.552)
Constant	6.391***	2.184	5.182**	-3.015	15.189**	-8.611	2.053	8.939*	-1.217
	(2.102)	(3.555)	(2.643)	(5.102)	(6.042)	(6.508)	(2.734)	(4.845)	(1.912)
Observations	132	132	132	132	132	132	132	132	132
R-squared	0.841	0.797	0.757	0.634	0.576	0.508	0.754	0.753	0.814

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
[1/] The results showed significant Hausman statistics in those cases, however, the random effect estimates were reported for the standardization of presenting estimation results.

Regression Seven: Sectoral Regression with Panel-Corrected Standard Errors (Heteroscedastic)

Variable	Differentiated			Homogeneous			Reference Priced		
	Ln(Trade)	Ln(Exp)	Ln(Imp)	Ln(Trade)	Ln(Exp)	Ln(Imp)	Ln(Trade)	Ln(Exp)	Ln(Imp)
Ln(Migration)	-0.262***	0.109***	-0.336***	0.571***	0.862***	0.398***	0.071**	-0.115	0.124***
	(0.032)	(0.033)	(0.029)	(0.048)	(0.110)	(0.079)	(0.031)	(0.083)	(0.030)
Ln(GDP_EGY)	1.344***	1.523***	1.350***	1.250***	-0.320	1.493***	1.471***	1.241***	1.532***
	(0.191)	(0.148)	(0.239)	(0.177)	(0.542)	(0.231)	(0.186)	(0.270)	(0.167)
Ln(GDP_PRT)	1.296***	1.366***	1.326***	0.857***	1.254***	0.839***	0.824***	1.864***	0.540***
	(0.026)	(0.033)	(0.026)	(0.037)	(0.088)	(0.060)	(0.077)	(0.109)	(0.035)
Ln(Dist)	-0.940***	-1.316***	-0.795***	-0.497***	-2.983***	0.268***	-0.413***	-1.957***	0.004
	(0.037)	(0.075)	(0.055)	(0.119)	(0.143)	(0.102)	(0.122)	(0.059)	(0.104)
Language	1.796***	1.748***	1.153***	-0.218	-2.557***	1.161*	1.888***	1.890***	2.145***
	(0.089)	(0.210)	(0.123)	(0.362)	(0.409)	(0.641)	(0.179)	(0.337)	(0.201)
Colony	-0.211***	0.111	-0.193**	-1.344***	-1.050***	-0.906***	-0.529***	-0.858***	-0.087
	(0.078)	(0.088)	(0.083)	(0.147)	(0.208)	(0.213)	(0.094)	(0.149)	(0.114)
Constant	7.158***	3.303***	6.198***	-2.228**	18.144***	-8.722***	1.979	8.627***	-0.838
	(1.011)	(0.845)	(1.279)	(1.147)	(2.840)	(1.373)	(1.220)	(1.426)	(0.994)
Observations	132	132	132	132	132	132	132	132	132
R-squared	0.8797	0.8131	0.8113	0.6388	0.7126	0.5106	0.7684	0.7642	0.8227

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Regression Eight: Country Specific Effect

	Ln(Exp)				Ln(Imp)			
Country/Region	**Fixed Effect**	**Ln(Migrants)**	**Ln(GDP_PRT)**	**Ln(GDP_EGY)**	**Fixed Effect**	**Ln(Migrants)**	**Ln(GDP_PRT)**	**Ln(GDP_EGY)**
Arab World	-50.76	5.56 (6.416)	-1.32 (3.625)	-0.37 (1.362)	53.00	-6.80 (5.067)	7.02** (2.867)	0.54 (1.070)
Austria	-9.16	0.38 (0.975)	1.97* (1.050)	0.33 (0.480)	-1.42	0.01 (0.771)	1.59* (0.832)	0.28 (0.382)
Australia	-565.23	56.88*** (19.027)	-3.10* (1.594)	-0.87 (0.700)	79.55	-6.99 (15.040)	0.44 (1.263)	0.45 (0.551)
Canada	-100.23	13.05** (5.076)	-5.81*** (1.889)	2.00*** (0.633)	160.23	-21.92*** (3.998)	8.64*** (1.492)	5.14*** (0.498)
Denmark	-69.58	11.74 (7.337)	-1.78* (1.050)	0.29 (0.400)	89.18	-13.41** (5.811)	1.15 (0.834)	2.26*** (0.316)
France	2.98	-2.13 (1.645)	2.36* (1.214)	1.86*** (0.593)	2.17	0.56 1.289	-0.28 (0.956)	1.51*** (0.465)
Germany	-21.12	1.53 (1.194)	1.52 (0.945)	1.17** (0.501)	-13.16	1.04 0.945	0.80 (0.746)	1.92*** (0.397)
Greece	0.38	0.27* (0.160)	0.70** (0.332)	0.85** (0.411)	-0.01	-0.16 0.127	0.65** (0.262)	1.74*** (0.326)
Italy	-3.66	-3.64* (2.125)	6.36** (2.489)	1.77** (0.766)	0.51	-1.91 1.682	2.91 (1.969)	2.21*** (0.606)
Spain	-2.50	-1.60 (1.183)	2.85*** (0.934)	1.50*** (0.408)	6.74	-2.39** 0.933	1.99*** (0.740)	1.96*** (0.325)
Sweden	-50.33	8.73** (3.508)	-2.15** (0.905)	0.50 (1.027)	-93.85	15.91*** 2.771	-1.54** (0.717)	-2.30*** (0.809)
United Kingdom	28.33	-1.05 (4.697)	0.27 (1.426)	-2.07 (5.443)	-15.97	2.23 3.728	1.18 (1.147)	-1.01 (4.294)
United States	-58.73	8.11* (4.581)	-2.47 (2.320)	-0.44 (1.024)	55.79	-8.45** 3.614	4.28** (1.836)	3.64*** (0.806)
AR(1)	-0.67*** (0.046)				-0.80*** (0.034)			
AR(2)	-0.67*** (0.046)				-0.80*** (0.033)			
Observations	340				340			
Number of Cross-Section Observations	30				30			
R-squared	0.908				0.880			

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Conclusion and Policy Implications

Policy prescriptions, especially in the South-North context do not seem to have the uncertainty in the type of relationship between migration and trade mentioned in the study so far. Policy makers of the North seem to have rather a firm belief in the substitution type relationship between trade and migration, which contradicts with the results of the emerging literature as remarked by results of this study and the whole research proposal it belongs to. That view opens opportunities for a new approach of policies from the trade and migration side, with migrant networks promoting trade exchanges, and people´s flows being a positive contribution for both, the origin and destination countries.

The study revealed that Egyptian migrants are able to create trade with major immigrants´ receiving countries in the EU. However, this is only in specific type of products and not with all countries. Hence, the study revealed that migration enhances trade between Egypt and the EU through both preference and network channels, but with a predominant role of the former over the later channel, as in usual South-North studies. The type of trade enhanced by Egyptian migrants differs on the exports and imports side, where Egyptian emigrants help to enhance Egyptian homogenous and differentiated exports to the EU (clear preference channel) and European homogenous and reference priced imports to Egypt (more closer to network effects and market opportunities in Egypt). This is an important finding for policy makers on both ends of the Mediterranean as it concedes an important role for migrants that has been often neglected, and shows migration currents as promoting development in both, Southern and Northern countries, with particular relevance in fostering manufactures industries, of differentiated industries, in the South.

To overcome the chronic economic problems faced by most of the countries in the MENA region, including Egypt, especially those related to the labor market and the unemployment problem and to make use of the trade creation effect of migration several policies need to be adopted on the local and regional levels. Such issues need to be dealt with in a comprehensive

way where for example, the low rate of return on education implies that dealing with migration requires tackling other areas as education and not only employment, emphasizing that migration has many roots in the society. On the regional level, the Egyptian government should link its education and training efforts to the migrants' countries needs. For example, the readmission agreement that was signed with Italy in 2006 was accompanied by an agreement that regulates legal migrant flows to Italy, specifying a certain quota of Egyptian labor to migrate to Italy on annual basis based on the demands of the Italian labor market. Fulfilling the quota remained a challenge for the Egyptian government as finding the labor with the skills needed in the Italian market remained a problem (Ghoneim, 2010; Zohry 2009). This is in line with the results of the study which based on country specific regressions it was found that trade creation effects of Egyptian migrants is only available in some countries implying the possibility of presence of specific skills or income threshold effects.

Digging further, on the local level, the EU and Arab migrant receiving countries need to implement a number of pivotal changes in their policies. Given the protectionist attitude towards immigrants and trade flows, the solution lies in domestic development. Hence a first step would consist of smoothing out the mismatch between job seeker profiles and market needs. Upgrading programs must be introduced to achieve the necessary competitive retraining of labor. Sectoral changes are also a must. Overvaluation of domestic currencies that resulted in misallocation of resources by favoring capital-intensive projects rather labor intensive ones should be redirected. In other words, the structure of incentives should be revised to provide the right environment for allocating resources. Finally, strengthening the entrepreneurial spirit in the educational system is needed to allow the shift toward a more diversified specialized labor force. Achieving such goals is capable of producing a labor force that is capable of meeting the challenges faced domestically to produce the right type of products that can be exported and at the same time creates the right skills needed by the hosting countries in case of migration.

On the regional level, a better coordination of migration policies and industrial planning is needed within the MENA region. This will help to achieve a better allocation of resources. Hence, the Pan Arab Free trade Area (PAFTA) project should address the migration issues and industrial planning which according to the knowledge of the authors is not included under its context or any other context. In the case of the North-South trade and migration relations, Southern countries should exert pressure to enact the movement of temporary labor to capitalize on their comparative advantage in trade in services issues even if on a temporary GATS style.

The future research agenda should address issues like the impact of national policies toward immigration and its role as an impediment to trade in services in the receiving countries. There is also more to be known about the indirect effects of migrant-importing strategies on the subsequent economic trends and trade position of these countries in selected industries. For sending areas, there is little documentation of the economic and trade consequences in countries that have followed an explicit or implicit policy of training skilled workers for international export (e.g. the Philippines, Sri Lanka, Barbados).

Migration should be dealt with in a wider context to count for its spillovers on trade. For example, the low rate of return on education implies that dealing with migration requires tackling other areas as education and not only employment, emphasizing that migration has many roots in the society. There is also a need to establish programs that make use of returned migrants in terms of the experience they have accumulated over years, and this can further enhance trade. As argued before Wahba (2003) identified that there is a need to benefit from return migrants experience as they have positive impact on the Egyptian economy, while networks still remaining and fostering trade exchanges. Specific programs in terms of selected job opportunities and use of remittances can be established aiming at benefiting from skills of certain migrants acquired abroad. Designed programs to link Diaspora with their home community through investment and trade should be enhanced, with important bilateral gains to be exploited. There are several programs that have been designed in countries that are less

developed than Egypt in this regard and have proved to be a success. The case of Diaspora from Ghana residing in Europe and how successful they were in exporting fruits from Ghana to Italy is worth following (Pandya, 2007). Role of NGOs and cooperatives is highly appreciated in this regard whether on initiated in collaboration with the government or as self-established programs.

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Annex 1: Note on Data Discrepancies:

Egyptian data on migration suffers from a high degree of discrepancy. One of the main constraints in analyzing these discrepancies is the differences in classifications as well as definitions. For example, the data of consular offices, as well as international databases do not differentiate between permanent and temporary migrants. Based on data from Ministry of Foreign Affairs and consular offices, the number of Egyptians abroad for the year 2009 was around 6.47 million, where 74% of them are residing in Arab Countries; 12% in European countries; 9.8% in the United States (Ministry of Manpower and Emigration, 2009) (table A1). According to such data, Libya comes on the top of destinations Egyptians seek in the Arab Region. Concerning European countries, United Kingdom and Italy comprise more than 31% and 24%, respectively, of total number of Egyptian residing in Europe.

Table A1: Number of Egyptians Abroad by Destination in 2009

Destination	Number of Migrants	Destination	Number of Migrants
Arab Countries	4789359	Canada	141000
Libya	2000000	Australia	106000
Saudi Arabia	1300000	Asian Countries	6073
Jordan	525000	New Zealand	3000
Kuwait	480000	Japan	1000
United Arab Emirates	260000	Israel	750
Qatar	88500	South America	4841
European Countries	790799	African Countries	2445
United Kingdom	250000	Nigeria	350
Italy	190000	Burkina Faso	250
France	160000	Uganda	180
Greece	80000	Djibouti	160
Germany	30000	Zambia	150
Switzerland	12000		
United States	635000	**Total**	**6475517**

Source: Ministry of Foreign Affairs, Ministry of Manpower and Emigration.

According to the Eurostat database on migration, Italy is the most attracting European destination for Egyptians; despite that the number of Egyptian migrants remained fluctuating over the period 1998-2009, it increased from 2800 in 1998 to 7977 in 2009. Also, migration to Spain has jumped over the abovementioned period from 48 migrants in 1998 to 415 in 2009. On the other side, emigration to Germany remained relatively constant over the same period with 1847 migrant in 2008 (table A2).

Table A2: Number of Egyptian Migrants to European Countries over the Period 1998-2009

Destination Country	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Italy	2800	2778	3995	:	2883	6407	11641	5584	5041	3726	5274	7977	58106
Germany	0	0	..	1873	1896	1605	1483	1453	1674	2063	1847	..	13894
Greece	1105	..	..	..	..	..	..	..	4843	2070	:	..	8018
Austria	800	701	663	640	820	828	805	809	506	589	492	..	7653
United Kingdom	399	199	1749	515	248	216	1340	817	..	..	..	..	5483
Netherlands	687	520	407	451	545	525	460	357	333	289	356	499	5429

Spain	48	67	172	257	232	283	404	560	494	477	593	415	4002
Sweden	68	89	66	104	120	97	122	117	242	212	230	314	1781
Cyprus	137	..	123	206	63	113	269	57	46	71	98	..	1183
France	608	227	..	..	..	..	..	..	..	..	..	..	835
Denmark	66	66	61	71	58	52	51	56	45	58	47	69	700
Hungary	27	21	26	38	36	36	47	37	70	48	96	..	482
Czech Republic	..	7	5	:	41	40	48	51	67	110	97	..	466
Finland	21	10	10	25	14	27	22	40	49	50	50	67	385
Slovakia	..	..	..	1	3	13	16	20	20	23	37	..	133
Poland	..	..	..	..	..	..	..	..	6	8	82	..	96
Slovenia	2	0	1	1	4	3	4	10	4	2	12	13	56
Luxembourg	3	4	0	0	1	5	1	0	3	5	15	9	46
Lithuania	0	1	0	2	3	3	3	2	6	4	7	..	31
Latvia	0	1	2	1	1	3	1	0	0	3	4	..	16

Source: European Commission, Eurostat, Migration and Migrant Population Statistics, 2011. Available online at: http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Migration_and_migrant_population_statistics

CHAPTER 4 :

Trade and Migration between Europe and Tunisia

FEMISE Research Project

March, 2012

Mongi BOUGHZALA & Mohamed KOUNI

1. INTRODUCTION

Tunisia had been for centuries, and until very recently, a country of destination for migrants, mainly for people coming from the neighboring southern European countries. The reversal started after the Second World War and intensified in the 1960s, and ever since the number of emigrants from Tunisia has been growing, and it is expected to keep growing. The outcome is that about 10% of the Tunisian populations, more than one million in 2010, live abroad. In either direction, when migrating people move to look for a better life and for more decent income opportunities.

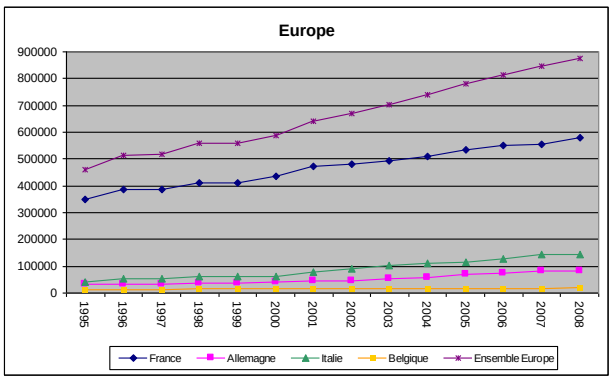
Table 1: Tunisian emigrants by group of countries

Country	1995	2000	2005	2006	2007	2008
Europe	**45911**	**589075**	**779161**	**815483**	**846803**	**873947**
Maghreb	97268	59764	90735	90946	98109	102930
Arab countries	35364	31783	38138	38718	44546	50326
North America	10335	16177	23054	25006	26188	27579
Africa	326	623	1236	1277	754	1057
Asia	739	530	976	1066	1073	1246
Oceania	152	156	644	644	700	712
Total	**603**	**698 108**	**933944**	**973140**	**1018173**	**1057797**

Source: Ministry of foreign affairs, Tunisia

Geographic, linguistic and cultural proximity makes Europe, mainly France, the most attractive destination for Tunisian migrants. More than 900 thousand of them are currently (2012) in Europe, 600 thousand in France (more precisely, this number was 577998 in 2008). Next after France, come Italy, Germany and Belgium as major destinations for Tunisian immigrants with respectively 16%, 10% and 2% of the Tunisian in Europe. It is also true that these same European countries are Tunisia's main trade partners, according to almost the same proportions. France comes in the first place, then Italy, Germany and other EU countries.

Figure 1: Tunisian migration flows from 1985 to 2008 to the main European countries



Source: Data from the Ministry of Foreign Affairs, Tunisia

Of course, this by itself does not imply that migration creates trade or that trade causes migration. However, migration and trade may well be two interdependent variables.

The purpose of this study is to verify to what extent there is any relation between trade and migration and to what extent is migration trade enhancing. The rest of this paper is organized in three sections. The first one is about the structure and evolution of Tunisian migration to Europe; the second one is about the profile of the Tunisian trade, and the last section is about the relation between trade and migration and is based on the estimation of a gravity type model linking trade to migration.

2. MIGRATION TO EUROPE: PATTERNS AND EVOLUTION

Only an estimate of the recent flow of Tunisian migration to Europe is available[1]. It is clear that the statistics published by the Tunisian National Institute (INS), giving less than ten thousand additional migrants per year, is an underestimation. The Ministry of Foreign Affairs data is more plausible; it indicates that the average rate of growth of the Tunisian community in Europe is equal to 3.9 percent. Given that the natural rate of growth of this population cannot exceed 1 percent, this means that the extra three percent reflect net migration (new arrivals minus return migration), which gives approximately 25000 net additional immigrants per year.

Table 2: Growth of the of Tunisian community in Europe

Country	2006		2007		2008	
	Total Number	Growth rate (%)	Total Number	Growth rate (%)	Total Number	Growth rate (%)
France	**551668**	**+3,0**	**555347**	**+ 0,6**	**577998**	**+ 4.1**
Italy	127059	+11,6	142972	+ 12,5	141907	- 0.7
Germany	72112	+2,5	80336	+ 11,4	82635	+2.9
Belgium	**17852**	**+17,4**	**18033**	**+ 1,0**	**19441**	**+7.8**
Switzerland	**10953**	**+2,5**	**11533**	**+ 5,3**	**12318**	**+6.8**
Holland	8031	+14,7	8129	+ 1,2	8222	+1.1
Austria	5124	+17,3	5896	+ 15,1	5870	-0.4
UK	**5869**	**-**	**5621**	**- 4,2**	**6526**	**+16.1**
Sweden	**7153**	**+5,7**	**7153**	**--**	**7593**	**+6.2**
Other countries	9662	+2,2	11783	+ 21,9	11437	-2.9
Europe	**815483**	**+4,7**	**846803**	**+ 3,8**	**873947**	**+3.2**

Source: Ministry of foreign affairs, Tunisia

[1] This descriptive section draws partly on the paper by Boughzala, El-Jaafari and Kouni (2011)

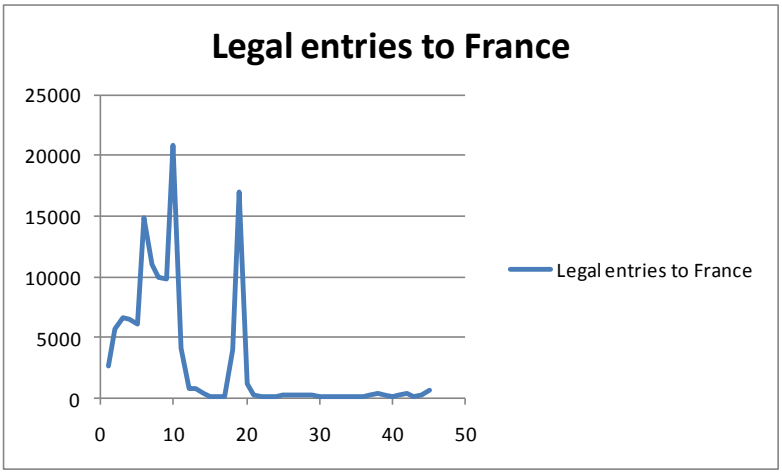
Although the majority of the Tunisian workers in Europe (80% of them) are rather unskilled (with little schooling) and are taking unskilled jobs, the number and the proportion of the more skilled are increasing, and it has become for the last twenty five years or so much easier for the skilled to get access to Europe than for the unskilled. Starting in 1983, legal migration to Europe has become highly restrictive but much less for skilled workers and students.

Table3: Legal entries of Tunisian immigrants to France from 1964 to 2008

Year	Number
1964	2730
1965	5776
1966	6631
1967	6534
1968	6109
1969	14925
1970	11070
1971	9971
1972	9890
1973	20857
1974	4190
1975	820
1976	883
1977	370
1978	106
1979	92
1980	163
1981	4053
1982	16979
1983	1185
1984	232
1985	143
1986	170
1987	162
1988	230
1989	331
1990	276
1991	290
1992	250
1993	168
1994	144
1995	101
1996	100
1997	128
1998	152
1999	202
2000	288
2001*	427
2002	243
2003	194
2004	278
2005	369
2006	140
2007	245
2008	646

Source: Ministry of Foreign Affairs, Tunisia

Figure 2: legal entries from Tunisia to France 1964-2008



A large part of the skilled Tunisian emigrants go to Europe first as students, and then they eventually decide to stay and to take a job there. The number of Tunisian students in Europe has indeed been increasing fast and has almost doubled between 2003 and 2008. Those who decide to settle and to seek work in Europe are in increasing numbers. Very often, they are the most talented of the country and are attracted by the job opportunities and better salaries and work conditions.

Obviously, salaries and working conditions are by far better in Europe, salaries up to ten times higher. These pull factors have been more generally the main determinants of migration to Europe, but they have not operated uniformly between European countries or within any one of them. People are more attracted by places where a Tunisian community has already formed and where they are likely to find people they know or originating from their own region at home. This geographic concentration of Tunisian in Europe supports the idea that migration leads to the formation of social networks across borders. This is important because social networks are expected to drive down trade costs and may be trade creating. According to this network hypothesis, immigrants also usually retain a preference for their home country's products, which creates the incentive for importing them.

Table 4: Tunisian students abroad

year	**2003**		**2004**		**2005**		**2006**		**2007**		**2008**	
country	**Number**	(%)	**Number**	Growth	**Number**	Growth	**Number**	Growth	**Number**	Growth	**Number**	Growth
France	16418	71,2	26094	58,9	28876	+ 10,7	28257	-2,1	23876	- 15,5	25153	+5.3
Germany	876	3,8	2007	+129,1	3336	66,2	3073	-7,9	4359	41,8	6255	+43.5
Belgium	1268	5,5	2867	+126,1	2867	-	2452	-14,4	2468	0,6	2740	+11.0
Switzerland	208	0,9	327	+57,2	230	-29,7	340	+47,8	432	27,1	300	-30.5
Canada	1799	7,8	5054	+180,9	2975	-41,1	2975	-----	511	- 82,8	3145	+515.5
USA	323	1,4	1195	+270,0	1227	+2,7	1227	-----	1501	22,3	1562	+4.1
Total	**23059**	100	**42034**	-	**44478**	-	**43326**	-	**39615**	-	**45246**	-
Growth	**---------**				**+ 5,8**		**- 2,5**		**- 8,5**		**+14.2**	

Source: Ministry of Foreign Affairs Tunisia

Table 5: Distribution of the Tunisian immigrants in Europe by consulate or Embassy from 2002 to 2008

Consulate	2002		2003		2004		2005		2006		2007		2008	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
C.G.T. Paris	165839	20,9	165839	19,7	171700	19,4	173990	18,6	176587	18,1	179332	17,6	182107	17,2
C.T. Pantin	82296	10,4	87000	10,3	89822	10,1	94431	10,1	98429	10,1	90003	8,8	99550	9,4
C.T. Strasbourg	14981	1,9	15613	1,8	16380	1,9	17379	1,9	18183	1,9	18719	1,8	19104	1,8
C.T. Toulouse	12165	1,5	13213	1,6	14241	1,6	15468	1,7	16505	1,7	17323	1,7	18683	1,8
C.T. Grenoble	32562	4,1	33529	4,0	34567	3,9	35518	3,8	36679	3,8	37777	3,7	38851	3,7
C.G.T. Nice	53738	6,8	56415	6,7	58216	6,6	67554	7,2	70800	7,3	72900	7,2	75022	7,1
C.G.T. Lyon	55156	6,9	55184	6,5	57433	6,5	59898	6,4	60423	6,2	62368	6,1	65181	6,1
C.G.T. Marseille	63330	8,0	66235	7,9	68817	7,8	71370	7,7	74062	7,6	76925	7,6	79500	7,5
S/Total France	**480067**	**60,5**	**493028**	**58,5**	**511176**	**57,8**	**535608**	**57,4**	**551668**	**56,7**	**555347**	**54,5**	**577998**	**54,6**
C.G.T. Palermo	24726	3,1	23261	2,8	22104	2,5	24433	2,6	27364	2,8	29438	2,9	18376	1,7
C.T. Rome	12873	1,6	14779	1,7	18205	2,1	17684	1,9	20789	2,1	23209	2,3	25434	2,4
C.T. Naples	6999	0,9	13222	1,6	14235	1,6	15014	1,6	13426	1,4	14091	1,4	14709	1,4
C.T. Genoa	14670	1,8	18780	2,2	23745	2,7	18714	2,0	24480	2,6	27334	2,6	30388	2,9
C.G.T. Milan	30628	3,9	31000	3,7	34000	3,8	38000	4,1	41000	4,2	48900	4,8	53000	5,0
S/Total Italy	**89896**	**11,3**	**101042**	**12,0**	**112289**	**12,7**	**113845**	**12,2**	**127059**	**13,1**	**142972**	**14,0**	**141907**	**13,4**
C.G.T. Bonn	19225	2,4	25716	3,0	26459	3,0	31500	3,4	32000	3,3	34428	3,4	35553	3,3
C.T Hamburg	11310	1,4	11643	1,4	12012	1,3	21000	2,2	21000	2,2	25000	2,4	25000	2,4
C.T. Munich	11745	1,5	12456	1,5	13049	1,5	12997	1,4	14260	1,4	14967	1,5	15818	1,5
C.G.T. Berlin	3624	0,5	4110	0,5	4523	0,5	4852	0,5	4852	0,5	5941	0,6	6264	0,6
S/Total Germany	**45904**	**5,8**	**53925**	**6,4**	**56043**	**6,3**	**70349**	**7,5**	**72112**	**7,4**	**80336**	**7,9**	**82635**	**7,8**
C.T. Brussels	**16982**	**2,1**	**17084**	**2,0**	**17225**	**2,0**	**15212**	**1,6**	**17852**	**1,9**	**18033**	**1,8**	**19441**	**1,8**
C.T. Berne	6909	0,9	6909	0,8	9592	1,1	10687	1,1	10953	1,1	11533	1,1	12318	1,2
C.T. Vienne	5057	0,6	5190	0,6	5542	0,6	4370	0,5	5124	0,5	5896	0,6	5870	0,6
Embassy Holland	7058	0,9	7058	0,8	7250	0,8	7000	0,8	8031	0,8	8129	0,8	8222	0,8
Embassy Sweden	6003	0,8	6156	0,7	6559	0,7	6766	0,7	7153	0,7	7135	0,7	7593	0,7
Embassy England	3293	0,4	3512	0,4	4225	0,5	5869	0,6	5869	0,6	5621	0,6	6526	0,6
Embassy Spain	1300	0,2	1360	0,2	1675	0,2	2012	0,2	2012	0,2	2371	0,2	2512	0,2
Other countries	**5704**	**0,7**	**6396**	**0,8**	**7006**	**0,8**	**7443**	**0,8**	**7650**	**0,8**	**9430**	**0,9**	**8925**	**0,8**

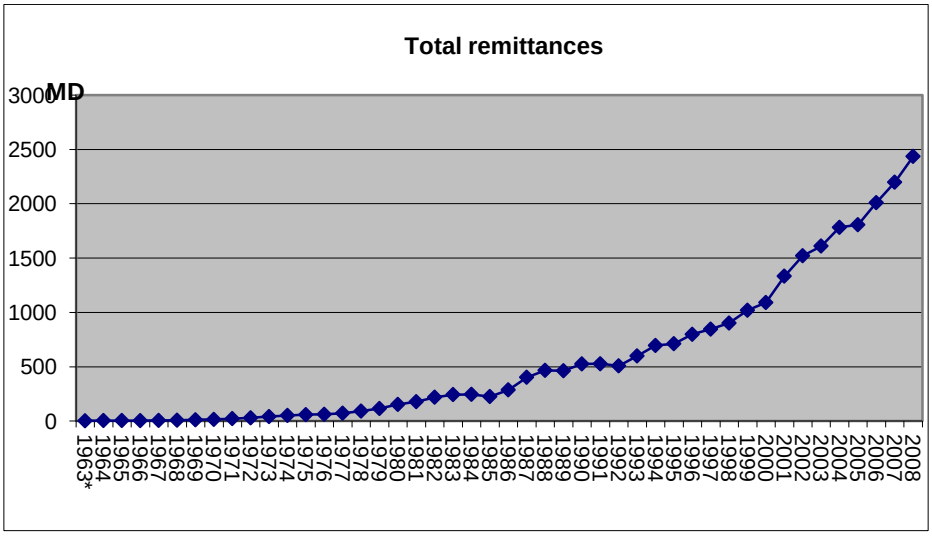
Source: Ministry of Foreign Affairs Tunisia

Table6: Total remittances 1985-2008

Year	Amount in million Tunisian dinars	Yearly growth
1985	225.8	-8.1
1986	287.1	27.1
1987	403.0	40.4
1988	466.6	15.8
1989	463.0	-0.8
1990	526.0	13.6
1991	527.0	0.2
1992	508.0	-3.6
1993	599.5	18.0
1994	695.7	16.1
1995	711.8	2.3
1996	798.3	12.2
1997	845.9	6.0
1998	901.9	6.6
1999	1019.7	13.1
2000	1091.1	7.0
2001	1333.9	22.3
2002	1521.7	14.1
2003	1610.9	5.9
2004	1782.7	10.7
2005	1806.9	1.4
2006	2009.9	11.2
2007	2198.5	9.4
2008	2435.9	10.8
2009	2653.0	8.9

Source: Central Bank of Tunisia (BCT)

Figure 3: Total remittances 1963-2008



Source: Central Bank of Tunisia (BCT)

Migration generates an obvious form of trade given by the remittances in kind sent home by the Tunisian abroad, worth about 25% of total remittances. This is a significant amount for Tunisia but rather small in European terms.

Total remittances have significantly contributed as a source of incomes for Tunisia, and have accounted for about 11% of total foreign resources, and they continue to grow.

Migration out of Tunisia is caused not only by pull factors but also by push factors. Unemployment is certainly the most important determinant of migration out of Tunisia where structural unemployment has been persistently higher than 14% (and much higher since January 2011, above 20% in early 2012). Overall, all ages included, unemployment of the educated reached 21.6% in 2008, compared to 10% in 2000, but youth unemployment is the hardest to deal with (around 30%), and it is the highest for the more educated youth, especially the young university graduates. The more educated are actually the more frustrated and the more likely to migrate. Unemployment and consequently poverty are even higher in some regions of the country where youth unemployment may be above 40%! The least educated and unskilled may find jobs more rapidly but only in the informal sector where working conditions are below international standards; this leaves them unsatisfied as well and also willing to leave the country.

Under these circumstances, it is natural that tens of thousands of young Tunisian would be willing to leave their region or their country in order to look for better work and life

opportunity. It is true that if the heavy barriers imposed by the European countries to restrict immigration were lifted, or significantly reduced, there would be tens of thousands of additional Tunisian migrants to Europe, which would lead to a massive loss for Tunisia in terms of brain drain and also to huge challenges for the European countries.

Table 7: Unemployment rates in Tunisia by age bracket (2010)

Age bracket	**15-19**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**70+**	**Total**
Unemployment rate (in %)	**34.1**	**30.2**	**23.9**	**13.3**	6.9	4.7	3.5	2.9	2.8	3.0	2.4	1.0	**14.0**

Source: Institut National de la Statistique (INS) , Enquête emploi et population 2007

Table 8: Labor force by education attainment (2010)

Education	**None**	**Primary**	**Secondary**	**Tertiary**	**Total**
Share of total (%)	10.6	34.4	37.8	17.8	100,00%

Source: INS, Enquête emploi 2007

3. TUNISIAN TRADE AND PARTNERS

Most of Tunisia's trade has been for centuries with the EU, while only a small share of this trade has been with other countries, including its Arab neighbors. Although this share has increased somewhat owing to the bilateral and regional trade agreements it remains much below expectations. No more than 5%, of Tunisian trade was with Arab countries until the year 2000. This share has grown and it reached 7.5% in 2005 and close to 10% in 2010. Not surprisingly, Libya and Algeria are Tunisia's most important Arab trade partners.

The Greater Arab Free Trade Area Agreement (GAFTA) and the Aghadir Agreement, along with a set of other agreements abolishing most of the previous tariff barriers, in principle fully effective since 2005 for both industrial and agricultural goods, have not been

effective enough to promote Tunisian trade with other Arab countries mainly because of non tariff barriers.

Tunisia's trade profile and policy

Somehow, Tunisia's trade profile looks paradoxical. On one hand, Tunisia has a very open economy, with an openness ratio (trade/GDP) above 100%, and it has been implementing trade reforms for two decades. The Association agreement it has signed in 1995 with the EU, by far its major trading partner, has led to the elimination of most of the tariff barriers concerning trade of manufacturing goods. Tunisia's trade with its Arab neighbors is also developing but much more slowly. On the other hand, it comes out, based on its Trade (MFN) Tariff Restrictiveness Index (TTRI) and its Overall Restrictiveness Index (OTRI) that its trade regime is rather restrictive, significantly more so than in the other MENA countries. Tunisia's Tariff Restrictiveness Index (TTRI) remains around 20%, which is indeed high and higher than in the comparable countries of the MENA region, where it has been around 12%. The same is true for the OTRI, the index that incorporates both tariff and non-tariff protection measures, which has been until very recently (2008) higher than 32% in Tunisia compared to 26% in the MENA region. Tunisian MFN tariffs are much higher for agricultural goods for which applied tariffs are above 65%. In fact, some rates on agricultural products were increased, some even doubled following the transformation into tariffs of the quantitative restrictions that had existed until 1994 (end of the Uruguay round). However these indices are only averages and are arguably an overestimation of the real level of tariff restrictiveness. Indeed, the collected import duties shrunk to about 3% of total imports (in 2008) and 8.3% of tax revenue down from about 15% of tax revenue in the nineties. Actually, this outcome is not surprising since most of Tunisia's trade is with countries under preferential agreement; that is with EU and Arab countries. Only a little part of actual trade is subject to the MFN rates. Moreover, in the doing business-ranking Tunisia is 38th out of 181 countries for "trading cross borders", much better than the other MENA countries and the average middle-income countries. It is also ranked 73rd in the 2009 overall ease of doing business (gaining 8 points on this and losing three points on the trading cross borders since the previous year), which again means that in practice Tunisian trade is less restricted than may be conveyed by the

restrictiveness indices, and perhaps less restrictive in average than trade in other MENA countries[2].

Nevertheless, one may say that the Tunisian policy makers' predominant attitude is that the economy is not yet fully competitive, as indicated by the persistent trade deficit, and needs to be protective. The surplus in terms of trade of services, mainly tourism, does not match the deficit in terms of trade of goods.

Table 9: overall Trade balance 2004-2009

Year	Imports CAF	Exports FOB	Deficit	Exports to imports ratio (%)
2004	16.185	12.404	3.781	76,6
2005	17.292	13.794	3.498	79,8
2006	20.003	15.558	4.445	77,8
2007	24.437	19.410	5.027	79,4
2008	30.241	23.637	6.604	78,2
2009	25.878	19.469	6.409	75,2

Tunisia's exports are fairly diversified, but not for agricultural goods. These goods take a significant share of its trade: they count for 10% of total exports and 12% of total imports. Olive oil, fish and dates are the main exported agricultural goods, while wheat, corn, vegetable oil and animal feed are the main imported ones. Put aside these items, Tunisia is not a major exporter or importer of agricultural goods.

Table10. Distribution of exports of goods by group of goods (%)

YEAR	2005	2006	2007	2008
Agriculture and food	10,67	12,12	9,73	9,12
Energy	12,74	12,97	16,17	17,26
Mining	6,91	6,64	6,95	13,33
Manufacturing	69,68	68,26	67,16	60,29
Total	100	100	100	100

Source : INS (Institut National de la Statistique), Tunis, Tunisie, www.ins.nat.tn

[2] World Bank, Doing Business Report 2010

Table 11: Main imported agriculture and food products (in million current US$)

Year	2004	2005	2006	2007	2008
durum wheat	20,69	28,38	72,69	256,46	365,77
soft wheat	166,31	146,92	186,08	310,92	399,15
barley	26,85	98,92	110,31	204,54	149,46
corn	115,54	91,08	84,08	138,62	209,62
Potatoes	19,92	18,92	14,54	50,85	15,15
Coffee	13,38	11,31	17,08	24,15	40,46
Tea	11,08	14,00	16,85	13,85	18,31
meat	26,23	26,69	20,08	14,38	20,85
milk and milk products	40,69	33,92	27,69	37,77	61,15
vegetable oil	160,08	188,38	220,54	221,92	431,23
sugar	76,46	92,08	153,69	122,23	124,85
soya cakes	120,92	70,23	59,38	79,31	114,46
raw tobacco	20,31	26,08	17,31	22,46	26,92

Source : INS, www.ins.nat.tn

Table 12: Tunisian trade by country

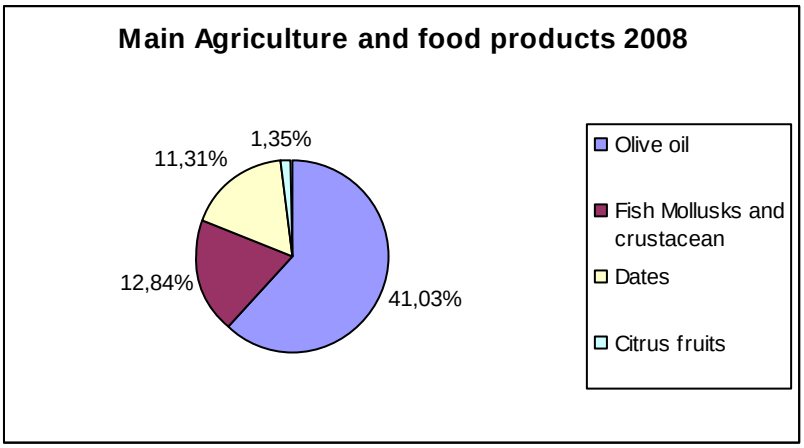
Country	Imports (CAF)				Exports (FOB)				Balance	
	MDT		%		MDT		in %		MDT	
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
EU	**13.111**	**15.761**	**65,5**	**64,5**	**12.011**	**15.387**	**77,2**	**79,3**	**-1.100**	**-374**
France	4.512	5.233	22,6	21,4	5.021	6.239	32,3	32,1	509	1.006
Italy	3.858	4.710	19,3	19,3	3.437	4.519	22,1	23,3	-421	-191
Germany	1.572	1.931	7,9	7,9	1.220	1.597	7,8	8,2	-352	-334
Spain	930	1.143	4,6	4,7	996	1.003	6,4	5,2	66	-140
NAFTA	**700**	**894**	**3,5**	**3,7**	**223**	**237**	**1,4**	**1,2**	**-477**	**-657**
USA	568	723	2,8	3,0	204	214	1,3	1,1	-364	-509
Arab countries	**1.832**	**1.985**	**9,2**	**8,1**	**1.447**	**1.761**	**9,3**	**9,1**	**-385**	**-224**
UMA	1.320	1.309	6,6	5,4	1.232	1.501	7,9	7,7	-88	192
Other countries	**4.361**	**5.799**	**21,8**	**23,7**	**1.877**	**2.025**	**12,1**	**10,4**	**-2.484**	**-3.774**
Total	**20.004**	**24.439**	**100,0**	**100,0**	**15.558**	**19.410**	**100,0**	**100,0**	**-4.446**	**-5.029**

Table 12: Main exported agricultural and food products (in million current US$)

year	2004	2005	2006	2007	2008
Olive oil	544,62	366,69	642,23	535,38	583,92
Fish Mollusks and	117,85	155,69	173,38	179,08	182,77
Dates	80,85	100,46	90,00	162,31	160,92
Citrus fruits	10,77	11,69	12,38	10,46	19,15

Source : INS, www.ins.nat.tn

Figure 4: Main exported agriculture and food products (in % of total exports)



Source: based on data from INS, www.ins.nat.tn

Table 13: Total Merchandise and food trade in Tunisia (in million TNDs)*

Year	**Exports**	Imports	Food Export	Food import
1986	**1403,7**	2303,7	169,2	287,5
1987	**1771,2**	2509,5	220,3	259
1988	**2055,5**	3167,0	251,2	475,4
1989	**2782,0**	4163,6	267,1	561,7
1990	**3087,4**	4826,8	320,8	444,3
1991	**3417,1**	4788,9	481,9	310,9
1992	**3549,7**	5688,8	335,5	380,5
1993	**3760,0**	6172,1	399,1	418,1
1994	**4696,6**	6647,3	551,9	542,8
1995	**5172,9**	7464,1	462	823,9
1996	**5372,0**	7498,8	354,1	605,6
1997	**6147,9**	8793,5	595,6	764,2
1998	**6518,3**	9489,5	548,7	802,5
1999	**6966,9**	10070,5	706,8	670,9
2000	**8004,8**	11738,0	628,2	782,4

2001	**9536,2**	13697,3	675,7	926,6
2002	**9748,6**	13510,9	556,5	1143
2003	**10342,6**	14038,9	565,6	894,1
2004	**12054,9**	15960,3	1227,4	1037,3
2005	**13793,6**	17291,5	1232,7	1097,5
2006	**15558,1**	20003,5	1599	1321,9
2007	**19409,6**	24437,3	1615,5	2040,9
2008	**23637,0**	30238,8	1849,9	2598,5
2009	**19469**	25878	1631.0	1593.0

Source: Central Bank of Tunisia, "Statistiques financières 2010"

*1€=1.9 TND (approximately)

More than 60% of Tunisia's exports and imports are manufactured goods, manufactured imports being more diversified than exports. Main exports are clothing, textiles, leather and footwear, and, more and more, electronics and electrical equipment, mostly for the automotive industry. It also exports chemical products (chiefly phosphate fertilizer) and fuel (fuel oil). Manufacturing has been stimulated by an export-oriented policy favoring the creation of wholly exporting enterprises. More than 10000 such enterprises were created forming what is often called the offshore sector, which generates close to two thirds of Tunisia's export. Initially the bulk of these enterprises were in the textiles and clothing industry. More recently, the motor vehicle component industry has been growing and making up for the loss of competitiveness of the textile exports. Agri-food is also important but it contributes less to exports.

As a result of the trade liberalization measures, the offshore sector has been challenged by the onshore sector (firms mainly inward oriented), which are more and more contributing to exports. Consequently, this dualistic separation between onshore and offshore firms is becoming irrelevant.

Tunisia continues to trade predominantly with the EU countries: around 75% of its exports go to the EU and 63% of its imports are from the EU (73.8% of exports and 62.7% of imports in 2009). The Association Agreement provides for duty-free trade in most imported industrial products origination in the EU, and is the most important and effective trade liberalization strategic decision taken by Tunisia (within the Barcelona EU Mediterranean process). This was a stimulating driving force for numbers of enterprises and industries, which felt the need to upgrade their products and their technology.

Table 14: Balance of payments with Europe (in million Tunisian dinars)

	Receipts		Expenditures	
	2007	**2009**	**2007**	**2009**
A. CURRENT TRANSACTIONS	**24 155,3**	**23 964,1**	**21 999,3**	**22 836,9**
- Merchandises FOB	16 398,4	15 297,2	17 485,3	17 879,9
- Services	5 272,0	5 986,5	2 732,4	3 118,5
* *Transports*	1 714,5	1 684,2	1 507,4	1 605,8
• Travels	2 768,0	3 045,8	390,5	423,4
• *Tourism*	2 600,3	2 834,3	268,6	293,8
* *Government transactions*	91,4	163,2	126,0	148,5
* *other services*	698,1	1 093,3	708,5	940,8
- Revenues	**2 278,4**	**2 398,5**	**1 762,7**	**1 820,7**
* *Capital Revenues*	325,4	75,5	1 749,0	1 808,5
* *Labor Revenues*	1 953,0	2 323,0	13,7	12,2
- Current Transfers	**206,5**	**281,9**	**18,9**	**17,8**
B. CAPITAL ACCOUNT	**2 271,2**	**2 959,3**	**669,7**	**848,4**

Source: Central Bank of Tunisia (BCT)

The trade agreement with the EU also allowed for a reciprocal preferential treatment in the form of tariff quotas for agricultural and fishery products: olive oil, meat, roses, cut flowers, spices, and fruit and vegetables (during specified periods of the year), wine, and preserved fish and crustaceans are the main products originating in Tunisia. Reciprocally, tariff quotas are granted to the EU for cereals and sugar.

Ongoing negotiations with the EU are expected to lead to a substantial liberalization of agricultural products and their inclusion in the FTA regime, but the pace of the negotiation has been very slow because the agricultural sector has always been more specific and more strongly regulated, in Tunisia and in its partner countries as well. The Tunisian stringent regulation is justified by the need to ensure food security and social stability. It is the Tunisian government policy to always ensure full supply of basic goods at subsidized prices of imported agricultural goods everywhere within the country and at all times. As a result, the government has to make sure that, regardless of world prices, enough food products are imported in order to satisfy all domestic demand for food. This has led to large and increasing Tunisian imports of food products. Although subsidies are also paid to producers of basic agricultural products Tunisian production remains below the country's need, and self-sufficiency is hard to achieve. This also means that even if the current barriers on trade of agricultural goods were eliminated, imports of such goods would hardly increase.

Currently, government controls both production and consumption of all major agricultural and food products, primarily through pricing and marketing regulation and control. This control process is assigned to a set of state-owned enterprises. The most important one is the “Office des céréales” (OC), which remains the major importer of cereals (wheat, corn, barley and soya cake) for the country and has a monopoly on the marketing and importation of durum wheat and soft wheat. In practice, a large part of the domestic production (around a half) evades this system and is marketed through private and non subsidized channels. The “Office National de l’Huile (ONH) imports vegetable oil (soya, colza, olive) and exports olive oil, but gave up its previous monopoly on these activities…The common policy of these state enterprises is to import enough to satisfy all demand at the administered and subsidized prices. Consequently, if these enterprises were privatized and trade concerning all these goods were perfectly deregulated it would be unlikely that the country would import more than what it has been doing.

Nevertheless, a large number of reforms were carried out to facilitate trade of industrial goods. In particular, customs procedures and institutions have been significantly improved, the customs documentation has been simplified and automated, and its legislation harmonized with the WTO and EU requirements. The Tunisian tariffs are now based on the 2002 version of the Harmonized Commodity Description and Coding System (HS 2002). Since 2001, the Automated Customs Information System (SINDA), in charge of processing imports and exports, uses a single integrated electronic form, which has helped with reducing custom clearance time. The import declaration document can now be filled in advance, by any importing firm, before the good arrives to port. However, wholly export oriented enterprises have always benefited from a very simplified procedure and remain favored from this point of view. They can import all their inputs duty free under a single declaration.

Customs controls depend on the type of goods and are much simpler for offshore enterprises and more generally for exports. Goods are classified in three separate lists corresponding to three different levels of risk. Full and stringent examination applies to the riskiest goods, which account for less than 10% of all import declarations. For these risky goods, a temporary release authorization may be granted, but the goods will be cleared for use only after the final authorization, which usually requires additional technical control and/or SPS tests

Limited convertibility of the Tunisian currency has also led to the simplification of the payment procedure, which does no longer require the authorization of the Central Bank. Nevertheless, many documents are still required for trade transactions, especially imports.

4. LINKING TRADE TO MIGRATION

The link between trade and migration is far from being obvious and trade theory, both the conventional neoclassical theory and the new trade theory, does not offer any support for the idea that migration may generate more trade. Nevertheless, many ideas have been developed to support the existence of a significant link between trade and migration. The main hypothesis is supported by enough evidence documented and tested in a number of studies. It has been argued, as already mentioned, that social networks formed by migrants reduce trade cost and facilitate trade. This idea has been widely discussed [Gould (1994), Herander, M., and L. Saavedra (2005), Rauch (1999) and (2005)…] and it was tested by Hisham (2009) in the context of the MENA (Middle East and North Africa) region. Moreover, the colonial and cultural linkages between certain European countries and their former countries continue to matter and remain a significant explanatory variable for trade. According to this hypothesis, countries continue to trade more with their previous colonial partners (colonized and colonizers) even though HEAD, K., T. MAYER, and J. RIES (2008) have shown that the colonial effect is eroding. Our own estimates confirm this finding. Actually, the model we use is a gravity model of the same category as Chaney's (2008) and similar to Hisham's (2008) and Bergstrand (1985).

It is the following:

$$comm_{ij,t} = mig_{ij,t-1}^{c1} remit_{ij,t-1}^{c2} GDP_{i,t}^{c3} GDP_{j,t}^{c4} \left(GDP_{i,t}/pop_{i,t}\right)^{c5} \left(GDP_{j,t}/pop_{i,t}\right)^{c6} dist_{i,j}^{c7} e^{(c8*lang_{ij}+c9*colon_{ij}+u_{ij,t})}$$

Or in the Log form:

$$\log comm_{ij,t} = C_0 + c_1 \log mig_{ij,t-1} + c_2 \log remit_{ij,t-1} + c_3 \log GDP_{i,t} + c_4 \log GDP_{j,t} + c_5 \log pc\_GDP_{i,t}\ c_6 \log pc\_GDP_{j,t}\ c_7 \log dist_{ij} + c_8 lang_{ij} + c_9 colony_{ij} + u_{ij,t}$$

$comm_{ijt}$: Trade, either imports or exports, of country i, namely Tunisia, from (to) country j in year t.

mig_{ijt-1}: number of immigrants from country i residing in country j in t-1.

$remit_{ijt-1}$: Remittances transferred by immigrants in country j to country i.

GDP_t^i : GDP of country i in time t.

pc_GDP : per capita GDP.

dist : distance separating country i from country j.

lang: a dummy indicating that country i and country j have the same language (1 if yes, 0 if no).

colony: a dummy indicating that country i and country j have had colonial linkages (1 if yes, 0 if no); this applies to France only in the case of Tunisia.

Our purpose is to test the impact of immigration on trade between Tunisia and its main EU partners (France, Germany, Italy, Belgium, Switzerland, Netherlands, Sweden, United Kingdom), and to control for the impact of geographic distance, the size of the countries' GDP, their cultural (depicted by the existence of a common language) and historical colonial linkages.

The data covers the period 1996-2009, and it draws on several sources: INS (The Tunisia National Institute) for trade data, the World Bank for GDP, OTE (The Tunisian Emigrants Office) and the Tunisian foreign Ministry for migration data and CEPII for the geographical distances. Tunisian trade per country is available only for total imports and total exports.

Prior to the model estimation, the standard tests were conducted, including on the independence and exogeneity of the explanatory variables.

Klein test shows that multi-co linearity is not significant except for the couples migration and remittances, and language and colony.

The Nakamura test shows that migration is endogenous; which justifies the use of instrumental variables (lagged migration).

And the Hausman test supports the use of a fixed effect methodology.

The following results are obtained using either OLS or a two stage least square and instrumental variables (2SLS-I.V):

Table15: Effect of migration on exports in Tunisia

Variable	OLS	OLS	2SLS-I.V	2SLS-I.V
Constante	-10.6547* (-1.87)	-18.660*** (-3.60)	-12.602*** (-5.54)	-15.329*** (-6.43)
	.557*** (16.49)	.294*** (3.87)	.545*** 12.44	.527*** (7.31)
	6.868* (1.65)	-	-	-
	-	-	-	-
	.384*** (6.54)	.7002*** 4.05	.401*** (5.22)	.5006*** (6.69)
	-7.941 (-1.50)	1.031*** (6.87)	.771*** (5.62)	.746*** (4.72)
	-	-	-	-
	-.437*** (-4.55)	-.681** (-1.96)	-.440*** (-3.49)	-.394** (-2.13)
	-.246*** (-2.59)	.192 (0.62)	-.236* (-1.91)	-
	-	-	-	-.220 (-0.74)
chi2	1306.84	444.12	830.63	632.75
Prob > chi2	0.0000	0.0000	0.0000	0.0000
R sq	0.7722	0.7942	0.7224	0.7266

Table 16 : Impact of migration on imports in Tunisia

Variable	OLS	2SLS-I.V	2SLS-I.V
Constante	-47.955*** (-4.87)	-48.872*** (-6.31)	-29.856*** (-3.64)
	.658*** (4.49)	.274* (1.83)	.639** (2.20)
	-	2.017*** (4.77)	1.264** 2.13
	-	-	-
	1.075*** (3.17)	.963*** (4.23)	-
	-	-	-
	2.431*** (4.29)	-1.591* (-1.75)	.795 (0.68)
	-.884 (-1.41)	-.852** (-2.21)	-1.188 (-1.19)

	.055 (0.10)	.720* (1.76)	-
	-	-	.199 (0.14)
chi2	165.69	234.75	141.72
Prob > chi2	0.0000	0.0000	0.0000
R^2	0.5991	0.5827	0.5796

The results are clear. Migration is highly significant, both for exports and imports and regardless of the method of estimation. Since only lagged values of migration are introduced, this means that migration generates and causes trade. Trade also depends on the demand variables reflected by the levels of GDP and per capita GDP and to a less extent on geographical distance. It is actually not at all surprising that the distance variable hardly matters given that only European countries are considered and are almost equidistant for Tunisia, of course less so for Italy and France. Our calculations also confirm that the language and colonial factors are not significant, or at least are clearly eroding. Both network and preference effects seem to merge in calculations, as shown in Egyptian case study. Given trade specialization, it seems that Tunisia has higher network effects with the EU than Egypt, more specialized in primary exchanges with the EU countries.

However, the effect of migration on trade should not be amplified. The obtained estimate for the elasticity of trade (both imports and exports) with respect to migration varies from 0.27 to 0.65. Thus, for a reasonable 0.5 elasticity, a ten percent increase in the number of migrants will lead to a 5 percent increase in trade. In fact the rate of growth of the Tunisian migrant population in Europe has been less than 4 percent (it was at 3.2% in 2008; see table2), including new comers. Migration may then explain at most two percent of trade growth. This is actually only one part of the migration story, and we need to analyze the full picture before drawing any final conclusion either for Tunisia or for the destination countries, the European countries.

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CHAPTER 5:

WHAT VARIABLES DO BETTER EXPLAIN THE DYNAMICS OF MIGRANTS´ REMITTANCE INFLOWS?: A PANEL DATA APPROACH FOR THE MENA REGION[1]

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Abstract

Studies on the factors explaining migrants´ remittance inflows accruing to developing countries have traditionally highlighted the role that macro variables play in this process. It includes exchange rates, income levels at the recipient countries, or the degree of development of the financial sector. Further contributions of the literature provide an interesting focus by introducing education and inequality issues in the debate. In this paper we employ a comprehensive approach in order to distinguish which factors better explain those capital entrances. As main novelties, first we apply panel data estimation techniques to a fully assembled data set for the countries of MENA region along the period 1990-2010. And second, we also introduce in a country-level setting a range of institutional factors as explanatory variables, testing their role in pulling remittances. Our results indicate the relevance of educational endowment of migrants, average income at the origin country, and the stage of business cycle at destination countries as main drivers of remittance inflows. Institutional factors seem to play a role too, although of a minor extent.

Keywords: Remittance inflows, panel data, education and institutions, MENA region.

JEL classification: F24, F22, O11

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1. Introduction

According to United Nations 214 millions of people were living and working outside their country of birth in 2010, representing around 3% of total world population (*International Migrant Stocks*, UN database). People working abroad tend to send

[1] We would like to acknowledge the very helpful research assistance of Ph.D. student Maria Isabel Osorio Caballero. We also would like to thank Prof. Nicolas Péridy for kindly providing us with institutional data for MENA region.

amounts of money and goods to the families staying at their home countries. Those amounts, termed as "worker remittances", totaled $440 billion in 2010, with $320 billion going to developing countries. In the last decade remittances have become an important financial source for that group of countries, doubling the size of official aid-related flows, and emerging as the second inflows in importance, just slightly surpassed by FDI. Moreover, the true size of remittances including unrecorded flows through formal and informal channels is likely to be even 50% higher than levels showed by official estimates. Another important feature of remittances is the stability shown as a capital source for developing nations, given that, although a modest decline in 2009, those flows quickly recovered in 2010. In contrast, private capital flows fell 20% in 2009 to $598 billion, showing half the values of the 2007 peak of $1.11 trillion (*Global Development Finance 2011*, World Bank).

Because of the global relevance of these capital currents and their acceleration since mid-1990s, the study of factors determining remittance inflows in developing countries have been recently attracting the interest of researchers (Adams, 2008; Rapoport & Docquier, 2006). First, some studies have investigated how the conditions of the macro environment of receiving countries influence the arrival of remittances. Main issues analyzed include the degree of development of the financial system, the returns of domestic investment projects, the currency value (exchange rate) at the receiving country, and more recently, the role played by political instability in leading that process. In general, it seems that better conditions at the country level, from a financial and institutional point of view, enhance the entrance of remittance flows (Bettin & Zazzaro, 2011; Chami, 2008; Higgins et al., 2004; El-Sakka & Mc Nabb, 1999). Second, other authors have looked at the relationship between remittance inflows and income distribution at the country level, showing that capital entrances could either reduce income inequality (i.e. Taylor et al., 2005, for rural Mexico) or increasing it (Rodríguez, 1998, for the Philippines; Barham & Boucher, 1998, for Nicaragua). In this regard, and given that not all citizens in developing countries could afford for migration costs, inequality could even be amplified by the migration process itself (Rapoport & Docquier, 2006). Third, a new branch of the literature has begun to explore how the educational level of migrants affects the volume of remits sent back

home. This is an important issue, given that high skilled migrants are gaining relevance in international flows. Seminal contributions on the issue found that the less educated tend to remit a larger share of their income, although they remit lower amounts in absolute terms because of their lower wages (Docquier, Rapoport & Salomone, 2011; Dustmann and Mestres, 2010). In this way, it seems that future dynamics of remittances would be a question of both, the number of migrants sent abroad, and their composition in terms of skills and education (Bollard et al., 2011).

In this paper we investigate the factors influencing migrants´ remittances in a comprehensive setting, in order to distinguise which are the leading variables driving these flows. Our analysis is devoted to the case of Middle East and Northern African (MENA) countries. This is an interesting region for the analysis because of several reasons: Primarily, macroeconomic turbulences have been affecting MENA countries, as well as EU ones, in recent years, so it is interesting to understand how these shocks could impact on remittances. Second, traditional studies on remittance flows have been mainly focused on the least developed countries, putting little attention on the situation of medium-upper income developing countries. This is the case of MENA countries, which additionally emerge as important receivers of remits since mid-1990s (*Migration and Remittances Factbook 2010*, World Bank; Rapoport & Docquier, 2006). Third, highly educated people occupy a central position inside MENA flows of emigrants, and the development of political institutions across the region is still an open question in present times. In this way, the MENA area emerges as a good laboratory for testing both relevant issues of the literature, that is, the role of education and of institutions in driving remittances. Fourth, analyzing the relationship between inflows of remittances and (social and economic) inequality for MENA region is an interesting question to be investigated, given mixed results on the issue arising in empirical contributions. And fifth, MENA is also one of the main source regions of migrants arriving to countries of the European Union (EU), so results of the investigation could be highly informative for the EU Common Migration Policy. Moreover, EU has become the first destination of migrants worldwide, together with the US, with volumes of migrants significantly increasing in the MENA-EU corridor in recent years (Docquier & Marchiori, 2010; *Trends in International Migrant Stock: The*

2008 Revision, UN). In this context, the focus of our investigation will allow to add relevant findings to the literature.

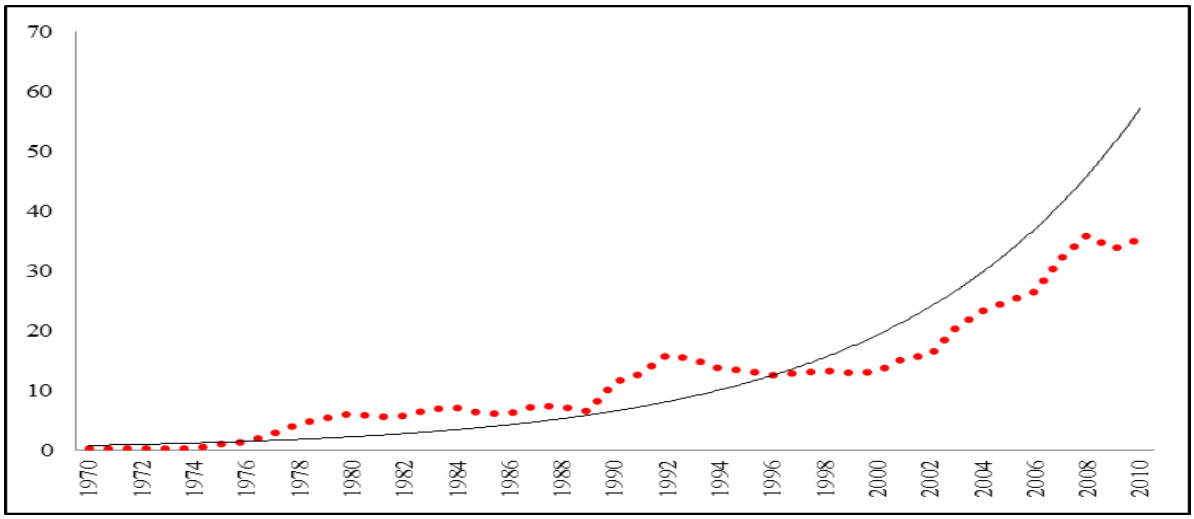
In pursuing this research, we employ a macro approach through panel data estimation techniques. We include a range of macroeconomic variables, together with institutional factors and inequality measures, as explanatory variables driving entrances of remittances for the period 1990-2010. Anticipating some of the results, we observe the relevance of educational endowment of migrants, average income at the origin country, and the stage of business cycle at destination countries as main drivers of remittance inflows. Institutional factors seem to play a role in this process, although of a minor extent. As a summary, relevant policy guidelines emerge from the study. After this introduction, in section 2 we present data descriptives and analyze the recent evolution of the MENA countries in terms of migration and remittance inflows. In section 3 we define the empirical model and present econometric results of the estimation procedure. Finally, in section 4 we include the main conclusions of the investigation and elaborate on policy issues.

2. Descriptive analysis of remittance inflows in MENA countries

Figure 1 shows the evolution of inflows of remittances in MENA region for the period 1970-2010. We observe a remarkable increase in remit volumes from 1 $US billion in 1975 to the present record of 35,4 billion in 2010, with inflows experiencing an important acceleration since the mid-1990s.

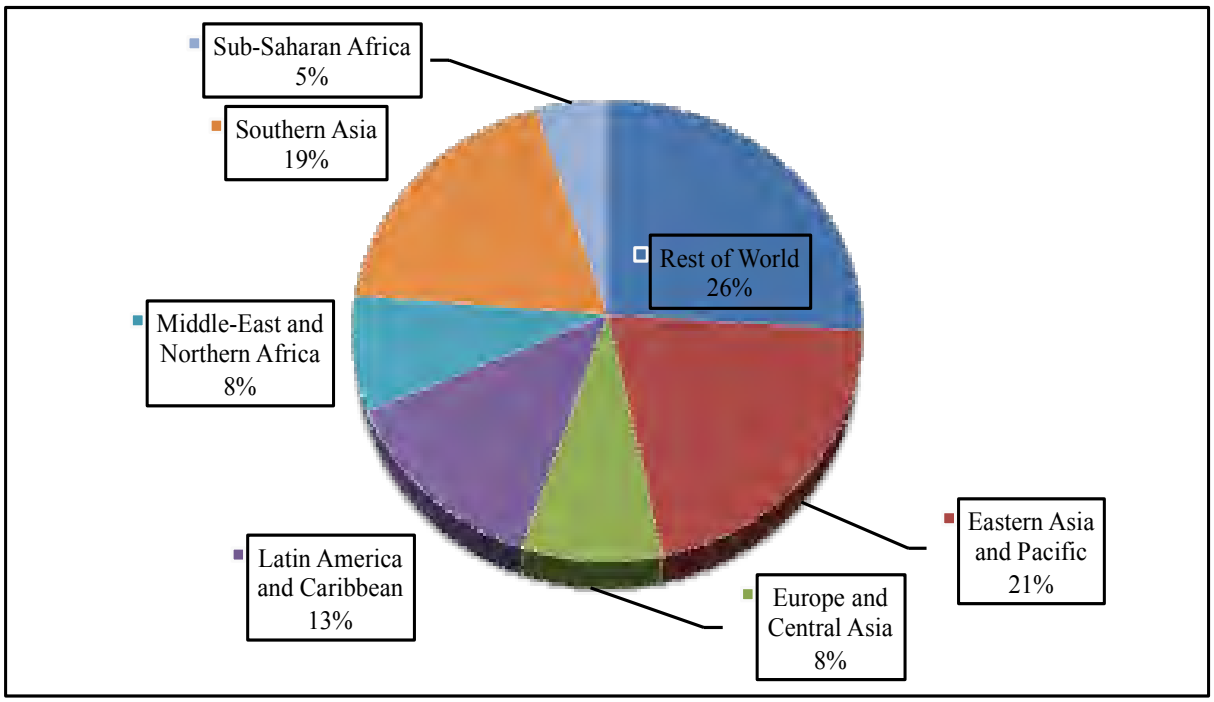
Figure 2 reports the world distribution of remittance inflows in 2010, with the region of Asia (Southern and Eastern) receiving the bulk (40%) of total entrances, followed at certain distance by Latin America (13%) and Europe (8%). The MENA region received approximately 8% of total world remittances, sent by the 9-10 millions of emigrants of that origin living in Europe, North America and the Gulf countries, majorly (World Bank, 2010).

Figure 1: Remittances inflows in MENA countries (US$ billions)



Note: MENA countries include Algeria, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Iran, Qatar, Saudi Arabia, Syria, Tunisia, UA Emirates and Yemen.
Source: World Bank

Figure 2: World distribution of remittances inflows in 2010



Source: World Bank

In Table 1 we include descriptive data on remittances for the MENA region. The first subpanel in the table (upper left hand side) highlights the relevance that these flows have acquired for the entire region through the years 1995-2010. At the end of the period remits represent 23% of all debt stocks in the area, 182% of debt service, and 133% of FDI flows. In this way, these capital entrances allow to ensure sustainability of external debt in the region, having surpassed FDI inflows in volume. Moving to the upper right hand side of Table 1, we can see that several single countries have been receiving the highest volumes of remits in absolute terms.[2] At the beginning of the period of analysis, Egypt, Morocco, Jordan and Algeria occupied the top positions as recipients of remittances, while fifteen years later Lebanon has climbed to the first place. Initial values of remits have been multiplied by a factor of ten in the case of Lebanon, and by two or three for the following four countries. The least receivers are then Tunisia, Syria and Israel. In terms of the stocks of emigrants living abroad, Morocco and Algeria occupy salient positions, after the great diaspora that characterised both countries in the past ten years. Tunisia, Lebanon and Egypt follow them in volumes, while Jordan, Syria and Israel stay far behind. Another interesting result is that of the level of education of migrants, with many MENA countries showing important shares of medium and high educated migrants in the total outflows. This is notable in the case of Egypt (67%), Israel (62%), Jordan (58%), Syria (50%), and Lebanon (48%). Morocco, Algeria and Tunisia, the countries with greater volumes of migrants, do not show such impressive brain drain process, with respective shares of 20%, 14% and 16% for most educated emigrants.

[2] We do not include in our study the rest of MENA countries listed in Figure 1, well because there is no data availability, or because their position is nearly marginal as receivers of remittances inflows.

Table 1: Statistics on flows of migration and remittances for MENA countries

Macro variables of MENA region			
(in 2000 US$ millions)	**1995**	**2005**	**2009**
FDI flows	871	16 763	24 350
Remitt + compens. employee	12 693	23 647	32 291
Exports	89 138	242 724	377 359
Debt stock	161 696	145 391	141 132
Debt service	18 808	20 874	17 735
Remitts+c.e. / Debt stock	8%	16%	23%
Remitts+c.e. / Debt service	67%	113%	182%
Remitts+c.e. / FDI	1457%	141%	133%

Total remittance inflows			
(in 2000 US$ millions)	**1995**	**2005**	**2010**
Lebanon	896	4 924	8 409
Egypt	3 226	5 017	7 725
Morocco	1 969	4 589	6 452
Jordan	1 441	2 499	3 812
Algeria	1 120	2 060	2 044
Tunisia	679	1 393	1 970
Syria	339	823	1 486
Israel	701	850	1 347

Stock of Emigrants				
(in number of people)	**1995**	**2000**	**2010**	% medium-high educ. in 2000
Lebanon	239 085	271 466	431 598	48%
Egypt	168 484	200 943	404 237	67%
Morocco	474 238	531 142	2 736 501	20%
Jordan	410 779	53 050	113 694	58%
Algeria	527 146	554 459	1 065 057	14%
Tunisia	210 092	210 293	513 199	16%
Syria	73 877	92 066	186 008	50%
Israel	102 448	122 068	239 744	62%

Population (in millions)		
	1995	**2010**
Lebanon	3,2	3,9
Egypt	57	77
Morocco	26	32
Jordan	4,3	6,1
Algeria	28	36
Tunisia	8,8	10,5
Syria	15	21
Israel	5,4	7,4

Source: Own elaboration from World Bank, UN World Population, and Docquier, Marfouk, Özden, and Parsons (2011).

Note: "medium-high educ." are the emigrants with upper-secondary education or more.

In Table 2 we include remit flows in per capita terms, with Lebanon occupying again a referent position, and the rest of MENA countries, with the exception of Jordan, laying quite far behind. Per capita inflows have also increased along the period of study, although do not show such impressive dynamics than those of total remittances flows. Demography has clearly exploded in recent years in many countries of the region, explaining low values of remits per capita. Syria, Algeria, Morocco and particularly Egypt face a remarkable growth of their populations between 2000 and 2010, and consequently of the number of migrants abroad (see Table 1 right lower panel). Data on GDP per capita included in Table 2 also show an important variability for MENA countries. Israel and Lebanon face similar levels of income per capita than many highly developed countries, while the rest of countries stay behind. However, it is interesting to note that all MENA countries in our study lay in the range of upper-middle income

level according to the World Bank classification, with per capita annual GDP ranging between $3,976 and $12,275. In this regard, this is an interesting group of countries to be analysed in a migration study for two main reasons: First, an important share of the population still lay below the poverty level, what acts as a necessary condition for people´s flows. And second, average income conditions of the country make their population able to find the necessary resources and international linkages for pursuing the decision of migrating, this being the sufficient condition of this process. As Table 2 shows, the ratio of remittances to GDP is in general a small one, despite the cases of Lebanon (14%) and Jordan (11%). Instead, if we focus in the shares of remits per emigrant, we can see that these capital inflows are clearly important for receiving households, both in absolute terms or in terms relative to GDP per capita. In the latter case, Jordan, Egypt, Syria and Lebanon are paradigmatic examples, with values of the ratio ranging between six, three, and 1.5 times that of GDP per capita, and important value of ratios for the rest of MENA countries too. Finally, regarding the share of emigrants on total country population, just Lebanon, Morocco and Tunisia show significant values of 11%, 9% and 5%, respectively.

Table 2: Some characteristics of flows of migration and remittances for MENA countries

	Remittance inflows per capita (pc)		GDP per capita	Remits/GDP
(in 2000 US$)	**1995**	**2010**	**2010**	**2010**
Lebanon	277	2 151	15 239	14%
Egypt	56	99	6 417	2%
Morocco	74	202	4 793	4%
Jordan	337	623	5 767	11%
Algeria	39	56	6 965	1%
Tunisia	77	186	9 454	2%
Syria	23	70	5 125	1%
Israel	130	181	29 601	1%

2010	remitt. per emigrant	% on GDPpc	% emig. on population
Lebanon	19 483	128%	11%
Egypt	19 110	298%	1%
Morocco	2 358	49%	9%
Jordan	33 529	581%	2%
Algeria	1 919	28%	3%
Tunisia	3 839	41%	5%
Syria	7 989	156%	1%
Israel	5 618	19%	3%

Source: Own elaboration from World Bank, UN World Population, and Docquier, Marfouk, Özden, and Parsons (2011).

From a descriptive approach, Tables 1 and 2 appear quite informative on the recent performance of the MENA region in terms of remittances, population growth and migration flows. Main receivers appear to be those countries having the higher number of migrants abroad (Morocco and Algeria), or receiving important amounts of remits per emigrant (Lebanon, Jordan, and Egypt). For some countries remittances become an important income source in terms of GDP (Lebanon, Jordan), and particularly in terms of income of household receivers (Jordan, Egypt, Lebanon, Syria). Further, we can also infer from these tables the relevance that social dimensions, such as income distribution, or educational level of migrants, present in MENA countries. In this context, improving our knowledge on the factors influencing remittance inflows constitutes the objective of the following section.

3. The econometric model and results of the investigation

3.1 The empirical model and estimation results

In this part of the study we present the empirical model, and results of the estimation process. Our function of remittance inflows is computed for the eight MENA countries with available data for the period of analysis 1990-2010: Lebanon, Egypt, Morocco, Jordan, Algeria, Tunisia, Syria and Israel. This set of countries accounts for more than 92% of total MENA remit entrances, so we are nearly showing the whole MENA picture. We decide to start with empirical model of remittances per capita in order to follow mainstream literature, then avoiding size bias in estimation. After this equation, we will present the results for remit inflows per emigrant, too. The explanatory variables are composed by three main sets of covariates. First, we include traditional "macro variables": GDP growth and unemployment rate in OECD and GCC countries, both as business-cycle proxy variables in destinations markets of migrants; GDPpc in ppp values, that proxy income levels in origin countries of migrants; real exchange effective rates (reer), as a measure of the value of national currency and its purchasing power (when the index falls, it grows); and real interest rates (rir), as a proxy of financial development and investment returns in countries receiving remittances. We also include measures of the stocks of emigrants in foreign countries, splitted by levels of

education, and official level of development aid-funds relative to GDP arriving to migrant´s countries of origin. We expect the signs of estimated coefficients for all these variables to follow the usual behaviour, as pointed in the literature on development issues[3] (Adams, 2008; Rapoport & Docquier, 2006).

The second set of covariates is built on a sort of "institutional measures" taken from the World Bank. We include different measures, such as voice (capacity of participating in elections and the political process at the country level), political stability (and the absence of violence and terrorism), and government effectiveness (see Kaufmann et al., 2010 for details)[4]. All institutional covariates are computed in a relative (multilateral) fashion, reflecting the institutional quality of every single country in the sample regarding a group of countries of reference, all MENA countries in our particular case.[5] Employing institutional covariates is an important novelty of the exercise, and we will pay special attention on how they affect the attitude of senders of money, and hence the volumes of remittances arriving to MENA countries. We expect that higher institutional stability and socio-economic certainty at countries of origin of migrants promote greater entrances of remits, so estimated coefficients for institutional variables are expected to be positive (Chami, 2008; Adams, 2008).

Third, we also include data on "income inequality" measures, taken from the POVCALNET website of World Bank, reflecting the distribution of income inside every MENA country[6]. Data comes from a continuous survey carried out by this institution at different developing countries since the late 80s. "Inequality" variable is approached by means of the traditional Gini index, usually employed in this type of analysis. Definitions of the variables can be found at the POVCALNET databank of the World

[3] We detail further in this paragraph the expected signs for these covariates, and the expected relationship with remittance inflows.

[4] We have run our equation with other institutional variables such as regulatory quality, corruption control, and rule of law, although we just include the ones that better behave in our preferred empirical model.

[5] MENA countries in this case include Algeria, Djibouti, Egypt, Israel, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Iran, Qatar, Saudi Arabia, Syria, Tunisia, UA Emirates and Yemen.

[6] We have also run equations for poverty measures, but results for this variable were inconclusive, although trying different specifications of the covariate. So, we decide not to include these covariates in our preferred empirical model.

Bank.[7] In terms of the expected sign for this covariate, we do not know what to expect a priori, given that exercises for developing countries have shown positive relationship between inequality and inflows of remits (that is, a positive sign for Gini index), while those for more developed (Israel and perhaps Lebanon) have shown a negative one.

The general equation of the empirical model is then specified as:

$$\ln REMPC_{it} = \varphi_i + \theta_t + \ln MACRO_{it} + \ln INST_{it} + \ln INEQ_{it} + \varepsilon_{it}$$

where the term φ_i represents a set of country effects, θ_t is a set of year dummies, $MACRO_{it}$ includes explanatory variables from a macroeconomic focus, $INST_{it}$ collects a set of variables on institutional factors, $INEQ_{it}$ capture inequality measures, and ε_{it} is the usual residual term of the equation. Given the cross-section plus time-series nature of data, we employ panel data techniques in our estimation procedure. We have employed STATA V. 12 software in running the econometric procedures. More details for the variables included in the empirical model are given in the appendix.

After specifying the empirical equation, we now move to Table 3 including results on factors driving remittance inflows per capita in MENA countries. We employ Panel-FGLS estimation with corrected errors, both for heteroskedasticity and cross-sectional correlation issues (between and within individuals in the panel). We also include time and country dummies in our panel specification, in order to cope with possible heterogeneity arising in the cross-section and time dimensions of the model. This procedure allows us to obtain the most efficient, unbiased, and robust estimates we can afford to in this type of settings (Cameron and Trivedi, 2009).

Estimation results are included in equations (1), (2) and (3) of Table 3. First we can observe the relevance that macro variables play in the process. Business-cycle related factors, such as GDP growth and unemployment rates, present the expected signs (positive and negative, respectively), showing that higher economic growth and lower unemployment levels in destination countries of MENA migrants increase remittance entrances (per capita) at home countries. Equally, relative currency value (reer) and

[7] See http://iresearch.worldbank.org/PovcalNet/povcalSvy.html

real interest rates (rir) show the expected negative and positive coefficients respectively, indicating that greater national currency value (a lower reer index) and higher rates of return of investments at their origin countries promote higher inflows of money back home. Positive sign of the coefficient for the real interest rate variable (rir) could also be showing that higher levels of banking/financial system efficiency attracts higher levels of remits to the country, as the literature has emphasised. The covariate of GDP per capita shows a positive coefficient, indicating that higher average income levels in origin countries allow for higher migration flows in MENA region, and hence higher volumes of remits back. The coefficient of the official development Aid flows over GDP is also positive, showing that financial inflows (Aid, FDI, remits) arriving to developing countries uses to positively covariate.[8]

Regarding the variable of emigrants by educational level, we include two covariates capturing migrants with high and medium levels of education, as defined in Docquier Marfouk, Özden & Parsons (2011). We discard the remaining stock of low-educated MENA migrants in order to avoid perfect co-linearity in the model. In this way, results shown in Table 3 for these covariates are reported in relative terms to the reference category let aside (low-educated migrants). Following this specification of the variable, estimates show that the higher-educated migrants tend to relatively send less remits per capita, while medium-educated ones would be sending greater amounts relative to lower-educated migrants. The results seem to confirm those of this new strand of the literature, highlighting that education and remittances would follow an inverse U-shaped curve relationship. That is, increasing education of migrants primarily fosters revenues sent back home until a certain skill threshold, after which high skilled migrants reduce the amount of money sent back, well because their families doesn´t need it to live, or because they invest in destination countries to allow for family reunification in developed countries (Docquier, Rapoport and Salomone, 2011; Docquier and Rappaport, 2006). This result appears to be robust in the MENA case, as we will see along the investigation.

[8] We have also tried with FDI inflows in other specifications of our empirical model, obtaining positive and significant coefficients for this variable. However, we decided not including these capital flows in our preferred specification, mainly because they don´t match the main focus of this paper.

The role of institutional variables is also explored in the model. Estimated coefficients capture the relevance that socio-political dimension, as well as the empire of law, has in attracting greater amounts of remittances back home. Voice, political stability, and government effectiveness appear to be the main institutional treats valued by MENA remitters.[9] All of them show the expected positive signs, and the "voice" variable, defined as the right of citizens to participate in the political process of the country, shows the highest elasticity for that group of covariates. This is an appealing result, given that remittances contribute remarkably to the income of households of MENA migrants, and the institutional framework seems to be playing some role in driving these capital entrances. Further, in terms of the results for the inequality index approached by Gini coefficient, the model is showing a robust positive correlation between social inequality levels and remittance inflows. The elasticity is also of certain magnitude in comparison with other covariates of the model, so it seems that capital inflows and income inequality at a social level reinforces one another, a typical result for developing countries (Docquier and Rapoport, 2006).[10]

[9] We have also run equations including other institutional variables such as corruption control, rule of law, and regulatory quality, not showing the same explanatory power for the case of MENA countries.

[10] We have also employed different poverty measures in previous equations we have run, not finding robust and significant estimates as in the case of the inequality measure. That seems to be the conclusion of other recent contributions on the issue, which recommends approaching poverty and remittances issues from a more micro focused perspective (see, i.e., related discussion in Adams, 2008).

Table 3. Equations of remittance inflows per capita for MENA countries in 1990-2010

Dep vable is: log Remittances per capita $_{it}$			
Equations	**(1)**	**(2)**	**(3)**
Macroeconomic variables:			
GDP growth OECD	0.0417***		0.0378***
	[0.01004]		[0.0097]
Unemployment rate OECD	-0.3198***	-0.1726***	-0.2919***
	[0.0894]	[0.0702]	[0.0736]
log GDPpc ppp	0.7383***	0.8159***	0.6423***
	[0.0684]	[0.0558]	[0.0663]
reer	-0.1336***	-0.0944***	-0.0994***
	[0.0318]	[0.0243]	[0.0315]
rir	0.0169***	0.0173***	0.0188***
	[0.0037]	[0.0037]	[0.0032]
log emigr_stock_high_edu	-1.5224***	-1.5340***	
	[0.3591]	[0.2749]	
log emigr_stock_med_edu	1.6355***	1.6833***	
	[0.3793]	[0.2886]	
Oficial_develop_Aid_inflows / GDP	0.0474***	0.0485***	0.0467***
	[0.0066]	[0.0055]	[0.0064]
Institutional measures relative to:	*MENA countries*	*MENA countries*	*MENA countries*
voice	0.1990***		0.2266***
	[0.0629]		[0.0516]
poltical_stability		0.0091***	
		[0.0044]	
gov_effectiveness	0.0712***		0.0571***
	[0.0220]		[0.0185]
Inequality measure:			
Gini index	0.2255***	0.2268***	0.3618***
	[0.0654]	[0.0587]	[0.0625]
Year (time) dummies	yes	yes	yes
Country dummies	yes	yes	yes
Robust stdr-errors	All errors corrected for heteroskedasticty and cross-sectional correlation (panel-specific between and within correlation)		
Observations	168	168	168
Pseudo R-squared	0.787	0.763	0.723
Model-type	All estimated by GLS Panel with correlated disturbances		

(***), (**), and (*) indicate estimated coefficients to be significant at 1%, 5% and 10%, respectively. [Robust standard errors in brackets].

Results of Table 3 appear to be robust to different specifications of the empirical equation, and goodness-of-fit measures show relevant values according to the literature. In general, empirical findings on factors driving remittance inflows in MENA countries appear to leave the following messages. First, macroeconomic conditions of destinations and origin countries of migrants are important in driving international flows of remits. Unemployment levels in destination countries and exchange rates seem to emerge as the two most important variables in this regard. Second, migrants have to face a cost for establishing abroad, so the average income level in exporting labour countries clearly influence the volume of migration flows and remittances sent back. While poverty level is obviously an important determinant of the volume of migrants leaving MENA countries in recent years, as i.e. in the case of Morocco and Algeria, remittance levels sent back home appear to be more influenced by characteristics of the migrants themselves. In line with this insight, our third result clearly states that educational level of migrants highly determines the volume of capital remitted by individuals, with this variable appearing as the most important factor in the case of MENA countries, together with per capita income levels at exporting countries. Fourth, the institutional framework seems to be relevant too, with political participation of people being the most important question in empirical terms. And fifth, inequality and remit entrances reinforce each other, given that distribution of remits inside developing countries used to show an even more unequal pattern than income distribution itself, as the literature has shown.

Table 4 presents further evidence for MENA region now in terms of remittance inflows per emigrant. Results show nearly the same picture that the previous table, with some changes in elasticities. Mainly, we can observe that income per capita reduces its relevance in fostering remittances per emigrant in equations (4) and (5), while the educational level of migrants gains even more relevance. However, those results do not changing qualitatively the main message of the investigation, with these two variables appearing once more as the main drivers of remittance inflows in MENA countries. The rest of covariates, although showing some complementary effects on such capital

entrances, stay rather these two in terms of their elasticities. Goodness-of-fit also increases in equations of Table 4, and the whole empirical model seems to show a relevant joint significance.

Table 4. Equations of remittance inflows per emigrant for MENA countries in 1990-2010

Dep vable is: log Remittances per emigrant $_{it}$			
Equations	**(4)**	**(5)**	**(6)**
Macroeconomic variables:			
GDP growth OECD	0.0238***	0.0271***	0.0332***
	[0.0062]	[0.0060]	[0.0665]
Unemployment rate OECD	-0.1410***		
	[0.0679]		
log GDPpc ppp	0.2862***	0.3265***	0.7315***
	[0.0990]	[0.0395]	[0.0265]
reer	-0.1229***	-0.0906***	-0.0730***
	[0.0426]	[0.0212]	[0.0222]
rir	0.0024	0.0011	0.0041***
	[0.0043]	[0.0020]	[0.0147]
log emigr_stock_high_edu	-1.2056***	-1.9234***	
	[0.4914]	[0.2751]	
log emigr_stock_med_edu	1.3334***	2.3607***	
	[0.4838]	[0.2665]	
Oficial_develop_Aid_inflows / GDP	0.0423***	0.0402***	0.0442***
	[0.0059]	[0.0053]	[0.0053]
Institutional measures relative to:	*MENA countries*	*MENA countries*	*MENA countries*
poltical_stability	0.0223***	0.0171***	0.0213***
	[0.0046]	[0.0347]	[0.0037]
gov_effectiveness	0.1349***	0.0715***	0.1390***
	[0.0234]	[0.0146]	[0.0147]
Inequality measure:			
Gini index	0.0690***	0.1695***	0.0994***
	[0.1059]	[0.0386]	[0.0331]
Year (time) dummies	yes	yes	yes
Country dummies	yes	yes	yes
Robust stdr-errors	All errors corrected for heteroskedasticty and cross-sectional correlation (panel-specific between and within correlation)		
Observations	168	168	168
Pseudo R-squared	0.896	0.895	0.886
Model-type	All estimated by GLS Panel with correlated disturbances		

(***), (**), and (*) indicate estimated coefficients to be significant at 1%, 5% and 10%, respectively. [Robust standard errors in brackets].

3.2 Discussion of the results of the investigation

The present paper is directed to improve our understanding of factors influencing the entrance of remittances in developing countries, particularly addressing the case of the MENA region. This is an interesting case of study given that the countries of this region share characteristics of both, developing and developed countries, so we can test different hypothesis that still remain unclear in the literature. MENA countries show higher levels of GDP per capita (5,000 to 10,000 $US on average), than middle-income countries (of 4,000 $US according to World Bank, 2010). Moreover, Lebanon, and particularly Israel, show income per capita levels of developed countries, with 15,000 and 30,000 annual $US per capita, respectively. This feature lets these countries well positioned for sending migrants abroad, because they have the money for affording for migration costs. Moreover, flows of skilled and highly educated migrants appear also to be of particular relevance in these countries, as we have seen. In this way we have been able to observe here how both questions (income and education) affect the level of remits per capita sent back home by workers staying in rich foreign (mainly developed) countries (the EU, the US and the Gulf countries). The case of Morocco, Algeria and Tunisia is the reverse, given that the bulk of migrants leaving those countries are of the lower-educated type.

Main results of our investigation have indeed highlighted how these two variables, educational endowments of emigrants and their capacity of affording for migration costs, emerge as the most important determinants of volumes of remittances arriving to MENA countries. In the case of education, it seems that medium-educated emigrants, those with upper-secondary enrollment, are the ones sending back more money to their families and relatives. It seems that low qualified emigrants could not opt to the same level of wages than medium educated ones, while high educated migrants do not share the incentives for returning back all that share of their income than medium educated do. Our results report in this way new evidence on the relevance of taking in account the skill and education composition of the flows of migrants in these types of studies, and particularly for those dealing with south-north corridors with a great proportion of highly educated migrants.

Business-cycle variables are another pivotal set of covariates in our study. Unemployment rates and GDP growth in destination countries of migrants are shown to be important actors in the remittances picture, with the former playing a more leading role than the latter in the story. Obviously, having an employment is of vital relevance for sending some of the wage earned back home, as our empirical model has shown. This result has been surely underlying the recent downturn of remits flows observed in the year 2009. Other variables that have attracted great attention in the literature of remittances, as interest rates and exchange rates, do not seem to have that much influence in the case of MENA region, with results showing that surely all these countries have surpassed the quality threshold of their financial systems that make both covariates relevant in these types of studies. Notwithstanding, the fluctuations of the currency price still appears to be of certain relevance in influencing remitters´ behaviour, showing an elasticity of around 10% that is not negligible.

Regarding institutional variables, our results provide evidence on the relevance of such type of factors in influencing entrances of remits in MENA countries, unless playing a secondary role. The existence of conditions for "voice" and political ways of participation for the people, presence of democracy, and government effectiveness, appear to be the most important questions for nationals living abroad. This result is obviously in line with recent studies highlighting the relevance of migrants in influencing the rise of democracy and human rights in developing countries (see, particularly, the excellent contribution of Docquier, Lodigiani, Rappaport, and Schiff, 2011 on this issue). Despite the lower value shown by institutional elasticities in our empirical model, this question is of paramount importance for MENA countries in the present times, after the Arab awakening of 2011, so it has been our interest in showing how this relates to remittance flows. In this way we have to remark that, for example, the coefficient on voice, expressing the political participation of people, reaches elasticities of around 20% in some of our equations, this being an appreciable value for a qualitative variable as it is, with all of the measurement problems that use to be associated to this type of covariates.

Finally, inequality measure has shown its relevance in the remittances debate for developing countries, showing their mutual linkages. High income, and highly educated, classes of the society in MENA region increasingly migrate to developed countries, sending amounts of money back, that unless necessary in certain aspects for the receivers to carry their lives forward, are pushing income differences up inside their nations. This result seems to point to two clear messages: first, MENA countries still are of developing type in its majority, and second remittances deepen income differences (and opportunities) in those type of countries, as the literature of development have been repeatedly shown. This message, besides being important in all times, is of major relevance in present times of crisis, given that it seems that remittances are not counterbalancing existing inequality situations at the receiving countries for this area.

3. Conclusions and policy concerns

The recent investigation has been focused on identifying main factors driving inflows of remittances along the MENA region. In carrying out such work, and following the literature on the issue, we have compiled a comprehensive set of explanatory variables, including macroeconomic factors, institutional variables, and inequality measures. Results have shown that macroeconomic variables, and the availability of income for migrants allowing them to face migration choices, are important factors in guiding the volume of capital remitted back home. Beside this, skill/education level of the emigrant has emerged as the main variable explaining this type of flows. All two results have policy consequences, given that the majority of MENA countries send skilled migrants abroad, although important differences remain inside this group of nations regarding this question. There is a first group of MENA countries including Morocco, Algeria and Tunisia, with great number of emigrants abroad (around 4.2 million), but of the low-skilled type, and a second group of countries (the rest of MENA countries in the sample), with lower number of migrants, around 1.4 million, but with of 50%-60% of people´s flows being of highly-educated type. In a near future one would expect that the second group of countries would be more affected in their inflows of remits, although it is interesting to note that medium-educated migrants emerge as the most relevant senders of remits among all MENA migrants in absolute terms. However, it

seems that restrictions in EU policy regarding entrances of migrants have become more severe for non-skilled immigrants, given the greater competition existing with nationals for scarce employment on that segment of jobs. In present times of big unemployment records in southern EU countries the composition of migrants between both MENA groups would affect, and it is affecting already now, the flows of low-skilled migrants. People coming from Morocco, Algeria and Tunisia, arriving some years ago to Spain, Italy and France as main destinations, are now facing important reductions of migrants´ quotas of entrance, with legislation even for familiar reunification getting stricter and highly restrictive. Given that remittance inflows in these countries become an important extra-income for households, representing an amount of around 10%-15% of country GDP in Morocco, for example, decreases of such flows are going to have an important impact in household economies, an outcome we are yet seeing since the beginning of the crisis. Such an economic impact has also to be added to the political impact of the recent conjuncture now faced by North African countries, letting this region in a bad situation at present times.

Turning back to the results of the investigation, it has been shown that education is an important determinant of remits flows, as some authors have recently shown and we have remarked throughout this investigation. In correspondence, such an issue should be in the forefront of the migration debate in the world institutions, those being international ¡or national ones. Remittances are also of major relevance for developing countries as a source of complementary income regarding national earnings for the MENA region: Lebanon received in 2010 flows for this concept accounting up to 20% of GDP, Morocco of around 10%-15%, and Jordan of 13%. In this way, education becomes an endogenous concept in the development argument for many of the MENA countries, given that, as we have seen, higher levels of education of migrants report lower levels of remits per capita, this being an interesting question in policy terms from the point of view of the sending country of the migrants. Moreover, and as some recent contributions have shown, such an issue would need from further evidence in order to control for the effects on highly educated remits caused by restrictiveness and selectivity of national and EU legislation on migrants´ entrances. Anyway, as we have

shown, education, migration flows and remits are issues very closely related, this result being of great relevance from a policy view.

Institutional stability, the political participation of MENA citizens in their countries, and other "voice" instruments for these societies, seems to be of relevance in pushing remittances upwards, too. The debate on this topic is now very present in the literature, with recent contributions showing the positive effects of migration on bringing some more democratic behaviour to home countries of migrants. The effect of foreign-rooted lobbies on autocratic governments in their home countries, and how these issues behave in several parts of the world has been recently highlighted by the literature. Despite that policy changes are always slow processes, moreover if we are thinking on structural changes, our results have shown that these questions are also of importance for the sender of remits to MENA countries, having consequences from a policy view too.

Finally, but not of less importance, we have faced the question of income inequality at a social level. Our findings have clearly shown that meanwhile poverty perhaps is not an issue clearly affecting flows of remittances, inequality and remits per capita influence each other in a statistical and highly significant positively related way. This is an expected result in a set of countries where we have two well-differentiated groups of people: those who migrate with a well-endowed education level in his/her back, and those who cannot even afford for migration costs. Medium and high skilled migrants sent some of their earnings back, so increasing inequality at home countries, with an undesired, but clear accumulative effect through time, this being another important issue to be conscious of for policy-makers.

As a general conclusion, results of the investigation have shown the relevance of three main factors in determining the volume of remits received in MENA region: The educational dimension of migrant people, the costs of migration, and the capacity of individuals for reaching a threshold of income allowing them to migrate, and the role of economic conjuncture at receiving countries. We have also seen how better institutions and political participation affect those capital flows, while the important linkages

between social inequality and remit flows have emerged once more in the debate of the impact of migration even in the case of MENA countries, countries showing relative higher levels of GDP per capita inside developing nations.

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Data appendix

Data set construction: We include here all references of data employed in the empirical model of the paper.

Dependent variables:

- Remittance inflows per capita: Remittance inflows taken from World Bank website (Databank of migration and remittances flows); population data taken from World Development Indicators database (World Bank).

- Remittance inflows per emigrant: remittance inflows taken from "Migration and Remittances Databank" from the World Bank´s website. Stock of emigrants taken Docquier, Marfouk, Özden & Parsons for 1990-2000, and from the World Bank data, EU database, and Jimenez-Martin, Jorgensen and Labeaga (2007), for years 2001-2010.

Explanatory variables:

MACRO VARIABLES: All data taken from World Development Indicators (WDI) database (World Bank), except for data for stock of migrants. Data on macro variables includes:

- GDP growth OECD.
- Unemployment rate OECD.
- GDP per capita: Constructed with data on GDP and population (both from WDI-WB).
- Real effective exchange rates (reer): Defined as nominal exchange rate ($US per national currency) * Relative prices (p/p*), with p(p*) = national (OECD) Consumer price index.
- Real interest rates (rir).
- Stocks of emigrants: taken from Docquier, Marfouk, Özden, and Parsons (2011), and from the EU database, and from Jimenez-Martin, Jorgensen and Labeaga (2007).
- Official development Aid flows.

INSTITUTIONAL VARIABLES: taken from World Bank and Kaufmann et al. (2010); we include data on:

- Voice: capacity of participating in election processes at the country level.
- Political stability: and the absence of violence and terrorism.
- Government effectiveness.

INEQUALITY VARIABLE: taken from POVCALNET databank website (World Bank):

- Inequality on the distribution of income at the country level: measured by the Gini index.

A.1 Summary statistics for data set

Variable	Observ.	Mean	Std. Deviation	Min	Max
remittances inflows	168	2124	1941	121	8694
remittances_pc	168	214	353	8	2152
remittances_per_emigrant	168	6541	7318	369	33535
reer	168	93	17	44	180
rir	168	4	7	-36	21
emig_stock_low_edu	168	136226	156738	6911	445948
emig_stock_med_edu	168	27587	14825	7791	63598
emig_stock_high_edu	168	63114	36582	15811	134592
voice_mena	168	-71	11	-91	-51
polit_stab_mena	168	-6	10	-22	18
gov_effect_mena	168	20	7	3	36
Gini_index	168	38	3	30	43
GDP_growth	168	2	2	-4	4
GDP_per_capita	168	6842	6024	2036	29602
Ofic._dev_Aid_GDP	168	2	3	0	22
Populat_014	168	34	6	23	47
Populat_1564	168	60	4	50	70
Total population	168	20	19	3	78
Unemployment_rate	168	7	1	5	8

CHAPTER 6:

CONCLUSIONS AND POLICY OPTIONS

FEMISE Research Project FEM 34-01: "The Trade creation effect of Immigrants: Characterising Socioeconomic opportunities arising from linkages between People´s and Goods´ flows inside the MENA region".

Main aim and conclusions of the study

The present chapter synthetises all research findings and policy recommendations derived from the Technical Report on "*Trade creation effect of Immigrants: Characterising Socioeconomic opportunities arising from linkages between People´s and Goods´ flows inside the MENA region"*, corresponding to FEMISE RESEARCH PROGRAM 2010-2011. The main aim of the study has been to highlight the link between networks of migrants along the MENA region and their trade creation effects. In particular, we have focused on the issue that *immigrants can have a positive effect on host and home countries* in economic and social terms, by promoting new bilateral commercial exchanges.

In the first part of the research, results point to the existence of clear pro-trade effects of immigrants arriving to Southern EU countries. Italy, Spain, France and Portugal have shown clear trade creation effects of people´s flows arriving to these countries. Quantitative exercises reflect that every 10% of new immigrants stocks living in that countries report extra-trade flows of 2%-5%, once controlled for other trade-creation factors. Migrants´ networks seem to affect similarly import and export flows, although in some cases those effects vary for types of products and commercial partners. Empirical results have also shown that the larger the distance between trading countries, in terms of culture, geographical distance or degree of development, the more important becomes the existence of a network of migrants for pushing new trade flows (given informational flows and enforcement effects they provide). In this framework, the personal linkages that networks of migrants allow for, appear to be of great help in pushing new trade flows with more distant areas, such as Asia, Sub-

Saharan Africa, and Eastern Europe. Complementarily, those countries with higher tradition in sending people to Southern EU region, such as Mahgreb, Latin America or Western Europe, show greater trade creation effects by the side of imports, leading to the so-called "preference effects". It means that when a migrant arrives to a new country, she promotes the demand of their own home-produced products, then fostering entrances of such products as new imports of the host country. In what regards the cases of Egypt and Tunisia we have also observed the existence of trade creation effects of migrants´ networks, but only in specific type of products and not with all receiving countries. It seems that those countries occupy an intermediate position between their EU and Arab commercial counterparts. In fact they show typical trade flows structures of developed countries when trading with some less developed Arab countries, and of developing nations when doing it with EU partners. However, all the results regarding these two countries are still seminal, and would benefit from further research. As a general result, the first part of the research point to the existence of important pro-trade effects of EU-MED migration linkages. It seems that networks of migrants stimulate exports in both shores of the MED region, but mainly for manufactures and at a lower extent for primary products.

In the second part of the research, we have provided new evidence on the factors driving remittance capital inflows in MENA countries, for the period 1990-2010. Remittances appear to be relevant in financial terms for the countries in the study; for example, Lebanon received in 2010 flows for this concept accounting up to 20% of GDP, Morocco of around 10%-15%, and Jordan of 13%. Moreover, for households receiving those capital flows along the MENA region, these could account for more than 200% of their average annual income per capita. Results of the investigation indicate that pivotal issues in influencing the level of remittances per capital arriving to MENA countries are the following ones: first, the level of education that the migrant person is endowed with (what clearly influences the volume of remits sent back home); second, the average level of income per capita that the sending country of migrants reflects (because it determines the capacity of the migrant to face for migration costs); and third, the economic conditions or conjuncture characterising destination countries (mainly the level of unemployment arising in host countries of

migrants, followed by the exchange rate). Institutional conditions in countries receiving inflows of remittances also seem to play a role in this process, although of second order.

Policy guidelines derived from the investigation

In policy terms, results of the investigation lead to the following recommendations:

1. Main output is that Trade and Migration policies should be viewed as complementary tools in fostering socio-economic development along the MED region. In this regard, policymakers in charge of these two Common EU Policies should be more aware of the linkages they are sharing in practical terms.

2. Trade effects of networks of migrants are more important for manufactures than for primary products, and for distant countries than for closer ones. Both issues have clear policy implications for EU policymakers. Asian countries become an important target in this regard, given the high content of manufactures in trade and higher distance with EU countries characterising these nations. A carefully-designed migration policy with that region would render important improvements in trade relationships between EU and Asian partners.

3. Migration policy has been of course becoming more selective in recent years for some EU countries (France, Germany, Spain, Italy). In this study we have tried to highlight the positive effects that migration could render in terms of trade growth for host countries. Migration policies of EU countries, individually and as whole region, should integrate main results of the investigation in this crucial time of changes, in order to gain in flexibility and economic rationality.

4. Remittances from immigrants in the EU appear as a relevant contribution to the development of the MENA countries. Measures supporting a reduction of transaction costs for remittances, particularly when referring to modest amounts, could be useful in reinforcing that positive impact.

5. Even this not being a specific aim of this research, we have found a positive covariance among some crucial capital flows arriving to MENA countries (remittances, foreign official aid, foreign direct investment). It would call for a comprehensive economic approach by EU institutions supporting the development of MENA economies in this regard. At the same time, we proved the positive effect on remittances (it could be probably extended to other flows) of key institutional variables related to good governance. No doubt the EU Common Foreign and Security Policy could interact quite usefully with the mentioned comprehensive economic approach.

6. Education has become nowadays the most relevant variable when thinking about the socio-economic impact of currents of migrants for the host and home countries. This factor should be occupying the frontline in every policy design dealing with people´s flows.

7. Remittance inflows used to increase income inequality at a social level, even in a region like MENA characterised by relative higher levels of GDP per capita among developing economies. This is another relevant question to be dealt with in policy terms, both at the level of host and home countries of migrants.

8. Finally, all the positive conclusions this research reached in terms of the real and potential impact of immigrants could only be sustained through the proper integration of immigrants in the recipient societies. In this sense, EU Migration Policy should allow for a more integrated focus, providing an ordered and sustainable path of migration flows. Welcomed and well-integrated migrants are those able to develop those positive economic impacts highlighted by this research.

Priorities and Opportunities

As main priorities and opportunities of the research in policy terms we would focus on:

- Exploiting positive externalities of trade creation effects of immigrants through national and EU common migration policies (Asia, Latin America, Eastern Europe; manufactures versus primary products).

- Accounting for the role of education in explaining the impact of migrants´ flows, in order to design sound migration policies. Defining a wider approach for EU Migration Policy, integrating the MED regional focus.

- Exploring the effects of migration and remittance flows in promoting sound institutions and social equality at MENA countries in these crucial times for those societies.