# Middle Eastern Assimilation, Migration and Trade to Europe and North America

**Hisham Foad**

**March 2009**

**Abstract**

Why are immigration and trade flows positively related? While many studies have documented this complementary relationship, we cannot definitively say what factors drive this relationship. On one hand, migration leads to the formation of social networks across borders, driving down trade costs. On the other hand, immigrants may retain a preference for their native country's products, creating a local market for exports. This study examines these two competing theories by estimating the immigration-trade linkage separately for migrants moving from the Middle East and North Africa (MENA) to both Europe and North America. While these two groups originate in the same location and have similar preferences, they are quite different in terms of both income and education, with MENA migrants to North America tending to be less numerous but more educated. While the greater degree of economic assimilation for North American migrants should strengthen migrant network effects, the fact that these migrants are more culturally assimilated should weaken both network and preference effects. I find that the migration-trade link is stronger for migrants to Europe, with the strongest effect for imports. The migration-trade link is stronger for differentiated goods than for homogeneous goods, and strongest 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, a widely accepted result that has had little empirical support in the existing literature.

JEL: F1, F22
Keywords: Migration and Trade, Middle East and North Africa

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* Department of Economics, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182. Please direct all correspondence to the author at hfoad@mail.sdsu.edu. I would like to thank seminar participants at the SDSU Brown Bag Series for their invaluable comments on this project. All remaining errors remain my own.

## 1. Introduction

How are flows of labor and goods across national borders related? Mundell (1957) argues that free trade can lead to factor price equalization, thereby reducing the incentive for labor to move to countries with high wages. This view was challenged by Markusen (1983), who finds a complementary relationship under alternative assumptions to the Heckscher-Ohlin trade model. A number of recent empirical studies have supported this latter view that trade and migration are complementary. Furthermore, these papers have also argued that labor migration leads trade. There are two theoretical channels through which migration can affect trade. First, migration may induce trade because immigrants bring with them a retained preference for their native country's goods and services. This channel applies mainly to imports of differentiated goods from the immigrants' native countries, as these are the goods for which immigrants may not find suitable substitutes in their new homes.[1] Second, migration may help to reduce the transaction costs associated with international trade. Although migrants physically leave their native country behind, they do not necessarily sever all ties with people living there, leading to the formation of ethnic networks across borders. These networks can overcome informal trade barriers, such as weak international legal systems or a lack of information about formal markets. Grief (1993) presents the historical example of the Maghribi traders, a distinct social group within the Jewish Diaspora living in the Islamic Mediterranean in the 11th century. The traders shared information about foreign markets and were willing to engage in collective punishment against any rent-seeking traders, thereby reducing risk.

Though the existing empirical literature on this topic has done a good job documenting the positive relationship between migration and trade, less attention has been given to the specific channel through which migration affects trade. This is an important deficiency in the literature, not only from an academic perspective but also for policy implications. If migration lowers informal trade barriers, then we must consider this positive externality when discussing the merits of immigration. If retained preferences are driving this relationship however, then the externality benefit accrues primarily to the sending country.

In this study, I attempt to resolve the question of how migration affects trade by looking at two groups of migrants: those moving from the Middle East and North Africa (MENA) to the European Union and those moving to North America. Though these migrants come from the same place, they are quite different in several important ways. MENA migrants to North America are more economically assimilated, with better education and higher incomes than their more numerous European counterparts. Anecdotal evidence suggests that these migrants to North America are also more

[1] It is possible that preferences can be transmitted through migrant networks, thus affecting exports to the immigrant's native country. For example, knowledge about a product only available in an immigrant's adopted country may be transmitted back to the native country, creating a demand for that product in that native country. I ignore this channel in this study, but it is an interesting topic for further research.

culturally assimilated, with higher rates of citizenship, local language proficiency, and preferences more in line with natives.

The unique characteristics of these two immigrant groups allow us to explore in greater detail the channels through which migration affects trade. The network effects of migration should be increasing with economic assimilation, as educated immigrants are better able to lower trade costs through ethnic networks. As cultural assimilation rises however, the network effect may weaken since more culturally assimilated migrants have weaker ties with their native countries. The preference channel through which migration affects trade will be driven by cultural assimilation, with more assimilation leading to a drop in exports from the immigrants' native countries. The immigrant preference channel should not affect exports back to the immigrants' native countries.

I find that the immigration-trade link is stronger for European migration than for North American migration. This difference is largest for imports from the MENA, suggesting that the immigrant preference channel is dominant. Immigration does have a weaker, yet still significant effect on exports to the MENA region, suggesting that network effects do matter. Disaggregating the level of trade, I find that migration induces trade most strongly for differentiated goods, lending further support for the preference channel as the mechanism through which immigration affects trade.

## 2. A Profile of MENA Migration

Tables 1 and 2 present a clearer picture of migration from the Middle East and North Africa. Looking at Table 1, we see that MENA migration to North America and Europe has substantially increased between 1990 and 2000, rising from 3.9 million emigrants to nearly 5.5 million. By far, Europe gets more MENA migrants than North America, with over 80% of total MENA migrants to these regions going to Europe.

While MENA migrants to Europe are much more numerous, migrants to North America tend to be better educated. In 2000, 65.1% of MENA migrants to North America held tertiary degrees, compared with only 12.6% of migrants to Europe. This reflects the relatively lower migration costs to Europe, ensuring that only the migrants with the highest expected earnings would be willing to move to North America. For relatively low-skilled migrants, the marginal increase in wages that they get following migration may be enough to overcome the low migration costs to Europe, but not the high costs of moving to North America.

Table 2 presents evidence of the link between migration and trade. We see that MENA countries generally have disproportionately high trade linkages with the countries that receive most of their emigrants. For example, the top destination for Algerian emigrants is France. In 1990, 22.5% of Algeria's trade was with France, a remarkable number given that France only accounted for 6.9% of global trade flows. Though France's share of Algerian trade fell to 15.9% by 2000, this still represented a share well above France's presence in global trade. The same pattern holds true for most MENA countries and for all but one of the major senders.[2]

One of the goals of this study is to explore the channels through which migration affects trade. As stated in the introduction, this issue can be examined in the context of economic and cultural assimilation. From Table 1, we see that MENA migrants to North America are more economically assimilated, with higher education and therefore greater income. All else being equal, the immigrant network effect on trade should be higher for North American migration. However, we also have to consider cultural assimilation. Even though MENA migrants to North America are better educated, have they maintained close ties with their native countries? Do they still crave the goods and services of their native lands? If migrants to Europe are more culturally assimilated, then through both stronger network effects and immigrant preferences, we should see a larger migration-trade link

Anecdotal evidence suggests that MENA migrants to Europe tend to be less culturally assimilated. There is significantly less quantitative data to support this assertion, however. Two ways to measure cultural assimilation are by looking at an immigrant's proficiency with the local language and whether or not the immigrant has become a naturalized citizen of their new home. Table 3 presents some evidence in support of weaker cultural assimilation for MENA migrants to Europe. From the 2000 US Census, 64% of migrants from the Middle East reported that they spoke English "Very Well," with little or no difficulties. Van Tuebergen and Kalmijn (2008) find that the language proficiency of Moroccan and Turkish migrants to the Netherlands is less than half this level. Dustmann (1994) finds similarly low local language proficiency for Turkish migrants living in Germany. While greater language proficiency among migrants to the US may simply reflect a greater worldwide proficiency with English as compared to Dutch or German, the conclusion regarding assimilation is the same.

Do immigrants move to a country for only a few years then go back to their native land or are they establishing a permanent residence there? One way to measure this is with the fraction of migrants that have become naturalized citizens. The second column of Table 3 shows that 54% of MENA migrants to the US are naturalized citizens, a fraction matched by MENA migrants to France and in excess of the citizenship shares of Austria and Spain. While incomplete, these figures suggest that there is greater permanence in MENA migration to the US. If this is the case, there may very well be a stronger network effect for Europe, since MENA migrants to Europe are going back and forth between their adopted and native countries.

[2] The exception is Iran, for which the US is the top emigrant destination. Iran is clearly a special case as there was a wave of migration to the US in 1979 following the overthrow of the Shah and the subsequent trade embargo by the US has severely limited trade flows between these nations. As this trade embargo might skew the results when comparing the differential effects of North American and European migration, I estimate the empirical model without Iran. The results do not qualitatively change and interestingly, the conclusion that European migration has a larger trade effect is quantitatively larger when we omit Iran.

## 3. The Migration-Trade Link

One of the first empirical studies to document complementarities between migration and trade was Gould (1994), who inserts the lagged immigrant stock from a range of countries into a gravity equation estimating exports and imports separately for the United States. He finds that a 10% increase in immigration to the US raises exports to the immigrants' native country by 4.7% and imports from the native country by 8.3%. That imports are more sensitive to immigration reflects the fact that immigrants retain some preference for native country goods. Head and Ries (1998) follow up on Gould's work using Canadian data and estimate the relationship with a Tobit model to account for the large number of zeros in bilateral trade data. Though they also find a positive relationship between immigration and trade, their elasticity estimates are lower. Head and Ries argue that the Canada's trade is primarily in commodities or in US bound automotive goods which do not significantly benefit from the migration-induced reduction in transaction costs. Girma and Yu (2002) find additional evidence for the transaction costs explanation by examining immigration and trade between the UK and 48 trading partners. They find that the migration-trade link is significantly positive only for countries that are not former British colonies. They argue that the trade promoting effects of immigration (contract enforcement, more symmetric information, etc.) do not matter so much for former colonies, as these nations already share many similarities with the UK (such as in the legal system) and information about foreign markets is plentiful.

Several studies have looked at the composition of trade, finding that immigration most strongly promotes trade in differentiated goods. Rauch and Trindade (2002) show that the presence of an ethnic Chinese network in a country significantly increases differentiated goods trade with China. Further evidence of the relatively stronger effect on differentiated goods is given by Dunleavy and Hutchinson (1999) looking at immigration and trade in the late 19th century as well as Blanes (2005) and White (2008) who look at the effects of immigration on intra-industry trade for Spain and the US respectively. These studies present evidence that labor migration induces international trade, most notably for differentiated goods.

My paper adds to this literature in two ways. This study is the first I am aware of to look at how differing destinations of the same migrant group affects the migration trade link. Holding the source country constant and looking at where migrants actually go gives us greater insights into why migration affects trade. The second contribution of my paper is to use trade linkages to examine the degree of assimilation of MENA migrants to Europe and North America. It is generally assumed that MENA migrants to Europe are less assimilated, but there is little data to support this notion. I find quantitative evidence that MENA migrants to Europe maintain stronger trade linkages with their native countries than their American counterparts. This effect is strongest for imports into Europe, suggesting that it is the retained preferences of immigrants from the MENA that drive the migration-trade link.

## 4. Empirical Specification

The existing literature suggests two channels through which immigration may affect trade: network effects lower transactions costs and retained preferences create a market for imports from immigrants' native countries. The transactions cost explanation suggests that immigration should increase both exports and imports between the sending and receiving countries, while the retained preference explanation only holds for imports into the receiving country. To test these predictions, I gather data on immigration and trade from a number of sources. Bilateral migration data is from Docquier and Marfouk (2007) and covers the number of migrants born in a particular sending country now residing in a given receiving country. The database covers the foreign born population in 1990 and 2000 for 19 sending countries in the MENA region and 19 receiving countries in North America and Europe. Bilateral trade data is taken from the UN Commodity Trade Statistics. To distinguish goods as differentiated, homogeneous or reference priced, I use the Rauch (1999) classification across goods disaggregated at the 4-digit SITC Revision 2 level. I then re-aggregate across the three categories to get total bilateral trade in homogeneous, reference price, and differentiated goods across the sample for 1991 and 2001. These years are chosen for the trade statistics so that we are measuring the effects of the lagged immigrant stock on trade, an attempt to control for simultaneity in trade and migration.[3]

The immigration trade relationship has generally been estimated with gravity equations. These empirical models have had remarkable success in predicting trade flows and may be derived from a general equilibrium model with imperfect competition as in Bergstrand (1985). The baseline model to be estimated is:

$$\begin{aligned}\mathrm{Trade}_{i,j,t} &= \mathrm{Mig}_{i,j,t-1}^{a} Y_{i,t}^{b} Y_{j,t}^{c} \left(Y_{i,t} / \mathrm{Pop}_{i,t}\right)^{d} \left(Y_{j,t} / \mathrm{Pop}_{j,t}\right)^{e} \mathrm{Dist}_{i,j}^{f} \\ &* \exp\left\{g * \mathrm{Lang}_{i,j} + h * \mathrm{Colony}_{i,j} + u_{i,j,t}\right\}\end{aligned} \tag{1}$$

We log-linearize this to:

$$\begin{aligned}\ln \mathrm{Trade}_{i,j,t} &= a * \ln \mathrm{Mig}_{i,j,t-1} + b * \ln Y_{i,t} + c * \ln Y_{j,t} + d * \ln\left(Y_{i,t} / \mathrm{Pop}_{i,t}\right) \\ &+ e * \ln\left(Y_{j,t} / \mathrm{Pop}_{j,t}\right) + f * \ln \mathrm{Dist}_{i,j} + g * \mathrm{Lang}_{i,j} + h * \mathrm{Colony}_{i,j} + u_{i,j,t}\end{aligned} \tag{2}$$

In this specification, bilateral trade depends on total income in both countries, on per capita income in both countries, and a series of variables that represent trade costs: distance, whether or not the countries share a common language, and any history of colonial ties that may indicate a common legal system or established trading relationship. Migration is predicted to reduce trade costs (and therefore increase trade) as well as increase exports from the sending to the receiving country due to retained

[3] Admittedly, this is a relatively crude method given that we are using the immigrant stock which should be relatively stable from one year to the next.

immigrant preferences. To assess whether or not the migration effect on trade is stronger for Europe, define a dummy variable equal to 1 if the receiving country is in Europe and 0 otherwise then interact this with log migration:

$$\begin{aligned} \ln \text{Trade}_{i,j,t} &= a_1 * \ln \text{Mig}_{i,j,t-1} + a_2 * \ln \text{Mig}_{i,j,t-1} * \text{EU}_j + a_3 \text{EU}_j \\ &+ b * \ln Y_{i,t} + c * \ln Y_{j,t} + d * \ln\left(Y_{i,t} / \text{Pop}_{i,t}\right) + e * \ln\left(Y_{j,t} / \text{Pop}_{j,t}\right) \\ &+ f * \ln \text{Dist}_{i,j} + g * \text{Lang}_{i,j} + h * \text{Colony}_{i,j} + u_{i,j,t} \end{aligned} \tag{3}$$

The elasticity of migration to trade is thus $a_1$ for North America and $a_1$+$a_2$ for Europe. Estimates of this relationship for 1990 and 2000 immigration across exports and imports are given in Table 4. Equation 3 is estimated with both OLS and Tobit to account for the relatively high number of zeros in bilateral trade data. The migrant stock variable may suffer from endogeneity. Greater trade between two countries may lead to increased familiarity and warmer political relations between these nations. This lowers the cost of migration, suggesting that causality may indeed be running in the opposite direction. To address this issue, I instrument the migrant stock following Javorcik et al (2006) and McKenzie (2005). The migrant stock in 2000 is instrumented with the migrant stock in 1990, the cost of obtaining a passport in the sending country as a percentage of gross national income, bilateral telephone traffic between the sending and receiving countries, population density in the sending country, two dummy variables equal to 1 if the sending country has cultural restrictions on women traveling alone and legal restrictions that require residents to get government approval before traveling abroad, and all explanatory variables in 3. The predicted migrant stock from this first stage estimation is then inserted back into 3 and re-estimated. As I only have migration data for 1990 and 2000, the IV estimation can only be done for 2001 trade flows.

## 5. Discussion

The immigrant stock in 1990 only has a significant effect on trade between the MENA and Europe, while the migration-trade elasticity is not significantly different from zero for North American migration, using either exports or imports as the dependant variable. I estimate that a 10% increase in migration from a MENA country to a European nation increases exports to that MENA nation by 1% and imports into the European nation by 1.25%. Looking at results for 2000, I find that migration to North America only significantly affects exports to the MENA region and this effect drops out when controlling for potential endogeneity in migration. European migration has an excess effect only on imports from the MENA region. I estimate that a 10% increase in migration from a MENA country will raise exports to that MENA country by 0.62%-1.72% for North America, while the European export-migration elasticity is slightly larger but not significantly different. This pattern is reversed for imports, with a 10% increase in migration increasing imports to Europe by 1.84%-2.32% and having no effect on imports to North America.[4]

For both Europe and North America, the migration-trade linkage was significantly positive for both exports to and imports from the MENA region. This result suggests that network effects matter, as immigrant preferences could only explain the linkage for imports from the MENA region. The stronger link between migration and trade for Europe implies one of two possibilities. First, MENA migrants to Europe maintain closer ties with their native countries and exert stronger network effects. The fact that the European migration-trade link is stronger for both exports and imports in 1990 supports this idea. Second, MENA migrants to Europe have stronger preferences for their native country goods. The fact that the European migration-trade link is stronger only for imports in 2000 supports this view.

We gain further insights into this analysis by looking at how migration affects trade in different categories of goods. In particular, do the effects of migration on trade vary when looking at differentiated vs. homogeneous goods? The channels through which migration can affect trade will both be influenced by how differentiated the goods being traded are. Homogeneous goods widely traded on organized exchanges will not benefit much from information flows through migrant networks. Trade in differentiated goods on the other hand is more likely to encounter the kind of informal trade barriers that migrant networks reduce. Immigrant preferences should only matter for trade in differentiated goods, as homogeneous goods are, by definition, the same regardless of where they are produced or consumed.

I categorize goods trade by using the classification system found in Rauch (1999). Goods are classified into one of three categories: Homogeneous, Reference Priced, or Differentiated. Homogeneous goods are traded on organized exchanges and include such classifications as crude petroleum (SITC Rev. 2 Code 3330) and cotton yarn (SITC Rev. 2 Code 6513). Reference priced goods are not traded on organized exchanges, but do have price data referenced in trade publications. Examples include Insecticides (SITC Rev. 2 Code 5911) and Calf Leather (SITC Rev. 2 Code 6113). Differentiated Products do not have a price listed either on organized exchanges or in trade publications. Examples include Jams and Marmalade (SITC Rev. 2 Code 0582) and Color Televisions (SITC Rev. 2 Code 7611).

I gather bilateral trade data at SITC 4-digit level of disaggregation then re-aggregate bilateral exports and imports into these three categories. Equation 3 is then estimated for six different dependant variables: exports and imports of homogeneous, reference price, and differentiated goods. Table 6 gives OLS estimates of equation 3 across the six specifications defined above for 2000 immigration data (2001 trade data) using IV estimation.

The first column looks at differentiated goods exports from Europe or North America to MENA countries. The migration-trade link is significantly positive, with a 10% increase in migration to these regions raising exports to a MENA country by 5.24%. The

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[4] The European migration trade elasticity was computed by adding together the coefficient on log Migration and the interaction effect between migration and the Europe dummy variable.

European elasticity is slightly higher (5.8%), but is not significantly different from zero. There is a significant difference for European migration when looking at differentiated goods imports, however. I estimate that a 10% increase in European migration will increase differentiated goods imports into European countries by 1.93%, while migration to North America has no discernible effect. These results suggest that network effects matter for exports to the MENA, with migrants facilitating trade by lowering informal the trade barriers.

For differentiated goods imports into North America, network effects do not seem to matter, nor do immigrant preferences make much of an impact. That migration does affect imports into Europe suggests that either network effects are stronger there, or that MENA migrants to Europe retain stronger preferences for native country goods.

Similar patterns hold for reference price and homogeneous goods, though the migration-trade link weakens as products become less differentiated. For reference priced goods exports to the MENA, the immigration-trade elasticity is not significantly different from zero for either Europe or North America, suggesting inconsequential network effects for these goods. Interestingly, reference priced imports into North America are significantly influenced by migration. The European import elasticity is higher, though not significantly different from the North American elasticity. That migration only affects imports of reference priced goods, suggests that preferences are the driving channel here, and for these goods the preference channel is the same between the two groups of migrants.

I estimate no discernable difference between Europe and North America in the migration-trade elasticity for homogeneous goods exports to the MENA, with a 10% increase in migration raising homogenous goods exports by about 2.5%. However, homogeneous goods imports are only influenced by migration to Europe, with an estimated elasticity of 0.21 compared to a statistically insignificant elasticity for North America. That exports of homogeneous goods to the MENA are affected by migration suggests the importance of network effects for homogeneous goods trade. This is a surprising result, as one would expect homogeneous goods to benefit less from the trade barrier reducing effects of migrant networks. While indeed the migration-trade elasticity is larger for differentiated goods, it is still positive for homogeneous goods, suggesting that even for these goods there are trade barriers. These trade barriers do not seem to matter as much when goods are coming into North America, perhaps reflecting the greater market infrastructure in this region. Migration does affect imports into Europe, which may be due to stronger network effects or immigrant preferences. In the latter case, this suggests that homogeneous goods are viewed as differentiated goods by some migrants expressing a preference for native country products.

## 6. Conclusion

This study addresses two issues: why does migration affect trade and are MENA migrants to Europe less assimilated than their North American counterparts? Migration can lower informal trade barriers through the formation of networks across borders linking a migrant's adopted and native countries. In this case, migration should have a pro-trade effect on imports into the migrant's adopted home as well as exports back to their native country.

I do find evidence that exports to the MENA are positively affected by migration, suggesting that network effects matter. These effects may be particularly important when looking at trade with developing countries that people in Europe and North America have little information about. When looking at imports into Europe and North America, I find that migration generally only has an effect for the former. Network effects may be less important for imports, as information about European and North American markets is plentiful. However, immigrant preferences may matter a great deal for imports. If immigrants retain a preference for their native country's goods and services, they constitute a ready-made market for MENA countries to export to. This appears to be happening in Europe, but not in North America. It has been widely accepted that MENA migrants to Europe tend to be less assimilated than their North American counterparts and the results in this study seem to confirm this.

While this study does provide good insights into both the channels through which migration affects trade and the differential experiences of migrants to the MENA and North America, there are still several unanswered questions. One such question is to what extent are North American networks with the MENA weaker than European networks? If we could hold these network effects constant, then any remaining difference would have to be due to the immigrant preference channel. One possible solution is to gather data on the length of time a migrant has lived in a country, with the idea that immigrants who have been away from their native country for a long time have weaker ties. While there is information on immigrant tenure, it is not available for all countries in this study.

Despite this shortcoming, the results in this study are relevant to both academics and policymakers. From an academic perspective, these results confirm that both network effects and immigrant preferences are viable channels through which migration induces trade, though the preference channel appears to be much more important for less assimilated migrants to Europe. This paper yields one important policy implication. Immigration creates positive externalities for receiving countries that need to be considered. Receiving countries benefit from increased information about foreign markets (network effects) while sending countries are able to capture at least some of their emigrants' consumption through increased exports.

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## Table 1: MENA Migration to Europe and North America, 2000

| | Emigration | NA Share | EU Share | Tertiary NA | Tertiary EU |
|---|---|---|---|---|---|
| Algeria | 605,726 | 3.9% | 96.1% | 79.5% | 11.3% |
| Bahrain | 4,176 | 39.2% | 60.8% | 71.8% | 34.9% |
| Djibouti | 1,578 | 15.8% | 84.2% | 64.0% | 32.4% |
| Egypt | 221,246 | 57.9% | 42.1% | 78.3% | 33.3% |
| Iraq | 224,240 | 60.9% | 39.1% | 72.2% | 38.4% |
| Iran | 499,558 | 40.6% | 59.4% | 45.6% | 32.4% |
| Israel | 133,683 | 76.7% | 23.3% | 64.8% | 33.6% |
| Jordan | 56,122 | 75.6% | 24.4% | 61.2% | 37.0% |
| Kuwait | 21,553 | 74.6% | 25.4% | 80.8% | 33.0% |
| Lebanon | 246,293 | 61.3% | 38.7% | 56.9% | 35.9% |
| Libya | 19,595 | 42.3% | 57.7% | 81.0% | 36.9% |
| Morocco | 1,093,597 | 4.7% | 95.3% | 67.6% | 10.1% |
| Oman | 1,172 | 44.0% | 56.0% | 98.1% | 33.4% |
| Qatar | 1,473 | 61.3% | 38.7% | 95.6% | 32.7% |
| Saudi Arabia | 16,095 | 71.8% | 28.2% | 76.7% | 34.7% |
| Syria | 109.538 | 55.8% | 44.2% | 52.8% | 33.9% |
| Tunisia | 263,420 | 3.7% | 96.3% | 71.3% | 12.6% |
| Turkey | 1,940,074 | 4.0% | 96.0% | 56.4% | 6.5% |
| UAE | 2,753 | 58.6% | 41.4% | 98.1% | 32.7% |
| Yemen | 20,364 | 60.4% | 39.6% | 32.6% | 35.4% |
| *Totals* | *5,482,257* | *20.0%* | *80.0%* | *65.1%* | *12.6%* |

* Emigration is the total number of people born in the Sending country that are residing in Europe or North America in 2000. NA Share is the share of emigrants living in North America, while EU share is the share of emigrants living in Europe. Tertiary NA refers to the percentage of migrants living in NA from each sending country who hold a tertiary degree while Tertiary EU gives the share for migrants living in Europe. Migration data is from Docquier and Marfouk (2007).

## Table 2: Immigration and Trade

| | Top Receiver | Emigrants | Total Trade | Trade Share | World Share |
|---|---|---|---|---|---|
| Algeria | France | 511,971 | $28,658 | 17.3% | 4.7% |
| Bahrain | UK | 2,335 | 10,828 | 2.7% | 4.7% |
| Djibouti | France | 1,027 | 238 | 20.4% | 4.7% |
| Egypt | USA | 96,660 | 18,699 | 22.8% | 15.7% |
| Iran | USA | 250,785 | 42,692 | 0.4% | 15.7% |
| Israel | USA | 89,385 | 62,808 | 33.4% | 15.7% |
| Jordan | USA | 39,140 | 6496 | 6.0% | 15.7% |
| Kuwait | USA | 12,505 | 26,592 | 14.3% | 15.7% |
| Lebanon | Canada | 55,615 | 6945 | 0.4% | 4.0% |
| Libya | USA | 7,024 | 16,429 | 0.1% | 15.7% |
| Morocco | France | 425,096 | 18,962 | 26.7% | 4.7% |
| Oman | UK | 508 | 16,358 | 3.2% | 4.7% |
| Qatar | USA | 688 | 3967 | 19.6% | 15.7% |
| Saudi Arabia | USA | 10,028 | 107,677 | 19.8% | 15.7% |
| Syria | USA | 47,660 | 35,966 | 1.1% | 15.7% |
| Tunisia | France | 184,603 | 14,417 | 29.1% | 4.7% |
| Turkey | Germany | 1,272,000 | 82,277 | 16.2% | 8.1% |
| UAE | USA | 1,322 | 84,844 | 3.9% | 15.7% |
| Yemen | USA | 11,609 | 6403 | 7.1% | 15.7% |
| *Totals* | *Germany* | *5,482,257* | *591,256* | *6.7%* | *8.1%* |

* Top receiver is defined as the country with the largest foreign-born population from the sending country. Emigrants is the total number of emigrants from the sending country residing in the top receiver. Total Trade is the total value of exports and imports in millions of dollars for the sending country. Trade Share is the share of total trade with the Top Receiver, while World Share is the Top Receiver's share of global trade. Immigration data comes from Docquier and Marfouk (2007), while trade data is from the UN Commodity Trade Statistics.

## Table 3: Cultural Assimilation of MENA Migrants

| Destination | Language Proficiency | Citizenship |
|---|---|---|
| Austria[a] | - | 30% Naturalized Citizens |
| France[b] | - | 54% Naturalized Citizens |
| Germany[c] | 26.2% of Turkish men and 9.5% of Turkish women have “Good” or “Very Good” proficiency in German | - |
| Netherlands[d] | 27% of Moroccan and 21% of Turkish immigrants have little to no difficulty speaking Dutch | - |
| Spain[e] | - | 26.6% Naturalized Citizens |
| USA[f] | 64% speak English “Very Well” | 54.2% Naturalized Citizens |

[a] 2001 Austrian National Census
[b] 1990 French National Census
[c] Dustmann (1994)
[d] Van Tuebergen and Kalmijn (2008)
[e] 2001 Spanish National Census
[f] 2000 US National Census

## Table 4: Migration and Aggregate Trade Flows, 1990

| | Exports | | Imports | |
|---|---|---|---|---|
| | OLS | Tobit | OLS | Tobit |
| Migration | -0.091 | -0.097 | -0.081 | -0.071 |
| | [0.249] | [0.159] | [0.158] | [0.107] |
| Mig*EU | 0.191 | 0.171 | 0.206 | 0.191 |
| | [0.005] | [0.003] | [0.000] | [0.000] |
| EU | 0.043 | -0.031 | 1.158 | 1.263 |
| | [0.971] | [0.975] | [0.007] | [0.000] |
| $Y_i$ | 1.579 | 1.465 | 1.004 | 0.995 |
| | [0.000] | [0.000] | [0.000] | [0.000] |
| $Y_j$ | 1.176 | 1.121 | 0.708 | 0.683 |
| | [0.000] | [0.000] | [0.000] | [0.000] |
| $Y_i/Pop_i$ | 1.854 | 1.123 | 1.807 | 1.397 |
| | [0.000] | [0.007] | [0.000] | [0.000] |
| $Y_j/Pop_j$ | 0.598 | 0.535 | 0.489 | 0.443 |
| | [0.000] | [0.000] | [0.000] | [0.000] |
| Distance | -1.641 | -1.479 | -0.685 | -0.590 |
| | [0.000] | [0.000] | [0.001] | [0.002] |
| Language | 0.748 | 0.740 | 0.675 | 0.651 |
| | [0.111] | [0.066] | [0.052] | [0.014] |
| Colony | -0.054 | -0.026 | 0.127 | 0.110 |
| | [0.917] | [0.953] | [0.740] | [0.750] |
| Adj. $R^2$ | 0.653 | - | 0.625 | - |
| Censored Obs. | - | 30 | - | 6 |

* OLS and Tobit estimates of equation 3 in the text. Migration data for 1990 and 2000 are from Docquier and Marfouk (2007). Exports refer to exports from European or North American countries to MENA countries, while imports originate in MENA countries. Trade data is from UN Comtrade, Income data is from the IFS, while distance, language, and colonial linkage data is from the CEPII Geodesic Distance Database. P-values are given in brackets.

## Table 5: Migration and Aggregate Trade Flows, 2000

| | Exports | | | Imports | | |
|---|---|---|---|---|---|---|
| | OLS | Tobit | IV | OLS | Tobit | IV |
| Migration | 0.172 | 0.109 | 0.062 | 0.025 | 0.015 | 0.036 |
| | [0.020] | [0.085] | [0.500] | [0.592] | [0.723] | [0.565] |
| Mig*EU | 0.045 | 0.020 | 0.018 | 0.207 | 0.212 | 0.148 |
| | [0.464] | [0.697] | [0.727] | [0.000] | [0.000] | [0.001] |
| EU | -0.939 | -0.879 | -1.571 | 1.587 | 1.314 | 1.094 |
| | [0.394] | [0.368] | [0.060] | [0.000] | [0.000] | [0.029] |
| $Y_i$ | 1.582 | 1.530 | 1.385 | 0.943 | 0.946 | 0.938 |
| | [0.000] | [0.000] | [0.000] | [0.000] | [0.000] | [0.000] |
| $Y_j$ | 1.087 | 1.116 | 0.976 | 0.583 | 0.572 | 0.536 |
| | [0.000] | [0.000] | [0.000] | [0.000] | [0.000] | [0.000] |
| $Y_i/Pop_i$ | -0.721 | -0.447 | -0.395 | 0.724 | 0.733 | 0.840 |
| | [0.088] | [0.218] | [0.459] | [0.006] | [0.004] | [0.012] |
| $Y_j/Pop_j$ | 0.736 | 0.673 | 0.922 | 0.510 | 0.494 | 0.818 |
| | [0.000] | [0.000] | [0.000] | [0.000] | [0.000] | [0.000] |
| Distance | -1.793 | -1.822 | -1.690 | -0.475 | -0.437 | -0.727 |
| | [0.000] | [0.000] | [0.000] | [0.010] | [0.013] | [0.000] |
| Language | 0.927 | 1.140 | 1.315 | 0.300 | 0.483 | 0.542 |
| | [0.034] | [0.000] | [0.001] | [0.271] | [0.065] | [0.061] |
| Colony | -0.445 | -0.387 | -0.597 | 0.148 | 0.076 | -0.012 |
| | [0.390] | [0.374] | [0.219] | [0.648] | [0.804] | [0.955] |
| Adj. $R^2$ | 0.731 | - | 0.686 | 0.730 | - | 0.702 |
| Censored Obs. | - | 43 | - | - | 6 | - |

* OLS, Tobit, and IV estimates of equation 3 in the text. For the IV estimation, the migrant stock in 2000 is instrumented with the migrant stock in 1990, the cost of obtaining a passport in the sending country, telephone traffic between the sending and receiving countries, population density in the sending country, cultural and legal restrictions on female travel in the sending country as well as all explanatory variables in equation 3. Migration data for 1990 and 2000 are from Docquier and Marfouk (2007). Exports refer to exports from European or North American countries to MENA countries, while imports originate in MENA countries. Trade data is from UN Comtrade, Income data is from the IFS, while distance, language, and colonial linkage data is from the CEPII Geodesic Distance Database. P-values are given in brackets.

## Table 6: Migration and Aggregate Trade Flows, 2000

| | Differentiated | | Reference Price | | Homogenous | |
|---|---|---|---|---|---|---|
| | Exports | Imports | Exports | Imports | Exports | Imports |
| Migration | 0.524 | -0.096 | 0.091 | 0.166 | 0.272 | -0.010 |
| | [0.000] | [0.144] | [0.396] | [0.012] | [0.001] | [0.856] |
| Mig*EU | 0.056 | -0.096 | 0.091 | 0.166 | 0.272 | -0.010 |
| | [0.402] | [0.000] | [0.971] | [0.141] | [0.313] | [0.000] |
| EU | 0.365 | 0.967 | -2.664 | 2.850 | -0.247 | 1.522 |
| | [0.501] | [0.062] | [0.033] | [0.003] | [0.850] | [0.035] |
| Yi | 0.880 | 1.036 | 1.226 | 0.801 | 0.239 | 0.848 |
| | [0.000] | [0.000] | [0.000] | [0.000] | [0.018] | [0.000] |
| Yj | 0.352 | 0.550 | 0.670 | 0.558 | 0.287 | 0.125 |
| | [0.016] | [0.000] | [0.000] | [0.000] | [0.004] | [0.128] |
| Yi/Popi | -0.328 | 1.405 | -0.792 | 0.035 | 0.076 | 0.822 |
| | [0.666] | [0.000] | [0.226] | [0.941] | [0.835] | [0.007] |
| Yj/Popj | 1.582 | 0.848 | 1.124 | 0.978 | 0.730 | 0.847 |
| | [0.000] | [0.000] | [0.000] | [0.003] | [0.000] | [0.000] |
| Distance | -1.403 | -0.492 | -1.517 | -1.063 | -0.927 | -0.624 |
| | [0.009] | [0.011] | [0.000] | [0.000] | [0.000] | [0.017] |
| Language | -0.056 | 0.694 | 1.387 | 0.513 | -0.035 | 0.699 |
| | [0.918] | [0.013] | [0.013] | [0.184] | [0.906] | [0.004] |
| Colony | -0.401 | -0.296 | -0.202 | -0.069 | -0.182 | -0.400 |
| | [0.602] | [0.287] | [0.681] | [0.837] | [0.696] | [0.224] |
| Adj. R2 | 0.517 | 0.710 | 0.520 | 0.585 | 0.454 | 0.604 |

* See the notes for Table 5 for a description of the data. All estimates are from the IV specification described the empirical section of the text. Bilateral trade at the 4-digit SITC Revision 2 level is collected then aggregated into Differentiated, Reference Price, and Homogeneous goods trade according to the classification given by Rauch (1999). P-values are given in brackets.