

New features in the migration-trade nexus: Historical country ties, profile of migrants and social integration effects

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Abstract

The arrival of immigrants can help to improve the economy of host countries, for example, by creating new trade flows. In this paper, we introduce new features in the analysis of the migration-trade nexus that modulate traditional results in the literature. First, we test if historical migration corridors between countries influence the size of related trade effects. Second, we investigate the role of migrants' profile in this process, including their level of education, language proficiency, and professional background. Third, we analyse how social integration of immigrants shape results of the model, according to their length of stay at receiving countries, their age at arrival, and their acquisition of citizenship. The research employs gravity equations with panel data, using France as an illustrative case study. Results help to provide several policy recommendations.

Keywords: Migration-trade nexus, Historical corridors,
Individual profiles, Social integration, Panel data

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1 Introduction

The stock of foreign-born people in OECD countries was of 129 million in 2018, after two years of decline since 2016 when international flows surpassed for the first time the pre-crisis levels (OECD, 2019). Inflows of immigrants make important contributions to Western societies. They push technological progress, with foreign-born people representing 22% of entries into strongly growing occupations in the United States and 15% in Europe, including health-care occupations and STEM-related jobs (Science, Technology, Engineering and Mathematics). Simultaneously, migrants are filling jobs seen by domestic workers as unattractive or lacking career prospects, including a quarter of new entries to the most declining occupations in Europe (24%) and the United States (28%) (OECD, 2014a). Migrants rejuvenate Western population structures, as new arrivals tend to be more concentrated in the younger and economically active age groups. In this way, migrants contribute to reduce the demographic dependency ratios (Gagnon, 2014), and by providing skills help to increase the stock of human capital (OECD, 2014b).

Moreover, recent work on the fiscal impact of migration for advanced OECD countries also suggests that people arriving over the past fifteen years have had on average an impact close to zero, rarely exceeding 0.5% of GDP in either positive or negative terms (Liebig and Mo, 2013). Even in the case of less-educated immigrants, the difference between their contributions and the benefits they receive relative to their native-born peers averaged net positive positions (OECD, 2013). All these facts illustrate the positive contributions of immigrants to host economies, an issue highlighted by the academic literature (see, i.e., Artal-Tur, Peri and Requena-Silvente, 2014). Despite this, migration policy has become more restrictive in OECD countries since the beginning of the financial crisis, with several countries revising their legislation in response to the changing economic and geopolitical environment (OECD, 2015a, 2019).

An important contribution to host economies comes from the capacity of immigrants to enhance trade flows, due to business creation and ethnic networks (Bratti, De Benedictis and Santoni, 2014). Given the importance of the migration-trade nexus, the topic has been extensively reviewed by researchers. Main efforts have focused on empirically identifying the main

channels underlying this process (White and Tadesse, 2007), or how the size of trade effects could depend on the type of goods exchanged, i.e. differentiated or homogeneous ones (Brian, Combes and Lafourcade, 2014). Further results relying on sub-national data, at the state or province level, provided deeper knowledge on the formation of networks of immigrants in host countries, showing the importance of geographic proximity in the effectiveness of ethnic networks (Artal-Tur, Pallardó-López and Requena-Silvente, 2012; Dunlevy, 2006).

In this paper, we extend this setting by exploring three new features. First, we analyse how historical ties between host and home country of migrants could affect the size of the associated trade effects (Fargues, 2013). This is an important issue given that flows of people are becoming progressively restricted along traditional corridors for historical partners and neighbours, as in the case of the US or the European Union (Mayda, Peri and Steingress, 2016). Second, we account for the role of migrants' heterogeneity in this framework by investigating how the level of education, language proficiency, and professional background of immigrants affect their trade effects. Nowadays, the proportion of highly educated immigrants in OECD countries is rising sharply, with the number of tertiary-educated people increasing by 70% in the last decade (Damas de Matos, 2014). The skilled people flows either come from developing or developed countries, with 34.8 million people showing a UNESCO ISCED 5/6 education level living in OECD destinations in 2018 (OECD, 2019). In this sense, it is important to understand how personal skills could be affecting the capacity of migrants to create new trade flows. Third, we study how social integration features could be affecting the pro-trade effects of immigrants. Social integration is becoming the key policy issue in dealing with immigration problems in many OECD countries (OECD/EU, 2015; OECD, 2015b). In this context, we are interested in getting deeper knowledge on how this concept performs in the migration-trade framework. With this objective, we employ data on the length of stay of immigrants in host countries, their age at arrival, and the acquisition of citizenship, investigating how these features of immigrants affect their capacity to enhance trade flows between host and home countries.

After this introduction, section 2 reviews the literature on the migration-trade linkages. Section 3 introduces data for the French case

study and section 4 explains the empirical model and estimation procedure. Section 5 discusses the main findings of the analysis, while section 6 concludes and offers policy recommendations.

2 Literature review

After the pioneering work of Gould (1994), academic literature began to explore the relationship between trade and migration flows (Rauch, 1999; Head and Ries, 1998). Migrants arriving at new destinations maintain links with their origin countries, being able to reduce bilateral fixed trade costs (Rauch, 2001). The pro-trade impacts of migration flows arise via two main channels. The first one is the “preference” of immigrants for some type of familiar “home-made” products, foodstuff, tools and apparels. This results in host countries experiencing an increase in imports. The second path impacts both import and export flows being defined as the “network” channel. In this case, networks of immigrants promote new business opportunities by reducing transaction trade costs, i.e. improving information channels or balancing institutional failures in business relationships. Examples of this would be security and/or arbitrage issues. In the “network approach,” the basic idea is that information costs are a major component of the fixed costs firms have to pay to enter a new market. It is obvious that international networks of people should be a great help in reducing these costs. Arrivals from a foreign country open new business opportunities. People can identify new products still not present in their home markets, help foreign firms to learn about consumer preferences, and develop the necessary contacts to build a distribution network for foreign products. Migrants might even help with the financial constraints faced by companies abroad (Brian, Combes and Lafourcade, 2014; Egger, von Ehrlich and Nelson, 2012). Seeking to accommodate this type of effect, the literature has augmented the gravity equation framework by introducing the stock of migrants as an additional covariate affecting the volumes of bilateral trade (Bratti, De Benedictis and Santoni, 2014).

Particularly, people’s networks can increase trade through intensive and extensive margins. Networks can reduce the entry costs of firms when

establishing a presence in a new market (extensive margin). Networks also decrease the costs of commercialisation of products given the information flows provided and contribute to more sales in existing markets (intensive margin) (Coughlin and Wall, 2011). More recent literature on firm-level data has shown the existence of an important degree of heterogeneity in foreign markets which must be understood when starting to export (Eaton, Kortum and Kramarz, 2011). Some specific relationship between firms and migrants of the same origin country could be influencing the internationalisation of companies, thus increasing the likelihood of new export entries (Lawless 2009; Eaton, Kortum and Kramarz, 2011). Conditional upon entry, the presence of migrants in a foreign market also appears to explain how much a firm is selling there. Larger stocks of immigrants in a given destination would help firms to overcome such start-up and commercialisation costs thereby increasing the intensity of exports. Countries with closer historical ties, resulting in larger stocks of immigrants, would then be expected to show higher trade effects (Bastos and Silva, 2012).

The present paper explores the role of historical ties and proximity issues between countries in fostering the pro-trade effect of migrants. A good laboratory for testing the effect of relatedness in the migration-trade linkage is by selecting a case study. In our case, we focus on the case of France. France has a stock of 8 million immigrants living in the country, around 12% of the population, being the fifth destination among OECD countries in 2017 (OECD, 2019). This includes a significant number of immigrants coming from the Maghreb and EU countries, making 70% of the total stock of foreign people in the country, with both regions exhibiting closer historical ties with France (INSEE and OECD databases).

The analysis of the French case will allow us to address some important issues. First, we are interested in knowing how historical ties impact the size of the pro-trade effects encountered. We wonder specifically, as the theoretical literature suggests, if such bilateral relationship and migration corridors create additional trade-enhancing effects linked to market specificities (Bastos and Silva, 2012). Moreover, recent empirical research points to the existence of a minimum threshold of migrants such that, when the percentage of migrants in the host territory is relatively small, migrants would not be showing any significant impact on trade. The

literature also shows the role played by social features of immigrants in shaping the size of the referred threshold, as determining the degree of interaction between foreign-born people and natives. In this way, this threshold appears to be sensitive to the nationality of migrants, suggesting that cultural differences matter in the migration-trade nexus (Barra, Galluzzi, Tantari, Agliari and Requena-Silvente, 2016). In this context, historical corridors of people leading to higher stocks of particular origin immigrants at particular destinations would be resulting in additional trade effects. This is the first hypothesis in our investigation. The second hypothesis focuses on the potential influence of the profile of the immigrant and his/her degree of social integration in affecting the size of the pro-trade effect arising. In this framework, the effect of the profile of migrants would be tested according to levels of education, language proficiency, and professional situation (self-employed or wage-earner). The effect of social integration of immigrants on trade creation is then approached by the length of stay at destination, the age of arrival, and the acquisition of citizenship. Finally, we will combine these particular characteristics of migrants and the migration process with proximity and historical linkages between countries to get a deeper understanding of the migration-trade framework.

3 Data sources and key features

3.1 Data sources

In this section, we describe data on migration and trade flows for the empirical exercise. We have tried to build a quite homogeneous data set for the study, despite employing several information sources. However, we are aware of the limitations that usually characterize migration data, given the difficulties appearing while collecting statistics, or the lack of an established international methodology for building data (Fargues, 2014). For France, migration data has been extracted from four main sources: OECD migration databases on-line,² International Migration database,³

² Database on Immigrants in OECD countries (DIOC).

³ <http://www.oecd.org/migration/mig/oecdmigrationdatabases.htm>

and National Census data,⁴ together with UN migration database (UN database, 2013). Data account for annual stocks over the period 2000-2015.⁵ Data only include legal entrances, defining a migrant as a foreign-born person, namely, an individual born abroad with foreign citizenship at birth. Other data sources in the model include the following: Trade data comes from UN COMTRADE database in HS 2007 classification.⁶ GDPs are from WDI-World Bank database.⁷ Bilateral trade agreements dataset is taken from Prof. Jeffrey H. Bergstrand website⁸ and World Trade Organization.⁹ Euclidean distance, common official language, and past colony links are taken from CEPII database¹⁰ and data set from the website of Prof. Thierry Mayer.¹¹ The border dummy variable is built for every country according to its geographical location.

The educational level of immigrants uses data from INSEE, OECD (2014b, 2015a, 2019), OECD iLibrary, and OECD databases. Data on share of self-employment of migrants come from the European Union Labour Force Survey (EU-LFS), OECD databases, Eurostat, and DG Migration and Home Affairs of the European Union. Data for language proficiency of immigrants comes from OECD/EU (2015), European Union Labour Force Survey (EU-LFS), OECD iLibrary, DIOC database and Eurostat (2011). Social integration measures of immigrants employ data from INSEE, the European Union Labour Force Survey, OECD databases, Eurostat, OECD (2013) and PIAAC (2012).

3.2 Summary statistics

Tables 1 and 2 show the main trends of people and trade flows. The stock of migrants in France sharply increased from 1960 to 1980, from 3.5 to 6 million, stabilizing until the early 2000s. Then, it continued to grow gradually again to around 7.9 million people in 2015, this being around 12% of the French population. The average annual inbound flows account

⁴ INSEE database: <http://www.insee.fr/en/bases-de-donnees/default.asp?page=recensements.htm>

⁵ 2015 was the last year with the necessary available information at the date of writing this paper.

⁶ <http://comtrade.un.org/data/>

⁷ <http://databank.worldbank.org>

⁸ <http://kellogg.nd.edu/faculty/fellows/bergstrand.shtml>

⁹ <http://rtais.wto.org/UI/PublicMaintainRTAHome.aspx>

¹⁰ <http://www.cepii.fr/CEPII/fr/bddmodele/bdd.asp>

¹¹ <http://econ.sciences-po.fr/thierry-mayer/data>

for around 220,000 individuals along the period of analysis 2000-2015. Table 1 shows that in terms of the structure of the immigrants' stock, 51% of arrivals come from Africa, and 36% from Europe, mainly from the EU countries. In the first group, migrants are mostly from Algeria, Morocco, Tunisia, and Turkey, while in the second group they arrive from Portugal, Italy, Spain and to a lesser extent from Germany, the United Kingdom and Belgium. Family reunification still represents the major motivation of immigrants arriving in France, 53% of the cases in 2015, but decreasing in relevance since the 73% in 2004. Conversely, people's inflow for working purposes has increased from 5% to 22% over the same period, mainly originating from non-EU countries (Africa (50%), Asia (30%) and Europe (20%)). The 80% of the permanent workers include migrants in the country changing their status (i.e. from student to permanent worker). Free-movement (EU space) immigration also account for a significant number of arrivals in the country, roughly 20% of arrivals (35% in 2012) (Peridy, 2012).

In general, table 1 let us see that African and European people usually receive French citizenship to a certain extent (61% and 40%, respectively), they show longer stays of more than 10 years (72% and 62%, respectively), their educational attainment is secondary or lower (85% and 71%, respectively), and being self-employed exceptionally (14% and 10%, respectively). Half of both groups of origin show native-speaker competence, while arriving adults account for 60% of cases, with an age of 15 years old or higher. Inflows from EU8 countries as shown in Table 1 accounted for 25% of total stock of migrants in France in 2015, while for people arriving from MENA countries the share was of 39%.

Table 1. Characteristics of the foreign-born population arriving to France

a) Composition of stock of foreign-born population in France in 2015

	Africa	Europe	Total
% of foreign-born population	51%	36%	100%
With citizenship	61%	38%	52%
Less than 10 years of stay	28%	41%	25%
Tertiary education (ISCED 4 to 8)	15%	32%	24%
Self-employed	14%	10%	12%
Native-speaker	50%	58%	42%
Foreign-born arrived adult	63%	62%	72%

Source: Own elaboration from National Institute for Statistics and Economic Studies (INSEE, France) and OECD Migration database.

b) Foreign-born population by nationality in France

	Inflows of immigrants (people)			Stock of immigrants (people)	
	2000	2005	2015	2015	%
Algeria	15000	25400	22427	1373329	18%
Morocco	19100	20200	18423	953542	11%
Portugal	7010	3510	11615	648079	8%
Tunisia	6600	8200	10508	397753	5%
Italy	2255	2264	13247	323937	4%
Spain	4231	11127	12363	286224	4%
Turkey	6900	8900	4948	260515	3,3%
Germany	15276	12260	7119	226000	2,8%
UK	14668	10768	9760	166467	2,2%
Belgium	8108	10378	6429	152739	1,9%
Senegal	3400	2300	3700	132722	1,5%
Switzerland	6607	6869	4472	96303	1,1%
China	2300	2800	4991	109663	1,2%
Cameroun	2400	4100	3164	95762	1,0%
DR Congo	1700	1900	2015	76749	0,7%
USA	3542	4516	4350	54413	0,7%
Lebanon	1121	1097	643	44861	0,6%
Netherlands	2166	1823	2142	40066	0,5%
Total	204578	217284	242707	7847499	100%
% of flows of immigrants from Europe 8	29%	27%	28%	25%	
% of flows of immigrants from MENA 5	24%	29%	23%	39%	
Total Population France (thousands)	59062	61181	66423		

Notes: Europe 8 countries include the United Kingdom, Belgium, Switzerland, The Netherlands, Portugal, Spain, Italy, and Germany.
MENA 5 countries include Morocco, Algeria, Tunisia, Turkey, and Lebanon.

Source: Own elaboration from OECD, INSEE and UN databases.

Trade figures for France show that the five main destinations of exports are EU countries, i.e. Germany, Italy, Spain, and the UK, as well as the USA (table 2). Exported commodities are mostly manufactures, including aircraft, electrical and electronic equipment, mechanical appliances, motor vehicles, chemicals, plastics, pharmaceutical products, textiles, iron and steel, as well as optical devices. Exports to MENA 3 countries (Algeria, Morocco, and Tunisia), show a particular share of around 1% of total exports, although they have grown significantly along the period of analysis.

Table 2. Main trade partners and exchanged commodities of France 2000-2015

FRANCE		Trade Value (Million US\$ 2000=100)				Change	Main commodities by partner (HS 2007 code)
		2000	%	2015	%	2000-2015	
Exports to							
	World	295345	100%	493941	100%	67%	
	Germany	44461	15.1%	79145	16.0%	78%	88,84,85,87,62, 39,72
	Italy	26529	8.9%	35526	7.2%	34%	84,85,87,27,29,72,30,33
	Spain	28566	9.7%	36022	7.3%	26%	84,87,62,30,90
	UK	23075	9.8%	21624	4.4%	-26%	87,85,84,62,39,30
	USA	25936	8.8%	36216	7.3%	40%	85,84,87,62
	Algeria	2656	0.9%	6891	1.4%	139%	84,85,87
	Morocco	1739	0.9%	4171	0.8%	52%	84,85,87,62
	Tunisia	2397	0.8%	3982	0.8%	66%	84,85,72
	China	2970	1.0%	19909	4.0%	570%	84,62,61
	Subtotal sample	165129	56%	243286	49%		Organic chemicals (29)
	% of exports to EU 4		43.5%		34.8%	134%	Optical, medical instruments, parts and accessories thereof (90)
	% of exports to MENA 3		2.6%		3.0%	193%	

Note: MENA 3 countries include Algeria, Morocco and Tunisia. EU 4 countries include Germany, Italy, Spain, and the UK.

FRANCE		Trade Value (Million US\$ 2000=100)				Change	Main commodities by partner (HS 2007 code)
		2000	%	2015	%	2000-2015	
Imports from							
	World	303757	100%	563398	100%	85%	
	Germany	49231	16.2%	96149	17.1%	95%	84,85,87,88,62
	Italy	26429	8.7%	41696	7.4%	58%	84,85,87,39,73,62
	Spain	20635	6.8%	34961	6.2%	69%	84,85,87,62
	UK	24193	8.0%	36002	6.4%	49%	84,85,87,62
	USA	26735	8.8%	38775	6.9%	45%	84,85,87,62
	Algeria	2311	0.8%	4320	0.8%	87%	84,85,87,19,20
	Morocco	2318	0.8%	4526	0.8%	95%	84,62,20
	Tunisia	1739	0.6%	4418	0.8%	146%	84,62,20
	China	9640	3.2%	51871	9.2%	438%	84,85,62, 61, 42
	Subtotal sample	163265	54%	312718	56%		Articles of iron or steel (73)
	% of imports to EU 4		40.0%		36.0%	173%	Articles of leather, saddlery and harness, travel goods, handbags, articles of animal gut (42)
	% of imports to MENA 3		2.0%		2.0%	207%	Cereal, flour, starch, milk preparations and products (19)
							Vegetable, fruit, nuts, and food preparations (20)

Source: Own elaboration from UN COMTRADE database.

In regards to import flows, EU countries again occupy the top of the ranking as main providers, together with the USA. The MENA 3 countries show a similar share for imports and exports, although sales to France do not show the same growth trend as in the case of exports. The import structure by product category includes the same type of manufactures, in a typical intra-industry two-way trade with their main partners. Some food products and aliment preparations can be distinguished in trade flows with MENA countries in the case of imports.

4 Regression model

In this section, we define the empirical framework to study the trade creation effects of migrants. Before discussing the model specification, table 3 provides information on the variables employed in the estimation procedure. Proximity and historical ties between countries consolidate a regular flow of people. Larger stocks of immigrants in particular countries increase their economic effects, i. e. mobilizing new trade exchanges. Building on a gravity augmented model, we test for the role of proximity issues in the migration-trade linkage. We extend the analysis by introducing some attributes of migrants, related to their particular profile and social integration features, interacting them with proximity issues.

Table 3. Variables in the general model

Variable	Definition
$\ln \text{trade}_{ijt}$ (exports or imports)	The log of the bilateral trade flows (T) between country i (France) and country j at time t .
$\ln \text{IM}_{ijt}$	The log of the bilateral migration stocks. The number of immigrants (IM) of country of origin j living in France at year t . We add data in IV regressions for stocks of immigrants in Switzerland and stocks of MENA immigrants in Spain.
$\ln \text{IM} * \text{REGION}_{ijt}$	The interaction variable designed for capturing the particular trade creation effects of stocks of immigrants (in logs) (IM) coming from one particular REGION j (MENA, EU), showing historical relationships with France.
$\ln \text{GDP}_{ij} * \ln \text{GDP}_{jt}$	The product of the logs of the Gross Domestic Products of the two countries that trade (i and j).
trade agreement $_{ijt}$	=1 if partner countries i and j share a trade agreement in time t , =0 otherwise.
$\ln \text{distance}_{ij}$	the bilateral euclidean distance between countries i and j .
common language $_{ij}$	=1 if a common official language exists between countries i and j , =0 otherwise.
past colony $_{ij}$	=1 if past colonial relationship exists between countries i and j , =0 otherwise.
border $_{ij}$	=1 if sharing a common border exists between countries i and j , =0 otherwise.
β_{jt}, β_{it}	Country-time effects.

Equation (1) shows the general specification of the augmented gravity model of trade:

$$\begin{aligned} \ln(\text{Trade}_{ijt}) = & \beta_1 \ln IM_{ijt} + \beta'_1 \ln IM * \text{REGION}_{ijt} + \beta_2 \ln(\text{GDP}_{it} * \text{GDP}_{jt}) \\ & + \beta_3 \text{trade agreement}_{ijt} + \beta_4 \ln \text{distance}_{ij} + \beta_5 \text{common lang}_{ij} \\ & + \beta_6 \text{past colony}_{ij} + \beta_7 \text{border}_{ij} + \beta_{it} + \beta_{jt} + \varepsilon_{ijt} \end{aligned} \quad (1)$$

The parameters of interest in the investigation include (β_1), showing the trade effect of the whole stock of immigrants in France, and (β'_1) capturing the additional trade effect of each particular region of origin specified in the model. The sets of country-time effects in the model (β_{it}, β_{jt}) help to deal with common problems arising in panel data exercises (Baier and Bergstrand, 2007; Egger, von Ehrlich and Nelson, 2012).

Further, we test for additional effects related to the profile of migrants and social integration traits of people living in France, to obtain a deeper understanding of how these variables affect the trade creation process. In particular, we will test for the following specifications of the model:

$$\begin{aligned} \ln(\text{Trade}_{ijt}) = & \beta_1 \ln IM_{ijt} + \beta_2 \ln IM \text{tertedu}_{ijt} + \beta'_2 \ln IM \text{tertedu} * \text{REGION}_{*ijt} \\ & + \beta_3 \ln(\text{GDP}_{it} * \text{GDP}_{jt}) + \beta_4 \text{trade agreement}_{ijt} + \beta_5 \ln \text{distance}_{ij} \\ & + \beta_6 \text{common lang}_{ij} + \beta_7 \text{past colony}_{ij} + \beta_8 \text{border}_{ij} + \beta_{it} + \beta_{jt} + \varepsilon_{ijt} \end{aligned} \quad (2)$$

$$\begin{aligned} \ln(\text{Trade}_{ijt}) = & \beta_1 \ln IM_{ijt} + \beta_2 \ln IM \text{self employed}_{ijt} \\ & + \beta'_2 \ln IM \text{self employed} * \text{REGION}_{ijt} + \beta_3 \ln(\text{GDP}_{it} * \text{GDP}_{jt}) \\ & + \beta_4 \text{trade agreement}_{ijt} + \beta_5 \ln \text{distance}_{ij} + \beta_6 \text{common lang}_{ij} \\ & + \beta_7 \text{past colony}_{ij} + \beta_8 \text{border}_{ij} + \beta_{it} + \beta_{jt} + \varepsilon_{ijt} \end{aligned} \quad (3)$$

$$\begin{aligned} \ln(\text{Trade}_{ijt}) = & \beta_1 \ln IM_{ijt} + \beta_2 \ln IM \text{language proficiency}_{ijt} \\ & + \beta'_2 \ln IM \text{language proficiency} * \text{REGION}_{ijt} + \beta_3 \ln(\text{GDP}_{it} * \text{GDP}_{jt}) \\ & + \beta_4 \text{trade agreement}_{ijt} + \beta_5 \ln \text{distance}_{ij} + \beta_6 \text{common lang}_{ij} \\ & + \beta_7 \text{past colony}_{ij} + \beta_8 \text{border}_{ij} + \beta_{it} + \beta_{jt} + \varepsilon_{ijt} \end{aligned} \quad (4)$$

Equations (2), (3) and (4) test for the individual effects linked to the profile of migrants on the migration-trade nexus, according to their level of education (tertiary education), professional occupation (self-employed), and level of language proficiency shown by the migrants, respectively.

Additional specifications are defined in equations (5), (6) and (7) to investigate the role of stay duration, age of arrival at host countries, and acquisition of citizenship by immigrants, respectively. In particular, equations to be tested are as follows:

$$\begin{aligned} \ln(\text{Trade}_{ijt}) = & \beta_1 \ln IM_{ijt} + \beta_2 \ln IM \text{ longstay}_{ijt} + \beta'_2 \ln IM \text{ longstay} * \text{REGION}_{*ijt} \\ & + \beta_3 \ln(GDP_{it} * GDP_{jt}) + \beta_4 \text{trade agreement}_{ijt} + \beta_5 \ln \text{distance}_{ij} \\ & + \beta_6 \text{common lang}_{ij} + \beta_7 \text{past colony}_{ij} + \beta_8 \text{border}_{ij} + \beta_{it} + \beta_{jt} + \varepsilon_{ijt} \end{aligned} \quad (5)$$

$$\begin{aligned} \ln(\text{Trade}_{ijt}) = & \beta_1 \ln IM_{ijt} + \beta_2 \ln IM \text{ arrived children}_{ijt} \\ & + \beta'_2 \ln IM \text{ arrived children}_{ijt} * \text{REGION}_{ijt} + \beta_3 \ln(GDP_{it} * GDP_{jt}) \\ & + \beta_4 \text{trade agreement}_{ijt} + \beta_5 \ln \text{distance}_{ij} + \beta_6 \text{common lang}_{ij} \\ & + \beta_7 \text{past colony}_{ij} + \beta_8 \text{border}_{ij} + \beta_{it} + \beta_{jt} + \varepsilon_{ijt} \end{aligned} \quad (6)$$

$$\begin{aligned} \ln(\text{Trade}_{ijt}) = & \beta_1 \ln IM_{ijt} + \beta_2 \ln IM \text{ citizenship}_{ijt} + \beta'_1 \ln IM \text{ citizenship} * \text{REGION}_{ijt} \\ & + \beta_3 \ln(GDP_{it} * GDP_{jt}) + \beta_4 \text{trade agreement}_{ijt} + \beta_5 \ln \text{distance}_{ij} \\ & + \beta_6 \text{common lang}_{ij} + \beta_7 \text{past colony}_{ij} + \beta_8 \text{border}_{ij} + \beta_{it} + \beta_{jt} + \varepsilon_{ijt} \end{aligned} \quad (7)$$

Composition of REGION(s) is defined for each equation in the footnotes of particular tables of results. In general, these include MENA and EU countries. Regional groups defined in each table would highly depend on data availability. In any case, we are also interested in extending the knowledge on how proximity issues in the migration-trade framework could be influenced by personal characteristics of migrants and social integration issues in host countries. The model is estimated for the period 2000-2015 for bilateral annual trade flows between France and their 236 trading partners.

In designing the analysis regarding migrants' profiles and social integration measures, in equations (2) to (7), we employ variables that could provide interesting results in policy terms. In particular, the stay of immigrants is defined for a long period of stay in the host country (10 years or more), and the level of education employs the higher attainment level (tertiary¹²) in the education system. Foreign-born children include those below 15 years old, while those arriving adults include the rest of foreign-born immigrants (OECD, 2015a; OECD, 2019). Regarding data on citizenship acquisition by immigrants, we employ information from Eurostat (2011), OECD database and OECD (2019).

Once the methodological issues in the investigation have been defined, we estimate trade equations for exports and imports, testing for the role of proximity issues in the linkage between migration and trade. As we run equations for imports and exports separately, we can observe the predominant channel through which this linkage operates, network or preference. If we obtain a positive coefficient of immigration on imports, but not on exports, it will reveal that mostly the preference effect arises. If we obtain a positive coefficient for both trade flows but it is bigger for imports, network effects can be thought to be of the same size in export and import flows, with the preference effect accounting for the difference. If the coefficient appears to be bigger or even similar for exports than for imports, the network effect can be thought as the prevailing one.¹³ However, it is important to note that the focus of the paper is not about identifying the particular channels driving the migration-trade link, but on getting new evidence on the role played by proximity and historical ties between countries in this framework.

¹² Tertiary educational level is defined as those people attaining ISCED levels of 6, 7 and 8 according to UNESCO (2011) classification, showing data on individuals holding a Bachelor Degree or higher.

¹³ These results rely on the assumption of symmetry of the network effect in both imports and exports equations. This is a common assumption in this literature that allows identifying the two existing channels of the migration-trade link, based on the work of White and Tadesse (2007) and Rauch (2001). However, as discussed later, we can also hypothesise non-symmetric network effects in the model, or even preference effects embodied in exports of host country coming from home-based consumption of nationals living abroad (see i.e. Tai, 2009 for a discussion along this line).

5 Empirical results

5.1 Results of the general model

Results of the general model specification are presented in table 4. Column (1) for exports shows the OLS results of the gravity equation, and given that the model follows a log-log specification, estimated parameter values represent elasticities. The aggregate effect of the stock of immigrants is shown to be positive in creating new trade flows, with an increase of the whole stock of immigrants of 10% leading to a growth in exports of around 1.8%. Breaking-down the stock of immigrants by particular regions, we get a deeper understanding of the role played by historical relationships and proximity ties in promoting new trade exchanges. Results show how the main origin regions of immigrants in France, MENA5 and EU8 countries, present an additional pro-trade effect,

Table 4. Trade effects of immigrants in France by closer partner countries. Years 2000–2015

Dep var: In Tijt (Xijt or Mijt)	FRENCH EXPORTS				FRENCH IMPORTS			
	Pooled	PPML ^a	GMM-IV	GMM-IV	Pooled	PPML ^a	GMM-IV	GMM-IV
	OLS		Panel	Panel	OLS		Panel	Panel
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
In IM ijt	0.1892***	0.1690***	0.1406***	0.1385**	0.1662***	0.1468***	0.1082***	0.1038***
In IM*MENA5 ijt	0.0335**	0.0302***	0.0237***	0.0284***	0.0488***	0.0442***	0.0327***	0.0339***
In IM*EU8 ijt	0.0522***	0.0492***	0.0479***	0.0474***	0.0522***	0.0686***	0.0462***	0.0468***
In (GDPit*GDPjt)	1.0371***	0.9922**	1.0773***	1.0742**	1.0038***	1.0883***	1.0078***	1.0952***
trade agreement ijt	0.7503**	0.7120**	0.6045**	0.6173**	0.6692**	0.5663**	0.4549**	0.4486**
In distance ij	-0.9553***	-0.9641***	-0.9823***	-0.9842***	-0.9229***	-1.0260***	-1.0128***	-1.0193***
common language ij	1.0388***	0.9832***	1.0182***	0.9830***	1.1215***	0.9291***	0.9188***	0.9726***
past colony ij	0.5582**	0.4892**	0.4822**	0.4789**	0.5023**	0.4886**	0.4908**	0.4884**
border ij	0.6002***	0.5892***	0.5772**	0.5721**	0.6682***	0.5736***	0.5789***	0.5803***
N	3776	3776	3776	3766	3766	3766	3766	3766
R ²	0.82	0.86	0.88	0.89	0.83	0.84	0.88	0.89
Kleibergen-Paap rk LM stat			7.987	7.832			7.899	7.880
(p-value)			0.0004	0.0006			0.0004	0.0005
Wald F-test (Kleibergen-Paap rk)			22.62	25.43			24.35	24.44
Hansen J stat			2.233	2.422			2.166	2.604
(p-value)			0.4326	0.4538			0.4904	0.4742

Significant at 1% (***), 5% (**) and 10% (*) level.

Panel estimates with standard errors robust to heteroskedasticity and autocorrelation.

Panel and PPML equations include country-time effects.

a: Mix are computed for PPML results to make results comparable with those of the rest of columns in table 3. (Dependent variable in levels).

Hansen J test: H0: Overidentifying restrictions are valid.

Kleibergen-Paap rk-stat (H0: Matrix of reduced form coefficients is underidentified)

Wald F-test (Kleibergen-Paap rk) (H0: Equation is weakly identified)

MENA 5 includes Algeria, Morocco, Tunisia, Turkey and Lebanon.

EU8 includes Portugal, Italy, Spain, UK, Germany, Belgium, Switzerland and The Netherlands.

this being larger in the case of EU countries. Elasticities are shown to be important for these two regions, with a value of 3.3% for the former group and 5.2% for the latter. Gravity covariates, such as GDP and distance, behave in the expected direction with positive and negative signs respectively. Other control variables for bilateral ties in trade relationships, like trade agreements, common language, colonial links, or sharing borders, also appear to influence trade flows in all cases, reflecting the role of geography, history, and international agreements in promoting economic exchanges between countries.

Column (2) of Table 4 shows the PPML specification, with fixed effects seeking to capture the remaining unobserved ties between countries, including multilateral resistance terms (it, jt). The PPML estimator also faces a loss of efficiency, due to the presence of zeros in trade and migration vectors, and heteroskedasticity issues as shown by Santos-Silva and Tenreyro (2006). Regarding time-variant measures, we maintain all terms for comparability. Coefficients in column (2) show some improvements in robustness of estimates reflected in the R-sq value. The coefficient for the total pro-trade effect of immigrants in exports for France drops to 16.9% showing some bias in OLS estimates, and the proximity ties of MENA5 and EU8 regions reduce slightly their value to 3.0% and 4.9%, respectively. The additional effects on exports of ethnic networks remain slightly higher for EU than for MENA inflows of people, reflecting the relative position that both regions (MENA and EU) occupy as source countries of migrants to France and destination markets for French exports.

Columns (3) and (4) in table 4 address the issue of potential reverse causality and endogeneity problems between trade and migration variables in the model. Following the literature, we employ two main approaches when building the instruments in the model. First, in column (3), we follow the spirit of Peri and Requena-Silvente (2010). As defined by these authors, we take the stock of immigrants in 1990 in France and apply for every origin country the growth rate for people's inbound flows of the EU8 aggregate for the whole period of study 2000-2015. Data is taken from OECD (2019) and OECD database. This allows computing a stock of immigrants that are correlated with those of France but uncorrelated with the French trade flows (Brian, Combes and Lafourcade, 2014; Steingress, 2015). The second strategy in column (4) follows the

original spirit of Tai (2009), also referred to by Hatzigeorgiou and Lodefalk (2015), instrumenting the French immigrant stock by relying on Swiss immigrant stocks to give their closer profiles. Immigration in France and Switzerland is very important for EU-origin flows of people linked to free movements, including entrances from Germany, Italy, Spain and Portugal, despite France showing additional inflows from MENA countries as previously shown (see i.e. country notes in OECD, 2019). In this way, Swiss stocks appear to be a potential good instrument. Data for Swiss stocks of immigrants are taken from The Swiss Federal Statistics Office and the Swiss Federal Department of Foreign Affairs. Given that MENA5 immigrants are not represented in Swiss stocks of migrants, we also employ stocks of MENA people in Spain to instrument for stocks in France. Data from Spain is taken from INE (National Institute of Statistics), including Population Census data, Encuesta Nacional de Inmigrantes and Padrón Municipal. Both columns (3) and (4) are estimated by a GMM-IV panel specification, with standard errors robust to heteroskedasticity and autocorrelation (Baum, Schaffer and Stillman, 2007).

The results in column (3) and (4) show good behaviour of these two instruments, pointing to exogeneity of instruments and good behaviour of the panel data specification, showing higher goodness of fit than previous models in columns (1) and (2). Kleibergen-Paap rk LM statistic rejects the null hypothesis of under-identification; Wald F-test rejects the null of weak instruments, or small correlation between computed stocks of immigrants and current ones, according to Stock-Yogo weak ID test critical values; Hansen J testing for validity of instrumental restrictions is not rejected, showing orthogonality between instruments and the error term (Baum, Schaffer and Stillman, 2007). Results point to causation going from migration to trade in line with previous literature (Gould, 1994; Hatzigeorgiou, 2010; Sangita, 2013). The results confirm the presence of additional trade effects for closer groups of immigrants in France for exports, higher for the EU8 inflows (around 4.7%) than for those of MENA5 countries (around 2.5%). Columns (5) to (8) in table 4 presents results for the imports equation. Stocks of immigrants appear to promote new imports in France of smaller magnitude than in the case of the exports, with elasticities around 10% in the panel data case. Additional effects of immigrants from MENA5 and EU8 countries for imports show

coefficients of around 3% and 4%, respectively. IV Panel specifications show good behaviour of instruments too. In general, results in table 4 show the role of business and social networks in creating new trade exchanges in France, together with proximity issues highlighted by the present research.

Regarding the channel of creation of these new flows in France, results in table 4 show some role for both channels, preference and network effects, with a higher presence of network effects in exports (13% in exports versus 10% in imports). Industrial and differentiated products compound the bulk of French trade exchanges, as shown in Table 2, although as previously explained we cannot deny the existence of some preference home-based effects in exports and imports for some European citizens living in France and French people living in EU countries. In any case, pro-trade effects seem to be stronger for EU8 immigrants than for MENA5 ones, given the higher levels of proximity existing between French and EU people. Historical links and proximity ties between France, MENA5 and EU8 countries appear to be relevant in fostering trade flows, once controlled for potential endogeneity. General discussion of the results in table 4 brings several questions to the forefront. First, the trade effects of immigrants in France appear to be higher for exports than for imports, pointing to bigger network (trade costs and information) versus preference (home-tastes) effects. However, as Tai (2009) noted, effects in exports could also be including some preference effects from French expatriates living abroad that would be demanding home-based goods, making both sources of trade creation more balanced in data.

Second, regarding results for immigrants coming from MENA5 countries, coefficients for imports overcome those of exports, showing clear preference effects. Following the theoretical framework in Tai (2009), the preference for home-based products of MENA immigrants could also be shared by French residents that would be acquiring these tastes in a “cultural transmission” effect. This fact would result in a (transplanted) preference effect increasing French imports. Such a process will lead to an enrichment of the national culture, with immigration seen as a way of adding new customs, and imports consumption, to host societies (Bowles, 1998). Third, in line with the literature, the preference effect is usually linked to specific or differentiated goods coming from abroad (new products or new varieties), the kind of goods that nationals could more

easily identify as coming from foreign countries, and immigrants miss and demand when they reach host countries (Rauch and Trindade, 2002). In this way, preference effects would be also related to additional network effects, with immigrants sharing information about demands for home-based products.

In sum, recent contributions in the literature would be showing how the boundaries between preference and network effects become more diffuse, as well as their impact on imports and exports. In this regard, it is interesting to note how immigrants bring new goods to host countries that residents will further adopt, while new products in France would be sent to MENA and EU countries opening new markets for French exports. As a result, interaction, tolerance and permeability between cultures become key pieces of the pro-trade effects of migration. This brings back the focus of this paper, seeking to investigate if proximity issues could increase bilateral exchanges. Results of the model provide evidence of such transmission process, where receptive capacity in host countries becomes pivotal too. In this way, historical ties and understanding between countries would increase the probability of this mutual fertilization process. Further from this, trade creation in more complex goods or varieties would surely require a higher qualification of immigrants to develop their international activity. To investigate this issue, in the next section we will study how the profile of immigrants affects the trade creation process.

5.2 Individual profile of migrants and social integration effects

Emigrants differ in their personal characteristics, correspondingly behaving differently once established at destination countries. In order to continue extending our knowledge on the migration-trade nexus, in this section we account for new features of the migrant and settlement issues when established at host countries. First, we study how some characteristics of the immigrants, namely, their level of education (tertiary level of attainment), professional status (self-employed), and language proficiency, could influence the magnitude of the trade effect arising. And second, we also test for the role of social integration issues in this framework of analysis. In particular, we investigate how migrants enhance trade according to their length of stay at destinations (more than 10 years),

their age of arrival at the host country (adult or children, the latter defined as people arriving with less than 15 years old), and whether or not they can get the citizenship of the host country. In all cases, we interact with these features of the immigrant with proximity issues linked to their region of origin to continue studying this feature of the paper. We only focus on the IV panel estimates using instruments *à la* Tai (2009) in the output for both the following tables 5 and 6.

Table 5 shows the results for the set of variables related to the profile of immigrants in France. All equations are IV panel estimates, with sets of instruments *à la* Tai (2009) that is, including stocks of migrants in Switzerland for EU arrivals and in Spain for MENA inflows. Data availability, in this case, leads us to restrict the regional approach to EU5 and MENA3 immigrants.¹⁴ In general, results show that immigrants with tertiary education (Bachelor degree or higher) present the bigger trade effects as expected.¹⁵ Effects upon the exports side are shown to be higher than in the imports side (column (1) versus (4)). Trade effects of tertiary educated people are shown to be higher for EU5 immigrants than for those coming from MENA3 countries, either for exports or imports flows. This result would be perhaps showing the dissimilar opportunities faced by these two origin people when arriving in France, given traditional overqualification problems of immigrants when joining labour markets in the first years of arrival (OECD/EU 2015; OECD 2013). Coefficients for tertiary-educated immigrants are closer than expected however in the additional pro-trade effect of inflows from both regions in columns (1) and (4), showing than overqualification could be an issue for both origins of immigrants as pointed out by the literature (OECD, 2019), and referring to the situation that MENA immigrants with tertiary education usually got that from Western universities, so the educational endowment of highly educated people from MENA region appears to be quite close to those of EU immigrants, roughly showing quite similar pro-trade effects. In line with such a result, to continue enabling the diaspora of students from developing nations to Western countries emerges as a relevant policy for

¹⁴ See table 5 footnotes for the country composition of these two groups.

¹⁵ We have tested the effects of other “formative level” variables such as literacy level or job qualification following data and definitions in the OECD/EU (2015) Report. However, educational attainment seems to be the best performing variable capturing this personal dimension of the immigrant, so we decide to keep this covariate as our preferred one in table 5.

both, the host and home nations, seeking to maximize the sharing benefits of a world-class education. Brain-drain and brain-gain issues also emerge at this point, this, however, being a wider topic transcending the scope of the current research. In this way, we just confine our comment to the trade-migration framework, where some specific brain-gains appear to arise for well-educated immigrants coming from the MENA region.

Table 5. Trade effects of immigrants in France by level of education, self-employment and language proficiency. Years 2000-2015

Dep var: ln Tijt (Xijt or Mijt)	FRENCH EXPORTS			FRENCH IMPORTS		
	(1)	(2)	(3)	(4)	(5)	(6)
ln IM ijt	0.1136***	0.1152***	0.1094***	0.0942***	0.1023***	0.9437***
ln IM tert_edu ijt	0.0371***			0.0387***		
ln IM tert_edu*MENA3 ijt	0.0192**			0.0183**		
ln IM tert_edu*EU5 ijt	0.0261**			0.0244***		
ln IM self_emp ijt		0.0162*			0.0101*	
ln IM self_emp*MENA3 ijt		0.0115			0.0132	
ln IM self_emp*EU5 ijt		0.0193			0.0185	
ln IM lang_prof ijt			0.0247***			0.0195***
ln IM lang_prof*MENA3 ijt			0.0137***			0.0143**
ln IM lang_prof*EU5 ijt			0.0116**			0.0109**
ln (GDPit*GDPjt)	0.9732***	0.9836***	0.9161***	0.9561***	0.9628***	0.9227***
trade agreement ijt	0.7281**	0.6927**	0.7042**	0.6993**	0.6828**	0.7116**
ln distance ij	-0.9939***	-0.9878***	-0.9847***	-0.9993***	-0.9872***	-0.9883***
common language ij	1.0105***	1.0021***	1.0112***	1.0133***	1.0339***	1.0211***
past colony ij	0.5526**	0.5212**	0.4933**	0.5294**	0.5289**	0.5077**
border ij	0.5822***	0.5743**	0.5771**	0.5792**	0.5788**	0.5709**
N	3776	3776	3776	3776	3776	3776
R ²	0.88	0.84	0.84	0.89	0.83	0.82
Kleibergen-Paap rk LM stat	7.822	7.736	7.701	7.920	7.757	7.704
(p-value)	0.0002	0.0005	0.0005	0.0002	0.0004	0.0004
Wald F-test (Kleibergen-Paap rk)	23.09	22.91	22.87	23.15	22.83	22.91
Hansen J stat	2.449	2.454	2.429	2.457	2.443	2.459
(p-value)	0.5529	0.4982	0.4887	0.5013	0.4821	0.4834

Significant at 1% (***), 5% (**) and 10% (*) level.

All models are estimated by GMM-IV Panel procedure with standard errors robust to heteroskedasticity and autocorrelation.

All equations include country-time effects and Instruments à la Tai (2009).

Hansen J test: H0: Overidentifying restrictions are valid.

Kleibergen-Paap rk-stat (H0: Matrix of reduced form coefficients is underidentified)

Wald F-test (Kleibergen-Paap rk) (H0: Equation is weakly identified)

Note: Education level includes non-tertiary level of studies (nontert_edu) defined as ISCED 0 to 5 levels, and tertiary level (tert_edu) as ISCED 6 to 8 according to UNESCO (2011) classification. Self_emp means self-employed immigrants.

Language proficiency (lang_prof) includes foreign-born immigrants with native-language skills, as defined in OECD Skills Outlook 2013, with data from the OECD Programme for the International Assessment of Adult Competencies (PIAAC) and OECD (2009).

MENA 3 includes Algeria, Morocco and Tunisia.

EU 5 includes Portugal, Italy, Spain, UK and Germany.

Columns (2) and (5) of table 5 include results for the labour status of immigrants (being self-employed or not). For the aggregate effect of immigrants, self-employed people seem to show smaller trade effects with regards to tertiary educated, and non-significant for the EU5 and MENA3 immigrants. In this way, as pointed out by the OECD studies, the size of the companies run by immigrants tend to be smaller, a fact that could explain their low trade creation effects appearing in both exports and imports in table 5 (OECD/EU 2015). The small number of self-employed immigrants in France, in the range of 10%-14% as shown in table 1, would be also related to this type of result to some extent. The analysis of trade effects by immigrants according to their language proficiency is shown in columns (3) and (6) of table 5. Results show the additional pro-trade effects of people able to fluently speak the host country language in mobilizing exports and imports with their home countries, as they would be acting as real bilateral networks if the language differs between origin and destination countries of migrants. The effect of language proficiency appears to be important for both origins, namely EU5 and MENA3, being more important in the latter case. Speaking the language of the host country appears to be important not only in the economic dimension but also as an integration policy as pointed out by recent experiences in France and other OECD destinations (see e.g., reflections on this issue in OECD, 2019). In general, results in table 5 show a good behaviour of traditional geographical and gravity type covariates and employed instruments in the IV panel case. As shown, particular profiles of immigrants are important for trade creation effects and even could shape the magnitude of such type of effects. The trade creation process appears to be clearer in the case of the more educated people and those showing a proficient use of the language of the host country.

Policy implications of these findings point to the positive economic effects, on bilateral trade flows in this case, that selective migration policies could offer. One recent example would be that of policies promoting easier access to EU countries of highly educated immigrants. In April 2014, while on the campaign for the Presidency of the European Commission, Jean Claude Juncker launched a “Five-point Plan for Immigration” based on the general idea that skilled immigrants are more than ever necessary for promoting future growth in the EU countries. As shown by other studies, highly educated immigrants provide evident benefits for host economies,

further from trade effects, as increases in revenue per worker and total factor productivity of firms associated with faster growth of capital and stronger specialization of natives in communication tasks (see, i.e., Mitaritona, Orefice and Peri, 2014). In this way, the recent “Revision of the EU Blue Card Directive,” launched in June 2016 by the Commission, pursues to increase the flexibility of the hiring process of foreign workers, improving their living conditions at hosting societies and enabling higher short-term mobility inside the EU space for working purposes.¹⁶ Also in this line of recommendations, and as reflected in the Annual Report on *International Migration Outlook 2019* from OECD, after the 2016 reform of the rights of foreigners, in 2017 France continued to implement provisions relating mainly to economic migration of immigrants, like the rollout of multi-annual residence permits or new residence permits for international talent, with the publication of several decrees implementing the Law of 7 March 2016 on the rights of foreigners. This country also continued working on transposing EU Directive 2016/801 on the conditions of entry and residence of third-country nationals for the purpose of research, studies, training, voluntary service, and educational projects. In 2017, the French Tech Visa scheme was launched, designed to attract innovative companies, start-ups and foreign investors. The France-Visas portal was launched in October 2017 to facilitate online visa applications too (see OECD, 2019). Moreover, many experts would agree now with the fact that low educated workers are playing another important role as well in filling jobs that no Western nationals want to pursue, but the society needs, including home-service tasks, or low profile occupations in the health and service sectors. In this way, they would be facilitating the conciliation of work and family duties, for example being in charge of the nursing of children and ageing members.¹⁷

Other policy guidelines emerging from results in the paper include the necessity of improving language proficiency of immigrants, either children or adults, living in the country, looking also for an increase in the employability levels of young immigrants reaching EU countries at their transition process from schooling to the job market. This is a key element of the OECD policies that focus on improving the integration of

¹⁶ See document COM 2016/378 final, 2016/0176 (COD).

¹⁷ Regarding the role of immigrant’s women in domestic and care services in the EU countries, see i.e. European Commission (2007, pp. 22-23).

immigrants in host countries, rendering at the same time important economic effects for host countries as shown in the case of France.¹⁸ The necessity of planning legal immigration policies with third-party countries, in particular with North African ones, is another priority of the Juncker Commission, as stated in his five-point plan for immigration.¹⁹ All these policies result in economic benefits for the home and host countries, for example through enhanced trade exchanges, as shown by this research.

Continuing with the analysis, table 6 presents results on how social integration features of immigrants affect their pro-trade effects. Integration traits include the duration of stay, age of arrival in the country, and acquisition of citizenship. As shown in Table 1, nearly 30% of MENA immigrants in the country arrived less than ten years ago, this share is 38% for EU immigrants. Also, around 60% of immigrants from both source regions arrived as adults to France, being more than 15 years old, and 60% of MENA people and 40% of EU ones hold French citizenship. Results in Table 6 show that immigrants with longer stays show small additional pro-trade effects of around 1.3%, both in exports and imports, those being only significant for the general case and the immigrants coming from EU5 on the imports side of trade. Regarding the age of arrival of immigrants to France, foreign-born children, 14 years old or less, show lower trade effects too, lower in exports than in imports, and for imports in the MENA3 case only. Finally, in the case of citizenship acquisition, those people finally receiving that status appear to render some new pro-trade effects in the general case, but not for the EU5 and MENA3 specific cases.

¹⁸ Regarding this policy recommendation for France see i. e. OECD (2015b).

¹⁹ See <http://juncker.epp.eu/my-priorities>

Table 6. Trade effects of immigrants in France and measures of social integration. Years 2000-2015

Dep var: ln Tijt (Xijt or Mijt)	FRENCH EXPORTS			FRENCH IMPORTS		
	(1)	(2)	(3)	(4)	(5)	(6)
ln IM ijt	0.0982***	0.0947***	0.0928***	0.0632***	0.0605***	0.0554***
ln IM long-stay ijt	0.0129**			0.0140**		
ln IM long-stay*MENA3 ijt	0.0081			0.0072		
ln IM long-stay*EU5 ijt	0.0129			0.0112*		
ln IM foreign-born arrived children ijt		0.0010**			0.0076**	
ln IM foreign-born arrived children*MENA3 ijt		0.0053			0.0042**	
ln IM foreign-born arrived children*EU5 ijt		0.0129			0.0086	
ln IM citizenship ijt			0.0093***			0.0064**
ln IM citizenship*MENA3 ijt			0.0191			0.0144
ln IM citizenship*EU5 ijt			0.0007			0.0012
ln (GDPit*GDPIjt)	0.9492***	0.9326***	0.9288***	0.9449***	0.9228***	0.9337***
trade agreement ijt	0.7436**	0.7228**	0.7429**	0.6806**	0.6848**	0.7214**
ln distance ij	-0.9319***	-0.9822***	-0.9848***	-0.9282***	-0.9454***	-0.9447***
common language ij	0.9829***	0.9473***	0.9733***	0.9942***	0.9313***	0.9529***
past colony ij	0.5013**	0.5227**	0.5116**	0.5092**	0.5119**	0.5193**
border ij	0.5640***	0.5737**	0.5733**	0.5708**	0.5823**	0.5746**
N	3776	3776	3776	3776	3776	3776
R ²	0.87	0.79	0.86	0.88	0.82	0.80
Kleibergen-Paap rk LM stat	7.773	7.766	7.698	7.882	7.774	7.877
(p-value)	0.0005	0.0005	0.0004	0.0005	0.0004	0.0004
Wald F-test (Kleibergen-Paap rk)	22.48	22.74	22.83	22.77	22.89	22.84
Hansen J stat	2.402	2.447	2.382	2.416	2.420	2.383
(p-value)	0.5154	0.5010	0.5227	0.5002	0.5229	0.5013

Significant at 1% (***), 5% (**) and 10% (*) level.

All models are estimated by GMM-IV Panel procedure with standard errors robust to heteroskedasticity and autocorrelation.

All equations include country-time effects and Instruments à la Tai (2009).

Hansen J test: H0: Overidentifying restrictions are valid.

Kleibergen-Paap rk-stat (H0: Matrix of reduced form coefficients is underidentified)

Wald F-test (Kleibergen-Paap rk) (H0: Equation is weakly identified)

Note: Long-stay means more than 10 years at host country, short-stay means until 10 years of stay.

MENA 3 includes Algeria, Morocco, and Tunisia.

EU5 includes Portugal, Italy, Spain, UK, and Germany.

In sum, results show that the higher the duration of stay and integration in the host society, linkages with home countries and related trade-creation effects decrease as well as business opportunities between home and host countries of migrants. With time, it seems that immigrants become more focused on their host societies losing ties with their home countries. One policy prescription here suggests that new flows of immigrants would show higher potential economic benefits for host countries with more integrated people in terms of the migration-trade framework.

6 Conclusion

The events occurring in North Africa and the Near East since 2011, with the war in Syria and Arab Spring episodes, fueled inflows of people to the European continent recently. Together with the deepness of the economic crisis hitting Europe, it has resulted in the rise of protectionism and populism messages. Migration policy has become more restrictive in OECD countries, with a number of them revising and tightening their entrance legislation even for high-skilled immigrants. In this context, the present investigation has been directed to highlight some of the economic benefits of immigration for host and home countries in the migration-trade framework, adding some new features accounting for the role of the immigrants' profile and his/her integration in the country of arrival.

To illustrate these facts, the paper has focused on the case of France, a country becoming very sensitive to the immigration discourse. Results have shown that networks of immigrants present a clear capacity for giving rise to new trade exchanges with estimates of effects at 10%-13% of total trade exchanges for the general case. Moreover, historical ties lead to higher stocks of migrants at particular destinations. The presence of immigrants from particular origins, such as Maghreb and EU people in France, increases the probability of social interactions between immigrants and natives, and among immigrants themselves. This leads to additional pro-trade effects, once controlled for other covariates in the model and endogeneity issues. This proximity effect is greater for the EU immigrants, but also important for MENA people. It has been estimated on an additional 7% of total French imports and exports. IV regressions added robustness to empirical results, with causality going from migration to trade flows as in previous literature.

To introduce new features in this setting, the research accounted for some heterogeneity in data, testing for the effects of people's profiles and social integration issues at destination. In general, econometric results have shown that the level of education becomes a key variable, with tertiary-educated migrants showing the highest pro-trade effect, with an additional 5% both in exports and imports. Self-employment definitively does not seem to prompt appreciable new trade exchanges, perhaps

because the number of self-employed is very low at destination countries, or because immigrant entrepreneurs face significant problems to internationalize, given limited access to funding or technical advice. Language proficiency, however, appears as a clear competence necessary to engage in international business when arriving in a new country, with an additional effect of around 2.5%. Regarding social integration issues, longer stays seem to reduce the capacity of people's networks to foster new commercial exchanges. In this context, assimilation and social integration issues appear to reduce the connection of immigrants with their home countries, as shown by the lower trade effects of foreign-born arrivals while children or those obtaining citizenship after long periods in destination countries.

In policy terms, the results raise several important options. Generally speaking, immigrants report evident benefits to both destination and origin countries by creating new economic exchanges in the international markets, this obviously representing an important issue in times of economic crisis and political turbulence. Historical linkages between countries have shown to have an impact from an economic point of view, for example in the case of French linkages with the MENA region and EU neighbours. The number of positive externalities that could be reached with joint partnerships transcends the objective of this paper. However, in times of globalization, protectionist or autarkic positions would make no sense, hardly reducing economic activity as we have seen in the US-China or US-EU current trade disputes on tariffs.

Moreover, migration policy is at the forefront of the debate in Europe nowadays, with current political decisions defining the future of European societies. Education is always a desirable investment on the immigrant population, with evident effects in their economic outcomes, as well as in their personal horizon. It appears to be one of the most influential policies for the integration of immigrants in Western societies, as shown by recent OECD and EU Reports. Selective migration policies in the EU countries are becoming a norm at the present time. Correctly defined, they can result in higher positive economic outcomes for host societies. Improving access to highly skilled immigrants is not only a need but a must for the future of European and US economic growth, as stated by all experts in the field. The "EU Blue Card" policy has been trying to address such an issue recently. The launching of bilateral agreements with strategic partners able

to guarantee ordered legal access of people for working purposes, as from North African countries, for example, are pivotal for the EU area as well. In sum, the present research has looked for a contribution to this debate, highlighting the need of accounting for the heterogeneity of migrants and their quite differing effects in host economies when designing a national or European migration policy.

Compliance with Ethical Standards

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Conflict of Interest

The authors declare that they have no conflict of interest.

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