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ORIGINAL ARTICLE

Trade and Migration: Some New Evidence from the European Mass Migration to Argentina (1870–1913)

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Abstract

During the first wave of globalization, Argentina was among the most internationally integrated economies, experiencing a rising trend in trade openness and a tremendous increase in labor due to migration. In this paper, we empirically show the central role immigration had in boosting exports and imports in the years 1870–1913 by considering Argentine bilateral trade and migration from eight European countries (Austro-Hungarian Empire, Belgium, France, Germany, Italy, Spain, Switzerland, and United Kingdom). We use a migration-augmented gravity model to estimate the contribution of the massive inflows of Europeans, and we find that the main pro-trade effect was on imports: a percent 10% increase in migrants from a particular country would increase imports by up to 8% from that same country. We do not find the same effect on exports. The disproportionate decrease in transportation rather than communication costs may explain why the latter are relatively more decisive for exports than for imports. To overcome the problem of reverse causality and endogeneity, we use migration flows to the US from the eight European countries as an instrumental variable. In so doing, we aim at capturing the same push (but not Argentine pull) factors inducing European out-migration.

JEL Classification Codes: F16; F22; N76

Keywords: Migration and imports; first globalization; gravity model; China shock instrumental variable

1. Introduction

The end of the civil war and the unification in 1862 marked the beginning of the Golden Age for Argentina that lasted until the First World War. The country increased its relevance in the world economy, moving from 0.99% in 1870 to 2.42% of the world GDP in 1913 and outpaced other similar countries, such as Brazil. The country took great advantage of the reduction in transportation costs and the rise in world demand for agricultural products following the increase in European per-capita income[1].

During the same period Argentina experienced tremendous inflows of migrants and expansion of the agricultural land. Between 1870 and 1913 more than five million of migrants entered the

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[1]See e.g. Bértola and Ocampo (2012), p. 27.

seaport of Buenos Aires, arriving mainly from Southern Europe, Italy and Spain in particular. The share of immigrants over the native population increased from 13% in 1870 to 45% in 1913. At the time of the yellow fever (1870), the population of Buenos Aires was 207,100 and in 1913 it reached 1.5 million[2], with almost half being foreign-born. A series of military campaigns backed the colonization of the Western and Southern territories, and the extension of arable land had increased by a factor of 54 by 1913.

This paper takes advantage of the extraordinary period that characterized Argentina both as an emerging actor in the international economy and as the destination of massive inflows of migrants in order to show how the two were linked, and more specifically how immigration from Europe was a relevant pro-trade factor. Argentina is an interesting case since immigrants' origin countries rapidly became also its major trading partners.

Our paper adds to the literature on the pro-trade effect of migration in two ways. First, we consider detailed and unexplored historical data[3]. We use Argentine bilateral trade and immigration flows with eight European countries (Austro-Hungarian Empire, Belgium, France, Germany, Italy, Spain, Switzerland, and United Kingdom). Availability of historical data is limited, but allows us to cover 75–90% of all international Argentine transactions and over 61% of the immigrants for the whole period. Second, our analysis covers the period of the First Globalization (1870–1914), whereas many of the recent contributions use data from the most recent globalization. Both periods are characterized by lowering of trade costs, but at the end of the nineteenth century the costs of transportation fell relatively more than the communication costs and this may give insights on the current debate about the sources of the pro-trade effect of migration.

As is common in this literature, we augment the standard gravity model with migration. The rapidly expanding economy heightens the contemporaneous-causality problem between trade and migration. The fast increase in GDP per-capita was the main pull factor for migration, but also responsible for the rising demand for imports. At the same time, Argentine growth had a relevant export-led component that could have contributed to an increase in the demand for labor, and prompt immigration.

The endogeneity problem is treated with a two-stage approach where our instrumental variable relies on the characteristics of out-migration from the origin countries of our sample. More precisely, migrants from Europe were motivated by push factors, like demographic trends or public incentives, that would also explain the choice of destinations other than Argentina. We take advantage of the common push factors and we compare migration to Argentina with migration flows to the US from the same origin (European) countries. Our instrument variable resembles what Autor et al. (2013) proposed when using trade flows from China to countries other than the US to obtain a measure of the China trade shock for the US economy.

As a preview of the results, both OLS and instrumental-variable estimation confirm the positive effect of migration on trade. An increase of 10% in migration inflows raised total trade flows (exports plus imports) by 4–6%. The addition is particularly (and statistically) significant in the case of imports and reached 8%.

The paper is organized as follows. In the next section, we report a short review of the literature on the pro-trade effect of migration and in Section 3 we provide the historical background of Argentina in 1870–1913. The empirical analysis, including the presentation of the model, the identification strategy and the econometric results, is presented in Section 4, whereas a detailed illustration of our data sources is included in Appendix A. Section 5 concludes.

[2]The city was called *la Gran Aldea*, i.e. the big village, in the 1850 (see Lopez and Arrieta, 1967), but at the turn of the century it changed its nickname into the *Paris of South America* for its opulent architecture, sparkling economic activity, and cultural scene. Vicente Blasco Ibáñez, Anatole France, and Guglielmo Marconi participated at the celebrations for the first centenary of the independence and of the May's Revolution in 1910.

[3]See Appendix A for a detailed description of the data that were collected from archives.

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2. A Review on the Pro-Trade Effect of Migration

Positive correlation between migration and international trade has been widely documented for different countries, periods, and goods since 1994 (see Gould, 1994). The literature has identified two possible channels via which migrants could stimulate trade flows: the network channel or the business and social network effect (Rauch and Trindade, 2002), and the preference channel or the transplanted home bias effect (Gould, 1994; White, 2007).

The first channel is based on the idea that immigrants can reduce the fixed cost of trading because of the language, the specific knowledge of homeland institutions and norms. Moreover, immigrant networks may provide contract enforcement through sanctions and exclusions, which substitutes for weak institutional rules and reduces trade costs. Chaney (2016) presents a very exhaustive literature review on ethnic networks and the patterns of international trade[4].

The presence of migrant networks mitigates information frictions, in particular imperfect information, and facilitates trade. More specifically, Chaney (2016) considers the difficulty in acquiring information about foreign products, the differences in taste between domestic and foreign consumers, troubles in communication among traders in the case of trade in highly differentiated and customized intermediates, considering them all as informal barriers. Ethnic networks are a proxy for the presence of social ties and they may affect the patterns of international trade through informal barriers and also contract enforcement and dispute resolution. Contract enforcement and dispute resolution relates to differences in legal systems between countries, ambiguity in the extent of the jurisdiction of the national court system, the inability of buyers and sellers to fully commit to pre-established contracts ex-ante, and the inability of the justice system to perfectly enforce existing contracts ex-post.

Concerning the preference channel, or the transplanted home-bias effect, as in Gould (1994) and White (2007), the idea is that immigrants are characterized by different habits in consumption when compared with natives. They may modify their original home-biased habits after settling in the host country, but it happens slowly over time. Supportive of preference stability, Atkin (2013) investigated habit formation in tastes and concluded that preferences developed in childhood persist into adulthood. It means that preferences tend to move with migrants and thus consumers from the same ethnic group tend to share the same tastes. In an innovative work based on data of transnational migration and international trade from 40 countries, Zhang (2020) introduces consumers' heterogeneity according to the presence of migrants by ethnic groups and is able to explain the trade-bias departure using the traditional gravity model based on the representative consumer.

The existing literature suggests that the relevance of these channels would be different for different types of products and for different types of immigrants/source countries. In general, the empirical literature has shown that both mechanisms usually work together (Head and Ries, 1998; Girma and Yu, 2002) and the network channel is found to be very relevant by some authors (Rauch, 1999; Herander and Saavedra, 2005). However, when focusing on trade flows, imports can benefit not only from the network effect, but also from the preference effect, and the elasticity of import flows to migration is higher than the same elasticity of export flows, as found in Bratti et al. (2014). The preference effect tends to increase with the number of migrants, as it measures the market size of the host country for imports from the home country, but it may decrease over the time if the preferences of the migrants are influenced by those of the natives.

Disentangling the single contribution of each channel is difficult, especially with aggregate data. The magnitude of the preference channel is usually inferred by the difference between the estimated elasticities of imports and exports to migration. Our work contributes to this literature by taking advantage of the extraordinary historical experience of migration to Argentina in the First Globalization when transportation costs fell much more than communication costs

[4]For other comprehensive reviews of the pro-trade effect of immigration, see also De Benedictis and Taglioni (2011), Gaston and Nelson (2013), and Felbermayr et al. (2015).

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(especially in comparison with the most recent globalization)[5]. These latter costs are essential to acquire information on the destination market and in reducing demand uncertainty, i.e. one of the most relevant factors for exporting decisions (see e.g. Albornoz et al., 2012). Then, immigrants in Argentina worked as a sort of insurance for importers of ethnic goods since the preference channel reduced uncertainty in the demand for origin-country goods. Instead, the (still) relatively high costs of communication between Argentine migrants and their contacts in the origin countries might have weakened the network effect on the Argentine exports.

Jacks and Tang (2018) have already shown how the correlation between migration and trade has been holding since 1870 with the exception of the interwar period, but the Argentine case can offer an interesting case study. For instance, migrants built business networks in Buenos Aires (Abad and Sánchez-Alonso, 2018), but at the same time the country experienced a transition in consumption patterns with the introduction in the market of new products. Indeed, Ramon-Muñoz (2009) highlights how migration from the origin countries is related to the relevant increase in Argentine imports of olive oil from Southern Europe, wine from Spain, and cloth from Italy[6]. Moreover, Fernández (2004) has underlined the correlation between overall Argentine imports and immigration flows from both Spain and Italy before World War I. Regarding evidence from the origin countries, Zamagni (1997) has argued that the growth of Italian exports to Argentina and the United States prior to 1913 could be partly explained 'by the massive presence of Italian immigrants in these countries' (p. 125).

3. Historical Background

Argentina's provinces gained independence from Spain in 1816, but a series of civil conflicts occurred during the first half of the nineteenth century and the country finally united in 1862 with a constitution that contained modern values and strongly affirmed the rule of law.

Besides well-designed institutions, Argentina boomed economically thanks to both the rapidly increased endowment of economic resources – both land and labor – and the openness to trade. As stated in the introduction, Argentina outpaced many similar countries, such as Brazil and Mexico, in their share of world trade (see Figure 1).

Land resources were acquired with the expansion of the frontier by means of military campaigns, differing from the US case of civilian settlers. During the *Conquista del Desierto* 135.000 square miles were taken from the indigenous dwellers and assigned to the Argentine settlements[7].

The demographic dynamics was the other important factor that determined the rapid and deep transformation in Argentina in the second half of the nineteenth century, with migration playing a key role[8]. Argentine territory was highly underpopulated at the beginning of the nineteenth century with 600,000 inhabitants overall in 1810 and characterized by rural settlements. Still in 1870, 71.2% of the population lives in rural area. One century later in 1910, the population had increased tenfold and the urban population (51.1%) had overcome the rural population. Illiteracy was reduced from 78.24% of the population in 1869 to 37.87% in 1914 and reached percentages similar to the major developed economies.

Argentina showed an exceptional ability to attract immigrants, as shown in Table 1. In terms of stocks, between the mid-nineteenth century and 1930 approximately four million Europeans

[5]Rodrigue (2020) shows that the introduction of containers in the late 1950s reduced maritime costs by one third between 1920s and the 1960s. With the introduction of fibre optic cables, a three-minute phone call between New York and London was 5 cents in 2015, while it costs $293 in 1931 (at 1993 prices)

[6]Since the colonial period, Argentina imported wine from Catalonia and Valencia and up to 1880 wine was the main commodity imported from Spain. In 1887, Spanish immigrants established the Spanish Chambers of Commerce of the Argentine Republic in order to promote Spanish trade penetration in the former colony.

[7]See Droller (2018).

[8]As the British consul in Buenos Aires noted, circa 1890, 'Never has such a proportionally large immigration entered in a country in a short period before' (see Cortés Conde, 1968, p. 59).

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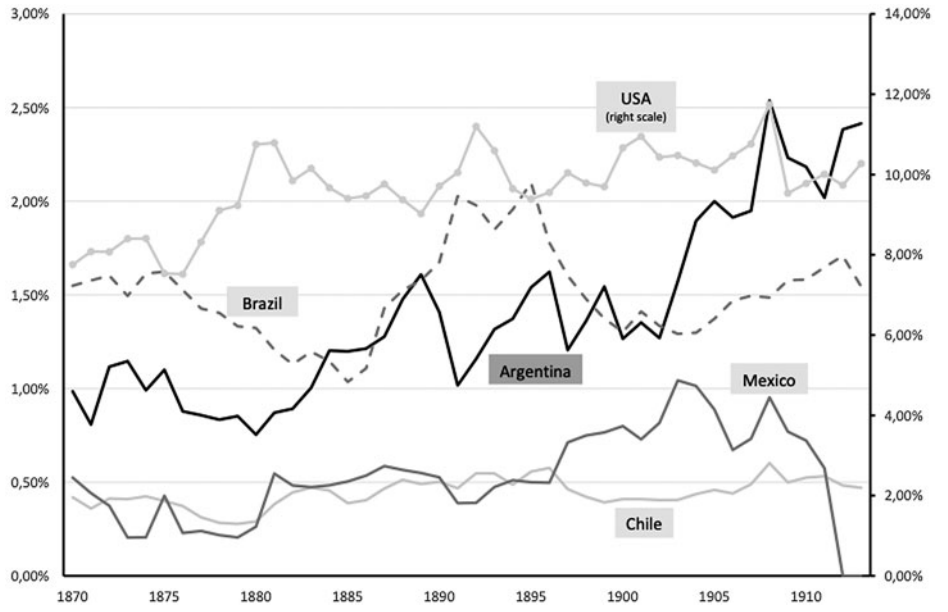

Figure 1. Share of world trade for Argentina, Brazil, Chile, and Mexico (left axis); USA for comparison (right axis), 1870 1913
Source: Fouquin and Hugot (2016).

Table 1. Immigration to the New World by decade and by destination (10-year average and per thousand population units)

	1860–71	1871–80	1881–90	1891–1900	1901–10
Argentina	99.1	117	221.7	163.9	291.8
Brazil		20.4	41.1	72.3	33.4
Cuba					118.4
Uruguay			118.3	88	123.3
Australia	122.2	100.4	146.9	7.3	9.9
Canada	83.2	54.8	78.4	48.8	167.6
USA	64.9	54.6	85.8	53	102

Source: Sánchez-Alonso (2019).

settled in Argentina, some two million in Brazil, and slightly fewer than 600,000 in Cuba and Uruguay (Sánchez-Albornoz, 1974, p. 129).

There are three main reasons why among the South-American countries Argentina was so successful in attracting migrants.

First, the complementarity between land and labor induced a big increase in labor demand, created mainly by the need to populate the new lands following the expansion of the land frontier, and marginally also by the abolition of slavery (1853). As a result, the real wage increased and became one of the main drivers of immigration. In Figure 2, we show the migration inflows from Italy and Spain to Argentina and the increases in Argentine real wages when compared with Italian and Spanish wages, indicating a positive correlation, especially for the period 1870–1890 (between 0.33% and 0.36%). The inflows dropped during the years around the Baring crisis in 1890 – one of the first international sovereign-debt crisis that intensively hit

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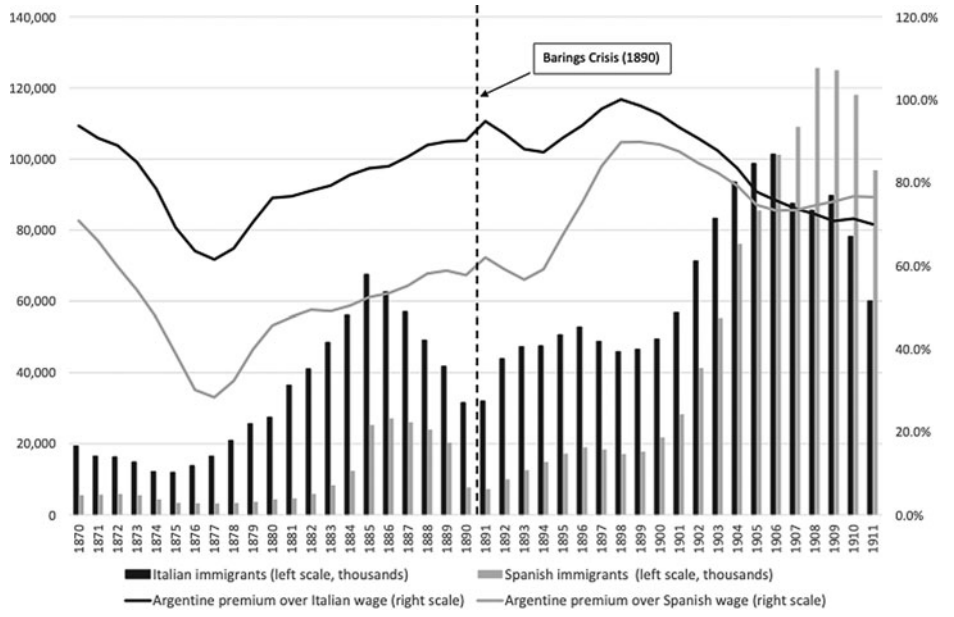

Figure 2. Real-wage premia of Argentine wages and immigration flows, 1870–1913 (5-year centered moving average)
Notes: Real-wage index. UK 1905 = 100. Sources: Williamson (1999), Inklaar et al. (2018), Banco Central de la República Argentina (1915).

Argentina[9] – but resumed in the early 1900s after the immigration policy restrictions in 1890s (Timmer and Williamson, 1998).

Second, the Argentine government implemented measures to promote immigration, which remained in place until the end of the century[10], and, third, network effects and the lower socio-economic costs of integration explain the selection of Argentina as a destination in the New World. Cultural affinity, language similarity, and the existing migrants were decisive in the selection of the final arrival countries. Compared to Italy, the average wage for unskilled workers in the 1870s was only 43% of the same wage in Argentina, but 22% of that in the United States. Notwithstanding the different wage gaps, in the 1870s and 1880s the destination of many Italian migrants was Argentina (Devoto, 2006). This phenomenon shows how the real wage differential can be the trigger to out-migration, but in the choice of final destination the presence of social networks and cultural affinity may play an even more relevant role, as argued by Moretti (1999). Along the same lines, Sánchez-Alonso (2019) argues that many skilled Italian migrants preferred Argentina over the US, given the similarity between the Italian and Spanish languages when compared to English. The lack of a language barrier would make it easier for them to find employment in occupations that rely on communication skills and offer higher wages.

As reported in Table 2, the foreign-born population kept on increasing and accounted for almost 44% on a yearly average in the first decade of the 1900. The table also highlights how migration tended to polarize into two main nationalities, i.e. Italians and Spaniards. The second important factor for the Argentine economic rise was provided by the increase in international trade during the First Globalization. Demand for agricultural products rose in the late nineteenth century mainly from North-Western Europe as a result of the fast population growth in

[9]The GDP growth rate dropped to −8.2% in 1890 and to −5.3% in 1891. See, for instance, Mitchener and Weidenmier (2008).

[10]An illustrative case is the *Ley Avellaneda* (Ley Nacional n. 817/1876). In May 1876, President Avellaneda declared to the National Congress 'the imperative need to attract migration' and created the Immigration National Direction, which encouraged migration from Europe through immigration agencies and relevant subsidies for transoceanic travels.

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Table 2. Population and immigration in Argentina 1870–1913 (10-year average)

Period	Population	Share of immigrants	of which % Italians	of which % Spaniards
1870–1880	2,208,000	17.60%	43.00%	15.70%
1881–1890	3,039,000	29.20%	52.70%	14.90%
1891–1900	4,118,400	37.80%	61.10%	19.10%
1901–1913	6,037,923	43.80%	67.00%	30.90%

Source: Ferreres (2005).

conjunction with the rising average per-capita income. Given its increased endowment of land and natural resources, Argentina became of the major exporters in primary products in exchange for manufactured goods with advanced European countries (see Schedvin, 1990 and Denoon, 1983)[11].

Overall, between 1870 and 1913 its share in world exports rose from 0.8% to almost 4%. The main trading partners were Great Britain, France, Belgium, and Germany. Spain and Italy lagged behind, but still played an important role in trade. In terms of value, Argentina traded 4.45 million US$ with Italy in 1881 and the flow reached 59.27 million US$ in 1913. The trade flow with Spain soared from 3.82 million US$ in 1881 to 18.96 million US$ in 1913.

Several studies investigate the export-led characteristic of Argentine growth, e.g. Conde (2005) and Taylor (1994). More recently, Pinilla and Rayes (2019) used a gravity model for Argentine exports between 1880 and 1929 and showed the relevance of both the supply and demand sides, as well as the positive impact of the reduction in transport costs. The authors show how the Argentine export-led model was a result of the strong integration and complementarity with European countries that were at a more advanced stage in their industrialization process (especially Great Britain).

Our main point in this study is to uncover the interplay between immigration flows and openess to international trade that contributed to Argentina's fortunes. As Figure 3 shows, the two phenomena occurred at the same time and in our empirical evidence we aim at disentangling the channel of immigration as a pro-trade factor.

4. Empirical Analysis

Our analysis aims at identifying the additional contribution of migration on the trade flows between Argentina and its major European partners that were also the major origin countries of Argentine immigration. The data source for bilateral nominal trade flows, nominal GDP, and gross national expenditure (GNE) is the TRADHIST dataset (Fouquin and Hugot, 2016).

Bilateral migration inflows of Argentina with eight European countries (Austro-Hungarian Empire, Belgium, France, Germany, Italy, Spain, Switzerland, and United Kingdom) from 1870 to 1913 are obtained from two historical archives, i.e. Banco Central de la República Argentina (1915) and Commissariato generale dell'emigrazione (1926). More detailed information is provided in Appendix A.

4.1 The Empirical Model

Our empirical strategy relies on the standard gravity model when there is one pivot country A as both exporter and importer, i.e. Argentina, with its partners i, that are: Austro-Hungarian Empire, Belgium, France, Germany, Italy, Spain, Switzerland, and United Kingdom. Following

[11]A common expression was *Argentina as the breadbasket of the world.*

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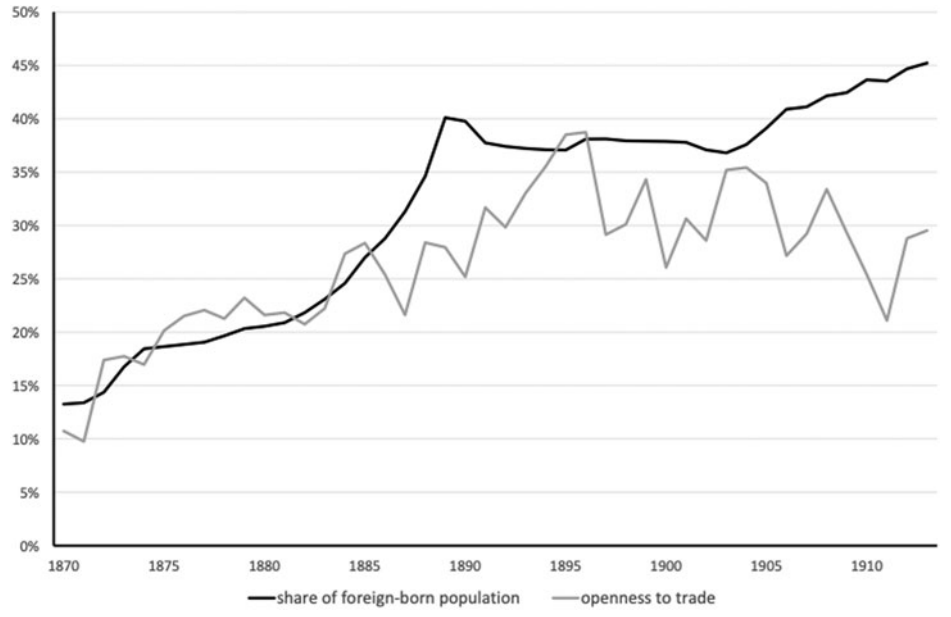

Figure 3. Share of foreign-born population and openness (exports + imports/GDP) in Argentina, 1870–1913
Source: Federico and Tena-Junguito (2017) and Ferreres (2005).

Head and Mayer (2014), we combine definitions 1 and 2 of general and structural gravity with the pivot country A and obtain:

$$X_{i,t}^{A} = \begin{cases} \dfrac{Y_{i,t}}{\Omega_{i,t}} \dfrac{X_{A,t}}{\Phi_{A,t}} \Phi_{A,i,t} \text{ when } A \text{ is importer} \\ \dfrac{Y_{A,t}}{\Omega_{A,t}} \dfrac{X_{i,t}}{\Phi_{A,t}} \Phi_{i,A,t} \text{ when } A \text{ is exporter} \end{cases} \quad (1)$$

where, for each time period t, $X_{i,t}^{A}$ is the trade flow between Argentina and its partners, either imports or exports, $Y_{h,t}$ and $X_{h,t}$ would represent respectively gross production and total expenditure in country $h = A, i$; $\Omega_{h,t}$ and $\Phi_{h,t}$ are multilateral resistance terms for country $h = A, i$.

The bilateral resistance terms $\Phi_{A,i,t}$ and $\Phi_{i,A,t}$ are assumed to be symmetric and such that:

$$\Phi_{A,\,i,\,t} = \Phi_{i,\,A,\,t} = (dist_{i}^{A})^{\eta} (MIG_{A,\,i,\,t})^{\delta}$$

where $dist_{i}^{A}$ is the sea distance of each country i from Argentina and $MIG_{A,\,i,\,t}$ is immigration to Argentina from country i at time t[12].

By taking log transformation, we estimated model (1) with two different empirical approaches. In what follows, small-letter variables represent log-transformation of capital-letter variables, i.e. $ln\ Z \equiv z$. With the first approach, we consider Argentina as an importer and an exporter in one single equation as follows

$$x_{(h,j),t} = \alpha + \beta_{exp}\, y_{j,\,t} + \beta_{imp} x_{h,\,t} + \delta mig_{(h,j),t} + \eta dist_{(h,j)} + \mu_{(h,j)} + \mu_{t} + \epsilon_{(h,j),t} \quad (2)$$

[12]Since migration represents an asymmetric and direction-specific term, we should have included $MIG_{\,i,A,\,t}$. We assume that the only relevant migration flows were from i to A as the return migration flows that occurred during that period could not be considered as Argentine natives moving to Europe.

where for $h = A$, $i\ j = A$, $i\ h \neq j$ and each time period t:

- $x_{(h,j),t}$ is imports of h from i;
- $y_{(j,t)}$ is the gross production of exporter j;
- $x_{(h,t)}$ is the total expenditure of importer h;
- $mig_{(h,j),t} = mig^{A}_{i,t}$, i.e. the only relevant migration flows for that period was from each country i to Argentina (see footnote 12);
- $dist_{(h,j)}$ is the time-invariant sea distance between h and j;
- $\mu_{(h,j)}$ is a country-pair dummy to capture the time-invariant heterogeneity in the relationship between h and j not included in the sea distance $dist_{(h,j)}$[13];
- μ_t is the year dummy to capture yearly common shocks.

With the second approach, we consider two different empirical models depending on whether Argentina is the importer or the exporter country:

$$x^{A}_{i,t} = \begin{cases} \alpha_{imp} + \beta_{exp}\, y_{i,\,t} + \delta_{imp} mig_{A,i,t} + \eta_{imp} dist^{A}_{i} + \mu_{i-exporter} + \mu_t + \epsilon_{i,t} \text{ when } A \text{ is importer} \\ \alpha_{exp} + \beta_{imp}\, x_{i,\,t} + \delta_{exp} mig_{A,i,t} + \eta_{exp} dist^{A}_{i} + \mu_{i-importer} + \mu_t + \epsilon_{i,t} \text{ when } A \text{ is exporter} \end{cases} \tag{3}$$

The two approaches present pros and cons. By estimating (2), we save degrees of freedom, but we miss the possibility of disentangling the different effects of migration on imports and exports since there is a common δ estimate. When considering model (3), the number of degrees of freedom drops, but we estimate two distinct parameters for migration, δ_{imp} and δ_{exp}, as the effects of migration to Argentina on Argentine imports and imports.

4.2 The Identification Strategy

The OLS estimation is likely to produce biased and inconsistent estimates because migration inflows could be endogenous, violating the orthogonality condition with the error term, i.e. $\epsilon_{i,t}$ in Equations (2) and (3). Our estimation tackles two endogeneity issues.

First, OLS estimates might be biased because omitted variables could simultaneously affect trade and migration flows. Economic growth and technological progress have been proved to be positively associated to international trade and migration (see e.g. Felbermayr et al., 2015). To control for the former, in the regression model we include a measure of countries' absorption capacity or ability to sell (GNE or GDP). To control for the latter, we include year fixed effects, since we suppose that the technological progress that has decreased transportation costs during nineteenth century was common to all the countries considered in the analysis – all European Countries[14].

Secondly, the Argentine upsurge in the world market might have increased labor demand, which, in turn, could have led to the arrival of foreign workers. If the increase of Argentine bilateral trade had eased migration flows along the same routes, OLS estimates would be inconsistent. In order to cut out the confounding effect of labor demand (the so-called pull factor), we propose an instrumental variable (IV) that could only account for movement of the Argentine labor supply due to migration, i.e. the general push factors of European out-migration.

Migration flows are determined by conditions at both destination and origin countries. In our analysis, origin countries are Argentina's trade partners and the only destination country is

[13]It is to be notice that $\mu_{(h,j)} \neq \mu_{(j,h)}$ while $dist_{(h,j)} = dist_{(j,h)}$. Therefore, the inclusion of country-pair dummies should better capture differences in trade policies within each country. Trade barriers can, indeed, be different when a country is importer or exporter.

[14]We have also estimated different specifications of the regression model with a time trend or a measure of transportation cost common to all the European Countries – that is the cost to transport a ton of coal from Manchester to Buenos Aires (Federico and Tena Junguito, 2016). Results are similar to those presented in the paper and are available upon request.

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Argentina. The ideal instrumental variable should be unrelated to factors that *pull* migrants to Argentina, but be able to capture factors that *push* migrants out from Europe. An incomplete list of these factors includes out-migration public incentives, demographic trends, and past out-migration that characterized the so-called *Atlantic Mass Migration* or *Migration to the New World* (see Hatton et al., 2018). Therefore, we use migration flows from Europe to US as an instrumental variable. In formula:

$$Z^{A}_{(i,\,t)} = mig^{USA}_{(i,\,t)}$$

Data on migration flows by nationality into the United States from 1870 to 1913 are obtained from the US Bureau of the Census (1949). We sampled the migration flows from: Italy, other Southern countries – which include Spain, Portugal and Greece – Austria-Hungary, Germany, United Kingdom and other North-Western countries – which include France, Belgium, Netherlands, Switzerland and Luxembourg. In order to assure consistency between our trade data and the differently aggregated data in the US-based instrumental variable, we have merged trade flows from France, Belgium, and Switzerland.

Our IV approach is related to the identification strategy in Autor et al. (2013) where Chinese exports to all countries but the US were the instrumental variable for Chinese exports to the US. Similarly, we use out-migration of the selected European countries to the United States as our instrumental variable. Our maintained hypothesis is that the push factors for European out-migration in late nineteenth century are very similar to all destination countries in the New World. Moreover, we assume that the Argentine bilateral trade with each European origin country did not affect the European out-migration to United States (our exclusion restriction) and migration flows to the US did not increase Argentine imports and exports. More explicitly, in order to have a *non-contaminated* IV estimates, migrant demand shocks and trade flows should not be correlated across US and Argentina.

To substantiate this latter hypothesis, in Figure 4 we compare Argentine and US trade from 1870 to 1913. During this period, the two countries were characterized by similar long-run trends in entering world trade and the graph focuses on the short-run behavior by presenting the growth rates (first log-difference) and the HP-filtered cyclical components of US and Argentine total trade flows – imports plus exports with the whole world. The two-time series clearly show different short-run dynamics. More formally, correlation coefficients for the first log-differences is 0.1441, not significant at the 0.05 level. We interpret this result as suggesting that correlated migrant demand shocks in the US and in Argentina are unlikely to be occurred in the years of the analysis.

4.3 Main Results

The estimation of the augmented gravity model in Equation (1) is performed with the two different approaches, presented in Equations (2) and (3). As mentioned above, only six of the original eight countries can be used for the IV estimation, therefore in the OLS estimation we consider the consistent sample with Austro-Hungarian Empire, Germany, Italy, Spain, BFS (an aggregate of Belgium, France and Switzerland) and United Kingdom.

In Table 3. we report OLS and IV estimates when using both the approach (Eq. (2)), i.e. flipping the role of countries depending on whether it is an importer or an exporter, and the approach (Eq. (3))[15]. The IV estimation has been implemented with a standard two-stage approach (see Baltagi, 1981). All the traditional gravity variables have the expected signs, are significant,[16] and the magnitude of the coefficients does not change from the OLS to the IV

[15]We present our preferred specification in the main text including all kinds of fixed effects. In the Appendix B, all specifications are reported.

[16]We always refer implicitly to the traditional 95% significant level if not said otherwise. The only exception is the IV result for the distance in column 3. Indeed, there might be a problem of near-collinearity between the distance and the country-pair

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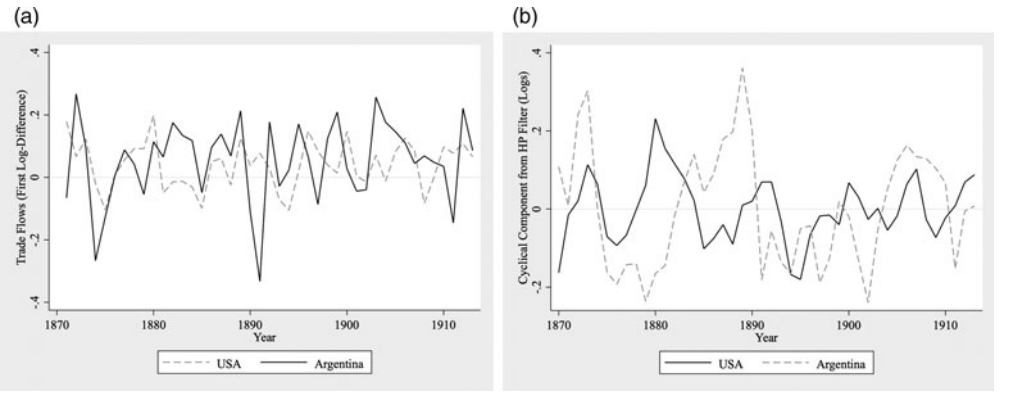

Figure 4. The Different Dynamics of US and Argentine Trade Flows
Notes: In panel (a) first log-differences bilateral trade flows with the rest of the world are reported. In panel (b) HP-filtered cyclical components of bilateral trade flows with the rest of the world are reported.
Source: Authors' elaboration on CEPII data.

estimates. Measures of economic masses (capability of exporting and absorption) show a positive elasticity between Equation (2) and Equation (3), which – in comparison with the existing literature that shows an elasticity lower than 2 and refers to more recent period – may signal that during the First Globalization common event (as the decreasing trade costs) made trade more sensitive to measures of domestic economic activity. The measure of bilateral resistance is consistently negative as expected. Immigration flows had a positive effect on aggregated trade flows of Argentina in the years 1870–1913. This result emerges from both the OLS and the IV estimates, even though the two-stage estimation method produces a greater coefficient, pointing at a downward bias affecting the OLS regression. This might be the case with a *measurement error*, i.e. when a variable is measured with an error that is uncorrelated with its true value. Since, migration data are collected directly in historical archives, we cannot exclude that this was the case, making the IV results more reliable than the OLS ones. In particular, the IV significant estimates show an elasticity around 0.6% for overall trade.

Furthermore, we obtain different effects of migration on exports and imports when we consider them separately (see columns 3 and 4 in Table 3). Migration inflows have a positive and significant effect when implementing the IV estimation for imports, where a 1% increase in migration inflows is associated with an increase that is close to 0.9%. The estimates for exports are not significant and lower than 0.2.

A possible explanation for this result – a preference effect (more relevant for imports) stronger than a network/information effect (more relevant for exports) – may be related to the characteristics of our period of investigation, i.e. the First Globalization. As also mentioned in the Introduction and in Section 2, both communication and transportation costs lowered during all recent globalization periods, but at the end of the nineteenth century communication costs, normally more related to the network/information effect, decreased relatively less than the physical transportation costs, more important for the preference effect.

4.4 Robustness Checks

The literature underlines the importance of *migration stocks* besides migration flows. Reliable measures of migration stocks with the origin-country breakdown are only available for three

fixed-effects that reduces the precision of the estimations of the coefficient of the distance. More details are available from the authors.

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Table 3. OLS and IV estimation of the (log-linearized) gravity model for Argentina (1870–1914) – overall trade and distinctly for exports and imports

OLS			
	EXP + IMP	IMP	EXP
Gross prod. @ origin	2.309***	–	–
	(0.298)	–	–
Gross exp. @ dest.	2.051***	–	–
	(0.298)	–	–
Partner GDP or GNE	–	1.881***	2.034***
	–	(0.293)	(0.331)
Imm. flow	0.276**	0.218	0.252
	(0.111)	(0.146)	(0.214)
Sea dist.	−8.182***	−2.637***	−3.030***
	(1.27)	(0.774)	(0.999)
Observations	480	240	240
Num. of countries	12	6	6
Year FE	YES	YES	YES
Country FE	–	YES	YES
Country pair FE	YES	–	–
IV			
	EXP + IMP	IMP	EXP
Gross prod. @ origin	2.727***	–	–
	(0.348)	–	–
Gross exp. @ dest.	2.486***	–	–
	(0.405)	–	–
Partner GDP or GNE	–	2.757**	1.946**
	–	(1.053)	(0.65)
Imm. flow	0.603**	0.873*	0.189
	(0.265)	(0.439)	(0.442)
Sea dist.	−10.40***	−5.501*	−2.762
	(1.636)	(2.597)	(1.976)
Observations	480	240	240
Num. of countries	12	6	6
Year FE	YES	YES	YES
Country FE	–	YES	YES
Country pair FE	YES	–	–
F Stat	70.725	33.382	31.302

Notes: Authors' elaborations. In the upper panel, we present the results of the OLS estimation of a panel model with random effects. In the bottom panel, we present the results of the IV estimation of a panel model with random effects. In model 1 (*EXP + IMP*) of both panels, we consider bilateral trade flows and we flip the role of countries depending on whether it is an importer or exporter. In this specification, we consider country-pair fixed effects. In model 2 (*IMP)* of both panels, we consider only Argentine imports and in model 3 (*EXP)* of both panels we consider only Argentine exports. In these latter specifications, we consider country fixed effects, since there is one common trade partner, i.e. Argentina. Time fixed effects are always included. The distance is the sea distance in maritime miles. The IV model is estimated following Baltagi (1981). Robust standard errors in parenthesis; *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

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Table 4. OLS and IV estimation of the (log-linearized) gravity model (3) for Argentina (1870–1914) augmented with immigration cumulated flows as a proxy for stocks

	OLS		IV	
	EXP	IMP	EXP	IMP
Partner GDP or GNE	1.276***	1.869***	1.401*	2.462***
	(0.482)	(0.526)	(0.621)	(0.865)
Cumulated 5-year lag imm.	0.110	0.373***	0.209	0.827**
	(0.336)	(0.141)	(0.570)	(0.330)
Sea dist.	−1.161	−3.006***	−1.568	−4.916*
	(1.479)	(1.297)	(2.085)	(2.074)
Observations	216	216	216	216
Num. of countries	6	6	6	6
Year FE	YES	YES	YES	YES
Country FE	YES	YES	YES	YES
F Stat			74.292	73.001

Notes: Authors' elaborations. In the first two columns, we present the results of the OLS estimation of a panel model with random effects. In the last two columns, we present the results of the IV estimation of a panel model with random effects. In column 1 and 3, we consider export flows. In column 2 and 4, we consider import flows. Immigration flows are cumulated over the past five years. In both cases, we consider country fixed effects and time fixed effects. The distance is the sea distance in maritime miles. The IV models are estimated following Baltagi (1981). Robust standard errors in parenthesis; *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$

years from the Census. Therefore, we resort to two indirect ways to measure yearly immigration stocks at the origin-country level. First, we cumulated the past five years of migration flows and used this variable instead of migration flows. This is an imperfect measure of stocks since we did not cumulate *net* migration flows and during that period there were return migration flows.

Table 4 reports the OLS and the IV estimation for model (3) with the cumulated flows when including all fixed effects. The migration variable has always a positive effect and it is confirmed that the import elasticity is significantly positive and higher than the export elasticity, in line with the previous estimation in Table 3.

Secondly, we use lagged immigration flows up to five years to see whether *past* migration affects trade via the different channels (decreased information costs for exports and preference for imports). Table 5 reports the IV estimation results by including lagged immigration flows one at the time up to time $(t\text{-}5)$[17]. The significant effect on imports is fully confirmed and it slowly decreases over time: after five years, the estimated elasticity is 0.65, i.e. only less that 0.2 than the 1-year lagged migration. The effect on exports is instead never significant at all lags[18].

The stronger and consistent effect of migration for imports supports the interpretation that during this period migration worked more as a factor that increased the demand for products from the origin countries (the so-called *olive oil effect)* rather than as a facilitator for exports.

As a final robustness test, we have regressed trade flows (bilateral flows, imports, and exports) on future migration flows (Table 6). More precisely, the trade flow between country j and country h at time t is regressed over the migration flow from h to j at time $t + 10$. None of the models shows a significant correlation between current trade and future immigration, possibly reassuring us about the potential reverse causality of the model.

[17]In Appendix B, we also report the OLS results.

[18]We obtain the same results if we aggregate migration flows over $t - (t - 1)$, $t - (t - 2)$, …, $t - (t - 5)$. Results are available upon request.

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Table 5. IV Estimation of the (log-linearized) gravity model for Argentina (1870–1914) augmented with immigration lags

	EXP					IMP				
Partner GDP or GNE	1.845**	1.571**	1.451**	1.324**	1.259**	2.630**	2.546**	2.367**	2.279**	1.970**
	(0.627)	(0.601)	(0.541)	(0.524)	(0.367)	(1.032)	(0.986)	(0.842)	(0.822)	(0.71)
Sea dist.	−2.471	−1.814	−1.534	−1.231	−1.14	−5.182*	−4.949*	−4.494*	−4.290*	−3.455*
	(1.911)	(1.877)	(1.734)	(1.72)	(1.24)	(2.504)	(2.368)	(2.009)	(1.945)	(1.692)
Imm. flow (*t*-1)	0.129					0.833*				
	(0.428)					(0.392)				
Imm. flow (*t*-2)		0.107					0.819*			
		(0.469)					(0.378)			
Imm. flow (*t*-3)			0.102					0.767*		
			(0.466)					(0.328)		
Imm. flow (*t*-4)				0.0915					0.770*	
				(0.509)					(0.323)	
Imm. flow (*t*-5)					0.148					0.654*
					(0.464)					(0.276)
Observations	236	231	226	221	216	236	231	226	221	216
Num. of countries	6	6	6	6	6	6	6	6	6	6
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Country FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
F Stat	28.345	30.622	37.745	38.353	53.958	31.02	31.677	37.962	37.697	65.415

Notes: Authors' elaborations. In the table, we present the results of the IV estimation of a panel model with random effects. In the left panel, we consider export flows. In the right panel, we consider import flows. Immigration flows are lagged for a maximum of a five-year lag. In both cases, we consider country fixed effects and time fixed effects. The distance is the sea distance in maritime miles. OLS results are reported in the Appendix B. The IV models are estimated following Baltagi (1981). Robust standard errors in parenthesis; *p< 0.10, **p < 0.05, ***p < 0.01.

Table 6. Placebo test: panel estimation of the (log-linearized) augmented gravity model for Argentina 1870–1903 with 10-year leaded immigration

	EXP + IMP	IMP	EXP
Gross prod. @ origin	2.249***	1.486***	
	(0.536)	(0.450)	
Gross exp. @ dest.	1.953***		2.219***
	(0.449)		(0.584)
Imm. flow *(lead)*	0.0617	−0.0687	0.162
	(0.130)	(0.197)	(0.194)
Sea dist.	−7.414***	−1.616	−3.343**
	(2.132)	(1.176)	(1.500)
Observations	360	180	180
Num. of countries	12	6	6
Year FE	YES	YES	YES
Country FE	YES	YES	YES

Notes: Authors' elaborations. Results of the OLS estimation of a panel model with random effects. In model 1 (*EXP + IMP*), we consider bilateral trade flows and we flip the role of countries depending on whether it is an importer or exporter. In this specification, we consider country-pair fixed effect. In model 2 (*IMP*), we consider only Argentine imports and in model 3 (*EXP*) we consider only Argentine exports. In these latter specifications, we consider country fixed effects, since there is one common trade partner, i.e. Argentina. Time fixed effects are always included. Immigration flows are leaded by 10 years. Therefore, the trade flow between country j and country h at time t is regressed over the immigration flow from h to j at time t +10. The distance is the sea distance in maritime miles. Robust standard errors in parentheses. *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

5. Conclusions and Future Research

In this paper, we analyzed the relationship between immigration and trade, focusing on a unique case-study – the European mass migration to Argentina at the end of the nineteenth century. During this Golden Age, the Argentine Republic was founded and the country experienced its most spectacular growth ever. Two structural changes characterized that period: the demographic transformation, where migration from Europe played a key role, and the tremendous increase in openness to trade, due to technological progress and a reduction in transport costs.

We study the inter-relationship between these two phenomena and claim that immigration helped open the economy by favoring both exports and imports. We assess this effect by estimating a gravity model augmented by immigration. OLS results show that migration from eight different European countries fostered Argentine bilateral trade interactions with those countries.

Concerns on the endogeneity of migration flows have been taken into consideration given the extraordinary growth of the Argentine economy during the same period. Therefore, we propose an IV approach with an instrumental variable mimicking what Autor et al. (2013) did to instrument Chinese exports to the US with Chinese exports to the rest of the world. We consider outmigration from Europe to the US so that we could capture the common push factors of migration decisions, but not the pull factors related to Argentine economic boom.

The IV results are similar to the OLS estimates and confirm the most important effect of migration on imports rather than exports. This difference may be related to the type of technological advancements that occurred during the First Globalization with respect to the most recent one. Waves of globalization are characterized by large drops in communication costs and transportation costs. However, when comparing the nineteenth-century globalization – coinciding with our period of investigation – with the most recent one, there is a substantial decrease in the relative costs, i.e. in the ratio of transportation to communication costs. It is well-known that the introduction of containers in the late 1950s reduced substantially maritime costs

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(Rodrigue, 2020, reported a reduction by one third between 1920s and the 1960s), not dissimilar to the introduction of steamships in the nineteenth century. However, the drop in communication costs was much more intense in the most recent period than in the First Globalization. With the introduction of fiber optic cables a three-minute phone call between New York and London was 5 cents in 2015, while it cost $293 in 1931 at 1993 prices (see Rodrigue, 2020).

Trade flows are hindered by both types of costs, but communication costs, as costs related to acquire information on the destination market, are essential to acquire information on the destination market and reduce demand uncertainty, i.e. one of the most relevant factors for exporting decisions (see e.g. Albornoz et al., 2012). As in our period of investigation, communication/information costs remained relatively high with respect to transportation costs, then the presence of migrants worked as a substitute for importers since it reduced demand uncertainty for ethnic goods at destination and could explain the strong effect of migrants' flows and stock especially on imports.

On the other hand, the (still) high relative costs of communication between Argentine migrants and their contacts in the origin countries hindered the positive network effect on the Argentine export capabilities and may explain the asymmetric effect of migration in our estimates.

This consideration may also justify why our results differ from other studies on the pro-trade effect of migration that are conducted on more recent periods when the communication costs dropped more intensively and could have then activated a migration network effect on exports, and not only on imports. Further research on the different relative effects of the two channels of the pro-trade effect of migration could take advantage of the two periods of globalization.

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Appendix A

Data Sources

Trade flows, GDP, common-language dummies, tariffs:

- All the nominal variables (Trade flows, GDPs, tariffs and transport costs) are expressed in British pound sterling.
- Source: TRADHIST Fouquin and Hugot (2016)
- For Argentina the source is Ferreres (2005); Argentine currency has been converted into British pounds by means of Fouquin and Hugot (2016).

Distance:

- Sea distance in maritime miles.
- Source: Mayer and Zignago (2011)

Immigration flows into Argentina:

- Inflows of overseas migrants in Argentina (excluded first class passengers) from Austro-Hungarian Empire, Belgium, France, Germany, Italy, Spain, Switzerland and United Kingdom. The historical archives contain data only on second- and third-class passengers.
- Source: Banco Central de la República Argentina (1915)

Immigration flows to the US:

- Inflows of migrants to the US
- Source: US Bureau of the Census (1949)

Table A1. Summary statistics

	Mean	St. deviation	Min	Max
Trade flows (thousand)	8,644	11,300	85.92	63,400
Imports (thousand)	3,419	3,998	9.41	22,600
Exports (thousand)	5,225	7,756	19.05	40,700
Gross prod. (thousand)	1.00e+06	6.30e+05	2.42e+05	2.76e+06
Gross exp. (thousand)	1.04e+06	6.66e+05	2.26e+05	2.69e+06
Distance (kilometers)	12,030	725.99	10,929	13,521
Immigration flows	15,099	28,518	50	165,662
Immigration flows (US)	51,361	60,551	1,382	291,040
Observations	264			

Notes: Authors' elaboration. All the nominal variables (Trade flows, GDP and GNE) are expressed in British pound sterling. Bilateral trade flows, imports and exports refer to Argentina's flows with trade partners. GDP and GNE refer to Argentina's and trade partners' Gross Domestic Product and Gross National Expenditure.

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Appendix B
Additional Empirical Analysis

Table B1 OLS country-pairs estimation of the (log-linearized) standard gravity model (2) for Argentina (1870–1914): baseline

Gross prod. @ origin	1.032***	1.981***	1.058***	1.958***
	(0.153)	(0.250)	(0.169)	(0.332)
Gross exp. @ dest.	0.794***	1.758***	0.755***	1.685***
	(0.135)	(0.267)	(0.142)	(0.297)
Sea dist.	−8.968*	−10.57***	−2.251***	−6.312***
	(4.868)	(3.041)	(0.340)	(1.285)
Observations	480	480	480	480
Num. of pairs	12	12	12	12
Year FE	NO	YES	NO	YES
Country pair FE	NO	NO	YES	YES

Notes: Robust standard errors are reported in parenthesis; *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

Table B2. OLS estimation of the (log-linearized) standard gravity model (3) for Argentina 1870–1914: Baseline

	IMP				EXP			
Partner GDP or GNE	2.565***	1.865***	2.626***	1.584***	3.063***	1.983***	3.217***	1.680***
	(0.249)	(0.315)	(0.272)	(0.308)	(0.311)	(0.278)	(0.384)	(0.309)
Sea dist.	−14.68***	−12.75***	−4.277***	−1.900***	−8.490	−8.289***	−5.504***	−1.954***
	(1.735)	(3.022)	(0.612)	(0.702)	(6.154)	(2.507)	(0.865)	(0.740)
Observations								
Num. of countries	240	240	240	240	240	240	240	240
Year FE	6	6	6	6	6	6	6	6
Country FE	NO	YES	NO	YES	NO	YES	NO	YES

Notes: Robust standard errors are reported in parenthesis; *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

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Table B3. OLS estimation of the (log-linearized) gravity model (3) for Argentina (1870-1914) augmented with immigration lags

	EXP					IMP				
Partner GDP or GNE	2.027***	1.695***	1.499***	1.325***	1.188***	1.953***	1.914***	1.830***	1.768***	1.645***
	(0.284)	(0.307)	(0.329)	(0.331)	(0.293)	(0.365)	(0.425)	(0.444)	(0.437)	(0.411)
Sea dist.	−3.037***	−2.202**	−1.689*	−1.236	−0.889	−3.061***	−2.979***	−2.791***	−2.638**	−2.341**
	(0.882)	(0.918)	(1.026)	(1.018)	(0.894)	(0.865)	(1.011)	(1.070)	(1.048)	(0.980)
Imm. flow (t-1)	0.268					0.295***				
	(0.213)					(0.114)				
Imm. flow (t-2)		0.207					0.313***			
		(0.229)					(0.112)			
Imm. flow (t-3)			0.145					0.314***		
			(0.276)					(0.115)		
Imm. flow (t-4)				0.0937					0.305***	
				(0.284)					(0.0996)	
Imm. flow (t-5)					0.0622					0.293***
					(0.284)					(0.0916)
Observations	236	231	226	221	216	236	231	226	221	216
Num. of countries	6	6	6	6	6	6	6	6	6	6
Year FE	YES	YES	YES	YES	YES	NO	NO	YES	NO	YES
Country FE	YES	YES	YES	YES	YES	NO	NO	NO	YES	YES

Notes: Robust standard errors are reported in parenthesis; *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

Table B4. OLS and IV country-pairs estimation of the (log-linearized) gravity model (2) for Argentina (1870–1914) augmented with immigration flows

	OLS				IV			
Gross prod. @ origin	0.973***	2.321***	0.987***	2.309***	1.002***	2.649***	0.979***	2.727***
	(0.178)	(0.243)	(0.203)	(0.298)	(0.204)	(0.248)	(0.233)	(0.348)
Gross exp. @ dest.	0.747***	2.100***	0.675***	2.051***	0.729***	2.442***	0.667***	2.486***
	(0.155)	(0.276)	(0.158)	(0.298)	(0.162)	(0.299)	(0.161)	(0.405)
Imm. flow	0.0889	0.278***	0.119	0.276**	0.0706	0.546**	0.132	0.603**
	(0.0991)	(0.107)	(0.105)	(0.111)	(0.136)	(0.209)	(0.154)	(0.265)
Sea dist.	−7.622	−7.242**	−2.039***	−8.182***	−8.032	−4.137	−2.017***	−10.40***
	(4.883)	(2.945)	(0.438)	(1.270)	(5.049)	(3.585)	(0.514)	(1.636)
Observations	480	480	480	480	480	480	480	480
Num. of country pairs	12	12	12	12	12	12	12	12
Year FE	NO	YES	NO	YES	NO	YES	NO	YES
Country pair FE	NO	NO	YES	YES	NO	NO	YES	YES
F Stat					81.313	37.374	135.717	70.725

Notes: Robust standard errors are reported in parenthesis; *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

Table B5. OLS and IV estimation of the (log-linearized) gravity model (3) for Argentina (1870–1914) distinctly for exports and imports

OLS Estimation								
	IMP				EXP			
Partner GDP or GNE	2.352***	2.265***	2.381***	1.881***	2.685***	2.343***	2.767***	2.034***
	(0.279)	(0.0916)	(0.348)	(0.293)	(0.475)	(0.324)	(0.590)	(0.331)
Imm. flow	0.312***	0.284***	0.306***	0.218	0.300***	0.307**	0.281**	0.252
	(0.0617)	(0.0669)	(0.0735)	(0.146)	(0.0952)	(0.140)	(0.123)	(0.214)
Sea dist.	−5.525***	−6.609***	−3.861***	−2.637***	−3.696	−5.004**	−4.746***	−3.030***
	(1.670)	(1.509)	(0.729)	(0.774)	(3.955)	−2.177	−1.223	(0.999)
Observations	240	240	240	240	240	240	240	240
Num. of countries	6	6	6	6	6	6	6	6
Year FE	NO	YES	NO	YES	NO	YES	NO	YES
Country FE	NO	NO	YES	YES	NO	NO	YES	YES
IV estimation								
	IMP				EXP			
Partner GDP or GNE	1.708***	3.334***	1.695***	2.757**	2.610***	1.846**	2.626***	1.946**
	(0.310)	(0.342)	(0.319)	−1.053	(0.596)	(0.642)	(0.651)	(0.650)
Imm. flow	0.548**	1.216***	0.553**	0.873*	0.374**	0.120	0.369*	0.189
	(0.195)	(0.347)	(0.201)	(0.439)	(0.596)	(0.642)	(0.651)	(0.650)
Sea dist.	−5.776	0.389	−2.683***	−5.501*	−2.638	1.64	−4.509**	−2.762
	(4.124)	(4.303)	(0.574)	(2.597)	(4.092)	(1.445)	(1.327)	(1.976)

Observations	240	240	240	240	240	240	240	240
Num. of countries	6	6	6	6	6	6	6	6
Year FE	NO	YES	NO	YES	NO	YES	NO	YES
Country FE	NO	NO	YES	YES	NO	NO	YES	YES
F stat	59.630	14.493	50.820	33.382	62.261	16.355	105.265	31.302

Notes: Robust standard errors are reported in parenthesis; $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.