THE DRIVERS OF ITALIAN EXPORTS AND PRODUCT MARKET ENTRY: 1862-1913

2018

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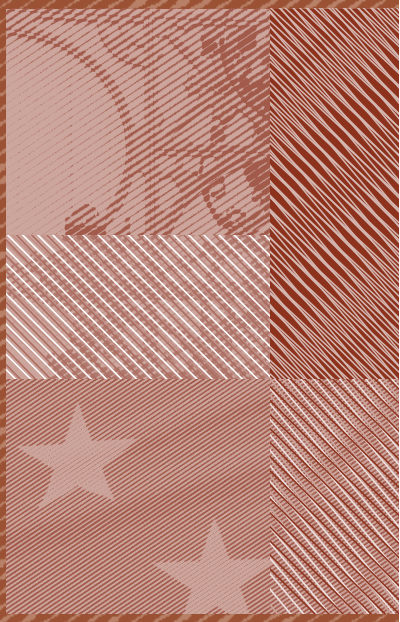

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BANCO DE ESPAÑA

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Abstract

Between its Unification and WWI, Italy's changing export composition echoed its economic transformation. In this paper I decompose Italian export growth in its margins, and then analyse the determinants of Italian exports and product market entry (and exit). To do so, I use two different databases (aggregate and product-level bilateral trade data) and methodologies (gravity and logit models). Besides confirming some well-known empirical and historical facts for the Italian case (gravity variables hold; trade follows a Heckscher-Olhin pattern), the regression results offer a new perspective on two distinctive features of its history: trade policy and emigration. These two factors are positively associated with Italian exports and product market entry. These findings also have additional implications for the role of emigration on the course of the Italian economy: accounting for the trade channel, its overall effect may be larger than previously thought.

Keywords: Italian exports, Market entry, First globalization, gravity models, logit models.

JEL classification: F14, F15, N73.

Resumen

Entre su Unificación y la Primera Guerra Mundial, la cambiante composición de las exportaciones de Italia reflejó su transformación económica. En este artículo, descompongo el crecimiento de las exportaciones italianas en sus márgenes y luego analizo los determinantes de las exportaciones italianas y la entrada (y salida) de los productos en los mercados. Para ello, utilizo dos bases de datos diferentes (datos comerciales bilaterales agregados y a nivel de producto) y metodologías (modelos de gravedad y logit). Además de confirmar algunos hechos empíricos e históricos bien conocidos para el caso italiano (las variables de gravedad se mantienen; el comercio sigue un patrón de Heckscher-Olhin), los resultados de la regresión ofrecen una nueva perspectiva sobre dos rasgos distintivos de su historia: la política comercial y la emigración. Estos dos factores están asociados positivamente con las exportaciones italianas y la entrada de los productos en los mercados. Estos hallazgos también tienen implicaciones adicionales para el papel de la emigración en el curso de la economía italiana: teniendo en cuenta el canal comercial, su efecto podría ser mayor de lo estimado anteriormente.

Palabras clave: exportaciones italianas, entrada en el mercado, primera globalización, modelos de gravedad, modelos logit.

Códigos JEL: F14, F15, N73.

1. Introduction

During the first wave of globalization, which began in the early nineteenth century and ended with the First World War (O' Rourke and Williamson, 2002), the world saw a spectacular decline in trade costs, paralleled by a stable increase in trade (Federico and Tena, 2019; Dedinger and Girard, 2017) and a remarkable economic expansion (Jacks et al., 2010). Whereas transport costs faced a steady decline, liberalizing trade policy experienced changing fortunes, with national policy makers alternating protectionist stances with "free trade epidemic[s]" (Lazer, 1999; cited in Lampe, 2011).

In this context, Italy increased its participation in the international economy, keeping the rapid pace of world trade growth, and experienced a gradual transformation of its production and export basket: by 1913, manufacturing goods constituted two fifth of Italian total exports.

Italy's participation in world trade during the first globalization has been discussed by numerous contributions with various approaches. Scholars mostly concentrated their efforts on measuring Italy's openness to trade (Estevadeordal, 1997; Federico and Tena, 1998; Felice and Vecchi, 2015; Federico and Vasta, 2015) and estimating the effects of Italian trade policy on growth (Gerschenkron, 1962; Coppa, 1970; Zamagni, 1978; Cardini, 1981; Fenoaltea, 1993; O'Rourke, 2000; Federico and O'Rourke, 2001; Lampe and Sharp, 2013; for non-tariff barriers see Ciccarelli and Nuvolari, 2015).

However, no cliometric analysis has engaged in uncovering the drivers of Italian exports and product market entry and exit yet. Therefore, exploiting the greater availability of bilateral trade data (Ricardo Project database: Dedinger and Gerard, 2017; Bankit-FTV database: Federico et al., 2012[1]), I aim to understand the role of factor endowments, productivity and trade costs in shaping the course of Italian trade during the first wave of globalization. In particular, I focus on two distinctive features of the Italian experience: first, trade policy, as Italy was fairly active, signing dozens of bilateral treaties, and, second, emigration, as approximately fourteen million people left Italy during the pre-WWI "age of mass migration".

First, I show that Italy increased the number of product exported, passing from 224 in 1862 to 401 in 1913.[2] Second, I decompose Italian export growth using ten-year windows and display that the expansion of continuing goods in continuing destinations account for more than two-thirds (71%) of trade growth. However, the two categories of continuing goods to "other"[3] destinations and entering goods also account for large

[1] The collection of disaggregated data on Italian trade statistics was an initiative of the Bank of Italy, under the scientific direction of G. Federico, G. Tattara and M. Vasta. Following Federico et al. (2012), I refer to the database with the acronym "Bankit-FTV DB". See "Data" section for more details.

[2] Four-digit SITC classification.

[3] Differently from the literature, I use the word "other" rather than "new" destinations. This choice relates to the features of the Bankit-FTV DB (that I use in this paper for product-level analysis): the database only includes product-level information for the ten major Italian trade partners. As they all received at least one product in the first year for which data is available, there is no "new" destination as such. However, data analysis pursued in Section 5 shows the importance of separating between "continuing goods to continuing destinations" and "continuing goods to other destinations". For more details, see Section 5.

share of export growth, approximately one-fifth each. Exiting goods are also relevant, with a 10% drag on export growth. Third, I use regression analysis to complement previous findings, and combine the exploration of aggregate and product-level information to cross-check the results. Indeed, on one side, the aggregate bilateral flows database (Ricardo Project DB) provides access to the full geographical diversification of Italian exports, but has no product-level information. On the other side, the product-level bilateral flows database (Bankit-FTV DB) contains fine-grained information on the products traded, but only for Italy's ten major trade partners. The latter database allows, for example, to separate the intensive and the extensive margins, and agricultural and industrial products.

Besides confirming some well-known empirical and historical facts for the Italian case (e.g. distance and market size matter for exports and market entry; trade follows a Heckscher-Olhin pattern), the regression results offer a new perspective on two distinctive features of the Italian economic history: trade policy and emigration. First, I find that Italian trade policy is positively associated with both trade flows and product (first) market entry, and particularly so for agricultural goods in line with the government's predilection for "rural Italy" in trade policy negotiations. Second, I find that important destinations for Italian emigrants are associated with large increases in Italian exports and product market entry, as well with reductions in the probability of market exit. These effects are likely to have operated by reducing trade costs and increasing foreign demand for Italian products: Italian emigrants would have served as a source of information on destination markets and had a certain degree of "home-bias", preferring Italian goods. This result has additional implications for the effect of Italian emigration on the course of the Italian economy: it may be larger than previously thought. Italian emigrants not only favoured a smoother functioning of the Italian labour market (i.e. lower unemployment) and sent back home large flows of remittances (improving real wages and GDP per capita), as previously argued by the literature (see, e.g., Gomellini and Ó Gráda, 2013), but also influenced the dynamics of Italian exports and product presence in destination markets.

The rest of the paper is organised as follows: Section 2 is dedicated to the literature review, connecting international trade and product market entry; Section 3 describes the historical context of Italy, with particular attention to its external sector; Section 4 describes the data used; Section 5 analyses the margins of Italian exports; Section 6 discusses the methodology; Section 7 presents the results for aggregate bilateral export flows; Section 8 reports the results for product-level regressions (market entry, exit, and export flows); Section 9 concludes.

2. Literature Review: the determinants of trade and market entry

What are the determinants of bilateral exports and product market entry and exit during the first wave of globalization? Economic historians have been dealing extensively with

the first part of the question, although not for the specific case of Italy, applying gravity models to a panel of different exporters. Oppositely, the economic history literature on product market entry and exit has developed only very recently, and has a country-level focus.

Research focusing on the determinants of aggregate bilateral trade often used panel gravity models to estimate the average effect of trade costs (geography, trade policy, exchange rate regimes) and factor endowments,[4] on export performances. Estevadeordal et al. (2003) argue that the gold standard and the fall in transport costs were behind the sustained trade expansion during the first wave of globalization. Jacks et al. (2010) and Jacks et al. (2011) confirm the relevance of the reduction in trade costs, and highlight the importance of economic expansion. Different strands of the literature focused on specific channels. Fixed exchange rates are often seen as one factor facilitating trade. Indeed, Lopez-Cordova and Meissner (2003) find that the classical gold standard (Officer, 2018) boosted trade among those nations that joined the system. However, similar exchange rate arrangements have not always been as effective. For example, Flandreau (2000) and Timini (2018) agree that the Latin Monetary Union did not have significant Union-wide effects on bilateral trade flows. Trade policy, in particular free trade agreements, also received substantial attention. Accominotti and Flandreau (2008) argue that the Cobden-Chevalier[5] trade network (approximately 1860-1880) did not affect trade. However, Lampe (2009) shows that MFN treaties often "did not pursue overall trade liberalization, but rather reductions in duties on specific commodities", with asymmetric benefits across countries and products.[6] Mitchener and Weidenmier (2008) identify another source of decline in trade costs: the colonial network. They suggest that the "empire" reduces trade costs by the use of a common language and other policy choices, such as the formation of preferential trade areas, custom and currency unions. Becuwe et al. (2018) compare France and Germany and find that even one of the standard factors in gravity, distance, has heterogeneous effects on trade at the country level. They suggest that this heterogeneity may be related to a bundle of policy factors, such as "commercial policy".

On the other side, constrained by data availability, product market entry (and exit) in historical perspective has only recently begun to receive some attention. Historical datasets do not include firm-level information. They contain product-level information and have only been collected for a limited number of countries: Belgium (Huberman et al., 2017), Canada (Jacks, 2014); France (Becuwe et al., 2018), Italy (Federico et al., 2012), Japan (Meissner and Tang, 2018), Spain (Betrán and Huberman, 2016), Germany (Hungerland, 2018), Mexico (Kuntz-Ficker and Tena-Junguito, 2018), Brazil (Absell and

[4] See Lampe and Sharp (2016) for a comprehensive review.

[5] The name refers to the surnames of the English and French negotiators of the first treaty of the network (between Britain and France).

[6] Lampe (2009) estimates the increase in exports attributable to the Cobden-Chevalier network, and shows a substantial degree of heterogeneity. He argues that "exporters from countries whose governments used bilateralism strategically to bring down partner tariffs benefitted most".

Tena-Junguito, 2018), Argentina (Rayes, 2018), and Honduras (Ledezma Díaz, 2018). However, only Meissner and Tang (2018) focus on market entry. Exploiting a new database at product and country level, with five-year intervals between 1880 and 1910, they shed additional light on the Japanese industrialization process, focusing on the external sector. Particularly, they analyse Japan's exports to uncover the determinants of their rapid growth. Decomposing export growth along its margins, they show that while the intensive margin was preponderant (responsible for two-thirds of Japanese export growth), there was a considerable part (one-third) of export growth associated to the extensive margins, i.e. new products and markets. They assert that, on one side, the relevance of the intensive margin is mostly in line with the conventional view of the first globalization, as it may be explained by persistent factor endowments. On the other, they argue that the relative importance of the extensive margins calls for other, more dynamic, determinants, such as "market intelligence, political economy, and market demand factors". They convincingly support and reinforce these findings through market entry and exit regression analysis.

Therefore, the aim of the paper is twofold: first, to assess the determinants of Italian aggregate bilateral exports; second, exploiting the granular information contained in the Bankit-FTV DB, to understand the course of the Italian export margins and to empirically investigate the factors that shaped Italian product market entry and exit. This also allows to contextualize the Japanese findings (Meissner and Tang, 2018) and to understand whether Japan was an "isolated case" or if the Japanese and the Italian experiences have features in common.

3. Italian trade and industrialization during the first globalization

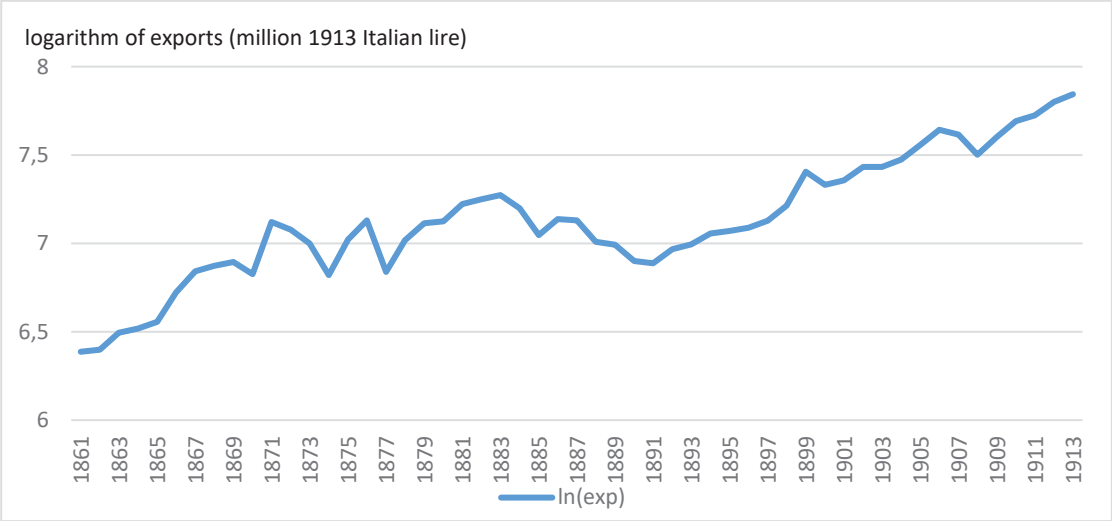
From its unification to WWI, Italy increased its participation in the international economy. Italian openness, measured as the sum of exports and imports over GDP, increased from an average of 14% during the period 1862-1887, to 21% in the period of 1888-1914 (Federico et al., 2012).[7] Italian exports increased by approximately four times in real terms (Pistoresi and Rinaldi, 2012; see Figure 1 below), keeping the pace of world exports.[8] However, Italy's export composition gradually changed: in 1863-67, primary products accounted for 85% of exports, while manufacturing for the remaining 15%. In 1909-13, manufacturing goods constituted almost two-fifth of total exports, with "various manufactured goods" (one-digit SITC "6" category, excluding "raw silk"[9]) increasing from 5% to 22% of exports, "miscellaneous manufactured articles" (one-digit SITC "8" category) passing from 3% to 8%, and "machinery and transport equipment" (one-digit SITC "7" category) taking off, from 0 to 3% (Federico et al., 2012; Vasta, 2009).

[7] It peaked at 25% in 1913 (Federico and Wolf, 2013).

[8] The share of Italian exports over world exports remained constant, particularly between 1860s and 1880s – at around 3-3.5% – and then slightly declined, until 2.5% in 1913 (see Federico and Wolf, 2013).

[9] In this accounting procedure, raw silk (the main Italian export in this period) is catalogued as primary product. As explained in Federico and Wolf (2013), "most of its value […] consisted in cocoons – a purely agricultural raw material".

Figure 1: Italian exports, 1861-1913



Note: Logarithm of exports, expressed in million 1913 Italian lire.
Source: Author's elaboration on Ricardo Project DB (Dedinger and Girard, 2017), World Exchange Rates Series (Federico and Tena, 2019), and Istat.

Italy's changing export composition partially reflected the undergoing industrial transformation of the country.[10] However, despite the so-called "*boom giolittiano*"[11] (1895-1913; see Cohen 1967; Federico, 1996; Fohlin, 1999; Cohen and Federico, 2001), the transformation was slower than in other countries.[12] Indeed, throughout the period, raw silk[13] remained the most important Italian export product. However, its share declined from almost one-third (30%) to less than one-fifth (18%) of total exports, and cotton and silk fabrics gained importance up to almost 10% of total exports. At the same time, "food and live animals" slightly increased its relevance, at around one-fourth of total exports and chemicals lost almost half of its share, down to 4% in 1913. These changes, highlighted also by Federico and Wolf (2013),[14] suggest that a factor endowment or static comparative advantage theory alone may be ill-equipped to explain the course of Italian exports and product market entry.

In this context, Coppa (1970, p.769) argues that trade policy positively influenced exports, even if in his view "the government's traditional concern [was] to facilitate the

[10] For detailed regional data on value added production for a variety of industrial sectors, see Fenoaltea, 2004; Fenoaltea and Ciccarelli, 2006; Ciccarelli and Fenoaltea, 2008a; Ciccarelli and Fenoaltea, 2008b; Ciccarelli and Fenoaltea, 2008c; CIccarelli and Fenoaltea, 2009; Ciccarelli and Fenoaltea, 2010; Ciccarelli and Fenoaltea, 2013; Fenoaltea, 2017).
[11] A period of acceleration in the industrialization process. The name is a reference to Giovanni Giolitti, among the most important Italian politicians of the time.
[12] For example, in Japan "higher value-added textiles", such as cotton threads, became the most important single product exported by 1910 (Meissner and Tang, 2018).
[13] Four-digit SITC code 6511.
[14] Federico and Wolf (2013) depict the composition, diversification and revealed comparative advantage (RCA) of Italian trade in the long run (1862-2009). More in detail, they construct a set of indices related to export concentration and RCA, and, in the pre-WWI period, they detect a gradual transformation towards manufacturing, accompanied by increasing export (product) diversification and RCA, Concerning the latter, they show that RCA in manufacturing (excluding silk) started increasing in the 1880s, but Italy only achieved comparative advantage in manufacturing by the very end of the 19th century.

exportation of the products of rural Italy", usually obtained by reducing Italian tariffs on industrial products. Nonetheless, he also suggests that, over time, the Italian government started to gradually consider industrial interests in trade negotiations, as it realized that "though agriculture was most important, it was not everything" (Coppa, p. 769).[15] More in general, to what extent trade policy influenced the specialization of the Italian agriculture is also a matter of debate in the literature (O'Rourke, 1997; Federico, 2008).

As the relevance of trade and trade policy increased, so did trade frictions. The 1880s trade war with France is one example: in the midst of European-wide protectionist resurgences, the two countries scrapped their trade treaty and irremediably compromised their trade relations. The Italian Parliament rejection of the 1905 Spanish-Italian trade agreement is another example: the two countries did not reach a new agreement for almost ten years.[16] These events provide additional interest for quantifying the effect of Italian trade policy on exports.

Moreover, the qualitative literature also indicates that Italian emigrants, that in large numbers left their country of birth during the "age of mass migration" (Arroyo Abad and Sanchez-Alonso, 2018; Baily, 1983) may have influenced Italian exports and product market entry. On this issue, Stanziani (2010, p.54) argues that:

> "Italian traders willing to enter a new market abroad were above all in search of Italian correspondents. The sizeable presence of Italian immigrants […] encouraged this approach. The importance of the overseas Italian community in commercial relations made it easier for the Italian foreign office to get timely information for homeland companies and traders seeking to enter a particular market. Emigration also assisted the establishment of commercial networks. Family networks usually followed patterns of emigration; family members (in the broad sense) gave commercial support to their relatives' homeland trade or productive unit. They provided information about their local market, helped to find correspondents (when they themselves did not play this role) and promoted the family or local product"

More recently, Zanoni (2018) suggests that the Italian "transnational labor paths opened and sustained global networks of trade in Italian products".[17] By including Italian emigration in the empirical analysis, I will examine whether Italian emigrants affected the course and composition of Italian exports, therefore influencing the Italian economy

[15] Italian trade negotiators started to target concessions for a wider array of goods (including both agricultural and manufacturing goods) during the Giolitti's era, particularly after WWI. For imports instead, the literature argued that trade policy effects were practically irrelevant (Federico and O'Rourke, 2001), and not responding to "any clear strategy for industrialization" (Federico and Vasta, 2015).

[16] For more details, see Timini (2020).

[17] Interestingly, she also brings evidence that advertisers of the time were well aware of this phenomenon. Indeed, Zanoni (2018) reports an advertisement from Cella's, a New York importer and seller of Italian food and wine, where it was displayed the following sentence: "Italian-American trade follows hand in hand intensifying from our immigration".

not only through the labour market and remittances channels (Gomellini and Ó Gráda, 2013).

To summarize, Italy's economic course during the first globalization – or as Federico (1996) defined it "a little known success story" – relied not only on a series of domestic factors and policies (e.g. the expansion of the railway network, Ciccarelli and Groote, 2017, 2018; a favourable demography, Ciccarelli et al., 2019; human and social capital, Ciccarelli and Fachin, 2017; Cappelli, 2016, 2017), but also on its capacity of surfing the wave of increasing international economic integration. In this paper, I use both bilateral aggregate (Ricardo Project DB) and product-level information (Bankit-FTV DB), to unveil the determinants of the fourfold increase in Italian (real) exports and the surge in product diversification, passing from 224 products exported in 1862 to 401 in 1913.[18]

4. Data

In this paper I use two bilateral trade databases, exploiting their different features. On one hand, the Ricardo Project DB (Dedinger and Girard, 2017)[19] offers a wider geographical coverage. On the other hand, the Bankit-FTV DB offers unique product-destination-level information, suited for studying, for example, market entry and exit dynamics. This fine grained product-level information comes at the expenses of its geographical coverage, as the Bankit-FTV DB only contains information related to Italy's ten largest trade partners. However, these ten countries represent a large share of Italian exports.[20]

For aggregate bilateral export analysis, I use mirror flows, as in Timini (2018). I prefer data from statistical offices with higher capacities, and longer series over shorter series.[21] To minimize missing information, I use five year intervals.[22] The resulting database is an unbalanced panel with 51 destinations and a time span of almost 50 years.[23] The Ricardo Project DB reports trade flows in pound sterling. GDP and GDP per capita are in dollars. Therefore, I convert trade flows to dollars using the World Exchange Rates Series pound-dollar exchange rate (Federico and Tena-Junguito, 2019). As standard in the literature, GDP and population data are from the Maddison Project Database (Bolt et al., 2018), distance and contiguity are from CEPII GeoDist Database (Mayer and Zignago, 2011), and gold standard adherence is from Officer (2018). In line with Cesarano et al. (2012), I consider the Italian "gold shadowing" period (1903-1911) as *de facto* gold standard. Information on trade treaties have been assembled from a variety of sources: Bassani (1932, 1933), Ministry of Finance (1911), House of Commons (1908) and United States Tariff Commission (1922). The ICOW Colonial History Data Set (Hensel, 2018) contains the information on colonial relationships. Finally, migration data are from Istat

[18] Four-digit SITC classification.
[19] Available at http://ricardo.medialab.sciences-po.fr/.
[20] Up to 90% of the total value of exports, see Figure A1.1, Appendix 1, for more details.
[21] To avoid artificial "jumps" in the data, caused by switching across different sources.
[22] Using intervals is common practice in the trade literature (Yotov et al., 2016).
[23] Five-years intervals between 1865 and 1910, plus 1913.

(1933).[24] Table A2.1, Appendix 2, provides a summary of the definition of the variables and their sources. Summary statistics are reported in Table A2.2, Appendix 2.

Product-level analysis is based on the Bankit-FTV DB. This database is the result of an incredible effort in digitalising all the sources that collected trade transaction statistics, such for example the volumes of *Movimento Commerciale*[25] and other secondary sources, e.g. Istat publications (Federico et al., 2012). The database enumerates Italian exports and imports at the four-digit SITC level.[26] Indeed, the Bankit-FTV DB contains information on more than 400 different products, between Italy and its ten major trade partners.[27] The original database contains only those products that have been exported to at least one destination in a specific year. I inflate the database to include the additional "zeros" of trade. The Bankit-FTV DB has a clear advantage in terms of the detailed product-level information: it is the finest reached in economic history studies. Additionally, its yearly – and continuous – coverage permits to relax the assumption – made by other historical studies that use benchmark years – of no entry, exit, and/or subsequent entry between two points in time, and to precisely determine the timing of product entry and exit. The sources of the other variables, when not Bankit-FTV DB itself, are the one reported above for the analysis of aggregate bilateral exports. For more details about the definition of the variables and their sources see Section 6 and Table A2.3, Appendix 2. Summary statistics are reported in Table A2.4, Appendix 2.

5. The margins of Italian exports

The gradual transformation of Italy from an agricultural to a manufacturing oriented economy has been already studied in the literature (e.g. Federico et al., 2012; Federico and Wolf, 2013), in parallel with the vicissitudes of the Italian external sector (e.g. Pistoresi and Rinaldi, 2012). However, much less is known on the dynamics behind the aggregate trends. Therefore, I proceed as follows: first, I calculate the number of products exported and the average export value per product for each destination included in the Bankit-FTV DB. Second, I decompose export growth by good categories (see below for more details).

[24] For our period of interest, Istat data include information on Italian emigrants to "Continental [destinations]" (Austria, Germany, France, Switzerland, and "Others [in Europe]") and to "Transoceanic [destinations]" (Argentina, Brazil, Canada, US, and "Others [outside Europe]").

[25] Released annually by the Kingdom of Italy since 1862, it is the primary source par excellence for Italian trade data.

[26] Technically, the database contains even more disaggregated data than the four-digit SITC level, as it reports directly trade flows for different products within the four-digit SITC categories, classified by the product label as recorded in the primary sources. However, this information is – unfortunately – impossible to use as product labels are not coherent over time. For example, "oxen and bulls" had a single label until 1886. From 1887/1888 their labels were separated. Therefore, I aggregate trade flow data to the four-digit SITC (the most disaggregated level that is coherent over time). SITC classification was included in the database directly by the authors. For further details on the database, including the original description (in Italian) and the correspondent SITC four-digit classification, see Federico et al. (2012).

[27] Argentina, Austria-Hungary, Belgium, France, Germany, Great Britain, the Netherlands, Russia, Switzerland and the US.

Figure 2 reports the information by destination country for both the number of products and the export value per product (1913 lire). In both categories, and particularly evident in the latter case, there are several abrupt changes that call for further exploration.

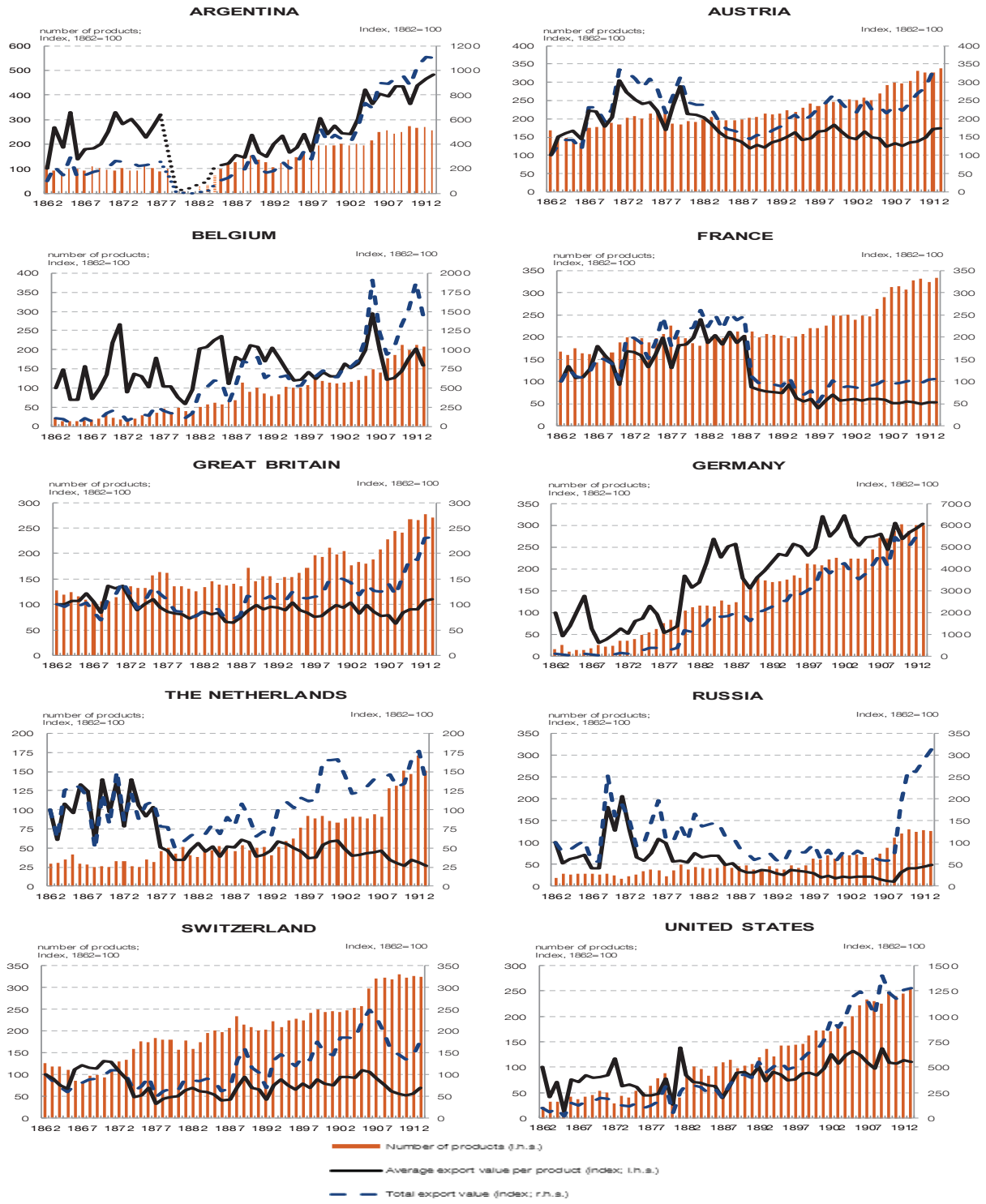
Therefore, inspired by the work of Eaton et al. (2008) as applied in Meissner and Tang (2018), I decompose export growth in the following four different categories:

1) Continuing goods in continuing destinations, i.e. those goods that are exported to destination j at t-1 *and* t;
2) Continuing goods in "other" destinations, i.e. those goods that are exported to at least one destination k at t-1, and are exported to other destinations j (j≠k) at time t;[28]
3) Entering goods, i.e. those goods that were not exported at t-1 and are exported to at least one destination j at time t;[29]
4) Exiting goods, i.e. those goods that were exported to destination j at t-1 and are not exported to destination j at time t;

[28] To be noted that the term "other destinations" identifies a destination where the product p was not exported at time t-1. In this, I differ from the cited literature, that identify "new" destinations, i.e. destinations that did not receive any products from the exporter at time t-1. However, due to the fact that Bankit-FTV DB only includes the ten major Italian trade partners (and all received a positive number of products in 1862), there is no "new" destination as such. Nevertheless, the numbers reported in Table 1 show the importance of separating "continuing goods to continuing destinations" and "continuing goods to other destinations" as they have very different behaviours throughout the period of analysis.

[29] Here, again for the characteristics of the Bankit-FTV DB, I cannot further decompose the indicator between "continuing destinations" and "new destinations", because there are no strictly defined "new destinations".

Figure 2: Number of products and export value per product, by destination country (1862-1913)



Note: In this figure, the y-axis scale used to depict the number of products (columns, l.h.s.), the average export value per product (solid line, index: 1862=100; l.h.s.), and total export value (dotted line, index: 1862=100; r.h.s.) varies at the country-level. As highlighted in Federico et al. (2012), Argentinian data contain some anomalies in certain years around end of the 1870s - beginning of the 1880s (represented here by the dotted line and columns) related to limitations in the primary sources available (not allowing to assign imports from South America to Argentina only). The main results of this paper are robust to this issue.

Source: Author's elaboration on Bankit-FTV DB.

Table 1 reports the export growth rate and the share of growth accountable to each of the four categories outlined above, for every ten-year window between 1865 and 1905, plus a shorter window for 1905-1913, as well as the growth and correspondent decomposition for the whole period 1865-1913.[30] The numbers presented are useful to portray the course of Italian exports since its Unification to World War I. Overall, the expansion of continuing goods in continuing destinations accounted for more than two-thirds (71%) of trade growth. The two categories of continuing goods to "other" destinations and entering goods account for a similar share of export growth, approximately one-fifth each. Exiting goods are also relevant, with a 10% drag to growth. The shares of the decompositions related to entering and exiting goods are considerably higher than those available for Japan (Meissner and Tang, 2018). However, I use a more disaggregated product classification and consider a wider range of goods.[31]

Table 1 : Italian export growth and its decomposition by product type

	1865-1875	1875-1885	1885-1895	1895-1905	1905-1913	1865-1913
Real export growth	64.1	10.1	-10.6[a]	51.4	26.4	209.0
GROWTH DECOMPOSITION:						
Continuing goods, cont. destinations	88.7	-41.7	109.3[a]	93.7	66.3	71.5
Continuing goods, other destinations	10.0	91.9	-27.7[a]	5.2	15.0	19.6
Entering goods	7.4	65.2	-22.0[a]	11.4	23.4	21.2
Exiting goods	-6.1	-15.3	40.35[a]	-10.4	-4.6	-12.4
Total	100	100	100	100	100	100

Note: Real export growth and its decomposition are based on the Bankit-FTV DB, therefore correspond to data for the main ten Italian trade partners. For the purposes of this table, continuing goods in continuing destinations are defined as those goods that are exported to destination j at t-1 and t; continuing goods in other destinations as those goods that are exported to at least one destination k at t-1, and are exported to other destinations j (j≠k) at time t; entering goods as those goods that were not exported at t-1 and are exported to at least one destination j at time t; exiting goods as those goods that were exported to destination j at t-1 and are not exported to destination j at time t. t=1865,1875,1885,1895,1905,1913.

[a] In 1885-1895, real export growth is negative, therefore positive contributions indicate negative growth in the correspondent category, whereas negative contributions indicate positive growth in the correspondent category.

Source: Author's elaboration on Bankit-FTV DB.

[30] In the literature the length for these kind of decomposition exercises is usually either five or ten years. Ten-year windows are sufficient to explain the evolution of Italian exports with detail, and allows to avoid using those years (end of the 1870s - beginning of the 1880s) that contain anomalies in Argentinian data. The reasons of these anomalies are reported in the note of Figure 2. Please refer to Federico et al. (2012) for more details on this issue.

[31] I include both manufacturing and agricultural products for two main reasons: first, agricultural goods represented the bulk of Italian exports throughout the period (despite their declining share). Leaving them out would imply to discard an important part of Italian exporting activities. Second, both factor endowments/comparative advantages and policy changes during the first globalization implied drastic consequences for agricultural products as well (e.g. the European grain invasion, O'Rourke, 1997).

Table 1 shows important heterogeneity in the share of export growth explained by each category across decades.

More in detail, between 1865 and 1875, high export growth (+64%) is mainly explained by continuing goods to continuing destinations (89%): this means, for example, exports of raw silk[32] to France, Austria and Switzerland.

Between 1875-1885, the still positive but slowing export growth (+10%) is explained by the counteracting forces of continuing goods to other destinations (e.g. eggs and plaited products[33]) and entering goods (e.g. hemp, hides and skins, poultry and maize, and silver[34]) on one side (positive contributions to export growth), and continuing goods to continuing destinations (e.g. olive oil,[35] to Austria, Great Britain and Russia) and exiting goods (e.g. wood to Austria or wheat[36] to Great Britain) on the other (negative contributions).

The period 1885-1895 stands out: it reports a backslide of Italian exports (-11%). This important episode also serves to exemplify the evolution of Italian trade as previously summarized in Section 3: raw silk plays a pivotal role, and there is marked heterogeneity both between *and* within agriculture and manufacturing. Briefly, in 1888, while already facing a sluggish export performance, trade with France collapsed from approximately half to less than one fifth of the total as a consequence of a trade war, and never recovered. The negative impact is concentrated mostly on agricultural exports destined to France, such as raw silk, eggs, wine, or husked rice. Altogether, these four products show a decline of 187 million lire.[37] Raw silk alone accounts for more than half of it. This amount corresponds to approximately 15% of Italian exports in 1885. Decrease in manufacturing exports is an issue of lesser importance, with one notable exception, plaited products (6 million lire).[38] However, despite the persistent effects on the relative importance of France as an export destination, this loss was reversed relatively rapidly, mostly by increasing agricultural *and* manufacturing exports to other destinations, such as Germany, Switzerland and United States.[39] On one side, raw silk had again a major role: its exports to these three countries alone rose by 158 million lire. Eggs, hemp, cattle, and milled rice[40] are other examples of successful agricultural products. The 1892

[32] SITC four-digit code: 6511 (raw silk).

[33] SITC four-digit code: 0251 (eggs) and 6597 (plaited products). These two products alone explain more than one third of export growth attributable to "continuing goods, other destinations".

[34] SITC four-digit code: 2652 (hemp); 2110 and 2111 (sheep, lamb, bovine and equine hides); 0014 (poultry, live); 0440 (maize, unmilled); 6811 (silver, unwrought, unworked, or semi-manufactured). These five products explain more than four fifth of export growth attributable to "entering goods".

[35] SITC four-digit code: 4235 (olive oil)

[36] SITC four-digit code: 2482 (wood) and 0416 (wheat).

[37] All values are expressed in real terms, using 1913 lire. Nominal values have been converted to real values using the deflator provided by the Italian National Institute of Statistics (Istat; http://seriestoriche.istat.it).

[38] SITC four-digit code: 0421 (husked rice) 1121 (wine). Plaited products also report a dismal performance in Germany (falling by 8 million of 1913 lire) and Switzerland (3 million of 1913 lire). Specie flows were also recorded in trade statistics and fell abruptly in the period: such evolution is strictly connected to the exchange rate convertibility and Italy's entry and exit in the gold standard. For more details on this issue, see Fratianni and Spinelli (1984).

[39] Figure A1.2, Appendix 1, contains detailed information on the importance of each country (among the ten major trade partners) in explaining Italian export growth between 1865-1913.

[40] SITC four-digit code: 0011 (animals of the bovine species, including buffaloes, live); 0422 (rice semi-milled or wholly milled).

trade treaty with Austria provided additional help in this direction, achieving considerable tariff cuts for some widely exported Italian products, such as raw silk and wine. The increase in exports of these two products to Austria accounts for almost 28 million lire. On the other side, outstanding performances in manufacturing are related to dyeing, tanning and colouring materials, textiles, silver products, headgears, and manufacture of carving,[41] mirroring the industrial specialization of Italy and its regions. From a different perspective, Table 1 indicates that negative export growth is concentrated in the "continuing goods to continuing destinations" and "exiting goods" categories, whereas the remaining categories of "continuing goods to other destinations" and "entering goods" act as counterbalancing forces.[42] Table A3.1, Appendix 3, compares the course of Italian exports to France and the rest of the world before and after the start of the "trade war".

In 1895-1905 Italian exports continued recovering, and recorded a dramatic +51%. These developments are based on the expansion of continuing goods to continuing destinations (e.g. raw silk to the US and Switzerland) and entering goods (e.g. cotton fabrics[43] to Argentina).

Then, exports grew solidly until the eve of World War I (1905-1913: +26%), relying to a lesser extent on continuing goods to continuing destinations, and relatively more on continuing goods to other destinations (e.g. raw silk to Russia) and entering goods (e.g. tires[44] to Belgium).

While the list of products identify in the parentheses above is merely indicative and has to be interpreted simply as an illustration of the goods that explain a significant part of the variation in each category, it also detects some of the distinctive features of the Italian external sector: the importance of silk for exports (Federico, 2005; Federico et al., 2012), the decline in certain agricultural exports exposed to the "European grain invasion" (O'Rourke, 1997), and the increasing product diversification both in agriculture and manufacturing, as summarized by the increasing number of products traded.

The course of Italian exports and the movements occurring along the margins, call for a deeper understanding of whether these developments are linked to persistent factor endowments or (also) to other, more dynamic, determinants. Therefore, I implement a regression analysis to uncover the determinants of Italian exports and product market entry (and exit).

[41] SITC four-digit: 5322 (dyeing, tanning extracts, tannins and their derivatives); 5513 (essential oil, resinoid, etc.); 6541 (fabrics, woven, of silk); 8484 (headgear and fitting thereof); 8991 (articles and manufacture of carving, molding materials).

[42] In the corresponding column of Table 1, as real export growth is negative for the period 1885-1895, positive contributions indicate negative growth in the correspondent category of goods, whereas negative contributions indicate positive growth in the correspondent category of goods.

[43] SITC four-digit code: 6520 (cotton fabrics).

[44] SITC four-digit code: 6250 (tires).

6. Methodology

As previously mentioned, I use two databases, as they offer different geographical and product-level information. My empirical strategy is tailored to the characteristics of these databases.

In the first part, using aggregate bilateral exports, my empirical strategy follows Head and Mayer (2014). I implement a gravity model that explains Italian exports by transaction costs and economic size. I use a standard gravity approach. Indeed, it is only in this way that I can estimate the coefficient of a set of time invariant variables (e.g. distance, contiguity) that are of intrinsic interest for the Italian case, and compare them with the existing literature (e.g. Lopez-Cordova and Meissner, 2003). To properly deal with trade data heteroscedasticity and "zeros", I perform these estimations using a poisson pseudo-maximum likelihood estimating procedure (Santos-Silva and Tenreyro, 2006).[45] Therefore, the main specification can be written as follows:

$$X_{ijt} = \exp\big(\beta_0 + \beta_1 \ln GDPsum_{ijt} + \beta_2 \ln GDPsim_{ijt} + \beta_3 \ln(|diffGDPpc|)_{ijt} + \beta_4 \ln\_distance_{ij} + \beta_5 contig_{ij} + \beta_6 \mathrm{MFN}_{ijt} + \beta_7 Gold\_Standard_{ijt} + \beta_8 Italian\_immigration_{ijt} + \beta_9 ColonyOther_{ijt} + \delta_{\approx j} + \gamma_t\big) + \varepsilon_{ijt} \quad (1)$$

where X_{ijt} are Italian exports to country j at time t. $lnGDPsum_{ijt}$ and $lnGDPsim_{ijt}$ are two variables related to the economic size of the country pairs: the logarithm of the sum of the country-pair's GDPs, and the similarity in size between the Italian and destination country GDP (this corresponds to "the log of the product of the share of GDP relative to total GDP of the dyad", Meissner and Tang, p. 1088). $\ln(|diffGDPpc|)_{ijt}$ is the log of the absolute difference in GDP per capita and, in the spirit of Helpman (1987),[46] it proxies factor endowment differences. The coefficient is expected to be positive for a traditional Heckscher-Olhin trade structure, where countries with different endowments trade more (and trade different products), and negative otherwise, i.e. if intra-industry trade dominates (see Helpman and Krugman, 1985; for an empirical application see Cieslik, 2005). $lndist_{ij}$, $contig_{ij}$, MFN_{ijt}, $Gold\_Standard_{ijt}$, and $ColonyOther_{ijt}$ are proxies for trade costs. While the first two, distance and contiguity, identify geography-related costs, the others indicate policy-related trade costs. In particular, *MFN* indicates whether or not the country pair has a trade treaty in force. During the first globalization, countries exited from bilateral trade treaties at a much higher rate that in present times. Therefore, the identification of the "MFN effect" comes from both the entry into force of *and* the exit from trade agreements. *Gold_Standard* identifies whether or not the countries in the dyad are both in the gold standard, and *ColonyOther* if the destination country is a colony of another nation.[47] I

[45] For more details on the advantages of estimating gravity equations using poisson pseudo-maximum likelihood, see Yotov et al. (2016).

[46] Clark and Stanley, 1999, and Okubo, 2007, are examples of its empirical application.

[47] In one of the robustness tests, I will also consider diplomatic relationships ($DipRep_{it}$, $DipRep_{jt}$), i.e. if the partner country has a diplomatic representation in Italy or the opposite.

also consider Italian immigration in destination countries,[48] as it can affect trade costs and foreign demand (for Italian products). Due to the trade-off between availability of detailed data and sample size, I opt for constructing a dummy variable to identify "important" destinations. A country is labelled as "important" (dummy $Italian\_immigration_{ijt}$ = 1) if receives at least 5% of total Italian emigrants at a certain point in time (i.e. with a lag with respect to export data).[49] Additionally, I include year fixed effects (γ_t), to control for any Italian and global trends,[50] and region fixed effects ($\delta_{\approx j}$).

In the second part instead, with bilateral product-level data, I closely follow Meissner and Tang (2018) approach in their analysis of Japanese export course and composition, and implement a pooled logit model to explain first market entry, further market entry, and market exit. Additionally, in a fourth set of regressions, I analyse bilateral product-level export flows. In this case, I apply a reduced form of equation (1). The pooled logit model is specified as follows:

$$\pi_{pjt}^{k} = F(\beta_0 + \beta X'_{jt} + \delta V'_{pt} + \gamma_t) \quad (2)$$

π_{pjt}^{k} is the probability of entry (exit) of product p in (from) country j at time t. This means that probability is modelled at the product/destination/year level. The subscript "k" refers to the different types of market entry/exit analysed, and it can be equal to "first market entry", "further market entry", or "market exit". Closely following Meissner and Tang (2018) methodology, the three types of events are operationalized by the means of dummies, with value either zero or one and varying at the product-destination-year level. "First market entry" identifies the observations where the product is exported for the first time. In these cases, the dummy is equal to one. For destinations where the product is not present in the first market entry year, and all the years prior to that, the dummy variable takes the value of zero. After its "first market entry", the product p is dropped from the sample (to avoid capturing it as a zero).[51] "Further market entry" identifies any product market entry episode after and excluding "first market entry". As in the case of "first market entry", after "further" entering the destination market, the

[48] In this paper, I am interested in the presence of Italians in destination countries. Therefore, I use interchangeably the terms: Italian immigrants (in destination countries) and Italian emigrants (to destination countries).

[49] As emigration data is reported (Istat, 1933) as the average over a five-year period, and I use five-year intervals for trade data, I insert emigration data with a lag to minimize endogeneity concerns. A destination can be labelled as "important" only during the era of Italian mass migration, defined as 1876-1913, in line with the literature and for the period of analysis of this paper (see e.g. Gomellini and Ó Gráda, 2013; Ardeni and Gentili, 2014). Yearly gross migration flow data are available at http://seriestoriche.istat.it. However, this approach reduces substantially the number of countries included in the dataset. When applying this alternative approach, main results hold.

[50] These include the world's and Italy's state of technology and its business cycle, as well as other relevant Italian features

[51] All the subsequent observations for that product-destination combination are switch to "missings". This is done to avoid capturing that product-destination combination either as "non-entered yet" (i.e. "zeros") or as a "first market entry" (i.e. "ones")

product-destination combinations are dropped from the sample. "Exit" identifies "permanent exits", i.e. products that exit the destination market and do not enter again. The variable is equal to one if the product-destination combination had positive exports at t-1, but are zero at t and all t+n following years. X' and V' are vectors including explanatory variables that vary at the destination-time and product-time level respectively. These include destination market size and other destination-level indicators (e.g. GDP, difference in GDP per capita, "important" destinations for Italian emigrants), trade costs (e.g. distance, membership in trade agreements or the gold standard, etc.), and product-level information (e.g. the number of markets where the product is exported). While its annual coverage and very detailed product-level information are sources of value added, the geographical limitations of the Bankit-FTV DB posit some empirical issues. Certain variables that ideally should enter together in the regressions, show a very high coefficient of correlation. For example, distance and contiguity. Therefore, I am obliged to refine the set of variables related to geography to be included in the main regressions.[52] Some other variables do not have enough variance to be included, such as the dummy indicating the presence of diplomatic representation. However, their non-significance in the aggregate and geographically more expanded regressions partly alleviate these concerns.

7. Aggregate Exports

In this section, I present the results of the gravity model applied to aggregate bilateral Italian exports. Table 2 shows the results for the regressions based on the main specification (see Eq. 1). On one side, these are in line with a range of consolidated historical and empirical facts, therefore reassuring on the estimating strategy. On the other side, the results quantify for the first time the role of emigrants and trade policy for Italian exports.

Indeed, the stylized facts of gravity are confirmed. Economic mass is positively associated with export flows. Oppositely, distance displays a negative coefficient: being farther apart from Italy implies receiving less Italian exports. Similarly, sharing a border has large and positive effects on exporting (≈+180%, indeed France, Switzerland and Austria-Hungary were among the top destinations for Italian exports). Similarity in GDP size is positively correlated with exports, although it is not significant when I include it in the regression framework. GDP per capita differences are positively associated with higher exports, confirming that Italy is trading more with countries at a different stage of development. In other words, this suggests that Italian exports are following a classic Heckscher-Olhin type of trade, where countries with different endowments trade more with each other (in line with what suggested by Findlay and O'Rourke, 2007). More precisely, the $\ln(|diffGDPpc|)$ coefficient implies that for a 10% increase in the absolute

[52] I prefer distance over contiguity as it provides greater variation. Results are robust to the use of contiguity instead.

difference between the Italian and the destination country GDP per capita, Italian exports will increase by more than 5%. To be noted that, as expected, the elasticity is below one. Moreover, the point estimate is, in absolute terms, slightly above those obtained using total trade and contemporary data (e.g. Baltagi et al., 2003; Stack, 2009), but very similar to those focusing on emerging and developing economies and agricultural trade (e.g. Rasoulinezhad and Jabalameli, 2018; Carrillo-Tudela and Li, 2004).

Trade policy matters. Having a trade treaty in force with the destination country is associated to an average increase in Italian exports of more than 40% ($100 * (e^{0.362} - 1)$). The coefficient is similar to those reported by the contemporary literature (see e.g. Head and Mayer, 2014; Baier and Bergstrand, 2007). The gold standard dummy is positive and significant, suggesting a trade-enhancing role (≈+50%).[53] The sign and size

Table 2: Determinants of Italian (aggregate) exports

Variables	(1) Basic	(2) + TA and GS	(3) + Italian immigration	(4) + Colony	(5) + Region FE
lnGDPsum	0.509***	0.465***	0.361***	0.351***	0.467***
	(0.057)	(0.062)	(0.062)	(0.060)	(0.089)
lnGDPsim	1.204	1.593	0.401	0.758	2.249*
	(1.691)	(1.684)	(1.412)	(1.332)	(1.350)
ln(|diffGDPpc|)	0.779***	0.752***	0.595***	0.652***	0.573***
	(0.228)	(0.233)	(0.177)	(0.176)	(0.198)
ln_distance	-0.317**	-0.265**	-0.374***	-0.293**	-1.333***
	(0.130)	(0.134)	(0.111)	(0.115)	(0.481)
contig	1.596***	1.579***	1.055***	1.119***	0.935***
	(0.172)	(0.173)	(0.187)	(0.201)	(0.210)
MFN		0.399***	0.374***	0.261*	0.362***
		(0.133)	(0.144)	(0.155)	(0.134)
Gold_Standard		0.289	0.371*	0.443**	0.400**
		(0.291)	(0.217)	(0.224)	(0.195)
Italian_immigration			0.949***	0.855***	0.459*
			(0.183)	(0.184)	(0.236)
ColonyOther				-1.318***	-1.360***
				(0.322)	(0.370)
R2	0.75	0.76	0.80	0.81	0.83
Observations	227	227	227	227	227
Year FEs	YES	YES	YES	YES	YES
Region FEs	NO	NO	NO	NO	YES

Note: Poisson regressions. Dependent variable: Italian exports (in US$). Fixed effects and constants not reported for the sake of simplicity. Robust standard errors (in parentheses) are clustered at the geographical level.
***p < 0.01, **p < 0.05, *p < 0.1
Source: Authors' elaboration

[53] Due to some limitations (i.e. only one exporter, unbalanced panel, limited number of data), most of which are shared with the rest of the literature, I cannot completely rule out the endogeneity of some of the estimates, in particular those of "MFN" and "Gold_Standard". However, for the former, these concerns are somewhat alleviated by the fact that Italy signed a large number of trade agreements with a varied set of countries (Bolivia, Greece, Mexico, and Romania to name a few), well beyond its main trade partners (which is the usual endogeneity concern for trade agreements).

of the estimation are broadly in line with those of other studies that use a panel of exporters (see, e.g. Lopez-Cordova and Meissner, 2003; Estevaordal et al., 2003; Flandreau and Maurel, 2005).[54] The dummy variable capturing "important" destination for Italian emigrants ($Italian\_immigration_{ijt}$) has a positive and significant coefficient. "Important" destinations have an "export premium" of approximately 60%. This large and positive effect is in line with what argued by the qualitative literature (Zanoni, 2018; Stanziani, 2010), that highlights two mechanisms. First, emigrants tend to preserve a higher demand for goods produced in their home land; second, they can be an important source of information on the conditions and rules of the destination market, reducing bilateral trade costs. Finally, the coefficient capturing the effect on trade of being a colony of another nation is negative (as expected).

To ensure the robustness of these findings, I run a set of alternative specifications. Results are included in Table 3. In Column 1 and Column 2, I use different measures of economic mass: the logarithm of the destination country GDP (*lnGDPdest*) and population data (*lnPOPsum* and *lnPOPsim*). In Column 3, I interact the distance measure with time dummies, to account for increasing economic integration. The vision that transport costs fell is in line with the positive coefficient of the interactions, particularly since the end of the 19th century (this is in line with what Yotov, 2012, found for the second wave of globalization).[55] In Column 4, I include region-time fixed effects, to account for all shocks common to countries pertaining to the same region. To a certain extent, region-time fixed effects serve also to alleviate the concerns related to the inclusion of multilateral trade resistances (Anderson and van Wincoop, 2003) in a context of a single exporter.[56] In Column 5, I include data on both Italy's diplomatic representations abroad (*Italian_diplomatic_rep*) and foreign diplomatic representations in Italy (*Diplomatic_rep_in_Italy*). Data are from the Correlates of War database (Bayer, 2006). The idea is to check whether diplomatic bureaucracy facilitates bilateral trade (for example, through improved access to local information). However, I do not find support for this hypothesis, as both variables report coefficients that are relatively small and not significantly different from zero. Finally, I include the Latin Monetary Union in the analysis. In line with Flandreau (2000) and Timini (2018), the LMU does not produce Union-wide effects on bilateral trade flows. The coefficients of the main variables of interest are very stable, both in terms of size and sign, therefore confirming the previous findings.

[54] However, point estimates are slightly higher: this may be related to the fact that Italy was only on the gold standard in periods when macroeconomic conditions were stable.

[55] The coefficients of the interactions are not reported for the sake of simplicity.

[56] In a separate regression, not reported for the sake of simplicity, I approximate the multilateral trade resistances by a "remoteness index", another solution proposed in the literature (see e.g. Cirera et al., 2016 for an application). Main results are robust to this alternative specification.

Table 3: Determinants of Italian (aggregate) exports, robustness

Variables	(1) lnGDPdest	(2) Pop.	(3) Dist*time	(4) Reg*time FE	(5) Diplomatic Rep	(6) LMU
lnGDPsum			0.468***	0.466***	0.488***	0.460***
			(0.0749)	(0.0795)	(0.0909)	(0.0879)
lnGDPsim			3.308***	3.469***	2.741*	2.214*
			(1.280)	(1.341)	(1.537)	(1.341)
lnGDPdest	0.461***					
	(0.0794)					
lnPOPsum		1.318***				
		(0.455)				
lnPOPsim		0.117				
		(0.200)				
ln(|diffGDPpc|)	0.259**	0.473***	0.634***	0.681***	0.578***	0.569***
	(0.115)	(0.136)	(0.172)	(0.190)	(0.203)	(0.194)
ln_distance	-1.168**	-1.142**	-2.579***	-1.549***	-1.429***	-1.306***
	(0.464)	(0.524)	(0.418)	(0.418)	(0.513)	(0.479)
contig	1.016***	0.993***	0.729***	0.821***	0.910***	0.879***
	(0.212)	(0.190)	(0.180)	(0.196)	(0.216)	(0.211)
MFN	0.332**	0.354***	0.600***	0.463***	0.351**	0.312**
	(0.137)	(0.134)	(0.123)	(0.124)	(0.142)	(0.134)
Gold_Standard	0.395**	0.420*	0.433**	0.393**	0.392**	0.432**
	(0.190)	(0.218)	(0.171)	(0.172)	(0.194)	(0.197)
Italian_immigration	0.484**	0.577**	0.568***	0.478**	0.444*	0.507**
	(0.241)	(0.273)	(0.214)	(0.225)	(0.246)	(0.245)
ColonyOther	-1.282***	-1.063***	-1.362***	-1.747***	-0.467	-1.400***
	(0.350)	(0.378)	(0.354)	(0.393)	(0.896)	(0.371)
Diplomatic_rep_in_Italy					-0.146	
					(0.0989)	
Italian_diplomatic_rep					0.0861	
					(0.117)	
LMU						0.518
						(0.329)
R2	0.83	0.82	0.86	0.85	0.82	0.83
Observations	227	227	227	217	200	227
Year FEs	YES	YES	YES	YES	YES	YES
Region FEs	YES	YES	YES	Region*time	YES	YES
Distance*time	NO	NO	YES	NO	NO	NO

Note: Poisson regressions. Dependent variable: Italian exports. Fixed effects and constants not reported for the sake of simplicity. Robust standard errors (in parentheses) are clustered at the geographical level.
***p < 0.01, **p < 0.05, *p < 0.1
Source: Authors' elaboration

8. Product-level market entry, exit, and export flows

To shed additional light on the determinants of the course of product market entry and exit, I explore the data with three sets of different regressions based on equation (2). The objective is to unveil the proximate causes of first market entry, further market entry, and market exit. In the Bankit-FTV DB there are 588 cases of first market entry, 2264 cases of further market entry and 401 cases of market exit as defined in the text. Additionally, in a fourth set of regressions, I analyse product-level data for export flows, applying a reduced form of equation (1), to understand how product export flow results relate to aggregate flows and market entry findings. In this section, I present the results of these product-level pooled logit and gravity models.

First Market Entry

Table 4 reports the results for first market entry.[57] The first market entry for Italian products is influenced by both trade costs and demand factors. Larger markets are often associated with a higher likelihood of entry, whereas more distant markets are associated with a lower likelihood of entry. More precisely, for any 100% increase in market size (*lnGDPsum*), first market entry of Italian products increases by between 4 and 5 percentage points. This rise until 7 percentage points for agricultural goods. In the case of distance (*ln_distance*), a 100% increase implies a reduction in the probability of entry between 8 and 10 percentage points. The coefficient of distance turns insignificant when I include region fixed effects. This, however, is likely to be due to collinearity. The coefficient related to the difference in GDP per capita (*ln(|diffGDPpc|)*) is positive, but not always significant for first market entry. Most regressions indicate that trade agreements (*MFN*) are associated with positive and significant effects on exports. In the case of agricultural goods, these correspond to an increase in the probability of first market entry of approximately 17 percentage points. The gold standard dummy coefficient is negative but not always significant. One possible explanation is that market entry is easier when Italy is off the gold standard, possibly coinciding with periods of exchange rate depreciation/undervaluation. This depreciation/undervaluation could make Italian products relatively more convenient for importers. This would be in line with the evidence on the post-World War II period, where Di Nino et al. (2013) find a consistent (positive) empirical relationship between undervaluation of the lira and exports. Finally, the previous evolution of exports matters for first market entry. More precisely, a destination that experiences a larger increase in the number of goods exported (*Δn_prod*) is more likely to be chosen as first market for new products, and particularly so in the case of industrial goods. As suggested by Meissner and Tang (2018), this finding points out a possible self-reinforcing mechanism between past and future product market entry. Finally, Italian emigrants (*Italian_immigration*) are relevant for product first market entry. "Important" destinations for Italian emigrants are associated with large increases in the probability of first market entry (approximately 24

[57] First market entry definition is reported in Table A2.3, Appendix 2.

percentage points). Indeed, this is in line with what suggested by Stanziani (2010, p.54): the Italian community was important for "Italian traders willing to enter a new market abroad".

Further Market Entry

In this section, I expand the analysis to "further market entry", i.e. all those product market entry events beyond first market entry.[58] Table 5 reports the results for further market entry.

Market size (*lnGDPsum*) and distance (*ln_distance*) coefficients are very close to those for first market entry, and aligned to gravity predictions. The coefficient of the difference in GDP per capita (*ln(|diffGDPpc|)*) is positive and significant. This means that further market entry is more likely to take place in those countries at a different stage of development. Both trade agreements (*MFN*) and exchange rate arrangements (*Gold_Standard*) are not significant in most regressions reported in Table 5. Differently from first market entry, demand factors seem to matter: growth in sales (*Δln(tot_val_prod)*), increases in the number of goods to destination (*Δn_prod*), the number of market served (*N_markets*) and the increase in export of goods other than product p (*Mean_gr_oth_goods*) have positive and significant coefficients. The role of Italian emigrants (*Italian_immigration*) in contributing to product market entry is confirmed. Indeed, emigrants may increase destination market demand and reduce bilateral trade costs. Finally, inspired by the literature of "industry spillovers", suggesting that market entry can be influenced by previous export activities in similar industry-country pairs (e.g. Muñoz-Sepulveda and Rodriguez, 2015), I calculate a measure for "product proximity".[59] Its coefficient is very small, but positive and statistically significant. This goes along with the idea that products similar to those already exported in a destination country are more likely to enter that market. The literature has been arguing that "product proximity" effects (or "industry spillovers") are driven by the presence of trade intermediaries (Ahn et al., 2011; Bernard et al., 2011; Felbermayr and Jung, 2011; Crozet et al., 2013; Cheptea et al., 2015; Ito et al., 2017; Akerman, 2018; Emlinger and Poncet, 2018) in particular for the agricultural sector and small and medium enterprises (Bernard, 2010; Madsen, 2012), labor mobility (Choquette and Meinen, 2015; Mion et al., 2017), and multinational enterprises (Greenaway et al., 2004; Greenaway and Kneller, 2008; Kinuthia, 2017). The presence of all these factors in Italy is well documented (Lupo, 1987; Amatori and Bezza, 1990; Zamagni, 1990; A'Hearn, 1998; Colli and Rose, 1999; Colli et al., 2003; Battaglia, 2003; Perugini, 2014). However, more granular (firm-level) data are needed to disentangle these channels and to safely

[58] Further market entry definition is reported in in Table A2.3, Appendix 2.

[59] For comparability purposes, the indicator is calculated by a two-step procedure, as in Meissner and Tang (2018): first, I generate "a variable equal to the lagged value-weighted average of the SITC codes of active exports to a market". Second, I take "the log of the absolute value of the difference between the SITC code for a product not yet entered and this weighted average".

prove the extent to which product proximity matters. Nonetheless, these data are practically inexistent for Italy during the period of analysis. Results concerning "product proximity" are therefore to be intended as suggestive evidence, perhaps reinforced by the significance of the indicator in the following regressions (see below). This might be a starting point for future research, but a more in-depth analysis is outside the scope of this paper.

Market Exit

Table 6 reports the results for market exit:[60] they often mirror those of market entry, even if some of the coefficients are not significant when region fixed effects are included in the regression. This may be due to the small sample size. The coefficient of market size (*lnGDPsum*) is negative but often not statistically significant. Distance (*ln_distance*) has a positive and statistically significant coefficient, when regional FE are not included. This means that the odds of exiting a destination market tend to increase with the distance from Italy. As indicated by the negative *ln(|diffGDPpc|)* coefficient (when regional FE are not included) product market exit is more likely to occur when the difference in GDP per capita is lower, that is in those destinations with similar levels of development. The gold standard is likely to lower the probability of exit. That is, once present in a market, exchange rate stability lowers the probability of product market exit. Being an "important" destination for Italian emigrants also lowers the probability of product market exit, by approximately 26 percentage points. Other factors are not consistently significant across all specifications, with the exception of the value of exports to destination in the previous period (*ln(val_prod)*), negatively associated to the probability of exit.

Product-level export flows

Finally, I analyse product-level export flows,[61] applying a reduced form of equation (1). Results are reported in Table 7. Market size (*lnGDPsum*) coefficient is positive, in line with expectations from gravity models. The distance (*ln_distance*) coefficient is negative, but only significant when region fixed effects are not included. The coefficient of the difference in GDP per capita (*ln(|diffGDPpc|)*) is not significant. In both cases, I cannot rule out the hypothesis that these results are driven by the sample composition. Indeed, using a similar gravity specification, the coefficient is positive and significant when using the Ricardo Project DB (see Section 7). Italian emigrants (*Italian_immigration*) and trade agreements (*MFN*) are positively associated with increases in Italian export flows. Again, as in the case of first market entry, and in line with Coppa (1970), the "trade agreement" effect seems to be particularly relevant for agricultural goods. The gold standard coefficient is not always significant, however this

[60] Market exit definition is reported in Table A2.3, Appendix 2.

[61] The Bankit-FTV DB reports trade flows in lire (Italian currency). GDP and GDP per capita are in dollars. Therefore, I convert the former to dollars using the World Exchange Rates Series lire-dollar exchange rate (Federico and Tena-Junguito, 2019).

when using the Ricardo Project DB (see Section 7). Italian emigrants (*Italian_immigration*) and trade agreements (*MFN*) are positively associated with increases in Italian export flows. Again, as in the case of first market entry, and in line with Coppa (1970), the "trade agreement" effect seems to be particularly relevant for agricultural goods. The gold standard coefficient is not always significant, however this may again depend on the characteristics of the Bankit-FTV DB. Main findings are robust to the inclusion of different sets of fixed effects: industry-year and region; region-industry and year; industry-year-region; industry-year region and product fixed effects.[62] In these cases, (pseudo-)R2 increases significantly, until 0.76.

As a caveat, it is important to recall that these results are based on Italian product-level exports to the ten Italian largest trade partners. Therefore, they are not exhaustive in geographical terms: this feature of the Bankit-FTV DB may prevent the identification of dynamics occurring in new destination (e.g. manufacturing exports to least developed countries, etc.).

[62] Regressions are not reported for the sake of simplicity. Industry: two-digit SITC. Product: four-digit SITC.

Table 4: First market entry (logit regression)

Variables	(1)	(2) + abs. diff. GDPpc	(3) + Mean growth of other goods	(4) + ΔNo. exp. goods to dest.	(5) + Italian immigration	(6) +Region FE	(7) Only agricultural goods	(8) Only industrial goods
lnGDPsum	0.035	0.041*	0.041*	0.045*	0.015	0.026	0.068*	-0.003
	(0.023)	(0.024)	(0.024)	(0.024)	(0.023)	(0.023)	(0.037)	(0.028)
lnGDPsim	-0.153***	-0.148***	-0.148***	-0.172***	-0.119***	-0.144***	-0.133	-0.153***
	(0.036)	(0.036)	(0.036)	(0.042)	(0.042)	(0.042)	(0.081)	(0.047)
ln(|diffGDPpc|)		0.024**	0.024**	0.023*	0.003	-0.014	-0.013	-0.019
		(0.011)	(0.011)	(0.011)	(0.013)	(0.015)	(0.029)	(0.017)
ln_distance	-0.082***	-0.091***	-0.091***	-0.097***	-0.098***	-0.040	-0.063	-0.022
	(0.017)	(0.018)	(0.018)	(0.018)	(0.016)	(0.033)	(0.060)	(0.037)
MFN	0.097***	0.072**	0.071**	0.056	0.062**	0.055*	0.173***	-0.013
	(0.027)	(0.032)	(0.032)	(0.035)	(0.029)	(0.030)	(0.051)	(0.038)
Gold_Standard	-0.072*	-0.105**	-0.106**	-0.104**	0.009	0.013	-0.059	0.070
	(0.039)	(0.042)	(0.043)	(0.044)	(0.046)	(0.046)	(0.073)	(0.054)
Mean_gr_oth_goods			0.00247	-0.000234	0.021	0.0251	0.0666	0.0204
			(0.0354)	(0.0396)	(0.037)	(0.0374)	(0.0746)	(0.0397)
Δn_prod				0.004***	0.002*	0.002*	0.001	0.003**
				(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Italian_immigration					0.239***	0.240***	0.226***	0.250***
					(0.0218)	(0.0216)	(0.0342)	(0.0274)
R2	0.09	0.09	0.09	0.09	0.14	0.14	0.21	0.15
Observations	2,190	2,190	2,190	2,100	2,100	2,100	750	1,340
Year FEs	YES	YES	YES	YES	YES	YES	YES	YES
Region FEs	NO	NO	NO	NO	NO	YES	YES	YES

Note: Logit maximum likelihood regressions. Dependent variable: ME^{FME}. Average partial effects are reported. Robust standard errors (in parenthesis) are clustered at the destination-good level. Mean growth of other goods and ΔNo. exp. goods to dest. are at t-1. Agricultural goods correspond to SITC one-digit ≤4. Industrial goods correspond to SITC one-digit > 4. Results are not sensible to how "raw silk" is coded (see footnote 9).
Source: Author's elaboration.

Table 5: Further market entry (logit regression)

Variables	(1)	(2) +Δln(exports to all markets)	(3) + ΔNo. exp. goods to dest. & No. of markets	(4) + Mean growth of other goods	(5) + Italian immigration	(6) +Region FE	(7) Only agricultural goods	(8) Only industrial goods	(9) (6) + Product proximity
lnGDPsum	0.039***	0.038***	0.046***	0.046***	0.028***	0.031***	0.028***	0.032***	0.028***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.006)	(0.006)	(0.004)
lnGDPsim	-0.069***	-0.068***	-0.093***	-0.092***	-0.074***	-0.072***	-0.067***	-0.077***	-0.051***
	(0.005)	(0.005)	(0.007)	(0.007)	(0.007)	(0.007)	(0.009)	(0.010)	(0.007)
ln(|diffGDPpc|)	0.016***	0.015***	0.016***	0.017***	0.009***	0.006***	0.007*	0.006*	0.008***
	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)
ln_distance	-0.029***	-0.028***	-0.033***	-0.034***	-0.038***	-0.026***	-0.028***	-0.023***	-0.014**
	(0.003)	(0.003)	(0.004)	(0.0037)	(0.003)	(0.006)	(0.008)	(0.009)	(0.006)
MFN	0.0007	0.0007	0.004	0.001	-0.008	-0.015**	-0.008	-0.022**	-0.011*
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.007))	(0.007)	(0.009)	(0.006)
Gold_Standard	-0.009	-0.010	-0.023**	-0.022**	-0.0003	0.0002	0.010	-0.0054	-0.0045
	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)	(0.017)	(0.012)	(0.009)
Δln(tot_val_prod)		0.011***	0.015***	0.015***	0.015***	0.015***	0.017***	0.013***	0.015***
		(0.0001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)
Δn_prod			0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
			(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
N_markets			0.022***	0.022***	0.023***	0.024***	0.028***	0.021***	0.025***
			(0.002)	(0.002)	(0.002)	(0.001)	(0.003)	(0.002)	(0.002)
Mean_gr_oth_goods				0.021***	0.019***	0.018***	0.013*	0.022***	0.013***
				(0.005)	(0.004)	(0.004)	(0.006)	(0.006)	(0.004)
Italian_immigration					0.057***	0.057***	0.045***	0.065***	0.038***
					(0.005)	(0.005)	(0.008)	(0.007)	(0.006)
Product proximity									0.0000197***
									0.000002
R2	0.04	0.05	0.07	0.07	0.08	0.08	0.09	0.08	0.09
Observations	30,665	30,665	29,546	29,546	29,546	29,546	11,296	18,250	29,546
Year FEs	YES	YES	YES	YES	YES	YES	YES	YES	YES
Region FEs	NO	NO	NO	NO	NO	YES	YES	YES	YES

Note: Logit maximum likelihood regressions. Dependent variable: ME^{ENTRY}. Average partial effects are reported. Robust standard errors (in parenthesis) are clustered at the destination-good level. Mean growth of other goods, ΔNo. exp. goods to dest., Δln(exports to all markets), No. of markets are at t-1. Agricultural goods correspond to SITC one-digit ≤4. Industrial goods correspond to SITC one-digit > 4. Results are not sensible to how "raw silk" is coded (see footnote 9).
Source: Author's elaboration.

Table 6: Market exit (logit regression)

Variables	(1)	(2) +Δln(exports to all markets)	(3) + ΔNo. exp. goods to dest. & No. of markets	(4) + Mean growth of other goods and value of exports to dest.	(5) + Italian immigration	(6) +Region FE	(7) Only agricultural goods	(8) Only industrial goods	(9) (6) + Product proximity
lnGDPsum	-0.022	-0.033	-0.040	-0.127*	-0.130*	-0.168	-0.066	-0.117	-0.056
	(0.037)	(0.037)	(0.038)	(0.067)	(0.068)	(0.291)	(0.088)	(0.120)	(0.066)
lnGDPsim	-0.041	0.023	0.036	0.267**	0.269**	1.193*	0.0971	0.264	0.149
	(0.075)	(0.077)	(0.078)	(0.132)	(0.131)	(0.673)	(0.214)	(0.166)	(0.130)
ln(|diffGDPpc|)	-0.022*	-0.025**	-0.028**	-0.059***	-0.041**	-0.002	0.005	-0.019	-0.030
	(0.013)	(0.012)	(0.013)	(0.019)	(0.019)	(0.031)	(0.044)	(0.044)	(0.032)
ln_distance	0.064***	0.066***	0.069***	0.177***	0.173***	0.059	0.076	0.036	0.028
	(0.024)	(0.024)	(0.025)	(0.058)	(0.043)	(0.085)	(0.140)	(0.147)	(0.088)
MFN	-0.138**	-0.161***	-0.154***	-0.061	-0.015	0.055	-0.227	0.095	0.151
	(0.055)	(0.053)	(0.054)	(0.081)	(0.081)	(0.094)	(0.151)	(0.109)	(0.098)
Gold_Standard	0.197	-0.178	-0.149	-1.712***	-1.847***	-1.858***	-0.957***	-2.101***	-1.668***
	(0.143)	(0.231)	(0.226)	(0.342)	(0.323)	(0.306)	(0.306)	(0.407)	(0.237)
Δln(tot_val_prod)		-0.034*	-0.035**	-0.040***	-0.035**	-0.037**	-0.071**	-0.018	-0.033**
		(0.018)	(0.017)	(0.015)	(0.015)	(0.014)	(0.030)	(0.022)	(0.016)
Δn_prod			-0.0009	-0.0004	-0.002	-0.001	0.001	0.002	-0.001
			(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)
N_markets			-0.025	-0.080***	-0.117***	-0.120***	-0.120**	-0.142***	-0.124***
			(0.021)	(0.030)	(0.028)	(0.029)	(0.052)	(0.045)	(0.030)
Mean_gr_oth_goods				-0.076	-0.088	-0.103	-0.251	-0.125	-0.009
				(0.104)	(0.104)	(0.105)	(0.200)	(0.137)	(0.097)
ln(val_prod)				-0.076***	-0.068***	-0.066***	-0.066***	-0.068***	-0.063***
				(0.010)	(0.010)	(0.010)	(0.015)	(0.017)	(0.011)
Italian_immigration					-0.229***	-0.257***	-0.241*	-0.326***	-0.177**
					(0.064)	(0.069)	(0.133)	(0.105)	(0.072)
Product proximity									-0.000152***
									(0.000004)
R2	0.09	0.08	0.08	0.28	0.31	0.31	0.42	0.31	0.35
Observations	735	683	683	469	469	469	179	252	469
Year FEs	YES	YES	YES	YES	YES	YES	YES	YES	YES
Region FEs	NO	NO	NO	NO	YES	YES	YES	YES	YES

Note: Logit maximum likelihood regressions. Dependent variable: ME^{EXIT}. Average partial effects are reported. Robust standard errors (in parenthesis) are clustered at the destination-good level. Mean growth of other goods, ΔNo. exp. goods to dest., Δln(exports to all markets), No. of markets are at t-1. Agricultural goods correspond to SITC one-digit ≤4. Industrial goods correspond to SITC one-digit > 4. Results are not sensible to how "raw silk" is coded (see footnote 9).

Source: Author's elaboration.

Table 7: Export flows (poisson regression)

Variables	(1)	(2) +Region FE	(3) + Italian immigration	(4) Only agricultural goods	(5) Only Industrial goods	(6) (3) + Product proximity
lnGDPsum	0.920***	0.922***	0.796***	0.816***	0.775**	0.619***
	(0.215)	(0.212)	(0.207)	(0.207)	(0.359)	(0.214)
lnGDPsim	-0.826	-0.864*	-0.685	-0.369	-0.954	-0.190
	(0.673)	(0.502)	(1.057)	(0.344)	(0.799)	(0.503)
ln(|diffGDPpc|)	0.0868	0.0587	-0.00477	-0.173	0.165	-0.0703
	(0.0839)	(0.210)	(0.262)	(0.126)	(0.463)	(0.212)
ln_distance	-0.749***	-0.655	-0.419	-0.0506	-0.694	-0.0728
	(0.277)	(0.680)	(0.694)	(0.379)	(1.111)	(0.537)
MFN	0.472**	0.440**	0.398**	0.365*	0.425	0.628***
	(0.236)	(0.195)	(0.164)	(0.192)	(0.272)	(0.152)
Gold_Standard	0.138	0.144	0.425***	0.328**	0.514***	0.270**
	(0.152)	(0.144)	(0.133)	(0.161)	(0.182)	(0.129)
Italian_immigration			1.019***	0.924***	1.135***	0.766***
			(0.197)	(0.199)	(0.317)	(0.195)
Product proximity						0.000490***
						(0.000133)
R2	0.05	0.05	0.07	0.08	0.07	0.09
Observations	229,320	229,320	229,320	91,000	138,320	229,320
Year FEs	YES	YES	YES	YES	YES	YES
Region FEs	NO	YES	YES	YES	YES	YES

Note: Poisson regressions. Dependent variable: Italian product-level exports (in US$). Average partial effects are reported. Robust standard errors (in parenthesis) are clustered at the destination-good level. Agricultural goods correspond to SITC one-digit ≤4. Industrial goods correspond to SITC one-digit > 4. Results are not sensible to how "raw silk" is coded (see footnote 9).
Source: Author's elaboration.

9. Conclusions

During the first wave of globalization, Italy's changing export composition echoed its economic transformation.

In this paper, I first decompose Italian export growth, showing the importance of the extensive margins. Second, I add further regression analysis, to identify the determinants of Italian exports and product market entry and exit. In doing so, I exploit both aggregate and product-level data, and apply two different econometric methods widely used in the literature: gravity and pooled logit models.

On one side, the results of the regressions confirm for the Italian case what suggested by the standard forces of gravity and the "Great Specialization" hypothesis: first, distance and market size matter; second, trade follows a classic Heckscher-Olhin pattern (i.e. countries with different endowments trade more with each other, see Findlay and O'Rourke, 2007). On the other side, they indicate that two distinctive features of the Italian history are of particular relevance for the course of its exports.

First, trade policy. Differently from other countries, Italy had a quite active trade policy, both in terms of securing a large number of trade agreements with a variety of countries across the world (Bassani, 1932) and of experiencing trade frictions. Trade agreements are positively associated with increases in both bilateral export flows (≈+40%) and in the probability of product (first) market entry (up to 17%). In line with the government's attention to "rural products" (Coppa, 1970), this positive association is particularly strong for agricultural goods. These findings leave open to speculation what would have happened to the Italian economic structure (and to the speed of its transformation) if trade policy interests would have been more skewed towards manufacturing.

Second, Italian emigration. During the "age of mass migration" (Sanchez-Alonso, 2019; Perez, 2017), fourteen million Italians moved out of their country of birth. My findings support the idea that the presence of Italian emigrants in destination markets is positively associated with Italian exports, with an "export premium" of approximately 60% for aggregate bilateral trade flows. Additionally, Italian emigration is also associated with large increases in the probability of first and further market entry, and substantial reductions in market exit. These positive effects may have operated by two different channels: first, reducing trade costs, as Italians abroad may act as a source of information on destination markets; second, increasing local demand for Italian products, as emigrants tend to preserve a higher demand for goods produced in their home land. These results imply that the positive effects of Italian emigration may be bigger than previously thought. Indeed, while previous research (e.g. Gomellini and Ó Gráda, 2013) already highlighted the role of Italian emigration in improving the dynamics of real wages and GDP per capita in Italy (mainly through the labour market and remittances channels), my findings emphasize its significant and positive association with Italian exports and product presence in destination markets.

Future work shall focus on expanding the coverage of the Bankit-FTV DB to overcome its geographical limitations. Indeed, at the moment, the Bankit-FTV DB, on which my product-level results are based, covers the ten largest Italian trade partners. Additionally, the collection of detailed data on tariffs is also important to enhance the understanding of the consequences of trade policy at the product-level during the first wave of globalization. Federico et al. (2012) and Federico and Vasta (2015) have laid solid foundations for those eager to take on the challenge.

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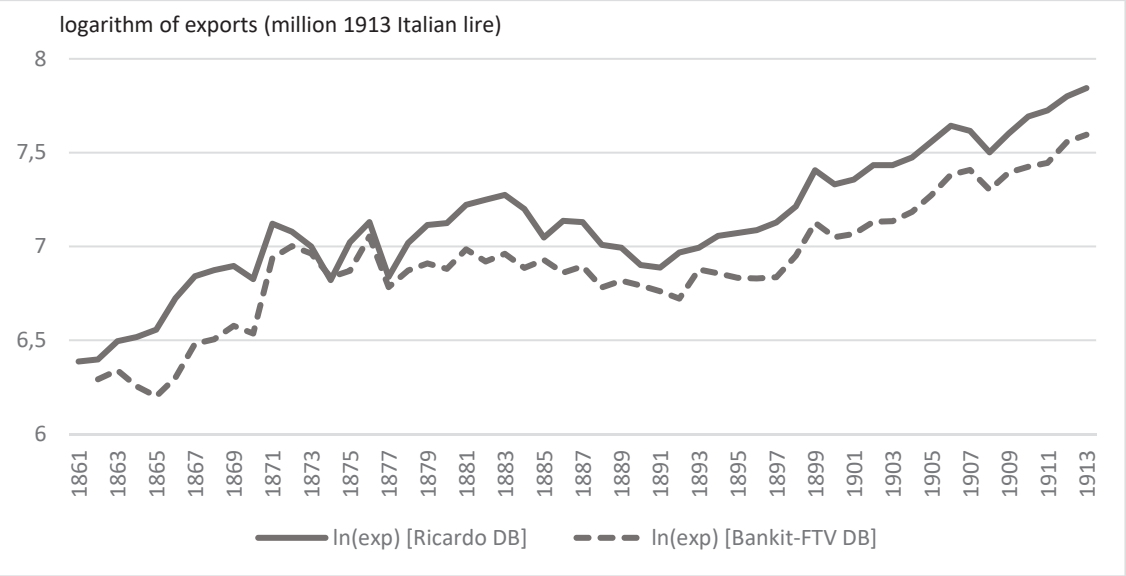
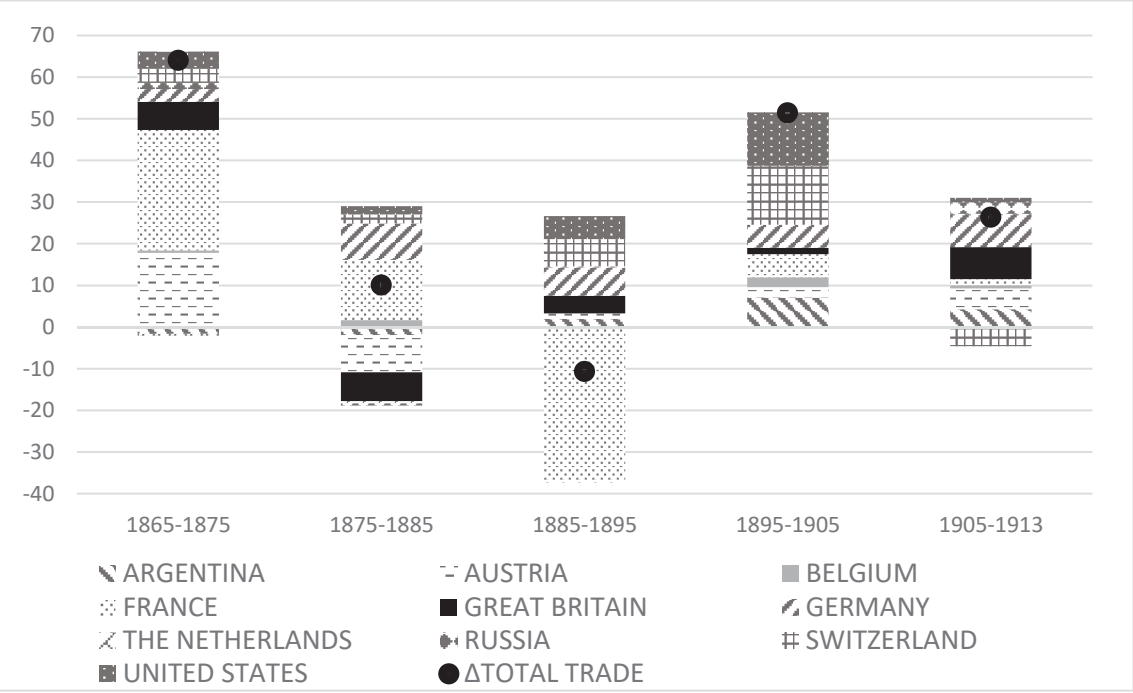
Appendix 1

Figure A1.1: Total Italian exports, Ricardo DB vs. Bankit-FTV DB



Note: Logarithm of exports, expressed in million 1913 Italian lire. Bankit-FTV DB only includes the ten Italian major trading partners. Data converted to million lire using the World Exchange Rates Series.
Source: Author's elaboration on Ricardo Project DB (Dedinger and Girard, 2017), Bankit-FTV DB (Federico et al., 2012), World Exchange Rates Series (Federico and Tena, 2019), and Istat.

Figure A1.2: Italian export growth and its decomposition, by country



Note: Bankit-FTV DB only includes the ten Italian major trading partners. Columns indicate percentage points of export growth attributable to each country. Dots indicate total Italian export growth in the correspondent time period.
Source: Author's elaboration on Bankit-FTV DB (see Federico et al., 2012).

Appendix 2

Table A2.1: Dataset – Gravity model (Eq. 1)

VARIABLE	Definition	Source
	Gravity model (Eq.1)	
X_{ijt}	Italian exports to destination country j at time t in US dollars (left hand side variable)	*Trade data*: Ricardo project database *Exchange rate data (see note)*: Federico-Tena World Historical Database
lnGDPsum	logarithm of the sum of the country-pair's GDPs: $ln(GDP_{Italy}+GDP_j)$	Maddison Project Database
lnGDPsim	logarithm of the product of the share of GDP relative to total GDP of the dyad $[ln((GDP_j/(GDP_{Italy}+GDP_j))*(GDP_{Italy}/(GDP_{Italy}+GDP_j)))]$	Maddison Project Database
ln(|diffGDPpc|)	logarithm of the absolute difference in GDP per capita $ln(\|GDPpc_{Italy}-GDPpc_j\|)$	Maddison Project Database
ln_distance	logarithm of the bilateral distance between Italy and destination country j	CEPII - GeoDist Database
contig	Dummy variable equal to one if Italy and destination country j share a border, and zero otherwise	CEPII - GeoDist Database
MFN	Dummy variable equal to one if Italy and destination country j have a trade agreement in force, and zero otherwise	Bassani (1932, 1933), Ministry of Finance (1911), House of Commons (1908) and United States Tariff Commission (1922).
Gold_Standard	Dummy variable equal to one if Italy and destination country j are both adhering to the gold standard, and zero otherwise	Officer (2018) and Cesarano et al. (2012)
Italian_immigration	Dummy variable equal to one if destination country j is an "important" destination for Italian emigrants, and zero otherwise. Destination country j is labelled as "important" if receives at least the 5% of Italian emigration at a certain point in time, with a lag with respect to export data (see Section 6 for more details).	Istat (1933)
colonyOTH	Dummy variable equal to one if destination country j is a colony of another nation, and zero otherwise.	ICOW Colonial History Data Set

Note: Exchange rate data are needed as in the original source trade flows are reported in pound sterling.
Source: Author's elaboration

Table A2.2: Summary statistics for the Ricardo Project-based DB

VARIABLE	N	mean	sd	min	max
Exports (US$)	227	9,910,391	16,100,000	0	88,000,000
lnGDPsum	227	17.52	1.30	14.57	21.18
lnGDPsim	227	-1.53	0.10	-1.82	-1.39
ln(|diffGDPpc|)	227	7.25	0.84	3.95	8.64
ln_distance	227	7.99	1.08	6.39	9.83
contig	227	0.14	0.35	0	1
MFN	227	0.59	0.49	0	1
Gold_Standard	227	0.33	0.47	0	1
Italian_immigration	227	0.20	0.40	0	1
colonyOTH	227	0.11	0.32	0	1

Source: Author's elaboration

Table A2.3: Dataset – Pooled logit model (Eq. 2) and product-level gravity

VARIABLE	Definition	Source
	Pooled logit model (Eq.2)	
First Market Entry$_{jpt}$ (ME^{FIRST})	Dummy variable equal to one for all observations (destination-product-year) where the product p is reported to be exported for the first time (export value>0). For destinations where the product is not present in the first market entry year, and all the years prior to that, ME=0. After its first market entry, the product p is dropped from the sample (see Section 6 for more details).	Bankit-FTV Database
Further Market Entry$_{pjt}$ (ME^{FURTHER})	Dummy variable equal to one for all observations (destination-product-year) identifying any product market entry episode after and excluding "first market entry". As in the case of first market entry, after "further" entering the destination market, the product-destination combinations are dropped from the sample (see Section 6 for more details).	Bankit-FTV Database
Market Exit$_{pjt}$ (ME^{EXIT})	Dummy variable equal to one if the product-country combination had positive exports at t-1, but are zero at t and all t+n following years.	Bankit-FTV Database
X$_{jpt}$	Italian exports to destination country j of product p, at time t, in US dollars (left hand side variable in the product-level gravity model)	*Trade data*: Bankit-FTV Database *Exchange rate data (see note)*: Federico-Tena World Historical Database
lnGDPsum	See Table A1.1	Maddison Project Database
lnGDPsim	See Table A1.1	Maddison Project Database
ln(|diffGDPpc|)	See Table A1.1	Maddison Project Database
ln_distance	See Table A1.1	CEPII - GeoDist Database
contig	See Table A1.1	CEPII - GeoDist Database
MFN	See Table A1.1	Bassani (1932, 1933), Ministry of Finance (1911), House of Commons (1908) and United States Tariff Commission (1922).
Gold_Standard	See Table A1.1	Officer (2018) and Cesarano et al. (2012)
Italian_immigration	See Table A1.1	Istat (1933)
Mean_gr_oth_goods	Mean growth (in value) of all other products (excluding product p) to destination j between time t and t-1	Bankit-FTV Database
Δn_prod	Change in the number of products exported to destination j between time t and t-1	Bankit-FTV Database
N_markets	Number of destinations where product p is exported at time t-1	Bankit-FTV Database
Δtot_val_prod	Change in the total (i.e. across all destinations) value of exports of product p between time t and t-1	Bankit-FTV Database
ln(val_prod)	logarithm of the value of exports to destination j (of product p) at time t-1	Bankit-FTV Database

Note: Exchange rate data are needed as in the original source trade flows are reported in Italian lire.
Source: Author's elaboration

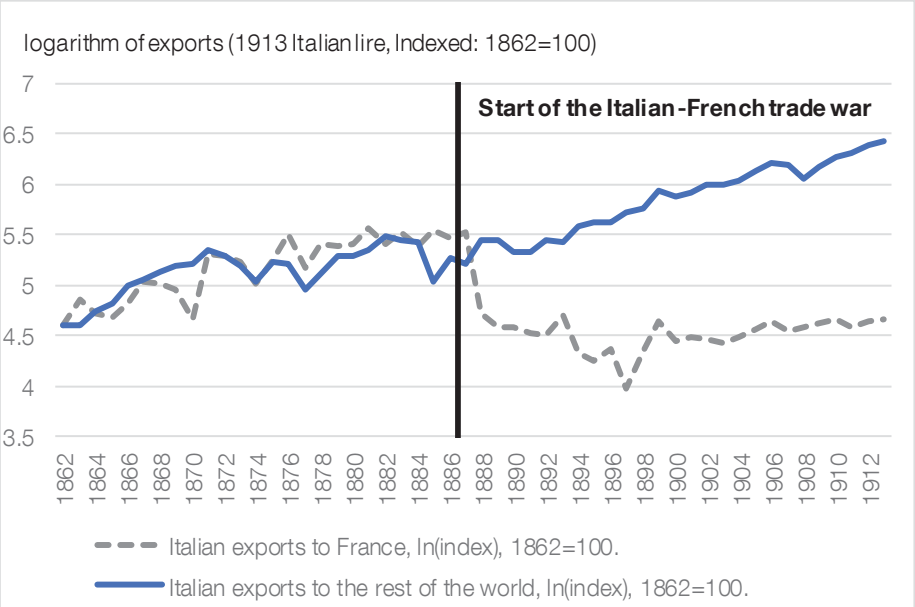
Table A2.4: Summary statistics for the Bankit-FTV-based DB

VARIABLES	N	mean	sd	min	max
ME^{FIRST}	2190	0.27	0.45	0	1
$ME^{FURTHER}$	30,665	0.065	0.25	0	1
ME^{EXIT}	735	0.33	0.47	0	1
Exports (US$) (prod. level)	229,320	44,492	544,180	0	46,500,000
lnGDPsum	229,320	11.60	0.62	10.57	13.32
lnGDPsim	229,320	-1.78	0.35	-4.63	-1.42
ln(|diffGDPpc|)	229,320	7.34	0.90	2.19	8.59
ln_distance	229,320	7.46	0.87	6.54	9.32
MFN	229,320	0.78	0.41	0	1
Gold_Standard	229,320	0.38	0.49	0	1
Italian_immigration	229,320	0.35	0.48	0	1

Note: Only those variables used consistently across the four different set of regressions are reported.
Source: Author's elaboration

Appendix 3

Figure A3.1: Italian exports to France and the rest of the world.



Note: Italian exports to France and the rest of the world are reported as the logarithm of the index (1862=100) of real exports (in 1913 lire).
Source: Author's elaboration on Bankit-FTV DB and Ricardo DB.

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