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“Geography, Policy, or Productivity? Interregional Trade in the Southern Cone, 1913-1950”

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Abstract: Regional trade in South America since independence has long been much smaller than would be expected if geography were the only constraint on trade. This limitation on market access very likely hampered economic growth in the region. Even in periods like 1910-50, when large external shocks altered trade patterns with the USA and Europe, South American regional trade remained extremely low. In this paper we hypothesize if trade costs--those beyond geography--among South American countries were relatively higher than trade costs between South American countries and core countries. Indeed, some part of the literature points out that this was the main cause behind the failure of these nations to integrate during the period.

To test this hypothesis, we present evidence on the level and evolution of a comprehensive set of trade costs, distinguishing between trade costs between a sample of South American countries and those between these countries and their main trade partners outside of the region. We consider trade costs in a broad sense including freight rates, tariffs, non-tariff barriers, information costs, consumer preferences, beachhead costs of establishing new markets etc. We also explore the role of similarity in factor endowments and incomes highlighting that these were not the main culprit.

In contrast with the work of (Jacks, Meissner, & Novy, 2010, 2011) we focus on a set of less developed countries in a period of de-globalization. In this context, the shocks of wars and economic collapse in the core during the Depression should have made for a more favorable environment for regional economic integration in our sample of South American countries. These external shocks produced an extraordinary opportunity for South America to promote regional integration through the expansion of pre-existing industrial capacity to serve regional markets. Moreover, their proximity compared to European and North American producers should have provided further impetus to this

process. We consider the period as a “natural experiment” to provide clues as to the drivers of regional integration. This is based on the notion that industrialization in the European core and the USA produced intense specialization in food and raw materials in South America during the First Globalization. As demand in these markets shifted and supply of their goods (especially European goods) on international markets dropped in the interwar, nascent South American industry made limited inroads into domestic and foreign markets. We approach that through the textile sector. This dynamic reveals that both productivity and trade costs broadly defined to include information on market opportunities interacted to limit intra-regional trade. The high uncertainty generated by limited political constraints on protective trade policy (e.g., multilateral or bilateral trade agreements) within the region and the possibility of a European and American “comeback” limited the investment necessary to win intra-regional markets. Greater regional trade might have been possible had productivity advanced more quickly or had trade policy been more benign.

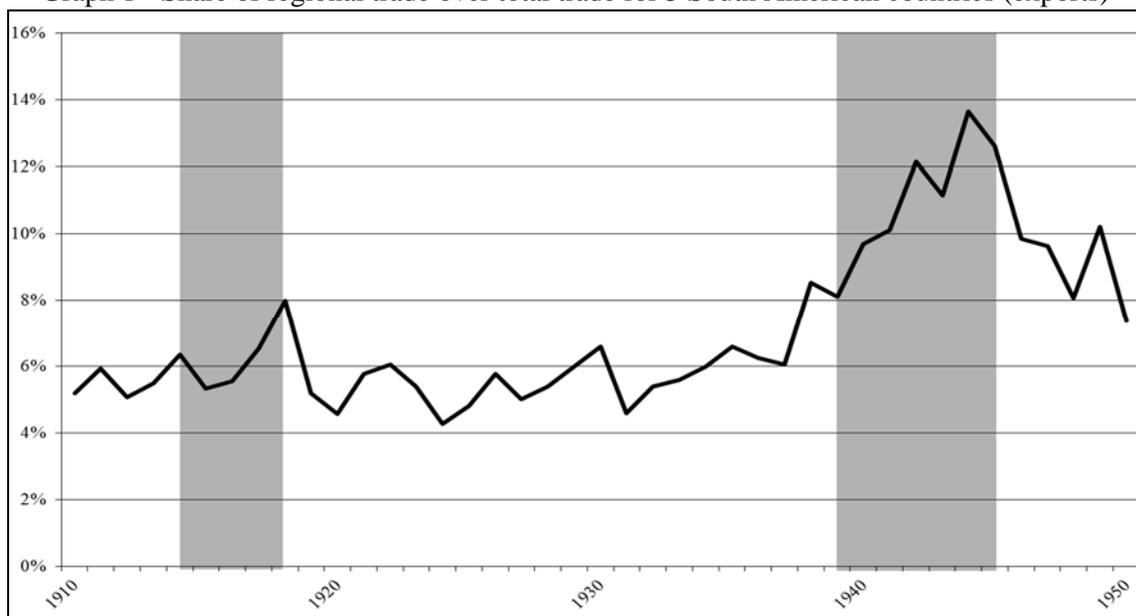
Key words: Trade integration, Trade Costs, Gravity Model, South American regional trade

“Geography, Policy, or Productivity? Interregional Trade in the Southern Cone, 1913-1950”

1. The years of the wars and the inter-war period: A natural experiment to investigate the drivers of regional trade.

Regional trade in Latin America shows a poor performance in the long-run, compared to other regions such as Europe or Asia. The economic evolution of Latin America has been close connected to the international markets since the First Globalization. During the period between 1910 and 1950, three significant external shocks produced an increase of the importance of regional trade (Carreras-Marín, Badia-Miró, & Peres Cajías, 2013). Graph 1 shows the share of trade among Argentina, Bolivia, Brazil, Chile, and Peru (SA5), from the export side, over total trade of these 5 countries. First World War meant an increase from around 5% to a maximum of almost 8% in 1918. The thirties' crisis produced a drop in regional exportation from 6% in 1929, to a minimum of 4.6 in 1931, recovering to 6% in 1934. In 1938 regional trade experienced a jump to 8.5%, probably due to the protectionist measures implemented in Latin America as a reaction of the deep effect of the crisis of the thirties. But it was during the Second World War years that regional trade suffered a huge increase, changing from 8% in 1939 to 13.5% in 1945. Despite all this, regional trade remained much smaller than would be expected if geography were the only constraint on trade.

Graph 1 - Share of regional trade over total trade for 5 South American countries (exports)

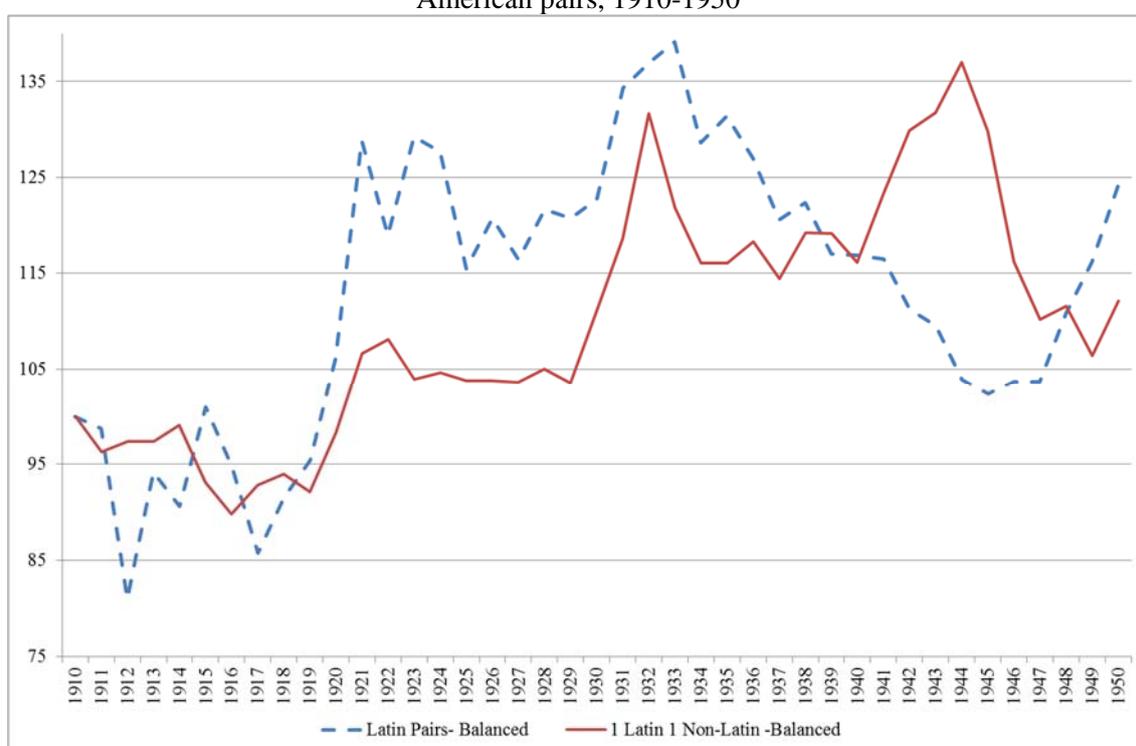


Source: (Carreras-Marín et al., 2013)

There are multiple potential explanations for such a poor development of regional trade:

- a. Similarity in **Factor Endowments**: But we argue that they were not so similar and introducing preferences to variety there was a chance for regional trade to increase.
- b. **High trade costs**, including tariffs, poor shipping services, home bias and other barriers. We have done several gravity estimations and our results show the importance of that as a main driver to regional trade. We can summarize the puzzle saying that trade costs were higher among South American countries than with USA and Europeans' trade partners. Our results show that when the lack of continental competition is properly controlled for, we see a significant rise in regional trade. A first approach to this question is presented in Graph 2. Our regressions will later confirm that trade costs mattered for regional trade to increase.

Graph 2 - Average Trade Costs for Latin American pairs and Latin American/Non Latin American pairs, 1910-1950



Notes: Trade costs are calculated as in (Jacks et al., 2011). Trade costs are not defined when trade flows equal zero. We therefore include only data from a balanced sample of country pairs.

- b. **Competition from third markets:** An alternative explanation consists on the fact that Europeans provide low-cost high quality goods eliminating the Latin-American products. We can also face a problem of non-homotheticity.

2. The drivers of regional trade through an econometric gravity approach.

In Table 1 and 2 we present difference in difference regressions relating exports, x , to various standard gravity controls of following form:

$$\ln(x_{ijt} + 1) = \beta_1 \cdot (LATAM_{ij}) + \beta_2 \cdot (LATAM_{ij} \cdot WAR_I) + \beta_3 \cdot (LATAM_{ij} \cdot WAR_{II}) + \beta_4 \cdot WAR_I + \beta_5 \cdot WAR_{II} + X'_{ijt} \cdot \Theta + s_{it} + d_{it} + \delta_t + \epsilon_{ijt}$$

Here, LATAM is an indicator if both countries in the pair are in Latin America, WAR is an indicator for the periods comprising either World War I (1914-1918) or World War II (1940-1945), X includes the logarithm of shipping distance between principal ports (time-varying due to the opening of the Panama Canal), a shared language dummy, a common land border, and Most-Favored nation trade treaty, and an indicator equal to one if both countries are on the gold standard. The last set of variables includes time varying exporter fixed effects (s), time-varying importer fixed effects (d), time dummies, and a zero mean, pair-specific error term.

Regressions of this form will be used to study two hypotheses.

1. First we want to know whether after controlling for geography, other observable trade costs, and relative productivity Latin American nations are less likely to export or import to each other.
2. Second, we use the wars as a natural experiment to study whether intra-Latin America could only take off in the absence of competition from highly productive exporters in North America and Western Europe.

Table 1 investigates the exports of Latin American countries in our sample. The treatment group is Latin American country pairs (Latin American exporter paired with a Latin American importer) and the control group is the set of country pairs with a Latin American exporter and a non-Latin American importer. The “treatments” we study are the changes in international market due to war-time disruptions in Europe. The

coefficients on the interaction terms (Latin America and wars) test whether during the war periods, intra-Latin American exports rose relative to all non-Latin American destinations. It is useful to keep in mind that during the wars exports to the continental belligerents were severely interrupted and exports to the US and the UK surged.

The war-time episodes and the changing trade patterns allow insight into the drivers of Latin American trade. One possibility is that there were no significant changes in formal trade barriers between Latin American countries during the wars.¹ Instead, war periods might identify moments when Latin American exporters were able to increase market share, especially in Latin American markets due to the absence of price competitive European goods. We also recognize however that war-time demands may have affected overall supply and demand for Latin American products since they were unscathed by outright warfare. Finally, while the wars severely restricted and altered continental supply and demand patterns, the US and UK markets were also affected. British expenditure on foreign goods rose while supply was generally restricted both for the home and foreign markets. In the US, while income and expenditure on imports rose, supply also surged and exports were diverted to Latin America

The set of non-Latin American destinations includes the USA, the UK and the continental countries embroiled in land warfare (Germany, Belgium, France and Italy). Spain and Japan are included also as destinations. The dependent variable is the logarithm of exports in both columns. We include observations with zero trade by adding 1 to all trade flows. Including the zero trade flow pairs is crucial in our sample since the World Wars led to many zero trade flows. Excluding these observations gives rise to a severe sample selection bias. Alternative techniques to deal with zero trade flows include estimation by PPML as in (Silva & Tenreyro, 2006) or Tobit methods. The PPML approach fails to converge when we include time-varying importer and exporter fixed effects. Tobit estimations were attempted but the parametric assumptions are stronger leading us to prefer a scaled OLS approach.

The traditional gravity equation in column 1, reveals that exports between Latin American pairs were significantly higher during both wars. We should not interpret this as evidence of a reduction in the barriers to trade between Latin American countries. We simply are

¹ See (Albert, 1988)

not controlling for the level of overall competition in the market. It could be the case that the elimination of European competition, and other supply and demand shocks, made it easier for Latin American firms to compete in other Latin American markets.

Column 2 checks this assumption by including a full set of time-varying importer and exporter fixed effects. (Anderson & van Wincoop, 2003) show how these control for the level of competition in the destination market as measured by the overall “price index” in a constant elasticity demand system. Here, there is no evidence that intra-Latin American exports grew faster than those to non-Latin American destinations during the wars. In other words, column 1 seems to mistake bilateral trade cost changes for what are, in reality, changes in the structure of market competition. This result fits well with the fact that exports from Latin America to the belligerent countries rose during the wars due to the increasing demand of raw materials.

Table 2 repeats this exercise but uses only Latin American importers. These countries receive imports from two sources: Latin America and non-Latin American sources. Column 1 of Table 2 suggests that intra-Latin American imports rose faster than non-Latin American imports during both wars. In column 2, after including a full set of controls for supply and demand changes as above, we find that the change in trade in Latin America during both wars was significantly higher compared to the reference group (imports from non-Latin American sources). The simplest explanation is that European imports were limited during the wars and Latin American imports replaced them. However, since the interaction terms are significant it appears that trade is being affected by forces beyond the lack of supply. In addition to a lack of European supply, it also became more costly to source goods from most European nations. It is interesting to note that the US is included as an exporter to Latin America here. While its market share might have rose, it did not rise sufficiently to completely offset the loss of European supply. Some substantial fraction of supply was replaced by Latin American producers.

Results in Table 1 and Table 2 may still be mis-leading if shocks to demand and supply during the wars differentially affected Latin American economies. In Table 3 we explore a more punishing estimation strategy. Here we look at a triple difference, so that exports to Latin America before and after the war are compared not only to changes in Latin American exports to other non-Latin American destinations, but also to US or UK exports to any destination. The estimating equation in this instance is:

$$\ln(x_{ijt} + 1) = \beta_1 \cdot (LATAM_{ij}) + \beta_2 \cdot (LATAM_{ij} \cdot WAR_I) + \beta_3 \cdot (LATAM_{ij} \cdot WAR_{II}) + \beta_4 \cdot LATAM_i + \beta_5 \cdot LATAM_j + \beta_6 \cdot LATAM_i \cdot WAR_I + \beta_7 \cdot LATAM_i \cdot WAR_{II} + \beta_8 \cdot LATAM_j \cdot WAR_I + \beta_9 \cdot LATAM_j \cdot WAR_{II} + \beta_{10} * WAR_I + \beta_{11} * WAR_{II} + X'_{ijt} \cdot \Theta + s_{it} + d_{it} + \delta_t + \epsilon_{ijt}$$

This approach is similar in spirit to the “tetradic” approach of (Head, Mayer, & Ries, 2010) and to a specification explored by (Jacks et al., 2011). In column 1 and in column 2 we find intra-Latin American trade grew significantly faster than in the control groups even after controlling for supply, demand and competitive forces. We find some evidence that intra-Latin American trade became more attractive during the wars due to lower trade costs in addition to any benefit they might have received from the elimination of international competition.

None of this should obscure the fact that even after controlling for supply, demand and competition and some simple observable trade costs such as geography and trade policy Latin American trade was differentially lower. We cannot easily assess why intra-Latin American trade was relatively less attractive.

Two forces drive intra-Latin American trade higher. The fact that intra-Latin American trade shares rose during the great wars seems to be due to the fact that the wars reduced competition from European nations. The low priced, high quality goods emanating from Europe were in effect substituted by American and also Latin American exports. However, it also became relatively easy to trade within Latin America when international markets were disrupted.

The preceding regression results provide a hint as to why Latin American persistently traded less than would be expected after controlling for obvious geographic barriers to trade. We infer that high prices, low productivity and potentially low quality kept intra-Latin American trade at low levels. However, relative trade costs were probably quite high too. During the wars intra-Latin American absolute trade barriers may or may not have changed substantively but *relative* trade costs did seem to have changed. Rises in market share were due to the opportunities available when European producers were off-line. This suggests that Latin American exports could compete in other Latin American markets if external conditions allowed. Both increased regional integration via policy and

attempts to build industry might have allowed for further industrial growth in Latin America prior to 1950.

Table 1 - Latin American Exports, 1910-1950

	Column 1	Column 2
Importer in Latin America	-0.54 [0.373]	0.34 [0.784]
Importer in Latin America x World War I	0.42* [0.228]	-0.16 [0.595]
Importer in Latin America x World War II	1.04** [0.417]	-0.5 [0.840]
ln(GDP) exporter	0.70*** [0.083]	---
ln (GDP) importer	0.66*** [0.128]	---
ln(distance)	-1.04*** [0.272]	-0.98*** [0.199]
MFN treaty	0.13 [0.209]	0.11 [0.153]
Both on the Gold Standard	0.43*** [0.136]	-0.16 [0.182]
Shared border	0.38* [0.222]	-0.05 [0.288]
Shared Language	-0.18 [0.210]	0.02 [0.257]
Number of Observations	2,460	2,460
R-squared	0.594	0.848
Time-Varying Country-Fixed Effects	No	Yes

Notes: Dependent variable is the logarithm of one plus the value of nominal exports of all Latin American countries in our sample. Destinations include Latin American countries and non-Latin American countries. Robust standard errors are reported in brackets. In column 1, standard errors are clustered on importers and exporters. In column 2 standard errors are clustered on the country pair. Time dummies and world war period dummies are included but not reported. Time varying country fixed effects are included in column 2. *** p-value<0.01, ** p-value < 0.05, * p-value < 0.1

Table 2 - Latin American Imports, 1910-1950

	Column 1	Column 2
Exporter in Latin America	-0.36 [0.315]	-3.05*** [0.391]
Exporter in Latin America x World War I	0.48*** [0.166]	2.50*** [0.641]
Exporter in Latin America x World War II	1.26*** [0.334]	3.90*** [0.715]
ln(GDP) exporter	0.70*** [0.110]	---
ln (GDP) importer	0.65*** [0.114]	---
ln(distance)	-0.93*** [0.248]	-0.81*** [0.175]
MFN treaty	0.12 [0.194]	0.08 [0.123]
Both on the Gold Standard	0.34*** [0.129]	-0.02 [0.161]
Shared border	0.39**	0.45*

	[0.183]	[0.238]
Shared Language	-0.03	-0.02
	[0.138]	[0.271]
Number of Observations	2,460	2,460
R-squared	0.648	0.889
Time-Varying Country-Fixed Effects	No	Yes

Notes: Dependent variable is the logarithm of one plus the value of nominal imports from all Latin American countries in the sample. Source countries include 5 different Latin American countries and 8 non-Latin American countries. Robust standard errors are reported in brackets. In column 1, standard errors are clustered on importers and exporters. In column 2 standard errors are clustered on the country pair. Time dummies and world war period dummies are included but not reported. Time varying country fixed effects are included in column 2. *** p-value<0.01, ** p-value < 0.05, * p-value < 0.1

Table 3 - Bilateral Exports, 1910-1950

	LATAM + US	LATAM+UK
Both Countries in Latin America	-9.85***	-7.03***
	[0.568]	[0.669]
Both in Latin America x World War	4.44***	2.49***
	[1.370]	[0.905]
Both in Latin America x World War II	4.16***	4.59***
	[1.035]	[0.888]
ln(GDP) exporter	---	---
ln (GDP) importer	---	---
ln(distance)	-0.88***	-0.43***
	[0.184]	[0.160]
Shared border	0.1	0.47*
	[0.279]	[0.249]
Both on the Gold Standard	-0.16	-0.05
	[0.154]	[0.166]
Shared Language	0.23	0.18
	[0.169]	[0.175]
Number of Observations	2,952	2,952
R-squared	0.848	0.849
Time-Varying Country-Fixed Effects	Yes	Yes

Notes: Dependent variable is the logarithm of one plus the value of nominal exports from the relevant countries in the sample noted at the top of each column to 13 destination countries. Source countries include 5 different Latin American countries and either the US or the UK. In column 1 the source countries are those in Latin America and the US. In column 2 they are those from Latin America and the UK. In columns 1& 2 standard errors are clustered on the country pair. Time dummies and world war period dummies are included but not reported. Other constituent interactions terms are also included but not reported. Time varying country fixed effects are also included throughout. *** p-value<0.01, ** p-value < 0.05, * p-value < 0.1

3. Some insights into the market structure: an approach from textiles: Substitution of foreign manufactures during the wars?

The precedent econometric analysis seems to point out the importance of third countries competition and trade costs as a main driver for regional trade to be so low in South America. The world wars meant an opportunity to regional trade as a substitution reaction to foreign trade shortages. We try to approach this question in a more disaggregated way, focusing on textile trade. Substitution of foreign manufactures could have been through two ways: importing from neighbors instead of from distant partners or increasing domestic production.

According to (Bulmer - Thomas, 1998), during the years of the First World War foreign demand for strategic raw materials increased and then the domestic demand also increased. Industrial production could grow with the limitation of lack of capital goods' imports. That restriction was especially huge for the Southern republics and not so much for Central America and the countries more close to USA, because the latter country replaced the Europeans in capital goods' flows. As a consequence the economic evolution differed so much by countries:

b.1/ Bolivia had no opportunity to increase the domestic industrial production due to lack of previous industrial capacity. As exports of commodities grew, she also increased her domestic market. She could import more from their neighbors, but prices also increased, neutralizing the positive effect on the internal market.

b.2/ Chile and Peru overcame the problem of limited imports of capital goods being able to increase so much their industrial production. They took advantage of the increasing exports and decreasing imports from others.

b.3/ Argentina managed to increase some specific sectors, like textiles, and to export to her neighbors (flour to Brazil) but in general the internal demand was not growing faster enough.

b.4/ Brazil managed to keep the internal demand through fiscal and monetary's policies and the industrial production grew.²

Bulmer-Thomas argues that after First World War, competing imports from others gained Latin American markets, as domestic inflation neutralized the protection measures. Domestic industrial production declined. After the crisis of 1920-21, most of Latin America applied devaluation measures, being able to incentive again their domestic production against foreign competition. Protectionism also provoked an increase of FDI (foreign business established in Argentina and Chile to produce automobiles, sewing machines, paper or tires). But the whole growth of the twenties relied on the internal market and it was still very much dependent on the prospects for exports. Latin American industrial countries, Argentina, Chile, Uruguay, Brazil, México and Peru, suffered of lack of competitiveness due to high unit costs.

The thirties' crisis affected Latin America through the end of FDI into the region (lack of capital flows), the decrease of prices for raw materials (higher than the decrease of prices for manufactures), the consequent decrease of its terms of trade, and the drop of exports to others. The most negatively affected were Bolivia and Chile, because of their dependence on the mineral exports (falling in prices-21% & 53%- and volumes-52% & 69%). Argentina, Brazil and Peru had a modest decrease because the volumes of their exports (food and raw materials) did not fall so much (less than 25%). (Bulmer-Thomas, 2003, p. 232).

The burden of external debt increased, imports decreased as a consequence of diminishing exports, and fiscal revenues also went down due to its dependence of the external sector. The end of the gold standard led to the instability of the exchange rate. Only Peru remained into the gold for more time than Britain. After USA and Britain left the gold, Latin America tried to connect their currency to the British pound (Argentina and Bolivia) or the USA dollar (Brazil and Chile). All countries imposed controls on the exchange rate and quotas on imports. Most of them failed to pay its foreign debt (Argentina was an exception due to its British dependence on future loans).

² “la producción manufacturera estaba mucho menos vinculada a las exportaciones (dominadas por el café), por lo que el sector que competía con las importaciones fue proporcionalmente más importante que en Argentina o Uruguay. (...) Brasil hasta empezó a encontrar mercados de exportación en el resto de América Latina (...).” (Bulmer-Thomas, 2003).

From 1932 the recovery started in Latin America due to the promotion of exports, the increase of internal demand and an incipient ISI process implemented with multiple exchange rates. Brazil, Chile and Peru experienced a fast recovery (GDP growing more than 50% between 1931 and 1939), where import substitution played an important role. But not so for Argentina and Bolivia, where GDP growth was only over 20%. In this period, Bolivia was defeated in the Chaco war (1932-35) in favor of Paraguay. Bolivian economy suffered so much due to the defeat.

Exports grew in Latin America during the 30s, despite the protectionist measures of the foreign trade partners, due to economic policies supporting the traditional export sector (like devaluation of real exchange rate or moratorium on debt payment), an improvement on net barter terms from 1932 (with the exception of coffee prices especially relevant for Brazil where resources were reallocated in favor of raw cotton production), and the lottery of natural resources (re-armament on the thirties was an stimulus to Bolivian tin exports and Chilean copper exports). But Bolivia experienced a vicious circle of inflation and devaluation of exchange rate due to the negative effects of the Chaco war. Just before the IIWW, the German market was growing in importance in Latin America due to the aggressive Nazi trade policy and the use of German currencies in the exchanges, which became a disadvantage during the war.

Imports continue to be important but its nature changed from consumer goods to intermediate and capital goods. Brazilian industrial growth during this period was exceptional due to her imports of capital during the 20s which allow the country to produce further than her neighbors. Brazil started also a small capital goods' industry which moderated the dependence on imports. In general in Latin America, industry diversified during the thirties, but it was not able to replace the importance of the agrarian sector. Low productivity has been highlighted by the literature as a main obstacle caused by scarcity of electric energy, lack of qualify work force, and use of ancient machinery. But as markets were heavily protected the industry could rise. On the other hand, the industry was benefited by the beginning of the building of the road network, once the railways system was finished in Latin America. The aerial system also started in this period. Especially the first had important effects on the Brazilian case. During the thirties, some modest structural changes allowed a change into the growth model for some limited countries: Brazil, Chile and Argentina managed to have an enough industrial power to

break the previous high dependence between exports and the internal demand. Some modest developments in fiscal policies (modest increase of direct taxes and a variety of taxes on consumption) allowed also reducing fiscal dependency on the external trade. The path to a growth model based on the internal market was just beginning (Bulmer-Thomas, 1998).

In Second World War, the role of USA was much more important for Latin America than before. Before 1939, there was the Pan-American Conference and some years after that, the creation of many cooperation institutions led by USA. FDI from US to Latin America reached a maximum during the war. But USA's help was not enough to compensate the Southern Cone for the loss of the European markets. It was in this situation that some countries in the region focused to their neighbors' markets. The *Pinedo Plan* was an explicit attempt to promote intraregional trade in *Rio de la Plata*.

During the war, industrial production grew because of:

- a) Decreasing imports from others gave a chance to the local production much more important in countries in which an industry for capital goods have been developed in the thirties, like Argentina, Brazil and Chile. Nevertheless, the lack of capital goods' imports from abroad was still an important restraint to the industrial growth.
- b) Increase of intraregional trade among neighbors, especially in the case of Brazilian textiles. Nevertheless new trade partners also appeared in this period, i.e. South African exports.
- c) Investment on intermediate and capital goods' production, financed in many cases by the USA.
- d) Higher intervention of the State into the economy through price controls, foreign exchange rationing, and direct public investment into transport and energy infrastructures. Public expenditures grew faster than its revenues, and fiscal deficits grew.

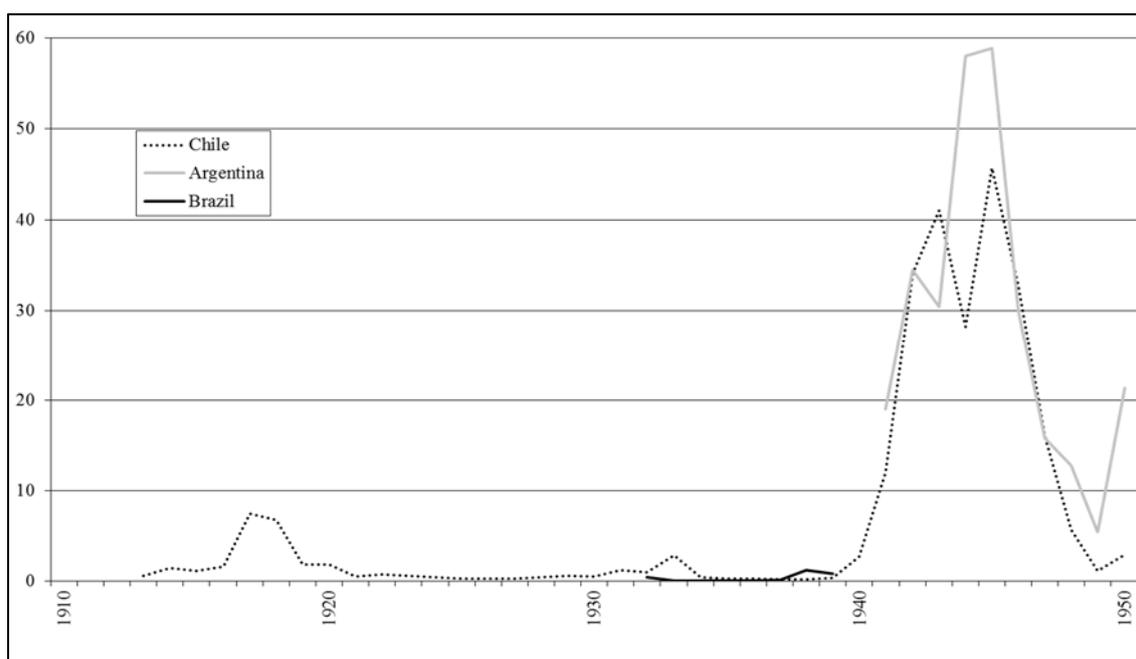
According to (Bulmer - Thomas, 1998), it was during the war that the export led growth model was substituted by an inward growth model. The non-traded sector grew so much and the production of intermediates and capital goods also improved. But the industrial growth was not big enough to achieve economies of scale, and its growth was mainly due

to high protectionism, imports' restraints and public subsidies. An additional problem was inflation. It appeared during the war due to scarcity of import's supply and high demand, and monetary factors, but it achieved high levels and become an endemic problem to the whole region.

Additionally, the reduction of imports provoked a fiscal deficit, as fiscal dependency on import taxes was still so much important although it has been reduced in previous decades. There were some attempts to compensate that through direct taxes but it was not feasible, and the governments were finally financed by the multiple exchange rate system and indirect taxation, both measures reinforcing inflation in the region. One of the consequences of the end of the war, it was that the USA financial help ended. Internal inflation in the LA economies, plus keeping exchange rates far from any devaluation, meant lack of competitiveness for Latin American exports (Bulmer - Thomas, 1998).

According to the previous explanations, textiles can shed some light to the substitution options of Latin American countries during the wars. Graph 3 shows the share of regional trade for textile importation regarding the small sample of our countries. During First World War textile importation were mainly from Britain and USA, although imports from our 5 South American countries also increased a bit. But during the Second World War, things change a lot. British textiles collapsed after 1941, which meant a chance for USA and Latin America to increase their exports. The nature of regional trade between First World War and Second World War seems to have changed dramatically, increasing the weight of manufactures in the second one. Substitution of foreign textiles seems to have been only for Second World War. According to this preliminary evidence, on the textile market, it seems that in First World War trade creation effect was dominant but too small, as imports of textiles grow for every main trade partner, even the British. In Second World War trade diversion seems to be more important but rather conjunctural as it declines when the conflict was finished.

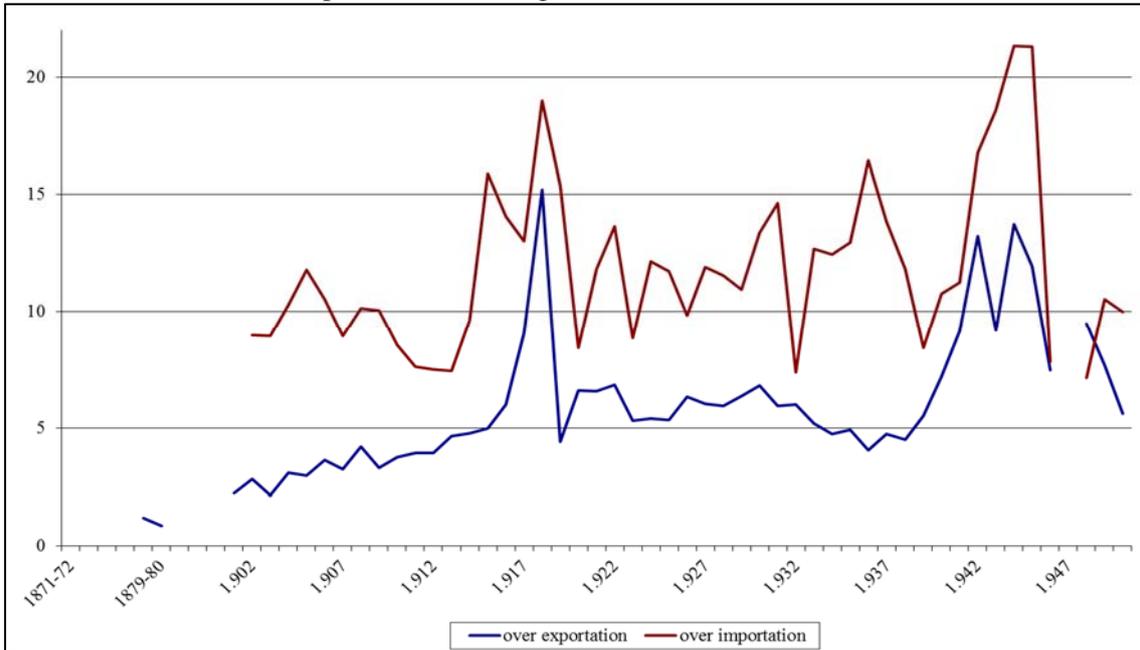
Graph 3 - Share of SA5 over textile importation (an indicator of substitution effect)



Notes: We consider the share of textile imports from South American partners for each country over total imports of this partners. Source: Trade Statistical abstracts for various years.

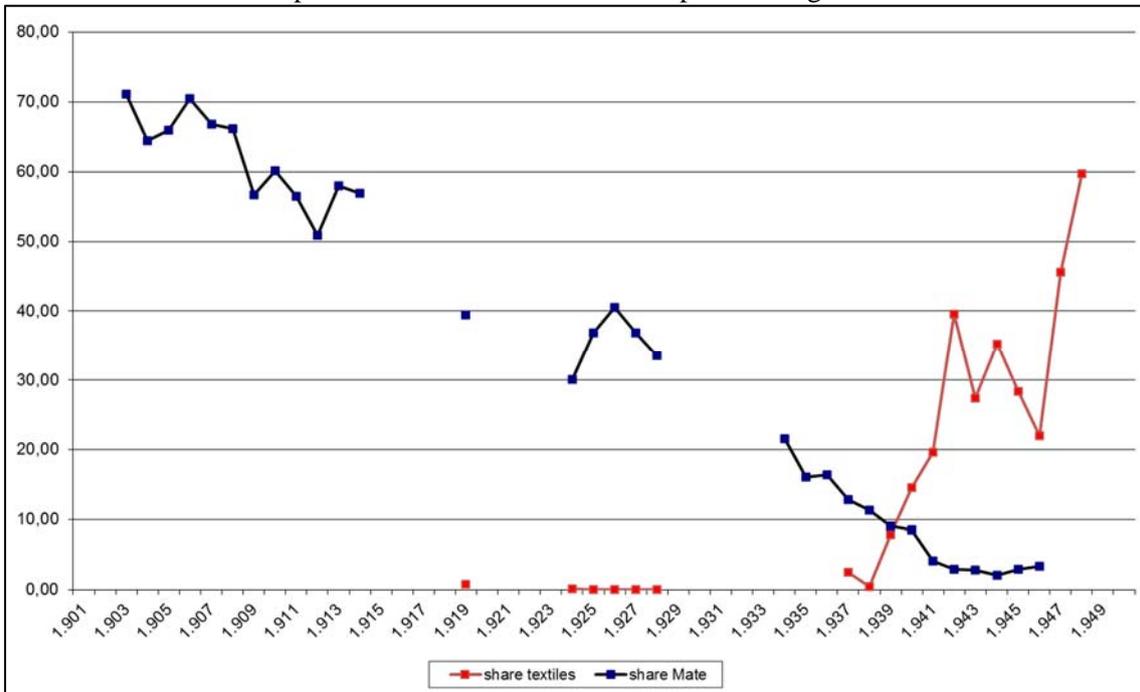
The core of regional trade in South America, both past and present, is mainly due to bilateral trade between Argentina and Brazil. Taking that into consideration, we analyze this particular trade flow in more detail. Graph 4 shows the share of Argentina over total trade of Brazil, both for imports and exports, according to Brazilian sources. We do not yet have data for the First World War and for some years of the thirties. We can clearly see the increase of Argentina as a market for Brazilian exports, especially during the forties.

Graph 4 - Share of Argentina over Brazilian trade



Source: Foreign trade statistical abstracts. Various years.

Graph 5 - The nature of Brazilian exports to Argentina



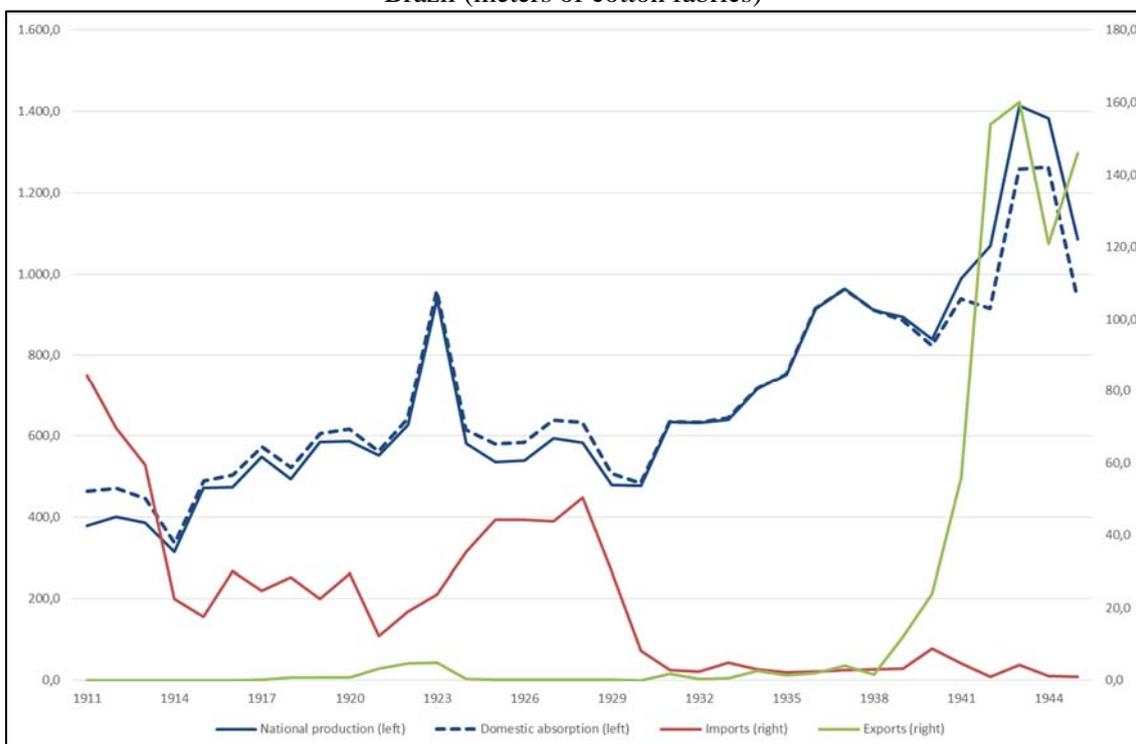
Source: Foreign trade statistical abstracts. Various years.

Graph 5 shows a long run trend in the composition of the main regional trade flow, that of Brazil with Argentina. It shows how at the beginning, it was mainly due to exports of

Mate de hierba buena from Brazil, but that gradually changed. It was only during WWII when textiles really increased on regional trade. As Mate was a traditional domestic product it has no substitution effect of foreign goods. Nonetheless, before the first war Brazil was exporting only hierba buena, as a raw material, meanwhile in the last years of the thirties she started to export it in a more processed type, as mate.

Graph 5 shows the evolution of the textile industry in Brazil and the relationship between domestic and external supply. Data is expressed in quantities (meters of cotton fabrics). The left vertical axis shows data of industrial production and apparent consumption. The right vertical axis shows trade data figures. The domestic market was covered in more than 80% by the domestic production the whole period. Imports were around 15% before the First World War, falling down to around 5% during the conflict. They remained more or less at that level during the twenties. After the thirties' crisis, textile importation drop to insignificant shares of the domestic market, in quantities. At the same time point, Brazilian textile exportation began to grow a lot. Textile exports were lower than 1% of the domestic production until 1939. In 1942, Brazil exported 14% of her domestic production

Graph 6 - Industrial textile production, domestic absorption, exportation and importation for Brazil (meters of cotton fabrics)



Source: (Vilella & Suzigan, 1973). Domestic absorption considers national production plus + imports – exports.

4. Conclusions

The poor performance of regional trade in Latin America is a long-lasting story as its historical roots are currently on the international debates. Liberalization efforts since the nineties have not been enough to strongly promote regional integration. Some authors argue that more attention should be paid to alternative obstacles, such as poor investment in regional transport infrastructures (Mesquita Moreira, Volpe, Blyde, & Martincus Volpe, 2008). We offer a new insight to this debate from an extraordinary period of regional trade, that of 1910-1950.

Regional trade in the Southern Cone of Latin America experienced an increase during the World Wars, especially important in the second case (Carreras-Marín et al., 2013). In this paper we explore the drivers behind this phenomenon. Following (Jacks et al., 2010, 2011) we have estimated relative trade costs for a sample of South American countries (Argentina, Bolivia, Brazil, Chile, and Peru) within them and for them with their main trade partners outside the region.

Our regression results provide a hint as to why Latin American persistently traded less than would be expected after controlling for obvious geographic barriers to trade. We infer that high prices, low productivity and potentially low quality kept intra-Latin American trade at low levels. However, relative trade costs were probably quite high too. During the wars intra-Latin American absolute trade barriers may or may not have changed substantively but relative trade costs did seem to have changed. Rises in market share were due to the opportunities available when European producers were off-line. This suggests that Latin American exports could compete in other Latin American markets if external conditions allowed. Both increased regional integration via policy and attempts to build industry might have allowed for further industrial growth in Latin America prior to 1950.

An approach to this question from textiles, it indicates that during First World War the main substitution was focused to the domestic market. However, in Second World War a modest substitution of foreign importation caused an increase of exports to neighbors. Nevertheless such an increase was not persistent, once the war finished. Again, relative

trade costs and third countries competition seem to be the clues. Next step into this research should be to investigate the role played by a set of factors behind trade costs.

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