Against the Grain:
Spanish Trade Policy in the Interwar Years

Online Appendices

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APPENDIX A:
NOTES ON INTERNATIONAL TRADE AND TRADE POLICY

Products, Categories, and Unit Values

Imports: From the *Estadísticas del Comercio Exterior de España* (Consejo de Economía Nacional 1922–1928, and Ministerio de Hacienda 1929–1935) we have culled 1,540 products; we added information on certain items contained in the appendices of the official statistics for a total of 1,720 products. For the years selected, we have 1,564 (1922) listed products, 1,564 (1925), 1,628 (1928), 1,695 (1931), 1,695 (1933), and 1,711 (1935). We use this level of disaggregation in our decomposition of the margins of trade in Table 3. Trade refers to special trade since transit trade, which represented a very low proportion of Spanish trade, is excluded. We follow the identification of products reported in the 1922 tariff legislation. This classification remained in place throughout the period.

The trade statistics recorded goods at different degrees of granularity. We opted to harmonize the sample at the 3-digit SITC (revision 4) level. The regression analysis is restricted to this level of 262 groups. In our sample, this amounts to 258 potential products; after excluding postal packages, special transactions, coins, gold, and monetary gold, we have 253 goods. We have normalized product volumes (generally recorded in physical units or quantities) in tons. For several products, volumes are given in numbers of units rather than by weight. We have converted these items into their equivalent weights based on information contained in the official statistics, which records tons and values (in thousands of gold-pesetas) for similar categories of goods. For the sectoral analysis in Table 6, we adopted the 3-digit level classification: agriculture SITC 0–1; raw

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materials 211–510; manufacturing 511–910; textiles 651–658; heavy industry 671–831 and 871–899.

Exports: The number of items recorded fluctuated over the period. Prior to 1928, the annual trade statistics listed a maximum of 350 products. Beginning in 1928, the number of items equaled that of imports, 1,540 products; with appendices, a total of 1,626 items. Compared to imports, the variation in destinations and goods over time was limited. We assembled a granular good-country dataset for 1928 and 1935. The years are reasonable benchmarks since they capture trade policies before and after the establishment of the Second Republic. In the regression analysis, we use the 3-digit SITC classification of 253 groups.

Unit values: From 1922 to 1930, the official sources record unit values of exports and imports by products irrespective of destination or source. These values were fixed by the Sección de Valoraciones del Consejo of the Ministry of Treasury. In 1931 Spain adopted an international practice and began reporting declared values by import source and export destination. Based on this information, we calculated unit values by good and origin country for 1931, 1933, and 1935. For these years, we considered the average unit value for each good (total value divided by total quantities for each good). For imports at the country level, we use average unit values. Despite the change in 1931 in recording unit values, the pattern of trade in our sample corresponds to that in Tena (2005).[1]

Countries

The official sources record information on 93 import sources, corresponding to 81 countries. For several units, we have combined regions: British India and other British possessions in Asia; Canada and Newfoundland; Denmark and the Faroe Islands; Morocco and regions under Spanish, French, and international control; Poland and Danzig. In regressions, we are restricted to a sample of 47 countries because of the

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[1] Since tariffs were specific, manufacturers had an incentive to inflate unit values in order to undervalue rates paid (and consequently demand increased protection). Tena (1985) concludes that any bias in reporting imports decreased from the second half of the 1920s.

availability of information on GDP. We exclude these import sources: Andorra, Belgian possessions in Oceania, British possessions in Europe, Gibraltar, Monaco, Rio de Oro (Sahara). For exports, we recorded values of the top 10 export destinations: Argentina, Belgium, France, Germany, Italy, the Netherlands, Sweden, Switzerland, United Kingdom, and the United States, amounting to 83.2 percent of the value of exports in 1928 and 76.4 percent in 1935. This article's replication kit contains a complete list of import sources and export destinations (Betrán and Huberman 2021).

Tariffs

Continuous series of duties by good are unavailable. We relied on information on tariffs by country from official trade statistics (Consejo de Economía Nacional 1925; Dirección General de Política Arancelaria 1934). We consider changes in tariff rates between 1926 and 1930 recorded in Vives (1931) and the *Gaceta Oficial*. We also consulted information on tariffs by good contained in trade treaties for selected years. For treaties until 1930, we consulted Consejo de Economia Nacional (1925) and the Ministerio de Economia Nacional (1930); from 1930, the *Gaceta Oficial* and the *Recopilación de la legislación complementaria de los aranceles de aduanas y de política comercial*. Online Appendix D gives annual information on trade legislation, MFN treaties, and quotas.

For 1,720 imported products, we calculated the ad-valorem tariff or the specific duty divided by the unit value of each item. In Figure A1, our measure of ad valorem (weighted) tariffs shows a sharp spike after 1928 compared to tariff measures based on Tena (2005). Since tariffs were specific, rates increased when prices or unit values fell. All measures plateau after 1933.

Tariffs varied by good, country, and time. The tariff had a two-column structure. The first column was applied to countries without trade treaties; the second to countries with a treaty. Special tariffs were fixed in bilateral trade agreements. Table A1 presents ad valorem rates for the two columns at the SITC 1-digit level for 1925–1935. The difference between first and second column rates varied over time, but on average the former were more than double. In 1925, beverages and tobacco had the highest rates; in 1935, food and live animals.
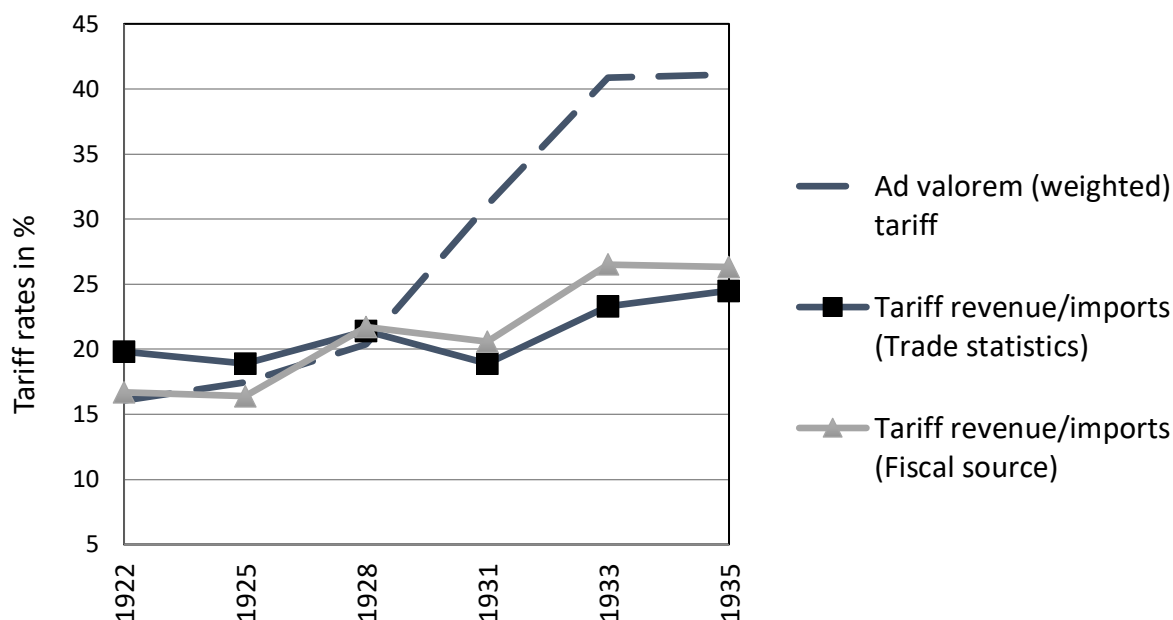
FIGURE A1
IMPORT TARIFF RATES, 1922–1935

Notes: Ad valorem tariffs weighted using import values by country.
Sources: Tariff revenues (fiscal and trade statistics) and imports from Tena (2005). Ad valorem tariff calculated from official sources. See the text for details.

In the regressions, we are restricted to the 3-digit level classification of 253 goods. For this exercise, we calculated the ad-valorem tariff for each 3-digit level category or product as a weighted average of the ad-valorem tariffs of all the goods included in the category. The weights used are the total values of imports by product as a share of total imports of each category.

TABLE A1
AD VALOREM TARIFFS BY PRODUCT CATEGORY, 1925–1935

| | 1925 Ad Valorem (%) | | 1928 Ad Valorem (%) | | 1931 Ad Valorem (%) | | 1933 Ad Valorem (%) | | 1935 Ad Valorem (%) | |
| | Second Tariff | First Tariff | Second Tariff | First Tariff | Second Tariff | First Tariff | Second Tariff | First Tariff | Second Tariff | First Tariff |
1-digit SITC category										
0 Food and live animals	22.23	65.85	23.94	71.05	54.04	168.42	57.77	169.02	73.06	208.13
1 Beverages and tobacco	57.19	167.84	30.19	45.17	51.09	57.45	41.47	45.44	14.37	40.95
2 Crude materials and inedibles	3.80	10.48	4.53	12.61	5.73	15.29	7.64	20.37	7.78	40.29
3 Minerals and fuels	24.10	72.26	28.85	86.54	77.20	231.53	106.22	318.60	126.05	193.19
4 Animal and vegetable oils	4.53	13.42	5.13	15.35	7.49	22.56	9.37	26.73	9.12	30.07
5 Chemicals and related products	8.62	22.53	7.55	20.52	9.17	25.89	11.69	32.58	12.56	34.99
6 Basic manufactures	26.92	74.10	26.48	75.24	38.07	107.75	55.10	158.88	44.41	124.19
7 Machinery and transport equipment	27.15	66.58	26.16	62.59	28.55	71.03	42.33	95.07	42.02	105.31
8 Miscellaneous manufactured articles	29.79	77.76	30.15	81.18	28.40	77.07	24.40	66.75	25.22	72.16
Average ad-valorem tariff	18.07	50.13	19.44	54.14	30.13	87.09	38.40	107.58	40.40	102.54

Sources: Spain, Consejo de Economía Nacional (1922–1928), Ministerio de Hacienda (1929–1935), and other official sources.

Trade Treaties

The *Real Decreto de aranceles de aduanas*, 12 February 1922 (Cambo's Tariff) and the *Ley de Autorizaciones,* 23 March 1922, established the framework of Spanish commercial policy in the interwar period.

The Consejo de Economía Nacional of 1925 classified treaties and agreements into four groups.

(1) Countries with special tariffs or MFN agreement in some products: Germany, France (with colonies and possessions), Iceland (cod only), Italy, Norway, Switzerland, and the United Kingdom.

(2) Countries with all tariff benefits (equivalent to MFN): United States, Japan, Morocco, and Portugal. We added to this group Spanish offshoots in South America and China.

(3) Countries with second tariff: Annam (Vietnam), Austria, Belgium (colonies from 1925), Brazil, British India, Bulgaria, China, Cuba, Czechoslovakia, Denmark (colonies from 1928), Egypt, Gibraltar, Iran, Ireland, Netherlands and colonies (same tariff as the Netherlands from 1928), Romania, Siam, South Africa, Sweden, Spanish offshoots in South America (including Panama, Santo Domingo and Haiti), Turkey, Yugoslavia (Croatia, Serbia, and Slovenia), and Zanzibar (same tariff as the United Kingdom from 1928). We added to this group Fernando Poo (Equatorial Guinea), the Philippines, and Spanish Sahara.

(4) Countries with first tariff: Abyssinia (Ethiopia), Albania, Australia (U.K. tariff from 1928), Canada (U.K. tariff from 1928), Danzig, Estonia, Finland, Georgia, Hungary, Latvia, Liberia, Lithuania, Luxembourg, Poland, Russia, Tunisia (French tariff from 1928), Ukraine, and Portuguese, Italian, and Japanese colonies. We added to this group Monaco, New Zealand (U.K. tariff from 1928), and Saudi Arabia.

Since the years we have selected in constructing our database do not align exactly with trade policy changes, we follow these guidelines:

1922: We consider tariffs exclusive of trade treaties. The first tariff is applied to countries on the 1925 list; the second tariff for all other countries.

1925: Tariffs and MFN treaties from the Consejo de Economía Nacional (1925).

1928: Tariffs in 1925, tariff changes in 1927 and 1928, and tariffs in new treaties with MFN clauses from the *Gaceta Oficial*.

1931: Tariffs in 1928, tariff changes between 1928 and 1930, and tariffs in treaties with MFN clauses from the Ministerio de Economía Nacional (1930) and *Gaceta Oficial*.

1933: Tariff and MFN changes in treaties from the *Gaceta Oficial*.

1935: Tariffs from the Dirección General de Política Arancelaria (1934*)*; tariffs and MFNs in new treaties from the *Gaceta Oficial*.

For the regression analysis of import values, we have coded a variable that takes the value 1 when the good has the MFN clause and 0 otherwise. At the 3-digit level (253 categories), we have calculated the MFN variable as the number of products with MFN clause in each category as a share of the number of products listed in the category.

Our sources do not give information on tariff rates on Spanish exports. This documentation, as well as detail on special tariffs, goods contained in MFNs, goods with quotas, and quotas in trade agreements, are available in the tariff legislation of destination countries only; in some agreements, goods are identified solely by the numbers recorded in foreign tariff legislation. In regressions for export values, we consider a treaty variable which takes the value of 1 if a country signed a trade treaty with Spain during the periods 1925–1928 and 1931–1935, and 0 otherwise.

Quotas

Authorized in 1931, quotas appeared in trade legislation in 1933. The Online Appendix D gives information on the two types: quotas on goods applied to all countries (quotas were distributed based on previous year's imports) and quotas on goods fixed in trade treaties. Several countries negotiated special quotas in trade treaties. Quotas varied

by product and country. In Column (1) (all countries) of Table A2, we present the percentage of goods with quotas as a share of the total number of goods in each 1-digit SITC good category. Columns (2)–(4) give the percentage of goods with quotas in trade treaties with countries having quotas applied to more than 10 goods. As in the case of MFNs, we have coded a variable that takes the value 1 when the item has a quota and 0 otherwise. At the 3-digit product level (253 categories), we calculated the variable as the number of products with quotas in each category as a share of the number of products listed in the category. Source: *Gaceta Oficial*.

TABLE A2
NUMBER AND SHARE OF GOODS WITH QUOTAS BY PRODUCT CATEGORY IN 1935

	1-digit SITC category	Percentage of Goods with Quotas			
		All Countries	France	Poland	Argentina
1	Food and live animals	9.43	4.40	1.26	1.89
2	Beverages and tobacco	0	0	0	0
3	Crude material and inedibles	12.12	4.55	5.30	4.55
4	Minerals and fuels	0	0	7.41	0
5	Animal and vegetable oils	26.92	11.54	0	7.69
6	Chemicals and related products	2.13	1.60	2.66	0.53
7	Basic manufactures	0.76	1.07	0.46	0
8	Machinery and transport equipment	7.84	1.12	0	0
9	Miscellaneous manufactured articles	0.43	0.43	0	0.43
	Percent of goods	4.00	1.74	1.10	0.76
	Number of goods	48	35	19	12

Notes: Figures represent the percentage of goods with quotas as a share of the total number of goods in each 1-digit SITC category. Other countries (number of goods): Netherlands (8), Norway (6), Yugoslavia (5), Denmark (2), Venezuela, Ireland, Iceland, and Estonia (1).
Sources: Spain, Consejo de Economía Nacional (1922–1928), Ministerio de Hacienda (1929–1935), and *Gaceta Oficial.*

Additional Variables

Exchange rates: The peseta value of each currency (Fouquin and Hugot 2016).

GDP of exporter and importer: In thousand current pesetas. Converted from U.S. dollars, current prices, non-PPP adjusted (Klasing and Milionis 2014).

Imports: In thousand current pesetas. Unit values in pesetas. Originally in pesetas-gold converted into pesetas (Tena 2005).

Time-invariant variables: Distance between capitals measured in thousands of km, border, colony (the presence or history of a colonial relationship), and common language or official primary language (Fouquin and Hugot 2016).

APPENDIX B:
THE DECOMPOSITION OF THE MARGINS OF TRADE

Equation (B1) presents our method of decomposition. It is a reduced form of a longer version in Eaton et al. (2007; see, also, Meissner and Tang 2018). We write:

$$\frac{M_{ct}-M_{ct-1}}{M_{ct-1}} = \frac{\Sigma_{k\in CN_c^{t-1,t}}\left(m_{ct}^k-m_{ct-1}^k\right)}{M_{ct-1}} + \frac{\Sigma_{k\in EN_c^{t-1,t}}\left(m_{ct}^k\right)}{M_{c\,t-1}} - \frac{\Sigma_{k\in EX_c^{t-1,t}}\left(m_{ct}^k\right)}{M_{ct-1}} , \qquad \text{(B1)}$$

where M_{ct} is the total value of imports to Spain from a country c in year t, m_{ct}^k is the value of imports of product k in year t; $CN_c^{t-1,t}$ are continuous or incumbent goods defined as goods imported in year $t-1$ and year t; $EN_c^{t-1,t}$ denotes entering goods in year t, but not in year $t-1$; $EX_c^{t-1,t}$ represents exiting goods or goods that are imported in year $t-1$, but not in year t. Countries, c, represent Spain's import sources. They consist of incumbent or continuous countries that export some or all continuous goods; continuous countries that export additional goods (continuous and new goods); new countries in export activity; old ones that stop trading selected (but not all) goods; and countries that stop exporting entirely. The left-hand side of the equation is the (net) change in Spanish imports. The first term on the right-hand side represents the contribution of the change in continuous goods; the second term, new goods; the third term denotes exiting goods.

APPENDIX C: ADDITIONAL ROBUSTNESS CHECKS

Table C3 presents two additional checks of our baseline estimates. The table reports coefficients using OLS high-dimensional fixed effects. This technique is analogous to the PPML estimation in Table 4. In regressions for all countries covering the entire period and for subperiods before and after 1931, the coefficients have similar signs to those in Table 4, although as expected at lower levels of significance. Second, we restrict our sample to France only, Spain's major trading partner. PPML estimation confirms the table's results.

TABLE C3
THE EFFECT OF TRADE POLICY ON IMPORT: ROBUSTNESS CHECKS

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	Log (Imports)	Log (Imports)	Log (Imports)	France Imports	France Imports	France Imports
Method	OLS	OLS	OLS	PPML	PPML	PPML
Period	1922–1935	1922–1928	1931–1935	1922–1935	1922–1928	1931–1935
log (GDP exporter)	0.318	0.506	0.078	5.223***	–1.134	1.153
	(0.372)	(0.883)	(0.460)	(1.974)	(1.494)	(1.111)
log (GDP Spain)	1.228	0.560	1.953	–6.619***		
	(567.8)	(128.9)	(985.9)	(2.272)		
Log (1 + tariff)	–0.581***	–0.745	–0.160	–0.158***	–0.185**	–0.067
	(0.197)	(0.533)	(0.444)	(0.061)	(0.082)	(0.078)
MFN	0.149	0.006	0.250**	0.440**	0.987**	0.619***
	(0.154)	(0.193)	(0.127)	(0.201)	(0.429)	(0.233)
Log (exchange rate)	–0.247	–0.374	–1.019***	–0.477	–0.222	–0.835
	(0.216)	(0.299)	(0.285)	(0.349)	(0.358)	(3.161)
Quota	–0.534		1.926	0.584		1.197*
	(1.447)		(1.959)	(0.733)		(0.637)
Quota in treaty	0.555		0.813	–0.393		–0.287
	(0.675)		(0.639)	(0.869)		(0.789)
Constant				16.85***	21.43	–4.24*
				(4.525)	(17.320)	(24.910)
Observations	12,996	6,291	6,705	1,161	580	581
R-squared	0.869	0.916	0.925	0.041	0.028	0.033

Notes: Dependent variable is the value of imports by good, country, and year. In Columns (1), (2), and (3), the dependent variable is the log of total imports; estimated using OLS reg2hdfe. Regressions control for good*country and good*year fixed effects. Columns (4), (5), and (6), the dependent variable is the value of imports from France; estimated using PPML controlling for good*year fixed effects. Robust standard errors clustered by country in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Sources: Spain, Consejo de Economía Nacional (1922–1928), Ministerio de Hacienda (1929–1935).