

STATISTICS OF SPAIN'S COLONIAL TRADE, 1747-1820: NEW ESTIMATES AND COMPARISONS

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ABSTRACT

New estimates of Spain's current-account balance with the «Indies» add new perspectives to the recent debate on the aims and results of Spanish commercial policy. At the height of «*comercio libre*» in 1784-92, Spain's private commercial interests appear to have drawn larger financial returns from the Indies than did their British counterparts from wider colonial engagement. On this as on other scores, by the eve of the French wars the Spanish empire appears to have become a sounder economic proposition than might be inferred from recent pessimistic views. The empire's subsequent demise may have involved a greater degree of geographical and dynastic accident than is seemingly apparent.

Keywords: Spanish colonial trade, «*comercio libre*», terms of trade, balance of payments, customs revenue, British colonial trade

JEL Classification: N73, N43

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RESUMEN

Una estimación de la balanza por cuenta corriente de España con sus «Indias» abre nuevas perspectivas al debate sobre los objetivos y resultados de la política comercial española. En pleno apogeo del «comercio libre» en 1784-92, los intereses privados españoles parecen haber extraído mayores flujos financieros del imperio americano que sus homólogos británicos, sobre la base estos últimos de una empresa colonial más amplia. En éste como en otros aspectos, en vísperas de la guerra con Francia el Imperio español parece haber logrado una mayor viabilidad económica de lo que pudiera inferirse de apreciaciones recientes. El subsiguiente colapso del imperio pudo haber obedecido a circunstancias geográficas y dinásticas en mayor medida de lo que pudiera pensarse.

Palabras clave: comercio colonial español, «comercio libre», relaciones de intercambio, balanza de pagos, renta de aduanas, comercio colonial de Gran Bretaña

Despite a generation's work on Spanish colonial trade from 1717 to 1821, the seemingly central task of calculating current values of total imports and exports for the entire period has yet to be attempted. This neglect is all the more intriguing because the 1980s and 1990s witnessed extensive interpretation and debate on the aims and results of Spain's so-called «*comercio libre*» since 1765¹. Some of the regional studies have supplemented earlier work with trade values and relevant prices². But the regional record remains patchy, and the very thoroughness of this research suggests that much additional evidence susceptible of serial quantification is unlikely to be forthcoming.

For its part the more extensive quantitative work of national scope remained surprisingly close to the primary sources employed. The two systematic attempts to construct a full matrix of import and export values at current prices were explicitly provisional, were restricted to the period 1778-1820, and relied in part on suspect revenue proxies for trade values in 1792-1820³. García-Baquero's pioneering work on Cadiz's colonial trade in 1717-78 and in 1798-1820 produced a wealth of commodity weights or quantities but no current values⁴. Conversely, Fisher (1981, 1985a, 1985b,

¹ Delgado Ribas *et al.*, eds. (1986); Fontana and Bernal, eds. (1987); Tedde de Lorca (1989); Prados de la Escosura (1993); Llombart (1994); Marichal (1999).

² García-Baquero (1972, 1974); Izard (1974); Ortiz de la Tabla (1978); Alonso Álvarez (1986); Delgado Ribas (1989, 1992); Fábregas Roig (2005).

³ Cuenca Esteban (1981, 1982, 1991); Prados de la Escosura (1993).

⁴ García-Baquero (1972, 1976).

1992) supplied no weights or quantities but export values for 1778-1820, import values at constant prices for 1782-96, and, for Cadiz only, import values at unspecified current prices in 1790-96. García-Baquero (2003) has since addressed some of the more obvious problems raised by both Fisher's work and his own; but the only new figures he provided are total import and export values at constant prices for Cadiz, with no commodity breakdowns for the indicated corrections.

The case for further quantitative work on national trends and cycles is arguably compelling, but the search for accuracy and comprehensiveness should be tempered with considerations of purpose and efficiency. The above mentioned contributions have all been concerned with Spanish domestic issues —most notably with the impact of colonial policy on local economic growth. The primary motivation of the present article stems more broadly from ongoing work on differential access to external wealth by contending European states. The extensive literature on the «fiscal-military state» in the eighteenth-century has focused on the effective mobilization and deployment of available resources⁵. Such matters are major issues in their own right, but they are prone to distract attention from the external mediations on the growth and dependability of the resources in question⁶. The drive for supremacy that reached a climax in the late eighteenth century was fought by Imperial states on a worldwide scale. Of primary importance for such states were those rewards of external involvement able to confer a decisive marginal advantage, not least by supplementing domestic revenue and by helping to finance aggression and defence.

On this particular score the British and Spanish states were leading contenders, but the empirical base for comparative work on the respective external resources has yet to be completed. Unlike their Spanish counterparts, British governments did not rely directly on unilateral transfers from abroad —though such private inflows as the «India drain», and the Irish rents remitted to absentee landlords residing in Britain, may have significantly enlarged the domestic tax base⁷. The largest single source of income for the British state was net customs and excise revenue on worldwide imports, to the tune of 25 per cent of total tax revenue in 1765-80 and 34 per cent by 1803-12⁸. One pertinent issue, to be addressed here for the first time, is what proportion of British customs and excise revenue came from duties on colonial trade.

In the Spanish case, a long-standing literature has stressed Bourbon governments' relative dependence on uncertain surpluses from American treasuries and on customs revenue from colonial trade. The Crown's share

⁵ Bowen and González Enciso, eds. (2006); Torres Sánchez, ed. (2007).

⁶ Bowen (2006); Cuenca-Esteban (2007b).

⁷ Cuenca-Esteban (2007a).

⁸ O'Brien (1988); Cuenca-Esteban (2007b).

in bullion imports from America is well documented for much of the eighteenth century and beyond, but comparable work on Spanish revenue from colonial trade remains at the stage of informed guesswork⁹. Pending the unlikely discovery of adequate records beyond cryptic entries in treasury accounts and heterogeneous ship registers, further work in this area must resort to computed trade values and to tax rates on individual commodities. But such sensitive calculations require the closest possible approximation to the tax base on which the revenue was drawn.

To this end, this article builds on a critical analysis of the published figures to construct consistent annual series of Spain's imports from the «Indies» at constant and market prices in 1747-1820. The wider scope and detail of these and other new estimates, and the comparisons they make possible with British external receipts and payments since 1776-78, add new perspectives to recent debate on the aims and results of Spanish commercial policy. At the height of *comercio libre* in 1784-92, Spain's private commercial interests appear to have drawn larger financial returns from the Indies than did their British counterparts from wider colonial engagement. By virtue of its direct bullion receipts, the colonial purse of the Spanish Treasury also appears to have fared equally well or even better, despite much smaller customs revenue, than did the British Exchequer's. In other substantial respects the volume of Spanish colonial trade was relatively small, and so too must have been the associated domestic benefits. But new analysis of Spain's import gains through 1747-96 does not support Delgado Ribas's assessment despite downward corrections of real growth in 1785-96. By the eve of the French wars, the Spanish empire appears to have become a sounder economic proposition than might be inferred from recent pessimistic views. The empire's subsequent demise may have involved a greater degree of geographical and dynastic accident than is seemingly apparent.

1. TRENDS AND CYCLES IN SPANISH IMPORTS FROM THE INDIES, 1747-1796

The 1980s and 1990s witnessed extensive interpretation and debate on the aims and results of Spain's *comercio libre* legislation since 1765. One of the obvious quantitative issues involved was the growth rate of Spain's colonial exports and imports at constant prices before and after the *Reglamento* decree of 1778. Fisher's conclusion that Spain's total imports from Spanish America grew more than 15-fold in 1778-96, and that exports were «400 per cent higher in 1782-96 than in 1778», rests on shaky grounds¹⁰. García-Baquero (2003, pp. 63-78, 192-213) correctly noted that Fisher's import and

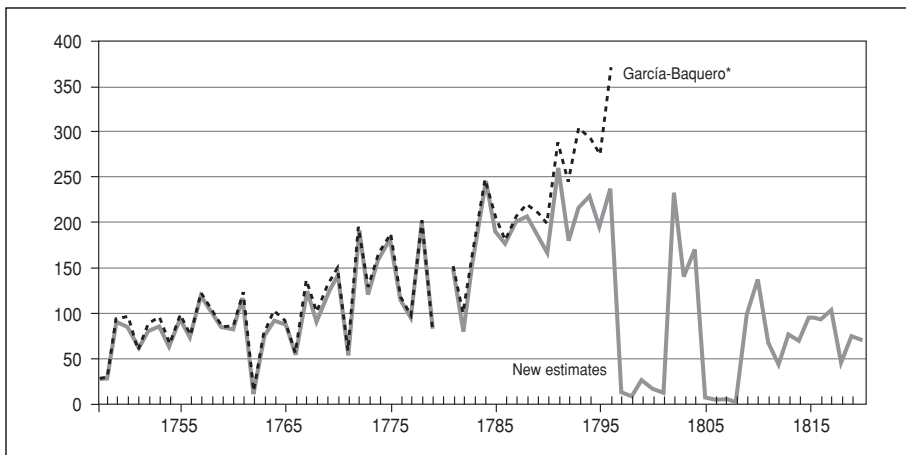
⁹ Delgado Ribas (1992); Prados de la Escosura (1993); Marichal (1997).

¹⁰ Fisher (1992), p. 17; *ibid.* (1985a), p. 62.

export figures for his base year of 1778 were grossly understated; that his import values for 1782-89 were «clearly defective»; that the official valuations of tobacco imports that Fisher accepted for 1786-96 were 12.5 times higher than those for 1747-78; and that his trend analysis downplayed the fact that non-bullion imports into Cadiz were officially valued at 1778 prices in 1782-89 and at presumably higher market prices in 1790-96. Fisher's series for 1778-96, and García-Baquero's otherwise acceptable revision for the same period, remain faulty in that neither of these authors corrected for the change of valuation of imports into Cadiz in 1790-96.

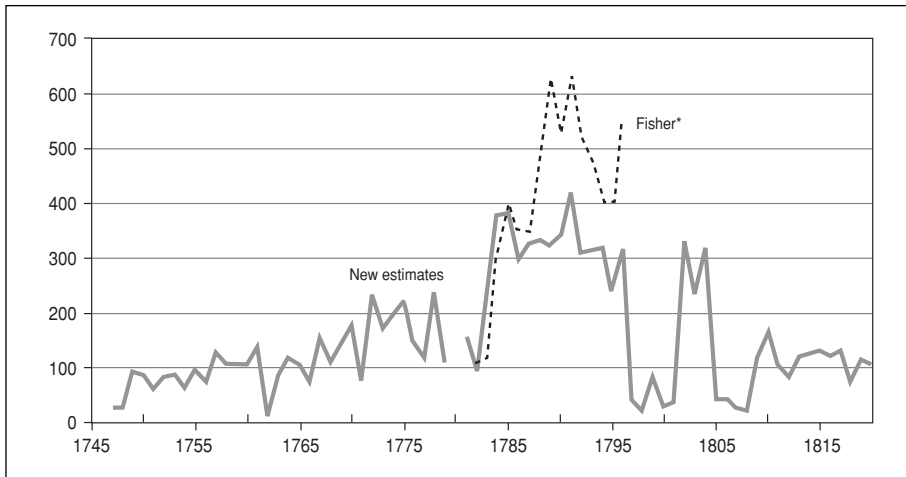
The implications of this long-standing omission are roughly conveyed by Figures 1-2. If García-Baquero's current values of non-bullion imports into Cadiz through 1790-96 are re-calculated at constant prices of 1778, they fall by an annual average of 64.2 million *reales de vellón* or 23 per cent. The new estimates of *private* import volumes in *Figure 1* also exclude independent estimates of tobacco *on Crown account* (5.5 million per year in 1790-96). Fisher's private, non-bullion import values into all Spanish ports are overstated on two counts: his apparent oversight of a major change in tobacco valuation since 1785, and his reliance on official values at market prices through 1790-96. The new corrected estimates for Spain in *Figure 2*, also including minor imports from the Indies by the *Compañía Guipuzcoana*, by the *Compañía de Barcelona*, and in the *Corunna Correos*, together amount to a net annual reduction, through 1785-96, of 154.5 million *reales de vellón* or 32 per cent. The new figures of private and Crown bullion imports for

FIGURE 1
 CADIZ: PRIVATE NON-BULLION IMPORTS FROM THE INDIES, 1747-1820
 (Million *reales de vellón* at constant prices of 1778).



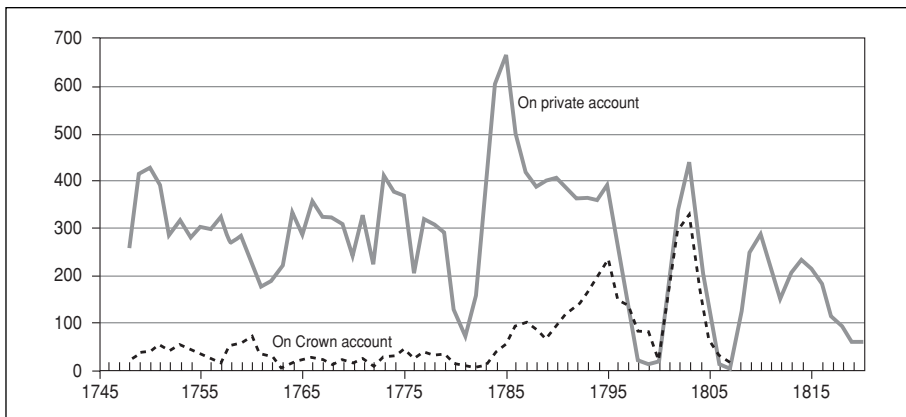
* Crown tobacco included. Market values in 1790-96 only.
 Sources and Procedures: See Appendix 2.

FIGURE 2
 SPAIN: PRIVATE NON-BULLION IMPORTS FROM THE INDIES, 1747-1820
 (Million *reales de vellón* at constant prices of 1778).



* Company and Correo imports apparently not included.
 Sources and Procedures: See Appendix 2.

FIGURE 3
 SPAIN: BULLION IMPORTS FROM THE INDIES, 1747-1820
 (Million *reales de vellón*; three-year moving averages).



Sources and Procedures: See Appendix 3 and Table 3, line 10.

1747-96 in *Figure 3* incorporate comparatively small revisions. All three Figures also include rough new estimates for 1797-1820.

Relevant breakdowns of commodity and bullion flows may be brought to bear on Delgado Ribas's pessimistic assessment of the impact of *comer-*

cio libre legislation on Spanish colonial imports. This author drew on Fisher's import figures for 1778-96, and on his own estimates from García-Baquero's import quantities for 1747-77, to suggest that Spain's non-bullion colonial imports on private account grew at lower annual rates in 1782-96 than they did in 1747-78¹¹. Obviously the broader issues at hand cannot be resolved with trend comparisons alone. The course of Spanish colonial trade was mediated by non-policy influences, some stemming from economic conditions on both sides of the Atlantic and others from the vagaries of warfare and foreign competition. Though the opening up of additional Spanish and colonial ports to Atlantic trade since 1765 was clearly important, the potential role of the alleged fiscal liberalization in promoting trade growth has yet to be ascertained¹². In any event, systematic comparisons of growth rates in relevant periods provide a vantage platform from which to suggest or to discard apparent causal connections.

The analysis proposed here recognizes that observed discontinuities in import levels are more significant than annual growth rates within arbitrarily specified trends. One basic requirement of trend comparisons is that they should expose any substantial sensitivity to the choice of time ranges. The alternative periodization in Table 1 allows for several starting and ending points for both the early and the later trends, with reference to three-year averages in all but one case. One consideration has been to avoid such atypical or controversial years as 1747 and 1778; another, to concede Delgado Ribas's point that Spain's colonial imports may have substantially benefited from the slave revolts in Saint Domingue since 1789-91. A second requirement of trend analysis is that it be explicitly biased against the proposed conclusion. In the present case, this amounts to comparing the period of highest trend growth during the first three decades with a choice of time ranges around the three thrusts to *comercio libre* in 1765, in 1778, and in 1789. The early trend in Table 1 starts in 1747-9 or 1752-4 and ends in 1774-6—the three-year period described by Delgado Ribas (1992, p. 415) as the culmination of the expansive phase of colonial trade.

Even on such adverse terms of comparison, and despite the already specified downward corrections of import growth through 1785-96, between 1775-7 and 1790-2 both Crown and private imports show much higher average growth rates than they do in 1752-3 to 1774-6. Delgado Ribas's finding that bullion and tobacco imports on Crown account grew several times faster since the 1770's is broadly confirmed. But his contention that bullion imports on private account grew half as fast during *comercio libre* is flatly rejected. Perhaps most significantly, his highly qualified concession that growth in other colonial imports through 1782-96 almost matched previous rates turns out to be far from generous.

¹¹ Delgado Ribas (1992), pp. 418-20.

¹² For a balanced assessment of the larger issues see Martínez Shaw (1987).

TABLE 1
SPAIN: IMPORTS FROM THE INDIES EXCLUDING COMPANY
AND CORREO TRADE ¹, 1747-1796
 (New estimates; commodity import values calculated at 1778 prices)

A. Average values per selected periods in million reales de vellón:								
	1747/ 1749	1752/ 1754	1764/ 1766	1774/ 1776	1775/ 1777	1787/ 1789	1790/ 1792	1796
1. Tobacco on private account	.192	.576	.385	.165	.158	.211	.228	.127
2. Other goods on private account	48	76	78	157	134	324	353	312
3. Bullion on private account	259	313	286	367	203	384	380	392
4. Total private imports (lines 1+2+3)	307	389	364	524	338	708	734	704
5. Tobacco on Crown account	2.63	7.89	5.28	2.26	2.17	13.9	14.4	9.26
6. Bullion on Crown account	20	54	21	42	25	86	118	236
7. Total Crown imports (lines 5+6)	23	62	26	44	27	100	132	246
8. Grand total (lines 4+7)	330	451	390	568	365	808	866	950
B: Average growth rates per year in selected periods (%):								
	1747-9/ 1774-6	1752-4/ 1774-6	1764-6/ 1787-9	1764-6/ 1790-2	1775-7/ 1790-2	1775-7/ 1796		
9. Tobacco on private account	-0.1	-5.1	-0.3	-0.5	3.7	-0.7		
10. Other goods on private account	4.4	3.3	6.4	6.0	7.1	4.6		
11. Bullion on private account	0.7	-0.04	1.8	1.4	4.4	3.3		
12. Total private imports	1.6	0.8	3.2	2.9	5.6	3.8		
13. Tobacco on Crown account	-0.1	-5.1	-0.3	-0.5	3.7	-0.7		
14. Bullion on Crown account	2.2	-1.7	5.0	6.3	10.7	11.1		
15. Total Crown imports	2.0	-2.0	5.1	6.2	10.9	11.0		
16. Grand total	1.6	0.5	3.4	3.3	6.2	4.9		

¹ As in Appendix Table 2: Compañía Guipuzcoana, Compañía de Barcelona, and Correos Marítimos. Sources and procedures: Commodity imports as in Appendix Table 2. Bullion imports on private account as in Appendix Table 3. Bullion imports on Crown account as follows: 1747-77: Appendix Table 3, line 3 times the share of García-Baquero's «Real Hacienda» over total «Caudales» (García-Baquero, 1976: II, pp. 264-65); 1782-96: Appendix Table 3, line 3 times the share of Fisher's «crown» over total gold/silver imports into Cadiz (Fisher, 1985a: 74).

2. SPAIN'S TERMS OF TRADE WITH THE INDIES, 1752-1820

The analysis of the preceding section can hardly establish that *comercio libre* legislation had a favourable impact on Spanish colonial trade; it merely rejects the hypothesis of slower import growth since 1765 or 1778. Any positive argument, still on strictly quantitative terms and excluding the impact of fiscal policy, must embrace both imports and exports and the relations between the two. Drawing on his figures of colonial trade at constant prices in 1778-96, Fisher (1985b, pp. 60-61) inferred that Spain secured growing imports per unit of exports from the Indies and thus enjoyed favourable terms of trade¹³.

Here again, Fisher's conclusions on relative trade values have been questioned on several counts. Delgado Ribas countered that Fisher's choice of 1778 as a reference year for both import and export growth was inadequate; that the fiscal sources for his trade values are distorted by changes in official assessments in 1778; and that Bernal's figures on risk underwriting point to much weaker export performance through 1779-88¹⁴. Perhaps more ominously, García-Baquero (2003, pp. 193-202, 210-16) has specified that Fisher's import and export values for 1778 exclude substantial sums and thus greatly overstate subsequent growth. The implications of these revisions for Spain's terms of trade with the Indies remain inconclusive due to the lack of reliable export values prior to 1782; but Delgado Ribas (1992, p. 421) has tried to reverse Fisher's optimistic assessment by arguing that Spanish exports to the Indies per unit of imports grew less in the last quarter of the eighteenth century than they did in the second.

Consideration of these issues requires theoretical precision and further empirical work. The standard measure of a country's external gains or losses is based on what has come to be called the *net* barter terms of trade: the ratio of export over net import prices (P_X/P_M). Both Fisher and Delgado Ribas have drawn their conclusions from trends in the *gross* barter terms of trade—which measure the real import volumes that a country can obtain from foreigners per unit of real export volumes (M/X). But these two ratios are equal only when commodity trade at current prices is balanced ($XP_X = MP_M$) and long-term capital flows are zero. As will be noted in the following section, all the available evidence on import and export values points to widely different trade balances in relevant reference periods. We may never be able to test the second condition, beyond the conjecture that Spain may have secured growing net inflows through predatory fiscal practices and capital repatriation.

In any event, the *gross* barter measure will be ignored here in view of reasonable doubts on the growth rate of Spanish export volumes with referen-

¹³ Fisher (1985b), pp. 60-61.

¹⁴ Delgado Ribas (1986), pp. 80-2; *ibid.* (1992), pp. 412-15.

ce to 1778. The upper section of Table 2 compares Fisher's export values at constant prices (lines 1 and 2) with alternative figures in relevant periods (lines 3 to 5). García-Baquero (2003, pp. 210-16) noted that Fisher's total of 75 million *reales de vellón* for 1778 excludes at least 23 cargoes whose values were not officially assessed; the only alternative figure he found was supplied in a report commissioned by the Cadiz Consulate, to the tune of 364 million *reales* per year in 1776-78. Fisher's export values for 1782-96 are either similar or moderately lower than those given in contemporary publications. On the fair assumption that the set of cargo inventories used by Fisher may have been incomplete, in lines 3 and 4 his values for 1784-86 are replaced with annual data in García-Baquero's source for 1776-78; and those for 1787-96 with Izard's choice for the same years¹⁵. For the period 1797-1820 we have no alternative to Fisher's total export values; his clearly defective figures for 1819-20 have been replaced with rough estimates from García-Baquero's much higher values at constant prices for Cadiz¹⁶. On the whole, however, García-Baquero's reluctant reservations on the export figures for 1776-78 seem sufficiently sound to compound the stated objections to the *gross* barter measure as a proxy for Spain's *net* barter terms of trade.

Unfortunately, the *net* barter specification poses its own set of problems. Here the primary emphasis is on export and import prices; but the price series for individual commodities must be weighted with the respective quantities, and the available evidence on the export side leaves much to be desired. The two export price indices in the middle section of Table 2 are described in Appendix 5; they separately specify Spanish and foreign goods, with constant weights of 50 and 60 per cent for textile fabrics respectively. The choice of Spanish prices incorporates Delgado Ribas's three series for cotton textiles through 1776-1807 and ten others for representative commodities; but no evidence has been found for silk fabrics, and the constant weights applied are only roughly consistent with the available export data¹⁷. The foreign goods covered in the second price index include French and British textiles, with documented annual weights, and four other commodities known to have figured prominently in Spanish re-exports to the Indies¹⁸; it should be noted, however, that the value of Spain's imports from France and Britain together amounted to less than half of the total from foreign countries in 1792¹⁹. For imports from the Indies we are on firmer ground with the proposed Fisher «ideal index» of the prices of 14 commodities (line 10). But the inevitable differences in index construction for imports and for exports introduce an unfathomable source of bias.

¹⁵ García-Baquero (2003), p. 214; Izard (1974), p. 302.

¹⁶ García-Baquero (1972), pp. 236, 239-40.

¹⁷ García-Baquero (1974), pp. 285, 291; *ibid.* (1976), II, pp. 184-85; *Balanza... 1792* (1805).

¹⁸ Fisher (1981), p. 36.

¹⁹ *Balanza... 1792* (1803).

TABLE 2
SPAIN: VOLUMES AND PRICES IN PRIVATE TRADE WITH THE INDIES, 1752-1820
 (Selected period averages)

	1752/ 1754	1765/ 1767	1776/ 1778	1782/ 1783	1784/ 1786	1788/ 1792	1793/ 1796	1815/ 1820
<i>A. Private trade values at constant prices (million reales de vellón)</i>								
1. Exports FOB (Fisher: Spanish goods)			28 ¹	64	193	178	147	32
2. Exports FOB (Fisher: foreign goods)			46 ¹	60	217	169	110	20
3. Exports FOB (Spanish goods)			138 ²	64	254	184	166	49
4. Exports FOB (foreign goods)			227 ²	60	292	167	128	35
5. Total exports FOB (lines 3+4)			365	125	546	351	294	84
6. Non-bullion imports CIF	76	109	166	161	350	342	294	111
<i>B. Price indices (1776-78 = 100)</i>								
7. Exports FOB (Spanish goods)	93	96	100	106	114	104	138	147
8. Exports FOB (foreign goods)	80	92	100	121	120	116	125	83
9. Total exports FOB	85	93	100	114	117	110	133	129
10. Non-bullion imports CIF	80	105	100	134	98	103	122	163
<i>C. Other indices (1776-78 = 100)</i>								
11. Net barter terms of trade	115	91	100	79	116	101	113	90
12. Income terms of trade			100	37	216	135	139	32

¹ 1778 only.

² Conjectural estimates: allocated from total in line 5 with relevant shares calculated from lines 1 and 2.

Sources and procedures: **Lines 1 and 2.** 1778, 1782-1796: Fisher, 1981, p. 27. 1797-1820: Fisher, 1992, p. 80. **Lines 3 and 4.** 1776-78: as in note 2 above. 1782-83: Fisher, 1981, p. 27. 1784-86: García-Baquero, 2003, p. 214. 1787-96: Izard, 1974, p. 302. 1797-1818: Fisher, 1992, p. 80. 1819-20: Domestic and foreign exports from Cadiz in García-Baquero (1972: 236, 239-40) times the respective ratios of Spanish over Cadiz export values in 1816-18 (calculated from Fisher, 1992, p. 80). **Line 5.** Line 3 + line 4. The three-year average for 1776-78 is that given from evidence in García-Baquero, 2003, p. 212. **Line 6.** Total private commodity imports as in Appendix Table 2, line 11. The Cadiz component of the Spanish total for 1778 in line 6 equals García-Baquero's «*productos*» value (2003: 69) minus the estimated value of Crown tobacco imports in 1778. **Lines 7-8.** See Appendix 5. **Line 9.** Average of the export price indices in lines 7 and 8, weighted with the respective export values in Table 3, lines 1 and 2 (for 1776-78, 1782-1821), or with the average shares of the same values in 1776-78 (for 1752-75). **Line 10.** Fisher «ideal index» of the prices of 14 commodities as in Appendix Table 1. The import quantities for 1782-96 were estimated from import values and relevant prices as explained in the text. **Line 11.** Line 7 over line 10 times 100. **Line 12.** Line 11 times line 3 over average value of line 3 in 1776-78.

With these qualifications, the net barter index in line 11 points to mildly favourable terms of trade from 1765-67 to 1793-96, followed by wild fluctuations on a falling trend to 1815-20. The interpretation of this index should be tempered with a word of caution and with two further considerations. In view of the margins of error identified in the preceding paragraph, the upward trend to 1793-96 cannot be regarded as definitive evidence of favourable terms of trade. To be sure, the purchasing power of domestic exports to the Indies, as measured by the income terms of trade (line 12), retains considerable gains to 1796; but it has long been suspected that the available figures of Spanish exports conceal growing proportions of foreign goods and thus incorporate an upward bias. On the positive side, Spanish welfare could have benefited from the progressive specialization, and the external and learning economies, that have been associated with growing exports to the Indies in the late 1780s²⁰. It has long been recognized that rising (or falling) relative prices do not necessarily amount to real income gains (or losses) if technological change is taken into account. If export prices rise from 100 to 110 per cent, while productivity in the export sector improves in the same proportion, the purchasing power of domestic *inputs* in terms of overseas products grows by 21 percent (110 times 110 per cent equals 121). One way to capture the key variables involved is to multiply the net barter terms of trade by an index of productivity growth in the export sector, into what is known as the *single factoral terms of trade*²¹. Unfortunately, in the present state of research the estimation of such complex indicators of Spain's external fortunes in the late eighteenth century confronts insurmountable problems.

3. SPAIN AND GREAT BRITAIN: CURRENT-ACCOUNT BALANCES WITH THE RESPECTIVE AREAS OF COLONIAL INFLUENCE

How large were Spain's net inflows from the Indies? How do such inflows compare with those received by competing European nations from their respective areas of colonial influence? A proper answer to the first question requires current trade values at market prices; but only those for imports into Cadiz through 1790-96 were provided by Fisher and by García-Baquero. Most of the new estimates of non-bullion imports in Table 3 have been calculated from price and quantity data as in Appendices 1 and 4; those for legal exports equal the relevant volumes times the respective price indices in Table 2. It must be conceded at once that the new estimates of contraband trade and mercantile profits in

²⁰ Tedde de Lorca (1989), pp. 206-09.

²¹ For an application of this and other concepts to Spanish foreign trade in the nineteenth century see Prados de la Escosura (1988), pp. 213-19.

TABLE 3
SPAIN AND GREAT BRITAIN: PAYMENTS ON CURRENT ACCOUNT WITH THE
RESPECTIVE COLONIAL AREAS¹, 1776-1820
 (Period averages of current values in million *reales de vellón*)

	1784-1792		1793-1796		1797-1807		1815-1820	
	Spain	Britain	Spain	Britain	Spain	Britain	Spain	Britain
1. Domestic exports FOB	215	823	230	1444	91	1826	71	1842
2. +Re-exports FOB	243	173	159	276	45	314	27	290
3. -Non-bullion imports CIF	-387	-1644	-410	-2597	-187	-2954	-188	-3392
4. +Illegal exports	147		49		70		76	
5. -Illegal imports		-40		-34		-35		-38
6. =Net merchandise exports	218	-687	27	-911	20	-849	-15	-1298
7. Freight earnings	100	160	155	469	56	489	54	522
8. +Insurance earnings	14	32	46	122	13	189	7	66
9. +Insured agents' commissions	11		11		5		4	
10. +Spanish customs payments	61		54		18		15	
11. +Mercantile profits ²	72	124	73	187	17	148	55	191
12. =Balance of services ³	257	317	340	779	108	826	135	779
13. Bullion imports on private account	475		366		128		120	
14. Balance of direct trade & services (lines 6+12)	475	-370	366	-132	128	-24	120	-519
15. -Payments on foreign goods (= line 2)	-243	-173	-159	-276	-45	-314	-27	-290
16. +Re-exports of colonial goods	58	397	62	749	28	902	28	936
17. =Balance of goods & services	290	-146	269	341	111	564	121	128
18. +Bullion imports on Crown account	86		207		120			
19. +Tobacco imports on Crown account	5.6		4.8		0.7		0.4	
20. +Net inflows from the slave trade ⁴		49		67		75		

(Continued)

TABLE 3 (Continued)

	1784-1792		1793-1796		1797-1807		1815-1820	
	Spain	Britain	Spain	Britain	Spain	Britain	Spain	Britain
21. +Profits on Irish exports to British America		35		72		34		47
22. +Net India transfers		135		225		135		167
23. +Irish rents ⁵		63		73		88		98
24. =Partial balance on current account	381	136	481	778	231	896	122	440

¹ Britain's «colonial world» includes her own formal colonies, Ireland, Asia, Africa, and foreign colonies including Spanish America.

² A residual: lines 12 - (7+8+9+10). It may include non-service items, such as investment flows and capital repatriation. See the text.

³ Calculated as line 13 minus line 6: see the text.

⁴ These balance of payments flows should not be confused with British profits on the slave trade. Detailed calculation in Cuenca Esteban, 2004, p. 45.

⁵ Conjectural estimates: one half of the Irish rents seemingly remitted to absentee landlords residing in Britain.

Sources and procedures:

SPAIN: Lines 1 and 2. Calculated from Table 2: line 3 or 4 times line 7 or 8 (1778=100) over 100. **Line 3.** Total private commodity imports as in Appendix Table 4, line 10. The Cadiz component of the Spanish total for 1778 equals García-Baquero's «*productos*» value (2003: 69) minus the estimated value of Crown tobacco imports in 1778. **Line 4.** Conjectural estimates: lines 1 and 2 times the Gibraltar shares of total British textiles annually exported to Spain and Gibraltar. Current export values estimated from relevant breakdowns in the British Customs Ledgers as in Cuenca Esteban (1997): 890-97. **Line 7.** See the text. Freight costs on imports calculated as rough estimates of ton equivalents times the relevant British freight rates as in Cuenca Esteban, 2001, pp. 78-79; the resulting totals were scaled up to reach 14% of current import values in 1785 as estimated by Thomas Southell: AHN, *Estado, legajo 3188*¹, Exp. 375-3. Freight costs on exports calculated at 17 per cent of current values (AHN, *ibid.*: 25 per cent minus 8 per cent tax revenue). Spanish residents' earnings guessed at 80 per cent of costs. **Line 8.** See the text. Insurance costs calculated as 80 per cent of current trade values times the British insurance rates as in Cuenca Esteban, 2001, pp. 78-79. Spanish residents' earnings guessed at 80% of costs. **Line 9.** Line 1 times 5 per cent: half the rate for 1787 in Fontana Lázaro (1991): 312. **Line 10.** See the text. Relevant trade values times the respective tax rates in *Reglamento... 1778* and in Delgado Ribas, 1986, p. 80. **Line 13.** Total private bullion imports as in Appendix Table 3, line 9. **Line 16.** Line 3 times 15 per cent: constant share roughly estimated from the total import value in *Balanza... 1792* (1805) and from the export quantities of cocoa, coffee, cotton, *Tabasco* pepper, and sugar in *Balanza... 1792* (1803), times the respective prices as in Appendix Table 1. The calculated share for 1792 is 13.7 per cent. **Line 18.** 1782-96: Appendix Table 3, line 3 times the share of Fisher's «crown» over total gold/silver imports into Cadiz (Fisher, 1985a: 74). 1797-99, 1802-04: Morineau's total bullion imports (Morineau, 1985: 433-36) minus Appendix Table 3, line 9. 1800-01, 1805-1807: Crown revenue as in Merino, 1987, pp. 65-74: «*Indias*». Also added «*Caudales registrados*», «*Renta de Correos*» in Belloto (1971): 241 (1768-79 only). **Line 19.** Current value of Crown tobacco imports at market prices as in Appendix Table 1.

GREAT BRITAIN: With minor improvements as in Cuenca Esteban (2004): 41, 45, 48-49. **Lines 21-23** as in Cuenca-Esteban (2007a): 166. Pounds sterling converted to *reales de vellón* with exchange rates compiled from *Course of the Exchange*.

Table 3 inevitably court circular reasoning due to the lack of firm evidence on both counts. The conjectural figures of illegal exports to the Indies in line 4 incorporate annual shares of British textile shipments to Gibraltar; the most that can be said for these figures is that their order of magnitude for 1784-92 is not inconsistent with scattered contemporary evidence for

the period 1778-87²². In any event, contraband trade cannot be ignored and the conjectural levels leave sufficient room, as will become apparent, for credible estimates of transport earnings and mercantile profits. The Spanish balance of merchandise trade with the Indies may thus be defined as domestic plus illegal exports minus non-bullion imports retained for domestic consumption. Instead, the «net merchandise exports» in line 6 equal total exports minus total non-bullion imports.

The unconventional arrangement of commodity flows in Table 3 is meant to illustrate the proposed estimation of the Spanish balance of services in direct trade with the Indies. Since the exports FOB (and non-bullion imports CIF) in lines 1-4 are all reckoned at Spanish ports, they respectively exclude (or include) such service items as freight and insurance earnings. The shares of such earnings accruing to Spanish residents and retained at home, together with mercantile profits and customs revenue passed on to American buyers, probably represented major favourable items in the Spanish balance of payments. In the absence of sufficient evidence on mercantile profits in particular, the service balance in line 12 is reckoned as bullion imports on private account (line 13) minus net merchandise exports (line 6). The implicit assumption here is that the extant figures of private bullion remittances to Spain do not include substantial non-service items, such as capital repatriation and investment flows.

In support for this assumption it may be noted that the Spanish service totals in line 12 are seemingly exhausted, in all sub-periods but 1815-20, by rough estimates of the net credits that were probably involved. One common feature of the estimated Spanish earnings on freight and insurance is that they both exceed, per unit of total trade values, their better documented British counterparts. Spanish shipping costs were regarded at the time as extremely onerous²³. Against this background, the freight differential of 63 per cent implied in Table 3 for the peace years 1784-92 is not implausible; relative diseconomies of scale should also have been involved —particularly in subsequent war periods when Spanish shipping volumes dwindled by well over 50 per cent. The estimated earnings of Spanish shipping insurers are also larger, per unit of total trade values, than those of British underwriters; but much of the difference appears to be explained by the British practice of insuring for only half the cargo values, or not at all during peacetime²⁴.

The «customs payments» in line 10 apply to Spain only, because British export taxes were negligible and British import values are estimated at

²² See Bernal (1987), pp. 21-22, and Pearce (2007), pp. 108-110.

²³ See Izard (1974), p. 303, note 15.

²⁴ See note to Table 3, line 8. Analysis and references in Cuenca Esteban (2001), p. 79. The British rate of shipping insurance for 1802 is comparable to those given in AGI, *Consulados*, *legajo* 78, no. 84 (blue booklet), Cadiz, 3 August 1802.

«bond» prices before customs duties²⁵. Since Spain's exports to the Indies were valued at private merchants' costs²⁶, presumably excluding commissions and export taxes, the customs revenue paid to the Spanish Treasury would have been passed on to American buyers and should be credited to Spanish residents. A similar consideration applies to the revenue component of the import values CIF at Spanish ports of arrival—which are debited in full in line 3. The fiscal credits in line 10 have had to be calculated as relevant trade values times the respective tax rates; we may take limited comfort from the close agreement of relevant breakdowns with such contemporary figures for the 1780s as have been found²⁷.

The aggregate Spanish credits on freight, insurance, and customs payments in 1784-92 fall short of the service balance calculated in line 12 by 71.7 million *reales de vellón*. If this residual is entirely attributed to mercantile profits, it represents an average annual return of 7.2 per cent of Spain's total direct trade with the Indies—a credible rate in view of scattered evidence of wide price differentials across the Atlantic²⁸. Subsequent profit rates would have stood at 8.6 per cent in 1793-96 and at 4.1 per cent in 1797-1807. This latter average rate would conceal net losses of 27 per cent during Spain's first naval war with Britain (1797-1801), abnormally large profits of 16 per cent during the truce of Amiens (1802-03), and moderate gains of 5.4 per cent through the second naval war (1804-07). The less credible rate of 15 per cent in 1815-20 is probably exaggerated by significant capital repatriation. When compared to their better documented British counterparts, these Spanish rates of mercantile profits are 50 per cent higher in 1784-92, nearly twice as high in 1793-96, and 41 per cent higher through 1797-1807.

Spain's overall balance of private trade and services with the Indies in line 17 includes private bullion imports, re-exports of foreign goods, and very rough estimates of re-exports of colonial commodities to the rest of the world. One distinctive feature of Spanish colonial trade in 1784-92 would have been that the net service credits (line 12) covered most of the CIF import costs (line 3) and exceeded the FOB value of domestic exports (line 1). By contrast, Britain's service balance with the «colonial world» almost always amounts to less than half the current value of British domestic exports; the financial burden of Britain's merchandise deficits (line 6) was almost equally shared by the net service credits (line 12) and by sizeable re-exports of colonial goods to the rest of the world (line 16)—where Britain's comparable strength lay not so much in costly transport charges, or in predatory profit rates, as in larger re-export volumes.

²⁵ Cuenca Esteban (2001), p. 78.

²⁶ «Al pie de las fábricas, y si fueren Extranjeros por sus valores corrientes en el Puerto del embarco»: *Reglamento... 1778*, p. 26.

²⁷ AGS, DGR, 20 remesa, legajos 572, 575.

²⁸ Tedde de Lorca (1989), p. 202. Prados de la Escosura (1993), p. 268. Bernal (1987), pp. 21-22. Also Delgado Ribas (1986), pp. 82-83.

The remaining items on current account in Table 3 include only those unilateral transfers, and net inflows from multilateral trades, that can be reasonably estimated in the present state of research. The proposed figures of the Spanish Crown's shares of American bullion and tobacco (lines 18 & 19) presumably include net revenue from import duties at Spanish American ports; the bullion figures alone certainly exceed the *Rentas de Indias* recorded at the Spanish Treasury²⁹. In any event, such Crown receipts as can be documented appear to have stayed well below Britain's net transfers from India (line 22) in most years through 1765-1800.

One striking contrast between unilateral inflows in Spain and Britain is that the former accrued to government and the latter to private interests. In the final analysis, however, all such payments had much in common. Britain's India transfers (line 22) are thought to have been made, for the most part, not in bullion and diamonds but in the form of Indian commodities purchased with Indian revenue. This unrequited «drain» resembles the Spanish Crown's bullion receipts (line 18), and the Irish rental payments to absentee landlords residing in Britain (line 23), in that they all arose from the exercise of military and political power. The net inflows from the British slave trade in line 20 arguably owed much to the cargoes of Indian textiles that only British merchants could supply at cut-throat prices to West African middlemen. Britain's privileged Indian connection would thus have extended its beneficial influence, through its likely impact on the growth of the British slave trade, to the profitable triangular trades across the Atlantic³⁰.

Judging from the partial balances on current account in line 24, between the American and French wars (1784-92) Spanish private interests drew larger financial returns from colonial engagement than did their British counterparts. As noted, the apparent relative importance of Spanish transport costs and mercantile profits would be consistent with scattered evidence of wide price differentials across the Atlantic. In other substantive respects Britain's economy and government probably drew much larger benefits, some of which cannot be quantified. The mounting size of British domestic exports, to the tune of four times the Spanish values in most documented years through 1776-96, must have brought substantial differential gains to British producers through its impact on increasing returns and on learning economies³¹. More generally, British trade with the «colonial world» most likely represented a much larger share of national income than that of Spain with the Indies³².

²⁹ Annual data on *Rentas de Indias* in Merino (1987). Note that Marichal's larger totals of *Ingresos de Indias* include shares of *rentas generales* and Crown tobacco profits that were levied or made in Spain, and thus do not belong in the Spanish balance of payments: Marichal (1997), pp. 480-83.

³⁰ Cuenca Esteban (2004), pp. 44-46.

³¹ Cuenca Esteban (1997), pp. 898-902.

³² Prados de la Escosura (1988), pp. 77-81.

4. CONCLUSION

This article has qualified, and in some new ways it has aimed to reverse, recent pessimistic views on the course and returns of Spanish colonial trade through 1747-96. At the height of *comercio libre* in 1784-92, Spain's private interests appear to have drawn larger financial gains from trade with the Indies than did their British counterparts from wider colonial engagement. Further research may fruitfully extend this comparison to those fiscal returns that can be traced back to the respective colonial ventures. On the eve of the French wars in 1788-92, Spain's net customs revenue from colonial trade may have amounted to some 101 million *reales de vellón* per year³³. This annual average compares poorly with Britain's net customs revenue of some 170 million *reales de vellón* per year on imports from the «colonial world» in the same period³⁴. The Spanish shortfall would widen from 69 to 88 million if we were to include those domestic revenues that ultimately came from colonial commodities³⁵. By virtue of its direct bullion receipts of 95 million per year, however, the colonial purse of the Spanish Treasury might have fared equally well or even better, despite far smaller customs revenue, than did the British Exchequer's. On this as on other scores, by the eve of the French wars the Spanish empire appears to have become a sounder economic proposition than might be inferred from recent pessimistic views.

One implication of this analysis is that the Spanish empire's subsequent demise may have involved a greater degree of geographical and historical chance than is seemingly apparent. The role of accident in Britain's rise to economic and military pre-eminence is seldom sufficiently stressed in the economic history literature. One relevant point here is that Britain's insular location, and a French coastal geography not suitable for harbouring fleets of large warships in the English Channel, helped to hold off foreign armies from Britain's home territory³⁶. Unlike Britain, Spain shared with Holland a double exposure on land and sea. The Spanish state's reliance of American bullion rendered its fiscal resources particularly vulnerable to British naval blockade and to French predatory claims on American silver. The compounded impact of external military exposure, and internal economic weak-

³³ Some 54 million from direct colonial exchange and some 47 million from related trades with foreign countries. These fiscal estimates are provisional: note that such revenue breakdowns are hard to disentangle from misleading accounts of «*rentas generales*» and «*libre comercio*».

³⁴ Britain's «colonial world» is defined in Table 3, note 1. Calculated from BNA, Customs 17, vols. 10-13 (customs tables only; tobacco revenue not included).

³⁵ Spanish Royal income on the tobacco monopoly (78 million) and Spanish excise revenue on colonial goods (possibly some 18 million). On the British side, additional revenue collected by the Excise Department on tea, rum, coffee, cocoa, and skins and furs (115 million *reales de vellón*: compiled and calculated from excise tables in BNA, Customs 17, vols. 10-13; given tobacco revenue not included).

³⁶ Other seemingly chance factors are listed in Cuenca Esteban (2004), pp. 54-55.

ness, was at the root of Spain's onslaught on the Mexican economy and on her own colonial trade³⁷. Both Britain and Spain may be described as Imperial, «fiscal-military» states³⁸. But Spain was held, in no small measure by geographical location and by long-standing dynastic mediations, from retaining its precarious status as a second-rate European power³⁹.

APPENDIX 1

Import prices at Spanish and European ports: constructed annual series, 1747-1820

The central missing requirement to construct credible annual values of Spanish colonial imports through 1747-1820 is a complete matrix of market prices for a statistically large sample of the commodities involved. The composite price series proposed here have been used to price import quantities; to derive current import values from figures at constant prices; to deflate proxies for import values at current prices; and to calculate Spain's net barter terms of trade with the Indies. A common feature of these tasks is that they all require wholesale market prices at ports of arrival excluding import duties and other taxes. The most comprehensive Spanish sources of such quotations known to this writer are the *Correo Mercantil de España y de sus Indias* (1792-1808) and the *Libros de precios corrientes de la Lonja de corredores de Cádiz* (1803-1835). For the 16 years prior to 1792 we also have five relevant series of wholesale prices in Barcelona through 1776-1807 (Delgado Ribas, 1989). For other commodities and time periods we must resort to those prices at non-Spanish European ports that meet the specified requirements of being wholesale and excluding duty. These criteria are satisfied by Posthumus's annual series for Amsterdam, which span the entire eighteenth century, and by the bi-weekly in-bond quotations in the London Price Current and in other British sources since 1779 (Posthumus, 1946; Gayer *et al.*, Supplement, 1953; Tooke, 1824).

The composite price series specified in Appendix Table 1 are the result of systematic testing and critical selection of relevant figures from the indicated sources. The definitive, non-random sample of market prices refers to 14 widely traded American commodities for which Spanish import quantities or values are available. The period 1792-1820 is almost fully covered by the extensive evidence on market prices in Cadiz; occasional gaps prior to 1804 were filled in with relevant quotations in the *Correo Mercantil* for

³⁷ Marichal (1999). Cuenca Esteban (1982).

³⁸ Torres Sánchez (2007).

³⁹ For an arguably complementary argument stressing structural constraints on Spain's external trade see Cuenca Esteban (1991).

APPENDIX TABLE 1
PRICES AT EUROPEAN PORTS: CONSTRUCTED ANNUAL SERIES, 1747-1820

	Amsterdam	London	Barcelona	Cadiz et al ¹	Cadiz ²
Cochineal (<i>ducados/arroba</i>)	1747-91			1792-1802	1803-20
Cocoa (<i>pesos/fanega</i>)	1747-75		1776-91 1799-1801	1792-1798 1802-1803	1804-20
Coffee (<i>cuartos/libra</i>)	1747-91			1792-1803	1804-20
Copper (<i>pesos/quintal</i>)	1747-91			1792-1803	1804-20
Cotton (<i>pesos/quintal</i>)	1747-75		1776-91	1792-1803	1804-20
Dyewood <i>Brasilete</i> (<i>pesos/quintal</i>)	1747-95			1796-1803	1804-20
Dyewood <i>Campeche</i> (<i>pesos/quintal</i>)	1747-89	1790-91		1792-1803	1804-20
Hides (<i>reales</i> <i>plata/35 libras</i>)	1747-91			1792-1803	1804-20
Indigo (<i>reales</i> <i>plata/libra</i>)	1747-75		1776-91	1792-1803	1804-20
Jesuits' bark (<i>reales</i> <i>plata/arroba</i>) ³		1779-91 1804-20		1792-1803	
Pepper, Tabasco (<i>cuartos/libra</i>)	1747-91			1792-1803	1804-20
Sugar brown (<i>reales plata/arroba</i>)	1747-81		1782-91 1799-1801	1792-98 1802-03	1804-20
Sugar white (<i>reales plata/arroba</i>)	1747-81		1782-91 1799-1801	1792-98 1802-03	1804-20
Tobacco (<i>pesos</i> <i>fuertes/quintal</i>)	1747-81	1782-1805 1819-20			1806-18

¹ Malaga, Corunna, or Barcelona where Cadiz quotations not available in *Correo Mercantil*.

² Cadiz only as in AGI (Archivo General de Indias), *Consulados, libros* 1131, 1134.

³ Also 1778 price as given for «*cascarilla o quina*» in *Reglamento 1778*: 1,500 *reales de vellón/quintal* (or 200 *reales de plata/arroba*).

Amsterdam prices. Annual averages in Posthumus, 1946, Vol. I: cochineal (Mexican: here reduced by 25 per cent for consistence with calculated averages from Cadiz data; note that Mexican cochineal, a Spanish near monopoly, also paid a duty of 15 per cent upon re-export from Spain); cocoa (Caracas: here reduced by 25 per cent for consistence with calculated averages from Cadiz data; note that Caracas cocoa was a Spanish near monopoly); coffee (Surinam); copper (Norwegian Garpopper 1731-83, Norwegian Trondheim 1784-91); cotton (Smyrna: far closer fit with Spanish series than Surinam prices); yellow wood (here reduced by 25 per cent for consistence with Cadiz quotations for «*Palo Campeche*»; separate series for «*Palo Brasilete*» derived with price ratio for Campeche/Brasilete in *Reglamento 1778*: 60/80); hides (Buenos Aires, per pound of weight: here assumed to weigh 24 pounds per hide for consistence with Cadiz

quotations per 35-pound *cuero*; compare Merediz, 1966); indigo (Guatimalo: here reduced by 25 per cent for consistency with calculated averages of *añil* prices from Cadiz data); pepper (white); sugar (Surinam, presumably brown); sugar (refined); tobacco (Virginia leaves; 1764 price as corrected in Broeze, 1973: 670).

London prices. Compiled from monthly quotations in London Price Current (Jesuits' bark: simple average of «optimum», «second», and «common», 1779-89); in Gayer *et al.*, 1953, microfilmed Supplement (logwood in bond, «Campeachy», 1790-91; Jesuits' bark or quinine yellow in bond, South American, 1790-91 & 1804-20); and in Tooke, 1824 (tobacco, Virginia 1782-1805 & 1819-20).

Barcelona prices. Annual data in Delgado Ribas (1989): 41-42, 57-58, 67-69, 80-81: «azúcar» (2 separate price series for brown and white sugar estimated here with Cadiz quotations on *Habana azúcar terciada y blanca* for 1792); cacao, Caracas (here reduced by 10 per cent for consistency with calculated averages from Cadiz data); *añil en flor de Caracas* (here reduced by 10 per cent for consistency with calculated averages from Cadiz data); *algodón sin pepita* (seemingly consistent with «*algodón limpio*» as for Cadiz 1792-1803). Barcelona prices of dyewood «*Palo Campeche*» on pp. 75-76 had to be discarded due to lack of agreement with alternative series.

Cadiz prices. Compiled from monthly or quarterly data in *Correo Mercantil* (1792-1803: Malaga, Corunna, or Barcelona where Cadiz quotations not available), and from monthly data in AGI, Consulados, libros 1131, 1134 (1804-20): cochineal (1792-1802: weighted average of 90 per cent *grana fina*, 5 per cent granilla, 5 per cent *polvo de grana*; 1803-20: weighted average of 90 per cent *grana superior*, 5 per cent *corriente*, 5 per cent *inferior*); cocoa (weighted average of 80 per cent *cacao Caracas* and 20 per cent *cacao Guayaquil*; note that most of the cocoa produced in Venezuela was exported through La Guayra: Fisher, 1985a, p. 56); coffee («*café*»); copper (*cobre, Perú*); cotton (1792-1803: *algodón limpio [algodón «sin limpiar»* here available for 1792-98 and 1802-03 only); 1804-20: simple average of *algodón varita, Girón, Caracas*); dyewood *Brasilete (Palo Brasilete)*; dyewood *Campeche (Palo Campeche)*; hides (*cueros*, Buenos Aires); indigo (simple average of quotations for *añil flor, sobresaliente, corte*); Jesuits' bark (*cascarilla* or *quina*; see also note 1 above); pepper (Tabasco); sugar, brown and white (*azúcar Habana, terciada* and *blanca*); tobacco (*Tabaco Virginia* in Cadiz).

Weights and measures. *Fanega* = 110 libras. *Quintal* = 100 libras. *Arroba* = 25 libras. The Amsterdam pound was taken to weigh 1.089 English pounds.

Monetary conversions (Spanish). Real de vellón = 34 maravedís de vellón. *Peso de cambio* = 8 reales de plata = 128 quartos = 15 reales and 2 maravedís de vellón. *Peso fuerte* = 20 reales de vellón. *Ducado de cambio* = 20.76103 reales de vellón (Marién y Arróspide, 1789). Catalan *dinero* = 9.067 maravedís; 42 Catalan *dineros* = 1 real de plata (Ardoin *et al.*, 1845-6: I, 74, 335). The Catalan «*peso sencillo*» was assumed to equal 1 *peso de cambio*.

Rates of international exchange: Annual rates calculated from the first monthly quotations in the bi-weekly issues of the *Course of the Exchange* (London on Cadiz and London on Amsterdam). Adjustments for Amsterdam bank quotations and occasional missing rates from relevant data in Posthumus, 1946: I, 610-12, 653-55.

Malaga, Corunna, and Barcelona. For the earlier period 1776-91, four of Delgado Ribas's five annual series of relevant wholesale prices in Barcelona (1776-1807) were judged sufficiently close to comparable Cadiz data for the 1790s to warrant their adoption with two minor scale adjustments. The calculated market values of the four commodities covered with Barcelona prices together account, on average, for 60 per cent of total import values. Remaining blanks in 1776-91, and through 1747-75 for all 14 commodities, were filled in with a choice of Dutch and British prices converted to Spanish currency with international exchange rates. The Amsterdam prices of Mexican cochineal, Caracas cocoa, and Guatimalo indigo, all three of which were Spanish near monopolies, had to be scaled down by 25 per cent to match average levels in Cadiz or in Barcelona; these adjustments presumably account for mercantile profits, transport costs to Amsterdam, and a Spanish export tax on cochineal. Elsewhere the Dutch and British price series were found tolerably consistent with their Spanish counterparts in commonly documented peace periods through 1776-1820.

Such broad consistence between Spanish and Dutch or British prices was to be expected for homogeneous, widely traded staples and raw materials with common origins in the Americas and the Far East. But we can hardly expect that international exchange rates remained close enough to purchasing-power parity, and merchants' arbitrage sufficiently efficient, to bring short-term fluctuations in line during war periods in particular.

APPENDIX 2

Spain: Private non-bullion imports from the Indies at 1778 prices, 1747-1818

For total imports into Cadiz at constant prices in 1782-96 we have no published quantities, only Fisher's annual values by commodities for 1782-89 (Appendix Table 2, line 1) and García-Baquero's corrected totals for Cadiz only in the same years (line 3). Fisher's total import values into Cadiz must be discarded because his relatively large figures for Crown and private tobacco are grossly overstated. Fisher (1885a, p. 43) reported that, in 1788-9, two large consignments of tobacco from New Orleans were officially valued at 40 *reales de vellón* per pound; he apparently overlooked that this was a single and major exception to the general practice of pricing import commodities at the fixed rates that were published in the *Reglamento y aranceles reales para el comercio libre de España a Indias* (12 October 1778). As noted by García-Baquero (2003, pp. 73-5), since 1785, tobacco imports were officially valued at 12.5 times above the constant rate used in the Cadiz customs from 1747 to 1778 (official rates in *Reglamento*, 1778, *Arancel Segundo*; and in García-Baquero, 1976, II, pp. 271-75).

Accordingly, García-Baquero replaced the official tobacco values for 1785-9 with alternative calculations at 1778 prices to obtain consistent totals of import values into Cadiz. One further reason to adopt García-Baquero's figures is that they include the years 1779-81 and were newly compiled, up to 1789, from more comprehensive sources than those used by Fisher (García-Baquero, 2003, pp. 64-5, 67-8). The «private commodity imports» into Cadiz for 1782-89 in Appendix Table 2 (line 4) are the result of subtracting similar re-calculations of Fisher's values of Crown tobacco values at the *Reglamento* rates from García-Baquero's corrected totals. For 1790-96, Fisher's current values for Cadiz by commodities, excluding «wood» and «others» (Fisher, 1985a, pp. 74-75), were divided by the respective market prices as in Appendix Table 1 (or by Fisher's given official rates for tobacco only: 1985a, p. 43); the resulting import quantities were then multiplied by the respective *Reglamento* rates to obtain the real import volumes in line 5. The 1790-96 totals for Cadiz in line 6 are the result of applying the implicit ratios of market over constant values to García-

APPENDIX TABLE 2
SPAIN: NON-BULLION IMPORTS
FROM THE INDIES AT 1778 PRICES, 1747-1818
 (New estimates unless otherwise stated; period averages
 in thousand *reales de vellón*)

	1747-50, 1752-77	1782-89	1790-96	1798-11, 1815-18
<i>A. Total commodity imports (private + Crown)</i>				
1. Cadiz (Fisher)		234379		
2. Other Spanish ports (Fisher)		108731	109183	
3. Cadiz (García-Baquero, 2003)	98801	192891		
<i>B. Private commodity imports</i>				
4. Cadiz excluding Crown tobacco	94041	182492		
5. Cadiz (14 commodities)	78975	148206	173847	65582
6. Cadiz (all commodities)	94041	182492	210509	68861
7. <i>Compañía Guipuzcoana</i>	9810	1878		
8. <i>Cía de Barcelona (1758-77)</i>	1841			
9. <i>Correos marítimos (Corunna)</i>	2751			
10. Other Spanish ports	1436	108731	109182	41358
11. Spain (lines 6+7+8+9+10)	109879	293102	319691	110219

Sources and procedures: **Line 1.** Fisher (1985a): total imports into Cadiz (p. 75) plus estimated values of Crown tobacco imports in 1784 and 1785 (see *ibid.* pp. 56-57) minus total gold/silver into Cadiz (*ibid.*, p. 74). **Line 2.** Calculated from values at 1778 prices in Fisher (1985a): 65-73 (gold/silver into Barcelona excluded). **Line 3.** García-Baquero (2003): 68-70 (1747-85: «Productos») and 76 (1786-89: «Géneros B»). **Line 4.** 1747-50, 1754-77: Line 3 minus «Real Hacienda: Productos» (García-Baquero, 1976: II, 264-65) times 20. 1751: as in line 3. 1752-53, 1782-89: Line 3 minus independent estimates of Crown tobacco values at 1778 prices. **Line 5.** Estimated total value of the 14 commodities in Appendix Table 1 at 1778 prices: see the text. **Line 6.** 1747-77: as in line 4. 1782-89: Line 3 minus estimated value of Crown tobacco at 1778 prices. 1790-96: see the text. 1798-1811, 1815-18: line 5 times 1.05 (line 4 over line 5 in 1786-89). 1797, 1812-14, 1819-20: Cuenca Esteban, 1981: 400-01 (Cadiz). **Line 7.** Import quantities of cocoa, hides and tobacco through 1757-85 (García-Baquero, 1976: II, 241-47fn.; Hussey, 1934: 305-18), times the respective 1778 prices in *Reglamento* (1778), plus 5 per cent. **Line 8.** «Valor Productos» in Oliva Melgar (1987): 319 (1758-77 only: see *ibid.*, p. 211). **Line 9.** «Frete s/ carga total de particulares» in Belloto (1971): 241 (1768-79), converted to import values into Corunna with algorithm in Alonso Alvarez (1986): 54, and deflated with an index (1778 = 100 per cent) of hides prices as in Appendix Table 1. **Line 10.** 1747-65: zero. 1766-77: 3 per cent of line 6 (guess from García-Baquero's inference from 1778 data: 2003: 66-67). 1782-96: as in line 2. 1797-1820: Cuenca Esteban (1981): 400-01: «7 other ports» plus Barcelona.

Baquero's revised current values excluding independently estimated values of Crown tobacco.

The remaining procedures outlined in Appendix Table 2 are relatively straightforward. García-Baquero's official totals of private non-bullion imports for 1747-77 (line 3) were judged sufficiently close to independent calculations, from a large sample of import quantities excluding Crown tobacco (line 5), to warrant their adoption for this period. Also accepted were Fisher's non-bullion import values at 1778 prices for chartered Spanish ports other than Cadiz in 1782-96; these figures do not include tobacco and are therefore free from the inconsistent valuation found in

Fisher's totals for Cadiz. The import values for «other Spanish ports» in subsequent years (line 10) are uncertain estimates from the proceeds of the *periage* and *avería* duties in Barcelona and elsewhere; it is rewarding to note, in any event, that similar estimates from the proceeds of *Consulado Antiguo* in Cadiz are remarkably close to independently calculated values, at the 1778 rates, from García-Baquero's import quantities for the same port in 1798-11 and in 1815-18 (García-Baquero, 1972). Lines 7 to 9 incorporate Oliva Melgar's commodity import values for the *Compañía de Comercio de Barcelona a Indias* (1758-85) and new estimates at 1778 prices of goods imported by the *Compañía Guipuzcoana* (1757-85) and by the *Correos marítimos de Coruña* (1768-79). The annual private totals underlying line 11 are given in Appendix Table 5.

APPENDIX 3

Spain: Bullion remittances from the Indies, 1747-1818

The available series of Spanish bullion imports also require additional work. Here García-Baquero's new figures should have sufficed, because they incorporate more comprehensive sources than those used by Fisher up to 1789; García-Baquero's new totals are also claimed to be an improvement over Morineau's rendition from Dutch and Spanish publications. Unfortunately, neither author has provided the key distinction between private and Crown remittances (García-Baquero, 2003, pp. 54-7, 64-5, 67-8; Morineau's relevant breakdowns are cryptic and fragmentary: 1985, pp. 418-19). The breakdowns for Cadiz in Appendix Table 3 were estimated from García-Baquero's new totals, with calculated shares from his earlier figures for 1747-77, and from Fisher's own for 1782-96. Also included in Appendix Table 3 are Fisher's private bullion imports into Barcelona in 1782-96 (line 5), Morineau's totals for the same port through 1797-1804, and uncertain estimates from the proceeds of the *avería* duty in Corunna in 1786-1820 and in three other Spanish ports through 1791-1820 (line 8). Here again the resulting totals were compounded with estimated bullion imports by the *Compañía de Barcelona* (1758-85) and in the *Correos marítimos de Coruña* (1768-79). The annual private totals underlying line 9 are given in Appendix Table 5.

APPENDIX TABLE 3
SPAIN: BULLION REMITTANCES FROM THE INDIES, 1747-1818
 (New estimates unless otherwise stated; period averages
 in thousand *reales de vellón*)

	1747-50, 1752-77	1782-89	1790-96	1798-11, 1815-18
<i>A. Total gold and silver (private + Crown)</i>				
1. Spain (Fisher, 1985)		326125	508514	
2. Cadiz (Fisher, 1985)		309215	484218	
3. Cadiz (García-Baquero, 2003)	318612	442881	484218	
<i>B. Gold and silver (private remittances only)</i>				
4. Cadiz	289150	390220	315251	133182
5. Barcelona (Fisher, 1985)		16909	24295	
6. <i>Cía de Barcelona</i> (1758-77)	607	15		
7. <i>Correos marítimos</i> (Corunna)	3101			
8. Other Spanish ports		24222	32640	22701
9. Spain (lines 4+5+6+7+8)	292859	431367	372188	155884

Sources and procedures: **Line 1.** Fisher (1985a): 73-74. **Line 2.** Fisher (1985a): 74. **Line 3.** García-Baquero (2003): 68-70 (1747-85) and p. 76 (1786-96): «Caudales». **Line 4.** 1747-77: line 3 times the share of García-Baquero's «particulares» over total «Caudales» (García-Baquero, 1976: II, pp. 264-65). 1782-96: line 3 times the share of Fisher's [«private» + «soldadas»] over total gold/silver imports into Cadiz (Fisher, 1985a: 74). 1797-1820: proceeds of the duty «Consulado Antiguo» (0.5 per cent) on gold and silver imported on private account into Cadiz, times 200 (as in Cuenca Esteban, 1978: Table 8b). **Line 5.** Fisher (1985a): 73 («soldadas» plus «private»). **Line 6.** «Valor Caudales» in Oliva Melgar (1987): 319 (1758-77 only: see *ibid.*, p. 211). **Line 7.** «Caudales registrados»: «Renta de particulares» in Belloto (1971): 241 (1768-79). **Line 8.** Proceeds of the «avería» duty (0.5 per cent) on gold and silver imported on private account into Alicante, Malaga, Santander (1791-1820), and Corunna (1786-1820) times 200 (sources and procedures in Cuenca Esteban, 1978: Chapter 1). Also added Morineau's bullion imports into Barcelona in 1797-1804 only (Morineau, 1985: 433-36).

APPENDIX 4

Spain: Private non-bullion imports from the Indies at market prices, 1747-1818

The only such figures published so far are those for Cadiz through 1790-96. Here again, Fisher provided no import quantities and his total import values at market prices are grossly overstated: it has been verified that García-Baquero's much lower figures, incorporating his corrected values of tobacco imports, are consistent with independent re-calculations of Fisher's commodity breakdowns with current prices as in Appendix Table 1. Accordingly, the «private commodity imports» into Cadiz in Appendix Table 4 (line 3) are the result of subtracting similar re-calculations of Fisher's values of Crown tobacco from García-Baquero's corrected totals in line 2. For the earlier period 1782-89 we must resort, as a point of departure, to the import values at constant prices in Appendix Table 2. For Cadiz, Fisher's constant-price values for 14 major

commodities were divided by the respective *Reglamento* rates (or by Fisher's given official rates for tobacco only: 1985a, p. 43); the resulting estimates of import quantities were multiplied by relevant market prices as in Appendix Table 1. The total current imports in Appendix Table 4, line 5 were then derived from relevant ratios in Appendix Tables 2 and 4 as indicated in the Table notes. For «other Spanish ports» through 1782-96 (line 9), Fisher's values were reflatd with the ratios of Cadiz's current over constant-price import values in the same years. Similar procedures were applied to the periods 1747-77 and 1797-20; but here there was no need to estimate the quantities of 14 commodities imported into Cadiz because most of these were provided by García-Baquero (1972, 1976). Lines 6 to 8 incorporate Belloto's proxies for imports in the *Correos marítimos de Coruña* (1768-79) and new estimates at market prices of Oliva Melgar's commodity import values for the *Compañía de Comercio*

APPENDIX TABLE 4
 SPAIN: NON-BULLION IMPORTS FROM THE INDIES
 AT MARKET PRICES, 1747-1818
 (New estimates unless otherwise stated; period averages
 in thousand *reales de vellón*)

	1747-50, 1752-77	1782-89	1790-96	1798-11, 1815-18
<i>A. Total commodity imports (private + Crown)</i>				
1. Cadiz (Fisher)			394317	
2. Cadiz (García-Baquero, 2003)			280200	
<i>B. Private commodity imports</i>				
3. Cadiz excluding Crown tobacco			274734	
4. Cadiz (14 commodities)	89374	169391	227261	108988
5. Cadiz (all commodities)	107564	207389	274734	113348
6. <i>Compañía Guipuzcoana</i>	8666	1937		
7. <i>Cía de Barcelona</i> (1758-77)	2322			
8. <i>Correos marítimos</i> (Corunna)	2898			
9. Other Spanish ports	1774	123439	138017	71804
10. Spain (lines 5+6+7+8+9)	123224	332765	412751	185152

Sources and procedures: **Line 1.** Fisher (1985a): 74-75: total imports minus total gold/silver. **Line 2.** García-Baquero (2003): 76, «Géneros B». **Line 3.** Line 2 minus estimated value of Crown tobacco at market prices as in Appendix Table 1. **Line 4.** Estimated total value of 14 commodities at market prices as in Appendix Table 1. **Line 5.** 1747-77, 1782-89: Line 4 plus [(line 6 - line 5 in Appendix Table 2) over line 5 in Appendix Table 2 times line 4 in Appendix Table 4]. 1790-96: line 2 minus independently estimated values of Crown tobacco at market prices. 1797-1820: line 4 times 1.04 (line 3 over line 4 in 1790-96). **Line 6.** Import quantities of cocoa, hides and tobacco through 1757-85 (García-Baquero, 1976: II, 241-47 fn.; Hussey, 1934: 305-18), times the respective market prices as in Appendix Table 1, plus 5 per cent. **Line 7.** «Valor Productos» in Oliva Melgar (1987): 319 (1758-77 only: see *ibid.*, p. 211), reflatd with a weighted index (1778 = 100 per cent) of cocoa and hides prices as in Appendix Table 1. **Line 8.** «Frete s/ carga total de particulares» in Belloto (1971), p. 241 (1768-79), converted to import values into Corunna with *ad hoc* algorithm in Alonso Alvarez (1986): 54. **Line 9.** 1747-65: zero. 1766-77: 3 per cent of line 5 (guess from García-Baquero's inference from 1778 data: 2003, pp. 66-67). 1782-1820: line 10 in Appendix Table 2 over line 6 in Appendix Table 2 times line 5 in Appendix Table 4.

de Barcelona a Indias (1758-85) and of goods imported by the *Compañía Guipuzcoana* (1757-85). The annual private totals underlying line 10 are given in Appendix Table 5.

APPENDIX TABLE 5
SPAIN: PRIVATE IMPORTS FROM THE INDIES, 1747-1820
(Estimated values in million *reales de vellón*)

Year	At constant prices	At current prices	Bullion	Year	At constant prices	At current prices	Bullion
1747	25.798	24.319	110.996	1784	377.577	426.365	803.526
1748	27.649	20.964	103.310	1785	379.388	434.448	682.500
1749	89.848	86.223	562.586	1786	294.088	335.754	493.624
1750	83.692	78.043	567.790	1787	321.872	295.335	316.289
1751	58.247	54.316	142.147	1788	329.183	381.625	433.770
1752	79.770	74.386	451.243	1789	321.112	361.761	402.486
1753	85.051	79.311	256.056	1790	337.242	390.892	353.958
1754	62.124	53.027	232.508	1791	415.044	448.887	443.711
1755	93.917	108.313	352.903	1792	307.629	407.764	342.641
1756	72.220	77.379	313.813	1793	310.871	433.384	300.232
1757	123.193	139.840	223.651	1794	315.298	403.406	443.400
1758	102.843	124.214	428.405	1795	239.768	329.680	329.411
1759	102.416	106.709	156.605	1796	311.992	475.251	391.963
1760	103.806	117.279	259.866	1797	32.801	49.965	14.494
1761	132.949	145.105	264.635	1798	20.699	43.373	2.917
1762	11.256	12.595	5.139	1799	81.557	165.186	35.174
1763	83.137	80.641	294.002	1800	27.995	49.489	3.398
1764	113.482	113.898	352.250	1801	33.765	57.366	7.721
1765	102.875	106.448	339.320	1802	324.734	545.369	559.393
1766	72.545	76.506	166.515	1803	230.739	384.736	442.443
1767	151.238	177.510	553.170	1804	312.669	567.760	305.626
1768	107.741	131.762	241.113	1805	39.303	68.059	23.581
1769	142.105	198.218	163.592	1806	40.325	67.735	5.922
1770	175.935	234.007	514.578	1807	26.423	54.904	5.059
1771	75.549	90.946	41.529	1808	19.105	39.126	3.740
1772	228.655	316.798	411.505	1809	114.484	166.941	331.368
1773	170.044	196.899	214.925	1810	160.350	215.861	401.991
1774	196.243	197.526	593.684	1811	101.748	131.939	121.998
1775	218.294	237.820	310.892	1812	81.450	105.618	133.953
1776	146.137	135.099	197.642	1813	117.719	152.649	195.469
1777	115.879	154.959	101.557	1814	122.686	159.090	277.672
1778	234.623	234.623	647.082	1815	128.771	223.562	216.457
1779	108.494	110.347	167.963	1816	120.773	202.215	151.788
1780			51.925	1817	128.089	229.698	173.517
1781	154.691	297.040	156.045	1818	72.431	119.431	13.832
1782	94.593	167.088	4.201	1819	110.897	182.857	92.236
1783	227.006	259.751	314.542	1820	104.459	172.242	71.566

Sources and procedures: See Appendix Tables 2, 3, and 4.

APPENDIX 5

Spain: Price indices of exports and re-exports, 1747-1820

The price index of Spanish domestic exports FOB in Table 2 (line 7) is a weighted average of a textile price index (50 per cent) and the prices of seven other Spanish commodities (50 per cent), with a choice of commodities and constant weights as consistent as possible with export data in García-Baquero (1974, pp. 285, 291), in García-Baquero (1976, II, pp. 184-85), and in *Balanza... 1792* (1805). The textile prices include those for three cotton fabrics in most years through 1776-1807 (Delgado Ribas, 1989, pp. 137-38, 142-43, 146-47); Hamilton's prices of *estameña*, *lienzo*, and *pañó blanco* in 1752-1800 (Hamilton, 1988 [1947], pp. 297-308); and the sub-index of French textile prices in Table 2, line 8 (1800-20). The seven other Spanish goods include *aguardiente* (15 per cent), almonds (5 per cent), cinnamon (5 per cent), olive oil (5 per cent), paper (5 per cent), wine (10 per cent), and wax (5 per cent): price data to 1791 in Hamilton, 1988 [1947], pp. 297-308; since 1792 compiled and processed from sources in Appendix Table 1, «Cadiz prices».

The price index of re-exports FOB in Table 2 (line 8) is a weighted average of a textile price index (60 per cent) and the prices of four other foreign commodities (40 per cent). The textile index includes the French prices of *étouffes de laine*, *filasses de lin*, and «*toiles*» from 1752 to 1789 (Labrousse, 1933, II, pp. 321-22, 331-33); a price index of French textiles exported to Spain through 1797-1820 (Cuenca Esteban, 1987, pp. 227, 231, 246-47); and unit values of British linen, woollen, and cotton fabrics exported to Spain and Gibraltar in 1772-1820 (weighted estimates as in Cuenca Esteban, 1994, 1999). Other foreign goods known to have figured prominently in Spanish re-exports to the Indies include Portuguese cod, United States flour, and Dutch spices (Fisher, 1981, p. 36); the trends involved have been proxied with price series for salted sardines and fish (Hamilton, 1988 [1947], pp. 297-308; *Correo Mercantil: 1792-1803*; AGI, Consulados, libros 1131, 1134: 1804-20); for wheat flour (Bezanson *et al.*, 1936, p. 80; Bezanson *et al.*, 1951, pp. 332-42; Beveridge, 1939, pp. 574-75); and for cinnamon and pepper (British and Dutch evidence as in Cuenca Esteban, 2001, p. 75; Gayer *et al.*, 1953, *Supplement*, p. 670; Tooke, 1824, IV, pp. 42-45; London Price Current; Posthumus, 1946, I, pp. 66, 74).

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