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Volume Title: Price and Quantity Trends in the Foreign Trade of the United States

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Volume Publisher: Princeton University Press

Volume ISBN: 0-870-14154-6

Volume URL: <http://www.nber.org/books/lips63-1>

Publication Date: 1963

Chapter Title: Appendix F: Adjustments for Changes in the U.S. Customs Area

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Chapter URL: <http://www.nber.org/chapters/c1898>

Chapter pages in book: (p. 402 - 412)

Appendix F

Adjustments for Changes in the U.S. Customs Area

THE incorporation of Hawaii and Puerto Rico into the United States customs area in 1900 introduced a degree of incomparability into the official foreign trade records. The official figures, which include the effect of the annexations, are appropriate for the calculation of the balance of payments but not for the comparison of foreign trade with domestic prices and production.

The only way to achieve consistent territorial coverage would have been to include or exclude Hawaii and Puerto Rico for the entire period studied; but this would have been too laborious. Instead, we only included the two territories back through 1899. This made the 1899-1913 period internally consistent and provided an overlap in 1899 to which the earlier data excluding the two possessions could be spliced.

Recalculating the value of trade involved the subtraction from the published data for the United States of the trade of Puerto Rico and Hawaii with the United States, and the addition of the trade of the two territories with the rest of the world. This computation is described in detail in Table F-1.

The change in total exports and imports is small. For exports, it was 6/10 of one per cent in calendar years 1899 and 1900 and no higher than 1.3 per cent in any quarter; for imports it was 2.3 per cent in calendar 1899 and 1 per cent in calendar 1900, the greatest change being 3.7 per cent in one quarter.

Imports into Puerto Rico and Hawaii were scattered widely over the commodity list but exports from them were extremely concentrated. Almost all their exports were accounted for by green coffee from Puerto Rico and sugar from both territories; most of the latter was exported to the United States. As a result of this commodity concentration the effect of the adjustment is almost entirely on two of our minor classes, Export Class 004 (green coffee) and Import Class 019 (sugar and related products, agricultural).

Since all U.S. exports of green coffee were from Puerto Rico, Export Class 004 was empty before July 1900 in the official records. Furthermore, because no commodity data were used for parts of years in which data for the full year were not available, the recorded exports of green coffee for the last half of 1900 were thrown into "all other articles." The inclusion

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of Puerto Rico makes it possible to carry this class back to 1899, as is shown in Table F-2. Only one price index is given because this is a one-commodity class. All indexes are reduced to the ratio of the given year price to the base year price.

The adjustments in Export Class 004 require some changes in the intermediate and major classes of which it is a component. These are shown in Tables F-3 and F-4. Adjustments in the price index were carried through Export Class 205; after that they were negligible and only the quantity indexes and dollar values were altered.

On the import side, shifting Puerto Rico and Hawaii across the customs frontier lowered the price, quantity and value indexes for Import Class 019 to the levels given in Table F-5. The reductions in 1899, the only year in which all four quarters were affected, were about 9 per cent in price, 15 per cent in quantity, and 23 per cent in value.¹

As these changes were carried into the intermediate and major classes (see Table F-6) the reduction in the price index for Import Class 019 tended to lower the indexes for the classes into which it was combined. In addition, the adjustments lowered quantities and values for Class 019 and therefore reduced its weight in these combinations. Since the 1899 price index for this class was high compared with those of the classes with which it was combined, its loss of weight further lowered the price indexes for combined groups.

Table F-7 gives adjusted and unadjusted quantity indexes for total exports and imports. The adjustment in the export index reflects only changes in the value series while that in imports reflects changes in the price index as well.

¹ The eliminated Hawaiian and Puerto Rican sugar imports had much higher average unit values than those from all other countries, 59 per cent higher in fiscal 1899 for example (*Foreign Commerce and Navigation of the United States, 1899*, Vol. II, pp. 366-368). Most of this was duty-free sugar from Hawaii, with an average unit value of 3.7 cents per pound in 1899. The average unit value for dutiable sugar was 2.2 cents per pound and the duty on it was 1.7 cents.

TABLE F-1
ADJUSTMENT OF VALUE OF U.S. DOMESTIC EXPORTS AND IMPORTS TO INCLUDE PUERTO RICO AND HAWAII IN U.S. CUSTOMS AREA,
1899-JUNE 1900
(dollar figures in thousands)

Calendar Year	Published U.S. Ex- ports or Imports (1)	U.S. Exports to or Imports from ^a		Exports to or Imports from other Countries (5)	Adjusted U.S. Exports and Imports (cols. 1, 4 and 5 minus cols. 2 and 3) (6)	Adjusted U.S. Export and Import Value Indexes (1913 = 100) (7)
		Puerto Rico (2)	Hawaii (3)			
EXPORTS						
1899 I	308,291	825	2,144	2,513	307,855	50.297
II	272,558	962	2,815	2,355	271,170	44.303
III	304,455	653	2,897	869	301,818	49.311
IV	367,628	1,030	2,907	933	364,638	59.575
Calendar Year	1,252,932	3,470	10,763	6,670	1,245,481	50.872
1900 I	364,435	806	4,045	1,252	360,850	58.956
II	334,245	1,771	3,229	557	329,829	53.887
Calendar Year	1,453,010	2,578	7,274	1,808	1,445,009	59.021
IMPORTS						
1899 I	191,319	538	4,080	1,264	188,174	41.989
II	197,126	2,244	6,654	1,474	189,977	42.391
III	197,458	579	8,763	1,759	190,157	42.432
IV	213,065	56	2,691	1,354	211,955	47.296
Calendar Year	798,967	3,417	22,188	5,852	780,263	43.527
1900 I	231,253	92	3,054	1,335	230,289	51.387
II	208,165	2,352	6,200	628	200,917	44.833
Calendar Year	829,150	2,444	9,254	1,963	820,937	45.796

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NOTES TO TABLE F-1

^a From various issues of U.S. Treasury Department, Bureau of Statistics, *Monthly Summary of Commerce and Finance of the United States*, 1899, 1900, and 1901.

^b July 1899 to April 1900 from U.S. Customs and Insular Affairs Division, *Monthly Summary of Commerce of the Island of Puerto Rico*. Calendar year 1899 and Jan. to June 1900 totals including coin and bullion, from the *Statistical Abstract of the United States, 1906*, p. 487, were used, after adjustment for gold and silver imported and exported July 1899–April 1900, to estimate the remaining quarters. Therefore the figures for Jan. to June 1899 and May and June 1900 may include some coin and bullion. The Jan. to June 1899 total for exports was distributed between the two quarters in the same proportion as exports of green coffee (see Table F-2); for imports—the same proportion as U.S. exports to Puerto Rico (See col. 2).

^c Calendar 1899 and Jan.-June 14, 1900 totals from the *Statistical Abstract of the United States, 1906*, p. 488, were distributed for exports among the quarters in the same proportions as imports, col. 3, and for imports, in the same proportion as exports, col. 3.

TABLE F-2
ADJUSTMENT OF EXPORT CLASS 004, GREEN COFFEE, TO INCLUDE PUERTO RICO
IN U.S. CUSTOMS AREA, 1899-JUNE 1900

	Value of Exports (\$000)	Price Index (1913 = 100)	Quantity Index (1913 = 100)	Value Index (1913 = 100)
1899 I	2,028	77.057	125.701	96.862
II	1,901	56.206	161.531	90.790
III	510	59.008	41.327	24.386
IV	585	74.422	37.524	27.926
Calendar Year	5,023	65.548	91.520	59.990
1900 I	817	86.769	44.968	39.018
II	328	82.137	19.105	15.692
III	14	100.915	.648	.654
IV	26	91.614	1.376	1.261
Calendar Year	1,185	85.669	16.524	14.156

SOURCE: Data are from various issues of U.S. Customs and Insular Affairs Division, *Monthly Summary of Commerce of the Island of Puerto Rico*. Figures for May and June 1899 include exports to the U.S., but these were assumed to be small since U.S. imports of coffee from Puerto Rico were only \$222,000 during the whole of fiscal 1899. We estimated figures for the second quarter of 1900 by multiplying the April values and quantities by three.

TABLE F-3
 ADJUSTMENT OF EXPORT VALUES AND PRICE AND QUANTITY INDEXES FOR INTERMEDIATE
 AND MAJOR CLASSES TO INCLUDE COFFEE EXPORTS FROM PUERTO RICO,
 1899-JUNE 1900
 (dollar figures in thousands)

EXPORT CLASS	Year or Quarter	FISHER INDEXES (1913 = 100)					
		Value of Exports		Price		Quantity	
		Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
104	1899	229,339	234,362	73.9	73.6	189.6	185.1
	1900	216,760	217,946	73.8	74.1	179.6	171.1
201	1899 I	55,031	57,058	77.5	77.5	170.9	168.8
	II	49,589	51,490	76.1	75.2	156.9	157.0
	III	65,663	66,174	73.5	73.0	215.2	207.7
	IV	59,540	60,124	72.8	72.8	197.1	189.5
	Calendar Year	229,823	234,846	74.2	73.2 ^a	186.5	183.9
	1900 I	44,998	45,815	72.1	72.5	150.4	144.9
	II	54,952	55,281	76.8	76.9	172.2	164.8
	Calendar Year	217,324	218,509	74.1	74.4 ^a	176.6	168.4
202	1899	259,809	264,832	74.0	73.7	160.3	158.0
	1900	244,210	245,396	74.2	74.4	150.3	145.0
205	1899 I	135,085	137,112	69.8	69.9	166.5	165.8
	II	117,875	119,774	68.4	68.2	148.3	148.5
	III	138,964	139,474	68.6	68.5	174.3	172.1
	IV	141,692	142,276	69.4	69.5	175.7	173.2
	Calendar Year	533,616	538,640	68.9	68.9 ^a	166.7	165.4
	1900 I	120,012	120,829	69.4	69.6	148.8	146.8
	II	131,966	132,294	72.1	72.2	157.6	155.0
	Calendar Year	526,475	527,600	71.5	71.6 ^a	158.5	155.7

^a Adjusted Paasche and Laspeyres Annual Price Indexes for these classes:

	201		205	
	1899	1900	1899	1900
Paasche	71.8	73.3	67.8	70.8
Laspeyres	76.0	75.5	69.9	72.5

TABLE F-4
 ADJUSTMENT OF EXPORT VALUES AND QUANTITY INDEXES FOR MAJOR CLASSES TO INCLUDE COFFEE EXPORTS FROM PUERTO RICO,
 1899-JUNE 1900
 (dollar figures in thousands)

EXPORT CLASS	Year or Quarter	Value of Exports		Fisher Quantity Index (1913 = 100)	
		Unadjusted	Adjusted	Unadjusted	Adjusted
206	1899	563,602	568,625	157.3	156.1
	1900	553,361	554,547	149.0	147.0
207	1899 I	136,514	138,541	161.7	161.3
	II	119,187	121,087	144.1	143.9
	III	140,485	140,995	168.9	166.6
	IV	144,427	145,011	171.5	169.2
	Calendar Year	540,613	545,637	161.9	160.6
208	1900 I	122,032	122,849	145.0	143.5
	II	133,581	133,909	153.3	151.1
	Calendar Year	536,435	537,620	154.7	152.4
	1899	575,800	580,823	152.2	151.2
	1900	569,059	570,245	145.2	148.4

TABLE F-5
 ADJUSTMENT OF IMPORT CLASS 019, SUGAR AND RELATED PRODUCTS, AGRICULTURAL, TO
 INCLUDE PUERTO RICO AND HAWAII IN U.S. CUSTOMS AREA, 1899-JUNE 1900

	Value of Imports (\$'000)	Price Indexes (1913 = 100)			Fisher Quantity Index (1913 = 100)	Value Index (1913 = 100)
		Paasche	Laspeyres	Fisher "ideal"		
1899 I	19,906	103.770	105.380	104.572	77.234	80.765
II	26,235	116.626	118.449	117.534	90.564	106.443
III	20,245	112.789	112.635	112.712	72.876	82.140
IV	17,120	102.285	102.940	102.612	67.693	69.461
Calendar Year	83,506	109.299	110.606	109.951	77.036	84.702
1900 I	17,907	105.429	113.097	109.196	66.536	72.654
II	22,636	115.615	118.383	116.991	78.504	91.842
Calendar Year	79,846	111.656	114.937	113.285	71.492	80.990

SOURCE: Data are from various issues of U.S. Treasury Dept., Bureau of Statistics, *Monthly Summary of Commerce and Finance of the United States*, 1899 and 1900.

TABLE F-6
 ADJUSTMENT OF IMPORT VALUES AND PRICE AND QUANTITY INDEXES FOR INTERMEDIATE
 AND MAJOR CLASSES TO EXCLUDE SUGAR IMPORTED FROM HAWAII AND PUERTO RICO,
 1899-JUNE 1900
 (dollar figures in thousands)

IMPORT CLASS	Year or Quarter	FISHER INDEXES (1913 = 100)						
		Value of Imports		Price		Quantity		
		Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	
111	1899	132,607	108,178	109.4	101.4	109.4	75.8	67.7
	1900	116,768	105,645	109.9	104.6		66.5	63.2
113	1899	131,074	106,645	107.7	99.8		71.8	63.0
	1900	114,540	103,418	108.7	103.5		62.1	58.9
203	1899 I	31,200	26,920	101.1	95.0		64.3	59.0
	II	42,591	34,160	108.8	101.8		81.9	69.9
	III	36,042	26,894	112.7	101.9		66.6	55.0
	IV	31,462	28,891	100.9	96.7		65.0	62.2
	Calendar Year	141,295	116,866	106.3	99.1 ^a		69.2	61.4
204	1900 I	28,157	25,111	105.8	99.5		55.5	52.6
	II	38,125	30,049	112.8	102.4		70.4	61.2
	Calendar Year	125,614	114,492	106.1	101.4 ^a		61.7	58.8
205	1899	143,635	119,206	105.9	98.9		68.5	60.9
	1900	128,000	116,878	105.6	101.1		61.2	58.4
205	1899 I	56,615	52,336	81.2	79.0		70.6	67.9
	II	67,297	58,866	89.4	85.4		77.1	70.6
	III	54,805	45,656	88.0	81.7		63.8	57.3
	IV	51,447	48,875	76.8	74.6		68.6	67.1
	Calendar Year	230,164	205,735	84.3	80.2 ^a		70.0	65.7

(continued)

TABLE F-6 (continued)

IMPORT CLASS	Year or Quarter	FISHER INDEXES (1913=100)							
		Value of Imports				Price			
		Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
206	1900 I	54,282	51,236	84.9	81.8	65.5	64.1		
	II	57,779	49,703	95.4	89.4	62.1	57.0		
	Calendar Year	217,843	206,721	88.1	85.7 ^a	63.3	61.8		
	1899	241,954	217,525	85.9	82.1	66.0	62.1		
207	1900	232,711	221,589	89.0	86.8	61.2	59.8		
	1899 I	58,903	54,622	82.0	79.0	69.2	66.6		
	II	69,578	61,148	88.9	85.1	75.3	69.2		
	III	57,484	48,336	88.2	82.2	62.7	56.6		
208	IV	55,602	53,030	78.2	76.2	68.4	67.0		
	Calendar Year	241,567	217,139	84.6	80.8 ^a	68.8	64.7		
	1900 I	56,686	53,640	84.9	82.0	64.3	63.0		
	II	59,931	51,854	94.6	88.9	61.0	56.2		
209	Calendar Year	230,248	219,126	87.8	85.5 ^a	63.1	61.7		
	1899	255,697	231,268	86.1	82.5	64.9	61.2		
	1900	247,502	236,379	88.7	86.6	60.9	59.6		
	1899 I	108,600	104,319	83.0	81.5	59.6	58.3		
208	II	113,293	104,862	86.4	84.2	59.8	56.8		
	III	98,095	88,946	85.1	81.9	52.5	49.5		
	IV	111,486	108,914	83.7	82.7	60.7	60.0		
	Calendar Year	431,474	407,046	84.6	82.6 ^a	58.1	56.1		

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210	1900 I	123,830	120,784	89.8	88.4	62.8	62.2
	II	110,442	102,365	92.7	89.8	54.3	51.9
	Calendar Year	420,673	409,551	88.4	87.3 ^a	54.2	53.5
216	1899	625,804	601,376	82.1	80.7	58.9	57.5
	1900	635,287	624,165	86.5	85.7	56.7	56.2
	Calendar Year	144,354	140,073	77.9	76.9	54.1	53.2
219	1900 I	174,095	171,049	86.8	85.9	58.6	58.2
	II	162,313	154,237	89.2	87.3	53.2	51.6
	Calendar Year	623,858	612,735	86.5	85.7 ^a	52.7	52.2
	1899	777,901	753,472	81.5	80.4	56.5	55.4
	1900	804,771	793,648	86.7	86.1	54.9	54.5

^a Adjusted Paasche and Laspeyres Annual Price Indexes for these classes:

	203		205		207		209		216	
	1899	1900	1899	1900	1899	1900	1899	1900	1899	1900
Paasche	100.3	101.7	77.8	83.3	78.2	83.0	80.5	84.7	77.3	83.1
Laspeyres	98.0	101.2	82.7	88.1	83.4	88.1	84.8	89.9	82.5	88.4

APPENDIX F

TABLE F-7
 ADJUSTMENT OF QUANTITY INDEXES^a FOR TOTAL EXPORTS AND IMPORTS FOR
 INCLUSION OF PUERTO RICO AND HAWAII IN U.S. CUSTOMS AREA, 1899-JUNE 1900
 (1913 = 100)

	<i>Exports</i> ^b		<i>Imports</i> ^c	
	Unadjusted	Adjusted	Unadjusted	Adjusted
1899 I	73.4	73.3	54.0	53.7
II	61.9	61.6	54.0	52.9
III	67.2	66.6	53.9	53.0
IV	80.1	79.4	57.1	57.2
Calendar Year	70.8	70.3	54.7	54.1
1900 I	75.5	74.7	59.5	59.7
II	66.2	65.3	52.4	51.5
Calendar Year	73.2	72.8	53.4	53.2

^a Fisher "ideal" indexes.

^b Export Class 220.

^c Import Class 221.