Castilian Seigniorage and Coinage in the Reign of Philip II

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Professor Earl J. Hamilton in his classic work entitled "American Treasure and the Price Revolution in Spain, 1501-1650", has this to say [1] on the records of Castilian mints: « Diligent search in all the appropriate national and local archives failed to locate continuous records for any Castilian mint prior to 1590. Discontinuous documents of the Seville mint from 1503 on are available; but it is significant that, on May 27, 1687, the House of Trade wrote the Council of the Indies that it was absolutely impossible to find papers disclosing the amount of seigniorage collected by the Seville mint for any quinquennium before 1590-1594 ». My less diligent search had met with equally poor results [2] until a few years ago.

Actually, many mint records, some of them continuous, for the period between 1566 and 1590 are to be found in the Spanish archives, and even for the period before 1566, although these latter are sometimes found where least expected. The purpose of this paper is to call attention to some of these records and to touch briefly on some of their implications.

At the beginning of the reign of Philip II (1556) there were eight mints in Castile, although not all of them were continuously active during the reign. They were located at Seville, Segovia, Toledo, Valladolid, Cuenca, Burgos, Granada and La Coruña. In the second half of the reign it was planned to erect a water-powered mint in Madrid, but the lack of a suitable river forced the abandonment of the project; it was erected in the outskirts of Segovia, on the banks of the Eresma river, and began to operate in 1586; with it, Segovia had

1 Page 39, Note 3.
2 *La Hacienda Real de Castilla en el reinado de Felipe II*, p. 272.

two mints, since the old one within its walls remained active. The mints of Valladolid, Cuenca and Burgos gradually lost in importance. We know little about the mints of Granada and La Coruña, except that the latter was inactive throughout most of the reign. (*)

Units of account

The two units of account most often found in the Spanish documents of the period are the *maravedí* and the ducat, which was equivalent to 375 *maravedíes*. In documents relating to the metals brought from Spanish-America one of the units of account is the "*peso de minas*", equivalent to 450 maravedíes. We shall refer to the three of them, and also to the "*peso ensayado*" (assayed peso), a unit used exclusively in Peru, with it was reckoned the value of bullion and coins in that dominion. It was rated at from 425 to 450 *maravedíes*.

Gold and Silver Coins

The two basic coins in the reign of Philip II were the gold *escudo* and the silver *real*. Their chief characteristics are given below:

Metal	Name	Approx. weight	Fineness	Rate
Gold	*Escudo*	3.38 *grams*	0.9167	400 *maravedíes*
Silver	*Real*	3.44 »	0.93	34 »

From 1537 to 1566 the gold *escudo* was rated at 350 *maravedíes*.

From a mark of approximately 230 grams and the corresponding fineness, 68 *escudos* or 67 *reales* were coined, depending on whether the metal was gold or silver.

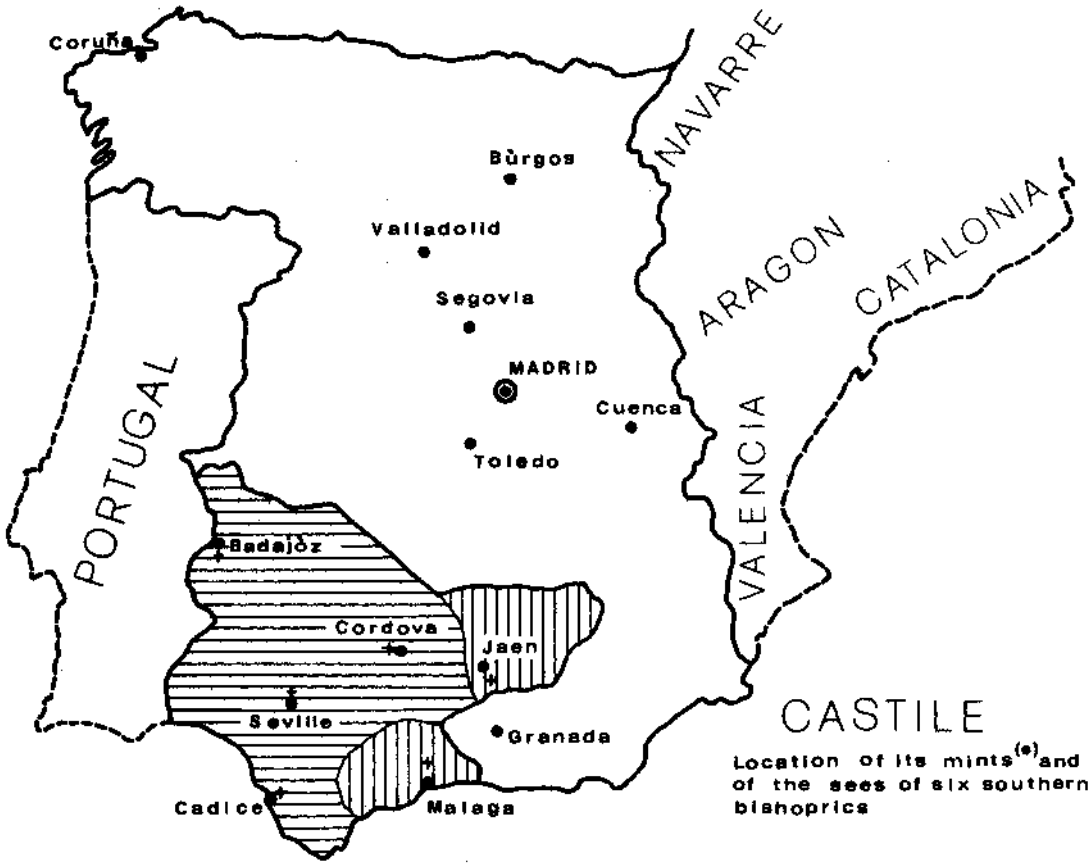
Besides the basic coins there were three multiples of the gold *escudo*, of 2,4 and 8 *escudos* [3], respectively; and three multiples and one sub-multiple of the silver real, of 2,4 and 8 *reales*, and half a *real*. The "pieces of eight" (eight reales) were destined to have many descendants, among them the original version of the United States silver dollar,

On November 7th, 1566, King Philip ordered the collection of seigniorage [4] on metals coined in the Castilian mints. The tariffs were to be: for each mark of gold, an *escudo*, for each mark of silver, fifty *maravedíes*. There were to be some exemptions: the metals brought to be coined by order of the King, and those that had belonged to the King but had been sold to one of the various merchants who fairly regularly bought the bullion that came from America consigned to the Crown and its agencies. Very rarely, Ameri-

* After this was written my wife found the accounts of the Granada Mint.

[3] The 8 *escudo* piece seems to have been coined only on rare and important occasions, like Philip's visit to the Segovian mint in 1587. (COLMENARES, *Historia de Segovia*).

[4] Archivo de Simancas - Contaduría Generales, L° 822.


Coruña
Burgos
NAVARRE
Valladolid
Segovia
ARAGON
CATALONIA
MADRID
Cuenca
Toledo
PORTUGAL
VALENCIA
Badajoz
Cordova
Jaen
Seville
Granada
Cadice
Malaga
CASTILE
Location of its mints(•) and of the sees of six southern bishoprics

can treasure originating in Royal grants to certain privileged persons was also exempted.

The total cost of coinage was as follows: 1 due to the king (seigniorage proper) 400 *maravedís* per mark of gold, 50 per mark of silver. 2 due to the officials of the mints: 125 *maravedíes* per mark of gold, 34 per mark of silver. In practice there were deviations from these last fees charged by the officials. Total charges for gold and silver coined in Castile in the period were thus at variance with Professor A.P. Usher's listed charges.[5]

The Mints and their Outputs

We shall refer almost exclusively to the coinage of gold and silver. The figure from the mint records, as stated, refer to the coinage done by order of private persons, since the King paid no seigniorage, but we do have some mint records of coinage done for the King in certain periods in the Seville mint and in the new Segovia mint. We can also estimate, unfortunately only for a few years, the amount of coinage *struck* for the merchants who bought the King's metals that, as stated, were free of seigniorage. A few words on this last operation are needed.

There was what might be called the ideal way of handling the precious metals arriving in bullion from America for the King: they would be weighed, assayed and auctioned in the Seville House of Trade (*Casa de la Contratación*), and the buyers would be given usually 180 days in which to pay. Once bought, the metals would be returned to the officials of the House to be coined, and once coined given back to the owners. Practically all the King's bullion was handled that way in particular years, but we have the records of only a few of them. A more common way of handling the King's treasure was to weigh it and transfer it to the King's creditors, who were usually impatient, or in the last two decades of the century, to weigh it and ship it off to Italy or Lisbon, or, occasionally, to send part or all of it to the new Segovian mint. Whenever the King's metals were treated in these various fashions, even the ideal one, the figures are only approximate and I have placed them separately from those of the mint records.

In Table I to VIII, made up from the mint records, I have placed in the column under A the proceeds of seigniorage in *maravedíes,* under B the gold, and under C, the silver bullion processed, in marks and ounces. Under columns D and E the value of each metal coined, at 400 *maravedíes* the *escudo* and 34 *maravedíes* the *real,* and for each metal its percentage of the total, calculated for the years in which we have the data in B and C. I placed under F the number of silver *reales* equivalent to the total value of both gold and silver coined, but when we do not have the quantities of each metal pro-

[5] *The Early History of Deposit banking in Mediterranean Europe,* (Cambridge, Mass. 1943), « Harvard Economic Studies », 75 p. 223.

cessed I have calculated the number of silver *reales* that would have been coined if all the proceeds of seigniorage had originated in the coinage of silver exclusively; in this last case F is always a minimum, since, as previously stated, seigniorage on silver was higher than on gold. Finally, under G, I have placed the marks of "*Rich vellón*" coined in certain years in certain mints. "Rich vellon" (*vellón rico*), was a copper alloy containing 21.53% of silver, and seigniorage to the amount of 34 *maravedíes* was charged for each mark of rich vellón. Its coinage was authorized in 1566, and after 1572 it disappears from the mint records. I have included it with the two precious metals since seigniorage collected from the three of them is found together in the mint accounts.

The proceeds (A) are sometimes a little higher than the amounts collected as seigniorage: annuities were charged against those receipts; upon the death of the beneficiary of a life annuity the Treasurer of the mint was sometimes charged with that part of the anuity that was no longer due for payment that particular year. Whenever possible I have discounted these and other small charges, but even when it has been impossible, they do not significantly change the results.

In calculating the number of *escudos, reales* and their respective values, I have made several simplifying assumptions, but they do not substantially influence the results. The first assumption was that metals coined were always of legal fineness; the second, that coins stamped were always of legal fineness and weight. We know that neither assaying nor weighing were very accurate in the XVIth century, even when honest and competent men were in charge of both: a little later we shall see examples of what, quite often, really happened, as regards weight of coins and bullion.

In the auctions of the House of Trade, in 1585, "good" silver bullion [6] that had been weighed and assayed more than once was sold part at 2244 mrs. the mark and part at 2190. In 1579 prices had varied [7] from 2232 to 2184. In general Peruvian silver had a higher fineness than Mexican: in 1590 in the new mint of Segovia, 70 *reales* (the value of 2380 *maravedíes*) were coined from a mark of Peruvian bullion, whereas at the same time 66 *reales* (2244 mrs) were obtained from a mark of Mexican silver.[8] One of the highest values for a mark of bullion was 2320 mrs., for silver from the Spanish Guadalcanal mine,[9] but that was in the sixties of the century, and the estimate was made by royal officials. Before 1566 a mark of silver bullion of legal fineness had had an official price of 65 *reales* (2210 mrs). If its owner took it to the mint and had it coined he got 66 reales and 1 real was retained

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6 A. DE SIMANCAS, *Contaduría Generales*, L.º 3056. There was also "*plata corriente*" (ordinary silver) sold at much lower prices.

7 A. DE SIMANCAS, *Escribanía Mayor de Rentas*, L.º 659 antiguo, 523 moderno.

8 A. DE SIMANCAS, *Consejo y Junta de Hacienda*, L.º 195 moderno, 284 antiguo.

9 A. DE SIMANCAS, *Estado* L.º 46 fol. 99.

as coinage fee. Some people thought that the King, and those who took metals to be coined, suffered considerable losses in the process of assaying and alloying at the mints.[10] But the merchants who bought the bullion from the King always contracted to receive the additional coins stamped on account of any deficiency in their weight.

When dishonesty came into the picture, and it was found out, big differences could be detected. In 1564 it was reported that a bar of silver had been estimated at 210 mrs. more per mark and another at 110, both had come out of the office of the Potosí assayer.[11]

TABLE I

SEVILLE MINT
COINAGE FOR THE ACCOUNT OF PRIVATE PERSONS [12]

Periods	A	B	C	d	% d d+e	e	% e d+e	F
Nov. 1566 to Jan. 31, 1571	86,779,363	64,875-7	1,216,579-6	1,764,623,800	39	2,771,368,670	61	133,411,543
Feb. 1, 1571 to Dec. 31, 1571	15,453,609	9,488-3	233,165-2	258,083,800	32.7	531,150,439	67.3	23,212,772
1572	7,679,484	4,577-1	116,792-1	124,497,800	32	266,052,460	68	11,486,772
1573	21,581,860	13,666-5	322,304-0	371,732,200	33.6	734,208,512	66.4	32,527,668
1574	12,459,512	7,624-4	188,197-7	207,386,400	32.6	428,714,759	67.4	18,708,857
1575	18,067,008	10,905-4	274,096-0	296,616,000	32.2	624,390,688	67.8	27,088,432
1571-75								113,024,501
1576	7,800,363							10,452,486
1586	8,566,235	(*)	(*)					11,478,755
1587	11,179,463	4,071-5	191,016-1	110,748,200	20.2	435,134,732	79.8	16,055,380
1588	24,449,055	17,805-6	346,535-0	484,316,400	38	789,406,730	62	37,462,445
1589	6,529,900	3,334-4	104,921-7	90,698,400	27.5	239,012,031	72.5	9,697,365
1590	39,134,207	16,060-7	654,199-3	436,855,800	22.7	1,490,266,176	77.3	56,680,058
1586-90								131,374,003
1591	21,419,140							28,701,647
1592	18,793,125							25,182,787
1593	20,477,357	9,477-7	333,724-4	257,798,200	25.3	760,224,411	74.7	29,941,841
1594	1,885,387	3,077-2	13,091-2	83,701,200	73.7	29,821,867	26.3	3,338,913
1595	38,460,794	33,575-2	500,614-2	913,246,800	44.5	1,140,399,261	55.5	60,401,354

(*) In the second half-year receipts (A) were 3,181,067 *maravedíes*, proceeds of the coinage of 2,461 marks of gold and 43,933 of silver.

TABLE II

SEVILLE MINT
COINAGE FOR THE ACCOUNT OF THE KING [12]

Years	B	C	d	% d d+e	e	% e d+e	F
1571	401-7	205,648-1	10,931,000	2.3	468,466,429	97.7	14,099,924
1572	240-0	9,052-6	6,528,000	24	20,622,164	76	798,534
1573	1,004-7	160,500-6	27,332,600	7	365,620,708	93	11,557,450
1574	1,022-2	124,109-1	27,805,200	9	282,720,587	91	9,133,111
1575	1,373-5	88,364-1	37,362,600	15.7	201,293,477	84.3	7,019,296
1571-75	4,042-5	587,674-7	109,959,400	7.6	1,338,723,365	92.4	42,608,315

10 A. DE SIMANCAS, *Estado*, L° 151, fol. 104 « Avisos de Antonio Sánchez ».

11 LEVILLIER, R., *La Audiencia de Charchas* (Madrid, 1918-20), I-131.

12 A. DE SIMANCAS, *Escribanía Mayor de Rentas*, L° 659 antiguo, 523 moderno.

The value of all the precious metals coined for the account of the King in the mint of Seville in the five year period 1571-75, (1, 448, 682, 765 *maravedíes*, or 3,219,295 "*pesos de minas*") was similar to the value of all the precious metals that according to Hamilton [13] were received by the King in the same period (3,298,660 "pesos de minas"). The King must have used almost exclusively the Seville mint for the coinage of his metals, although more than 8,000 marks of silver were also coined for him in the Toledo mint in 1573. But the yearly value of coinage and the yearly value of arrivals of royal metals were very different.

Thanks to a report [14] of the public notary, Martínez de Zavaleta, we

TABLE III

OLD MINT WITHIN THE WALLS OF SEGOVIA
COINAGE FOR THE ACCOUNT OF PRIVATE PERSONS [15]

Years	A	B	C	d	% e d+e	e	% e d+e	F
1567	391,875	561-2	3,347-4	15,266,000	66.7	7,625,605	33.3	673,282
1568	498,905	787-7	3,674-4	21,430,200	71.9	8,370,511	28.1	876,491
1569	278,232	130-3	4,521-5	3,546,200	25.6	10,300,262	74.4	407,249
1570	717,473	274-3	12,154-0	7,463,000	21.2	27,686,812	78.8	1,033,818
1571	196,874	266-7	1,818-4	7,259,000	63.7	4,142,543	36.3	335,339
1572	27,900	25-7	351-0	703,800	46.8	799,578	53,2	44,217
1573	14,750	36-7	00	1,003,000	100	00	0	29,500
1574	18,450	46-1	00	1,254,600	100	00	0	36,900
1575	274,850	163-6	4,190-0	4,454,000	31.8	9,544,820	68.2	411,730
1571-75	532,824							857,686
1576	60,319	67-3	667-3	1,832,600	54.7	1,520,280	45.3	98,614
1577	20,300	50-6	00	1,380,400	100	00	0	40,600
1578	28,050	70-1	00	1,907,400	100	00	0	56,100
1579	9,180	19-4	27-6	530,400	89.4	63,214	10.6	17,459
1580	12,375	26-5	34-4	724,200	90.2	78,591	9.8	23,611
1581	12,800	32-0	00	870,400	100	00	0	25,600
1582	8,800	22-0	00	598,400	100	00	0	17,600
1583	1,150	2-7	00	78,200	100	00	0	2,300
1584	5,350	13-3	00	363,800	100	00	0	10,700
1585	53,450	133-5	00	3,634,600	100	00	0	106,900
1586	1,978,425	18-0	39,424-0	489,600	0.5	89,807,872	99.5	2,655,808
1587	1,985,850	24-7	39,518-0	676,600	0.7	90,022,004	99.3	2,667,606
1588	7,732,925	302-4	152,238-4	8,228,000	2.3	346,799,303	97.7	10,441,979
1589	?							
1590	1,384,793	2-6	27,673-4	74,800	0.1	63,040,233	99.9	1,856,324
1591	4,859,695 (a)	43-6	96,842-6	1,190,000	0.5	220,607,784	99.5	6,523,464
1592	3,741,389	2-0	74,811-3	54,400		170,420,312	100>	5,013,962
1593	5,880,421	1-3	117,597-0	37,400		267,885,966	100>	7,880,099
1594	210,058	269-2	2,047-0	7,323,600	61.1	4,663,066	38.9	352,549
1595	17,391,665	16-4	347,701-0	448,800	0.1	792,062,878	99.9	23,309,167
1596 (b)	3,911,750	00	78,235-0	00	0	178,219,330	100	5,241,745
1597	3,650,542	820-0	66,449-0	22,304,000	12.8	151,370,822	87.2	5,108,083
1598	340,034	3-7	6,769-0	105,400	0.7	15,419,782	99.3	456,623
1599	2,469,174	4-6	49,345-0	129,200	0.1	112,407,910	99.9	3,309,915
1600	815,000	00	16,300-0	00	0	37,131,400	100	1,092,100

(a) In A. de S. - Contaduría Generales -Lº 2674 there is a slightly lower figure: 4, 859, 667 *mrs.*
(b) In one place appear both the receipts and the quantity of silver that I have reproduced on the Table, and it is stated that they correspond to the period ending on September 21st; but in two other places it is said that 51,683 or 51,643 *marks* of silver were coined.

13 *Ibid.*, p. 34.

14 A. DE SIMANCAS, *Expedientes de Hacienda*, Lº 392.

15 A. DE SIMANCAS, *Escribanía Mayor de Rentas*, Lª 658 antiguo, 522 moderno.

TABLE IV

TOLEDO MINT
COINAGE FOR THE ACCOUNT OF PRIVATE PERSONS [16]

Years	A	B	C	d	% d d+e	e	% e d+e	F	G
Nov. 14, 1566 to Dec. 31, 1567	1,388,147	1,791-6	13,429-0	48,735,600	61.4	30,591,262	38.6	2,333,143	
1568	1,252,521	1,654-7	11,811-1	45,012,600	62.6	26,905,742	37.4	2,115,245	
1569	2,062,922	1,305-5	30,813-4	35,513,000	33.6	70,193,153	66.4	3,109,004	
1570	2,519,002	1,843-4	30,192-0	50,143,200	42.2	68,777,376	57.8	3,497,664	8,000 (a)
1571	1,944,383	646-6	33,713-7	17,591,600	18.6	76,800,207	81.4	2,776,229	
1572	852,552							1,142,419	18,000 (b)
1573	3,409,722	5,005-4	28,150-4	136,149,600	68	64,126,839	32	5,890,483	
1574 (c)	754,216	1,331-6	4,429-5	36,223,600	78.2	10,090,685	27.5	1,362,184	
1575	6,912,143	14,839-0	19,530-0	403,620,800	90.1	44,489,340	9.9	13,179,710	
1576	762,575	1,678-2	1,825-2	45,648,400	91.7	4,157,919	8.3	1,464,891	
1577	273,754							366,830	
1578	2,116,889							2,836,631	
1579	1,049,800							1,406,732	
1580	3,970,301							5,320,203	
1581	4,032,211							5,403,162	
1582	2,080,137							2,787,383	
1583	2,975,254							3,986,840	
1584	4,225,120							5,661,660	
1585	6,045,482							8,100,945	
1586	10,099,164	1,531-1	189,734-0	41,646,600	8.8	432,214,052	91.2	13,937,078	
1587	4,509,776							6,043,099	
1588	9,718,618							13,022,948	
1589	830,544							1,112,928	
1590	9,134,113							12,239,711	
1591	6,905,870							9,253,865	
1592	3,410,090							4,569,520	
1593	9,818,310	508-5	192,297-2	13,834,600	3.1	438,053,135	96.9	13,290,815	
1594	238,765	576-6	161-5	15,687,600	97.7	368,181	2.3	472,228	
1595	14,850,800	600-5	292,212-0	16,337,000	2.4	665,638,936	97.6	20,058,704	
1596	3,298,666 (d)	2,324-6	47,230-0	63,233,200	37	107,589,940	63	5,024,210	
1597	10,586,694	2,108-7	194,862-4	57,361,400	11.4	443,896,775	88.6	14,742,887	
1598	5,697,393	2,406-7	94,695-0	65,467,000	23.3	215,715,210	76.7	8,270,065	

(a) The proceeds from the seigniorage on precious metals that year were 2,247,002 *mrs*; 272,000 were added for the seigniorage of 8,000 *marks* of *rich vellón* actually coined in 1568 but not charged in this last year.

(b) *Rich vellón.*

(c) From January 31st to December 31st.

(d) Total charges are somewhat higher than seigniorage; except for this year in all the others they are equal. In 1573 and 1580 there were additional charges of various types, they were not included with those for seigniorage.

know the amount of silver coined for both private persons and the King, and the approximate daily output of the Seville mint, for a short, but very active period a little after the establishment of seigniorage. From February 4th to April 22nd, 1567 the mint coined 115,472 marks 7 ounces of silver for private persons and received and apparently also coined 80,917 marks 1 ounce of the King's silver. The work force was increased by 20 persons and the average daily coinage was between 180,000 and 200,000 *reales*.

The Duke of Alba had some silver coined in the Toledo mint in 1569-70. By royal privilege he did not pay any seigniorage, but it was duly charged and then credited to the Treasurer of the mint, so that it is included in the figures for metals coined.

[16] A. DE SIMANCAS, *Escribanía Mayor de Rentas*, L° 661 antiguo, 525 moderno.

In 1573 more than 8,000 marks of silver were coined for the account of the King, no seigniorage was charged, and the metal is not included with that of private persons in the Table.

For many years the person for whose account the most metals were coined in Toledo was Cosme Sánchez de Espinosa, sometimes in his own name, sometimes in the name of the Sevillan bankers Pedro de Morga y Compañía, and of Pedro La Torre Espinosa. According to G. Löhmann Villena.[17] in the late eighties Cosme Sánchez Espinosa and Pedro La Torre Espinosa were involved in a vast counterfeiting operation in various mints, and they were jailed together with the assayer of the Segovian mint.

TABLE V

VALLADOLID MINT
COINAGE FOR THE ACCOUNT OF PRIVATE PERSONS [18]

Years	A	B	C	d	% d d+e	e	% e d+e	F	G
Nov. 11, 1568 to Dec. 31, 1570	6,287,356	480-7	119,003-4	13,079,800	4.6	271,089,973	95.4	8,357,934	4,257-5 (a)
Jan. 1, 1571 to Dec. 31, 1583	11,387,973 (b)							15,259,883	
1590	1,212,640							1,624,937	
1591	3,417							4,578	
1592	3,635,150							4,871,101	
1593	1,297,466							1,738,604	
1594	00							00	
1595	5,222,937							6,998,735	
Jan. 1, 1596 to Mar. 31, 1598	00							00	

(a) *Rich Vellón.*

(b) In the short period from October 26 to December 31st, 1583, receipts amounted to 3,318,238 *mrs*, proceeds from 66,364 *marks 5 ounces* of silver coined. But in the total in the table were included various charges that did not originate from seigniorage, others corresponding to the previous management, etc.

From 1585 to 1591 one and two escudo gold pieces were coined exclusively in the Cuenca mint. There are good reasons to believe that this mint was not active from 1592 to 1596 [19]. In 1597 the average coinage fee was 119 mrs. per mark of gold,[18] instead of the 125 authorized.

The ratio of gold to silver coined.

A very important conclusion to be drawn from the examination of the figures of metals coined is that the weight of gold imported from

17 *Les Espinosa, une famille d'hommes d'affaires en Espagne et aux Indies à l'époque de la colonisation* (Paris 1968), p. 119.

18 A. DE SIMANCAS, *Escribanía Mayor de Rentas*, L° 657 antiguo, 521 moderno

19 A. DE SIMANCAS, *Expedientes de Hacienda* L° 89. « Declaración fecha por los diputados para el repartimiento del alcavala de los hacedores de paño ».

TABLE VI

CUENCA MINT
COINAGE FOR THE ACCOUNT OF PRIVATE PERSONS [18]

Years	A	B	C	d	% d d+e	e	% e d+e	F	G
1567	1,280		25·5		0	58,373	100	1,716	
1568	200,192							268,257	5,888 (a)
1569	18,759	6·7	320·1	187,000	20.4	729,244	79.6	26,948	
1570	1,394,612		27,892·2			63,538,545	100	1,868,780	
1571	9,737	24·3		663,000	100	0	0	19,500	
1572	33,629	33·0	528·6	897,600	42.7	1,204,492	57.3	61,826	
1573	5,810	6·1	67·2	166,600	52.1	153,195	47.9	9,405	
1574	00							00	
1575	916	2·2	0	61,200	100	0	0	1,800	
1576	00							00	
1577	10,162	25·3	0	690,200	100	0	0	20,300	
1578	7,378	18·3	0	499,800	100	0	0	14,700	
1579	3,996	9·7	0	268,600	100	0	0	7,900	
1580	3,712	9·2	0	251,600	100	0	0	7,400	
1581	1,064	2·5	0	71,400	100	0	0	2,100	
1582	4,932	12·3	0	336,600	100	0	0	9,900	
1583	00		0					00	
1584	372,463	10·0	7,369·1	272,000	0.6	16,786,866	98.4	501,731	
1585	00								
1585	1.512 (b)	3·0	0	81,600	100	0	0	2,400	
1586	8.057	20·1	0	547,400	100	0	0	16,100	
1587	00							00	
1588	2,110	5·2	0	142,800	100	0	0	4,200	
1589	00							00	
1591	3,237	8·1	0	221,000	100	0	0	6,500	
1597	24,800	62·0	0	1,686,400		0	0	49,600	

(a) *Rich vellón.*
(b) On one side it is stated that no seigniorage was collected, on the other appear the figures copied here.

TABLE VII

BURGOS MINT
COINAGE FOR THE ACCOUNT OF PRIVATE PERSONS [20]

Years	A	B	C	d	% d d+e	e	% e d+e	F	G
1568-70	533,777							715,261	
1571	28,302	35·1	285	955,400	59.5	649,230	40.5	47,195	
1572	66,600	71·7	0	1,955,000	100	0	0	57,500	1,112 (a)
1573 (b)	14,889	37·2	0	1,013,200	100	0	0	29,800	
1574 (c)	32,417							43,439	
1576	12,136							16,262	
1577	28,528							38,227	
1578	6,093							8,164	
1579	4,100							5,494	
1580	5,880							7,879	
1581	3,700							4,958	
1583	1,800							2,412	
1584	12,944							17,344	
1591	00							00	

(a) *Rich vellón.* Its seigniorage is relatively important in this exceptional instance.
(b) In the same set of documents there are slightly lower figures.
(c) From January 1st to August 23rd.

[20] A. DE SIMANCAS, *Escribanía Mayor de Rentas*, L° 656 antiguo, 520 moderno.

TABLE VIII

GRANADA MINT
COINAGE FOR THE ACCOUNT OF PRIVATE PERSONS [21]

Period	A	B	C	d	% d d+e	e	% e d+e	F
Oct. 14, 1583 to Mar. 1, 1584	4,099,038	23-5	81,791	642,600	0,03	186,319,898	99.7	5,498,897
1591	1,472,929							1,973,724

America must have been far higher than had been estimated.[22] It was known that the King received proportionally less gold than his subjects, since the high officials in America were in the habit of collecting all or part of their salaries in gold. And Professor Hamilton had rightly remarked [23] that, « since gold was easier to conceal, the percentage that came unregistered doubtless exceeded that of silver », and that therefore, the mint records should show a bias in favour of gold. But, in spite of all that, the very large differences between estimates and the conclusions to be drawn from mint records were a surprise to me, as I think they must be to others who have studied the problem.

The Royal Finances and seigniorage.

Being unable to find the records of the mints, in a previous work [24] I published several figures taken from estimates made by royal officials. In one of these estimates it was written that collections of seigniorage to the value of 41,000,000 *maravedíes* were expected in 1598; unfortunately the mint records corresponding to that year are incomplete. I also published some figures of receipts of the Seville mint that are wrong or misleading.

Seigniorage was of great fiscal importance in certain years (Table IX), as in 1590 and 1595. In the latter, with receipts of about 200,000 ducats it was one of the important sources of royal revenue.

The water-powered mint of Segovia.

We have only official records of this mint for the year 1588:: its officials delivered 7,165,467 *reales* from March 31st to November 15th. They were the proceeds of 106,429 marks 4 ounces of silver of the legal

21 A. DE SIMANCAS, *Escribanía Mayor de Rentas*, L° 659 antiguo, 523 moderno, Contadurías Generales, L° 2674.

22 HAMILTON, *ibidem*, pp. 40-42.

23 *Ibid.*, p. 39.

24 *La Hacienda Real de Castilla*, p. 273.

25 A. DE SIMANCAS, *Escribanía Mayor de Rentas*, L° 659, antiguo, 523 moderno.

TABLE IX

RECEIPTS (IN *MARAVEDIES*) FROM SEIGNIORAGE, AND VALUE OF METALS COINED IN SIX CASTILIAN MINTS *

Years	Seville	Segovia	Toledo	Valladolid	Cuenca	Burgos	Total yearly receipts	Value of metal coined (a) *Reales*	Value of metal coined (a) *Pesos de minas*
1571	15,453,609	196,874	1,944,383		9,737	28,302	17,632,905	23,628,092	1,785,323
1572	7,679,484	27,900	852,552		33,629	66,600	8,660,165	11,604,621	876,793
1573	21,581,860	14,750	3,409,722		5,810	14,889	25,027,031	33,536,221	2,533,847
1574	12,459,512	18,450	754,216		00	32,417	13,264,595	17,774,557	1,342,966
1575	18,067,008	274,850	6,912,143		916		25,254,917	33,841,588	2,556,920
1571 to 1575									9,095,759
1586	8,566,235	1,978,425	10,099,164		8,057		20,651,881	27,673,520	2,090,888
1587	11,179,463	1,985,850	4,509,776		00		17,675,089	23,684,619	1,789,504
1588	24,449,055	7,732,925	9,718,618		2,110		41,902,708	56,149,628	4,242,416
1589	6,529,900		830,544		00		7,360,444	9,862,994	745,204
1590	39,134,207	1,384,793	9,134,113	1,212,640			50,865,753	68,160,109	5,149,874
1586 to 1590									14,017,886
1591	21,419,140	4,859,695	6,905,870	3,417	3,237	00	33,191,359	44,476,421	3,360,440
1592	18,793,125	3,741,389	3,410,090	3,635,150			29,579,754	39,636,870	2,994,785
1593	20,477,357	5,880,421	9,818,310	1,297,466			37,473,554	50,214,562	3,793,989
1594	1,885,387	210,058	238,765	00			2,334,210	3,127,841	236,325
1595	38,460,794	17,391,665	14,850,800	5,222,937			75,926,196	101,741,102	7,687,105
1591 to 1595									18,072,644

(a) Assuming that silver was the only metal coined.

* If we take into account the data of the Granada Mint, the final figures should be read as follows (see p. 460 * n.),

1571-75	10,454,935
1586-90	15,377,381
1591-95	21,166,254

fineness. The metal yelded 34,691 *reales* more that would have been the case if all coins had had the legal weight.

Besides this data, there are only royal orders instructing the officials of the Seville House of Trade to deliver silver bullion to the new Segovian mint, Professor Hamilton has enumerated most of these orders; [26] we have also accounts of the Treasurer General of Castile, in Madrid, with entries of coins coming from the mint. We do not seem to have all orders, nor do we know if they were executed and the metal actually coined. In all cases the metals belonged to the King.

According to C.M. Rivero,[27] operations began in 1586, and in that and the following year gold *escudos* were coined, although in those years we know only of silver sent from Seville.

Professor Hamilton gives the following list of royal orders to the House of Trade for bullion to be sent to Segovia:

Date	Marks of silver	Date	Marks of silver
Nov. 2, 1585	80,000	Dec. 17, 1588	100,000
Dec. 8, 1586	35,000	May 3, 1589	50,000
Dec. 4, 1587	100,000	Feb. 29, 1590	100,000

26 *Ibidem*, p. 27, note. 2.

27 *El ingenio de la moneda de Segovia*, in « Revista de Archivos, Bibliotecas y Museos », XXII (1918).

The are some references in the manuscripts to other royal orders wich are as follows: [28] January 31st, 1590, for 100,000 marks. I assume this is the same as that dated February 29th in the Hamilton table. The processing of royal orders and royal « *asientos* » often made them appear with two dates, the later being usually that of the final royal approval or confirmation. It seems that the order was not completely executed, since Seville made two deliveries, one of 30,821 marks, the other of 45,739. Incidentally, in Segovia their weights were 30,838 and 45,719 marks respectively.

There is another royal order of that same year 1590, dated October 24. No quantity is specified, but it seems to have applied to the King's treasure that had arrived in two ships at the port of Viana in Portugal, in August.[29] They carried for the King about 515 million *maravedíes* in silver and 33,300,000 in gold and, all, or almost all, seems to have been taken from Viana to Segovia.

In 1591 all the gold and more than 487 million *maravedíes* in silver that had arrived that year in Portuguese and Spanish ports for the King, were delivered to the new Segovian mint. On the other hand, in 1592 only a litle more than 4,500,000 mrs. seem to have been delivered.

There are three royal orders [30] in the period 1596-99. On November 16, 1596, for 200,000 *ducats* (75,000,000 *mrs*); on March 20, 1598, for another 200,000 *ducats;* as on other occasions, on executing the order of 1596 there were differences between the amount the House of Trade claimed to have sent (72,565,569 *mrs.*) and the amount that the new mint said it had received (72,305,467 *mrs.*). Finally, in 1599, the House of Trade sent 150,644,301 *mrs.* to the new Segovian mint.

The general Treasury in Madrid seems in some years to have received all the money coined in the new mint for the account of the King and in other years only part of it, probably because some payments were ordered to be made in Segovia itself; finally, in certain years the entries for coins coming from Segovia are together with money originating somewhere else. The figures are as follows: [31]

Years	Receipts from Segovia	Years	Receipts from Segovia
1586	163,157,432 *mrs*	1590	142,875,000 *mrs*
1587	163,812,000 »	1591	119,527,000 »
1589	114,375,000 »	1594	22,491,000 »

Only in 1586 and 1589 do the amounts received check approximately with the amounts of previous royal orders.

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28 Archivo de Indias - Seville - Contaduría, L^{os} 330, 335.

29 CHAUNU, H. et P., *Séville et l'Atlantique*, III, 464.

30 Archivo de Indias - Seville - Contaduría, L^{o} 335. According to J. SIGÜENZA, *Historia de la Orden de San Jerónimo*, the new mint was inactive in 1595.

31 A. DE SIMANCAS, *Contaduría Mayor de Cuentas*, 2ª Epoca, L^{os} 106, 107, 124, 138, 148, 156.

The King's treasure sold and coined.

We can estimate the value of the King's treasure sold by auction only for four years. In one case, 1580, the value in *maravedíes* corresponds to sales executed to the end of December. The value of the metals received that year, and intended to be sold, had been estimated at 652,063,422 *mrs.*, but part of them had not yet been sold. In other years there were no auctions, or, as in 1576, only part of the treasure, its value impossible to estimate, was auctioned, and another was shipped off after an estimate of its value was made.

The value of the sales and their equivalent number of *reales* are given below. Since the buyers were thought to have made a modest profit, the equivalence in *reales* must be close to the amounts actually coined, especially since gold usually made up a small percentage of the King's treasure. It seems that the metals were taken to the Seville mint, probably because the House of Trade was supposed to supervise the coinage.

TABLE X

VALUE OF ROYAL TREASURE AUCTIONED AND COINED [32]

Years	*Maravedíes*	*Reales*	Years	*Maravedíes*	*Reales*
1579	538,881,842	15,849,465	1584	696,192,945	20,476,263
1580	628,020,811	18,471,200	1585	834,614,662	24,547,519

Relative importance of the various mints

The concentration of most of the coinage in Seville, Segovia and Toledo is explained by the fact that the first city was the place of entry of the precious metals, and the most populous and rich in the kingdom, and had the monopoly of trade with the Americas. The other two cities were near the capital, that had become in the last quarter of the century the centre for the numerous financial deals of the Crown. On the other hand, Burgos, once very active in trade with the Low Countries; and Valladolid, former seat of the principal government agencies, and sometime seat of the court, which was located near Medina where the great international fairs had been held, had lost much of their former importance.

Metals imported in proportion to metals coined.

It is interesting to compare the value of precious metals coined for the account of private persons in the six principal mints with the value of the same metals registered in the Indies and received by private persons

[32] A. DE SIMANCAS, *Contaduría Generales*, L^{os} 3056 and 3057.

in Spain in the same periods. But first, a word about Castilian silver production after seigniorage was established. Between 1566 and 1572 the chief silver mine in the peninsula, Guadalcanal, which accounted for most of the metal extracted, produced little and before the middle of 1576 it was inactive. In the period 1571-76 it smelted 29,179 marks,[33] about 145,695 *pesos de minas*. Guadalcanal and several other mines shipped to Seville [34] in the period 1572-76 some 77,528,277 mrs. worth of silver, which almost certainly were coined in the Seville mint, their equivalent in *pesos de minas* being about 172,285. Of that total, 72,102,300 mrs. were received in the House of Trade from September 15, 1572 to November 7, 1575, which were equivalent to 160,227 *pesos de minas*. Almost all were royal property and exempted from seigniorage. Since Castilian silver production was low in this period, and lower in the following years, the precious metals coined must have come frome America.

I have chosen for Table IX the years 1571, 1586 and 1591 as the beginning of the three five-year periods, simply because the periods comprise most of the data available. The metals coined in those years could not have been exactly the same as, according to Hamilton, had arrived in the same periods. Although there was a marked tendency, especially among private persons, to coin the bullion as soon as they took possession of it, the late arrivals of the fleets, and the time that elapsed between the arrivals and the delivery, must have meant that metals received in certain years could not have been coined until the next. In spite of this, years when practically nothing arrived for private persons, as 1589 and 1594, and when receipts were a record, as 1595, made a corresponding showing in the figures for coinage.

Theoretically, the value of coinage, especially in the last two decades of the century, should have been considerably lower than the value of arrivals. There were several reasons for this: 1) in some years fairly large quantities of coined silver came from America (no gold was coined there); in 1593 the remittances of Lima, the chief contributor to the Royal Exchequer, to the King, were 23% in coins.[35] It was, as far as I know, the record year, and I do not know what the situation was as far as private remittances were concerned, but undoubtedly, part of them arrived as coin. 2) Some years a part of the metals that had arrived for private persons

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[33] GONZÁLEZ, T., *Noticia histórica documentada de las célebres minas de Guadalcanal* (Madrid 1831), 2 vols., II, 582, 3.

[34] A. DE SIMANCAS, *Contaduría Mayor de Cuentas*, 2ª Epoca, Lº 382.

[35] ULLOA, M., *La Hacienda Real de Castilla en el reinado de Felipe II* (Rome, 1963), p. 492. In 1596 Seigniorage at the Potosí (Peru) mint, active since 1573, amounted to 21.433 *pesos ensayados*; it was collected at the rate of one *real* per mark, so that approximately 283,675 marks, some 19 million *reales* were coined. (A. de Indias Seville - Contaduría, Lº 1810).

went into the Royal Treasury, since high officials succeeded in making more or less forced sales of annuities to their owners. 3) Much metal was also used for non monetary purposes.

According to Professor Hamilton,[36] in the same three five-year periods shown in Table IX, the values of private treasure received, in *pesos de minas* of 450 *maravedies,* were as follows: 8,607,948 in 1571-75; 15,789,418 in 1586-90, and 25,161,514 in 1591-95. These figures and those in the table call for some remarks, and some comments.

Remarks

1) The figures for the coined metals in Table IX were arrived at assuming that silver was the only metal coined, therefore they are smaller than the actual, since gold paid less seigniorage and vellon seigniorage was unimportant. In the five year period 1571-75 we can calculate, in four of the six mints, the considerable difference between the actual value of metals coined and the value shown on Table IX. In the Seville mint actual value was equivalent to 113,024,501 *reales,* as against 100,832,573, or a 12% difference. In Segovia actual value was 857,686 *reales*, as against 713,984, a 20.1% difference. In Toledo actual value was 24,351,025 as against 18,589,841, a 31% difference. Neglecting a similar correction in the case of Cuenca, where it is possible but would not significantly change the results we are after, and in the cases of Valladolid and Burgos, where we do not have all the data, the value of coinage in the period 1571-75, in *pesos de minas,* would have been 10,462,897. In the five year period 1586-90, applying the same type of correction exclusively to the Seville mint in the four years 1587-90, and to the Segovia mint, the value of coinage would have been 14,875,375 *pesos de minas.* This was a period in which the Toledo mint was very active, and it usually coined a large proportion of gold, but the only year in which we have the quantities of the two metals coined is 1586, so that no correction was applied.

2) No figures from the Granada (**) or la Coruña mints were included, and we are not completely sure that the mints in the table were completely inactive in certain years for which we have no data, as for example, Segovia in 1589, etc.; nor that the new mint in this city did not coin private metals.

3) The metals coined tended to increase in value: a mark of silver 93.06% fine yelded 67 *reales,* or 2278 mrs.; a mark of registered silver was usually estimated to be worth 5 « *pesos de minas* », or 2250 mrs.

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[36] *Ibid.*, p. 34.

** I have not been able to work on the crude data found, but to give an idea of the importance of its coinage I might mention that in 1595, the year of its maximum activity during the reign, the Granada mint coined nearly 150,000 marks of silver, or about 30% of the weight of silver coined in the Seville mint that same year.

4) As regards the figures for the registered metals received, it should be borne in mind that once weighed and assayed in Seville the resulting values were usually lower than those registered in America, this was especially true of Mexican silver.

Numbers 1 and 2 tended to make the figures for coined precious metals smaller than they actually were. Number 3, to make them larger in relation to the figures for metals received, while number 4 tended to exaggerate the value of American treasure imported.

Comments:

On the subject of smuggled bullion Professor Hamilton reminded his readers that,[37] « unregistered bullion accepted by the mint was purged of all guilt », thus « the percentage of smuggled treasure coined probably exceeded that of registered specie ». In view of the similarity, in some periods like 1571-75 and 1586-90, between metals received and metals coined, plus the high proportion of gold coined to total coinage, it seems certain that smuggling must have been considerably more extensive than most of us had thought. Its value was roughly equivalent to American coined silver received, plus gold and silver used for non-monetary purposes. I assume that little bullion was exported by private persons.

A comparison of coinage in Castile and France.

To help place coinage of precious metals in Castile in its historical context a comparison with coinage of the same metals in the neighbouring kingdom of France is useful. France had about twice the population and far more real wealth. Thanks to the work of F.C. Spooner we are well informed about the French situation. His figures are in the unit of account called « *livre tournois* », but he gives its equivalences in both the French and Spanish coins at various dates and places.

According to Spooner,[38] the Spanish *real* had the following values in French *sous* and *deniers*:

October 20, 1567	4s 4d	May 31, 1575	5s
August 11, 1568	4s 2d	1585-90	5s to 5s 3d
May 26, 1573	4s 6d	1596	5s 6d

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37 *Ibid.*, p. 39.

38 *L'Economie Mondiale et les Frappes Monétaires en France, 1439-1680* (Paris 1956), pp. 164 to 177. France experienced great monetary disorder, especially in the period 1572-77. P. Vilar says that in Lyon the Spanish *escudo* and the Spanish *real*, with official values of 58 and 5 *sous* respectively, were quoted in the black market at 100 and at 12 sous. (*Oro y Moneda en la Historia. 1450-1920*, Barcelona, 1972, p. 250).

To simplify matters, I shall estimate its approximate value at 4s 6d in the period 1571-75, and at 5s3d in 1586-95, the years in which I intend to establish the comparison.

Following Spooner,[39] the value of the gold and silver coined in the mints of France, in *livre tournois,* is shown in Table XI under A, whereas the same metals, coined in Castile for private persons in the same years, their value taken from Table IX, and converted to *livre tournois,* is shown under B. I have disregarded coinage for the account of the Spanish King, since we have only the complete data for the Seville mint in 1571-75. I have only the following comment to make about it.

TABLE XI

Years	A	B
1571	373,807	5,316,231
1572	386,051	2,611,039
1573	659,101	7,545,650
1574	485,442	3,999,275
1575	2,258,790	7,614,357
1586	2,142,003	7,264,299
1587	5,259,193	6,217,212
1588	3,076,225	14,739,277
1589	2,165,327	2,589,036
1590	1,932,754	17,892,028
1591	2,183,856	11,675,060
1592	1,206,122	10,404,678
1593	444,777	13,181,322
1594	865,593	821,058
1595	589,974	26,707,039

Coinage for the account of the King in the Seville mint in the period 1571-75 amounted to 42,608,315 *reales,* equivalent to 9,586,871 *livres tournois,* or more than double the total coinage in France in the same period (4,163,191 l.t.).

Gold, silver and inflation.

Four hundred years ago some began to see a direct cause and effect relationship between the influx of gold and silver from America and the first European inflation of modern times. Spanish and Spanish-American silver coins could in fact be found all over the world, in the sixteenth century,

[39] *Ibid.*, pp. 525-6.

but they were not abundant in Spain itself, so whatever correlation existed between the extensive coinage and the price revolution in Spain must have been indirect, through the mass and the speed of circulation of various means of payment, metallic and non-metallic.

Among the prices, the one that rose highest was the price of wheat, the most important commodity of the age. The place where the long-term rate of increase was greatest was Seville where the « revolution » is said to have started. As far as wheat is concerned, the supply situation, which is sometimes forgotten, should be borne in mind. I intend to touch on it briefly here.

It is possible to follow that situation in Seville and the region from which it drew most of its supplies. The region was made up of six dioceses in the southern part of the kingdom; the archbishopric of Seville, and the bishoprics of Cordova, Cadiz, Bajadoz, Malaga and Jaen, the last two less important for the Seville market than the first four; the region is marked approximately on the map. Although we do not know enough about its population, it seems certain that it grew in the course of the century, at least until the eighties, and consequently, potential demand for wheat also grew. The difficulties of land transportation made the various Iberian geographic regions quite independent of each other. As for wheat imports by sea, they do not seem to have been a major factor in the formation of the average yearly price: few Dutch ships, the chief carriers, arrived in 1596; they had been embargoed the previous year; whereas 1598 was a year of numerous Dutch arrivals,[40] and yet, average prices in the last year were about twice those of the previous one. The consequence of geography and politics was to make of crop size, in the short term, an almost independent variable determining price oscillations.

« Tercias » and tithes.

In the Archives of Simancas there is a certain amount of data about the collection in kind of « *tercias* » and tithes in six bishoprics. « *Tercias* » were certain fractions of the ecclesiastical tithes that the King of Castile had the privilege of collecting; they were proportional to crop size. Other records include both tithes and land rent, so that they are not as representative as those of « *tercias* », but since land rent is relatively unimportant in most years tithes and rent are good enough to show what the trend was. As a sample of how the figures look I have tabulated those for Seville and Cordova, the two biggest producers, together with the average yearly prices of wheat in the city of Seville, as calculated by Hamilton.

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[40] IJZERMANN, J.W., *Amsterdamsche Bevrachtings contracten, 1591-1602*, in « Economish-Historisch Jaarboek », 1931, Zeventiende Deel, pp. 164-204.

[41] *Ibid.*, pp. 335-9.

TERCIAS[42] AND TITHES[43] (IN *FANEGAS* OF 55 *LITERS* EACH), AND PRICES OF WHEAT (IN *MARAVEDIES* PER *FANEGA*)

Years	*Tercias*	Tithes	%	Prices	Years	*Tercias*	Tithes	%
1542	11,504							
1543	13,161				1543	14,703		
1544	8,707							
1545	3,719							
1546	12,238							
1550	18,045							
1551	12,186							
1553	18,548							
1554				188				
1557	9,204			561				
1558	18,043			210.5				
1559	11,967			187				
1560	17,601							
1561	2,164			306				
1562				561				
1568	18,612							
					1574		31,751	173
1575		45,476	135		1575		24,177	132
1576		41,695	124		1576		22,056	120
1577		45,660	136					
1579	16,899				1579	19,389		
1580	12,384				1580	7,959	14,073	77
1581	10,262				1581	5,986	10,231	56
1582	11,071				1582	8,362	15,467	84.5
1583	14,120				1583	11,189	20,343	111
1584	8,557	21,651	64	1,003	1584	4,155	5,371	29.2
1585	22,039	60,377	180	331.5	1585		27,919	152
1586		34,162	101		1586		21,621	118
1587		27,020	80	467.5	1587		13,201	72
1588		27,301	81	735.3	1588		15,107	82.5
1589		16,866	50	1,119.9	1590	18,883		
1591				799	1591	8,767		
1592		37,847	112	601	1592	12,532		
1593		26,063	77	879	1593	7,832		
1594		36,702	109	604.5	1594	13,165		
1596				529	1595	15,042		
1597		30,687	91					
1598		23,447	69	1,041.3	1598		15,632	85
1599		30,230	90	986	1599		15,117	82.5
					1600		23,556	129

[42] A. DE SIMANCAS, *Expedientes de Hacienda*, L^os 86, 122, 167, 168, 169, 171, 186.
[43] A. DE SIMANCAS, *Patronato Eclesiástico*, L^os 6, 136, 137.

Besides I have estimated for each diocese what the « average » crop was, based on all the years for which I had the information on tithes and then estimated what percentage of that average crop represented the crop of each year.

Correlation Coefficient

If for the years 1584, 85, 88, 89, 92, 93, 94, 98, 99, we take the figures for wheat tithes collected in kind in the archbishopric of Seville (43) exclusively, and the average prices of wheat in that city, as calculated by Hamilton, and apply to both sets of figures one of the statistical methods now in use, we find that their correlation coefficient is better than —0.90, which seems to reinforce the belief that local wheat production was acting, in that period, as some sort of independent variable determining price.

It is necessary to remind the reader that besides the bishops and the Crown several institutions and persons colected *tercias* and tithes in this region. Other chief beneficiaries were the Military Orders of Saint Iago and Calatrava as well as certain monasteries, and nobles.

The figures for three of the four other bishoprics, (the exception is Malaga), show the same tendency, with slight variations. In the last quarter of the century there is the exceptionally bad year of 1584, followed by the exceptionally good year of 1585, but excluding these two the trend seems quite clear.

In addition to these quantitative data there is the fact that tithes were exacted on maize (Indian corn) in the diocese of Malaga,[44] which is a sign that it had acquired a certain commercial importance, in the famine year of 1584. By 1590 the usual direction of the grain trade, from Castile to Valencia, was reversed; besides, the custom houses of the Eastern frontiers of Castile were told that duties applied also to maize.[45]

The conclusion is that in the long term, at least until 1598, insufficient production of grain was a factor of prime importance in accounting for the rise in prices.

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[44] A. DE SIMANCAS, *Patronato Eclesiástico*, L° 135.
[45] A. DE SIMANCAS, *Contadurías Generales*, L° 2674.