Rascie and the Florentine cloth industry during the sixteenth century

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The *rascie* in which the Brandolini firm specialized played a central part in the fortunes of the Florentine cloth industry during the sixteenth century. Their manufacture had been introduced in 1488. They were a high quality cloth made from the best Spanish wool, a 'new drapery' belonging to the category of cloth serge, and they constituted the main Italian contribution to the diversification of wool textile production, which was such a feature of the period. With 'rashes of the Flowers people' as they were picturesquely called in England (and to a lesser extent Milanese *stametti*, another 'new drapery') the Italian industry for the first time succeeded in carving out a major market north of the Alps.[1]

I

We may begin the story with the very severe crisis experienced by the Florentine industry between 1526 and 1530 when it was brought almost to a standstill by plague and war, culminating in a year-long siege of the

[1] Despite the wealth of available archival material, particularly in the account books of clothing firms, the Florentine cloth industry of the sixteenth century has not been much studied. The principal historian of the industry in the preceding centuries, Hoshino, did not live to carry the story further. Much the most enlightening contribution is Dini, 'Aspetti del commercio', based mainly on industrial and commercial accounts, which ranges more widely than its title suggests, but which does not go beyond c. 1540. The study of P. Malanima, *Decadenza di un'economia*, provides a useful, if generalized, context, more especially on the period of decline from the last decades of the century, although his account of the decline, and the way he uses the evidence to support it, are, as will be seen, open in places to criticism. Reference is made to the Brandolini firm by R. Goldthwaite (see his accompanying article), to whom I am grateful for arousing my interest in this subject.

city. According to the Venetian ambassador Suriano, cloth production was reduced to 'pochissimi', testimony confirmed by the letters of merchants, who write of the wool-shops being closed, and who anticipate a dearth of supply perhaps for years, 'perché siamo dalla peste in modo destrutti et dalle guerre in modo inpediti che ci manchano la lana, li danari, gl'uomini da fargli.' As well as from its sources of raw materials the industry was cut off from its major markets in Rome and Naples. At the same time, Suriano states that, as a result of the plague and the consequent depletion of the labour force, costs had risen: 'tutti i lavori sono cresciuti de precio, perché non se attrovano salvo pochi opifici, e quelli etiam si fanno pagare molto più del solito'. Suriano's predecessor, Foscari, also emphasizes the severity of the crisis experienced by the city.[2]

The crisis of 1526-30 brought to an end a long phase of expansion which had seen output double from the low levels of the early fifteenth century, when it ran at around 10.000 pieces. There is good evidence that the industry was producing in the region of 20,000 pieces c.1520.[3] Of these, 4-5,000 were made by the San Martino branch of the industry, which specialized in superfine broad cloths made from English wool - famous 'per tutto il mondo' in the words of a contemporary clothier - while the rest were middling quality cloths from Spanish-made wool by the second of the two branches into which the industry was divided, the Garbo.[4] The crisis ushered in a prolonged period during which levels of activity in the industry were low. Although the production figures are few and problematic, they strongly suggest that the value of output in real terms did not recover its c.1520 level until the end of the 1550s.

[2] The reports of Foscari and Suriano are printed in Segarizzi, *Relazioni,* vol. 3, pt. 1. The relevant passages are on pp. 23-26 (Foscari) and pp. 112-3 and 119 (Suriano). The letter, of September 1527, is cited by Dini, 'Aspetti del commercio', p. 267. Another merchant found the industry at a standstill in October 1526, writing: 'ma per tanta la peste stata a Firenze sino ad ora, non v'è statto ordine, ché no' v'è boteghe aperte', advising, '..se vi trovate panni di Firenze a botega, sapiateli ben vendere, ché no' v'è per venire così presto' (Vacchelli, 'Operatore economico', p. 565).

[3] For these and all subsequent production statistics mentioned in the text, the reader is referred to appendix one, where the available material is discussed. Production levels in the early fifteenth century are discussed by Hoshino, *Arte della lana*, pp. 203-206, and Franceschi, '*Oltre il 'Tumulto'*, pp. 12-27.

[4] On the origin of the distinction in the early fifteenth century, see Hoshino, *Arte della lana*, pp. 206-11.

Normal output of the Garbo, still essentially of the established line of production, was assumed by a clothier of the branch c.1540 to be 9,500 pieces. In 1567 the line was stated by another clothier to be 'el 7/8 abandonata.' According to both these sources the San Martino branch had largely ceased operations.[5] Had the industry continued to rely on these traditional lines it would have been faced with extinction.

II

The revival of the industry's fortunes in the later fifteenth century had been centred in the Garbo branch; and it had been due very largely to the increasing success, after the Ottoman conquest of Constantinople in 1456, of its 'panni di Levante' on the Levant market, described in an Arte document of 1487 as 'lo stomaco a nostri panni garbi'.[6] In good years, during the 1470s, exports to the Levant reached 7-8,000 pieces, probably approaching half the output of the branch.[7] The counterpart to these exports was the import of raw Iranian silk for the growing Florentine silk industry, which also had significant exports to the Levant. The prosperity of the Florentine merchant community, numbering 50-60 and largely concentrated in Pera and Bursa, the main *entrepôt* of the silk trade, depended upon this dual trade. The letters of Giovanni Maringhi in Pera to two Florentine merchants for whom he acted as agent give a glimpse of how lively the trade was in the first decade of the new century.[8]

It was the decline in the Levant market that was the main cause of the difficulties in which the Florentine industry found itself in the period after

[5] Spallanzani, '"Modo da crescere.."', p. 529 (memo. to the Grand Duke on how the industry might be revived); and Archivio di Stato, Florence (hereafter ASF), Miscellanea Medicea 27, part III, chaps. 1010-1017 (the first of two reports of 1567 by unnamed clothiers to the authorities of the Arte della lana, the corporate body of the industry). Both clothiers refer to the shops of the San Martino branch being 'serrate'.

[6] Cited by Hoshino, *Arte della Lana*, p. 243. Hoshino refers to the 'garbizzazione' of the industry in response to this new market situation.

[7] The figures are given by the diarist, Benedetto Dei, himself a former Levant merchant, cited by Hoshino, *Arte della lana*, p. 236.

[8] On the importance of the Levant market see Hoshino, *Arte della Lana*, pp. 268-75; *idem*, 'Commercio fiorentino', and 'Alcuni aspetti'; Dini, 'Aspetti del commercio'; Inalcik, *Economic and social history*, pp. 230-42; Richards, *Florentine merchants* (letters of Maringhi).

1530. It has been claimed that this decline only began later, after the mid-sixteenth century, and reached serious proportions only from the mid-seventies.[9] But the evidence that it took place essentially in the decades after 1530, indeed that it may already have begun before the crisis of 1526-30, seems conclusive.[10] Sales in the Levant, while still important, were said in an Arte report of 1544 to have 'da qualche tempo in qua diminuito'.[11] Whereas it absorbed a minimum of 34-42 per cent of the output of three Florentine cloth firms operating in the period 1518-32, the percentage had fallen to 23 and 13 for two firms operating between 1534 and 1544.[12] Trade via Ragusa, the main conduit of Florentine exports, fell away drastically from the high levels typical of the first decades of the century after 1531, when 2,293 Florentine cloths were registered as passing through

[9] Malanima, *Decadenza di un'economia,* pp. 256-7 (who mis-cites Foscari's figure duc. 10,000 as the value of exports to the Levant as 10,000 pieces: Segarizzi. *Relazioni,* 3, pt. 1, pp. 25-6) opines that Florentine exports to the market probably reached their peak towards the middle of the century, claiming that at this time 'la produzione laniera veniva assorbita in prevalenza dal Levante'. In support of this view - and apparently his only source for it - he cites the XVIIIth century historian Galluzzi - surprizingly as the latter says nothing of the kind. Writing of the period before 1550, Galluzzi states, on the contrary, that various factors 'aveano indebolito il traffico de' Fiorentini in Levante' and continues: 'sempre più crebbe il languore di quel commercio' (I, pp. 155-6). Later (II, pp. 382-3) he refers 'la quasi totale estinzione di quel commercio' in the following years. See also note 14. Malanima goes on to state that the trade began to decline after the mid-century, but he implies that the decline was gradual, claiming that the Levant still remained a 'cliente privilegiato' in the early seventies. Hoshino, 'Messina e l'arte della lana', p. 434, refers in passing to the 'la perdita del mercato levantino' in the seventies, but does not discuss the matter further; and it is not clear that he considered the long-term decline of the Levant trade to have begun during this decade.
[10] The arguments put forward by Dini, 'Aspetti del commercio' (which Malanima unaccountably fails to cite), particularly pp. 233-42 and 264-70, for the earlier date - basically that proposed by Galluzzi - are supported by other evidence, some of which is cited below. More generally, that the market was in decline from c. 1530 can be inferred from the failure of the Garbo branch to recover from the crisis and the continued decline of its traditional line of production during the following decades, as was shown above - a decline also noted by Galluzzi (I, p. 156). As will be seen (p. 15) there is evidence of a revival of Florentine exports to the Levant around 1570, which was short-lived and and not of major proportions.
[11] Masi, *Statuti,* p. 151.
[12] Dini, 'Aspetti del commercio', pp. 233-41. An increasing proportion of cloth was bought in Florence by Florentine merchants, some of which was certainly destined for the Levant. The decline in the share of the latter market may therefore be somewhat overstated.
[13] Tadiç, 'Le commerce en Dalmatie', p. 249. If he is correct in stating that the figure refers to goods exported to the Turkish possessions through the port by Ragusan merchants, i.e. that it excludes cloths exported by Florentine merchants, the volume must have been significantly higher. The total figure for cloths was 31,117 of which 26,409 were kerseys.

the port.[13] By the 1550s the Florentine merchant community in Constantinople had been reduced to a mere handful.[14] Already in 1531, because of the decline in trade, the established dues were no longer sufficient to cover the expenses of the Florentine consulate.[15]

A major cause of the decline in Florentine exports to the Levant appears to have been the disruption of the trade in Iranian silk.[16] Bursa never recovered from the embargo imposed on the trade by Selim I between 1514 and 1520; and, although the chronology is unclear, it was superseded by Aleppo as the main *entrepôt*.[17]

The profitability of the Florentine business in the Levant was heavily dependent on the import of raw silk for the Florentine industry.[18] The shift of the trade to Aleppo left the Florentines, who had no established presence there - and whose interests in the Levant were in any case recent and, in respect of the city's overall economy, secondary to those in the West - at a disadvantage compared with the Venetians, of whom the opposite was true in all these respects.[19] This appears to have been a

On the basis of customs receipts, Tadiç estimates the aggregate value of the trade, of which cloth was much the most important component, as falling from *duc.* 400,000 in 1531 to 130,000 in 1533, thereafter normally fluctuating between 160-200,000 during the remainder of the century. He does not discuss the period before 1531; but from the graph of these revenues given by Carter, *Dubrovnik*, pp. 396-7, the volume of trade rose to a peak in that year, from a level c.1500 that was much higher than that of the decades after 1531.

[14] Galluzzi, *Istoria*, I, p. 207 and II, p. 187, states that their number had fallen to 15 by 1551 and only one by 1556. We do not know his source.

[15] Dini, 'Aspetti del commercio', p. 268.

[16] *Ibid.*, pp. 264-5, and 269.

[17] Inalcik, *Social and economic history*, p. 226, tabulates the revenues from the raw silk tax in Bursa, 1487-1648. They fell from 7.325 million *aksa* in 1512/3 to 2.1 in 1521, when the embargo was lifted, fluctuating between 2.9 and 4.55 during the remainder of the century. He does not discuss when Aleppo became the main emporium for Iranian silk exports, simply stating (p. 246) that this was the case by 1600.

[18] Dini, 'Aspetti del commercio', pp. 266-7, and Hoshino, 'Commercio fiorentino' pp. 117-8.

[19] The point was made forcibly by Filippo Sassetti, the writer and merchant, in his *Ragionamento* of 1577, pp. 181-3. The concentration of Florence's Levant trade in the Costantinople area emerges clearly from a large sample of insurance policies taken out before a Florentine notary in 1525-6: 84.52 per cent by value of those relating to the Levant were in respect of shipments to the capital or to Balkan ports serving it. Dini, 'Aspetti', p. 226. According to Hoshino, *Arte della lana*, p. 268, Florentine exports to Alexandria and the Syrian ports in the late fifteenth century were inconsiderable, although there was some demand for San Martino cloth.

major reason why during the three decades after 1530 the Venetian cloth industry, a comparative newcomer on the international scene, progressively superseded the Florentine as the main supplier of the Levant market. Its output of middling fine cloth, destined almost exclusively for the market - particularly of the *panni da 60,* the type which according to a later Venetian report had 'tolto l'inviamento con la tal sorte di panni a Fiorenza..' - increased from an average of 1,916 pieces in 1530-9, to 4,547 in 1540-9, to 10,119 in 1550-9, during which period its total production averaged 13,242 pieces.[20] Probably as a result of this shift in the pattern of trade, the Florentine industry seems moreover to have ceased using Iranian silk after about 1520, turning almost exclusively to Sicily and Calabria as its source of supply.[21]

In this situation the steep rise in the price of Garbo cloth during the period - over 40 per cent for the standard *panno di Levante* between 1520 and 1540 - must have greatly added to the difficulties of Florentine exporters.[22] Whether or not this made it uncompetitive with Venetian cloth, as a Florentine clothier later maintained, is unclear, as we have no evidence on Venetian prices.[23] The main cause of the increase was the contemporary rise - approaching 50 per cent - in the price of Castilian wool, something which must also have affected the Venetian industry.[24]

[20] Sella, 'L'economia', p. 633. Venice, Biblioteca Correr, Mariegola 129, Lanificio, f. 199r. (report of 1572). *Panni da 60* were of 60 porters, perhaps somewhat finer than the standard Florentine *panni di Levante,* which were of 54. For their popularity see Tucci, *Lettres d'un marchand vénitien,* passim. Sella, 'Mouvements longs', p. 31, prints the annual production statistics of the Venetian industry from 1513 to 1713, a unique series.
[21] Dini, 'Industria serica', pp. 115-6, estimates at one-third the proportion of Levant silk employed by the industry in the late fifteenth century, noting it virtual disappearance from the market by about 1520. See also Morelli, *Seta fiorentina,* pp. 44-5.
[22] Dini, 'Aspetti del commercio', pp. 239 and 270.
[23] See note 5, report of 1567.
[24] The average price paid by the Medici firm for Castilian wool 1530-34 was fl. 11.2 per 100 lb; by the Salviati 1539-42, 16.4. de Roover, 'Florentine firm', p. 113; Scuola Normale Superiore, Pisa, archivio Salviati (hereafter SNSP, Salviati), 969. The wool seems to have been of the same quality, although it it is only possible to make a precise comparison in the case of one denomination: the Medici paid fl. 10.5 for 'Serena' wool, the Salviati 17.5. See also Dini, p. 239: the average paid by the Salviati 1517-21 for all wools (but mainly Spanish) was fl. 10.7. It should be recalled however that, according to Suriano (see p. 1), labour costs also increased in Florence after 1530 as a result of a shortage of labour following the plague, from which Venice seems to have escaped.

It is likely, however, that the profit margins of Florentine clothiers came under pressure; and it has been argued that, given the adverse structural change in the Levant market, they sought a way out by developing a new and more expensive line, employing apparently the same wool, but with a much higher value-added, and addressed to a new market - in a word the *rascia*, which is the subject of this essay.[25]

III

The Florentine industry's other traditional market was central and southern Italy. In the middle decades of the fifteenth century the San Martino had a virtual monopoly of the top end of the market in Rome, the Papal States and Naples, upon which in turn it was overwhelmingly dependant, having only limited sales elsewhere, in Sicily and Spain. For the Garbo this was its only market apart from the Levant. Annual exports of Florentine cloth to Rome and the Papal States have been estimated at around 1700 pieces during the third quarter of the century. Sales in the kingdom of Naples were probably of comparable importance, although no figures are available.[26] Little is known about the evolution of these markets after c.1480. It is clear that they continued to be of major

[25] The Florentine industry 'cercò nuovi sbocchi con prodotti sempre più fini': Dini, 'Aspetti del commercio', p. 270. In these two paragraphs, and in the last point, I have basically followed his analysis, enlarging upon it. Some denominations of Castilian wool in the Medici accounts of 1531-34 (no more expensive than the others) appear in those of the Barducci 1559-61 (ASF, Serristori, famiglia, 1322) and of the Brandolini at a price which makes it clear that they were used for *rascie*. That the wool employed for *rascie* was the top quality is clear from the letters of a Spanish wool merchant operating in Florence, Diego Suarez: Ruiz Martin, *Lettres marchandes*, particularly no. 345 of 12 April 1584. That the Medici and other clothiers should have employed such wools in the manufacture of *panni di garbo*, a middling fine cloth, is surprising, although the quality of Castilian wools certainly improved in the course of the sixteenth century.

[26] See Esch 'Importe in das Rom', pp. 406-7. 40% of the cloths imported into Rome were *panni di grana*, top quality San Martino cloth. The remaining 60% would have included both San Martino and Garbo cloth. The respective proportions of the two exported to Rome and Naples (mainly to the latter) by the Cambini firm 1453-80 were 60% and 40%. We are unlikely to be far wrong if we estimate on the basis of these proportions the total export of San Martino cloth to these markets at about 2-3000 pieces, not all of which would have been superfine, however. Hoshino, *Arte della lana*, pp. 244-64, has a detailed discussion of these central and southern Italian markets, which does not reach beyond 1480.

importance in the 1520s. The serious impact on Florentine trade of the events of 1526-8 in Rome and Naples described by Suriano leaves no doubt about this.[27] It also seems clear, from the descriptions of the parlous state of the San Martino branch of the industry in the 1530s and later, that sales of superfine cloth did not recover from the crisis. Difficulties in the supply of English wool, and the steep increase in its price from already high levels during this period were cited as the main cause of the difficulties of the San Martino clothiers, who probably suffered in any case, like other European superfine producers, from the adverse trend in demand resulting from the increasing shift in consumption from wool to silk among the higher ranks of society.[28] Sales of Garbo cloth probably stood up better.[29]

Before about 1540 there is no evidence that the market for Florentine cloth extended north of the Alps. Indeed it seems barely to have extended north of the Appenines, where there were numerous industries catering for local consumers.[30] There was however the domestic market, both in Florence itself, a city of around 80,000 inhabitants c.1520, and in Tuscany more generally. It has been claimed that this market was of no account from the point of view of the Florentine industry, that it was almost exclusively export-geared.[31] This does not seem plausible. We know little about the domestic market. But we do know that, in the case of one firm at least (1524-7), it absorbed over a third of output.[32] From what is known, moreover, about the volume of exports to the Levant and central-southern Italy it does not seem likely that it was sufficient to account for the c.20,000 cloths produced by the industry during the early sixteenth century. Whatever its importance, domestic demand must also have been seriously affected by the crisis of 1526-30: it has been estimated that the population of the city fell by a quarter as a result of the plague, and it took several decades to recover.[33]

[27] Segarizzi, *Relazioni*, vol. 3, pt. 1, pp. 112-3.
[28] See the reports cited in note 5.
[29] 263 of the 324 cloths purchased by the Capponi company 1530-36 were destined for its Neapolitan branch: Dini, 'Aspetti del commercio', p. 238.
[30] Hoshino, *Arte della lana*, pp. 245-8.
[31] *Ibid.*, p. 238: 'non ebbe alcun peso'.
[32] The proportion sold retail by the Doni firm: Dini, 'Aspetti del commercio', p. 233.
[33] See Beloch, *Bevölkerungsgeschichte*, II, pp. 137-42, for the population of Florence in the sixteenth century.

IV

During the third quarter of the century the Florentine industry enjoyed a remarkable turn-around in its fortunes. Although, as is explained in the appendix, the production figures from the period that are always cited in evidence of this are not, as has been assumed, comparable to the figures cited above or to the later series from 1586, referring as they do to a notional rather than to actual output, they leave no doubt about this recovery. Between 1558 and 1561 the industry experienced an extraordinarily sharp boom, which, if the statistics are to be trusted, saw production double from the levels recorded during the fifties. Although, as a result of the disruptive effects of the 1552-58 war between Hapsburg and Valois, these levels may have been lower than those of the late forties, for which we have no evidence - the scale of the boom seems unlikely unless there had been some spare capacity in the industry - it is unlikely that any such difference was considerable.

Commenting on the previous year's figures, in a report of 1560 the Arte anticipated that unless labour shortages supervened 'in breve si supererà la maggior somma che abbia mai fatto questa Città...'[34] A year later, despite a stream of weavers coming into the city, the Arte was compelled to take measures to promote further immigration.[35] At the same time the number of new apprentice weavers registered by the Arte increased from an average of 30.5 in the period 1551-1558 to 134 in the three years 1559-61, peaking at 183 in the latter year. Over the period 1559-73 it averaged 96.5, with another peak of 163 in 1572, suggesting that the peak output of around 33,000 notional pieces attained during the initial boom was more or less maintained until the early seventies, when the Arte reported similar figures, the last in the series.[36]

[34] Report to the grand-ducal authorities cited by Galluzzi, *Istorie*, I, p. 383.

[35] An Arte regulation of March 1559 states: '..ogni giorno da diverse bande ci vengono nuovi tessitori..' In April 1560 the Arte relaxed, and in March 1561 ended, a ban on clothiers making loans of cash or looms to weavers to 'facilitare et dar' animo al venirci de manifattori, et maxime de tessitori per essercene mancamento'. ASF, Arte della lana, 16, fs. 383v, 368v, 380v.

[36] The apprentice registrations are in ASF, Arte della lana, 278-304. The years 1562, 1569 and 1570 are missing. Carmona, 'Economia toscana', p. 38, used this source to estimate the total number of apprentices, on what basis he does not say. It seems safer to take the annual figures. The registrations, which name the weavers taking on apprentices, show the very high proportion of immigrants in the labour force.

V

It is no exaggeration to say that this dramatic revival in the industry's fortunes was due almost entirely to the development in the Garbo branch of a new line of production, the *rascia fiorentina,* that exploited the growing demand in western Europe for a woollen dress material lighter than the traditional broad cloth, and enabled the industry for the first time to penetrate markets north of the Alps. The manufacture had been introduced by the Comune in 1488 as a measure of import substitution against *rascie di Schiavonia* - the term itself has been plausibly derived from the capital of the then kingdom of Serbia, Ráska - which were also popular elsewhere in Italy at the time.[37] Presumably the later Florentine product, which was made from the highest grades of Castilian wool, was a superfine version of this cloth, which from contemporary references seems to have been - surprisingly given its origin - a fairly high quality cloth.[38]

The early history of the manufacture remains obscure. There is little mention of it in the Arte records before the 1540s, when a flurry of regulatory activity began concerned more particularly with the cloth. It was then that production took off, as emerges clearly from the proportion of *rascie* in the output of a succession of cloth firms: only 'modest' in that of the two firms cited above operating in the period 1534-44; already 38/9 per cent in that of two firms in 1548-51, and 1549-53; 60/65 per cent in two of 1560-63 and 1562-4; nearly 80 in the output of the Brandolini firm 1580-89.[39] At the same time these firms also turned to the production of other *panni ricchi* as they were called, *panni larghi* and *accordellati,* at the expense of the old *panni di garbo,* confirming the opinion cited above that this line had largely gone out of production by the sixties. It may be inferred from this that if, as seems

[37] Hoshino, *Arte della lana,* pp. 236-7. Battaglia, S., *Grande dizionario,* p. 504, who however mistakenly qualifies *rascia* as 'grossolana'. According to Pasi, *Tarifa de pesi,* pp. 90-113, *passim,* it was exported from Venice to most of the cities of Lombardy and the Romagna. Tadiç, 'Commerce en Dalmatie', p. 242, cites figures of exports from Split to Venice in 1515-17, and again in 1580-3.

[38] From some of the citations in Battaglia, *Grande dizionario,* p. 504.

[39] Medici and Salviati firms (Dini, 'Aspetti del commercio', p. 240): Medici (calculated from Edler de Roover, *Glossary,* pp. 420-2), Salviati (SNSP, Salviati, 977); Barducci (ASF, Serristori, famiglia, 1322), Capponi (ASF, libri di commercio 124). The proportions are of pieces produced.

to have been the case, levels of activity in the industry as a whole continued to be low until the late 1550s despite the rise in the production of *rascie,* this was because the latter was not yet sufficient to outweigh the decline in that of *panni di garbo.* No overall breakdown of the industry's production is available before the 1590s, when it was estimated to comprise 50-60 per cent *panni ricchi,* of which about 80 per cent were probably *rascie,* the remainder consisting in another new and much cheaper cloth, the *perpignano.*[40] During the period under consideration production of the latter was still limited, and the proportion of *panni ricchi* was certainly much higher - probably more like 80 per cent.[41]

The initial impetus behind the production of *rascie* appears to have come from domestic demand. A cursory examination of the voluminous series of post mortem inventories which exist for the city shows that the cloth, which is rarely mentioned before that time, became increasingly popular during the forties. By about 1550 half the inventories detailing clothes mention it, and by 1570 most.[42] The incidence of its consumption extended geographically to other towns of the Grand Duchy such as Pisa and Prato, and socially to people in only middling circumstances, despite its cost. Benedetto Varchi, writing in the late forties, already describes the usual dress of the Florentines as 'una veste di saia o di rascia nera'.[43] *Rascia* was certainly exported before 1550. But from the evidence available this still seems to have been on a limited scale.[44]

VI

It is clear that the boom of 1558-61 was due to a break-through in exports, triggered probably by the peace of Câteau-Cambrésis in 1558,

[40] See appendix 1.

[41] 85/6 per cent of the output of the Barducci and Capponi firms cited above consisted in *panni ricchi,* and 99 and 88 per cent of that of the Brandolini in 1580/1 and 1584/5.

[42] None of 23 inventories detailing clothes mention *rascia,* 1538-42; five of 14, 1542-44; 10 of 18, 1550-52; 18 of 26, 1569-72. ASF, Pupilli. 2648, 2650, 2653, 2709.

[43] Varchi, *Storia fiorentina,* II, p. 123. According to Vecellio, writing in 1590 (*Habiti antichi,* p. 82) the normal dress of merchants 'per quasi tutta l'Italia' included a cloak of 'rascia fiorentina' or fine cloth.

[44] Dini, 'Aspetti del commercio', p. 240, also concludes - from the sales of cloth firms - that production of *rascie* was initially for the domestic consumption.

after long years of disruptive conflict, between Hapsburg and Valois. Both in Lyon and Antwerp, the two great emporia of long-distance trade in western Europe, the long-established Florentine business communities were in a position to respond at once to market opportunities. How great these had become by the sixties in Lyon, which served the vast French market, emerges vividly from the letter-books of the Martelli company, which are full of reports on the buoyancy of the trade: 'E mercanzia che ha buon spaccio con isperanza ancora di più avere tanto per qua che per ispania' (1564); 'sendosi questa pannina messa in tal uso che ciascuno ne vuole' (1566); 'il gran consumo che si fa di tal merchantia in questo regno' (1571). In 1572/3 the company, only one of numerous Florentine houses in the city, sold 356 pieces worth about 57,000 lb tourn.[45] The purchasers came from all over France: one letter alone indicates merchants from Paris, Tours, Poitiers, Toulouse, Marseilles, besides Lyon itself. When the trade was established remains unclear. But the books of another leading Florentine firm in Lyon, the Salviati, provide a pointer: they include no sales of rascie in 1531/2, a few in 1549/50, and sales of about 50 pieces in the six months from August 1553.[46] That the trade was already significant by this time is shown by an official survey of French imports, which lists *serges de Florence*, as *rascie* were called, with *estamets* and scarlets among wool textiles coming from Italy.[47] The Laran, important cloth merchants in Toulouse, were already selling the cloth in 1551.[48]

There is no comparable evidence for the other great emporium of international trade, Antwerp. But it was the destination of a roughly similar proportion (18.1 per cent) to Lyon (22.2 per cent) of the 4,755 cloths exported by a leading Florentine house, the Violi, between 1558 and 1585.[49]

[45] ASF, Carte Strozziane, V, 1512 (letters of 5 Feb. 64/ 29 Oct. 66); 1593 (letter of 21 May 71); 1596.
[46] SNSP, Salviati, 562, 585, 602.
[47] Chamberland, 'Commerce d'importation', pp. 29-30: the report was prepared between 1551 and 1556. It is demonstrable that the *serge de Florence* referred to in sixteenth-century French documents was the same as *rascia:* the latter was the only Florentine cloth exported to France; and it was the only cloth made in the city that would qualify, apart from *saia,* which was produced only on a small scale. Sometime after 1600 the term *ratine* came to be used.
[48] Archives départementales, Haute-Garonne (herafter ADH-G), ms.112 (grand livre), entry of 6 May 1551.
[49] Hoshino, 'Messina e l'arte della lana' p. 431.

These were certainly *rascie,* which are singled out with silks among imports from Florence in Guicciardini's detailed description of Antwerp's trade written in 1564, and which appear in a price list of *c.*1575 as second only in value to Coggeshall 'fine fines' among wool textiles.[50] It is unlikely that the trade was established much before 1550, as there is no mention of *rascie* in the correspondance of the Antwerp Salviati 1541-3.[51] There is the same silence in the 'Sommario di Mercante in Inghilterra', a detailed manual on English trade (which was mainly with Antwerp) compiled about 1553 probably by a Florentine merchant. It is only later that the cloth begins to appear in accounts and inventories, showing that England, too, became a market for the Florentine industry.[52]

The Martelli correspondance refers more than once to the lively demand for *rascie* in Spain, where the firm also had a branch; and there is no doubt that the Spanish market had become of central importance for the industry by the sixties. In 1563 the Cortes of Castile, in pressing for a ban on imports of the cloth, went so far as to claim that '..se han venido à usar tanto las rajas, que ya casi no se viste de otros pânos la mas de la gente..'[53] Even after a steep duty was introduced in response in 1566, annual imports registered by the customs continued to run at around 1,500 pieces (1566-9), while the farm negotiated in the latter year anticipated a level of 2,500 pieces. 534.5 were imported through Seville in 1571.[54] These figures, it should be noted, apply to Castile alone, which had a customs regime distinct from Aragon, to which the vogue for *rascia* must obviously have extended, but about which no information is

[50] Guicciardini, *Descrittione,* p. 163; Thijs, 'Textiles au marché anversois', pp. 81-4. The prices: *ras large de Florence* (252-324 d./aune), Coggeshall *fin fin* (480), followed among the broad cloths by Malines (240), and Castle Combe blues (126-196). *Oultrefins* of Armentières, one of the most popular cloths of the period (60-76). Milanese *stametti,* the only other Italian cloth exported on any scale north of the Alps, are listed at 132-144 d.
[51] SNSP, Salviati, 988. The same is true of the letter book of the Antwerp merchant Van der Molen (1538-43), who had a fair number of Italian correspondents, although not in Florence: Stadsarchiev Antwerp, Insolvente Boedelscamer, 1, B, 2039.
[52] BL, Add. MS 48082. For a summary of the document see Waley, 'Sommario di mercantie'.
[53] Actas de las Cortes de Castilla, 1, p. 415 (cited by Ruiz Martin, *Lettres marchandes,* p. cviii).
[54] Lapeyre, *Comercio exterior,* pp. 53 and 71. Ulloa, *Hacienda real,* p. 144. Ruiz Martin, *Lettres marchandes,* p. cviii, cites these figures somewhat loosely, in stating that exports oscillated around 2,500 pieces 1566-77.

available. The growth of exports to Spain was closely associated with the great increase in Florentine imports of Castilian wool, to which the Garbo turned almost exclusively from the end of the XVth century, and the concurrent establishment of an important Spanish merchant community in the city, who were already beginning to import increasing quantities of Florentine cloth in the 1530s and who later, according to an Arte report, 'levavano molte e molte centinaia l'anno' of *rascie* 'et erano occasione che altri ne mandassino'.[55] As had been the case with the Levant trade, these complementarities were clearly a major factor in the expansion of the trade.

The same was arguably true of the fourth major market for Florentine cloth exports, Sicily and the Kingdom of Naples, which superseded the Levant as the Florentine silk industry's main supplier of raw silk during the sixteenth century. Of Florentine cloths shipped by the Violi company 1550-85, and by the Capponi 1550-90, respectively 44.7% and 40.3% went to Messina and Palermo.[56] While we have no breakdown of these cloths by type, it is fairly clear from the sales in Messina of another company, the Corsi, that they consisted overwhelmingly in *rascie:* the latter accounted for 70% of sales 1550-65. Before 1550 the Corsi had conducted only a modest trade, and that almost exclusively in Northern cloths. After that date they both stepped up their sales and concentrated more and more on Florentine cloth.[57] The latter had only a limited share of the Sicilian market in the first half of the century, when it remained confined to the traditional San Martino and Garbo lines.[58] The kingdom of Naples, a major traditional market as has been seen, has not been studied. But it is probable that, as a major exporter of Calabrian silk, it, too, was caught up in the expansionary process so evident in Sicily. Around 1600 it was said to have been heavily dependant on imports of Florentine cloth.[59]

[55] De Roover, 'Florentine firm', p. 101. Second of two reports of 1620 by the *proveditore* of the Arte della lana, Vincenzo Pitti (ASF, Arte della lana, 447, ch. 155).

[56] Hoshino, 'Messina e l'arte della lana', pp. 431-2.

[57] *Ibid.*, table 1.

[58] *Ibid.*, p. 431.

[59] According to a 1604 report by the *proveditore* of the Arte, Vincenzo Pitti, ASF, Miscellanea Medicea, filza 27, ins 28, fos. 1095-7 (printed by Carmona, 'Economia toscana', pp. 42-46).

It should be noted that during the last years of the boom there was some recovery of cloth exports to the Levant - now imitations of Venetian cloth - which may have helped to prolong it. This was due primarily to the war of Cyprus between Venice and Turkey, which severely affected Venetian exports, and led to a sharp fall in production from 26,541 pieces in 1569 to 9,492 in 1570, a depression that lasted until 1573.[60] The opportunity this opened to the Florentine industry doubtless accounts for the optimism expressed by the Arte about the prospects for the Levant market in its report of January 1572 to the Grand-Ducal authorities.[61] Although in the current state of research it is not possibly to gauge the importance of the recovery, it does not appear to have been great, and it was short-lived. Sassetti, writing on the question in 1577 summed up the current cloth trade to the Levant: 'Le pannine.. sono la maggior parte di Ponente, qualcuna di Fiorenza e molte Veneziane'; and, while noting that the Florentine imitations of the latter had had some success, he emphasizes the difficulties encountered by Florentine exporters, stating that 'molte volte interviene che coloro i quali mandano in Levante, non ritornano sul capitale', and that profits lay elsewhere: 'in ogni altro paese si è fatto meglio, da un pezzo in qua..'[62]

[60] Sella, 'Mouvements longs', p. 31. Venetian production again fell to less than half its 1569 peak in 1576-7, as a result of the plague of those years, which hit Venice with particular severity. See the comments of the Florentine diarists, Ricci, Cronaca, p.202, and Arditi, Diario, pp. 98, 100, and 112: 's'era abandonato tutti gli esercizii e non si faceva più faccende di sorta nessuna per la gran pestilenza..' (entry of 20.7.76). The outcome of these adverse factors was that the extraordinary growth of the industry in the previous decades, based on exports to the Levant, was interrupted, average production falling to 16,651 pieces in 1570-9 from 18,002 in 1560-69, before recovering to 19,479 in 1580-9 and 22,969 in 1590-9. It reached its all time peak in 1602, when production reached 28,729 pieces.

[61] Galluzzi, *Istoria*, II, p. 220.

[62] Sassetti, 'Ragionamento', particularly pp. 178-82. He states that the 'le cose che adesso si raccontano degli avoli nostri e delle tante ricchezze lì fatte, sono oggi riputati favolose'. See also Arditi's comment in 1577 *(Diario*, p.153):'non si negozia più in 'Gostantinopoli'. A weavers' petition of 1594 makes it clear that the recovery, such as it was, did not last: it concerns an initiative of the Grand-Ducal authorities, with the help of a Venetian clothier, to re-start the manufacture of 'le pannine de levante come già si soleva fare' (ASF, Arte della lana, 389, f. 543r), an initiative that does not appear to have come to anything. Specifications for *panni alla veneziana* were laid down by the Arte in 1576 (ASF, Arte della lana, 63, f. 106 ff).

It seems justifiable to qualify as 'excessive' the fears expressed by the Venetian 'bailo' in Constantinople in 1578 about the potential threat from Florentine competition.[63]

VII

The boom based on *rascie,* remarkable in itself, did not last long. Although the lack of a firm figure for production *c.*1570 leaves its precise extent uncertain, there appears to have been a sharp contraction during the seventies, bringing production down from somewhere perhaps in the region of 18,000 pieces to a low of 11,240 pieces in 1581-2 - a figure that may be somewhat understated - from which there was a recovery to 15,723 (a firm figure) in 1586.[64] Two further indicators point to a decline in the level of activity: first, the average number of new weavers' apprentices registered fell from 96.5 in 1559-73 to 50 in 1574-9 and only 23 in 1580-87, although given the recovery of production, there must be some doubt about the accuracy of the latter figures (the last in the series), particularly as there is evidence of a deterioration in the administration of the Arte during these years;[65] second, the number of clothing firms fell from 152 in 1562 to 127 in 1581 - there are no intervening figures - to an estimated 120 in 1587.[66]

[63] Sella, 'L'economia', p. 684. While Sella does attribute the deceleration in the growth of the Venetian industry apparent after 1570 in part to renewed Florentine competition, he sees the main cause as lying elsewhere in factors internal to the Ottoman Empire.
[64] The figure of 18,000 is highly conjectural: see appendix 1.
[65] ASF, Arte della lana, 278-304. Registrations for 1584-5 are missing. The Arte officials ceased to record new matriculations of clothiers in 1583, resuming only in the nineties: Arte della lana, 23. A commission was set up to reform the administration of the Arte in 1587, indicating that all was not well in it. See note 70.
[66] The figures for clothing firms ('botteghe') may not be precisely comparable. They come from the census of 1561 (Battara, 'Botteghe e pigioni', p. 13); a list of those using the tenters of the Arte 1581, which exercized a monopoly over the process (ASF, Arte della lana, 389, fos. 140-44); depositions of witnesses before the reform commission in 1587, two of which put the number at 120, a third at 90-100 (*Ibid.*, fos. 101r, 104v, 116v). Extraordinarily the Arte does not seem to have known how many members it had (see previous note). An Arte report of 1620, perhaps using these figures, put the number at 120 in the nineties (Arte della lana 447, ch 155). A list drawn up in 1646 and without commentary gives the numbers as 114 in 1586 and 100 in 1596 (ASF, Miscellanea Medicea, 311, ins 2).

By and large, this picture squares with contemporary comments on the state of the industry. The diaries of Benedetto Arditi and Giuliano de' Ricci make a number of references to difficulties experienced by the industry during the years after 1573. Ricci in particular, in a succession of entries between 1579 and 1582, gives the impression that things were going badly wrong, not just with the cloth industry, but with the Florentine economy as a whole. From what he says, employment in the industry, which he claims provided jobs for three quarters of the 'plebe' of the city, was seriously contracting. He refers to artisans leaving the industry, and either emigrating or taking up other occupations; in 1582, for example, commenting on the case of an ex-weaver who had murdered his wife, he writes: 'E da considerare..la miseria e infelicità della città nostra, quale si va riducendo in termine che le artigiani si riducono a stare per servitori.'[67] Although there is nothing in it to suggest that the industry was in the plight described by Ricci, the Spanish wool merchant, Diego Suarez (one of Brandolini's suppliers) in his correspondance with the banker, Simon Ruiz, which begins in 1579, also reports slack activity during these years, 1579-82; but then from late 1582 two good years with 'bonísimo despacho' for wool - years during which Ricci is notably silent on the industry's difficulties - before another lull in early 1585, apparently due as much to over-supply as to a slow-down in the industry.[68] Ricci returns to the theme of unemployment and emigration, and the parlous state of the industry as he sees it, in the summer of 1586, when there was a serious conflict between clothiers and weavers.[69] From this it seems that the down-turn in 1587, when production fell by about 2,000 pieces, had already begun. In that year a commission was appointed by the grand-ducal authorities to look into the industry's problems. Of the period since about 1570 it noted in its report that the industry had not enjoyed the prosperity of the preceding years: 'le pannine per lo più non sono state

[67] Arditi, *Diario*, pp. 2, 26, 123, 130, 142/3. Ricci, *Cronaca*, pp. 216, 255-7, 297, 310, 323, 371 (citation). Arditi's diary begins in 1574, Ricci's in 1573. There are no comparable sources for the preceding period.

[68] Ruiz Martin, *Lettres marchandes, passim*. The letters reporting on the wool market are too numerous to cite. They do not continue beyond 1585.

[69] Ricci, *Cronaca*, pp. 470, 475, 476, 512.

fatte nè di quella qualità, nè di quella quantità che innanti a detto tempo si faceva'. The reforms that it proposed would, it hoped, result in Florentine cloths having 'più esito et spaccio che fino a qui non hanno havuto'.[70]

VIII

The 1570s proved to be a turning point, the beginning of what was to be a terminal decline in the industry's fortunes. The hope that production might return to earlier levels was not realized; and although the crude output levels of the eighties were maintained into the new century - the average recorded by the Arte 1591-1605 was 13,437 pieces - this apparent stability masked an accelerating decline in production of *rascie,* which by the 1620s had brought aggregate output down to 8-9,000 pieces and transformed what was left of the industry into a producer primarily of low-cost *perpignani,* output of which had remained fairly stable since the nineties. The latter now accounted for 71 per cent of the total output, compared to 14 per cent rascie and 28 per cent *panni ricchi* as a whole. The effect of this change in the structure of production was that the fall in its value, and the quantity of capital and labour employed in the industry, was considerably greater than that in its crude volume. The pattern of the middle years of the sixteenth century, when *rascie* had replaced *panni corsivi* as the dominant element in output, was reversed.

The decline in the production of *rascie* had almost certainly begun in the seventies, and accounts for the down-turn during that decade. Its precise trajectory remains unclear. As has been seen, during the boom years the proportion of *rascie* and other *panni ricchi* was probably around 80 per cent. In Arte reports of 1604 and 1620 it was variously estimated for the nineties at 'three-fifths' and 'over half' - with the remainder *perpignani* - the latter figure relating to the longer period cited above.[71] The proportion was said to have been higher in the years before

[70] ASF, Arte della lana, 61, f. 3v: preliminary report of 2 Dec. 87. The final report of 17 July 89 is printed by Cantini, *Legislazione,* XII, pp. 322-74.
[71] Reports of the 'proveditore' of the Arte, Vincenzo Pitti. See appendix one.

1590 'il che era di qualche consideratione, tanto per utile de lanaiuoli, che il più guadagno dei manifattori.'[72] It is not clear how these figures should be interpreted as the proportion was certainly falling during the course of the period covered, which doubtless explains why the later figure is lower. In a petition of the late nineties the clothiers claimed that *perpignani* were now the main article of production, 'chè d'altra sorte di pannina se ne fa poca se non che le rasce e panni vanno forte declinando'.[73] It seems likely that it was the development of this line of production that was behind the recovery of the eighties.

IX

Explanation of the decline of the Florentine cloth industry involves questions of a different order of magnitude than that of its earlier recovery. Whereas the markets through which the recovery was generated were already served by the long-established European network of the Florentine commercial and financial houses, the decline was part and parcel of the collapse of that network, a splendid subject that has not yet found its historian, and which goes far beyond the limits of this essay. The two major centres of Florentine international business were Lyon and Antwerp, both, as has been seen, major markets for *rascie*. The difficulties that beset these centres with the onset of the Wars of Religion in France and the Troubles in the Netherlands during the 1560s are well-known; but the precise chronology of their decline, more especially as it affected the trade in *rascie,* remains unclear.

Despite severe ups and downs, commercial transactions seem to have maintained their earlier levels in Lyon until 1573, which according to Gascon, marked the real onset of the 'grand dèclin commercial'. Thereafter the decline was sharp, reducing volumes by a half by the early eighties, with a further deterioration with the occupation of the city by the League in 1589-94, which seems to have marked its demise as a major

[72] Arte report of 1620.

[73] ASF, Arte della lana, 389, f. 626r, an undated petition, which from its position in the series is probably of 1597. From its reference to the cessation of exports to Lyon as a result of the French wars, it is unlikely to be much later.

international centre.[74] The downturn in 1573 is reflected in the correspondence of the Martelli, and in the fate of the firm. As has been seen the Martelli were still selling *rascie* (and Italian silks) in large quantities in 1572/3. But in April 1574 they informed their correspondents that they had resolved to suspend all trading activity until 'le cose di francia non pigliano miglior'; and in 1576 the company appears to have folded, victims probably of the widespread and severe difficulties that hit international finance in these years.[75] Despite the experience of the Martelli, Florentine businesss in Lyon seems to have held up longer than the trade of the city as a whole. The number of major Florentine houses fell only from 15 to 13 between 1568-9 and 1586, before falling to six in 1596-7; and the Lyon merchants in 1575, and the Rouen clothiers in 1582, still complained of competition from *rascie* in the French market.[76] But is clear that by the nineties Lyon had ceased to be of much account as a market for *rascie*. Towards the end of the decade the Florentine clothiers stated that 'per causa delle guerre di Francia non ne va più in Lione, ne per il regno..' and that this was a major reason why 'l'exito..e scarsissimo', and why production of the cloth had fallen.[77]

In Antwerp the trajectory of decline from the mid-1560s is difficult to discern amidst the sharp ups and downs that characterized the period. One composite commercial index suggests an acceleration in the years 1572-84, before the crisis of 1586, when the population of the city fell by almost a half as a result of famine and the massive emigration following the Spanish re-occupation. Even so, it has been argued, Antwerp's trade still retained 'a great vitality', which enabled it to stage something of a recovery in the nineties. Trade by land, from Germany and Italy, had suffered less than trade by sea.[78] There seem, however, to have been very

[74] According to Gascon, *Grand commerce*, pp. 595-607 and 667-72, although as regards the precise chronology of the decline the evidence he adduces (from taxation revenues) is not altogether compelling, nor his use of it altogether trasparent.
[75] ASF, Carte strozziane, V, 1593 (letter of 6 May 1574). Gascon, *Grand commerce*, p. 886. They were subject to a 'saisie de créances'.
[76] Gascon, *Grand commerce*, pp. 607-610 and 616; Archive départementales, Seine-Maritime (hereafter ADS-M), F. 375 (Fonds Guittard).
[77] ASF, Arte della lana, 389: f. 626r.
[78] I have followed Brulez, 'De handel', pp. 114-8, here. He emphasizes the difficulty of evaluating the evidence in trying to determine the trajectory of Antwerp's decline. This also emerges from the narrative of Van der Wee, *Growth of the Antwerp market*, 1, pp. 213-74.

few Florentine merchants left in the city by the middle years of the decade.[79] It is probable, although there is no direct evidence, that by that time, as in Lyon, the trade in *rascie* had largely come to an end.

Some of the losses in Lyon and Antwerp may have been made up through the redirection of trade to other centres. In 1576 the Consulat of Lyon claimed that 'les estrangiers ont délaissé de peu à peu de traffiquer en cedit royaulme se retirans ès villes d'Anvers (interestingly), Genève, Franckfort et aultres semblables'.[80] There were similar complaints in Antwerp that merchants were relocating, particularly to Cologne, where there was a large influx of Italian merchants during the seventies, peaking in 1578, and which certainly enjoyed an increasingly lively trade with Italy via Frankfurt during the last two decades of the century, which included the import of cloth serge, although those recorded came from Como.[81] Lille also grew in importance as a centre of distribution as Antwerp declined - it became known as the 'little Antwerp' - and Florentine rascie were among the cloths traded there.[82] But it is unlikely that such shifts provided much compensation for Florentine exporters. In the French market at least the main reason why merchants like the Martelli withdrew from trade seems to have been the collapse of the internal credit network, which would have affected them from wherever they operated: '.. hoggi per causa della guerra non si trova da far denari de debitori', the Martelli write in one letter.[83] It is probable that the sharp contraction of the Lyon and the Antwerp markets after 1573 was a major cause of the reversal of the conjuncture in the Florentine industry.

Over and beyond the increasing difficulties faced by Florentine clothiers in marketing their *rascie* as the Florentine commercial network

[79] Vasquez de Prada, *Lettres marchandes*, I, pp. 31-4, notes the return of many Iberian and Italian merchants to the city after it was re-occupied by the Spanish in 1585. But of 14 Italian firms mentioned by Simon Ruiz's Antwerp correspondents in 1596 only 2 seem to have been Florentine.

[80] In their 'cahier de doléances' for the Estates General: Gascon, *Grand commerce*, p. 945.

[81] Gramulla, *Handelsbezieungen Kölner Kaufleute*, pp. 175-200. Thimme, 'Quellen zur Geschichte', pp. 33-94 (ref. to *saglie drappati* p. 44).

[82] de Sagher, 'Enquête sur la situation', pp. 476-481.

[83] ASF, Carte strozziane, V, 1559 (letter of 6.5.1569). Gascon, *Grand commerce*, pp. 599-604, emphasizes the critical importance of credit at all levels.

was dismantled, a further reason for falling sales in these Northern markets may have been competition from local producers.[84] The latter began to produce imitations of Florentine rascie within a remarkably short time of their becoming popular. The well-known printer and humanist Henri Estienne, writing in 1566, commented on the poor copies, 'facon de Florence', of the 'très bonne et très belle marchandise' he had bought in the city, that had begun to be sold in France during the previous 10 years.[85] The Laran were already selling these in Toulouse in the mid-fifties, at a price of around three fifths the genuine article.[86] They were probably made in Beauvais, whose serges, it was claimed somewhat optimistically in 1575, could stand comparison with those of Florence.[87] In 1624, when the manufacture was in decline, the town had over 400 looms employed largely in the manufacture of *ratines*, as *rascie* had come to be called in France.[88] The cloth was also made in Normandy - where it was still an important branch of the cloth industry in the XVIIIth century - and across the channel in Southampton and Canterbury, where it had been introduced by Walloon emigrants. In England, as has been seen, it went under the picturesque name of serge or rash of the 'Flowers people'.[89]

[84] It was noted later by the 'proveditore' of the Arte that clothiers had been increasingly forced to undertake the marketing of their cloth themselves - an 'inconveniente di grandissima consideratione' - as the old network disintegrated, whereby they sold to merchants in Florence, who in turn either sold on to merchants in Lyon etc. or had those merchants sell for them on commission, the latter being the norm so far as the Martelli were concerned. ASF, Arte della lana, 447, ch. 155 (report of 1620).

[85] Estienne, *Apologie*, p. 351.

[86] ADH-G, ms.111 (April 1551) and ms.112 (July 1554).

[87] de Belleforest, *Cosmographie universelle*, 1, p. 374, who notes that they were widely exported. The French manufacture was encouraged by the protectionist tariff introduced in 1570, by which the duty on *serges de Florence* (and English cloths) was raised by 200 per cent: Gascon, 'Au carrefour', p. 401. He does not say what the initial duty was.

[88] Goubert, *Beauvais et le Beauvaisis*, 1, pp. 127 and 241. In the early seventeenth century the term *ratine* came to be used in France instead of *serge de Florence* to denote *rascie* or their copies.

[89] In 1601 two Flemings from Norwich contracted with the commissioners of the Royal burghs of Scotland to introduce the manufacture, among other cloths, of 'serge de Florans, counterfuilt as is maid in Deip, Southampton and Cantorbery': *Notes and Queries*, 4th ser., VIII (1871), p. 251. Also Kerridge, *Textile manufactures*, pp. 111-113. It is clear that these were imitations of *rascie*. It is impossible here to go into the terminological complications involving the cloth.

It is unclear at what point these Northern cloths became directly competitive with the Florentine article, whose clientele was largely at the top end of the market. For the most part, as was usually the way with such imitations, they seem to have been much cheaper and designed for a different class of consumer. But at some stage yet to be determined a top quality product began to be made. We find English and Spanish ratines selling at similar prices to those of Florence on the Paris market in the 1620s and 30s; and it is probable that those of Rouen that were sold in the sixties as the authentic product (production of which had almost ceased) were already being made by this time.[90] By the time Savary compiled his dictionary at the turn of the new century the '*ratines* très fines et très estimées,' that 'Florence..fournissoit autrefois à la France' were no more than a memory. The cloth was still in demand. But it was supplied entirely by Northern manufacturers.[91]

Import substitution, promoted as has been seen by the imposition of heavy duties in 1566, was probably the primary cause of the loss, during the subsequent years, of the major Spanish market, where there were no problems such as those that bedevilled trade in Lyon and Antwerp. The manufacture of *rascie* had already been successfully established in Segovia, the principal centre of the Spanish fine cloth industry, by 1560, and it was a major factor in the latter's extraordinary growth during the following period, which was based not only on the home market, but later, as has been seen, also on exports.[92] Segovian *rascie* were said to be 'più belle et a miglior prezzo, sebben manco durabili' than the Florentine *rascie*.[93] The fact that the cloth had begun to be made in Spain

[90] Paris, Bib. Nat., Ms. fr., 18594 ff. 27-30 (memoir of drapers on cloth prices, n.d., catalogued as either 1636 or 1641): the price of Florentine and Spanish ratines are quoted as repectively #. 9.10-10 and 9-11 per ell (those of Beauvais 2.15-3); English ratines are mentioned, but the price not given. The latter were bought at fr. 18, Florentine at 16-18, for the household of the duke of Lorraine in the 1620s (Roy, *Vie, mode et costume*, p. 169). Rouen: ADS-M, F.375 (Fonds Guittard), *Enquête sur les métiers* of 1664.

[91] Savary des Bruslons, *Dictionnaire universel*, arts. *ratine* and *serge*.

[92] Production rose from under 5,000 pieces before 1550 to around 13,000 1579-81, a level maintained until the end of the century, when a gradual decline began (Ruiz Martin, *Lettres marchandes*, p. cix).

[93] Report of the Luccan ambassador in Florence 1626 (cited by Hoshino, 'Messina e l'arte della lana,' p. 436).

was adduced by the Florentine clothiers, in the petition of the late nineties cited above, as one of the causes of the decline in exports.[94]

Florence's remaining important market was, as been seen, Sicily and the Italian South; and it has been plausibly argued that, as its sales in the North and in Spain declined, the industry increasingly concentrated its efforts on this market.[95] The sales of the Corsi company in Messina increased from an average of 51 cloths in 1550-65 to 278 in 1588-97, of which 44.9% were *rascie* and 35% were *perpignani*, before falling away during the first decade of the XVIIth century.[96] The extent to which the industry had become dependent on the Sicilian and Neapolitan markets is clear from an Arte report of 1604.[97] But these markets, too, declined after 1600. It was claimed in 1626 that sales in Messina were only half the level that they had been.[98]

[94] ASF, Arte della lana, 389: f. 626r..

[95] Hoshino, 'Messina e l'arte della lana'.

[96] Ibid, p. 440. Even in the late nineties the Florentine clothiers were complaining of a falling sales of *rascie* in these markets (petition cited in note 94).

[97] See note 59.

[98] See note 93 (report of Luccan ambassador, p. 436). The above account of the decline of Florentine exports is almost completely at variance with that put forward by Malanima (*Decadenza di un'economia*, pp. 257-8 and 298-303), who, assuming that the Levant market remained critical for the Florentine industry until the 1570s (see note 9), argues that it was the contraction of this market that was the primary cause of the reversal of the conjuncture from c. 1575, claiming that the contraction was essentially due to competition from English and Dutch cloth, described as 'ben più temibile' than that of Venice. It will be sufficiently clear why I find this view at odds with the evidence. But it should be pointed out that Malanima never gives adequate consideration to the question of Venetian competition, and that he seriously antedates that from England (and even more from Holland). As Sella points out ('L'industria', p. 684): 'le esportazioni inglesi di stoffe capaci di competere con quelle veneziane - broad cloths as opposed to kerseys - non si svilupperanno..se non dopo il 1600', a point that would apply equally to Florentine cloths, had the export of these been of any importance. Malanima seems unaware that 'ingenti quantità' of kerseys (Sella, p. 696: see also n. 13) had been exported to the Levant since the later Middle Ages, citing (p. 299) a figure for such exports in 1606 as evidence of the penetration of the market by English exporters from the late sixteenth century. Indeed he makes the statement (p. 255) that in the late middle ages 'la produzione fiorentina dominò a lungo incontrastata nei mercati del mediterraneo', apparently consigning to oblivion not only the English, but the Languedoc, Catalan, Valencian, and Flemish industries - not to say those of Lombardy and the Veneto. As has been seen, while the Florentine industry was dependant upon the Mediterranean market, its position as a major supplier was confined essentially to south-central (mainland) Italy and Constantinople.

X

It is worth raising the question, although it would require further research to adumbrate an answer, how far the Florentine industry was affected by the 'banking crisis' of 1574-9 and the consequent liquidity shortage that, it has been argued, prevailed in the city after a period of easy money during the fifties and sixties.[99] The crisis has been analyzed in terms of domestic factors; but it is clear that it was due also, and perhaps primarily, to the turbulence that hit international financial markets everywhere during this period, and which was the cause of a spate of bankruptcies - many of Florentine firms - the repercussions of which were felt in the Florentine 'piazza'.[100] Both Arditi and Ricci were acutely aware of the liquidity problem, the latter writing at length on the subject. Both note that it caused serious difficulties for clothiers in meeting their wage bills. Both note down the succession of bankruptcies.[101] Of one of these, that of Tomaso Premerani, a major Florentine cloth exporter, in early 1577, Arditi comments that as Premerani was financially involved with 'quasi tutti e' lanaioli di Firenze', he expected many of the smaller ones to be driven to the wall and the bigger ones to be weakened.[102] The 'molti fallimenti seguìti in diversi parti del mondo', Ricci writes in 1580, combined with other 'accidenti de'quali ne tocca gran parte alla nostra piazza, l'hanno fatta di maniera alterare che non si trova più a cambio et non ci è più contanti nè spirto vivo'.[103] Given the dependence of the industry on credit, both that extended by suppliers of raw wool, and that extended to exporters by clothiers, besides the cash flow required to meet wage payments, it would be surprising if it had not been adversely affected by these financial stringencies.

[99] Cipolla, *Money in sixteenth-century Florence*, chap. 6.

[100] Surprisinglly, Cipolla does not discuss the international context of the 'crisis'.

[101] Arditi, *Diario*, pp. 23, 26, 70, 123, 130, 142, 143, 189; dei Ricci, *Cronaca*, pp. 130, 205, 210, 233, 307, 320, 323, 325, 337, 388, 395, 457, 522, 533, in particular the long analysis of the problem on pp. 255-8 and 502-3.

[102] Arditi, p. 142. The Martelli acted on commission for Premerani in Lyon; and it would be interesting to know whether the difficulties of the former had anything to do with the bankruptcy of the latter.

[103] de Ricci, p. 307.

XI

To what extent were factors on the supply side proper implicated in the decline of the industry? From the evidence available, it appears that the sale price of *rascia* remained remarkably stable from the 1540s, when the cloth first began to be made in quantity, until the end of the century. The standard price of £. 32-33 per *canna* at which the Salviati sold in 1540 was still that of Brandolini in 1592-3, and it had not altered during the intervening years.[104] During the same period labour costs, in respect at least of the production of *rascie*, also remained stable. The rates laid down by the Arte during the forties for spinning and weaving, which accounted for rather over 60 per cent of total manufacturing costs, were still those paid by Brandolini in the eighties; and there is no sign of their being subsequently raised. According the Arte report of 1620 they had been stable 'da molti et molti anni'.[105]

Raw material costs in contrast increased considerably. The steep rise in the price of wool evident in the thirties - which was probably a major factor in the conversion of the industry to the production of *rascia* - continued until about 1560, when prices were running at twice the level that they had been thirty years before. In 1559-61 the Barducci company paid an average of fl. 25.5 per 100 lb. for Castilian wool, compared to the 11.2 paid by the Medici 1530-32, the 16.4 by the Salviati 1539-42 and the 18.7 by the same firm 1546-50.[106] Thereafter, doubtless as result of the decline in demand from the Low Countries, the rate of increase slowed

[104] SNSP, Salviati, 969. The Medici sold at #. 31-31.5, 1551 (Edler de Roover, *Glossary*, p. 406; the Barducci at #. 33, 1559-62 (ASF, Serrisori, famiglia, 1322). Brandolini's prices were slightly higher in 1581.

[105] The rates for spinning yarn for *rascia* laid down in 1547 were formulated in more detail but not increased in 1560 and 1562, when those for other cloth types were also regulated: Cantini. *Legislazione*, II, pp. 366-8; III, pp. 214-7; IV, pp. 78-83 and 380-90. There is no sign in the Arte records of any subsequent increase. The rates for weaving (all cloth types) were laid down in 1546. They were increased in 1578 and again in 1596 (possibly temporarily), but *rascie* were excluded from these increases: *Ibid*, I, pp. 289-94; ASF, Arte della lana, 16, f. 385; 61, f. 96. The Medici firm paid the official rates in 1556-8 (Edler de Roover, *Glossary*, pp. 413-426), as did Brandolini in 1580-6, including the recent increases in weaving rates for cloths other than *rascie*. Report of 1620 (ASF, Arte della lana, 447, ch. 155).

[106] ASF, Serristori (famiglia), 1322; de Roover, 'Florentine firm', p. 113; SNSP, Salviati, 969, 977.

markedly: the Salviati paid fl. 26.6 in 1571-2, the Brandolini 27.5 in 1580-85, the Salviati 29.9 in 1600-2, the latter figure representing a rise of 17.25 per cent over the price paid by the Barducci forty years before.[107] The pace of inflation began to quicken again after about 1600. According to Vincenzo Pitti in the 1620 report cited above, prices had risen by 10-12 per cent since 1604, although the example he cites of an increase from fl. 35-6 to over 40 for the top quality implies a still greater rise, the former price already significantly higher than the maximum of 32.75 paid by the Salviati in 1600-2. The acceleraion of inflation in the first decades of the seventeenth century is confirmed by the evidence of producer prices in Castile: Segovia Cathedral wool sold on average for 32.6 reales per arroba 1603-12; 41.2 1613-22; 44.9 1623-32.[108]

Pitti judged that the high price of wool was the 'cagione principalissima' of the low profit margins of clothing firms, and the consequent disinvestment in, and decline of, the industry. Given the stability of the finished product prices, it certainly seems plausible that at some point the persistent rise in wool prices, which in the Brandolini case accounted for about 40 per cent of total costs, would have had this effect. Obviously it did not do so during the period of maximum increase up to the 1560s, precisely the period of take-off in the production of *rascie*. The down-turn began in the 1570s. Could it be that by then the price had reached a level at which it began to have the consequences adduced by Pitti? Against this we have the example of the Brandolini firm, which, during the course of its 18-year existence from 1580-98, returned a steady profit of five to six per cent to its investors, which was sufficient for them to maintain their investment, and which there is no reason to suppose was exceptional. The implication is that profits must have been much higher (if declining) during the preceding expansionary

[107] SNSP, Salviati, 1530 and 1574. In 1571-2 they paid fl. 28 for 'Serena' wool compared to 17.5 in 1539-42 and to 10.5 paid by the Medici in 1530-34.

[108] Calculated from Phillips, *Spain's golden fleece*, table A4.1. The fragmentary evidence cited by the authors (pp. 252-7) for the sixteenth century is broadly conformable to that for Florence. The prices for Segovia Cathedral wools, the only ones permitting comparisons, were respectively 13.1 *reals*, 1518-33 (average of five years); 19.3, 1541-50 (three years); 38, 1590 (one year). The series is continuous from 1603, and shows pronounced annual fluctuations.

phase, which would account for the readiness of capital to move into the industry.

Pitti was concerned, of course, with the renewed acceleration in the rise of wool prices after 1600, when the industry was already in decline. To accomodate this increase a commensurate rise in the price of the finished product would clearly have been necessary. But this, he states, had not happened. Presumably, in the adverse demand conditions that prevailed it was impossible. In conclusion, it does not seem from the evidence at present available that supply-side factors, specifically the rising cost of wool, were a major determinant of the decline of the industry after 1570, although they probably played a part in the final phase. The critical factor was the decline of export markets.

XII

By the 1640s the old Florentine industry had dwindled into a position of little more than regional significance. It had recovered from the effects of the Black Death by developing a superfine cloth which could outcompete that of Flanders and Brabant in the markets of the Mediterranean; from the depression of the early fifteenth century by developing a middling fine cloth that enabled it to exploit the new opportunities in the Levant that arose after the Ottoman conquest of Constantinople; from the loss of the Levant trade by developing the *rascia fiorentina,* a distinctive high-quality product, that in a period of increasing diversification in the demand for wool textiles, enabled it for the first time to win major markets north of the Alps. It had no answer to the adverse conjuncture of the late sixteenth and early seventeenth centuries.

APPENDIX ONE: THE VOLUME OF FLORENTINE CLOTH PRODUCTION IN THE SIXTEENTH CENTURY

There is good evidence that the output of the Florentine cloth industry c. 1520 before the crisis of 1526-30 was something like 20,000 pieces. The contemporary historian, Varchi, writing in the mid-forties, and basing himself on the sealing registers of the Arte della Lana (which have not survived) puts it at 20-23,000, the latter figure the maximum historically recorded, according to a 1560 report of the Arte. The Venetian ambassadors, Foscari and Surian, who were in Florence respectively in 1527 and 1528, report figures of 18-19,000 and 22-24,000, made up of 4-5,000 *panni di San Martino,* superfine cloths made from English wool, and 14,000 (Foscari) or 18-20,000 (Surian) *panni di Garbo,* middling fine cloths made from Spanish wool. The value of production was reported by Foscari to be fl. 600,000. These figures also probably derived from Arte sources. The impact of the crisis can be inferred from the fact that in a memo of c.1540 by a Garbo clothier, the normal output of the branch was assumed to be 9,500 pieces, and about 10,000 less than had once been produced. The 'povere botteghe (shops)' of the San Martino were said to have been 'serrate molti anni'.[1]

No further statistics have come to light before the third quarter of the century, when we have a series of figures from the Arte, tabulated below; but these are not comparable to those just noted, nor to later figures, although they are always cited as if they were, with the result that the expansion of the industry compared with the situation c. 1520 has been exaggerated.[2] They do not represent real physical output, as students of the industry have assumed, but a notional output standardized in terms of *panni corsivi,* the basic traditional product of the Garbo branch. The Arte report for 1559 runs: 'Quest'anno si sono lavorati quì nella Città panni ventimila... riducendo le rascie e panni larghe a panni corsivi come già si costumava; ragionasi l'un panno per l'altro scudi trenta, in modo che li ventimila

[1] Varchi, *Storia,* I, p. 110; Galluzzi, *Istoria,* I, p. 383; Segarizzi, *Relazioni,* 3, pt. 1, pp. 23-26 (Foscari) and 112-3 (Suriano); Spallanzani, '"Modo da crescere.."', p. 529. Foscari's figure for the value of production is based on average prices of fl. 22 for Garbo cloth, which accords with contemporary evidence, and fl. 60 for the San Martino, which is more open to question. It should be pointed out that Malanima (*Decadenza di un'economia,* p. 296) mistakenly cites Suriano's figure for Garbo as for total production. I have discussed this subject in greater detail in my paper 'The volume of cloth production in Florence 1500-1650: an assessment of the evidence', forthcoming in Fontana J.L. and Jayot J. eds., *Wool: products and markets,* years here are given throughout in the modern not the Florentine style.

[2] For example, by Romano, 'A Florence', p. 511, n. 1; Ruiz Martin, *Lettres marchandes,* p. cxii; Malanima, *Decadenza di un'economia,* p. 295. So far as I know the peculiarity of these figures had not previously been pointed out.

panni montano scudi siecentomila..' The same formula (and the same price) is used in the report for 1571.[3]

TABLE 1 Notional output in panni corsivi valued at fl. 30

year	volume	value in fl.
1553	14,700	(444.000)
1554	16,500	(495.000)
1558	16,000	(480.000)
1559	20,000	600.000
1560	30,000	(900.000)
1561	33,000	(990.000)
1570	28,492	(854.760)
1571	33,212	c.1.000.000

Notes: the figs. for 1559-60 and 1570-71 come from official reports of the Arte della lana. Although the provenance of the figures for 1553-4 and 1560-61 is not known, it seems clear from the way that the years are coupled, and the figures themselves, that they come from the same source and are also notional figures established in the 'customary' way. The figures in brackets are the values implied.

Sources: Galluzzi, *Istoria*, I, pp. 381-3 and II, p. 221; for 1560-1 Cantini, *Legislazione*, IV, pp. 83-4., citing a document in the library of the Società Colombaria, Florence, which is no longer in its possession.

It is evident that the Arte employed some form of weighting to establish a measure of aggregate volume in terms of the *panno corsivo*, that would take account of the changing structure of production. Such procedures were not unfamiliar. They had been employed, for example, by the English customs administration since the mid-fourteenth century to aggregate the various types of cloth exported in terms of a single measure, the cloth of assize; and they were current, with the same term 'reducere' being employed, in the Italian business world of the sixteenth century.[4] Unfortunately the records of the Arte provide no indication as to how the reduction was effected in this case, or when the procedure was introduced. The report of 1560 refers to its being customary; the standard price of fl. 30 adopted for the panno corsivo corresponded to the actual price c. 1540, and probably until the early fifties, after which it appears to have risen. It

[3] Galluzzi, *Istoria*, I, p. 383; II, p. 221.

[4] Carus-Wilson and Coleman, *England's export trade*, p.14. Tucci, *Lettres d'un marchand*, p. 16 (citing a 1551 report of stocks of cloth in Aleppo, which refers to kerseys and 'panni di ogni sorte, che reducendoli in archiminie (a type of cloth) asendono a peze 500'), also p. 194 (where a 'kersey standard is employed). Another example, from Florence: a report on the operation of the dye-shop owned by the Arte for 1617/18 states: 'ha lavorato tante tinture da rasce et perpignani, lane et altro de lanaiuoli, che ridotte tutte a rasce sono rascie 1134..' To this is appended a list of dyeing rates, which were the basis of the calculation. ASF, Arte della lana, 447, chap. 94

can be assumed that the reduction was made on the basis of price ratios, *rascie*, for example, the price of which was around fl. 60, counting perhaps in a ratio to *panni corsivi* of 1:2. Provided that the ratios set were accurate and comprehensive in their coverage, which is a reasonable assumption, and provided that they remained unchanged, which seems probable given that the standard price of fl. 30 for the *panno corsivo* was retained even though it had ceased to correspond to the actual price, what we would have is a volume index based on constant prices.[5]

It seems likely therefore that the table gives a fair approximation of the movement of production during the period covered - a better index, given the changing structure of production, than figures of crude output would give, did we have them. It may be useful, however, for purposes of comparison with later figures, to attempt an estimate of what this might have been at the peak figure of 33,000 *panni corsivi* equivalents. Assuming a price ratio of 2:1 to *panni ricchi*, and that the latter constituted 80% of production, which is in line with the evidence cited above, we obtain a figure of 18,333 pieces.[6] Of course this figure is a conjectural one. But it seems unlikely that crude output was higher than 20,000 or lower than 16,000 pieces.

From the 1580s until the 1640s the evolution of the industry is well-documented (table 2). Besides the figure for the number of cloths sealed for the two years, 1586/7, we have the average for 1591-1605 compiled by the Arte della Lana for a report of 1620, which also has average figures for 1605-11 and 1611-1619; and from 1602-45 a series of annual output figures, complemented by another from 1616-45 which breaks production down by type of cloth. Another Arte report of 1604 also has some production figures. Although there are several inconsistencies between these various sources, which cannot be discussed here, some of which may attributable to differences of calendar, some of which cannot be explained, they do not affect the overall picture. For 1581-86 we have in addition annual figures for the number of cloths tentered in the official shops of the Arte della Lana, which exercized a monopoly in respect of the process.

[5] The average price of the panni corsivi sold by the Salviati firm, 1539/40 was fl. 30; in 1551/2 it was 29 (SNSP, Salviati, 969, 977). The Medici charged fl. 31-31.5, 1553-4 (two instances: Edler de Roover, *Glossary*, p. 373); the Capponi, 1562-5, for the few such cloths they made fl. 33-38 (ASF, Libri di commercio, 124). The price of rascie nere, the standard type, in 1544/5 was fl. 56, but 66 in 1551/2 (Salviati, 975, 977). The other *panni ricchi (panni larghi* and *accordellati)* were similarly priced: in the latter accounts fl. 60 and 62. The rise in price of *rascia* was due basically to an increase in 1549 in the statutory length of the cloth, hitherto made at 9, to 11 *passini* in the loom (ASF. Arte della lana 16. f. 364), something which would have distorted the 'reduction' procedure, if it were not taken into account. It should be emphasized that the figures in the table do not represent the value of production at current prices.

[6] See note 41

The average was 12,518, recovering from 11,240 in 1581/2 to 14,413 in 1586. The latter figure is significantly lower than the 15,723 for cloths sealed in that year. The years run respectively from March to February and January to December, so are not directly comparable. But it is possible that the tentering figures understate the level of production.[7]

TABLE 2

years	total a	b	ricchi	%	rsc.	%	perp.	%
1586	15,723							
1587	13,827							
1591-1605	13,437		6,735	50+	(5,725	40)	6,735	50-
1602-1609	12,863							
1610-1619	10,717							
1620-1629	8,207	9,026	2,519	28	1,225	14	6,368	71
1630-1639	6,428	6,295	2,239	35	830	13	3,882	62

Notes: panni ricchi include, besides rascie, other high quality cloths of similar value (panni larghi , saie and accordellati). The Arte report of 1604 puts their proportion at 60 per cent for the period 1590-1601. The proportion of rascie 1591-1605 is derived from the number produced compared to other panni ricchi in the first quarter of 1604 (Arte report of 1604). The average for 1620-29, col. a, is for nine years, 1621 being missing, which accounts for the discrepancy with col. b. All the dates are according to the modern calendar.

Sources: ASF, Arte della lana, 389, f. 269r; 447, ch. 155 (Arte report of 1620, ; Romano, *'A Florence au XVIe siècle'*, tables 1 and 2; ASF, Miscellanea Medicea, filza 27, ins 28, fos. 1095-7 (Arte report of 1604: printed by Carmona, 'Toscane face au crise' pp. 157-9).

Although the outline of the evolution of the industry is, I think, reasonably clear, it is not possible, given the problematic nature of the figures for the mid-century, to make firm comparisons between the three periods covered by the statistics presented above. It remains uncertain how far - or even perhaps whether - production in real terms exceeded its levels c. 1520 during the boom years, while the extent of its decline during the 1570s, and the precise trajectory of its evolution during the following period until 1600 remain unclear. Of course these questions cannot be meaningfully discussed in terms of crude physical output alone. Changes in the structure of production over the period, noted in the main text, were critical.

In c. 1520 according to Foscari's figures (less if Surian's are accepted) the San Martino branch accounted for nearly half of the revenue of fl. 600,000 generated by the industry, although its share of crude output amounted to only about one quarter. It follows that its subsequent decline (which has not been studied) must have been disproportionate in its effect. This, together with the concurrent decline of the traditional line of the Garbo, resulted in a sharp

[7] ASF, Arte della lana, 389, fos. 20r and 269r. The figures for the 1580s have not previously been published.

decrease in the real value of production, which at constant c. 1520 prices had probably fallen to no more than about half its earlier level c. 1540, the next point of reference, although in the absence of any figure for the production of the San Martino branch this can only be a conjecture. The current value of production at that time (the price of the *panno corsivo* having risen from fl. 22 to fl. 30 in the intervening period) does not seem likely to have been less than fl. 400,000, and may well have been somewhat higher.[a]

The figure offers some possibility of comparison with the Arte's valuations of the 1550s before the boom - fl. 444-495,000 - which were based on the fl. 30 price for the *panno corsivo*, indicating some recovery, but only a moderate one. Arguably the conversion of the industry to high-priced *panni ricchi*, which appears to have been proceeding rapidly during this period, was not as yet sufficient in terms of volume to do much more than compensate for the continued decline of the traditional lines of production, until the upsurge during the boom of 1559-61, which, if the figures are to be trusted, led to a doubling of the real value of production, bringing it above its level of c. 1520 but not by a large margin, certainly by much less than the output figures, as they have hitherto been interpreted, would suggest. It hardly needs stressing, of course, that all this is based on - reasoned - conjecture. If we stuck to the path of caution, we would say little.

On the evolution of production after the down-turn during the 1570s little more needs to be added here to what was said in the main text. The movement of crude physical output from 1581 is well-documented, although its precise contours between 1587 and 1602 remain unclear. What still needs to be established with greater clarity is the chronology of the change in the structure, and so in the real value, of production. *Perpignani* inceasingly replaced *rascie* as the staple product of the industry. The shift from a comparatively low to a high-priced product, which had been the motor of the recovery during the third quarter of the century, was reversed. When and by what stages did this happen? Further research into the abundant business records of the industry would permit an answer to this question.

[a] The volume figure at constant prices assumed a production of 1,000 *panni di San Martino* at fl. 60 worth fl. 60.000. For the Garbo account has to be taken of the incipient diversification into *panni ricchi*, which was as yet 'modest' (Dini, 'Aspetti', p. 240). For the Salviati firm 1539/40 (SNSP, Salviati, 969) it raised the average price of the cloth sold to fl. 34.2 (30.3 for *panni corsivi)* or 14% above the standard price of fl. 30 for the latter. If we extrapolate from the example of this single firm, and raise the c. 1520 price by this proportion we obtain a price of 25.1, and we can estimate the value of Garbo production (9,500 cloths) at constant prices at fl. 238,450, giving a total of fl. 298,450, exactly half Foscari's figure, but less if Surian's higher production figure for the Garbo are used. At current 1540 prices we obtain a figure for the latter of fl. 325.000, which allowing for some increase in the price of the *panno di San Martino* (for which we have no firm evidence at this time) gives a total of around fl. 400,000.

APPENDIX TWO.
RASCIE: TECHNICAL CHARACTERISTICS

Rascie were an exceptionally fine species of cloth serge, a type of cloth widely made in the XVIth century and later. They fell into the category of woollens in that they were felted; and the technique of manufacture was basically similar to that employed for broad cloths (*panni larghi*). Like the latter they were woven on the broad loom from a combed, drop-spun warp and a carded, wheel-spun weft. (The all-carded broad cloth had not been adopted by the Italian industry, which still adhered to the preparatory processes developed in the XIVth century, as for that matter did much of the Northern industry). After weaving they were scoured, fulled and napped. The same high-grade Castilian wool was employed as for the best *panni larghi*. Although the successive stages of production were basically similar, however, there were critical, and interrelated, differences at the key stages of spinning and weaving, which were reflected in marked differences in cost, and the outcome of which was that *rascie*, despite being a felted material, had some of the technical characteristics, and lightness, of worsted.[1]

The most striking thing about Florentine *rascie* - and an index of their fineness - is the density, for a felted material, at which they were warped. The standard cloth had rather over 18 warp ends per cm. in the loom, a density similar to that of the famous Hondschoote says (1576), which were a true worsted, and almost double that of superfine *panni larghi*. (The very finest *rascie*, developed at the end of the century, possibly as a response to the competition discussed above, had a density as high as 25 cm.).[2] The corollary was that the warp yarn was spun very fine, which was in turn true, if to a lesser degree, of the weft yarn, as the weave was probably balanced. An indication of the relative fineness of the weft compared to that for *panni larghi*, and the very different character of the cloth that resulted, is given by the warp weft ratios in terms of weight: 1:1.6 for *rascie*, 1:4.4 for *panni larghi*, an admittedly unusually high ratio, which seems to have been a feature of Italian broad cloth compared with that of the North.[3]

[1] This section is based on Arte della Lana regulations, printed by Cantini. *Legislazione*, I-IV, and in ASF, Arte della Lana, 16 and 61, *passim*; the Brandolini accounts; information from Medici accounts in Edler de Roover, *Glossary*, appendix one, and de Roover 'Florentine firm'; Ferraro G., *L'arte della lana in Ferrara*.

[2] Regulations of 1562 (Cantini, *Legislazione*, IV, pp. 380-90) and 1603 (Arte della Lana, 16 fo. 305); Coornaert, *Centre industriel*, p. 218.

[3] The ratios are those of cloths produced by Brandolini, 1581-3. It must be pointed out, however, that they exaggerate the difference between the two cloths: whereas the wool for *panni larghi* was oiled in the usual way, this was not the case for *rascie* (see below. The Brandolini documentation does not permit a calculation of the amount by which the weight of the yarn in *panni larghi* was increased by oiling. But it was certainly considerable.

The requirement of a very fine yarn in both systems accounts for what might seem a surprizing thing about the production process for *rascie:* the yarn was spun (and apparently combed and carded) dry. As the Arte regulations laid down, and the Brandolini books show, no oil was applied.[4] The procedure was that of the worsted manufacture of the time; and the warp yarn could probably be described as a worsted yarn, except that it was not made from the longer combing wool already currently used in the northern worsted industries.[5] For a carded, wheel-spun weft to be spun dry was, however, highly unusual, at least for this quality of product: the weft in cloth serge was normally oiled (as was of course the yarn for both systems in broad cloth, the *panni corsivi* and well as *panni larghi* as made in Florence).[6]

The costs involved in producing the yarn for *rascie* were commensurately much higher than for *panni larghi* (and other cloths), not only in spinning but also in the preliminary processes of combing and carding. For spinning the respective rates, as laid down by the Arte, and followed by Brandolini and by the Medici (1556-8) were for *rascie* 15-35s./lb for the warp 12s./lb for the weft; for *panni larghi* 8-13s. and 3s.[7] 'Non guardare al pagamento,' wrote the clothier author (from Ferrara) of a contemporary manual on cloth manufacture in respect of spinning costs for *rascie,* 'che serà tuo utile, che questi filati voleno essere molto belli, altramente no farai nulla.'[8] The difference in the rates probably reflects not only the longer time, but also the greater degree of skill involved in spinning the yarn for *rascie:* to spin weft yarn on the wheel, which had the requisite fineness and was at the same time soft enough to be amenable to raising cannot have been easy. Much would have depended, of course, on the preparatory processes, as the manual just cited stresses. From it we learn that combing and carding costs were also much higher for *rascie* than for broad cloth.

Rascie, as has been seen, were woven in a twill weave, the reason being to obtain a weft-faced cloth, or as Roland de la Platière later put it 'd'unir entr'eux, plus encore que dans le drap, les fils de la chaîne, pour que les seuls fils de la

[4] Various regulations distinguish 'stame' for *rascie* from 'stame unto' for *panni.* The application of oil was expressly prohibited: regulation of 1595 (ASF, Arte della Lana, 16, fo.40).

[5] It is perhaps worth pointing out that the description, often found in the literature, of the combed warp (and weft) yarns normally used in the medieval *draperie* as worsted yarns, is misleading. The combs employed were very different from the later worsted combs (as were those used in Florence in the XVIth century) and the yarn was soft-spun.

[6] I use the term here to include cloths woven on the two-man broad loom, which include both *panni corsivi* and *panni larghi,* which were (with some variations later in the century) respectively 18.5 and 22.5 quarters wide in the loom. Regulation of 1550 (Cantini *Legislazione,* II, pp. 159-65)

[7] For *rascie* the Medici paid 30 s. (de Roover, 'Florentine firm' p. 97 n. 1), Brandolini 26-28 s. for warp, and both 12 s. for weft.

[8] Ferraro, *Arte della lana a Ferrara,* p.25.

trame cèdent au chardon et fournissent le poil nécessaire à former le bouton ou la frise de la ratine'.[9] In what ways the weaving process differed from that for broad cloth is unclear. Possibly the operation of beating in the weft was more complex. What is clear is that the process was more time-consuming: the Arte regulations for the payment of weavers assume that it would take about twice the time to weave a piece of *rascia* as broad cloth of the same length. It also required more skill. The Ferrarese clothier warns that the work should not be given to 'chi non é ben pratico del mestiero, che facilmente se potrieno guastare'.[10] These differences were reflected in the piece rates set the Arte in 1546: £. 66 for *rascie*, £. 24-26 for *panni larghi*, although the latter rates were substantially increased in 1578 so that Brandolini paid £. 30 and 38.5 but still £. 66 for *rascie*.[11]

Alhough the degree of felting to which *rascie* were subjected was significantly less than for broad cloth, it is nonetheless remarkable for such a densely woven cloth. The respective shrinkage in length was about 20 and 32%, but in width 40 and 46%.[12] Neither the Arte regulations, not the Brandolini books provide any information on the subsequent processes of raising and shearing. The very low costs recorded suggest that finishing was basically carried out after the cloth had left the manufacturer, as had been the case in many centres of the wool textile industry since the middle ages. The original *rascie* seem to have been finished like broad cloth; but by the 1570s *rascie pelosi* had been developed and become the standard article. They were probably often frizzed, giving the cloth what became its characteristic finish. Savary wrote: 'Il y a des ratines drapées ou apprêtées en draps, des ratines à poil non drapées, et des ratines dont le poil est frisé du cOté de l'endroit.'[13]

[9] Roland de la Platière, 'Draperie', p. 266.

[10] Ferraro, *Arte della lana in Ferrara*, p. 27.

[11] Cantini, *Legislazione*, I, pp. 289-94; ASF, Arte della lana, 16, fo. 385.

[12] Calculated from lengths recorded by Brandolini, and from specifications in ASF, Arte della lana, 16, fos. 156r., and 199r, Cantini, II, pp. 159-160. (These varied somewhat during the century).

[13] Savary, *Dictionnaire*, p. 422 (art. *ratine*). Roland, 'Draperie', p. 351, notes that *ratines* 'sont moins rentrées au foulon, moins approchés à la tonture ou n'en recoivent point, et dont le poil un peu moins allongé, ou laissé de toute sa hauteur, est destiné à être frisé, ou de servir de fourure.'

REFERENCES

Actas de las Cortes de Castilla, I (Madrid 1877).

ARDITI B., *Diario di Firenze e di altre parti della Cristianità* (1574-79), ed. R. Cantagalli (Florence, 1970).

BATTAGLIA, S., *Grande dizionario della lingua italiana,* XV (Turin, 1990).

BATTARA P., 'Botteghe e priori nella Firenze del 500: un censimento industriale et commerciale all'epoca del granducato Mediceo', *Archivio Storico Italiano,* XCV (1937), pp. 3-28.

CANTINI L., *Legislazione toscana,* 32 vols, (Florence 1800-18).

CARMONA M., 'Sull'economia toscana del cinquecento e del seicento', *Archivio Storico Italiano,* CCXX (1962), pp. 32-46.

CARMONA M., 'La Toscane face à la crise de l'industrie lainière: techniques et mentalités économiques aux XVIe et XVIIe siècles', in M. Spallanzani, ed., *Produzione commercio e consumo dei panni di lana (nei secoli xii-xviii),* (Florence, 1976), pp. 151-168.

CARTER F., *Dubrovnik (Ragusa): a classic city state,* (London 1972).

CHAMBERLAND A., 'Le commerce d'importation en France au milieu du XVIe siècle', extrait de la *Revue de géographie,* (Paris 1894), pp. 1-30.

CIPOLLA C., *Money in sixteenth-century Florence,* (Berkeley 1989).

COORNAERT E., *La draperie-sayetterie d'Hondschoote (XVIe-XVIIe siècles),* (Paris 1930).

DE BELLEFOREST F., *Cosmographie universelle de tout le monde,* (Paris 1575).

DE PASI B., *Tariffa de pesi e mesure correspondenti dal Levante al Ponente,* (Venice 1521). The first edition was in 1501.

DEI RICCI G., *Cronaca* (1532-1606), ed. G. Sapori, (Milano 1972).

DE ROOVER R., 'A Florentine firm of cloth manufacturers' - in *Business, Banking and Economic Thought in Late Medieval and Early Modern Europe* (Chicago, 1974), pp. 85-118, repr. from *Speculum,* 19 (1941) pp. 3-33.

DE SAGHER H., 'Une enquête sur la situation de l'industrie drapière en Flandre à la fin du XVI siècle' in *Etudes d'histoire dédiées a la mémoire de Henri Pirenne,* (Brussels 1937), pp. 471-500.

DI GIOVANNI V., *Tessuti italiani ed esteri alla dogana di Palermo nel secolo XVI* (Palermo, 1894).

DINI B., 'Aspetti del commercio di esportazione dei panni di lana e dei drappi di seta fiorentini in Costantinopoli, negli anni 1522-1531' in *Studi in onore di Federigo Melis,* IV, (Naples 1978), pp 1-54. Reprinted in Dini, B., *Saggi* *su una economia-mondo: Firenze e l'Italia fra Mediterraneo ed Europa (secc. XIII-XVI),* (Florence 1995), pp. 215-270, the pagination used here.

DINI B., 'L'industria serica in Italia: secc. XIII-XV' in S. Cavaciocchi, ed., *La seta in Europa: secc. XIII-XX,* (Florence 1993)

EDLER DE ROOVER F., *Glossary of medieval business terms: Italian series, 1200-1600,* (Cambridge, Mass. 1934)

ESCH A., 'Importe in das Rom der Frührennaissance: Ihr Volumen nach der römischen Zollregistern der Jahre 1452-62', in *Studi in memoria di Federigo Melis* (Naples, 1978), III, pp. 381-452.

ESTIENNE H., *Apologie pour Herodote,* (The Hague 1735).

FERRARO G., ed., *L'arte della lana in Ferrara nell'anno 1550 da un ms. della biblioteca di Ferrara,* (Ferrara 1876).

FONTANA J.L. and JAYOT J. eds., *Wool: products and markets (13th to 20th century) / La Laine: produits et marchés (XIIe-XXe siècle),* (Padova, forthcoming).

FRANCESCHI F., *Oltre il 'Tumulto': i lavoratori fiorentini dell' Arte della Lana fra Tre e Quattrocento,* (Florence 1993).

GALLUZZI R., *Istoria del granducato di Toscana sotto il governo della casa Medici,* 8 vols., (2nd. ed. Florence 1781).

GASCON R., *Grand commerce et vie urbaine au XVIe siècle: Lyon et ses marchands,* (Paris 1971).

GASCON R., 'Au carrefour des concurrences: draps de France et draps étrangers à Lyon au XVIe siècle', in M. Spallanzani, ed., *Produzione commercio et consumo dei panni di lana (nei secoli xii-xviii),* (Florence 1976), pp. 393-402.

GOUBERT P., *Beauvais et le Beauvaisis de 1600 à 1730,* (Paris 1960).

GRAMULLA G.S., *Handelsbezieungen Kölner Kaufleute zwischen 1500 und 1650,* (Cologne-Vienna 1972)

GUICCIARDINI L., *Descrittione di tutti i Paesi Bassi, altrimenti della Germania inferiore,* (Antwerp 1567).

HOSHINO H., *L'Arte della lana in Firenze nel basso medievo,* (Florence 1980).

HOSHINO H., 'Messina e l'arte della lana fiorentina nei secoli XVI-XVII' in G. Motta, ed., *Studi dedicati a Carmelo Trasselli* (Soveria Mannelli, 1983), pp. 427-446.

HOSHINO H., 'Alcuni aspetti del commercio dei panni fiorentini nell'impero ottomano ai primi del '500', in Hoshino, H., *Industria tessile e commercio internazionale nella Firenze del tardo medioevo,* (Florence 2001), pp. 125-135.

HOSHINO H., 'Il commercio fiorentino nell'impero ottomano: costi e profitti negli anni 1484-1488', in Hoshino, H., *Industria tessile e commercio internazionale nella Firenze del tardo medioevo,* (Florence 2001), pp. 113-123.

Inalcik H., *An economic and social history of the Ottoman Empire, 1300-1600,* (Cambridge 1997).

Lapeyre H., *El comercio exterior de Castilla a través de las aduanas de Felipe II,* (Valladolid 1981).

Malanima P., *La decadenza di un'economia cittadina: l'industria di Firenze nei secoli XVI-XVIII,* (Bologna 1982).

Masi G., ed. *Statuti delle colonie fiorentine all'estero (secc. XV-XVI),* (Milan 1941).

Morelli R., *La seta fiorentina nel Cinquecento,* (Milan 1976).

Phillips C.R. and W.D., *Spain's golden Fleece: wool production and the wool trade from the middle ages to the nineteenth century,* (Baltimore 1997).

Richards G.R.B., *Florentine merchants in the age of the Medici,* (Cambridge Mass. 1932).

Roland de la Platière J., 'La Draperie' in *Encyclopèdie Methodique: Manufactures, Arts et Métiers,* I, pp. 256-440, (Paris 1785).

Romano R., 'A Florence au XVIe siècle: industrie textile et conjoncture', *Annales E.S.C.*, 7 (1952), pp. 508-12.

Ruiz Martin, F., *Lettres marchandes échangées entre Florence et Medina del Campo,* (Paris 1965).

Sassetti F. 'Sul commercio tra la Toscana e le nazioni levantine: ragionamento di Filippo Sassetti (1577)', *Archivio Storico Italiano,* appendice IX (1853), pp. 166-88.

Savary des Bruslons J., *Dictionnaire universel de commerce,* 3 vols., (Geneva 1742).

Segarizzi A., ed., *Relazioni degli ambasciatori veneti al senato,* 4 vols., (Bari 1916).

Sella D., 'Mouvements longs de l'industrie lainière à Venise aux XVIe et XVIIe siècles' in *Annales E.S.C.*, 12 (1957) pp. 29-45.

Sella D., 'L'economia', in *Storia di Venezia,* 6, (Rome 1994), pp. 651-711.

Spallanzani M., '"Modo da crescere l'entrate di Firenze": Un progetto presentato a Cosimo I', *Annali della scuola normale superiore di Pisa,* classe di lettere e filosofia, ser.III, XVI (1986), pp. 517-33.

Tadic J., 'Le commerce en Dalmatie et à Raguse et la décadence économique de Venise au XVII siècle', in *Aspetti e cause della decadenza economica veneta nel secolo XVII,* (Venice 1961), pp. 237-74.

Thijs A., 'Les textiles au marché anversois au XVIe siècle', in Aerts, E., and Munro, J. H., eds., *Textiles in the Low Countries in European economic history,* vol.

19 of the proceedings of the tenth international economic history conference, Leuven, 1990, (Leuven 1990), pp. 76-86.

THIMME H., 'Quellen zur Geschichte der italienischen Kaufmannschaft in Köln um des Wende des 16 Jahrhundert', *Mitteilungen Stadtarchiv Köln,* Bd. 14, Hft. 35 (1914), pp.33-94.

TUCCI U., *Lettres d'un marchand vénitien, Andrea Berengo (1553-1556),* (Paris 1957).

ULLOA M., *La Hacienda real de Castilla en el reinado de Felipe II,* (Rome 1963).

VACCHELLI G., 'Un operatore economico del primo '500: Tuccio di Giovanni Fieravanti, 1490(?)-1544', in *Studi in memoria di Federigo Melis,* (Naples 1978), III, pp. 543-68.

VARCHI B., *Storia Fiorentina,* 2 vols., (ed. Florence, 1838-1843).

VASQUEZ DE PRADA V., *Lettres marchandes d'Anvers,* 4 vols., (Paris, n.d.).

VECELLIO C., *Habiti antichi e moderni di tutto il mondo,* (Venice 1590; edition of Paris, 1860).

WALEY D, 'A "sommario di mercantie in Inghilterra" (1555)' in *Aspetti della vita economica medievale.* Atti del convegno di studi nel X anniversario della morte di Federigo Melis, Firenze-Pisa-Prato, 10-14 marzo 1984 (Florence 1985), pp. 232-242.