

At the Centre of the Old World

*Trade and Manufacturing in Venice
and the Venetian Mainland,
1400–1800*

Edited by

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THE PRODUCTION OF WOOLLENS IN FIFTEENTH- AND SIXTEENTH-CENTURY VENICE¹

ANDREA MOZZATO

Although there are many studies of the Italian wool industry, especially for Tuscany and Lombardy, very few of these have dealt with medieval Venice, where greater attention has been paid to the early modern period.² This disinterest does not so much reflect a lack of source material as an approach that goes back to two major historians of the early twentieth century, Roberto Cessi and Gino Luzzatto.³ Their interpretation, which was incorporated into post-war and subsequent historiography, regarded not just the wool industry but the manufacturing sector in general.

In 1381, the peace of Turin ended the long period of warfare between the republics of Genoa and Venice that had begun in the mid-thirteenth century. In 1405, Venice established a mainland empire

¹This article is based on my doctoral thesis *L'arte della lana a Venezia nel basso Medioevo: Materia prima, produzione e produttori*, Università degli Studi di Milano, 2001–02. Directors: Rinaldo Comba and Patrizia Mainoni. I am grateful to James Shaw, Jane L. Stevens and Alexandra Bamji for their help in the translation. In this article I will use the following abbreviations: ASV = Archivio di Stato di Venezia; CN = Collegio, Notatorio; GP = Giudici di Petizion, Sentenze a Giustizia; GPter = Giudici di Petizion, Terminazioni; IA = Inquisitore alle Arti, Lanificio, Camera del Purgio; M = Mozzato, *La Mariegola dell'Arte della Lana*; NA = Notarile, Atti; PC = Provveditori di Comun; SM = Senato Misti; SMr = Senato Mar; ST = Senato Terra; UM = Ufficiale delle Messetteria.

²Research for this article has been limited to institutional aspects. Fano ('Ricerche sull'arte della lana') and Sella ('The rise and fall') took up the theme to describe the rise of wool manufacturing in the 1520s and its decline in the eighteenth century. See also Mozzato, *La Mariegola dell'Arte della Lana*, [henceforth M]. For the later period, see Panciera, *L'arte matrice*, 42–43 and bibliography. For a bibliography of Tuscan and Lombard wool manufacturing, see Epstein, *Freedom and growth*, 122–138.

³Cessi, *Politica ed economia*; Cessi, *Storia della Repubblica di Venezia*, 275–278; Luzzatto, *Storia economica di Venezia*, 62–63, 173–174; Luzzatto, *Breve storia economica*, 138. On the relation between Luzzatto and subsequent historiography, see Lanaro, *I mercati della Repubblica Veneta*, 15–16.

and, from being an exclusively maritime power, became one of the most powerful territorial states in Italy. For Venice this marked the beginning of a new historical period, lasting almost a century and a half, marked by broadly common features at the political, economic, social, and especially commercial level. In general, this was a golden age for maritime trade. It was only following the anti-Venetian coalition of the League of Cambrai and the peace of Bologna in 1530 that a rather different historical period began, with the Republic reduced to being a second-rank international power. In this context, according to Cessi and Luzzatto, the maritime orientation of the city throughout the medieval period acted to obstruct the development of manufacturing, with the exception of shipbuilding and related crafts. Industrial interests were opposed by stronger ones based in international trade, the principal source of wealth for the noble ruling class. At the institutional level, the division between merchants and artisans was achieved with the total subjection of the guilds to the state and with their exclusion from all political power in the decades leading up to the ‘closing’ of the Great Council in 1297 (the *Serrata*).⁴ With regard to the wool industry, it was more important to guarantee the free passage of foreign cloths (from Germany, Poland, England, Flanders, Bergamo, Brescia, Padua, Vicenza, Verona, Feltre, etc.) through the Venetian market of Rialto on their way to the Levant, than it was to limit the ‘free’ circulation of goods in order to protect local industry. In other words, it was necessary to safeguard the interests of noble merchants at the expense of wool manufacturers, who were excluded from high commerce. This interpretation assumes a clear separation of roles between political and economic forces. However, while it contains some elements of truth, it is excessively schematic and requires some revision. Above all, as has been recently noted, artisans were not in fact excluded from long-distance trade and the manufacturing sector was doubly advantaged by Venice’s commercial power, both for the supply of raw materials and for the easy sale of finished products in foreign markets.⁵

One of the reasons that historiography has continued to insist on the weakness of the wool industry in the medieval period may be the explosive growth the industry recorded in the sixteenth century.⁶ This

⁴See Lane, ‘L’ampliamento’ and Mackenney, *Tradesmen and Traders*.

⁵Mackenney, ‘The Guilds of Venice,’ 15–43.

⁶See Cracco, *Società e stato*, 198–294; Tucci, ‘L’economia veneziana nel Quattrocento,’ 16; Rösch, ‘Le strutture commerciali,’ 439; Panciera, *L’arte matrice*, 39–40.

expansion has been explained as the result of three factors: the loss of maritime supremacy, a change that supposedly favoured the industrial sector; the flight of foreign capital to a safe refuge during the Italian wars; and the great capacity of the wool manufacturers to respond to changes in the market by producing new light cloths in the Dutch style, increasingly demanded by Levantine clients.⁷ Although correct and generally accepted, these explanations remain only partial because they make no allowance for the pre-existing situation and how structures that were already functioning were able to respond to external events (such as war, competition from new products, and immigration). These stimuli favoured the expansion of wool manufacturing, but it had a long history behind it. In this article I will show that the commercial power of the fifteenth century did not constitute an obstacle for the wool industry, the sector that (according to Cessi and Luzzatto) was the most heavily penalized by the maritime orientation of the city, but rather stimulated its development without any contradiction between the mercantile and artisan classes.⁸

1. Raw Material

A wool manufacturer operating in the great Venetian trading empire had the advantage of being easily able to purchase raw materials of different qualities and provenance, allowing him to produce different types of cloths as demand required. From the high Middle Ages to the early sixteenth century, Rialto was one of the largest supply centres for raw wools, hides, silks and 'industrial spices' (alum, ash, kermes, woad, madder, brazilwood, indigo, colocynth, etc.). The city was supplied with wools from the Veneto hinterland (*lane nostrane*), from South Italy, from England and Flanders (*lane francesche*), from Spain, Greece, Germany, Provence, and the Islamic World.⁹ Although we know how much wool was imported by certain merchants over limited periods, it is impossible to obtain a yearly estimate of the total volume for the whole

⁷See Sella, 'The rise and fall,' 112–113; Panciera, *L'arte matrice*, 44–49. On the new political and economic conditions of the sixteenth century, in addition to Lane, *Storia di Venezia*, 292–293, 356 et seq., see also Tucci, 'Venezia nel Cinquecento,' 61–83.

⁸Remarks in relation to these ideas can be found in Crouzet-Pavan, *Venezia trionfante*, 186–187, 193–195 and Caravale, 'Le istituzioni della Repubblica,' 322–323.

⁹On silk, see Molà, *The Silk Industry*, 55–88.

city. The numbers are, in any case, high: it would have taken just three importers of the calibre of Marino di Paolo Contarini, who loaded around 800 sacks from Spain in 1422, to guarantee the entire production of 4,000 cloths in the early fifteenth century. And there were far more than three importers.¹⁰ According to the *Provveditori di Comun* (the magistracy supervising the Wool Guild), in 1512, at a time of severe shortages of raw materials, more than 200 out of 562 bales of English wool arriving with the Flanders galleys were sold to Italian merchants, while the remainder was left to local manufacturers. This figure gives some idea of how much wool was re-exported and how much was processed by Venetian manufacturers (35–40%).¹¹

In line with the city's traditional function as a commercial intermediary, the government adopted a policy for wool similar to that for grain and salt: to force raw materials to arrive from all locations in order to demand higher prices from the inhabitants of the mainland dominion and from foreigners.¹² Yet, since wool was not a prime necessity (in contrast to foodstuffs), the government could manipulate policy to enlarge – or restrict, according to city stocks – the merchants' freedom of action. On the one hand, the authorities might forbid, or permit, supplies of low quality wool to producing areas, while at the same time introducing regulations limiting the use of these inferior qualities to the weaving of restricted types of cloth, just as it did for other wool manufactures.¹³ On

¹⁰Archivio di Stato di Venezia (ASV), *Giudici di Petizion, Sentenze a Giustizia* [henceforth GP], reg. 42, fol. 88v. Approximately 12 cloths of various quality could be produced with 477 kg. See Rebora, 'Materia prima,' 150. According to the cases analyzed, each merchant bought an average of 150 to 230 sacks per year. Sella ('L'economia,' 160) assumed 150 tons of wool, but this estimate, though correct, cannot be considered representative because it is based only on production within the city and takes no account of re-export.

¹¹ASV, *Senato Mar* [henceforth SMr], reg. 17, fol. 164v.

¹²See Hocquet, 'I meccanismi dei traffici.' Already in the fourteenth century, the Senate ordered that cargoes of wools leaving Spain should be subdivided in the ratio 1/3 wool to 2/3 salt; Hocquet, *Le sel et la fortune de Venise*, 159.

¹³English, Spanish, and locally produced wools always received favourable treatment, while the lower-quality wools of Greece were prohibited in 1444, permitted solely for the weaving of cloths of 40 portee (a unit of measure for the warp) in 1450, and prohibited again in 1475 when better quality wools were available. Similar treatment was reserved for wools from South Italy, whereas the fifteenth-century legislation altogether excluded wools from Barbary and Dalmatia (*Giudecca*), although their use is documented elsewhere; See Rebora, 'Materia prima,' 150; M 469, 545; ASV, *Provveditori di Comun* [henceforth PC], b. 1, fol. 161r; ASV, *Senato Terra*

the other hand, they established on an annual basis how much imported wool to sell to foreigners and how much to reserve for Venetian artisans.

In the second half of the fourteenth century, wars with Genoa and the interruption of the route to Flanders caused shortages. In 1374, the Senate lowered duties and permitted foreigners to pay at the same rate as Venetians, in order to boost imports of all types of wool. To favour local producers, it was forbidden to re-export by sea locally produced.¹⁴ At the turn of the century, trade rapidly improved and the economy recovered. At the start of the fifteenth century the price of Spanish wool fell significantly; the re-export of wool from San Matteo, previously barred in favour of Venetian artisans, was again permitted, and import duties were raised. According to Doge Tommaso Mocenigo, Venice imported and re-exported 'francesca' (i.e. English) wool for a value of 120,000 ducats, along with a similar quantity of Catalan wool.¹⁵ In 1419, duties on locally produced wool were removed altogether in order to attract these to the city. At the same time, the government obliged the subject territories to obtain their supplies of foreign wool via the capital, although not without granting special exemptions, and with only limited results.¹⁶ Between 1430 and 1450 there is no documentary evidence available, but it is probable that stocks were low, at least for Veneto wools: in 1433 the drapers protested because there was little wool in the city and they were unable to guarantee production quality.¹⁷ At mid-century a second recovery is suggested by the indiscriminate taxation to pay for the public debt built up during the wars of Lombardy, an imposition that hit all wools coming from the west. In 1471, the Senate went back to taxing locally produced wool at the same rate as Spanish imports and also allowed it to be exported. According to the senators, up to the mid 1480s there was an 'extraordinary abundance' of wools in the city.¹⁸

[henceforth ST], reg. 1, fol. 145v; Paxi, *Tariffa*, 98.

¹⁴ASV, *Senato Misti* [henceforth SM], reg. 28, fol. 7r; reg. 34, fol. 150v; M 210, 295.

¹⁵SM, reg. 46, fol. 135r; Archivio di Stato di Prato, Archivio Datini [henceforth ASP, AD], b. 712, 27 Feb 1399; b. 714, Carteggio di Venezia, Commissaria di Zanobi Gaddi, 11 Mar. 1403 (=1404); *Bilanci generali*, 578–579.

¹⁶SM, reg. 52, 198v; ST, reg. 2, fol. 162v, reg. 6, fol. 149r; SMr, reg. 1, fol. 122v; reg. 4 fol. 192r.

¹⁷SM, reg. 59, fol. 6v.

¹⁸SMr, reg. 5, fol. 108r; reg. 9, fol. 178r; ST, reg. 6, fol. 150v. On the increased

In 1485, renewed protests from wool manufacturers marked the commencement of another crisis in raw materials, one that was much more serious and destined to last until the 1520s, striking the industry at precisely the moment when the government considered it to be 'of great reputation and at its height.'¹⁹ The shortage struck English wools in particular. The situation worsened in the 1490s as a result of Florentine pressure on the king of England to open a staple at Porto Pisano similar to that existing at Calais. This would have allowed English merchants to export their wool to the Mediterranean while handing the monopoly for Italy over to the Tuscans. Venice averted the danger by slashing transport costs on Venetian ships and threatening to interrupt the export of oriental spices and Cretan wine.²⁰ A further problem was presented by the poor condition of state galley lines to Flanders and England, which would finally be abandoned around 1530. Between 1496 and 1502, only two voyages were made. In response to the shortage of English raw materials, in almost every year from the end of the fifteenth century to the start of the 1540s, the Senate offered concessions to foreign importers: the lowering of charterage and customs duties (import tax, property tax and 'messetteria', or brokerage tax), the transport of wool via land and the use of non-Venetian ships.²¹

Turkish wool was also scarce as a result of war with the Ottomans and problematic relations with the Mamelukes, which remained tense until at least 1510.²² In 1504 there was a short breathing space, interrupted the following year by a fire in the *Fondaco dei Tedeschi*, the old German trading house and the point of arrival for caravans transporting English and Flemish wool overland. Again in 1513 a general invitation went out allowing anyone to import wool from the eastern Mediterranean. From this date onwards, Venetian workshops made increasing use of Turkish and Dalmatian wools.²³

production of local wools, see Demo, *L' 'anima della città,*' 28–39.

¹⁹Commerce was generally in a critical state: the number of ships constructed fell from 300 in the mid fifteenth century to only 16 in 1502. The Senate noted that foreign merchants were wary of importing any sort of merchandise to Venice; ST, reg. 11 fol. 28r; SMr, reg. 15, fol. 157r; reg. 17, fol. 81r. See also Ruddock, *Italian merchants*, 226–227.

²⁰*Calendar of State Papers etc.*, ed. Brown, 184–188. On foreign importers in the sixteenth century, see Goldthwaite, 'The Florentine Wool Industry,' 534–536.

²¹For example, SMr, reg. 13, fol. 10v; reg. 15, fol. 71v, fol. 78v; reg. 20, 44r; reg. 31, fol. 121r. See also Doumerc, 'Il dominio del mare,' 124–125.

²²See Arbel, 'The Last Decades,' 39.

²³SM, reg. 18, fol. 4r; Tadić, 'Jugoslavia e Paesi Balcanici,' 292.

It is generally recognized that England reduced its wool exports in the sixteenth century. For Venice this must be placed in relation to difficulties in the spice trade.²⁴ Yet, for most of the sixteenth century, although not at previous levels, Venetian wool manufacturers continued to work with 'francesca' wool transported on private ships or via the Rhine valley.²⁵ Production of high quality woollens (cloths and caps) used mostly this type of raw material.²⁶ When English wool was lacking, manufacturers repeatedly asked the authorities (from 1515 to 1542) to free up wool production and to permit the use of other wools in textiles made previously with English wool alone.²⁷

In 1530 the crisis in raw materials finally came to an end. Wool imports from England picked up in parallel with a recovery in the spice trade. This was the result of difficulties experienced by the Portuguese because of the Turks who, following their conquest of Mameluke territory in 1517, were able to defend the Levantine trade more effectively than the Venetians had done.²⁸ The Senate noted the fact that, after a period of increases in the price of raw materials caused by limited supply and strong demand, prices had returned to lower levels.²⁹ In 1553, during a crisis in the supply of Spanish wool, English wool, which remained abundant 'by the grace of God' (as the Senate put it), became the sheet-anchor for those manufacturers registered with the

²⁴In the early decades of the sixteenth century, war between the Spanish and Turkish empires, an increase in piracy and a temporary crisis in spice imports forced the Venetians and Mamelukes to raise prices, which had the effect of significantly reducing the re-export of pepper to England in exchange for wool. On the decline of English exports, see Lloyd, *The English Wool Trade*, 99, 257–287; Ramsay, 'The Merchants of the Staple,' 46–60 and bibliography.

²⁵M 742–743; Lane, *Storia di Venezia*, 406–407; Stabel, 'Italian Merchants,' 153.

²⁶Around 1506, the number of cap-maker workshops increased from 5 to 80; Arbel, 'The Last Decades,' 55.

²⁷M 810; ST, reg. 19, fol. 41r; PC, b. 1, fol. 142r.

²⁸Arbel, 'The Last Decades,' 37–86; Lane, *Storia di Venezia*, 337.

²⁹From 32 to 25 ducats per 100 pounds (PC, b. 1, fol. 149r). English wool was the object of close legislative attention: its processing was kept clearly separate from that of Spanish wool at a juridical level (people could register in the guild or form companies to work only one variety of wool) and at a physical level (with a distance of at least 50 metres between workshops); PC, b. 1, fol. 146r (1520), fol. 189r. One example of a company for the exclusive use of English wool is that of Salvatore di Cristoforo Ruzier and Melchiorre Sessa (1548); ASV, *Notarile, Atti* [henceforth NA], b. 3252 (Marc'Antonio Cavaneis), fol. 343v.

Wool Guild as working in Spanish wool, but who were now permitted to work with other varieties.³⁰ The road to success, however, was to be shown by Italian wools. From the moment that Spanish wools virtually disappeared from the market altogether and prices soared, the old decrees limiting the use of Spanish raw materials to just *garbo* cloths in the Florentine style were abolished (1573) and the use of locally produced, Italian, Turkish, and French wools was permitted.³¹

2. Cloth Production

Production estimates have already been made for the early modern period. According to some historians, the annual number of cloths remained below 4,000 during the first twenty years of the sixteenth century; the limit of 10,000 was exceeded in 1548 and reached almost 30,000 cloths in 1602, before falling back to 10,000 by 1655. In the first and second halves of the eighteenth century, the respective totals were 2,000 and 1,000 cloths woven annually. For the late medieval period, however, there are no sources that allow such a detailed curve to be drawn.³²

In 1381, during the immediate post-war crisis, annual production was probably around 800 cloths, but soon recovered. In a plea to the Senate of 1423, the Wool Guild stated that over 3,000 cloths were produced in the city.³³ This figure corresponds to that given in the same year by Doge Mocenigo: Venice imported 48,000 cloths from Tuscany, Lombardy, France, Flanders, and England, while it exported precisely the number of cloths described by the guild.³⁴ In 1433, according to the *Provveditori di Comun*, production fell from 4,500–5,000 to just 1,400 cloths. It should be noted however that more cloths must have been woven in the city because the *Provveditori* took into account only the high quality products made with local wool and destined for the internal market, not the cheaper cloths produced for export.³⁵

³⁰M 767. In 1569 charterage was eliminated for English wool. M 810.

³¹M 817, 818. For an example of importers of Turkish wools from Pera and Silivri, see the acts of Bernardo and Girolamo dalla Croce in NA, b. 11636 (Marino Renio), fol. 50r (1576).

³²Sella, 'The rise and fall,' 28–29 and Panciera, *L'arte matrice*, 42–43.

³³Each merchant could have no more than 3 cloths fulfilled per month. Since twenty members were registered around 1380, this gives an annual production of around 720 cloths; M 230.

³⁴M 361; *Bilanci generali*, 578; see also Mackenney, 'The Guilds of Venice,' 31.

³⁵SM, reg. 59, fol. 4r.

According to the authorities, during the first half of the century woollen manufacturing was in a bad way with an average annual production of 3,000 cloths, not counting the lower quality cloths.³⁶ There was undoubtedly some growth in the 1450s. In 1458, the Senate exalted the recovery 'in a great rush' of manufacturing of products of all types, but particularly the imitation Florentine *garbo* cloths produced with Spanish wool that were in high demand in Ottoman markets.³⁷ It was in this same period that the firm of Giova-Tagliapietra was producing mostly *bassi* ('low') and *garbo* cloths destined for Constantinople.³⁸ Although the source gives no estimate of production, the growth is nevertheless proven by the volume of foreign cloths flowing through the Customs House and passed off as cloths of St. Mark. When a product is imitated, as in the case of the light Dutch cloths that were to make the fortune of wool manufacturing in the sixteenth century, it is a sign that demand for that product is strong enough to stimulate supply. No less than 6,000 foreign cloths in fake 'Venetian style' were exported from the start of 1456 to 1458 (2,000 per year).³⁹ These imitation goods, to which must be added those coming from other centres of the Venetian hinterland,⁴⁰ were produced not just by the wool manufacturers themselves, but also by numerous teaselers and dyers buying semi-finished cloths. Those primarily responsible for the production of imitations were however the many noble merchants who commissioned cloths in England to be woven in the Venetian style.⁴¹ In the context of production that was by no means passive, it is probable that around 5,000 cloths per annum were produced in the mid-fifteenth century, taking into account these 'Venetian style' imitations.

There are no data available for the 1460s and 70s, but an estimate of the daily cost of washing cloths at the *Purgo* (Wool Office) in 1490 leads to a estimated total (here omitted for brevity) of at least 6,000 cloths.⁴² The result of this calculation is confirmed by the figures

³⁶For example, M 332 (Senate, 8 Jun 1419).

³⁷See M 817. See Hoshino, 'Il commercio fiorentino nell'impero ottomano,' 115.

³⁸GP, reg. 130, fol. 108r. 'Low' cloths were those with less than 60 portee.

³⁹ST, reg. 4, fol. 92r.

⁴⁰For example, in the workshop of Basilio Bronzolo in 1451, Wool Guild officials found counterfeit seals for cloths in the 'Brescian style', made by a goldsmith acquaintance, which he applied to his own products as well as to cloths imported from Vicenza; ASV, Avogaria di Comun, Raspe, reg. 3650, I, fol. 20v.

⁴¹ST, reg. 4, fol. 71r.

provided by the heads of the Wool Guild in 1556 and 1573, according to whom annual production was around 6,000 cloths before the ‘great leap forward’ at the end of 1540s.⁴³ In 1412, at the time of the construction of the *Purgo*, the authorities had optimistically planned to equip the new building with seven tanks, in which, theoretically, 15,000 cloths could be washed every year.⁴⁴ In 1551, when that limit was reached, the tools and space were no longer sufficient and the buildings were extended. In 1587, to meet the production requirements of over 22,000 cloths, a bigger workshop was constructed on the *Fondamenta della Croce*.

Changing point of view, the few and precious production estimates available for individual firms show the same trend described above. In 1488, the guild insisted that to participate actively in the guild and to merit the title of *lanaiolo* (wool manufacturer) operators had to produce at least 60 cloths in three years. A draper produced an average of 55 cloths per year, while 20 was the minimum permitted to have any weight in the guild.⁴⁵ Venetian workshops therefore had the same production levels as those in other European manufacturing centres.⁴⁶ Multiplying this figure by the number of manufacturers registered in the early fifteenth century (see below), the figure of 3,000 cloths is easily exceeded: the 69 participants in the *capitolo*, or decision-making assembly of the corporation, could have produced 3,800 cloths in 1408, while in 1466 the 116 manufacturers could have produced 7,000 cloths. In 1505,

⁴²The ‘Purgo’ was both the headquarters of the guild and also the state workshop where cloths were washed; from 1474 only cloths made in the city could legally be ‘purged’ there (M 572, 600). There is evidence to show that it was already normal practice to exclude foreign cloths prior to this date.

⁴³M, ‘Prefazione,’ XVI and 783, 817, 844.

⁴⁴M 290.

⁴⁵M 687. Some estimates of annual production: 1381, all members: 36; 1393, Nicolò da Fabriano: 68; 1405; 1413, Ziossi-Morosini, 210, 351 in 20 months; 1423, Malombra 86, 36 in 5 months; 1456–58, Tagliapietra-Giova: 29, 80 in 33 months; 1484, Barelli-Cappello: 54; M 230; GP, reg. 5, fol. 39r; reg. 60, fol. 78r; reg. 96, fol. 152v; reg. 130, fol. 108r; reg. 185, fol. 20r.

⁴⁶In Florence, average annual production per workshop fell from around 100 cloths in the period 1378–1382 to 44 in the period 1425–1430, but recovered in the second half of the fifteenth century (Franceschi, *Oltre il ‘tumulto’*, 16; Hoshino, *L’arte della lana*, 227). In Prato, the firm of Francesco di Marco Datini produced an average of 55 cloths in the period 1395–1399 (Melis, *Aspetti*, 631). In the fourteenth century, workshops in the German towns of Cologne and Frankfurt could each produce 35–50 and 20–25 cloths respectively (Malanima, *Economia preindustriale*, 276).

when, following the crisis, the number of workshops fell to 66, production fell by half, returning to around 4,000 cloths per year. However, these figures, which are based solely on the number of people eligible to vote in the assembly, do not take any account of the production of the great noble merchants since in the fifteenth century these were not obliged to enrol in the guild.⁴⁷ As detailed above, in 1512 the authorities were concerned about the scarcity of English wool – they calculated that with just 362 bales the artisans could have worked only for three months at the previous rate of production. In 1525 the shortage was not yet over, since the 210 bales available were sufficient for only two months.⁴⁸ From this we can deduce that in the period preceding the crisis in raw materials that began in the final decades of the century, around 9,500 cloths were produced each year with ‘francesca’ wool alone, not counting locally produced, Spanish, Apulian, Cretan, and Balkan wools.⁴⁹ In 1442, Iacopo d’Albizzotto Guidi, a Florentine poet and skilled merchant active in Venice and the Levant, was not exaggerating when he wrote in his verse poem that ten thousand ‘gross’ and ‘fine’ cloths were produced in the city.⁵⁰

3. The Venetian and Foreign Labour Force

How many workers were employed in Venetian wool manufacturing? Each workshop had an average of 6 to 8 artisans. The dimensions of workshops varied to some extent over time, contracting at moments of crisis (as in 1505). This is shown by two estimates carried out at a distance of two centuries. In the first, dating from 1359, the authorities shared out the 187 carders and combers who had survived the Black Death

⁴⁷Great entrepreneurs such as Morosini and Contarini have been excluded from this calculation because there is not sufficient data to know if these constituted exceptional cases. The 500 cloths that Antonio Contarini claimed to have worked in his workshop probably did not include any foreign fabrics (ASP, AD, b. 929, fasc. 2, 515066, 22 March 1404).

⁴⁸ASV, Compilazione Leggi, b. 234, fasc. 404; SMr, reg. 17, fol. 164v.

⁴⁹Around 10,000 cloths in 1512 (362 bales x 7 cloths x 4 three-month periods) and around 9,000 cloths in 1525 (210 bales x 7 cloths x 6 two-month periods). A bale of French wool was sufficient for 7 *alti* (‘high’) heavy cloths (each containing approximately 35 kg of wool; Rebora, ‘Materia prima,’ 150). This figure is in proportion to the weight indicated in the statute, M 256; see also Sella, ‘L’economia,’ 160.

⁵⁰Guidi, *El sommo*, XV, 47.

equally among the 25 workshops. In the second, dating from 1575, at a time of rapid expansion and one month prior to a second great plague, the notary Luca Gabrieli counted 320 workers in 41 workshops, almost all of them from Veneto and Lombardy.⁵¹ The number of participants in the guild assembly throws further light on the number of workshops in the fifteenth century. From 1343 on, in order to belong to the corporation a draper had to be the owner of at least one shop, enrolling only a single member of his family in the guild.⁵² In the first two decades the average number of participants was 50, with a maximum of 69 manufacturers in 1408; in the 1430s the average was 25; in the period 1440–60 there are no data; in 1488 there were 48 and in 1502 there were 143. It must be noted however, that the number of shops and their proprietors registered in the guild is proportional to, but does not correspond precisely with, the true number of entrepreneurs. The assembly did not reflect the full total. In theory, a workshop gave the manufacturer access to rights, while allowing the state to identify the firms to be taxed, regulated, and, if necessary, punished.⁵³ In practice, however, there were many who practiced the trade in their own right or for others without any reference to physical location. When the Senate adjusted the brokerage tax in 1515, this was applied both to producers who owned workshops and to those who did not.⁵⁴ Based on

⁵¹For 1359, M 134; for 1505 M 733; for 1575, NA, b. 6519, fol. 76r; I am grateful to Edoardo Demo for the latter reference. In both periods there were workshops with a minimum of 2 to a maximum of 15 people, according to the wealth of the entrepreneur. In 1429 there are cases of 6 people in a tailor's workshop. ASV, *Collegio, Notatorio* [henceforth CN], reg. 7, fol. 60v.

⁵²M 117, 488.

⁵³On the requirement to be proprietor of a workshop, in a dispute with the wool-beaters and carders heard by the Council of Ten in 1539, the wool manufacturers argued that their opponents had no right to create their own guild because they had no shops (M 733; Lane, *Storia di Venezia*, 361–362). See also Degrassi, *L'economia artigiana*, 58; Franceschi, *Oltre il 'tumulto'*, 46–47.

⁵⁴ST, reg. 19, fol. 39r; I am grateful to Reinhold C. Mueller for this reference. The weight exercised by a black labour market of people working for foreign entrepreneurs outside the guild will be examined below. The Senate was almost certainly referring not to artisans, but to noble merchants outside the guild who were involved in the production process. In 1507 'the noblemen ser Francesco Duodo and ser Carlo Contarini [must] pay the brokerage tax for cloths which they have had made in the city even though they have no workshops for cloths or wool, nor do they employ any factors or salaried masters as the law requires'; M 705. On the black market economy, M 488 (1448).

our direct count of wool manufacturers, in the 1560s there were around one hundred artisans, while only half that number participated in the assembly.⁵⁵ 'Every day – remarked the heads of the guild – new manufacturers arrive to practice the wool trade,' but not all of the new arrivals participated regularly in meetings.⁵⁶

The rest of the workforce must have been large, but it is not possible provide figures. High numbers of weavers can be deduced from the fact that the authorities often noted the threat that they posed to public order.⁵⁷ As a result of the great retail market of Rialto and the flourishing silk industry, there were many dyers and shearers and they appear frequently in the sources. For carders, combers and beaters, the evidence is somewhat better. In 1408 the seventy or so heads of workshops present in the assembly employed around 560 people (an average of seven per workshop, plus an apprentice). In 1505, during the crisis, employees of the 66 workshops stated before the Heads of the Council of Ten that there were over 200 artisan heads of families (3 per shop) in the city, while in 1537, after the crisis, the proprietors of the 130 workshops counted 1,800 workers (14 each), in addition to 4,000 seasonal workers from the subject territories.⁵⁸

These data suggest around 1,500 employees in the late fifteenth century. This is much lower than the figure suggested by another piece of evidence: in 1512 the Senate spoke of literally 30,000 people who made their living thanks to the wool industry. Given a family nucleus of 4–5 people, this means that there were 6–7,000 workers active at the

⁵⁵M 523 (1471). For a comparison with Florence, in the same period Hoshino calculated 111 and 122 firms respectively (*L'arte della lana*, 283).

⁵⁶Many names in the registers do not appear among the participants. In addition, note the enormous disparity between 27 voters in 1500 and 143 voters only two years later.

⁵⁷In 1463 master weavers were prevented from owning more than three looms per workshop in order to avoid the emergence of internal differences among their number and the creation of dangerous concentrations of workers (mostly Germans). This ban indirectly reveals the existence of large weaving shops with high levels of production. M 354. See also Molà, 'Fondaci, mercanti, artigiani,' 167–168; Braunstein, 'Appunti per la storia di una minoranza,' 551. On spinners there is only one piece of data: in 1413 the nobleman Ludovico Morosini employed 27 wool spinners (GP, reg. 72, fol. 76v). In 1488 around thirty silk workshops provided a living for 300 people, with a ratio of 10 women per shop (Molà, *La comunità dei Lucchesi*, 144 and Id., 'Le donne nell'industria serica,' 442).

⁵⁸M 733.

end of the century.⁵⁹ It would have been difficult for the 66 workshops of 1505 to have provided work for such a huge number of artisans. Some probably worked in the service of noble merchants without workshops; others, previously in the employment of the over one hundred entrepreneurs of the late fifteenth century, were perhaps hit by unemployment as a result of the shortage of supplies noted above. In 1556 the drapers estimated that out of a population of 190,000 souls, 36,000 were made up of wool workers, weavers, and their dependents.⁶⁰ Although the accuracy of this figure remains unclear, in any case it reflects the strong increase in cloth production of the mid sixteenth century. Nevertheless, in the early decades, the number of workers inherited from the previous century cannot have been much lower, and this again suggests a level of similarity between the late fifteenth and the early sixteenth centuries.

The majority of the workers, whether qualified or not, were foreigners: out of more than one thousand registered artisans, around a third were of foreign origin and of these only one third obtained citizenship.⁶¹ This was a constant feature of Venetian wool manufacturing from its beginnings. Unlike silk manufacturing, where there was a marked presence of artisans from Lucca, wool manufacturing appears to have been ‘multi-ethnic.’ One third of the specialist masters who registered came from Lombardy and especially from the flourishing industries of Monza and Milan, at the cutting edge of technology in the fourteenth century but in decline during the fifteenth.⁶² In the fourteenth century, the percentage of Lombards appears roughly equal to that of Tuscans, while in the fifteenth century the former became the majority, with a strong presence of Bergamascans. One fifth of the registered artisans came from the Veneto and around one tenth came from Emilia and the Balkans respectively.⁶³

⁵⁹SMr, reg. 17, fol. 164v. Melis (*Aspetti*, 551) counted a thousand people working for Datini alone, with production of 220 cloths in three years.

⁶⁰M 783 (1556); Lane, *Storia di Venezia*, 25. On demography, see also *Il sistema demografico alla fine delle grandi epidemie*.

⁶¹The citizens by privilege or by grace were subdivided into *cives de intus* and *de extra*: the former could trade only on the internal market, the latter could also trade in the Levant. On Venetian citizenship, see Mueller, “‘Veneti facti privilegio’” and bibliography.

⁶²Mainoni, “‘Viglaebium opibus primum’,” 226–234.

⁶³The *Annunciation* by Vittore Carpaccio was commissioned in 1504 by the shearer Giovanni di Nicolò, chief official of the Albanian fraternity.

Florentines were active in Venice in the foreign exchange market and in the wool industry, especially after the defeat of the Ciompi, which caused many to leave Florence. Their presence reached its peak after 1390 but began to decline in 1420.⁶⁴ Just one year earlier, in 1419, the Tuscan wool manufacturers threatened to strike and abandon the city because the judges of the guild had been too indulgent with their Venetian debtors. The Senate, which intended to 'encourage anyone to carry out the wool trade in Venice' in this crucial year for the reform of the sector, attempted to protect the interests of the Florentines by ordering the officials to give fairer sentences.⁶⁵ The threat of repatriation was real, since they could make more profit in their own industry. This was the golden age of Florentine *garbo* cloths, which were subsequently adopted as a model by the producers of the lagoon. Like the Lombard manufacturers, the Tuscans imported the technical know-how that was essential to the process of imitation.⁶⁶

Venice adopted immigration policies similar to those of other Italian centres. The need for a foreign labour force was already felt in 1343 and became fundamental after plague became endemic in 1348.⁶⁷ The possibility of obtaining access to the great metropolitan, Adriatic, and especially Levantine markets was the card played by the authorities to draw human resources into circulation by use of fiscal and commercial incentives. At times of crisis, following plague or war, (as in 1348, 1356, 1381–85, 1407) the period of residency required to obtain citizenship was shortened. Drapers and wool manufacturers were guaranteed the opportunity of opening a workshop at Rialto, of loading their merchandise on ships (on condition that they had produced the goods within the city) and of trading directly with other foreigners without a Venetian intermediary (however, access to the *Fondaco dei Tedeschi*, the German

⁶⁴This chronology roughly coincides with a crisis period for the Tuscan wool industry: 1373–1437; see Epstein, *Freedom and Growth*, 136.

⁶⁵SM, reg. 52, fol. 199r.

⁶⁶CN, reg. 8, fol. 138r. See Mueller, *The Venetian Money Market*, 255, 262, 284–287; Hoshino, *L'arte della lana*, 234–244. An emblematic case is that of the Florentine Giovanni di Nigi, a manufacturer of cloths in the Florentine style at his shop in Rialto at the beginning of the fifteenth century; GP, reg. 19, fols. 36v, 50r. On the transfer of skills through immigration, see *Handwerk in Europa*, 213–296 and *La trasmissione dei saperi*.

⁶⁷Kohl, *The Records*, n. 710 (SM, reg. 21, fol. 23v).

trading house, remained a prerogative of Venetians alone, although it was often violated in practice).⁶⁸

The special agreements with the communities of the seaborne and mainland empire, by which the Senate granted citizenship (*de intus*) to determined groups of subjects between 1405 and 1450, only increased the attraction of Venice for these.⁶⁹ In the first two decades of the century, there were close contacts between the ‘merchant-entrepreneurs’ of the subject territories and Venetian shearers and wool manufacturers: the former imported cloths to Rialto for finishing by the latter, in exchange for wool, dyestuffs and waste oil.⁷⁰ In 1431 it became possible to form companies with the wool manufacturers of the lagoon. Non-Venetians intending to work in the city were usually unable to start their own manufacturing businesses due to a lack of capital, but this situation could be resolved through a combination of local and external entrepreneurial forces.⁷¹

The repopulation policy proved effective in the long term, but it also produced some negative effects, such as attracting people with little respect for the laws.⁷² In 1429 the Senate had instructed the *Provveditori di Comun* to pay greater attention to evaluating the real capacity of candidates to make a contribution. In the Wool Guild the irregular conduct of the newcomers was felt in various ways. At mid-century some of the artisans registered in the corporation formed companies with drapers and merchants of Rialto (including nobles), with the former mostly taking the role of active partner (not contributing operating or fixed capital). But at the conclusion of their business they abandoned the city without paying wages to the weavers or spinners. In addition, people attempted to influence guild voting by sending accomplices to the assembly who would vote according to their whim, and these were often foreigners in the guise of wool manufacturers. To exclude these intruders, from 1488 to 1568 a law was enforced which limited partici-

⁶⁸SM, reg. 24, fol. 91v and fol. 85r; reg. 27 (copy), fol. 158r; reg. 38, fol. 17r; PC, b. 1, fol. 33r (law of 1382 granting *de intus* status after only 8 years and *de extra* status after 15 years) and fols. 34r, 45v; CN, reg. 2, fol. 63r; ASV, *Ufficiale della Messetteria* [henceforth UM], b. 1, fol. 14v.

⁶⁹Molà and Mueller, ‘Essere straniero,’ 840–848; Cozzi, *Storia*, 135–137.

⁷⁰Mozzato, ‘Il mercato dei panni di lana.’

⁷¹SM, reg. 58, fol. 79v. This was for wool only: for other categories the general ban on mixed companies applied.

⁷²See Cozzi, *Storia*, 135–139.

pation in the guild assembly to those who could demonstrate production of at least 60 cloths in the last three years.⁷³

Despite these restrictions, foreign entrepreneurs continued to be attracted by the great opportunities for profit at Venice. In the sixteenth century, in contrast to the preceding period, a drastic halt was brought to this process. The Senate had noted in 1558 that many of the foreigners naturalized by the law of 1385 had accumulated great wealth through the textile industry. Having originally come to the city to work wool and silk, they exported other goods to the Levant as well as their draperies, just as Venetians did. From this time on, it was determined that only the 'original citizens' could trade in woollen and silk fabrics. The guild attempted to discipline the new arrivals with greater rigor.⁷⁴ From 1515 requests for admission were evaluated by increasingly restricted commissions and the fiduciary deposit required from foreigners was increased to 300 ducats; in 1524, a new wool manufacturer, in order to vote, had to prove he had worked for at least three years and in 1533 it was required that he be at least twenty years old. In 1536, this latter restriction was also extended to all those registering in the guild with a fiduciary deposit of 200 ducats, including Venetians.⁷⁵ In 1537, in a *de facto* reversal of the law of 1431, wool manufacturers who wanted to start a business in the capital were required to have resided there with their family for at least five years if they were from the subject territories, or at least ten years if they were foreigners.

The attention paid to guaranteeing an assembly composed of competent people who would observe the rules of production was quite justifiable. It was precisely around 1520 that the reputation of the St. Mark name on the international markets was damaged by a great number of frauds. Foreign entrepreneurs, including in the 1530s some Jews, sent

⁷³M 358, 807. In the fourteenth century, acceptance of a new member was based on quantity of wool he had purchased in the year preceding his request for admission; M 73.

⁷⁴PC, b. 1, fol. 260v. In 1502 the *capitolo* was composed of 143 voters, in 1530 of 101, in 1537 of 90, in 1554 of 89, in 1557 of 108, and in 1579 of 204 (M 787, 850). It sometimes occurred that rowdy gatherings of over two hundred people remained until late in the evening to complete the voting process. The number of wool manufacturers subsequently declined in parallel to the production trend: in 1626 it was composed of 120 people; ASV, *Inquisitore alle Arti, Lanificio, Camera del Purgo* [henceforth IA], b. 45, doc. 4 May 1651.

⁷⁵M 653, 687, 700, 712, 722, 855

wools of low quality to Venice to be worked under the cover of a Venetian representative enrolled in the guild who had access to the efficient structures of the *Purgo* and who could export the product to the Levant. It might even happen that these ‘representatives’ were the young children of other members and therefore ‘not liable to be subject to any penalty’. The problem of the ‘baby wool workers’ lasted until at least 1555. In 1575, foreign manufacturers were required to have resided in the city for twenty years in order to enter the guild.⁷⁶

4. Merchants and ‘Merchant-Entrepreneurs’

Frederic Lane made a clear distinction between merchants (nobles) and ‘merchant-entrepreneurs’. The latter did not have the same flexibility as the former to diversify and shift their investments in response to changing conditions on the international market. One of the many investments made by a typical merchant like Andrea Barbarigo might regard a manufacturing firm, but this latter never constituted ‘a true entrepreneurial function’.⁷⁷ Nevertheless, in some cases the distinction between these two types of merchants appears to be limited in terms of both wealth and economic behaviour.⁷⁸ There are examples that attest to interests going far beyond simple manufacturing activity, such as the sale of diverse types of goods, the re-sale of foreign textiles or the supply of raw materials to colleagues, even by people who are defined as ‘manufacturers’ in the sources.⁷⁹ The international market touched the

⁷⁶Manufacturing was forbidden to Jews from at least 1515 due to the risk of ‘carrying the craft out of the city, as has occurred in the past’. M 653, 722–729, 796. In 1615 the requirement for baptismal testimonies indirectly indicates the continued presence of non-Christian artisans within the guild; IA, b. 45, fol. 2v. In 1575 Iosef Fini *ebreo* (Jew) made an agreement with Ludovico di Pietro dal Campo, a wool worker, and Antonio Crestini, a ‘wool washer’, to wash his wool; NA, b. 8314, Francesco Mondo, fol. 247v.

⁷⁷Lane, *Storia di Venezia*, 186; Lane, ‘Andrea Barbarigo, mercante di Venezia,’ in Lane, *I mercanti di Venezia*, 93, 119.

⁷⁸It has been widely shown that artisan citizens could be wealthier than many of the members of the governing class who made a living only thanks to public employment; Romano *Patricians and Popolani*, 86, 33–73; Finlay, *La vita politica*, 102–109; Queller, *Il patriziato veneziano*, 63–65; Chojnacki, ‘La formazione della nobiltà,’ 696.

⁷⁹Many fifteenth-century entrepreneurs in the wool sector (Pagano degli Augusti, Francesco Rabia, Francesco d’Albin, Bettino degli Uberti, Domenico Cataben and others) also dealt in cloths made outside Venice, hides, Spanish wool, copper, bales

entire society and gave Venetian wool manufacturing a distinctive character. While rejecting the mystic vision of harmony among the social orders, common interests nevertheless existed among nobles, merchants, wool manufacturers and lesser artisans.⁸⁰ Despite the laws, the ‘merchant-entrepreneurs’, or those who had work done by others (*Verleger*), were not the only ones to hold power in the guild.⁸¹ In Venice, a *Verlagssystem* (or putting-out system) existed that was far more elastic than the classic model of a single figure coordinating every face of the production process. Various workers ‘had work done’ at intermediate levels of production, rather than being entirely dependent on a single person: they bought or re-sold semi-finished products and commissioned work from other artisans.⁸² This was a complex network in which three types of relation can be identified:

a) The noble merchant associated with one or more wool manufacturers, supplying them with either wool, dyestuffs, and capital, or with semi-finished foreign cloths; in exchange he received fabrics for sale. ‘There was – writes Lane – a sort of double putting-out system in Venice. The Pisani, and other merchants who imported wool and cloth, ‘put it out’ to merchant employers who, in turn, ‘put it out’ to the craftsmen.’⁸³ This practice dated back to 1528, but a Senate ruling of 1419 shows that this system had already taken shape in the first half of the fifteenth century: merchants outside the guild sold and bartered woollens or formed partnerships with wool manufacturers, supplying them with raw materials while the latter undertook to give them finished

of paper from Fabriano, pearls, lacquer, *zambellotti* (cloths of Muslim manufacture), woad, raw silk, caps, crystal-glass; GP, reg. 7, fol. 36r; reg. 20, fol. 98r; reg. 21, fol. 5v; reg. 112, fol. 115r; reg. 134, fol. 25r; reg. 168, fol. 83r; reg. 171, fol. 177r.

⁸⁰If there were tensions, these were internal to the Wool Guild, or between wool manufacturers and lesser craftsmen, rather than between the ruling class and the artisans.

⁸¹In 1548 production was again forbidden to those not enrolled in the guild; M 751.

⁸²For a revision of the traditional interpretation of the putting-out system in Europe see Holbach, *Frühformen von Verlag*, 26–155 and extensive bibliography; Franceschi, ‘L’organizzazione corporativa.’ Lane (*Storia di Venezia*, 185–186), while accepting the canonical model of the *Verlagssystem*, also perceived something of the distinctive nature of Venice through the multiple figures: ‘merchant’, ‘merchant-entrepreneur’, ‘artisan-worker’, ‘artisan-manager’, although his interpretation is somewhat strained. See also Braudel, *Civilisation matérielle*, 2:372–376.

⁸³Lane, ‘Family Partnerships,’ 41.

cloths in exchange (in the case of a company), or sold semi-finished products to the merchants.⁸⁴ The Senate emphasized the fact that noble merchants did not limit their activities to the supply of wool and dyestuffs, but since they were well-informed about the state of foreign demand by their factors, they also made agreements with manufacturers regarding the price and quality of the wool and the number of portee of each cloth. It is firmly established that fifteenth-century nobles, if they were not employed full-time in the state apparatus, were primarily active in commerce and secondarily in landed property; nevertheless, it is not difficult to find references to 'nobiles viri' involved in putting out work in textile production, especially in the later fifteenth century. This section of the nobility controlled the supply of raw materials and could play a dominant role in the production process.⁸⁵ They probably had connections to those in the Senate who put forward decrees on the wool industry and who had not only the well-being of the Republic at heart, as the preamble of such laws always states, but also their own profits.⁸⁶ In the sixteenth century, it became commonplace for the nobility to have interests in the wool sector. Although nobles were not obliged to enrol in the guild in the previous century, from at least 1515 they were required to enter the guild, although without needing to provide a deposit as in ordinary practice.⁸⁷

⁸⁴SM, reg. 52, fol. 177v.

⁸⁵Raw wool alone accounted for almost half the costs; see Goldthwaite, 'The Florentine Wool Industry,' 537.

⁸⁶For the sake of brevity, only a few cases of nobles forming companies with wool manufacturers will be cited. In addition to Antonio Contarini, there were also Giovanni di Matteo and Ludovico di Marino (1430s); Leonardo Vitturi, Bernardo Giustinian di Pietro and Maffeo Michiel (1426); Girolamo and Agostino Contarini (1450s); Francesco Calbo, Bertuccio and Girolamo Gradenigo (1468); Lorenzo Lore-dan di Marco and Alessandro di Vettore da Pozzo (1493); and finally, Antonio Valier di Antonio (1472). ASV, *Giudici di Petizion, Terminazioni* [henceforth GPTer], reg. 16, fol. 133v; GP, reg. 7, fol. 36r; reg. 41, 81v; reg. 60, fol. 78r; reg. 130, fol. 57r; reg. 172, fol. 17v; reg. 197, fol. 122v. In 1463 the members of the guild included the noblemen Matteo Balbi, Michiel Boldù and Iacopo da Canal (M 653). More frequent are cases of nobles as proprietors of drapers' shops at Rialto, like that of Bertuccio Soranzo *draperius* (1452) (M 538).

⁸⁷In 1505 and 1537 the presence of nobles among the membership was reiterated (M 733). They too were subject to guild controls when putting goods on sale, although the cloths were destined for personal consumption, then they were not required to adhere to the regulations; see the doctoral thesis of Judde De Larivière, *Entre bien public et intérêts privés*, 350. This mixing of nobles and wealthy citizens within the same

b) The noble merchant involved in production who did not deal with wool manufacturers, but directly with artisans of lower rank. The remaining raw materials that had not been sold to the manufacturers were processed in their own residence or workshop. Imported semi-finished products were supplied to teaselers, dyers and stretchers or entrusted to a shearer who oversaw the entire finishing process.⁸⁸

c) The wool manufacturer who imported his own 'raw materials' (raw wool, dyestuffs, or unfinished cloths bought from producers in the hinterland) and took charge of the spinning, weaving, dyeing, or finishing processes; he might also give the unfinished product to a shearer, not only for shearing and teaseling, but also for fulling, dyeing and stretching before re-sale back to the manufacturer.⁸⁹

The importance of teaselers and shearers must be reiterated. Independent and dynamic, they did not limit their activities to the shearing of the many foreign cloths circulating on the Rialto market, but also took responsibility for 'having work done' on behalf of noble merchants or wool manufacturers, and might even put cloths on sale themselves. Such behaviour is confirmed by the constant efforts of the Senate to prohibit them from selling cloths, a prerogative that was limited to wool manufacturers and drapers.⁹⁰ On account of their technical ability, they were permitted to estimate publicly the value of cloths, although to

corporation tended to accentuate the aristocratic bearing of the wealthiest entrepreneurs who held administrative office in the *Purgo*. This had in the meantime become 'an ordinary public office' that increasingly resembled a state institution, and its officials felt themselves to be little different from those nobles who held minor public office (M 715–716). See also Molà, *La comunità dei Lucchesi*, 75.

⁸⁸Once more, only an emblematic case will be cited. In the early fifteenth century, Bertuccio and Tommaso Contarini were trading from England to Syria, importing wool and cloths from the north for re-export to the Levant. In Venice the cloths could take two alternate routes: they were either sold to local drapers or finished directly and then loaded for Damascus. In the first case, two kerseys were sold to Iacopo Toson, aspirant leader of the Wool Guild; in the second, Tommaso placed 15 'bastard' cloths with the teaseler Ragarin, who in turn was responsible for having them teaseled, stretched and fullled. Tommaso also placed another 11 'bastard' cloths with the dyers Nicolò Aldoni and Antonio Colonna to have them dyed in scarlet; GP, reg. 115, fol. 190r.

⁸⁹Francesco Tosabezzi, head of the Wool Guild in 1408 (M 283), and his brother Giovanni bought 8 Florentine cloths from Bindo di Gherardo Piaciti (GP, reg. 24, fol. 29v).

⁹⁰M 498. In 1390 Nicoletto di Clemente joined with Vito Baro to form a company for shearing, brokerage *et aliarum rerum* (GP, reg. 22, fol. 42v).

prevent favouritism they were not supposed to have ties with the producers. A dispute of 1441 brought by the teaselers against members of the Wool Guild is highly significant in this regard. They accused the latter of depriving them of work by employing teaselers in the workshops to teasel and shear not only cloths of their own production, but also imported ones. The independent teaselers threatened to go and work elsewhere if their 'raw material' continued to be taken from them in this way.⁹¹

As the poet Guidi put it in verse, all operators in the Venetian wool sector were involved in two main activities: the entire production of local cloths (*panni facti*) and the finishing of foreign cloths (*panni laborati*) according to the model to be imitated (in the Florentine, Bruges, Monza, Bergamo, or Feltre styles).⁹² Trades that were clearly distinct in Florence (Wool Guild and Calimala) were in Venice united in a single corporation and subject to the legislative attention of part of the noble class. The desire of the latter to coordinate urban production on one hand and the trade in foreign cloths on the other will be the theme of the final section of this article.

5. Production and Trade Policies for the Cloth Trade

In the 1350s–60s, local production declined to the point that merchants refused to load defective cloths on the ships sailing for the Levant. The government, with its commercial interests at stake, implemented an almost obsessive enforcement of quality controls while, at the same time, attempting to raise standards. The Senate intended to make its wool industry a fearsome competitor for the other manufacturing centres. As the preamble of a law of 1433 recorded, the more the crafts flourished, the greater would be the public benefits from the growth of trade and customs income.⁹³ To resolve the question it was necessary to find the delicate balance between imported and manufactured cloths, between cloths for re-export and for local consumption, and, finally, between those drapers who produced cloths from start to finish and those who completed semi-finished cloths.

⁹¹ST, reg. 2, fol. 161v; M 457.

⁹²Guidi, *El sommo*, 47.

⁹³M 400. In 1374 a first major state subsidy was made to support the guild (M 177, 122, 212; SM, reg. 58, fol. 79v).

If they had chosen the path of protection (*restrictio*) in favour of local manufacturers, that is a ban on foreign fabrics for retail and dress, then the productive capacity of the lagoon, which the Senate perhaps overrated, would have been unable to meet the large demand of the enormous internal market that attracted businessmen from all over Europe.⁹⁴ That would have led to its decline and unemployment not just for those involved in finishing (fullers, shearers, dyers, stretchers, tailors), but also for small to middling manufacturers who relied on the finishing of foreign cloths in order to stay in business. Proof of this are the continual reprimands throughout the fifteenth century applied to weavers, shearers and manufacturers for falsifying the trade-marks of Venetian cloths by applying these to foreign products.⁹⁵ On the other hand, this would have been to the advantage of richer manufacturers, like the powerful Rabia firm, who would have had no scruples about using their monopoly position to reduce quality and increase prices out of all proportion, as in fact happened during the period. In addition, the transit trade would have been adversely affected by the rise of smuggling (this was particularly rife for Mantuan cloths).⁹⁶ The opposite course of permitting the free sale of all foreign cloths (*largitas*), would have revitalized the internal market, to the relief of the many workers who imitated Venetian products, as well as other manufacturing centres, but at the expense of the authenticity of the local product. As the *Provveditori di Comun* pointed out, prices would have fallen because ‘the second-hand dealers or drapers [would have bought] foreign cloths rather than cloths manufactured [in Venice],’ bartering these for wool and spices,

⁹⁴The office and workshop of the *Purgo* was built between 1412 and 1417 in a period of free trade. At the direct dependence of the Senate, it implemented production directives. It was therefore a place to centralize all controls and impose a new production policy, as in fact happened in 1419 with the shift to protectionism. See M pp. XXI–XXXI. The senators were strongly convinced that the new regulations applied in that year to the whole production process would have improved and increased internal production to the point that it could have guaranteed sufficient supplies to the Rialto market by itself. Similar limits were also placed on semi-finished silks during this period. SM, reg. 52, fol. 198r, M 347; Molà, *The Silk Industry*, 79–88.

⁹⁵M 509.

⁹⁶Attempts were made to compensate for this restriction by lowering entry taxes on foreign cloths for the transit trade, especially cloths from Lombardy, which were also traded by Florentine merchants via alternate routes towards Apulia, Romagna, the Marches and Dalmatia. SM, reg. 35, fol. 91r; UM, b. 1, fol. 37v. On smuggling, see for example SM, reg. 60, fol. 102r or PC, b. 1, fol. 75v.

but with the drawback of them retailing ‘mostly foreign cloths’. There would also have been a greater risk of people evading the customs duties.⁹⁷ In both scenarios, as a general rule of foreign trade, cloths were to be re-exported using state galley lines exclusively.⁹⁸

During the first half of the fifteenth century the Senate alternated between these two policies with moments of high tension among the voters, as in 1433 and 1444. The policy was one of *largitas* in 1381–1419, 1434–1436, and 1444–1450; and of *restrictio* in 1373–1381, 1419–1433, and 1437–1443.⁹⁹ In the first half of the century the health of the wool guild remained critical and the alternating pattern reflected the result of different attempts to sustain production.¹⁰⁰ But from the mid-fifteenth to the end of the sixteenth century, the Senate settled on a protectionist (or perhaps ‘prohibitionist’) policy, after the recurrent shifts of policy had led foreign merchants, especially during *restrictio*, to desert Venice in favour of Adriatic ports such as Ravenna.¹⁰¹ However, closer examination shows that even during times of prohibition, a number of exemptions permitted the retail of cloths that were not manufactured in Venice: English and Flemish cloths, those arriving overland at the *Fondaco dei Tedeschi*, those brought by ships from the south of France by the Aigues-Mortes route, ‘gross’ cloths and others of low value. After the conquest of the mainland, this exemption was also applied throughout the fifteenth century to cloths from the numerous manufacturing centres of the subject territories, including cloths that had already been dyed ‘in grain’ (‘Venetian red’).¹⁰² In practice, the aim was to penalize cloths from Lombardy and Tuscany (perhaps in response to their own protectionism) as well as those coming from the two shores of the

⁹⁷M 347; UM, b. 1, fol. 55.

⁹⁸In 1384 a failed attempt was made to establish a fixed ratio when loading ships of 2 Venetian cloths to 6 or 8 foreign cloths. The loading of foreign cloths on unarmed vessels was repeatedly prohibited up to 1424 (e.g. SM, reg. 39, fol. 37r or reg. 55, fol. 31r). Exception was made during the period 1436–1441, when the Senate allowed merchants with full warehouses to send foreign cloths to Syria, Rumania, and Crete using private vessels (SM, reg. 59, fol. 167r or SMr, reg. 1, fol. 56r).

⁹⁹M 311–315, 374–391, 460–472.

¹⁰⁰SM, reg. 52, fol. 196r; reg. 57, fol. 119v; reg. 58, fol. 8v.

¹⁰¹SMr, reg. 5, fol. 114. In 1763 the *Inquisitori alle Arti* attributed the ‘happiness of the wool industry in Venice’ to protectionism alone. IA, b. 45, 18 May 1763.

¹⁰²M 347, 517. Nevertheless, for brief periods, the import of English and Flemish cloths was forbidden to prevent manufacturers from using these to make imitations in the Venetian style, as they had done previously; SMr, reg. 3, fol. 180r.

Adriatic. Overall, the policy of *restrictio* had a wide mesh, allowing the urban and semi-urban centres of the Veneto to export their products to Rialto, so favouring the greater integration of markets and greater competition with local manufacturers.¹⁰³ The import of unfinished English and Flemish cloths was of benefit not only to noble merchants, but also to the artisans who finished them. And it should be noted that in 1444 the wool manufacturers themselves asked the authorities to shift to a free market because the protectionist policy set up to favour the Wool Guild had produced contradictory results.

Foreign commerce sustained the wool industry in two main ways. The customs income produced by the flourishing transit of European cloths was ably used by the Senate 'for the benefit and maintenance of the Wool Guild'.¹⁰⁴ From 1435 to 1544, with brief interludes, an entry tax (of 4.2%) was collected on all cloths and distributed at year end among all manufacturers of *bassi* ('low') cloths in proportion to the number of cloths they produced.¹⁰⁵ In the second place, the Senate focused its attention on the external rather than the internal market: the only way to increase production was to boost the export of local cloths through trading other products abroad. In other words, it was necessary 'to export the cloths made here and to take care that foreign cloths, as far as possible, do not compete with ours in the places they are sent'; the penalty for transporting prohibited cloths was no less than 1,000 ducats.¹⁰⁶ However, it is important to stress the abandonment of the alternating policy of *largitas* / *restrictio* of fourteenth-century stamp and the initiation of a policy

¹⁰³For a similar policy in Lombardy and Florence, see Epstein, *Freedom and Growth*, 125, 137–138.

¹⁰⁴On the cloth trade, see Ashtor, *Levant Trade*; Ashtor, 'Die Verbreitung des englischen Wolltuches' with bibliography, and Hocquet, 'Giacomo Badoer,' 71–89.

¹⁰⁵M 437, 460–482. In 1544 the Senate remarked that the policy of incentives established in the 'free trade' measures of 1431 and 1444 had produced excellent results and each year the Export Office donated no less than 900 ducats of which 200 went in salaries. This support was removed once production was growing strongly (PC, b. 1, fol. 183r).

¹⁰⁶ST, reg. 4, fol. 72v; M 496. Attempts were made to connect Venetian woollens to the profitable trade in precious metals: whoever imported silver to Venice via sea was obliged to buy Venetian cloths for export to a quarter of the value of the silver (ST, reg. 2, fol. 161v). In England in the 1470s, in a reversal of this situation, imports of precious metal were sustained by forcing merchants to pay two silver marks for every sack of wool exported. See. Munro, 'Bullionism and the Bill of Exchange,' 192–196.

of product diversification in terms of dyes, wools and density of weave to aid the insertion of the cloth of St. Mark in the markets. Incentives were put in place on the one hand for the production of *bassi* ('low') and medium-quality cloths for export (*quarantini* cloths and *garbo* cloths in the Florentine style) and, on the other, for the production of *alti* ('high') luxury cloths made only from English wool, dyed 'in grain' and destined for rich Italian consumers on the internal market.¹⁰⁷ Through this dual production, the Venetian textile industry (both silk and wool) succeeded in reacting with flexibility to the decline of the Levantine market, the increase of wealth in Western Europe due to the 'inheritance effect' of those surviving the plague, and finally, to the vigour of proto-industry in the minor centres of the mainland empire.¹⁰⁸

A civil dispute between two wool manufacturers, Pantaleone Tagliapietra and Iacopo Toson, illustrates this situation clearly.¹⁰⁹ The former, who maintained that 'the wool craft is one thing and navigation is another,' blamed his partner for heavy losses of 900 ducats' worth of cloths exported to Constantinople without his consent (damages that were in fact caused by the Turkish conquest). The latter defended himself by stating, as was well-known to all wool manufacturers, that there was no other way to 'profitably dispose' of finished cloths than by exporting them to the Byzantine capital (but only for a little longer) once the best quality ones had been retailed on the internal market. He

¹⁰⁷ *Quarantini* cloths were the principal articles exported to Corfu and the Levant by Zaccaria Giustinian; Mueller, 'A Venetian Commercial Enterprise,' 86–92.

¹⁰⁸ In 1458 the Senate observed that 'the wool craft [was] greatly multiplied' and in 1463 the Purgo was 'much in credit, by grace of God' and 'fat with money for the great amount of work carried out in this State' (M 493–499, 511–518). In Verona, an import wool-manufacturing centre, it was said in 1484 that 'the wool trade in Venice [was] much grown' (Archivio di Stato di Verona, Università dei Cittadini, processo 40, fol. 42r, reference from Demo). On the strategy of diversification in the silk sector, see Molà, *The silk industry*, 89–106. See also Goldthwaite, *Wealth and the Demand*, 12–20; Munro, 'The origin of the English "new draperies",' 35–128; Epstein, *Freedom and Growth*, 106–109.

¹⁰⁹ GP, reg. 115, fol. 190r. The firm finished English kerseys which it then exported to Alexandria and Constantinople, where it had a shop for the storage of Venetian cloths (including unfinished cloths), cloths of Marino Priuli, Balkan wool, and kermes. The son of Pantaleone, Stefano, who in the 1470s specialized in importing Vicentine and Brescian cloths was used by Luca Pacioli as an example of a person selling Brescian cloths; Pacioli, *Trattato di partita doppia*, 66–67. See also Demo, "'Da Bressa se traze panni fini'."

then added that it was unprofitable to sell undyed cloths at Rialto and that the badly dyed, stained and low-quality cloths had to be sold off to clients in Byzantium and Damascus. Convinced that Venice's strength lay in finishing, Iacopo stated that 'there is profit in the wool trade only when the cloths are finished, and they must be finished in different ways according to their quality and the times [i.e. fashions]'. On the Rialto market, the principal outlet despite the importance of the Levant, luxury products were sold to the richest Italian buyers, while the discards and coarser cloths were sold to the poorer clients of the Levant. This was also the pattern in the firm of Nicolò Cappello di Francesco and Andrea Barelli di Girolamo (1484) and in those of manufacturers in general.¹¹⁰ With this attitude, the Senate had its work cut out in defending the good reputation of Venetian products abroad! But it responded well to the spirit of the entrepreneurs by focusing on dual production. From the mid-fourteenth and for most of the fifteenth century, protectionism was in force, both with the usual exemptions and conversely with periods when the import of foreign cloths was blocked, perhaps because the market was saturated.¹¹¹ In the sixteenth century, Dutch and English products were increasingly in demand in the Levant at the expense of Italian manufactures. As in the past, Venetians took to imitating the products for which demand was highest and around 1550 they introduced the new light Flemish cloths.¹¹² A severe policy of *restrictio* was considered increasingly inadequate in this new situation because it encouraged the 'damaging and pestilential imitation' of foreign woollens that were sold off as Venetian products (berets, 'dark' cloths and scarlet cloths) with colours that ate away the fabric and with an irregular number of 'portate'. These problems were particularly serious in 1520. In 1567 and 1576 protectionism no longer seemed to work: 'almost publicly', stated the authorities, all sorts of cloths were imported to Venice and retailed under the guise of Flemish

¹¹⁰GP, reg. 185, fol. 20r-25v. Ashtor, ('L'exportation de textiles occidentaux,' 303-377, 305-308) talks of an authentic example of *dumping*. In the view of Hoshino ('Il commercio fiorentino,' 115), in the 1480s, Egyptian and Syrian Mameluke merchants demanded more valuable cloths than did the 'Romania' region, emphasizing the demand for luxuries; Arbel ('The Last Decades,' 51-53, 70-72) has recently underlined the persistence of demand for more ordinary goods imported from Venice.

¹¹¹PC, b. 1, fol. 139r; ST, reg. 11, fol. 52r; reg. 15, fol. 108r.

¹¹²Pancierà, 'Qualità e costi di produzione.'

says. The struggle against falsification was carried on until at least 1587 when the new laws referred with nostalgia to the ‘good old days’ of the fifteenth century.¹¹³

6. Conclusion

From the late fifteenth century, Venetian production and part of that of the subject territories – with the advantages of increased supplies of local raw materials and (despite recurrent crises) abundant imported wools – was able to meet internal and external demand by diversifying production.¹¹⁴ The beginnings of this growth should not be located after the League of Cambrai, but in the mid-fifteenth century, when production was around the same level as in the first forty years of the sixteenth century.¹¹⁵ The low point was touched at the end of the century. With the passing of the storm, production returned to previous levels until the end of 1540s when the light cloths of London and Holland began to be imitated. When Levantine clients began to frequent Venetian and Italian markets more assiduously after 1530 in search of Florentine and Lombard cloths, this gave the wool industry of the lagoon a further opportunity for development.¹¹⁶

Luzzatto explained the weakness of the medieval wool industry as a result of the lack of protectionism and the wish not to openly support wool manufacturing, or even to impede its growth to keep the way clear for foreign cloths.¹¹⁷ However, it appears that the wool industry of the fifteenth century had a solid production structure in which scores of firms operated (and hundreds, if not thousands, of artisans, to which the Senate was already attentive), and which was able to attract specialist foreign workers and technical know-how. Although the Senate’s prior-

¹¹³See for example PC, b. 1, fol. 142r (1520); b. 2, fol. 364v (1569); M 750, 848.

¹¹⁴Luzzatto (*Breve storia*, 149) noted in relation to the Villani estimates that Sombard neglected the wools arriving in Florence from the Appenines, Abruzzo, Spain and the *garbo* country. The same observation could be directed towards Luzzatto with regard to his underestimation of wool manufacturing in the lagoon.

¹¹⁵By comparison, the great centre of Verona only exceeded 6,000 units in 1469, and reached 11,000 cloths in 1493. Vicenza on the other hand produced 3,000 *alti* (‘high’) cloths in the mid-fifteenth century and 4,000 in the 1480s; Demo, *L’ anima*, 177, 187.

¹¹⁶See M 750; Arbel, *Trading nations*; Tucci, *Tra Venezia e mondo turco*, 41 and Demo, *L’ anima*, 260–263.

¹¹⁷Luzzatto, *Storia economica*, 61, 110, 174; Luzzatto, *Breve storia*, 194.

ity was undoubtedly, it never had the intention of impeding industrial development. The continual reversals of policy were the consequence of different attempts, as was standard practice of the pragmatic Venetians, to coordinate commerce and industry successfully.¹¹⁸ Through its role of commercial intermediary between two economic areas of primary importance, the Mediterranean and continental Europe, Renaissance Venice was able to stimulate manufacturing through imports of raw materials and semi-finished goods, just as in the late thirteenth century Constantinople had encouraged its industries by exploiting traffic between the Mediterranean and the Black Sea.¹¹⁹

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¹¹⁸See Epstein, *Freedom and Growth*, 69–72.

¹¹⁹See Jacoby, 'La grande espansione,' 2:267.

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