Florentine Woolen Manufacture in the Sixteenth Century: Crisis and New Entrepreneurial Strategies

Francesco Ammannati

In this essay, I re-examine Florentine woolen textile manufacture with a focus on the types and quantities of cloth produced. Although classic historiography notes several fluctuations in the quantity and value of the sector's output during the sixteenth century, my approach to the archival sources shows a continuous decline. In a time of crisis, the Arte della Lana partnerships introduced new textiles between the end of the fifteenth and the sixteenth century. These were high-quality cloths, able to bear the rising costs of raw materials and skilled labor. The partnerships also intervened by reducing the costs of managing unskilled labor, using the services of fattori (labor masters) charged with supplying labor and remuneration for unskilled workers (ciompi) who performed the first phases of wool processing. These changes influenced the partnerships' bookkeeping methods; comparisons of account books from the fourteenth to the sixteenth centuries reveal downsizing of the accounting system.

In this essay, I communicate the first results of my research on the Florentine wool guild, the Arte della Lana, with a focus on the strategies adopted by producers to overcome the difficulties affecting the city's wool textile industry during the sixteenth century. By analyzing some aspects of woolen manufacture, I explore the hypothesis that the crisis of the seventeenth-century Arte della Lana resulted from structural rather than conjunctural causes.

The changes that occurred in the international economic landscape during the early modern period left the Florentine production system, which was mainly urban-based, unable to bear the competition from Northern European production. The glorious Tuscan production was condemned to a low-profile future by the ability of Northern European producers to offer successful products at a competitive price, augmented by their crushing primacy in maritime trade. Nevertheless, Tuscan compagnie did not lose their adaptive spirit and innovative skills: the last

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positive years of the Florentine wool industry provided a chance for original experimentation.

**Florentine Cloth Production in the Sixteenth Century: Products, Labor Costs, and Accounting Systems**

Beginning in the second half of the fifteenth century, the Florentine wool guild, the Arte della Lana, formalized a product differentiation by entrusting the exclusive use of English wool (at that time the most precious raw material destined for luxury production) to some workshops located in the San Martino “convento.” Other workshops, generically named “di Garbo,” were allowed to use Italian (matricine, from the Abruzzo region,) and Spanish (merino) wools. Garbo workshops proved to be the most dynamic branch of the sector, and the guild put the industry’s recovery in their hands after the early-fifteenth-century crisis. They were enjoined to produce new textiles to imitate various foreign cloths, destined for domestic consumption, that were invading the city’s market at the time.¹

Florentine wool-makers became familiar with a whole series of low-quality products such as perpignani, saie, and, above all, rasce, which would characterize the wool industry in the second half of the sixteenth century. The panni larghi di Garbo or panni sopramani (Garbo broadcloths) continued to be produced for the international market, the real driving force of the city.

Changes in supplies affected the purchase of raw materials: after decades of widespread use of good quality Abruzzese wool, the Garbo workshops started to buy large stocks of Castilian merino wool, as relations with Iberian merchants improved. By the third decade of the sixteenth century, export to the Levant quickly declined. The loss of this vital trade, the most significant for the first thirty years of the century, was a hard blow to the city’s workshops. One cause of that waning, among others, was the contraction of Brussa (Bursa)’s raw silk imports, which had played an important role in the Florentine trade scheme.² The city’s woolen cloth production was approaching an intense season of uncertainty and renewal, coinciding with a complex international scene (with the Italian wars) and the turbulent transition period leading Florence from the Republic to the Principato.³

The account books of the partnerships of that age cast some light on wool-makers’ attempts at innovation in their cloth production. Garbo

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workshops were the most sensitive to the sector’s need for change, while the San Martino branch slowly declined.

The wool-makers, who had been forced to familiarize themselves with new kinds of cloth in the fifteenth century, used their experience and ability to transform low-quality imitations into higher-level products. The most successful cloths, besides the accordellati and the saie, were the perpignani and the rasce, made with the best Castilian wool (at least until the end of the sixteenth century). With their characteristic black finishing, the rascia became the industry’s key product of the century.4

The generalized use of Spanish merino wool combined with the production of so-called woolen cloths (in brief, woven with carded wool and subjected to fulling) was not unique to Italian textile centers; historians have traced similar diversification processes in much of the European woolen industry at that time.5

These rasce and, to a lesser extent, the other cloth types, found new marketplaces across the Alps: in Lyon and all of France, Antwerp, and Spain itself, but also Messina, Palermo, and Naples, which were replacing the Levant as suppliers of raw silk. Even in this dynamic climate, Florence tried to strengthen its relations with the Ottoman Empire to improve the Levant trade, which had never fully ceased.6

This commercial growth was not destined to last long; the last twenty years of the sixteenth century were defined by a gradual worsening in the quality of both the cloths and the raw materials. Analyzing the account books of Cristofano di Tommaso Brandolini’s partnership, for example, which was active from 1580 to 1597, we notice a strong tendency toward the use of mixtures of different kinds of wool or lower qualities of Spanish wool, even for making rasce, so “precious” for the guild’s market.7

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4 Evidence can be found in many Florentine wool-makers partnerships’ sixteenth century account books, along with the panni corsivi (coarse cloths), destined to disappear from the second half of the century, and the panni larghi (broad cloths), which were not so different from the sopramani of the previous century. Some sixteenth-century rasce technical specifications can be found in Patrick Chorley, “Rascie and the Florentine Cloth Industry During the Sixteen Century,” Journal of European Economic History 32 (Winter 2003): 487-527, especially p. 520.


6 Paolo Malanima, La decadenza di un’economia cittadina (Bologna, 1982), 258.

7 See in particular: Libri dei tessitori C and D, Archivio di Stato di Firenze (ASF), Serie strozziane—V serie, 1720, 1739.
Moreover, in a letter to the Grand Duke, Ferdinando I de’ Medici, dated 1603, the guild complained about the wool-makers making rasce with a lower yarn density and passing them off as higher-quality goods.8

From this time on, the markets that the rasce contributed to opening to Florentine woolen products were no longer reliable (especially Lyon and Antwerp). In all of Europe, and within Italy as well, cheap imitations of rasce started to circulate. The role of woolen manufacture in the Florentine contado or dominio is also worth mentioning. Although production was strongly restricted by the urban guild, the quality of these products had gradually increased during the century, prompting the Arte to ask the Grand Duke to take some preventive measures.9 Yet, this did not lead to a shift to rural manufacturing; high-quality cloth production remained an essentially urban phenomenon.

I cannot provide a full analysis of the composition of Florentine cloth production output here, but it is interesting to note that production continued in San Martino even into the early seventeenth century.10 The Guild’s stiff rules, intended to differentiate them from the Garbo workshops, were mostly ignored, however, and San Martino wool-makers could continue to weave rasce and perpignani using Spanish wool mixtures with no significant problems.

In discussing other aspects of fifteenth-century woolen manufacture, such as personnel management, it must be stressed that, at that time, the production system had not experienced any substantial transformation. As in the previous centuries, all of the processes were carried out by external operative centers that had fitful and non-exclusive relationships with the workshops. As is well known, transformative activity, in a narrow sense, was not performed under a single roof, and permanent personnel were employed only to organize the process and to deliver and collect half-finished goods to and from artisans or external workers.

By the second half of the fifteenth century, we see a substantial change in managing lavoranti (workers): many sources show an abrupt shift away from direct relationships between workshops and single workers to the use of fattori (labor masters) in charge of supplying labor and remuneration to a group of unknown and unskilled workers (ciompi).

The fact that the ciompi were totally unknown to the wool-makers, who dealt only with the fattori, coupled with the simple nature of their duties, may explain the comparatively low cost of the preliminary operations in the woolen process in the sixteenth-century workshops, which had experienced a steady reduction during the previous two

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8 ASF, Pratica segreta, 16, c.205r.
9 Ivi, c. 515r-516r.
10 Many San Martino partnerships’ accounting books dating back to 1580s and 1590s can be found in the “Archivio dell’Ospedale degli Innocenti di Firenze” (AIOF). In 1605, only three remained, see ASF, Pratica segreta, 17, c. 155v.
centuries. It was not by chance that in the course of the sixteenth century the guild granted its protection only to skilled workers, who were able to maintain the value of their real wages thanks to many provisions, such as those on the weavers’ behalf. Nevertheless, during the early seventeenth century the Grand Duke confirmed some old weavers’ privileges and reaffirmed some spinners’ benefits against the stamaioli (spinners’ masters), but he rejected many wool-beaters’ requests. In response to their recurrent claims (“ricorsi in diversi tempi più volte a domandare simili cose”), they were prompted to change jobs if they did not like the situation (“se non piace loro l’arte, mutinla in una altra”).

A similar validation of the organizational system necessarily shaped the partnerships’ bookkeeping method. Generally, accounting simplification was the norm for the workshops’ bookkeeping techniques. Sixteenth-century partnerships seem to have become skilled in good accounting practices and tried to standardize their bookkeeping systems. During the fourteenth and fifteenth centuries, the books were more “customized.” This impression is strengthened by the analysis of many partnerships’ account books. With respect to the commercial and manufacturing aspects, all workshops kept few books and used the same rules. Even big companies did not seem to need an exhaustive cost-accounting system, a lack that inevitably compromised a detailed reckoning of production costs. It is possible that in the sixteenth century such an analysis was not considered as important as it had been in the past for establishing prices.

The Volume of Florentine Woolen Cloth Production in the Sixteenth Century

Despite many attempts, studies of the volume of Florentine Arte della Lana cloth production have not yielded consistent results. The data for the years from 1553 to 1571, a period of renewal for Florentine manufacturing, are particularly controversial. They are derived from Arte reports that are available to us only from later printed sources.

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12 Giuseppe Parenti, Prime ricerche sulla rivoluzione dei prezzi (Florence, 1939), 213; ASF, Arte della lana, 16, cc. 252v, 360r, 382v, 396r.
13 ASF, Pratica segreta, 15, cc. 318r, 428r, 481r.
14 Some examples can be found in the accounting books of Pratese Francesco Datini and other Florentine wool workshops, dating to the late fourteenth and fifteenth centuries.
16 The January 1560 and January 1572 reports (1559 and 1571 according to the Fiorentine calendar ab incarnatione) are quoted in Riguccio Galluzzi, Istoria del
annual amount of cloth produced was calculated by dividing the annual production value for the standard *panno corsivo* (coarse cloth) by the price of 30 scudi (“riducendo le rascie e panni larghi a panni corsivi come già si costumava, ragionasi l’un panno per l’altro scudi trenta”). The use of these uncorrected data leads to an obvious distortion: for example, in 1561, the annual production result is 33,000 cloths. Distributed over the 152 workshops that were surely active at that time, this yields a productive capacity of about 217 cloths per workshop per year. It would be nearly impossible for even the largest partnerships to have reached this capacity. Some interpretations of these numbers consider the reports’ data to be merely statistical figures; we propose a new production estimate for the period between 1488 and 1615 (see Figure 1). Our estimate shows a new trend, not characterized by sudden highs and harmful lows, but by a slow decrease in the number of cloths produced beginning in the 1560s (see Table 1). If the level of output physically produced by the industry did not suffer sudden leaps, the value of production was instead subject to wider fluctuations.

**The Causes of Decline of Florentine Woollen Manufacture**

The non-traumatic reduction of woolen cloth production during the last thirty years of the sixteenth century could lead to misinterpretation of the Florentine woolen industry’s crisis. Actually, those years’ difficulties would have blocked any possibility of recovery, as Florentine cloth faced the market with two strong negative characteristics. Maintaining the Arte’s price level brought lower profitability. At the same time, the cloths’ quality decreased as wool-makers started to replace the fine *merino* wool with mixtures of lower-quality material to reduce shrinkable production costs. In brief, they were not able to compete with other types of cloth.

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Granducato di Toscana sotto il governo della casa Medici (Florence, 1781), 1: 381-83; 2: 221. Data for the years 1553/54 and 1560/61 come from Lorenzo Cantini, Legislazione toscana raccolta e illustrata (Florence, 1800-1808), 4: 83-84. See Chorley, “The Volume of Cloth Production,” 556.


18 We hypothesize that the percentage of coarse cloth gradually decreased. Our estimate is based on the analysis of the city’s textile production derived from the Arte’s legislation, accounting data, and other written information in Florence’s archives. We assume that the percentage of coarse cloth dropped progressively from 25% during the years 1553 and 1554, to 20% in 1558 through 1560, and to 15% after 1561. We have also estimated cloth prices, and consider 64 fiorini to have been the stable price for higher-quality cloth during this whole period.
FIGURE 1
Florentine Cloth Production, 1488-1615

# of Cloths

Years

Cloth production (1488-1615)
(1560 and 1572 Guild’s reports)
TABLE 1
Comparison of Estimated Florentine Woolen Cloth Production, 1553-1571

<table>
<thead>
<tr>
<th>Year</th>
<th>Production value</th>
<th>Guild’s Reports</th>
<th>Chorley’s Estimate</th>
<th>Our Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td># of cloths</td>
<td>% Coarse cloth</td>
<td># Coarse cloths</td>
</tr>
<tr>
<td>1553</td>
<td>440,000</td>
<td>14,700</td>
<td>25</td>
<td>1.982</td>
</tr>
<tr>
<td>1554</td>
<td>495,000</td>
<td>16,500</td>
<td>25</td>
<td>2.230</td>
</tr>
<tr>
<td>1558</td>
<td>480,000</td>
<td>16,000</td>
<td>20</td>
<td>1.667</td>
</tr>
<tr>
<td>1559</td>
<td>600,000</td>
<td>20,000</td>
<td>20</td>
<td>2.083</td>
</tr>
<tr>
<td>1560</td>
<td>900,000</td>
<td>30,000</td>
<td>20</td>
<td>3.125</td>
</tr>
<tr>
<td>1561</td>
<td>990,000</td>
<td>33,000</td>
<td>15</td>
<td>2.508</td>
</tr>
<tr>
<td>1571</td>
<td>1,000,000</td>
<td>33,212</td>
<td>15</td>
<td>2.534</td>
</tr>
</tbody>
</table>

Obviously, the causes of the industry’s decline were many and interdependent. A number of events coincided: the dynamics of international trade changed very quickly, and some key marketplaces closed or fell into ruin (especially Levant, Lyon, and Antwerp). The competition from the new textile industry emerging in Northern Europe combined with the production of foreign rascia imitations (some evidence of these copies was traced by contemporaries in France, England, and Spain), keeping in mind the sixteenth- and seventeenth-century boom in the Venetian woolen industry. A tight monetary policy in the 1560s caused a lack of cash in the Florence marketplace, resulting in the revaluation of 1570 and the bank crisis of the second half of 1570s. The lack of Castilian wool and its rising price were representative of difficulties with the raw materials supply. In this climate, we can well understand the Florentine Customs Consul’s (console della Dogana) proposal to the Grand Duke Cosimo I, dated 1573, to use matricine wools of domestic production, due to their quality (“hoggi sono in assai miglior condizione”), when higher-priced Spanish wools were mostly diverted to Venice (“delle quali buona partita se ne sono smaltite per Vinegia [e] che sono molto alzate di pregio”).

The decision to rely on a luxury cloth made with raw materials that were increasing in price left the Florentine industry wide open to the competition of Northern Europe’s less expensive products. During a period of population growth, these cloths found great success among the middle and lower classes. Given those conditions, the Arte made the one choice they could make to survive. A shift toward a lower quality product would not have been sustainable by the Florentine manufacturers, due to the organization’s characteristics: higher wages than those in other countries, the impossibility of integrating rural and urban labor, and the lack of an adequate supply of good quality native raw materials. These elements, during a period of fierce competition and profound change over the international landscape, unveiled the fragility of Florentine textile production.

22 ASF, *Pratica segreta*, 9, n°76.