A Ledger of Rinucci, a Florentine Clothier, 1322-25

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Preface

In 1338, Givanni Villani wrote the following article in his famous Chronicle about the woolen cloth produced by Florentine clothiers, and about the woolen cloth imported from northwestern Europe by Florentine merchants: "The workshops of the woolen industry [in Florence] were two hundred or more, and produced about seventy to eighty thousand pieces, whose value was about one million and two hundred thousand golden florins. $\cdot \cdot \cdot$ About thirty years ago, there were three hundred workshops or so, and they produced more than one hundred thousand pieces per year. However, these were coarser and of half the value, because then English wool was not imported and not used, as was done later. There were about twenty shops of the Calimala guild which traded in northwestern European and ultramontane cloths (panni franceschi e oltramontani), and they imported more than ten thousand cloths per year, which were sold in Florence and valued at three hundred thousand golden florins, not including those that they sent outside the city¹."

According to this evidence, the average price per piece of cloth produced in Florence was 7.5-8.6 gold florins (florins hereafter) in 1308, and 15.0-17.1 florins in 1338, while that of cloth imported from northwestern Europe into Florence was 30 florins in 1338. Therefore, in 1338, the price of Florentine cloth was still lower than that of northwestern Europe, but its quality was already being improved by the use of English wool.

The cloths of northern France, Flanders and Brabant were generally called "panni franceschi²" by Italian merchants, a term which initially referred to those cloths which

¹ Cronica di Giovanni Villani, XI-94. (*Cronica di Giovanni Villani a miglior lezione ridotta coll'aiuto de testi a penna*, Firenze, 1823, ristampa anastatica, Roma, 1980; *Croniche di Giovanni, Matteo e Filippo Villani secondo le migliori stampe e corredate di note filologiche e stroriche* (Biblioteca classica italiana, secolo XIV, n.21), vol.I – *Cronica di Giovanni Villani*, Trieste, 1857.)

² According to Armando Sapori, panni "franceschi" includes cloths from Caen, Châlons-sur-Marne, Ypers, Gent, Bruxelles, and so on. cfr. Sapori, Armando, *Una compagnia di Calimala ai primi del Trecento*, Firenze, 1932, pp. 49, 80-99.

originated in and passed through northern France³. It is well known that these northwestern European cloths were mostly exported to Mediterranean markets from the 12th century, and that the supremacy of Italian merchants in this export transaction was established in the 13th century. From the late 1260's, after the victory of the Guelf alliance (Charles d'Anjou, the king of France, the pope, the Florentines and so on) in Italy, Florentine merchants became increasingly active in the cloth trade, and extended their economic influence into the areas controlled by the Guelf alliance. By the end of the 1310's, after the decline of the Fairs of Champagne, they bought panni franceschi not in Champagne, but directly from its production centers⁴.

English wool⁵, famous for its high quality, was exported to the wool industrial zone in northwestern Europe by Flemish merchants, and used as an important material in the production of panni franceschi. However, in the final years of the 13th century, Florentine merchants began to export English wool, having first gained commercial privileges by contributing to the finances of the king of England and also to those of various noblemen. The Florentines were able to gain this advantage because the Flemish merchants had been banished from England for political reasons. The Florentine merchants subsequently exported English wool to their mother city, and used it to produce high quality cloths.

Starting in the final years of the 13th century, the wool industry in northwestern Europe, especially that of Flanders, gradually began to lose its traditionally privileged position. The king of England banned the use of English wool in exports, which had a great effect upon the entire cloth industry, and the manufacture of panni franceschi decreased due to social unrest in its centers of production. Furthermore, in the Mediterranean markets where the demand for northwestern European cloth had been sustained, Florentine cloth began to be its rival. Thus, from the final years of the 13th century, the Florentine cloth industry developed rapidly as an export industry. Traditionally, it had produced cloth only for the local market using local materials but, from this time onward, it began to produce cloth for a wider market using

³ See the following explanation and description. Panno francesco is a cloth "which is manufactured in France, but particularly in Flandre", vedi, Battaglia, Salvatore, *Grande dizionario della lingua italiana*, term "Francesco"; Francesco "denotes especially those wools and cloths which come from 'France' and from Flandre", vedi, Battisti, C. e Alessio, G., *Dizionario etimologico italiano*, Firenze, 1975, term "francesco"; "In London in England they purchase 'le lane (the wools) Francische', and they are of many sorts, namely of ··· the Cotswolds" and so on, vedi, Da Uzzano, a cura di Pagnini Del Ventura, *La pratica della mercatura*, Lisbona e Lucca [Pisa], 1766, ristampa anastatica, Bologna, 1967, p.118.

⁴ cfr. Sapori, Armando, Una compania di Calimala ai primi del Trecento, cit., pp.80-99.

⁵ Concerning this material and its export traffic, see, among others, Ramsay, George D., The Merchants of the Staple and the Downfall of the English Wool Export Traffic, in Spallanzani, Marco, a cura di, *La lana come material prima*, Firenze, 1974, pp.45 ff.; van Houtte, Jan A., Production et circulation de la laine comme matière première du XIIIe au XVIIe siècle, in Spallanzani, a cura di, *La lana come material prima*, cit., pp.381 ff.

materials obtained in Italy and the Mediterranean⁶. Moreover, as Villani stated, Florence began to import English wool between 1308 and 1338, and to use it to produce high grade cloth. In other words, the use of English wool enabled the Florentine cloth industry to manufacture higher quality products.

Although the details of this process are unknown, an account book has recently been found containing information that may be of relevance. The aim of this article is to understand the actual conditions of the process through an analysis of this account book. Here, I wish to express my sincerest gratitude to the late professor Hidetoshi Hoshino for introducing me to this book, in which I was able to find valuable information.

1 The account book of Rinuccio di Nello Rinucci

In the Archivio di Stato di Firenze, there is an unpublished account book registered as "*Carte Del Bene, n. 63*". On the front side of folio 1, inscribed by the same hand as the book's registrar, are the words "this book belongs to Rinuccio di Nello Rinucci⁷". Therefore, we shall henceforth refer to it as the Book of Rinucci. Its initial entry was added on the 1st of September 1322, and its final entry is dated August 1325, thus making its period of use about three years. However, even after this date, there are several ex post facto entries. There is little information about Rinuccio himself, except for one episode recorded by Franco Sacchetti in his "Trecentonovelle" as the 159th story⁸. We learn that the Rinucci family were clothiers in the wool industry, and that they occupied an important position in Florentine society. Rinuccio's father, Nello, and his brother, Niccolò, had not only been priori and gonfalonieri di giustizia⁹, both the highest offices in the political structure of Florence, but also consuls of the Wool Guild¹⁰. Although Rinuccio's name is not found in the register (matricola) of this guild, this does not mean that he was not a member. This is because there are remarkably few names in the register, thus leading us to suspect that it might be incomplete¹¹. We can state without reservation that Rinuccio was a clothier from the contents of his account book.

⁶ On the development of the Florentine cloth industry, see Hoshino, Hidetoshi, *L'arte della lana in Firenze nel basso Medioevo*, Firenze, 1980.

⁷ Archivio di Stato di Firenze (hereafter ASF), Carte Del Bene, n.63, c.1r. "Questo libro è di Rinuccio di Nello Rinucci".

⁸ Hidetoshi Hoshino corresponded with me on this matter.

⁹ Father Nello was priore $\overline{7}$ times and gonfaroniere di gistizia once between 1295 and 1315. Brother Niccolò was the former 4 times and the latter once between 1324 and 1342. vedi, ASF, Raccolta Sebregondi, n. 4507.

¹⁰ Nello was its consul 3 times (1310, 1312, 1314) and Niccolò twice (1332, 1333). vedi, ASF, Arte della Lana, n.18, cc.9t-10t, 12r-t.

¹¹ Hidetoshi Hoshino explained this matter to me. Following his suggestions, the registers of the consuls of 1303-19 and that of 1331-34 are complete.

He borrowed a total of 1450 libre a fiorini, namely 1000 florins, on 10 separate occasions between 1 September 1322 and 20 April 1323, from Guerriante Maringnole¹², the grandfather of his sister's husband¹³. This large sum must have been capital investment for his business. From 13 September 1322 onward, he bought materials for use in the wool industry, such as warps, woofs and so on^{14} . On 1 October of the same year, a debt resulting from the hiring of a wool industry workshop and its equipment was recorded¹⁵. Thus the preparations for production were complete. The first entry containing information about the sale of cloth was dated February 14, 1323, and the last was dated July 30, 1325.

Dates in the account book follow the Florentine style, in which the first day of the year is 25 March of the same year as the modern style¹⁶ but, in this article, the date has been converted into the modern style. The basic monetary unit recorded in this book is the denaro (soldo, libra) "a fiorini" (literally "in fiorini"), but two other units, namely the "fiorino d'oro" (golden florin, that is, florin) and the denaro "in piccioli" also appear occasionally. As is well known, the florin and denaro in piccioli are real currencies, while the denaro a fiorini is a currency used only for accounting purposes, and thus an ideal currency. The value of 1 florin was fixed at 348 denari a fiorini, but its equivalent in denaro in piccioli fluctuated according to the market exchange rate¹⁷. When a transaction in golden florins appears in the book in its proper unit, it is converted into the base unit, namely denaro a fiorini, in the same account. When a small transaction in denaro in piccioli appeared in its proper unit, it was converted into the base unit when it was posted to other accounts¹⁸.

¹⁶ vedi, Cappelli, A., Cronologia, Cronografia e Calendario perpetuo, 3a ed., Milano, 1969, pp.8sgg.

¹⁷ On the monetary unit, see Bernocchi, Mario, La monetazione fiorentina dell'età dello splendore. indagine attorno al Fiorino Aureo, Firenze, anno accademico 1966-67; Cipolla, Carlo M., Money, Prices and Civilization in the Mediterranean World, Fifth to Seventeenth Century, New York, 1967, pp.27-51; De Roover, Raymond, The Rise and Decline of the Medici Bank, 1397-1494, New York, 1966 (paperback ed.), pp.31-34; Lopez, Roberto S. and Raymond, Irving W., Medieval Trade in the Mediterranean World, New York & London, 1955, pp.10-16; Edler, Florence, Glossary of Medieval Terms of Business, Italian Series 1200-1600, Cambridge Massachusetts, 1934, term "Fiorino" etc.; Dizionario Enciclopedico Italiano, voce "Fiorino".

Edler says that 1 florin weighs 3.53 grains, but it must be 3.53 grams. According to the fixed exchange rate, 1 florin = 348 denari in piccioli (hereafter, denari a fiorini), Lopez and Raymond asserts that the Florentine government arranged this situation in 1271, but Bernocchi says that the Calimala guild arranged it in 1278.

¹⁸ For example, see ASF, Carte Del Bene, n.63, c.4t. Here, concerning the trade carried out on January 13, 1323, libre 39 libre 13 soldi in piccioli are converted into 17 libre 6 soldi a fiorini. Therefore, 1 florin equals 3 libre 6 soldi 5 and a hahf denari in piccioli.

¹² ASF, Carte Del Bene, n.63, c.3r.

¹³ ASF, Sebregondi, n.3336. Guerriante was gonfaloniere di gistizia in 1323, vedi ibidem.

¹⁴ ASF, Carte Del Bene, n,63, cc.4r.sgg.
¹⁵ ASF, Carte Del Bene, n,63, c.3t. " • • • p[er] entratura nella bottegha ch[e] avemo tolta • • • e masserizie che tolgliemo · · · ." The sum recorded here is 68 libre a fiorini.

The following words are written on the front side of folio 2 in the Book of Rinucci:

"On 1 September 1322, we shall arrange this book into 3 parts. In the first, we shall register what we must give \cdots [for] the purchase of wool, spun thread and other merchandise. We shall begin [this registration] in [folio] 3, and continue until folio 60.

In 60 we shall begin to register what we must have \cdots that should be receivable (danari di scritte), and continue until folio 110.

In 110 we shall begin to register the sale of cloths and other merchandise to be sold, and continue¹⁹."

This book is, therefore, composed of 3 parts. The first part records liabilities and the purchase of raw materials for the production of cloth, such as wool, spun thread and dye. According to this preface, the second should record receivables, and the third should record the sale of cloths and other merchandise. But, in fact, the third only records the sale of cloths, and that of other merchandise is recorded in the second, together with receivables (danari di scritte). Thus, the main characteristic of this system of book keeping is that the cloth-sale account is separated from other debit accounts, which serves to indicate the main area of interest for the book keeper. We shall refer to the first part as the credit account, the second as the debit account, and the third as the cloth-sale account.

Let us examine this book keeping method in detail, taking as an example the account of Chocho co.²⁰, a company with which Rinucci traded in various ways. Let us first observe some points about the following charts. If there is no specific notation, the monetary unit is always libra, soldo, and denaro a fiorini. Regarding the recorded folio number, a different number from the real one is often recorded in the original accounts, but we have included the real numbers in the charts. Furthermore, although there are several mistakes in the recorded totals, we have chosen to retain the original (incorrect) ones.

¹⁹ ASF, Carte Del Bene, n,63, c.2r. "In chalendì settenbre nel mille treciento venti due, ordinamo questo libro in tre partite. Nella prima, iscriverremo ciò che dovremo dare ··· e le chonpere delle lane e dell'accia e d'altra merchatantia. E chominceremo qui inanzi nel III e anderemo inanzi insino a sessanta charte.

Nel sessanta, chominceremo a scrivere ciò che doveremo avere $\cdot \cdot \cdot$ che siano danari di scritte, e anderemo inanzi insino alle ciento diecie charte.

Nel ciento diecie, chomincieremo a scrivere le vendite de'panni e d'altre merchatantie che vendessimo, e anderemo innanzi."

²⁰ Rinuccio di Chocho e chonpangni. This company undertook the financial management of the Wool Guild at this time. "Societas $\cdot \cdot \cdot$ Bardorum $\cdot \cdot \cdot$ soluerunt pro novo artifice mercatoris societatis de Chocchis camerae dicte artis lbr. centu[m] ad flor[inos], die secto novembris an[n]o MCCCXXII. ASF, Arte della Lana, n.18, c.6t. et vedi sqq.

This company purchases wool of England etc, and from Florentine companies as Alberti Del Giudice, Covoni and Peruzzi. vedi, Sapori, *Una compagnia di Calimala*, cit., pp.33, 66, 74, 81, 98, 164, 250, 306.

Let us now examine chart 1. Every cloth-sale account is arranged so that every transaction clears within the same account. In fact, any unsettled sum of the net amount is posted, after a certain amount of time, in the personal debit account of the cloth purchaser in question. If a purchaser did not have a personal debit account in the book, as was the case with Dardo del Pace, it was recorded in the debit account of the purchaser's trading bank, as occurred in the case of Rinuccio di Chocho co., that is, a giro. In this case, Rinucci receives the unsettled sum from Chocho co., and the latter should receive this loaned sum from del Pace, or from some of his debtors. Thus, the cloth-sale account was not totally independent from the debit account.

Chart 1: The Correlation between the "Cloth-Sale Account" and the "Debit Account" of Chocho co. in the Book

		The Cloth-Sale Account				The Debit Acount of Chocho co.	
folio	date (y.m.d)	abstract	sum (l.s.d.)	folio	date (y.m.d.)	abstract	sum (l.s.d.)
110r.	—	Sold 1 piece of cloth to Chocho co. Trading tax Received a part of the price	35.16.7 0.6.0 11.16.10			[On c.60r., the debit account of Chocho co. is recorded.]	
	1323 Jun. 8	Posted the unpaid part to the debit account of Chocho co. on c.60r.	23.13. 9		1323 Jun. 8	Posted from the cloth-sale account of Chocho co. on c.110r.	23.13. 9
	1323 Apr. 4	Sold 4 pieces of cloth to Dardo del Pace	57.19. 0	60r.			
112t.	—	Trading tax	0. 9. 8				
1121.	1323 Apr. 4	Received a part of the price	19. 3. 1				
	1323 Jul. 4	Posted the unpaid part to the debit account of Chocho co. on c.60r. (*A)	38. 6. 4			Posted from the cloth-sale account of Dardo del Pace on c.112t. (*B)	38. 6.4

(A)...ci [h]a datoDardo del Pace..., die[de] p[er] lui Rinuccio di Chocho, po[niamo] a sua ragione ove de[ono] dare in qua[derno] nel[le] LX charte.

(B)E de[ono] dare Rinuccio [di Chocho] e chonpan[gni]..., scrise gli ci p[er] Dardo del Pace, levamo da sua ragione ove dovea dare in[n]anzi nel[le] CXIII (actually CXII).

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Chart 2 shows the registers recorded on the first folio of every credit and debit account associated with Chocho co. There are registered receivables, liabilities and merchandize transactions, and entries posted to or from the other accounts. In each folio, the subtotal is calculated when the front or reverse side of the folio is completed, and this subtotal is posted in the subsequent folio of the credit and debit account associated with Chocho co. Every folio is settled formally in the following manner: "We have paid to Chocho co. ... [and] we post [this subtotal] into the credit account of Chocho co. on the front side of folio 11." Furthermore, this formal settlement is indicated by 2 or 3 oblique lines, which were omitted in the charts.

		The Credit Account of Chocho co.		The Debit Account of Chocho co.								
folio	date (y.m.d.)	abstract	sum (I.s.d.)	folio	date (y.m.d.)	abstract	sum (I.s.d.)					
	1322 Oct. 1	Chocho co. paid Luoglia Fini for us. Posted to the account of L. Fini in the lending book on c.2. (*A)	58. 0.0		1322 Sep. 25	Paid Chocho co. 200 gold florins (*b)	290. 0. 0					
	1323 Jan. 13	Chocho co. paid Luolglia Fini for us. Posted to the account of L. Fini in the lending book on c.2.	17. 6.0		1323 Jun. 8	Posted from the cloth-sale account of Chocho co. on c.110r.	23.19. 9					
	1323 Jan. 1	Posted from the account of B. Poni in the journal covered with sheepskin on c.50.(*B)	38. 0.0	60r.	1323 Jul. 4	Posted from the cloth-sale account of D. del Pace on c.112r.	38. 6. 4					
3t.	1323Aug. 1	Chocho co. paid G. Marchesini and M. di Vani for us. Posted to the accounts of these in the dyers book.	29. 0. 0		1323 Mar. 1 1323 Mar. 1	Subtotal Posted this subtotal to the debit account of Chocho co. on c.62t.	991.16.10 981.16.10					
	1323 Sep. 11	Posted from the credit account of Chocho co. on c.8t.	468. 3.0	a	Luolglia Fini,	l ho e chompangni deono avere, die[ro chome chonta al quaderno delle prestar Rinuccio [di Chocho] e chompangni, p	nze nel II.					
	1323 Jul. 21 1323 Jul. 21	Subtotal Posted this subtotal to the credit account of Chocho co. on c.11r.	1510.12. 0 (*a) 1510.12. 0 (*a)		scritto, al							

Chart 2: Entries in the Credit and Debid Accounts of Chocho co.

Let us now examine how the settlement of Chocho co.'s account was actually accomplished. Chart 3 shows that, when both the debit (receivable) and credit (liability) accounts had increased to a considerable amount, the settlement was calculated. As the chart shows, the first settlement with Chocho co. was done on July 21, 1323, but, the dates of the first settlement with each trading partner are different²¹. The account of Chocho co. was not closed, not even on the last folio of the debit or credit account, and each remainder should have been posted into the same company's debit and credit accounts in the following book.

²¹ For example, the first settlement with Amieri co. was done on May 24, 1323.

	Tł	ne Credit Account of Chocho co				The Debit Account of Chocho co.	
folio	date (y.m.d.)	abstract (*A)	sum (I.s.d.)	folio	date (y.m.d.)	abstract (*A)	sum (I.s.d.)
3t.		[Subtotal of c.3t.	1042. 9. 0]	60r.	1323 Mar. 1	Subtotal of c.60r. (posted to c.62t.)	691.16.10
	1323 Sep. 11	Subtotal of c.8t. (posted from c.8t.)	<u>468. 3. 0</u>	62r.	1323 Aug. 6	Subtotal of c.62r. (posted to c.62t.)	895. 4. 1
	1323 Jul.21	Total (posted to c.11r.)	1510.12. 0				
8t.	1323 Sep. 11	Subtotal of c.8t. (posted to c.3t.)	468. 3. 0				
11r.	1324 Mar. 16	Subtotal of c.11r.	836.17.0				
	1323 Jul. 21	Subtotal of c.3t. (posted from c.3t.)	<u>1510.12. 0</u>	62t.	1323 Dec. 7	Subtotal of c.62t.	610.15. 1
	1323 Oct. 16	Total	2347. 9. 0		1323 Mar. 1	Subtotal of c.60r. (posted from c.60r.)	691.16.10
	1323 Jul. 21	Balanced by the debit account	(2197.16.11(*a)		1323 Aug. 6	Subtotal of c.62r. (posted from c.62r.)	<u>895. 4. 1</u>
	1324 Jan. 1	Interest (on the total) (*B)	31. 6. 1		1323 Jul. 21	Toptal: Balanced by the credit ac- count	2197.16. 0(*a)
	1324 Jan. 1	Transferred to c.12t.	<u>118. 7. 0</u>				
				63r.	1324 May 26	Subtotal of c.63r. (posted to c.67t.)	1248. 7. 4
12t.	1324 Jan. 1	Subtotal of c.12t.	922. 0. 3	67t.	1324 Sep. 26	Subtotal of c.67t.	20.12. 9
	1324 Jun. 18	Transferred from c.11r.	<u>118. 7. 0</u>		1324 May 26	Subtotal of c.63r. (posted from c.63r.)	<u>1248. 7. 4</u>
		Total: Balanced by the debit account	1040. 7. 3		1324 May 28	Total	1269. 0. 1
					1324 Jul. 1	Interest (on the total)(*B)	<u>4. 0. 0</u>
						[Grand Total]	1273. 0. 1(*b)
					1324 Jun. 18	Balanced by the credit account	1040. 7. 3(*b)
					1324 Jul. 1	Transferred to c.68r.	233. 5. 1(*b)
					\sim		
15r.	1325 Apr. 11	Subtotal of c.15r.: Balanced	1216. 5. 0		[Omitted cc.68	Br., 71r. and a part of 72t. in which there	is no balance.]
		by debit account		72t.		[Grand Total]	1596. 7. 2(*c)
					1325 Apr. 11	Balanced by the credit account	∫1216. 5. 0(*c)
18r.	1325 Aug. 15	Subtotal of c.18r.	325. 0. 0		1325 Jul. 1	Transferred to c.73r.	380. 2. 0(*c)
				73r.	1325 Jul. 1	Transferred from c.73t.	380. 2. 0

Chart 3: The Structure of the Balancesheet for the Accounts of Chocho co.

(A)The "subtotal" in the abstract column is a total sum of trades recorded for the first time in that folio, excluding the subtotals posted from other folios. However, the posted sum from the cloth-sale account to the credit account is included there. If the subtotal or the grand total is not recorded, I calculated it and added it in []. There is no regularity in the entry order in the folio: sometimes the subtotal of the folio is recorded first, but sometimes the posted sum is recorded first.

(B)...donarci di tenpo di questa moneta [total] a lb. sei i mezo p[er] cie[nto] [lb.]. This should mean the interest at 6.5 %, but it is unclear how this figuer is reached.

(a,b,c)These entries include a miscalculation.

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As was mentioned above, this book deals with those trading partners with whom Rinucci frequently did business. However, those with whom he only traded sporadically are treated differently, that is, every transaction was settled formally, as was seen in the case of the cloth-sale account. Chart 4 shows an example of this type, namely Bencivenni's credit account. The debit account is the same. Thus many settlements were not actually done directly, but rather indirectly through a bank account, as can be seen from the account of Chocho co. In other words, many accounts were posted in the credit and debit accounts of trading banks, as may be seen in the case of the cloth-sale account. Therefore, accounts were mostly posted and subsequently absorbed into both types of account associated with several banks (or someone who functioned as such)²².

		The credit account of Bencivenni		The credit account of Chocho co.								
folio	date (y.m.d.)	abstract	sum (I.s.d.)	folio	date (y.m.d.)	abstract	sum (I.s.d.)					
			(in piccioli)				(a fiorini)					
4t.	1323 Jan. 13	Purchased yarn from N. Bencivenni Trading tax	40.0.0	3t.	1323 Jan. 13	Paid Bencivenni for us. Posted from the credit account of Ben-	17. 6. 0					
			0. 7. 0			civenni on c.4t.						
	1323 Jan. 13	Resolved unsettled sum. Chocho co. paid Bencivenni for us. Posted to the credit account of Chocho co. on c.3t. This sum is I.17 s.6 d.0 a fiorini.	39.13. 0									

Chart 4: Postings from the Credit Account of Bencivenni to the Credit Account of Chocho co.

There are several books related to the Book of Rinucci²³, some of which appear in chart 2. From the records of this book, we can confirm the existence of the following books²⁴, but their present whereabouts are unknown. Probably they were disposed of, except for the Book of Rinucci, which should probably be thought of as a ledger, as will be discussed later. Below is a list of these related books:

- (1) A journal covered with sheepskin
 - (quaderno della pechora, memoriale · · · chovertato di pechora)

²² I do not consider the position of this document in the history of bookkeeping. On bookkeeping in Medieval Italy, see Melis, Federigo, *Storia della ragioneria. Contributo alla conoscenza e interpretazione delle fonti più significative della storia economica*, Bologna, 1950.

²³ On the composition of a series of books which correlate with each other and their respective functions, see Melis, Federigo, (Dini, Bruno, a cura di,) *Sulle fonti della storia economica. Appunti raccolti alle lezioni del Prof. Federigo Melis*, Firenze, anno accademico 1963-64, pp.156sgg; idem, *Documenti per la storia economica dei secoli XIII-XVI*, Firenze, 1972, pp.377sgg.

 $^{^{24}}$ Besides the books listed below, there should also have been others, for example, a secret book. The folios where these are recorded are (1) c.3t., etc., (2) c.13t. (3) c.67r., (4) c.110r., (5) c.70t., (6) c.61t., (7) c.3t., etc., (8) c.15r., etc., (9) c.3t. etc., (10) c.61t., 10t., etc.

(2) A purchase book (quaderno del mercato)

- (3) A sale book (quaderno delle vendite)
- (4) A book for purchasers [cloth retail] (quaderno dei chonpratori)
- (5) A book for spinners / skein winders (quaderno delle dipanatori)
- (6) A book for weavers (quaderno dei tessitori)
- (7) A book for dyers (quaderno / libro dei tintori)
- (8) A book for shearers(quaderno degli afetatori)
- (9) A lending book (quaderno delle prestanze)
- (10) cash books (quaderno di entrata / quaderno di uscita)

Among the previously listed books, numbers 2 through 6 appear only once, and the exact role of numbers 2 through 4 is not always clear. It may be that (2) is a register of the purchase of raw materials for the manufacture of cloth, (3) a register for the sale of the same materials, and (4) a register for the sale of cloths sold in amounts less than one piece. Books 5 through 8 deal with various manufacturing processes, that is, spinning, weaving, dyeing and shearing. The role of (9) and (10) is clear from their names, that is, (9) must be a register for advances to artisans and workers, and the 2 books of (10) must be registers for income and expenditure in cash. Considering the contents of this book and the fact that portions of the previously mentioned books are included in this book, we may safely conclude that the Book of Rinucci is a ledger (mastro / libro grande / libro dei debitori e creditori) belonging to a clothier. There should also be a secret book (libro segreto) in which the procurement of capital and the distribution of profits were registered, but its existence is unknown.

As the Book of Rinucci is a ledger that belonged to a clothier and a member of a powerful cloth industry family, it should contain abundant information about the materials and products of the Florentine wool industry from September 1322 to August 1325. Let us now analyze its contents, paying particular attention to its formal structure.

2 An Analysis of the Book of Rinucci

Let us first examine the credit account in the Book of Rinucci. Chart 5 contains the results of an analysis of this account²⁵. Details of the trade with principal trading partners should be

Entry	Trading partner	Father Nello	Brother Niccolo	Kin Maringnole	Chocho co.	Amieri co.	Bardi co.	Others (28)	Total
	Received or borrowed sum	—	140 • 13 • 0	1450. 0. 0	_	_	_	87. 0. 0	1677.13.0
	Paid a third party for us /Made ad- vances to us	345.13.0	462. 0.6	-	4055. 7. 0	4128. 3.9	_	—	8991. 4.3
Debt in money	Posted credit to the account of a third party from each trading partner's account in the book	_	_	_	104. 2. 3	88. 9.0	_	_	192.11. 3
	Interest resulting from the balance	_	1.16.0	_	31. 6. 1	32.10.0	_	-	65.12. 1
	Error correction	_	_	_	163. 2. 0(*A)	_	_	_	163. 2.0
	Cloth	_	565. 3.7 (*B)	-	-	-	-	28. 7.0 (*C)	593.10.7
	Wool	466. 7.0	237. 3.0	_	472. 7. 0	_	3052. 3. 0	3137.19. 0	7365.19. 0
Purchased goods	Woolen yarn	483.11.0	70.17. 0	_	-	_		{ 218.19.0 *721.9.0	{ 773. 7.0 *721. 9.0
	Linen yarn	_	23. 0.0	_	-	_	_	58. 0.0	81. 0.0
	Sappan [dye]	_	41.11.2	_	_	_	_	67. 1.3	108.12.5
Tetel	I. s. d. a fiorini	1295.11.0	1542. 4.3	1450. 0. 0	4826. 4. 4	4249. 2.9	3052. 3. 0	3 597. 6. 3	(20012.11. 7
Total	I. s. d. in piccioli						•	(*721. 9.0	*721. 9.0

Chart 5: Analysis of the Credit Account

(A)Rinucci purchased wool from Chocho co. together with his brother Niccolo, and having thought that Niccolo had paid his share, he registerd this cost in Niccolo's credit account. However, Niccolo had not paid his share, so he registered it in Niccolo's debit account to offset this (c.70t.), and registered it again in the credit account of Chocho co (c.5r.). See the debit account of Niccolo in chart 6.

(B)12 pieces of mischiati alla francesca (7 pieces of best grade, 4 high grade, 1 middle grade) and 3 pieces of "panni crudi d'attenderni lana" [for packing ?]. (C)1 piece of saia.

²⁵ Here we shall quote the phrases concerning the occurrence and transference of debt and credit in this book. We begin with the relevant phrase in the credit account: "E de[ono] avere Rinuccio [di Chocho] e chompangni, dì XIII di giennaio, in fiorini lb. XVII s. VI, an[n]o treciento venti due. Diedero p[er] noi a Nuto Bencivenni. Leva[mo] da sua ragione ove dovea[no] avere in[n]anzi nel V" (c.3t.). This phrase means that Rinucci has paid a sum to Nuto Bencivenni from his account in the book of Chocho co., or that Chocho co. has advanced it to Nuto Bencivenni for Rinucci, and, having been settled, the sum was paid into the credit account of Nuto Bencivenni in folio 5 [actually the reverse of folio 4]. (This phrase has been simplified in the chart.)

clear from the chart. Our Rinuccio received the capital and the materials for cloth from his father, Nello, and his brother, Niccolò. He received numerous materials from Niccolò, and also the cloths produced by Niccolò's factory for resale . From Maringnole, the grandfather of his sister's husband, Rinuccio received libre 1,450 a fiorini (namely1,000 florins) in cash, which must have been a fund for the management of his company. Maringnole, perhaps already too old for actual work, must have lent the money to young Rinuccio, distancing himself from such direct business transactions. Chocho co. and Amieri co.²⁶ functioned as trading banks for Rinucci. He also purchased wool from Chocho co., but mainly from Bardi co. which was probably the biggest company in Europe at this time, and also flourished in England. From other companies and individuals –28 in total – he mainly purchased wool, but also materials of other kinds.

Let us turn our attention to the debit account. Chart 6 contains the results of an analysis of this account. Rinuccio also financed and provided materials for cloth manufacture to his brother Niccolò. It seems that these brothers assisted each other. Chocho co. and Amieri co. again functioned as his main trading banks. He sold a fairly large amount of wool to the Fini family²⁷, and he sold wool, cloths purchased from others, and papers to 22 companies and individuals. The cloths, for which sales are registered in the debit account, were not produced by him, but purchased from others, especially from his brother Niccolò. For this reason, the cloth-sale account only records cloths which were produced by him.

Rinuccio, who was the administrator of his own company, and his brother Niccolò, also the administrator of his own company, not only financed each other and purchased materials

[&]quot;E deono avere Rinuccio [di Chocho] e chompangni p[er conto di] Bartolo Poni $\cdot \cdot \cdot$ "(c.3t.). This phrase means that Rinucci has paid a sum from his account in the book of Chocho co. to the account of Bartolo Poni in the same book.

Let us turn our attention to the credit account. "E deo[no] dare Rinuccio [di Chocho] e chonpan[gni] $\cdot \cdot \cdot$. Iscrise gli ci p[er] Dardo del Pace $\cdot \cdot \cdot$ "(c.60). This phrase means that a sum has been paid into the account of Rinucci in the book of Chocho co. from the account of Dardo del Pace in the same book.

[&]quot;E deono dare mes[ser] Foglia [Amieri] e chompangni $\cdot \cdot \cdot$. Die[dero] p[er] noi Franciescho di Benedetto da San Giermano $\cdot \cdot \cdot$ "(c.60t.). This phrase means that Franciescho di Benedetto da San Giermano has paid a sum into the account of Rinucci in the book of Amieri co., or that Franciescho has advanced it to Amieri for Rinucci.

²⁶ Foglia Amieri (e Riccardo di Petri) e chonpangni. This company is one of the representative Florentine companies in the early Trecento and goes bankrupt in 1326. Its bankruptcy has a serious effect on the Florentine economy (Villani, G., *Cronica*, X-4). It functioned as a trading bank for Del Bene co., and was paid by a non Florentine who had purchased cloth [from northwestern Europe] from this company (Sapori, *Una compania di Calimala*, cit., p.130).

²⁷ Voglia Fini and Cione Fini. Both are yarn merchants (stamaioli). Vedi, Sapori, Armando, per cura di, *I libri degli Alberti del Giudice*, Milano, 1952, pp.62 et passim. Yarn merchants, at this time, are still independent [not dependent on clothiers]. vedi, Edler, *Glossary of Medieval Terms of Business*, cit., term "Stamaiuolo".

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		analysis si a					
Entry	Trading partner	Brother Niccolo	Chocho co.	Amieri co.	Fini family	Others (22)	Total
	Paid or advanced money	7.12.0	1015. 0. 0	1015. 0. 0	—	160.15. 0	2198. 7. 0
	Received for us from a third party / Received advances from us	_	2187.16.10	1875. 9. 2	_	3. 8. 0	4066.14. 0
Credit in money	Posted debit to the account of a third party from each trading partner's account in the book	118. 0.2	1296. 2. 1	1581.18. 4	_	_	2996. 0. 7
	Interest resulting from the balance	6. 4.0	_	49.17. 3	_		76. 1. 3
	Error correction	163. 2.0 (*B)	20. 0. 0		_	_	163. 2. 0
	Cloth	16.10. 0 (*C)	—	—	—	559. 0. 7 (*D)	575.10.7
Sold goods	Wool	335. 3.3			217. 8. 0	410. 7. 0	962.11. 3
	Paper	—	—	—	—	38.18. 0	38.18. 0
Total	I. s. d. a fiorini	646.11.5	4518.18.11	4522. 4. 9	217. 8. 0	1172. 1. 7	11077.4.8

Chart 6: Analysis of the Debit Account (*A)

(A)Among the accounts of each trading partner, the posting from the cloth-sale account of the trading partner is deducted from this debit ac-count to avoid duplication.

(B)See, note (A) in chart 5.

)1 canna of mescolato.

(D)Sold 12 pieces of mischiati alla francesca and 1 piece of saia all of which were purchased from brother Niccolo. This means that the sale of the cloth purchased from others is handled by this debit account.

together²⁸ as seen in charts 5 and 6, but occasionally paid their employees jointly as well, as may be seen from the following record found in the credit account: "Niccholò himself must receive · · · libre 17 soldi 5 a fiorini [for he has paid the whole wages of two apprentices, and I must pay one third]. We [our company] pay one third [of the wages] of two apprentices, to Bonaiuto for the purchasing, and to Franciescho for the fulling. Bonaiuto [has worked for us] for fourteen months and a half, and Franciescho for eighteen months and a half ··· ²⁹". Thus, although the brothers managed their own cloth manufacturing companies, they seem to have cooperated closely with each other.

Although this book could be called a ledger, it seems apparent that not all of the accounts are included here. This is because entries from several related books only appear once and, when they do appear, they are often fragmentary. When the settlements are recorded in those books, they are not included in this ledger. Its role as a creditor-debtor book is, therefore, incomplete, as it does not include enough information with which the precise analysis of the entire profit or deficit of the company could be assessed. This is corroborated by the absence

²⁸ vedi, note A of chart 5.

²⁹"E deve avere Niccholò [di Nello Rinucci] medesimo • • • in fiorini lb.XVII s.V, pagamo lo p[er] terza parte di due disciepoli, Bonaiuoto p[er] lo merchato e Franciescho p[er] le gualchiere. Bonaiuoto p[er] quattordici mesi i mezo, e Franciescho p[er] diciotto i mezo · · · "(c.13t.).

of a general settlement in the book. Perhaps profit and deficit were calculated without recourse to this book. It is, therefore, impossible to reconstruct the way in which Rinuccio ran his business from this book alone.

	purchased				woight	nrico nor	nrico	
folio	recorded date (y.m.d.)	date (y.m.d.)	type of wool (*A)	load number (*B)	weight (gross) lb.	price per lb. 100 (l. s. d.)	price (I. s. d.) (gross)	seller (*C)
4r.	1323 Dec. 6	[1323] Jun. 6	long wool of England	b. 8	1586	24. 0. 0	385. 5. 0	Father Nello (←Peruzzi co.)
6r.	[1323] Apr. 11	—	lamb wool of Burgandy	b. 4	1030	28. 0. 0	283. 1. 0	Tomaso Peruzzi and Chele Guidi
6t.	1323 Mar. 15	[1322] Sep. 15	lamb wool of England (middle and low grade, unwashed)	_	157	22. 0. 0	34. 1. 0	Brother Niccolo
	1323 Jun. 11	[1322] Dec. 11	lamb wool of Burgandy (middle and low grade, unwashed)	_	109	23. 0. 0	24. 7. 0	Brother Niccolo
	1323 Apr. 14	[1322] Dec. 14	lamb wool of Burgandy and England (middle grade, washed)	_	108	24. 0. 0	25. 8. 0	Brother Niccolo
8t.	1323 Sep. 9	[1323] Mar. 9	long wool of England	b. 4	962	25. 0. 0	228. 7. 0	Metto Biliotti co.
	1323 Sep. 11	1323 Mar. 11	long wool of England	b. 8	1963	25. 0. 0	472. 7. 0	Chocho co.
9r.	1323 Oct. 20	[1323] Apr. 20	long wool of England	b. 6	1476	28.10. 0	409. 8. 0	Bardi co.
	1323 Nov. 9	[1323] May 9	long wool of England	b. 2	471	24. 0. 0	109.13. 0	Brother Niccolo (←Mazetti)
10t.	1324 Feb. 8	[1323] Aug. 8	long wool of England	b. 6	1376	25.15.0	343. 4. 0	Bardi co.
	1324 Apr. 5	[1323] Oct. 5	long wool of England	b. 5	1275	26. 0. 0	299.18.0	Lizio Guidalotti co.
11t.	1324 Apr. 7	[1323] Oct. 7	long wool of England	b. 6	1267	33. 0. 0	392. 7. 0	Bernardino da Massa
	1324 Jun. 14	[1323] Dec. 14	long wool of England	bne. 3	1498	27.10. 0	375.15. 0	Peruzzi co.
13r.	1324 Jun. 26	1324 Jun. 26	[wool ?] (middle and low grade)	_	230	19. 0. 0	43.14. 0	Brother Niccolo
14r.	1324 Aug. 21	[1324] Feb. 21	long wool of England	b.10	2577	25.10. 0	631.17. 0	Dino Rinieri da Massa co.
15t.	1324 Dec. 4	[1324] Aug. 2	best wool from northern France ("sodo", washed)	s. 3	409	45. 0. 0	164.14. 0	Fedello de' Rosso
	1324 Dec. 2	[1324] Aug. 2	best wool from northern France ("sodo", washed)	s. 3	415	43. 0. 0	163.12. 0	Bartolo Michele
	1324 Dec. 2	[1324] Aug. 2	best wool from northern France (best grade, washed)	s. 2	197	45. 0. 0	81. 2. 0	Father Nello
	1325 Feb. 17	[1324] Aug. 17	long wool of England	b.10	2350	25.15. 0	598. 2. 0	Bardi co.
16t.	1325 Mar. 5	[1324] Sep. 5	long wool of England	b. 2	448	28. 0. 0	123. 4. 0	Bardi co.
	1325 Mar. 5	[1324] Sep. 5	long wool of England	b. 2	397	24.10. 0	119.11. 0	Bardi co.
	1325 Apr. 11	[1324] Oct. 11	long wool of England	b. 9	2032	26.10. 0	527.18. 0	Bardi co.
	1325 May 9	[1324] Nov. 9	long wool of England	b. 7	1646	27.10. 0	439. 3. 0	Bardi co.
17r.	1325 May 23	[1324] Nov. 23	long wool of England	b. 8	1885	27. 0. 0	491.13. 0	Bardi co.
	1325 Jul. 11	[1325] Jan. 11	long wool of England	bne. 2 } b. 6 }	2485	25. 0. 0	598. 8. 0	Franciescho Bonfigliuoli
Total					28349		7365.19. 0	

Chart 7: Purchase of Wool Recorded in the Credit Account

(A)long wool = lana lunga, lamb wool = agnellina, best wool = fioretto, middle and low grade = mezana e grossa, ecc., best grade = fine, unwashed = sucida, washed = lavato.

(B)b. = balla, bne. = ballone, s. = sacco. (C)"Father Nello (←Peruzzi co.)" ;this means that Rinucci puchased wool from Father Nello who had purchased it from Peruzzi co.

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The purchase of raw materials is recorded in the credit account, so I analyzed the purchase of a fundamental material, namely wool, in chart 7. In 1322, Rinuccio purchases "lamb wool" (lana agnellina) of England and Burgundy and, from March of the following year onward, he mainly purchases "long wool" (lana lunga) of England. However, he also purchases "the best wool" from northern France (fioretto franciescho) at the same time, and cheap wool whose origin is unknown (purchased from his brother Niccolò on June 26, 1324), both in small quantities. Let us now compare the prices of each type of wool per libra (a unit of measurement in this case, though the denomination has the same name as the monetary unit). The prices of lamb wool of Burgundy and the same type of wool from England are almost the same. The average price of long wool of England is a little more than that of lamb wool, but the price of the best wool from northern France is high. Here it is remarked that the price of the best wool constitutes 91% of the gross weight of all wool, and 89% of the total cost of all wool purchased.

The resale price of wool is recorded in the debit account, and I analyzed its fluctuations in chart 8. Among the various kinds of resold wool, the "wool from northern France" (lana franciescha)³⁰ is overwhelmingly represented. This book does not tell us the origin of the wool, as its aim is to record the credit and debit accrued by the purchase and resale of wool, and not to document its source. Though wool from northern France constitutes about 75% of the total weight of resold wool, and about 60% of its total cost, almost all of the wool resold outside the Rinucci family is of this type, while the other types are almost always resold to Niccolò. All of the wool from northern France is recorded as being of middle or low grade, and is always cheap. The average price of this type, which occupies the major portion of all of the resold wool, is half again as much as that of the long wool of England, which occupies the major part of all of the purchased wool. From the fact that the quantity of each resale is much smaller than that of each purchase of long wool of England, it may be supposed that the wool was gradually resold to companies which used it to produce cheap cloth. In any case, the purchased wool and the resold wool in the book are of quite different types.

Together with wool, the purchase of yarn, namely "weft / warp" (stame / trama) is also recorded in the credit account, and it is clearly grouped into "best" (fine), "high" (gentile), "middle" (mezana) and "low" (grossa). There are clear differences corresponding to this classification in the prices for the same unit weight³¹.

³⁰It is recorded literally as "middle / low class from north France [of wool]" (mezano / grosume franciescho [di lana]).

³¹ ASF, Carte Del Bene, n.63, cc.4sgg. Middle and low grade yarn was largely purchased from those with whom transactions were carried out in denaro "in piccioli", that is, not rich persons.

folio	recorded date (y.m.d.)	sold date (y.m.d.)	type of wool (*A)	load number (*B)	weight (grosso) Ib.	price per lb. 100 (l. s. d.)	price (l. s. d.) (grosso)	buyer
61t.	1323 Aug. 5	[1323] Apr. 5	wool from northern France (low grade)	s. 2	253	8.15. 0	21. 0. 0	Voglia Fini
	1323 Aug. 8	[1323] Apr. 8	_	_	420	21.10. 0	90. 6. 0	Albizo de Richo
	[1323] Sep. 24	[1323] Sep. 24	wool from northern France (middle grade, "sodo")	s. 1	148	19.10. 0	27. 2. 0	Voglia Fini
	1323 Sep. 19	1323 Sep. 19	wool from northern France (low grade)	-	58	11. 0. 0	5.15. 0	Neri Chanbi
63t.	[1323] Nov. 12	1323 Nov. 12	wool from northern France (low grade)	s. 1	85	11. 0. 0	8.5.0	Ghuccio del Massaio di Viemaggio
	1323 Nov. 16	1323 Nov. 16	wool from northern France (low grade, washed)	s. 2	242	18. 0. 0	40.19. 0	Ghuccio di Foleliardo
	1324 May 7	[1323] Nov. 7	long wool from England (←Ber- nardino da Massa)	b. 2	440	33. 0. 0	132.10. 0	Brother Niccolo
64t.	1324 Jul. 6	[1324] Feb. 6	wool from northern France (low grade, washed)	s. 1	100	10. 0. 0	9.10. 0	Simone di Lapo
65r.	1324 Jul. 29	[1324] Mar. 29	wool from northern France (middle grade, washed)	s. 2	298	20. 0. 0	55.14. 0	Bartolo di Lotto
	1324 Jul.29	[1324] Mar. 29	wool from northern France (low grade)	-	103	10. 0. 0	10. 6. 0	Cione Fini
67t.	1325 Feb. 15	[1324] Oct. 15	wool from northern France (middle grade, washed)	s. 2	304	22.10. 0	65.18. 0	Voglia Fini
	1325 Feb. 15	[1324] Oct. 15	wool from northern France (low grede, washed)	s. 1	100	10. 0. 0	9. 6. 0	Voglia Fini
	1325 Mar. 22	[1324] Oct. 22	wool from northern France (middle grade, washed)	s. 2	246	22. 0. 0	56.16. 0	Cione Fini
	1325 Mar. 22	[1324] Oct. 22	wool from northern France (low grade)	s. 1	135	11. 0. 0	14. 0. 0	Cione Fini
69r.	1324 Dec. 4	[1324] Aug. 4	best wool from northern France (←B. Michele, father Nello)	-	465.5	-	202.13. 3	Brother Niccolo
	1324 Dec. 14	1324 Dec. 14	"mil[iore]" [better wool ?] (mid- dle grade)(*C)	s. 1	231	26. 0. 0	57.14. 0	Salvestro Manetti co.
	1324 Dec. 14	1324 Dec. 14	wool from northern France (low grade)	s. 1	117	10.10. 0	11. 8. 0	Salvestro Manetti co.
70r.	[1324] May 4	[1324] Jan. 4	wool from northern France (low grade, washed)	s. 1	154	12.10. 0	18. 0. 0	Cione Fini
	1324 May 9	1324 May 9	wool from northern France (middle grade, washed)	s. 2	226	24.10. 0	51.11. 0	Noldo di Michele and Ciore del Buono
	[1325] Jan. 25	[1325] Jan. 25	wool from northern France (low grade, washed)	sto. 1	56	10. 0. 0	5. 5. 0	Bartolo Banchi and Nuto di ser Diritto
	[1325] Jan. 26	[1325] Jan. 26	wool [from northern France] (middle grade, washed)	s. 1	145	22. 0. 0	29. 7. 0	Buoso and Sabatino di ser Simone
70t.	1325 Feb. 9	1325 Feb. 9	wool from northern France (middle grade, washed)	s. 2	193	21.10. 0	36.19. 0	Buoso Simone and Saba- tino di ser Simone
	1325 Feb. 12	1325 Feb. 12	wool from northern France (low grade, washed)	s. 1	80	10. 0. 0	7.10. 0	Strufaldo di - di Borgho San lachopo
Total					4599.5		962.11.3	

Chart 8: Sale of Wool Recorded in the Debit Account

(A)Low grade = grossume, grosso; middle grade = mezano; (←) this means the same as chart 7, note (C); The others are the same as chart 7, note (A).

(B)s. = sacco (sack), sto. = sacchetto (little sack), b. = balla (bale) (C)mil[iore] = better [wool]?

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Let us now examine the cloth-sale account. Here, the sale of cloth is formally recorded in the following manner: "Alberto del Giudicie must give us, 21 March, libre 83 soldi10 denari 7, for two mixed [cloths] of high class in the northern French style · · · of whose length is [in total] canne 30 braccio 1 quarters 2, soldi 55 per canna. The broker [is] Vighoroso." (Alberto del Giudicie ci de[ve] dare dì XXI marzo, [in] fio[rini] lb. LXXXIII s. X d.VII, p[er] due mescolati gientile a la fran[ciescha] · · · [che] furo[no] cha[nne] XXX br[accio] I quarti II. p[er] s. LV cha[nna]. Sen[sare] Vighoroso.)³² Thus, the book usually records the type of cloth, its classification, its length, and its price per 1 canna (a cloth measurement). Regarding the type of cloth, we may infer that it is a "panno a la franciescha", namely cloth modeled after the "panno franciescho," or cloth from northern France. In other words, "panno a la franciescha" was produced in Florence in imitation of the "panno franciescho" created in northwestern Europe. The length of a piece of cloth was not specified at this time, but it generally fell between 12~15 canne³³. 1 Florentine canna was about 2.33 metres³⁴, so one piece of Florentine cloth should have measured about 28-35 meters. In the previously cited case, the average price of one piece was about libre 42 a fiorini, or about 29 florins. The average wage per year for each of those 2 apprentices hired jointly by the Rinucci brothers may therefore be converted into about 13 florins. The annual wages of artisans involved in the finishing process in the wool industry in Florence in 1364 were as follows: a brusher received 60 florins, and a shearer received 44 florins³⁵. In Pavia in 1376, the cost of living for an average adult male was about 20 florins³⁶. Therefore, the price of a piece of cloth was fairly high for the time. The total amount recorded in the cloth-sale account in the book is libre 12,676 soldi 6 denari 5 a fiorini, which is about 8,742 florins, a not inconsiderable sum.

Among the cloths produced by Rinucci and recorded in the cloth-sale account, there are 3 types, "saia" (serge), "tritana", and "panno alla francesca". Saia is, as is well known, a typical kind of thin cloth used in summer. Tritana is a poor quality cloth made from a mixture of wool and hemp or cotton to be used by commoners³⁷. Panno alla francesca is, as was mentioned above, a Florentine imitation of panno francesco³⁸.

³² ASF, Carte Del Bene, n.63, c.115t. Canna is ell, and braccio is yard in English.

³³ The late professor Hidetoshi Hoshino provided me with this information.

³⁴ The length of a canna differs by area (Edler, *Glossary*, cit., term "Canna"). A Florentine canna is about 2.33 meters (vedi, Martini, Angelo, *Manuale di metrologia*, Torino, 1883, p.206). The relationship between cloth measures is the following: 1 canna = 4 braccia (the singular form is braccio) = 16 quarti.

³⁵ Hidetoshi Hoshino, Francesco di Iacopo Del Bene, cittadino fiorentino del Trecento –La famiglia e l'economia-, in, per cura dell'Istituto Giapponese di Cultura in Roma, *Annuario*, IV, 1966, p.49.

³⁶ Cipolla, op.cit., p.60.

³⁷ vedi, Hoshino, *L'arte della lana in Firenze nel basso Medioevo*, cit., pp.126sgg; de Roover, Raymond, The Story of the Alberti Company of Florence, 1302-1348, as Revealed in its Account Books, in, *The Business History Review*, vol. 32, 1958, p.22.

 $^{^{38}}$ On the market conditions which gave rise to such imitations, see Hoshino, op. cit., chapters 1~3.

Panni alla francesca can be divided into 2 categories according to the quantity sold, one called mischiato or mescolato³⁹, which is woven from threads dyed in various colors⁴⁰, and another which consists of various types. The price of panno alla francesca is almost the same as that of certain types of panno francesco⁴¹, but it is more valuable than saia, and is considerably more costly than tritana. In the book of Rinucci, a 4 grade classification according to quality is adopted for cloths, namely "best" (fine), "high" (gientile), "middle" (mezano) and "low" (grosso). The designation "best" is mostly applied to panno alla francesca, but also to one piece of saia.

As we have seen, Rinucci co. recorded the sale of self-produced cloths from February 1323 to July 1325. Dividing this term into 5 periods, I analyzed the periodic trend in the sale of each type and grade. According to this system, the first period is from February to June 1323, the fifth is from January to July 1325, and every other period consists of 6 months.

Saia is sold in every period, but its sale frequency increases and decreases in every period, perhaps because of its seasonal nature, that is, it is especially suitable for summer. Regarding the quantity sold, each type of high and low grade cloth is almost double that of the middle grade cloth. Tritana, the cheap cloth, disappears entirely from the second period onward. The quantity sold of its high grade cloth is more than that of other grades, and even the price of high grade cloth is much cheaper than that of the other types of cloth. The last sale of tritana is recorded on May 17, 1323, and immediately after this date, namely on the 21st of the same month, the first sale of panno alla francesca is recorded. From this, we may infer that Rinucci stopped the production of tritana, and began to produce panno alla francesca. From the second period, the quantity sold of panno alla francesca outstrips that of the other 2 types. Among panni alla francesca, the sold quantity of mischiato and mescolato (from now on, these 2 names are represented by the former, namely, mischiato) is more numerous from the beginning. The number of the other types of panno alla francesca is small at first, but increases gradually. So, the produce of panno alla francesca might have begun with the mischiato type. This type is generally expensive, and the number of best and high grade pieces sold is especially large. The selling rate of these grades constitutes about 86% of all of the sold pieces of panno alla francesca. Additionally, the selling rate of panno alla francesca constitutes about 67% of all of the sold pieces of the 3 types of cloth.

³⁹ Mischiato and mescolato could be the same. cfr., Hoshino, ibidem, p.126.

⁴⁰ Mischiato (mescolato) is woven together with threads dyed in various colors. vedi, Hoshino, ibidem, p.128.

⁴¹ The price of panni alla francesca is almost exactly similar to that of panni franceschi sold in Florence during 1319-1323, especially that of "mescolato" and "bighino". vedi, Hoshino Hidetoshi, Per la storia dell'arte della lana in Firenze nel Trecento e nel Quttrocento, un riesame, in, per cura dell' Istituto Giapponese di Cultura in Roma, *Annuario*, X, 1972, p.53, Tabella 3b; Sapori, Armando, *Una compagnia di Calimala*, cit., pp.282-303.

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There are clear price differences between the grades of each type of cloth, as can be seen from chart 9. A sale of the best grade is not recorded in the first period, and appears for the first time in the second period, together with panno alla francesca. Incidentally, the best grade of saia, only 1 piece of which appears in the second period, should probably be considered as high grade because of its price. This fact leads us to speculate that the very notion of high grade was created together the production of panno alla francesca. After applying this theory to the traditional high grade of saia, one could conclude that this price is not suitable for the best grade.

The price of every grade of saia declines as time passes, while that of the best and high grades of panno alla francesca falls in the fifth period. What is the reason for this decline? There is a time gap between each of these 2 types, so it is difficult to speculate whether or not the reason may have been the same. Unfortunately, we cannot answer this question.

We already know that	at there are some	differences	in type and	d grade in the	wool, and there

	Piece-Price			Saia				-	ritana					F	Panno	alla	france	sca				Other	
Period	(*A) / Type-			Jaia				1	IIIalla	l		M	Mischiato/Mescolato					Others (*C)					Total
	Grade (*B)	В	Н	М	L	Т	В	Н	М	L	Т	В	Н	М	L	Т	В	Н	М	L	Т	(*D)	
	piece	0	13	13	24	50	0	20	11	3	34	0	6	0	0	6	0	0	0	0	0	1	91
	average price	—	46.01	31.06	24.01		_	26.1	19.04	14.08		_	54.08	_	_		—	_	_	_		26	
1st	maximum price	_	49	37	26		_	28	20	15		_	56	_	_		_	_	_	_		26	
	minimum price	_	43	30.09	22		_	26	19	14		_	54	_	_		_	_	_	_		26	
	piece	1	0	0	0	1	0	0	0	0	0	11	35	1	0	47	0	1	1	4	6	0	54
	average price	44	_	_	_		_	_	_			62.08	52.11	39	_		_	53	39	32.09			
2nd	maximum price	44	_	_	_		_	_	_	_		63	56	39	_		_	53	39	33			
	minimum price	44	_	_	_		_	_	_	_		62	50	39	_		_	53	39	32			
	piece	0	1	7	11	19	0	0	0	0	0	21	26	4	4	55	7	2	4	3	16	0	90
	average price	_	42	28	22.07		_	_	_	_		62.01	52.10	42	35.11		63.02	53.06	42.0	2 31.08			
3rd	maximum price	_	42	28	23		_	_	_	_		64.06	57	43.06	37		74	54	45	33			
	minimum price	_	42	28	22		_	_	_	_		60	52	38	34.09		56	53	36	30			
	piece	0	0	2	4	6	0	0	0	0	0	7	19	2	2	30	5	7	2	1	15	0	51
	average price	_	_	27	21.06		_	_	_	_		63.09	52.06	42	35		59.10	51.03	41	33			
4th	maximum price	_	_	28	22		_	_	_	_		69	56.06	43	35		61	56	42	33			
	minimum price	_	_	26	20		_	_	_	_		59.06	49	41	35		58	45	40	33			
	piece	0	26	0	0	26	0	0	0	0	0	32	22	4	0	58	19	15	7	0	41	0	125
	average price	_	41.04	_	_		_	_	_	_		54.06	47.08	40	_		54.10	48.04	40.0	9 —			
5th	maximum price	—	44	_	_		_	_	_	_		57	50.06	40	_		60	54	45	_			
	minimum price	—	38	_	_		_	_	_	_		53	46	40	_		52	45	38	_			
Total	piece	1	40	22	39	102	0	20	11	3	34	71	108	11	6	196	31	25	14	8	78	1	411

Chart 9: Sold Cloth recorded in the Cloth-Sale Account

(A)Prices are per canna, and the monetary unit is soldi - denari a fiorini.

(B)B = best (fine), H = high (gentile), M = middle (mezano), L = low (grosso), T = total.

(C)There are more than 21 denominations. Vedi, Hoshino, Hidetoshi, Per la storia dell'arte della lana in Firenze nel Trecento e nel Quattrocento; un riesame, in, per cura di Istituto giapponese di cultura in Roma, Annuario, X, 1972, p.52, tabella 3a.

(D)"mischiato in accia" (c.116t.).

are also 3 or 4 further grades associated with each of the 3 types of cloth. Therefore, it seems natural to deduce that there must be a correlation between both the types and grades of the materials and those of the products, namely, that a specific product is made from a specific material. As English wool was commonly used in the production of panno francesco, it was probably also used in the production of panno alla francesca, the Florentine imitation of panno francesco. From the large quantity of English wool purchased, especially long wool (lana lunga), it must have been used for panno alla francesca. In the book of Rinucci, the first purchase of long wool of England is dated March 9, 1323, and the first sale of panno alla francesca is dated May 29 of the same year, the time difference between these 2 dates being about 80 days. It takes an expert weaver about 1 month to weave a piece of cloth⁴². Taking into account the time needed not only for the processes of preparation, spinning, weaving and finishing, but also for the time needed to produce the new and high quality cloth, it is possible that the panno alla francesca sold at the end of May was made from English long wool purchased at the beginning of March. If a book containing corroborative evidence existed, such as a book for weavers, we could specify the date of each stage in the manufacturing process, and even resolve the question of whether or not artisans were brought from northwestern Europe to work in Florence. Unfortunately, though, such materials do not exist. Therefore, we do not know whether or not fioretto wool, the most precious type of wool, was used in the production of the best grade of panno alla francesca. However, based on the correlation between the large quantity of panni alla francesca and that of English wool, we may conclude that the former could only have been produced by using the latter. On the other hand, the material used for tritana must have been the low grade "wool from northern France" (lana franciesca). In the debit account, we saw that Rinucci resold low and middle grade wool of this type to others, but some part of this wool must have been used by Rinucci himself for cloth production⁴³.

Thus, we can say that the Rinucci company changed its product from tritana made with wool from northern France to panno alla francesca made from English wool. Our book records this exact change. In his company, the production of cloth made from English wool was begun by imitating panno francesco made from the same material. It is difficult to know to what extent this imitation had expanded in Florence at this time. Perhaps it had its origins among powerful clothiers like the Rinucci who had sufficient capital to purchase valuable materials. According to Villani's account, it may be that such production was fairly widespread. According to this account, in 1338, after more than 10 years had passed since the time of our document, Florentine merchants still imported about 10,000 pieces of panno francesco per year

⁴² vedi, Edler, *Glossary*, cit., p.421. On the manufacturing processes, vedi, ibidem, pp.324-329.

⁴³ This part should be recorded in a book different from the book of Rinucci, and be settled there, so it is not recorded in the book.

into their mother city, except for those which were exported to other centers⁴⁴. This clearly indicates the extent to which it was in demand. Therefore, the production of the simulated version should also have expanded in the city. Incidentally, as far as the writer is aware, the book of Rinucci is the first document to record the production of panno alla francesca in Florence.

Let us now turn our attention to the sale of cloths produced by Rinucci, shown in chart 10-(1). Purchasers who procured more than 10 pieces constitute only about 8% of all purchasers, but their purchases account for about 42% of all sold cloths. Those purchasers who acquired more than 5 pieces constitute about 18%, but their purchases account for about $61\%^{45}$. Thus, if we consider the purchase of cloth in its entirety, the proportion of cloth procured by bulk purchasers is comparatively high. This, of course, begs the question of who these purchasers may have been. Before considering this, it seems worthwhile to note that, among the purchasers' names, there are some that include a place name, for example, Balducci "da Pisa", and some that do not. The latter category consists almost entirely of the names of Florentines⁴⁶. As the majority of the bulk purchasers who bought more than 5 pieces seem to have been Florentines, it seems likely that many of them must have belonged to the upper classes which produced governmental leaders, and to the genealogy of the Calimala merchants (see the notes). Arte di Calimala is a guild of merchants that had establishments (botteghe) on Calimala Street, and was active in the trade of panno francesco, as was previously mentioned. It therefore follows that many of these bulk purchasers were probably also active in international trade⁴⁷, with the greater part of the large quantity of cloth which they purchased being sold in near and distant markets.

The majority of the purchasers of more than 10 pieces were great Florentine merchants, while the majority of the purchasers of 9-5 pieces were non Florentines, according to the place names included in their names. These non Florentine merchants were most likely fairly powerful merchants in the cities suggested by their names. Let us now examine the origin of

⁴⁴ "I fondaci dell'arte di Calimala de'panni franceschi e oltramontani erano da venti , che faceano venire per anno più di dieci mila panni di valuta di trecento migliaia di fiorini d'oro, che tutti si vendeano in Firenze sanza quelli che mandavano fuori di Firenze". Villani, *Cronica*, XI-94.

⁴⁵ However, the part sold to brother Niccolò was resold to others, so it should properly be excluded from this calculation. However, I have included it here for convenience. Such a figure should not differ greatly from the excluded one.

⁴⁶ [At this time] non-Florentines usually pay in cash. vedi, Sapori, *Una compagnia di Calimala*, cit., p.130. The matter of jurisdiction could be important in the case of a dispute, so whether or not a purchaser is Florentine should be clearly noted.

⁴⁷ A merchant who is a member of the Calimala Guild (Arte di Calimala) can register in the Woolen Guild (Arte della Lana), because of the Florentine "Doppelzünftigkeit" (Alfred Doren). As seen in note (20), the representative international trading company Bardi paid an enrollment fee to the Wool Guild for its new artisans.

Туре		Sa	aia			Trita	ana		Panno alla franc- esca				Other	Total
Buyer (*A) Grade	В	Н	М	L	В	Н	Μ	L	В	Н	Μ	L		iotai
Rinaldo di Neri and Falcho Rondinelli (*a)							2	1	6	13	3	6		31
Brother Niccolo (previously mentioned)						2			10	16	1		1	30
Chocho co. della tavola (previously mentioned)		10				3			2	14	1			30
Michele Ristori (*b)			9	9										18
Panfilo and Petruccio (=brothers) da Sulmona			6	8		2								16
lachopo and Franciescho Tedaldi (*c)									7	8				15
Migliore Francieschi *		1							8	3				12
None di Buto da Prato		2	6								2			10
Alberto del Giudice e co. (*d)									4	6				10
Gieppo Schiatta *				9										9
Berto Pieri *		6							1		1			8
Rosso Balducci da Pisa		1							6	1				8
Niccholo di Ceo da Siena		3							4					7
Filippo and Cieccho di Giunta da Gubbio				7										7
Vanni Bonacchorsi co. da San Gimignano										3	3	1		7
Dardano Acciaiuoli co. (*e)										4	2			6
Banchello del Buono (*f)						6								6
Franciescho di Benedetto da San Germano										4		1		5
Petro di lachopo and lachopo di Petro da Bologna									1	4				5
Petruccio Nelli da San Gimignano		4								1				5
Tomaso Peruzzi co. (*g)									1	4				5
Buyers of 4 pieces (without PN 2, with PN 6)		4				2	5		6	14	1			32
Buyers of 3 pieces (without PN 7, with PN 3)		3				3			8	12	2	2		30
Buyers of 2 pieces (without PN 11, with PN 12)				4			2		20	19	1			46
Buyers of 1 piece (without PN 23, with PN 30)	1	6	1	2		2	2	2	18	7	8	4		53
Total 115 (without PN 56, with PN 59)	1	40	22	39	0	20	11	3	102	133	25	14	1	411

Chart 10 - (1): Buyers of the Cloth Produced by Rinucci (1)

(A)Persons with * could not be identified. Without PN means a person without a place name, and with PN means a person with a place name (for example, da Prato).

(a)Rinaldo di Neri and Falcho Rondinelli. The former could not be identified. The latter was a "priore" in 1307-08, and many of his kins were "priori" and "gonfalonieri di giustizia". (Sebregondi, n.4550) (b)He is registered in the "matricola" of "arte della lana" of 1332. (Sebregondi, n.4517)

(c)They belong to a rich merchant family. Their kin were the "consoli" of "arte di Calimala" in 1310s and 1320s. (Sebregondi, n.5163)

(d)He belongs to "arte di Calimala", and his father and brother were "consoli" of the guild. (ASF, Manoscritti, n.542, Matricole de'Mercatanti [=arte di Calimalaj, 1235-1495. He engaged in international commerce and financing. The branchs of the company managed by him and his suc-cessor were [during 1302-70 ?] at Avignon, Flandre, Venezia, Napoli, Brabant, Barletta, England, Majorca, Genova, Milano, Puglia, Romania, France, Bologna, Pisa, Champagne, Sulmona, Verona, Ancona, Lombardia. He was "priore" and "gonfaloniere di giustizia". (Sapori, Armando, I libri degli Alberti del Giudice, Milano, 1952, pp.XXII-XXIV, 315-316, LXXXV.)

(e)Dardano Acciaiuoli was active in Tunis and was the treasurer of the local lord. Then, he transferrd to the Neapolitan kingdom where he engaged largely in economic activities (including the sale of cloth) and together with lachopo de' Bardi advanced a large sum to the king of Naples. Avignon was also a center of economic activity for his family. (della Berardenga, C. U., Gli Acciaiuoli di Firenze nella luce dei loro tempi, 2 vols., Firenze, 1962, vol.I, pp.31-55.)

(f)He was "priore" twice (1314, 1324). (Sebregondi, n.914)

(g)He registerd with the arte della lana in 1319. "Thomasus P[er]ucci artifex novus i[n] arte lane, soluit pro novo artifice, die XX° aprilis anno MCCCXVIIII" (Matricola della'arte della lana, n.18, cit.) His brother Giotto was a "console" of the arte di Calimala in 1317. (Matricola dell'arte di Calimala, cit.)

the non-Florentines, including the purchasers of less than 5 pieces. Chart 10-(2) constitutes a list of these place names. Along with Tuscan cities, such distant cities or regions as Messina and Puglia also appear. Among the non-Florentines, the Pisans purchased the largest total amount, namely 18 pieces. Among the cities whose merchants purchased more than 5 pieces in total, there are 5 Tuscan cities, namely Pisa, Siena, San Gimignano, Prato and Arezzo, and there are seven non-Tuscan cities, namely Sulmona⁴⁸, Bologna, Rimini, Perugia, Gubbio, Orvieto and San Germano, all of which are fairly close to Tuscany. Where did the merchants from these cities sell their cloths? Perhaps most of them sold their merchandise in and around their home cities. In other markets, such as those of the Sicilian Kingdom, the Neapolitan Kingdom, Roma and Venice, the local merchants, even though they might be powerful in

Amount of Cloth Purchased (*A)	Place Names
18	Pisa
16	Sulmona
15	Siena, Bologna
12	San Gimignano
10	Prato
8	Rimini, Perugia, Gubbio
7	Orvieto
5	Arezzo, San Germano
4	Sassoferrato, Venezia
2	[Citta di] Castello, Pistoia, Parma, Salmina [?], Puglia
1	Borgo [di San Sepolcro], Roma, Bagnolo, Narni, Faenza, Camerino, Rontano, Parella, Messina, Lucca, Gallia [=Gagliano?], Chiusino

(A)Persons with the place name of Siena bought 15 pieces in total.

their home cities, could not resist the Florentine merchants who had greater mercantile power. Non-Florentine merchants comprised about a half of all purchasers, and procured about one third of the cloths, namely 34%.

Florentines who purchased fewer than 5 pieces make up about 37% of the total number of purchasers, but acquire only about 18% of the cloths. Among these merchants, there must have been many who sold their cloths in Florence and its environs.

Thus, the markets for the cloths produced by the Rinucci can be categorized into three broad types: the near and distant markets used mainly by the great Florentine merchants, the near markets used mainly by merchants from nearby cities, and the markets in Florence and its

⁴⁸ In my article written in Japanese, "da sermona" is interpreted as "da ser Mona", but "sermona" should be "Sulmona", so I have corrected this error here. Consequently, Charts 10-(1)~(3) have been partially corrected. On "Sermona", see Melis, Federigo, *Documenti per la storia economica dei secoli XIII-XVI*, cit., p.605.

environs, used mainly by Florentine merchants, both great and small. The quantity of the cloth sold in each type of market is indicated to some extent by the figures cited above. The first type of market should consume more than the second, and the second type should consume more than the third. In this document, a ledger belonging to a clothier, we can deduce no more about the market conditions.

Was there some difference between the types and classes of cloths purchased by Florentines and non-Florentines? Let us attempt to reach an answer to this question by examining chart 10-(3). Non Florentines purchased comparatively more panno alla francesca and less tritana, and purchased higher grades of both types. However, the difference is very slight, so there is, in essence, almost no difference. Following from this, what is the difference in purchasing patterns between the bulk purchasers and small scale purchasers? From chart

		• • •							•	/ · ·	•		,		,		
Type Grade	Saia							Tritana			Panno	Others	Tatal				
	В	Н	М	L	Т	В	Н	М	L	Т	В	Н	М	L	Т	Other	Total
Buyers with Place	1	17	12	19	49	0	9	1	0	10	41	44	9	4	98	0	157
Names	0.6	10.8	7.6	12.1	31.1	0.0	5.7	0.6	0.0	6.4	26.1	28.0	5.7	2.5	62.4	0	100%
Buyers without	0	23	10	20	53	0	11	10	3	24	61	89	16	10	176	1	254
Place Names	0.0	9.1	3.9	7.9	20.9	0.0	4.3	3.9	1.2	9.4	24.0	35.0	6.3	3.9	69.2	0.4	100%
Total	1	40	22	39	102	0	20	11	3	34	102	133	25	14	274	1	411
	0.2	9.7	5.4	9.5	24.8	0.0	4.9	2.7	0.7	8.2	24.8	32.0	6.1	3.4	66.6	0.2	100%

Chart 10 - (3): Buyers of the Cloth Produced by Rinucci (3) (upper - real number, lower - %)

10-(1), we see that each bulk purchaser has a particular tendency. From chart 10-(4), we realize that the bulk purchasers procured more saia and less of the other 2 types. Regarding the grade of the purchased cloth, those who acquired more than 10 pieces bought more low grade cloth (in the case of saia, the middle class), and the non-bulk purchasers bought more high grade cloth (in the case of panno alla francesca, the higher classes). Thus it seems reasonable to deduce that, in the markets frequented by the great Florentine merchants, the proportion of the higher grade cloths is somewhat smaller than that of other markets. However, it is necessary

Chart 10 - (4) : Buyers of the Cloth Produced by Rinucci (4) (upper - real number, lower - %)

Туре	Saia					Tritana					Panno alla francesca					Others	Total
Grade		Н	Μ	L	Т	В	Н	М	L	т	В	Н	М	L	т	Other	Total
Buyers of more than 10 pieces	0	13	21	17	51	0	7	2	1	10	37	60	7	6	110	1	172
	0	7.6	12	9.8	30	0	4	1.2	0.6	5.8	22	35	4	3.5	64	0.6	100%
Buyers of 5 - 9 pieces	0	14	0	16	30	0	6	0	0	6	13	21	6	2	42	0	78
	0	18	0	21	39	0	7.7	0	0	7.7	17	27	7.7	2.6	54	0	100%
Buyers of 2 - 4 pieces	0	7	0	4	11	0	5	7	0	12	34	45	4	2	85	0	108
	0	6.5	0	3.7	10	0	4.6	6.5	0	11	32	42	3.7	1.9	79	0	100%
Buyers of 1 piece	1	6	1	2	10	0	2	2	2	6	18	7	8	4	37	0	53
	1.9	11	1.9	3.8	19	0	3.8	3.8	3.8	11	34	13	15	7.5	70	0	100%

The items and totals in this chart are the same as those of chart 10 - (3).

to verify this theory based on evidence from other documents before further comments can be made regarding the market structure.

Conclusion

From this analysis of the book of Rinucci, the following points have become clear. This book is a ledger that belonged to a clothier, and there were at least 10 related books whose present whereabouts remains unknown. In the cloth-sale account of this book, there are detailed records of self produced cloths having been sold to various cloth merchants. Also, information about the wool trade is recorded in the credit and debit accounts.

Regarding the origins of the wool, there are no entries more precise than those concerning England, northern France and Burgundy, and it remains unclear whether or not the so-called "wool from northern France" (lana francesca) actually originated from that area. The process by which raw wool was rendered into cloth is unknown, due to a lack of source materials. It is, therefore, impossible to clarify the precise relationship between the type and class of cloth and those of wool. Rinucci also sold his cloths to his brother, the clothier Niccolò, but their purchasers were mostly other cloth merchants. Regarding the details of the sale of cloth, this document records aspects which are not recorded in the books of other merchants, namely the real conditions in which Florentine and non-Florentine merchants operated who purchased cloth directly from a clothier. The account books recorded by merchants from nearby cities or by small scale Florentine merchants who appear in this book are yet unknown to this writer, and there is no information about the precise structure of the cloth market.

The types of wool purchased by Rinucci are, judging from the prices, fioretto francesco (the best from northern France), long wool of England, and lamb wool of England and Burgundy. Concerning their quantity, that of long wool of England is overwhelmingly large, and that of fioretto francesco is more than that of lamb wool. On the other hand, concerning the quantity of the resold wool, that of the middle and low grade wools from northern France are the most prevalent, and even the price of this wool's middle grade type is lower than that of lamb wool. Both fioretto francesco and long wool of England are resold once, and their purchaser is always Rinuccio's brother, Niccolò. Thus, there are clear differences between the types and grades of purchased and resold wools. The stocks of wool from northern France might be resold, and not purchased thereafter.

Among the cloths produced by Rinucci there are 3 types, namely saia, tritana and panno alla francesca. Despite some fluctuations possibly explained by seasonal demand, the saia used in summer is produced continuously. While a decreasing trend can be observed in

its quantity, it would be unwise to draw any conclusions from such short term data. The production of tritana was stopped and, at the same time, that of panno alla francesca was begun. The production of the latter was started by the mischiato and, whether mischiato or not, the predominance of the higher grades of panno alla francesca increased. This change in the produced cloth correlates with the change in the purchased wool. Panno alla francesca should be made partly using long wool of England, and partly using fioretto francesco. Further, tritana was made using wool from northern France, especially that of low grade. The merchants who purchased cloths (more than 1 piece) from Rinucci consist of 3 types: great Florentine export merchants, merchants from nearby cities, and Florentine merchants of various types other than great exporters. Furthermore, its markets can also be divided into 3 categories: the nearby and distant markets, the nearby cities and their environs, and Florence and its suburbs. The cloths produced by Rinucci which were exported to distant markets were generally not valuable. There panno francesco should still be exported, as Villani suggests.

The import of English wool and the production of panno alla francesca in Florence occurred only because the international markets of wool and cloth underwent a change at this time. The Florentine merchants and clothiers began to exploit this change by producing imitation panno francesco in their own city, due to the great demand for the original. Because of this, it can be truly said that the Florentine cloth industry started to assume a genuinely international flavor⁴⁹.

This article is a translation, with a little correction and modification, of a chapter in my book written in Japanese; *Italian Commerce and Cities in the Late Middle Ages*, Tokyo, 2002. And this chapter is based on my old article written in Japanese; The Book of Rinucci, in, *Italia Gakkaishi*, No. 25, 1977. The late professor Hidetoshi Hoshino, an old friend of the late professor Keiichi Takeuchi, had cited this article in his book; *Arte della lana in Firenze nel basso Medioevo*, Firenze, 1980. I have long wanted to translate it into a European language, so I chose this occasion to do so. I wish to express my sincere gratitude to my late teachers for their invaluable assistance and encouragement.

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⁴⁹ The fact that English wool was already being imported into Florence in the early years of the 14th century is mentioned in the following books: Staley, Edgcumb, *The Guilds of Florence*, London, 1906, p.156; Doren, Alfred, Italienische Wirtschaftsgeschichte, Jena, 1934, S.500f. But, as Hoshino says, the real figure cannot be corroborated.