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European and Mediterranean perspectives on the paper produced in Camerino-Pioraco and Fabriano at the apogee of its medieval development (14th–15th century)

1 Foreword

Since the 1960s, Federigo Melis, a pioneer in the study of the documents of the “Archivio Datini” in Prato, has underlined how the paper produced in Pioraco and in Fabriano was mentioned in the lists of Francesco di Marco Datini’s correspondents.¹ Later studies by Eliyahu Ashtor have highlighted a range of commercial expansion between the 14th and 15th centuries that went beyond national boundaries.² Still, it is only recently that scholars have examined enough documentary collections to acquire quantitative and serial data and an insight into the complex net of relationships between the centres of production and the big markets.

The systematic investigation of Datini’s correspondence has indeed highlighted a significant commercial route that involved the two Apennine poles for paper production from the second half of the 14th up to the first years of the 15th century, while the Roman customs records and the focused investigations of the *Misti* of the Venetian Senate, integrated with the re-examination of the local notarial fund, have further enriched the picture with new data, giving us useful knowledge about the interchange between the centres of production and the major centres of consumption until the end of the Middle Ages.³

The present contribution seeks to provide a first comprehensive account of the studies that have been conducted, paying particular attention to the volume, type, and prices of the paper artefacts produced in the Marches and destined for international trade. It thus aims to reconstruct the trade system that revolved around this new and enduring medium of communication within a very broad, European and Mediterranean framework.

As a first step, it is necessary to explain the dyad “Camerino-Pioraco”, which defines one of the most widely distributed paper types in Medieval Italy and Europe, so as to remove any uncertainty resulting from lexical ambiguity. The systematic

1 Melis 1962, Melis 1972.

2 Ashtor 1976, Ashtor 1982.

3 For the results of the research see Di Stefano 2005, Di Stefano 2007a, Di Stefano 2007b, Di Stefano 2009, Di Stefano 2011.

survey of the notary deeds, combined with the analysis of Datini's 14th-century correspondence and of the later Roman customs records of Sant'Eustachio, reveals that the citizens and merchants of Camerino – one of the five *civitates maiores* of the medieval *Marca* – were the owners of the *gualchiere*, the 'fulling mills' located in Pioraco,⁴ a *castrum* in the countryside a few miles from the city.⁵ After renting the equipment to the paper masters – mostly from Pioraco – *cives* and *mercatores* fully controlled the manufacturing process, established quantities, types, and quality, and directed the following stage of commercialization into the great markets. Thus, Paoluccio di Maestro Paolo da Camerino – Francesco di Marco Datini's most assiduous correspondent from the Marches – in a letter dated 12th August 1396 and sent to Barcelona, writes: the paper *de monte et da corneto sono de la milliore sorta se faciano ad lu locho dove io le facio fare et mandatone ad Brugia*.⁶ In another letter, dated 28th January 1404 and sent to the 'casa madre' in Florence, the same merchant points out: the papers *fove lavorare io a Chamerino alle mie ghualchiere* (Fig. 1).⁷

The merchant-entrepreneurs, who controlled every single stage of the production and trade cycle, from the finding of the rags *ad exceltram camerinensem*, to the export of the artefacts into the big markets,⁸ had their warehouses in Camerino, while the production machines were concentrated around Pioraco, a small *castrum*⁹ on the river Potenza, with favourable environmental and energetic conditions for the development of paper mills.

This is where the ambiguities in the source documents come from: the expression *carta di Pioraco* (Pioraco paper), predominates in Datini's documents; the phrase *carta di Camerino* (Camerino paper) emerges in the records of the Roman customs office (Fig. 2–3).¹⁰ Indeed, Camerino paper and Pioraco paper have been identified with each other for about four centuries, from the most remote origins – probably in the 13th century – until the late 17th century, when, in the wake of a marked process of deindustrialization that also involved the wool sector, the city ultimately withdrew from control of the paper sector.¹¹

⁴ In this regard, see Di Stefano 2010d, Di Stefano 2010a, Di Stefano 2010c.

⁵ To reach Pioraco, people would follow the shortest road, through Seppio, and pass through the Porta Angelesca (see Di Stefano 2013b, 34).

⁶ Archivio di Stato di Prato (ASPo), *Datini*, filza 926.

⁷ *Ibid.*, filza 715.

⁸ In this regard see Di Stefano 2013d.

⁹ In 1502, Pioraco had 111 tax-paying families, which means about 550–600 inhabitants, including the untaxed. At that time Camerino numbered 1200 tax-paying households, which would mean about 7000 inhabitants (*Inventario BORGESCO*, in Biblioteca Valentiniana di Camerino, Carte Feliciangeli, E 21), after a sharp drop in population following the recurring epidemics of the 14th and 15th centuries, see Di Stefano 2010b.

¹⁰ Archivio di Stato di Roma, *Camerale I, Camera Urbis*, reg. 41, year 1469, c. 131r.

¹¹ Di Stefano 2010a, Di Stefano 2010c.

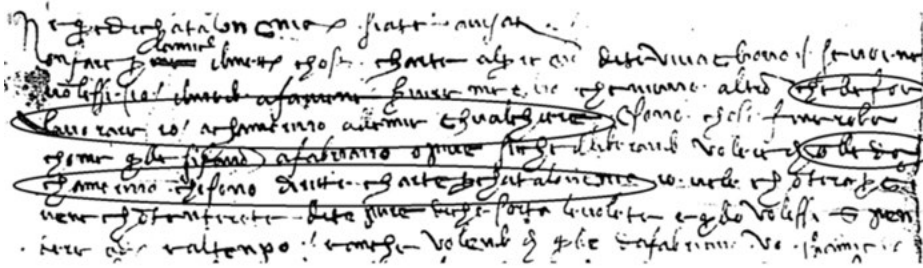


Fig. 1: Excerpt of the letter in which Paoluccio di Maestro Paolo da Camerino signals to Francesco di Marco Datini that the paper types in his list were produced in his own *gualchiere* in Camerino, pointing out that *quelle da Chamerino [...] sono diritte charte per Chalongna*. Source: Archivio di Prato, Datini, lettera Venezia–Firenze del 28 gennaio 1405, filza 715.

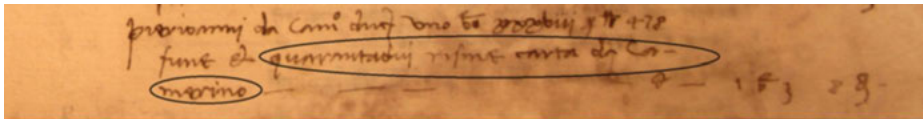
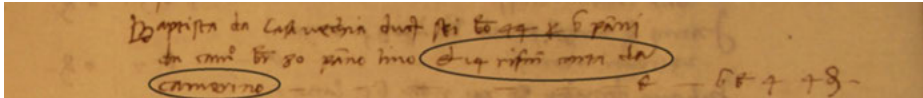


Fig. 2–3: Paper from Camerino, recorded at the Roman customs office in S. Eustachio, 3rd June 1469. Source: Archivio di Stato di Roma, *Camera Urbis*, reg. 41, c. 131r.

2 Sources

Prato’s collection of commercial documents, by virtue of the breadth of Datini’s system,¹² the complexity of the mercantile networks in which it was included, and the number of missives and registers,¹³ enabled scholars to highlight an impressive paper trade from Fabriano and Camerino-Pioraco, which started in the Apennine centres and reached the major consumption centres via both the interregional road networks and the Adriatic and Mediterranean routes.

¹² The accounts in his correspondence indicate contacts as far afield as Ireland, Scotland, Nuremberg, Dubrovnik, Varna, Tana (or Tanais), Trabzon, Mecca, Safi, and Lisbon, with connections to El Catif, Basra, Tabriz, Astrakhan and the Canary Islands (Melis 1962, 40).

¹³ 125,000 commercial letters are kept in the Datini fund, see Melis 1962, Dini 2004.

Networks of spatial relationships, commodity elements, quantities, and currencies emerge with a wealth of detail on rereading the correspondence concerning the harbours of Pisa and Ancona, the marketplaces of Perugia and Avignon, the great sorting centre in Venice and, albeit sporadically, the one in Genoa: the collection contains three to four thousand commercial letters sent between 1370 and 1410–11,¹⁴ which, when systematically analysed, trace the close connections between partners and correspondents in the Germanic world and Northern Europe, as well as Catalonia and the Levant.

A variety of documentary clues allows us to trace even more remote trade flows, over which it is worth lingering, even if only briefly. Purchases of *carte di bambasca* of unspecified origin, but probably from the Marches, appear in the Marca Anconetana's *Libro degli Esiti* for the years 1279–80.¹⁵ *Marchigiane* paper of a type known to have come from Camerino-Pioraco and Fabriano appears to have been included, before 1335–40, among the *spezierie* requested by the markets in the famous *Pratica della mercatura*, written by Francesco Balducci Pegolotti, the Bardi's sales representative and branch manager in London.¹⁶ Those references evidently depict extensive use of paper, specifically from the Marches, in the most lively trade scenes of the Peninsula. It is finally worth lingering over the oldest reference to the extra-regional commercialization of paper towards Fano and Venice, deducible from the archives of the Marches: a document from Fabriano, dated 1363, which concerns five bales of paper sent from Pioraco to Venice via Fano-Sassoferrato by the Florentine Ardingo de' Ricci's company, operating in Perugia.¹⁷

These elements reveal an intense commercialization of the artefact since its origins in the 13th century, leading to new, promising research fields which aim to measure its actual spatial and temporal breadth, within the framework of an expansive economic stage whose undisputed protagonists are the Italian merchant-entrepreneurs.

14 Together with the almost six hundred letters by Paoluccio di Maestro Paolo, there are more than a thousand instances of Perugia-Pisa and Perugia-Florence correspondence, and another thousand letters between Avignon and Pisa, as well as several between Genoa and Pisa, and some between Bruges and Florence, in ASPO, *Datini*.

15 Palmieri 1889, 90, 92.

16 Balducci Pegolotti 1936, 94.

17 Lipparoni 1990, 73 with note 12.

3 A production *sechondo i paesi*: the markets of Genoa, Avignon, and Paris

Several testimonies confirm that the Marches had specialized in paper production of remarkably advanced excellence, in high demand in the big markets, since the end of the 13th century. But it is Datini's document collection from the second half of the 14th century which offers the most extensive and detailed information about the intensity, quality, and direction of economic flows. A close analysis of several letters, actually, allows us to clarify concrete data: the type of the exported paper, its circulation and distribution systems, routes and currencies.

The road to Pisa and Genoa, Marseille and Aigues Mortes, also leads to Provence and Avignon and, further north, to Paris and Champagne. Thus Bongianni Pucci, in Genoa, writes to Ludovico di Guido degli Adimari, in Pisa, on 20th September 1379: *[di Fabriano] avrei voluto di riciute X balle che, essendo fini, a uno parigino ne mandavamo subito e anche ad altri.*¹⁸

Another passage is quite explicit in this regard, from the letter dated 9th April 1382, sent to Pisa by Cardinal di Bonaccorso in Perugia: *voi volete 10 balle di charte di Pioracho, 5 piane, 5 riciute pichole. Queste si potranno avere [...]. A l'amicho di là le chiederemo le più fini e del migliore segno e che si vogliono per Provenza: l'amicho n'è pratico e sa chome vogliono essere fatte sechondo i paesi.*¹⁹

On the basis of these and further testimonies, the productive organisation of the Marches' two paper production poles indeed proves to be so advanced and complex, as to be able to realize artefacts *sechondo i paesi*, answering the demands of users from the different markets. As regards Avignon in particular, the commercial correspondence shows that its commercial role was shrinking significantly in the years after the return of the Popes to Rome and in the middle of the Schism, and Datini directs his partners and correspondents towards small-format supplies, which the notaries of Avignon vastly preferred. Thus a letter from Avignon, dated 11th September 1383 and addressed to his partners in Pisa, reads: *niuna carta grande reale ci mandate però [che] no ciano ispaccio [...]: mercatanti fanno pocho e notai fanno asai e volgiono picoli folgli.*²⁰

The hegemony of the paper produced in Fabriano and Camerino-Pioraco remains undisputed: beyond some purchase of artefacts coming from Prato and Foligno, the paper from the Marches is still considered to be the best and of *grande spaccio* (great demand), in comparison with other types. The purchasing orders always appear to be extremely precise, as in the following paragraphs:

¹⁸ ASPo, *Datini*, lettera Genova-Pisa, codice 10120.

¹⁹ *Ibid.*, lettera Genova-Pisa, filza 537, codice 10120.

²⁰ *Ibid.*, lettera Avignone-Pisa, filza 426, codice 105196.

Potendo avere VIII in X balle di cartte [...] fini pratresi del sengnio delle maje collo C [...] sarebe da mandalle perché ci avorebono bono ispacio, ma se potessi avere delle fini da Fabriano [...] si spaciarebono meglio perché sono migliori per lo pregio.²¹Potendo avere IIII in VI balle di charte tonde di Pioragho fini riciute [...] si spaciarebono bene che di fini di queste carte vi diciamo ci pare sienno migliori.²²

Requests for paper produced in the Marches, found in letters from Genoese merchants, are equally numerous and articulate. This emerges from the rich correspondence with Datini's partners located in Perugia, Pisa, and Florence, key locations for marketing the paper from the Adriatic to the Tyrrhenian coast. But the paper bound for Genoa was not only destined for direct use: it appears that, for the most part, it would be sent beyond the Alps and to the other side of the Mediterranean, from Marseille to Montpellier, from Avignon to Paris. The following paragraph is from a letter from Genoa to Pisa, dated September 1379: *Le charte mi piacie [...] sono salve: fa d'averne il chonto subito e manderalomi sì ch'io veggio che venghono, però ch'ò un provenzale qui ch'el fratele fa una buona botegha a Vignone e torame da noi tutto dî.²³*

The paper produced in the Marches was likely to reach London and Bruges on Genoese galleys, especially when political conflicts between the major mercantile nations obstructed Venetian trade in the Adriatic and Mediterranean Sea. In this respect, a letter written in Venice by Paoluccio di Maestro Paolo da Camerino and dated 5th April 1404 is particularly meaningful: *Per lettera da Bruggia de dî 5 di marzo dichono v'era fante partito da Londra de dî primo marzo [...]. Pare fusse alfine giunta quella [nave] di Francesco Doria dove vostri charicharono le mie balle di charte.²⁴*

Genoa's role as an important crossroads of the paper trade in the second half of the 14th century has been confirmed by the convergence of different paper types from other productive centres in Central Italy, such as Narni and Gualdo, although this traffic was minor and sporadic, compared to the strong demand for paper from the Marches, as can be seen in the following letter, dated August 1379: *vostre fini di Fabriano valgono fl.45 in 46 e piane 48 in 50 e venderolonsi a tempi da fl. 40 in 43 e tonde 36 in 37. Fa n'abiamo 4 in 6 balle d'ogni sorte [...]: tutto dî se ne vende o se ne domandano.²⁵*

Market tendencies – and not only in Genoa – are plain; purchases and transactions favour the paper produced in the Marches in all of its various types: *fine*, *tonda*, *ricciuta*.²⁶ As for the demand for paper produced in Pioraco, strong enough to induce

²¹ *Ibid.*, lettera Avignone-Pisa dell'11 settembre 1383, codice 105196.

²² *Ibid.*

²³ *Ibid.*, lettera Genova-Pisa, filza 554, codice 103984.

²⁴ *Ibid.*, lettera Venezia-Firenze, filza 715.

²⁵ *Ibid.*, lettera Genova-Pisa, codice 103979.

²⁶ These contemporary categories describing paper qualities are not only difficult to translate; it is also problematic to relate them to the material appearance of historic papers; see Klinke and Meyer in this volume.

purchasers to endure long waiting times, this passage from the Perugia-Pisa correspondence, dated December 1379, and already published by Federico Melis, adds more specific information: *Piaceci che que' da Gienova vengha vendendo quella di Pioraco con pro', e anche ci piacie gli abiate ricordato, se ne vuole di più, si faccia un pocho inanzi, però che lle sono richieste e, volendone, si conviene bene spesso aspettare un pezo.*²⁷

It is consistent with the gathered elements that, in a detailed list of the prices of the artefacts commercialized in Avignon in 1384, titled *Valuta di merchatantie in Vignone*, the papers listed are essentially from Fabriano and Pioraco. This important document calls for a complete transcription, as it proves, firstly, the by now undisputed leadership of Marchesian paper production, and, secondly, the consolidation of an efficient productive and commercial structure along the Camerino-Fabriano axis which, within the broader Peninsular and European trade circuit, is capable of providing the markets with several types of paper, different in format, quality and price.

Tab. 1: Currency *per chas[s]a* of the papers being commercialized in Avignon in 1384, in florins *di reina* of 24 soldi

<i>Charte reali piane di Fabriano</i>	<i>no ciano ispacio</i>
<i>Riciute reali di Fabriano</i>	<i>no ciano ispacio</i>
<i>Charte di Pioracho piane fini</i>	<i>fl. 2 s.2 in 4</i>
<i>Charte riciute di Pioracho</i>	<i>s. 22 in 23</i>
<i>Charte riciute tonde di Fabriano</i>	<i>s. 24 in 26</i>
<i>Charte riciute tonde di Pioracho</i>	<i>s. 20</i>
<i>Charte piane pichole di Fabriano</i>	<i>fl. 2 in 2 e ½</i>
<i>Charte riciute di Fabriano fini</i>	<i>fl. 2</i>

Source: Archivio di Stato di Prato, *Datini*, lettera Avignone-Pisa del 6 aprile 1384, filza 426, codice 504272.

4 Towards Venice and Catalonia, London and Bruges

In 1395, more than ten years after he had left the direct management of the Avignon warehouse, and having founded a variety of business groups in the meantime, Francesco di Marco Datini approached a merchant from Camerino who operated in Venice about forming a cooperation with companies from Majorca, Barcelona, and Valencia, which had been active for about three years. The cities were the key points of a very broad system, which had extended its horizons out to the western Mediterranean and up to Northern Europe.

²⁷ ASPo, *Datini*, lettera Perugia-Pisa, codice 402174; see Melis 1972, 142–145.

The proposal addressed to Paoluccio di Maestro Paolo da Camerino was primarily intended to establish a steady relationship with a merchant who – in Melis’ words – “costituiva [...] la punta avanzata delle cartiere marchigiane (di Fabriano e di Pioraco)”²⁸ on the Laguna shore, and to provide the businesses in Catalonia with a steady supply of Marchesian paper, of whose higher quality he had been well aware since his time in Avignon. Moreover, Paoluccio di Maestro Paolo had by this time obtained Venetian citizenship, the essential condition for conducting international trade in the Laguna as an equal to the *cives originarii*. Still, he kept close contacts in his own land, from where the most requested products of his lists came: saffron and, above all, the paper that he himself produced in huge quantities in the *gualchiere* in Camerino, and shipped to Venice, on Catalan ships, or on Genoese and Venetian galleys to Catalonia, England, and Flanders.

The Datini fund in Prato holds a corpus of 591 letters sent by the merchant of Camerino and his partners between 1395 and 1411, including the five pieces following Datini’s death: those are letters sent mostly from Venice – only fifteen letters are from Camerino – and addressed to the businesses in Tuscany and Catalonia, which thus highlights the long-range trade system centred on this new and enduring writing material.

It is known that, when the cooperation between the merchant from Camerino and Francesco di Marco Datini began, the intercontinental trade of Marchesian paper had existed for decades: we can place side by side the already known testimonies from the beginning of the 14th century provided by Pegolotti²⁹ and what emerges from the mercantile documentation produced by the merchant from Fabriano, Lodovico di Ambrogio di Bonaventura, who exported paper to Paris and the fairs of the Champagne, and whose son, in 1366, sent a large quantity of paper to Talamone, the port from which ships bound for Provence and Catalonia often sailed.³⁰ The late 14th-century correspondence between Paoluccio di Maestro Paolo and Francesco di Marco Datini is an exceptional collection of documents about the quality and quantity of exported paper, its circulation and distribution systems, and the variety of the purchases and itineraries.

The merchant from Camerino indeed built a dense network of relationships with the major companies of the Peninsula and those permanently established with his own partners and agents, all over Europe and the Mediterranean: from the Mannini to the Orlandini, from the Gaddi to the Davanzati, from the Rucellai to the Cavalcanti. In the following passage, the breadth of his operating range can be easily seen. On 10th September 1395, he wrote to Ambrogio di Loreno in Majorca:

²⁸ Melis 1962, 220.

²⁹ See note 17.

³⁰ For a recent summary, see Garzella and Vaccari 2013, 17. For the merchant of Fabriano see particularly Castagnari and Lipparoni 1989, 185–222.

Ve mando balle 12 singnade de mio singno [...]: balle 7 carte ricciute fine de uno 'P' et balle 5 ad canpana riciute fine [...]. Cierto so che da Çanobio de Tadeo n'avete avute più fiate, che la maggior parte n'è avute da mi [...]: so per quisso paese, che sonno grosse e bianche.³¹

Up to that date, then, the Catalonian market consumed significant quantities of large-format mercantile paper. This type was abundant in Paoluccio di Maestro Paolo's warehouses in Camerino and Venice, as he had it produced in his own *gualchiere*: *Quelle da Chamerino* – he writes, in a letter dated 28th January 1404 (= 1405 in the Venetian calendar), addressed to the 'casa madre' in Florence – *sono diritte charte per Chatalogna*.³² It is no surprise that the merchant, even before 1395, asserted more than once that he had sent paper to Iberian markets through the mediation of Datini's commissioner, handled by Zanobi di Taddeo Gaddi, or of merchants from Catalonia, operating in Venice. But through a thorough reading of the letters sent, it is easy to see how his trade horizons expanded to the markets of Northern Europe. For example, in a letter dated 8th April 1396, he points out that 12 of the 24 bales of paper just sent to Majorca are of the same type as the ones he is sending to Bruges with the mude of Flanders, La Serenissima's regular state service:

Balle 24 de charte ve mandai per la mano paro[ne] ser Jacomello Bonolino [...] de quali balle 12 ne sonno di piane fine che ad Bruggia se sonno vendute ad li denari franchi 2 risma et per le presentì gale[e] ne mandai balle 44 de quessa medesima sorta.³³

In the last centuries of the Middle Ages, Bruges was the most active international port in Northern Europe, at the centre of a dense trade network extending to Germany, France, and England. Paoluccio di Maestro Paolo regularly exported paper to Bruges, and sometimes saffron from the Marca, and imported felt: he conducted this activity with the mediation of Tuscan companies permanently based there, such as the Mannini, the Orlandini, and the Cambini. The complexity of his operations is quite well illustrated in a letter dated 30th March 1398 (= 1399 by the Venetian calendar):

Quanto ad la parte me dite del cossto de feltri [...] non ve posso dire la pora verità, per chasione che chi li a conperati per mi, como sonno quilli Mannini, non m'anno mandato conto: chasione n'è solo perché anno de meo nelle mani più roba et denari, perché ad Brugia et in Engelterra fanno li facti mei.³⁴

Great quantities of the paper described in the merchant's price list were then broadly commercialised in England. It is worth emphasizing that, to diversify the wares

³¹ ASPo, *Datini*, filza 1082.

³² *Ibid.*, filza 715 e fig.1, present paper.

³³ *Ibid.*, lettere Venezia-Maiorca, filza 1082.

³⁴ *Ibid.*

available to the demanding markets of Northern Europe, the merchant exported not only the best artefacts of Camerino-Pioraco, with the sign of the mountain, *corneto* and bell,³⁵ but also the most refined types of paper from Fabriano, that is, *piana fine* paper, with the sign of the crown and stag head,³⁶ giving the international profile of the two paper production poles a strong further impulse.

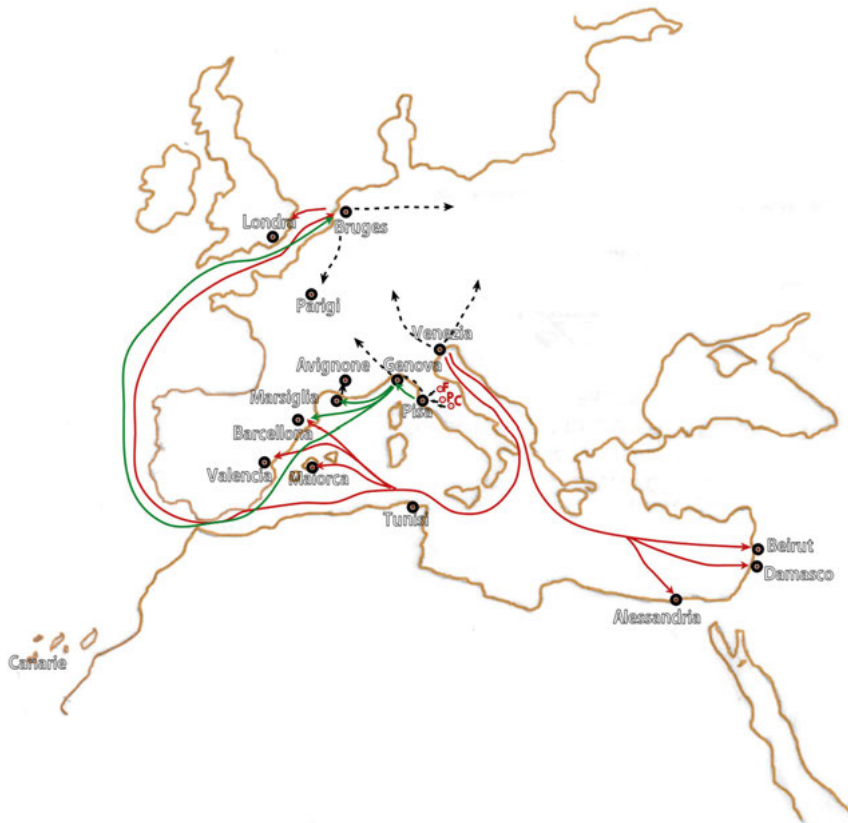


Fig. 4: Nautical and land routes of the paper produced in Camerino and Fabriano for European and Mediterranean markets (14th–15th centuries). Sources: Archivio Datini di Prato, *Datini*, lettere da Venezia, Genova, Avignone, Perugia, Ancona, Camerino.

³⁵ For a first analysis of the watermark signs that emerge from the correspondence, see Di Stefano 2005, Di Stefano 2007b, 67–122.

³⁶ *Ibid.*

5 Exported quantities and typologies

One of the limitations imposed to historiography is the extremely fragmentary state of most sources and the lack of quantitative elements. The focused approach on Datini's correspondence and on the Roman customs office sources enables us to fill many gaps, even though only for a few decades of the 14th and 15th centuries. The earliest serial data come from the correspondence between some merchants from Perugia and the Datini firm in Pisa between 1379 and 1389, a period during which Jacopo Soldanieri, Cardinale di Bonaccorso and Ceccolino di Lello, assiduously traded paper from the Marches. The following table lists the results of our scrutiny of each of the companies' letters:

Tab. 2: Paper commercialized by Jacopo Soldanieri's company, located in Perugia: 1379–1380

Year	Month	N. of Bales	Typology	Sign	Place of Origin	Destination
1379	July	1	<i>pianne</i>	unspecified	Foligno	Pisa
	"	5	<i>ricce</i>	keys	Pioraco	Pisa
	"	5	<i>ricce</i>	bow	Pioraco	Pisa
	"	2	<i>tonde</i>	little horn	Pioraco	Pisa
	"	2	<i>tonde</i>	bow	Pioraco	Pisa
	November	20	<i>ricciute</i>	unspecified	Pioraco*	Genoa via Pisa
	"	8	<i>fini</i>	unspecified	Fabriano	Pisa
	"	unspecified	<i>grandi</i>	unspecified	Gualdo	Pisa
	December	1	<i>piane</i>	horn	Foligno	Pisa
	"	5	unspecified	unspecified	Narni	Pisa
	March	4	<i>ricciute</i>	unspecified	Pioraco	Pisa
	April	8	<i>ricciute</i>	unspecified	Pioraco	Pisa
	"	1	<i>reali fini</i>	unspecified	Pioraco	Pisa

*The place of origin of the paper can be inferred by comparing the different letters.

Source: Archivio di Stato di Prato, *Datini*, lettere Perugia-Pisa, filza 554

Via the Perugia road, the Soldanieri company sent about 60 bales of paper from the Marches to the Pisan firm in the space of a year, mostly paper from Camerino-Pioraco. It is also interesting to note that they also sent, in limited quantities, paper from Umbria, produced in Foligno, Gualdo, and Narni.

Not so different is the information gathered by scrutinizing the letters of the company of Cardinale di Bonaccorso and his partner Berizo di Bonanno, located in Perugia, as can be seen in the following table.

Tab. 3: Paper commercialised by Cardinale di Bonaccorso e Berizo di Bonanno's company Perugia: 1379–1384

Year	Month	N. of Bales	Type	Place of Origin	Destination
1379	August	400 ream	unspecified	Foligno and Narni	Pisa
	October	12	unspecified	unspecified	Pisa
1380 **	August	10	<i>tonde</i>	Pioraco	Genoa via Pisa
1383	April	5	<i>piane</i>	Pioraco	Provence via Pisa
	“	5	<i>ricciute</i>	Pioraco	Provence via Pisa
	“	2	<i>grandi</i>	Fabriano	Provence via Pisa
1384	“	unspecified	unspecified	unspecified	Provence via Pisa
	May	unspecified	unspecified	Fabriano	Provence via Pisa

** In the years 1380–1383, the paucity of the documentation does not afford quantitative evaluations.

Source: Archivio di Stato di Prato, *Datini*, lettere Perugia-Pisa, filza 537.

The picture that emerges from the scrutiny of the letters sent between 1387 and 1388 by Ceccolino di Lello's company, located in Perugia, is different. From it the prevalence of paper supplies from Narni and Fabriano emerges – though with uncertainties, due to the several gaps.

Tab. 4: Paper commercialized by Ceccolino di Lello & Co. located in Perugia: 1387–1388

Year	Month	N. of Bales	Typology	Place of Origin	Destination
1387	February	7	unspecified	unspecified	Pisa
	May	unspecified	<i>fini</i>	Fabriano	Pisa
	June	more than 8	unspecified	unspecified	Pisa
	July	unspecified	<i>fini</i>	Fabriano	Pisa
1388	January	4*	unspecified	Narni	Pisa
	January	10	unspecified	Narni	Genoa via Roma-Talamone
	April	4	<i>rigate and piane</i>	Narni	Pisa

* The source points out that they are *ballette*, 'little bales' of 7 reams each.

Source: Archivio di Stato di Prato, *Datini*, lettere Perugia-Pisa e Perugia-Firenze, filza 671.

What emerges, for the same years, from the studies on the activity of the Pisa warehouse is highly relevant: the sources attest that in 1386 the company had paid 812 florins for a large lot of paper, destined for Avignon, 40% of which was from Pioraco,

41% from Fabriano, and 19% from Prato.³⁷ This is one of the many lots of Marchesian paper largely used in Tuscany for its higher quality.

Another impressive shipment of paper from the Marches to the great European and Mediterranean markets of the time is attested by the copious correspondence between Paoluccio di Maestro Paolo da Camerino and Datini's companies in Tuscany and Catalonia. In the fifteen years of his correspondence with Datini's companies, the merchant from Camerino signalled with extraordinary precision the harbour movements of La Serenissima – and, when it was useful, those of the Doric harbour – the patrons, the ships with their cargos, the trade regulations, the shipwrecks, the retaliations, the armed conflicts that often obstructed trade connections over the Adriatic Sea and between the continents. With reference to the paper trade, the following table shows the most meaningful data drawn from a focused scrutiny of the documentation.

Tab. 5: Paper directed from Paoluccio di Maestro Paolo da Camerino to Catalonia, England, and Flanders between 1395 and 1411

Year	Bales per Shipment	Place of Origin	Signs	Destination
1395	12	Camerino-Pioraco	unspecified	Majorca via Venice
1396	24	Camerino-Pioraco	bell, little horn, mountain	Majorca via Venice
1396	44	Camerino-Pioraco	mountain, little horn	Bruges/London via Venice
1396	25	Camerino-Pioraco	mountain	Catalonia via Venice
1396	10	Camerino-Pioraco	mountain	Bruges/London via Venice-Majorca
1396	5	Camerino-Pioraco	bell	Bruges/London via Venice-Majorca
1396	21	Camerino-Pioraco	mountain, dragon with and without flag	Bruges/London via Venice-Majorca
1398	30	Camerino-Pioraco	mountain, crown, half a horse	Majorca via Venice
1398	10	Camerino-Pioraco	bow	Barcelona via Venice
1398	20	Camerino-Pioraco	half a unicorn	Majorca via Venice
1398	27	Fabriano	mountain with a circle, stag head, <i>orecchio rigate</i>	Majorca via Venice
1399	15	unspecified	unspecified	Bruges/London via Venice-Majorca
1400	100	Camerino-Pioraco/ Fabriano	crown, ox head, little horn, unicorn, scale, <i>sesto</i> , stag head	Majorca-Valencia via Venice

³⁷ Garzella and Vaccari 2013, 17.

1401	55	Fabriano	unspecified	Majorca-Valencia via Venice
1401	8	Fabriano	ear	Barcelona via Venice
1402	32	Camerino-Pioraco/ Fabriano	unspecified	Barcelona via Venice
1403	109	Camerino-Pioraco/ Fabriano	stork, unicorn, crown, <i>scar-</i> <i>sella</i> , flower, ear with a little cross, keys	Barcelona via Venice
1403	12	Fabriano	crown	Barcelona via Venice
1403	n.p.	Fabriano	crown	Aigues Mortes via Venice
1404	36		stork and others	Valencia via Venice
1404	21	unspecified	unspecified	Catalonia via Venice
1405	16	Camerino-Pioraco	ram head with a circle	Valencia/Majorca via Pisa
1405	6	Camerino-Pioraco	ram head and ox head with a circle	Catalonia via Pisa
1405	11	Camerino-Pioraco	unspecified	Valencia via Ancona on Catalan yacht
1405	9	Camerino-Pioraco	ox head with a circle and a cross over it	Bruges/London via Ancona-Valencia
1405	28	Camerino-Pioraco	ram head with a circle, ox head with a circle	Valencia via Pisa
1406	70	Camerino-Pioraco	ox head, ram head, 3 balls with a circle, <i>moçicti</i>	Majorca via Ancona on Catalan ship
1406	40	Camerino-Pioraco	unspecified	Catalonia via Venice
1407	38	Camerino-Pioraco	unspecified	Valencia via Venice
1408	18	Camerino-Pioraco	unspecified	Valencia via Ancona on <i>cocca</i> from Ancona
1409	110	Camerino-Pioraco	unspecified	Catalonia via Venice
1409	25	Camerino-Pioraco	bell, ox head, 3 balls with a circle, ox head with a circle	Valencia via Venice
1410	42	Camerino-Pioraco	ox head, bell, 3 balls	Barcelona via Venice
1411	60	Camerino-Pioraco	bell, 3 balls with a circle, ox head	Majorca-Valencia via Venice
Total	1.089			

Source: Archivio di Stato di Prato, *Datini*, lettere Venezia-Firenze, filze 710, 711, 712, 713, 714, 715; lettere Venezia-Maiorca, filze 1082, 1083, 1085; lettere Venezia-Barcelona, filze 927, 927, 928, 929, 930, 932; lettere Venezia-Valenza, filze 1003, 1004; lettere Camerino-Maiorca, filza 1060; lettere Camerino-Firenze, filza 648.

Part of the correspondence has been lost: this clearly emerges when reading the individual letters. Nevertheless, the numbers that we do have, depict an impressive trade, and underline the hegemonic role of the Marches in the production and international trade of paper. Estimating 10–12 reams for each bale, the 1.089 counted bales – surely less than the actual total – reveal a total of 12–13 thousand reams, mostly shipped from La Serenissima, 11.000 bound for Catalonia and 1.300 for Bruges and London (these numbers were deduced through fortuitous hints and, thus, were only a small part of a much more significant traffic).

This being the correspondence of a merchant-entrepreneur from Camerino, it is no surprise that 67,8% of the paper sent proves to be from Camerino-Pioraco and only 22,58% comes from Fabriano, while the origin of the remaining 9,55% remains uncertain. However, the picture that emerges from the systematic scrutiny of the correspondence is particularly meaningful because it offers the rare opportunity to learn about the precise boarding areas and destinations, and also the nautical and land routes that were followed. What emerges is that 85% of the paper – that is, 931 bales – was shipped from Venice, where the goods had previously arrived from Fano on Venetian or Catalan ships. 108 bales were shipped from Ancona, mostly on Catalan ships and only occasionally on *cocche* from Ancona. Finally, 50 bales seem to have travelled overland to Pisa, adding to those already indicated in the correspondence of the merchants from Perugia.

The Doric harbour, though functional for the export of goods from the interior of the Marches, specifically paper, does not appear to have a strategic position in international trade.³⁸ It must be remarked that between the 14th and 15th centuries, it endures the undisputed supremacy of La Serenissima, which controlled the Adriatic Sea trade with rigid, “Venetocentric” regulations and concomitant police actions. And still, its central location in the Adriatic area allowed Ancona to take the opportunities offered by the numerous political-commercial crises that involved La Serenissima at the end of the Middle Ages, and also to increase the volume of traffic through its harbour system.³⁹

Tab. 6: Bales of paper addressed to the companies of Catalonia through Ancona between 1405 and 1410

Year	Bales per Shipment	Place of Origin	Signs	Destination
1405	26	Fabriano	scissors, horn, crown, flower	Barcelona
1406	18	Fabriano	bow, 2 “o”, unicorn	Majorca

³⁸ Di Stefano 2013a.

³⁹ *Ibid. passim.*

1406	70*	Camerino-Pioraco	ox head, ram head, 3 balls with a circle, <i>moçicti</i>	Majorca
1406	35	unspecified	unspecified	Majorca/Barcelona
1406	15	Fabriano	axe, bell, "M", ship, flower	Majorca
1408	10	Fabriano	<i>reale</i> from the mountain, scissors, stag head, "M"	Barcelona
1408	18	Camerino-Pioraco		Barcelona
1408	28	unspecified	unspecified	Barcelona
1410	10	unspecified	unspecified	Valencia
Total	230			

*These are the seventy bales already mentioned in the correspondence of Paoluccio di Maestro Paolo da Camerino, shipped from Ancona on a Catalan ship by his partner, Biagio di Giannello. Source: Archivio di Stato di Prato, Datini, lettera Ancona-Pisa, filza 425; lettere Ancona-Maiorca, filza 1004; lettere Ancona Barcellona filza 844; lettera Ancona-Valenza filza 962.

The scrutiny of the letters written by the merchant from Camerino, mostly active in Venice, combined with the accurate analysis of the 27 letters from Ancona addressed to Pisa, Majorca, Barcelona, and Valencia and sent by merchants from Ancona, Umbria, and Tuscany, proves that the Doric harbour was used for trading paper produced in the Marches, but not as intensely as the harbour on the road to Venice. On the other hand, harbour traffic in Ancona was just 1/20 of Venice's.⁴⁰ This clearly explains how, from the first years of the 14th century, paper producers in the Marches sent their wares to La Serenissima, attracted by the lighter customs regulations and, above all, broader and more permanent international connections.⁴¹ It is worth lingering over the data that emerged from the scrutiny of the letters from Ancona, kept in the Datini fund in Prato.

Datini's documents over a period of five years thus attest to the loading of 230 bales of paper, that is, about 2500 reams,⁴² onto ships in the Doric harbour, dispatched by merchants of Florence and Ancona and bound for Catalonia's companies: about a quarter of those sent through Venice, even though over a longer period, by a single merchant, Paoluccio di Maestro Paolo da Camerino; to those should be added the hundreds of bales sent from the commissioner, handled in Venice by Zanobi di Taddeo Gaddi.

For a complete framework of the letters received by Datini's firms in the Marches, it is necessary to include the results of the scrutiny of the ten letters sent to Pisa and

⁴⁰ Tangheroni 1996, 391.

⁴¹ For such tax breaks, see Di Stefano 2007b, 80–84.

⁴² The analysis of several letters has shown that the bales of paper transported overland did not contain more than seven reams; the ones transported by sea had more weight and contained from 10 to 12 reams of paper.

Florence from Fabriano – seven of which have already been entirely transcribed by Giancarlo Castagnari and Nora Lipparoni⁴³ – and of three other letters sent by a merchant from Sant’Angelo in Vado: probably a small correspondence, that nevertheless testifies to direct contacts between paper masters and merchants from Fabriano and Datini’s firms that were even more frequent and enduring than they appear in the documents. The following table summarizes the data.

Tab. 7: Paper bales sent from paper masters and merchants from Fabriano and Sant’Angelo in Vado to Datini’s company in Pisa

Year	Bales	Paper masters or merchants	Signs	Destination
1392	2	Biagio di Giovanni Bertelli, paper master from Fabriano	unspecified	Pisa
1400	8	company of Meo di Venanzio and Gregorio di Pace located in Fabriano	scissors	Pisa
1400	4	Benedetto di Matteo di S. Angelo in Vado	half a unicorn	Pisa
1400	18	see above	mountain with circle, dragon, half a unicorn, wings	Pisa
Total	32			

Source: Archivio di Stato di Prato, *Datini*, lettere Fabriano-Pisa, filza 443; lettere Fabriano-Firenze, filza 649; lettere Sant’Angelo in Vado-Pisa, filza 546.

6 The signs, qualities, and prices: conclusive notes and research perspectives

The analysis of Datini’s correspondence allows us to reach a first conclusion: during the 14th century and the first half of the 15th century, the growing production of other centres in the Peninsula did not threaten Camerino’s and Fabriano’s leadership in the markets of Central and Northern Italy, as it dominated the flows destined for European and Mediterranean export. The accurate study of the records of the Roman customs office in S. Eustachio underlined the contextual supremacy of the two productive poles of the Marches in the export of writing materials to the Papal Capital even in the late 15th century, as Rome was growing rapidly.⁴⁴

⁴³ Castagnari and Lipparoni 1989, 209–213.

⁴⁴ Di Stefano 2013c, 43–72.

Fig. 5, 6, 7: Paper produced in the Marches, exported via Pisa, Ancona and Venice.

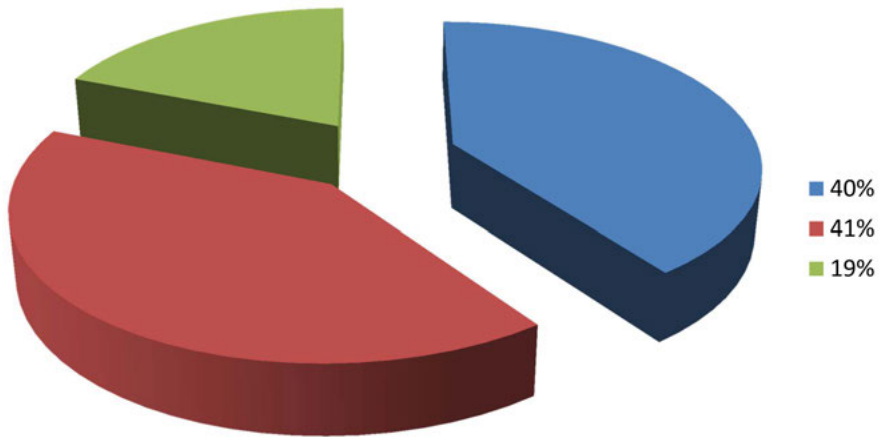


Fig. 5: Lot of paper sold in 1386 in Porto Pisano. Source: Archivio di Stato di Prato. In red: Paper produced in Fabriano; in blue: paper produced in Camerino-Pioraco; in green: paper produced in Prato.

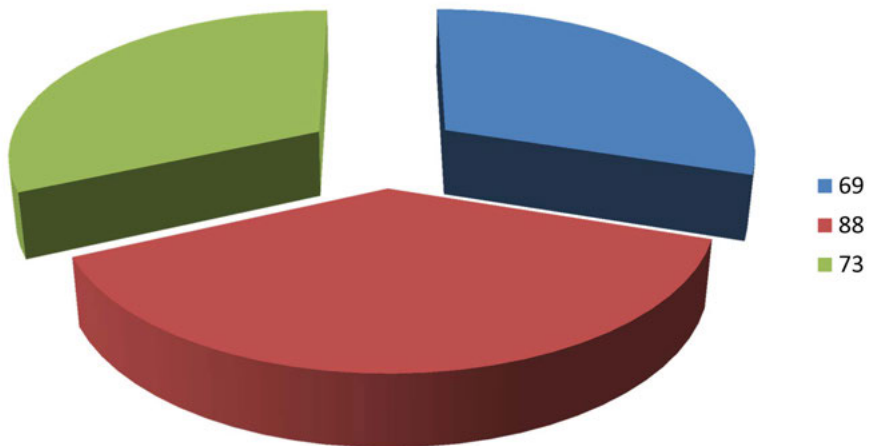


Fig. 6: Paper sent to Catalonia via Ancona from companies of Florence, Ancona, and Camerino from 1405 to 1410. Source: Archivio di Stato di Prato. In red: bales of paper produced in Camerino-Pioraco; in blue: bales of paper produced in Fabriano; in green: paper produced in unspecified locations between Camerino and Fabriano.

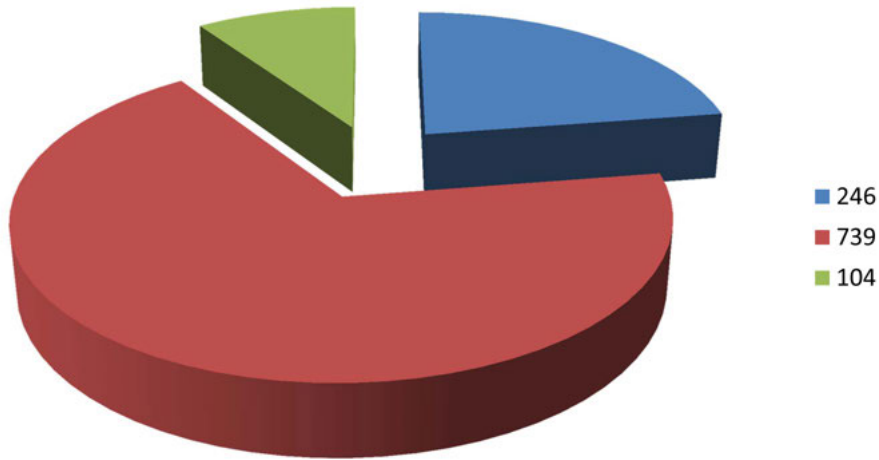


Fig. 7: Paper sent to Catalonia via Venice-Ancona-Pisa from Paoluccio di Maestro Paolo da Camerino between 1396 and 1411. Source: Archivio di Stato di Prato. In red: bales of paper produced in Camerino-Pioraco; in blue: bales of paper produced in Fabriano; in green: paper produced in unspecified locations between Camerino and Fabriano.

With regard to the types, formats, and prices, the sources – from Prato more than from Rome – provide a useful collection of documents: Fabriano and Camerino produced both *piane paper* and *ricciute reali* for mercantile use, that is, in large format, and also medium and small *ricciute fini* and *ricciute tonde*, *piane fini* and *ricciute fini* for bureaucratic and notarial use. As for the prices, types, and format of the paper, they represent important elements of distinction. The most popular in the markets was the *piana fine* from Fabriano, immediately followed by the *piana fine* from Camerino-Pioraco, as noted in a letter dated 7th October 1383, written in Perugia by the Florentine merchant Ardingo Ricci, where he informs Datini's company in Pisa that a ream of *carta fine* produced in Fabriano cost a florin and a half, while paper of the same type produced in Pioraco was priced at a florin and a quarter per ream.⁴⁵ Similar information emerges from the letters sent to the same office from Genoa.

One fact is clear: the two paper production poles produced varieties of paper different in price, type, and quality, as the note *Valuta di merchatantie in Vignone*, written in the Spring of 1384 (Tab. 1), proves. Some types of paper produced in Fabri-

⁴⁵ ASPo, *Datini*, lettera Perugia-Pisa, filza 537, codice 301464.

ano remain the most popular in the market: Paoluccio di Maestro Paolo da Camerino confirms this, emphasizing that the paper produced in Fabriano, marked with the sign of the crown and stag head, was among the finest and most expensive, and not rarely did the merchant from Camerino ship it, together with paper produced in Camerino-Pioraco, to the markets of Northern Europe.⁴⁶

With regard to the paper produced in Camerino, at the end of the 14th century, the best types were marked with the sign of the mountain, bell, and *corneto* (little horn),⁴⁷ often destined for Catalonia, Flanders, and England, while at the beginning of the 15th century, the finest papers produced in Camerino-Pioraco were watermarked with the ram head and ox head, sometimes with a cross above them;⁴⁸ the merchant from Camerino sent them in large quantities to Germany: this is indicated by the steady relationships with the *fondogho dei tedeschi* in Venice and the finding of papers with analogous marks in Nuremberg and Ravensburg from the period 1395–1434.⁴⁹

In the present state of the research, one element stands out vividly. In the late Middle Ages, Fabriano and Camerino, the leading productive centres of *bambagina* paper, made different but complementary productive choices: while Fabriano turned to the production of a very fine paper destined for very limited markets, among them the demanding book market,⁵⁰ in Camerino it was the production of medium and medium-high quality paper, destined for a broader range of consumers, that grew. These were commodity choices which can properly explain the surprising results of the scrutiny of the Roman customs records from the third quarter of the 15th century, as the customs office of S. Eustachio records the transit of more than 12.000 reams of small-format ‘fine’ paper coming from Camerino, which is 54% of the total, against the 4.100 reams of paper coming from Fabriano, which is only 18%.⁵¹ In the same years, Fabriano instead dominates the Roman market for *carta di pecora*, ‘sheep paper’, and *di capretto*, ‘goat paper’, or, to use more common expressions *pecore in carta*, ‘sheep in paper’, or *capretti in carta*, ‘goats in paper’, still in use in the Papal Capital.⁵²

The documents and sources are open to further close examination and integrations. Short- or medium-term focused research on the signs, types, and formats is called for, together with a new consideration of the contextual phenomena – from

⁴⁶ *Ibid.*, lettere Venezia-Barcellona e Venezia-Valencia di Paoluccio di maestro Paolo da Camerino, anni 1400–1403; Di Stefano 2007b, particularly 94–96.

⁴⁷ *Ibid.*, lettere Venezia-Maiorca, Venezia-Barcellona, Venezia-Valencia di Paoluccio di maestro Paolo, anni 1395–1396; Di Stefano 2007b, 85–86.

⁴⁸ *Ibid.*, lettere dal 1405 al 1411; Di Stefano 2007b, 102–103.

⁴⁹ Kluge 2007, 388–390.

⁵⁰ Rodgers Albro 2007.

⁵¹ Di Stefano 2011, 54.

⁵² *Ibid.*, 69.

epidemic diseases to economic and financial factors – which might have influenced the entrepreneurs' choices and their productive orientations, leading to different courses in the two major paper production poles in Italy in that period.

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