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Cotton manufacturers as bankers:
the textile trade and credit in spain (1840-1913)

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Abstract: Historians claim that in the nineteenth century Catalan cotton manufacturers were giving informal credit to their clients, and were therefore unable to transfer this credit to the banking system. Such circumstances would have had a detrimental effect on the profitability of the cotton firms. Based on an analysis of the archives of several firms, as well as judicial and notary sources, we can confirm this state of affairs, but present a more optimistic interpretation of the system. Manufacturers were, in fact, acting as their customers' bankers because they were in the best position to perform this function. They built up a good information structure, managed the credit risk efficiently and earned money from this activity.

JEL Classification: D83, G12, G21, L14, L22, N23.

Keywords: credit market, financial system, information costs, cotton industry, commercial network.

Resum: La historiografia ha assenyalat que en el segle XIX el crèdit que els fabricants cotoners catalans oferien als seus clients era de caràcter informal i, per tant, impossible de ser transferit al sistema bancari. Això hauria tingut un efecte negatiu en la rendibilitat de les empreses cotoneres. A partir de l'anàlisi de diversos arxius empresarials, així com de fonts judicials i notarials, aquest treball confirma aquesta descripció dels fets però proposa una interpretació més optimista. Els fabricants feien de banquers dels seus clients perquè eren els millor situats per a exercir aquesta funció. Havien construït una bona estructura d'informació, gestionaven eficientment el risc creditici i obtenien beneficis d'aquesta activitat.

Paraules clau: mercat de crèdit, sistema financer, costos d'informació, indústria cotonera, xarxa comercial.

Since the beginning of the twentieth century, several Spanish authors have studied how different nineteenth-century Catalan cotton manufacturers commercialised their goods, contrasting this process with British manufacturing. While the British could rely on a strong commercial sector and they were not involved in the commercial sphere, the Catalans had to build commercial structures on their own and to invest time and resources in marketing their goods[1].

Some differences also existed concerning the financial aspects of selling. All British sales were backed by a bill of exchange so that whatever the term of payment was, manufacturers could transfer this credit to a banker who would discount this bill of exchange. Thus it can be seen that banks financed the working capital involved in the selling process. In contrast to the British system, in Spain manufacturers' clients would not accept signing such a documented compromise of payment and, as a consequence, manufacturers could not transfer their credit to the banks. Therefore, all the credit clients received was "informal" and given by manufacturers themselves, with no help of the financial system.

The high level of commercial and financial involvement of manufacturers has been viewed by these authors as an encumbrance, as something that made manufacturers' business more difficult and less profitable.

In this article we concentrate on the financial aspects of the problem. In section one below, we seek first to verify the extent to which the commercial commitment of the Catalan cotton industry also entailed a financial involvement, second, whether the credit terms given by the manufacturers to their customers were informal and, third, whether this impeded the participation of the banks in the financing of circulating capital. To do this we draw on the records of four cotton manufacturers and three cotton textile merchants, as well as on the pertinent court and legal records. The next three sections seek to understand and assess the credit practices of the cotton manufacturers. More specifically, in section two, we see how the historiography reveals other cases in which it was not the bankers that were best placed to fulfil this credit function; in section three, we examine how the construction of a commercial network provided a particularly effective information structure to support this banking function; and in section four we analyse the extent to which the Catalan cotton manufacturers acted as efficient financial middlemen for Catalan industry and the Spanish market.

I

The aim of this part is to test the relative importance of formal and informal credit in the cotton goods trade in several firm archives. I will use quantitative and qualitative information from four cotton manufacturer firms –"La Espanya Industrial", "Sedo" "Viladomiu" and "La Rambla"- and three textile merchant firms –"Masaveu", "Herrero" and "Fortea"-.

First, I want to test how extended the use of bills of exchange and promissory notes was as a credit instrument during the period 1840-1913. Lluís Castañeda has shown that for the period 1817-1884 bills of exchange were not credit instruments, but a way of transferring money from distant places[2]. In the Barcelona market, the great majority of bills of exchange issued against other Spanish places were short term bills (8 days sight)[3]. Moreover, in the minority of longer term bills (40, 60, 90, 120 days...) Catalan manufacturers had a very low participation[4].

The analysis of the commercial letters of several firms confirms this view. In letters, we find that these bills were usually of a very short term, i.e. eight days sight. The majority of them were for Barcelona, and clients sent them by mail when they had decided to pay for their purchases, after having received, for example, three or four months of informal credit from the manufacturer. Sometimes, if payments were delayed, the manufacturer issued a bill to his client and discounted it in Barcelona. But it was also a bill at eight days sight, so it was not any credit.

Given that the term was so short, they did not have any credit function. In short, the bill that ran between a merchant and a cotton manufacturer was not a document embodying the credit the first had really received from the second, and, as a consequence, this credit could not be transmitted to a third economic actor. On the other hand, bills of exchange progressively lost this role as money transfer after 1884 because of the creation of a free transference system by "Banco de España", connecting all Spanish provincial capitals and most important cities and, therefore, integrating the Spanish financial market[5].

Although the commercial letters of several firm archives provide us with strong evidence, other proof is necessary. Give that Catalan manufacturers sold more than half of their production in Barcelona over the period, much of their business escapes the analysis of commercial letters. It is possible that clients from Barcelona behaved differently with regards to formal credit. Although before 1884 no bill of exchange could be drawn against someone from the same city, promissory notes could play the same function. Therefore we have to analyse the account books for the use of promissory notes as a credit instrument in order to have a complete view of how high or low formal credit was. We use the "Credit Documents" accounts of two firms –"Viladomiu" and "Sedó"-, which record all the bills of exchange and promissory notes received by these firms over several years[6] (Table 1). As can be seen, before the 1880s, between a quarter and a twelfth of all sales were backed by a credit document. After this date, the share fell dramatically.

Table 1. "Viladomiu" and "Sedó". Credit documents (in pesetas).

"Viladomiu"	1867	1873	1874	1907	1908	1909
Credit documents	75.836	59.952	37.961	3.701	4.429	519
Sales	450.454	372.856	462.403	726.027	986.089	997.132
Documents/sales (in %)	16,83	16,08	8,15	0,51	0,45	0,05

"Sedó"	1857	1881
Credit documents	151.025	5.000
Sales	570.000	1.045.537
Documents/sales (in %)	26,50	0,48

Source: ANC; FV and FS, ledgers.

However, this information is not very good. First, because we do not know how long the term of these documents were. Perhaps many of them were very short term and they did not play any credit function. Second, because we do not know from this source how many of these documents were given to be discounted by banks. In any case, these figures provide the maximum of how important formal credit could be.

A better is that of using a “Copy book of several credit documents”. This kind of source only exists in “La España Industrial” and I have done work on it for three years: 1857, 1870 and 1880[7]. I examine only those bills of exchange and promissory notes that had a period of maturity longer than 15 days when they arrived at “La España Industrial”. Below this term I consider that they did not have any credit function. From this source analysis we can know how much credit the cotton firm had backed by transmissible documents in these three years and what share of this formal credit was financed by the banking system. Moreover, we can compare these figures with the informal credit the firm gave to its clients during the same years.

In Table 2 there is the total value of bills of exchange and promissory notes over 15 days for 1857, 1870 and 1880. We can see in column A the average length of the document – from the day it was issued until its deadline; in column B we can see the average remaining length of the document from the moment “La España Industrial” owned it until the deadline. This is very important information for us. Since it is, in fact, the average formal credit the firm has. For example, in 1857 the weighted average for all kinds of documents was 45.89 days - in short, when “La España Industrial” received a credit document it had still, on average, 45.89 days of life. Then each document could be transferred to someone else or, on the contrary, the cotton firm could wait until the deadline of the document and go by itself to cash it in. “La España Industrial” could also wait for some days and then transfer the document. Column C is the average amount of time documents remained in the hands of “La España Industrial” and column D the average amount of time before deadline documents were transferred to someone else. Thus we can see that, on average, in 1857 the cotton manufacturer retained the documents 17.32 days and transferred them for 28.57

days. In other words, it used to 68.51 per cent the advantage of a formal credit, namely, the possibility of transferring this credit to someone else.

Table 2. "La España Industrial".Formal credit

Year	Value (in reales)	A	B	C (in days)	D	D/B (in %)
1857	3.243.512	64,37	45,89	17,32	28,57	68,51
1870	2.833.164	67,20	55,45	43,48	11,97	21,59
1880	90.521	43,69	32,91	16,77	16,14	46,98

Source: ANC; FEI,'Copy book of several credit documents' of "La España Industrial" (14.7).

In Table 3 there is an estimation of both formal and informal credit in "La España Industrial" in 1857, 1870 and 1880, and the relative importance of each. Taking the lifespan that documents had, on average, when they arrived at the cotton firm, and multiplying this figure by the total value of these documents, we have a figure of the total formal credit provided by "La España Industrial", expressed in *reales* per day. The utility of this figure is that it can be compared with the total amount of informal credit. We obtain this second figure from the clients' debit at the end of the year. Considering the relatively homogeneous behaviour of sales and payments throughout the year, it is safe to assume that clients, on average, owed this money for 365 days a year. Therefore, multiplying this average debt by 365 we obtain the total amount of formal credit, also expressed in *reales* per day, and we can then make comparisons with the formal credit figure. This estimation shows us that formal credit was a very tiny part – 8.18 per cent in 1857, 10.53 in 1870 and 0.64 in 1880 - of the total credit "La España Industrial" gave to its clients. The bulk was current account credit, namely, without any transferable document backing it. Given that in 1857 the 68.51 per cent of formal credit was effectively transferred, it can be seen that only 5.61 per cent of all credit was financed by someone else –and the 2.27 per cent in 1870-.

It has to be said that some of these documents, although their maturity was longer than 15 days, could only play a money transmission role and not any credit function. This is specially true in the case of bills of exchange in foreign currency, that were bought in order to pay foreign suppliers and they had to be negotiated through bankers[8]. If we removed these bills from our analysis, then formal credit would be even smaller: only 6.98 per cent of total credit in 1857 and 8.78 per cent in 1870. Therefore, the figures of Table 3 are a maximum estimation of formal credit.

Table 3. "La España Industrial".Formal and informal credit

Year	Informal credit	Formal credit	Informal credit	Formal credit
	(in days	x reales)	(in	%)
1857	1.670.094.730	148.846.615	91,82	8,18
1870	1.300.945.045	153.107.758	89,47	10,53
1880	399.910.425	2.582.174	99,36	0,64

Source:The same of Table 2 and ANC; FEI, ledgers and inventories books of "La España Industrial" (14.7).

The analysis of "La España Industrial" for 1857, 1870 and 1880 confirms the traditional view: formal credit played a very small role in commercial relations between manufacturers and merchants. The huge part of the credit given by manufacturers to their clients were, in fact, informal. Informal credit could not be transmitted to a third actor as formal credit could and, therefore, bankers were not able to finance, through discounting, this credit. However, manufacturers had another way of obtaining external funds to finance working capital. They could issue their own promissory notes, namely, documents promising a future payment to someone –a banker, a supplier, a merchant, ...- who were lending money to them. As we can see in Table 4, in 1857, 1870 and 1880 "La España Industrial" received an amount of formal credit very close to 25 per cent of the total credit "La España Industrial" gave to its clients. In order words, this cotton firm only had the possibility of transferring to the banking system 10 per cent - and in 1880 this share was smaller than 1 per cent- of the credit it was giving to its clients, but at the same time it was able to obtain external finance for 25 per cent.

The bulk of this formal credit was constituted by promissory notes that had to be payed to the managers of the firm and some raw cotton suppliers. In other words, when "La España

Industrial" had a liquidity problem, they received formal credit from their own managers and some suppliers. This formal credit was usually obtained at an annual interest rate of 6 per cent. These promissory notes could be discounted in the banking system by their tenders.

In other cotton firm, "Sedó", own promissory notes were also an important way for obtaining external funds. When the firm had a special capital need, like in 1869, external funds documented in promissory notes could be as large as 64.53 per cent of sales (Table 4). These promissory notes usually documented loans to the firm by a bank, a firm owner or a supplier[9].

Table 4. Received formal credit: "La España Industrial" and "Sedó".

"La España Industrial"	1857	1870	1880
Own documents (% of total credit)	22,43	25,88	24,16
"Sedó"	1869	1871	1881
Own documents (% of sales)	64,53	25,16	7,57

Source: The same of table 2 and 3 and ANC;FMS, ledgers of "Sedó" in 1869, 1871 y 1881.

Raimon Soler reports that "La Rambla", when facing liquidity problems, would systematically resort to loans from its business partners, suppliers, other businessmen or savers of Vilanova that were prepared to lend money. These loans were usually constituted as one-year promissory notes, which could then subsequently be renewed or otherwise depending on the will of the parties involved. The rate of interest did not rise above 6per cent. As Soler points out, the involvement of the cotton companies in the business community of Vilanova gave them access to the local capital market, making bank loans unnecessary[10].

The practice of "La España Industrial", "Sedó" and "La Rambla" is consistent with other scholars' findings on the Catalan financial system in the nineteenth century[11]. In Barcelona a credit market had formed in which those offering and those seeking capital came together. Using financial tools such as *debitorios* (a form of debit note), promissory notes and also credit in the current account from their suppliers, the companies had access to the capital they required to undertake their business activity. The *debitorios*, which included a mortgage-backed security, typically had an interest rate of 6per cent and could be used to finance both fixed and circulating capital. Promissory notes, which did not have collateral but were negotiable, were the main tool of merchants and manufacturers for financing circulating capital. The founding of the Bank of Barcelona in 1844 strengthened their use in the wholesale market: in 1860, at least 56.6 per cent of credit sales in the Barcelona stock exchange were endorsed by this type of document[12]. In this market, raw cotton was one of the main products being traded and, as we know, it was the main raw material in the manufacture of cotton fabrics. Therefore, the fact that it was sold on credit meant it was a source of finance for the cotton textile firms, and the fact that a major part of these credit payments were formalised as promissory notes allowed the banks to finance, indirectly, the circulating capital of these firms[13].

The Bank of Barcelona, between 1850 and 1899, offered credit to its clients at an interest rate between 4 and 6 per cent[14]. The other joint stock banks founded in 1856, which comprised the next rung on the banking ladder, applied between 1856 and 1866 an average rate of 6.76 per cent[15]. One rung further down the ladder operated the moneylenders that were not banking societies, merchant-bankers and simply merchants, who applied higher rates. Logically, only the most solvent companies were eligible for credit from the Bank of Barcelona, while the rest could obtain funding lower down the ladder of the financial system. Many of the Bank of Barcelona's customers rediscounted the promissory notes that they had made with their own customers, who did not have direct access to the issuing bank. The difference in interest rates constituted their financial margin.

Cotton fabric manufacturers, logically, enjoyed relatively easy access to these credit sources. The largest firms were able to discount their promissory notes at the Bank of

Barcelona. This was the case of “La España Industrial”, which both in 1857 and in 1870 discounted its own promissory notes in favour of its directors (which, in fact, acted as guarantors) at the Bank of Barcelona with an annual interest of 6 per cent, and in 1880 of 5 per cent. Likewise, they did the same with the promissory notes received from their customers[16]. Similarly, in 1869 “Sedó” discounted its own promissory notes at the Bank of Barcelona for 5 per cent and at the “Crédito Mercantil” (a joint stock bank) at 6.5 per cent. Two years later, it repeated this transaction with the joint stock bank at a rate of 6 and 7 per cent[17]. These firms of lesser standing, or those whose partners’ or directors’ signatures were not recognised in the Bank of Barcelona or in the large joint stock banks, had access to credit via the next rungs down on the ladder that made up the Catalan financial system.

In short, my research confirms the traditional view as regards the relative unimportance of the formal credit system between cotton manufacturers and their customers. However, it also indicates that manufacturers had various alternative mechanisms available to finance their circulating capital by using current liabilities, often through formal credits that could be transferred to the banking system.

Table 5. Cotton manufacturers' informal credit. Average term of payment (in days).

	1867	1868	1873	1874	1895	1908	1909	1910
"Viladomiu"	96	120	157	156	131	114	122	128
	1850-59	1860-69	1870-79	1880-89	1890-1900			
"La España Industrial"	107	79	105	120	108			
	1841-49	1850-59	1860-69	1871-79	1880-84	1909-14		
"La Rambla"	164	143	51	139	106	113		
	1871	1873-83						
"Sedó"	113	60						

Source: AHCVG; FLR, ledgers of “La Rambla”. ANC; FEI, FV and FS, ledgers and inventories of “La España Industrial”, “Viladomiu” y “Sedó”.

Having verified that in the main the credit offered by manufacturers to their customers was not endorsed by transferable commercial paper, we now seek to quantify this credit, in terms of the number of days, on average, the manufacturers allowed their customers before demanding payment. Table 5 provides a summary of the accumulated empirical evidence. For various cotton firms during the 1850-1913, the average length of credit terms was, in many cases, greater than a hundred days[18].

Table 6. Textile merchants' credit matrix (in days)

"Fortea"	1850	1881	1907-9	1911-13
Credit received from suppliers	103	104	86	78
Credit given to clients	126	98	119	110
Net credit given by "Fortea"	23	- 6	33	32

"Herrero"	Oviedo, 1849	Santiago, 1858
Credit received from suppliers	44	49
Credit given to clients	140	128
Net credit given by "Herrero"	96	79

Source: ABH, ledgers of “Herrero”. BUZ; FF, ledgers of “Fortea” (1850, 1881, 1930) and balance sheets (1907-9 y 1911-13).

While it is true that the commercial vocation of the manufacturers led them to offer credit terms to their customers, and that these were in the main informal agreements, we should stress that they were not the only ones to finance the circulating capital of the sales process. The wholesalers and the commission houses were also often net creditors. Drawing on the books of two provincial wholesalers, we can calculate the time that elapsed before payment was made to their suppliers as well as the time that elapsed before they demanded payment from their customers, what Pat Hudson has called their “credit matrix”[19]. In Table 6 we can see their net credit position in various years[20]. While “Fortea” of Zaragoza did not give much more credit to its customers than that which it received from its suppliers, and in some years it even had a net debit position, “Herrero” played an important role as a net credit provider.

In short, the manufacturers were not the only ones to be granting credit. Every link in the chain of distribution that the fabrics passed through on their way to the consumer was a potential creditor. As we have seen, the situations could be highly varied. There were merchants that played the role of financial “cushion”, the absence of which historians have stressed, while others, effectively, allowed this financial weight to fall exclusively on the manufacturers.

Whatever the case, we can conclude that in the distribution and sale of Catalan cotton fabrics, current account credit was an essential element in the relationship between the economic agents that participated in this activity. In fact, we can speak of a true credit market in which manufacturers, commission houses, wholesalers and retailers all intervened. Below we shall examine just how this market operated.

II

Previous historical studies have suggested that Catalan manufacturers acted as bankers to their customers. In all certainty, the authors that express this idea do so in a metaphorical sense indicating that the manufacturers were obliged to offer generous payment terms to their customers and, because of the non-formalization of these debts in transferable documents, to provide this circulating capital without the help of the banks. It was, they claim, a role that the manufacturers adopted very much against their will and which had detrimental economic effects.

However, an analysis of the documents consulted presents a less negative view of the manufacturers’ financial activity. It is my belief that the Catalan cotton manufacturers integrated their credit functions perfectly with their business activity. If, as the specialists in financial economy have claimed, the three main activities of the bank are screening, monitoring and enforcing contracts, that is, choosing solvent clients, overseeing their long-term behaviour and having the ability to make them pay[21], then the Catalan manufacturers exercised these functions with their customers in a very professional way. As we have seen earlier, the manufacturers played the role of creditors throughout the period 1850 to 1913, and so it is only normal to consider that beneath a behaviour typified by these structural characteristics there lay a certain rationality. Although the origin of the informal credit of the manufacturers lay in the refusal of their customers to accept firm commitments to pay, it is difficult to imagine that so many manufacturers, for such a length of time, were able to tolerate conditions that were systematically prejudicial to their interests. Particularly if we consider that Barcelona was an important financial market place, that brought together a critical mass of manufacturers, merchants, bankers and savers to constitute a fluid credit market. In fact, we have already seen that the manufacturers had access to bank credit through the issue of their own promissory notes. They were well known in the market and had sufficient guarantees to obtain outside finance without the need to discount their customers' promises to pay.

As we analyse the various company records, and court and legal documents, the image that emerges is that of a number of manufacturers that have taken on the task of producing fabrics and selling them, as well as the functions of classifying their customers according to their solvency, of minimizing the risks of their credit sales and developing the capacity of pressure sufficient so as to guarantee the deferred payment of their bills. All the indications are that, under the circumstances, the cotton manufacturers were best placed to act as bankers to their commercial customers.

Before seeking to demonstrate with empirical evidence the veracity of this hypothesis, we shall see how this type of explanation is not new in economic history. Given that the chief function of the banks, namely lending money to others, is subject to the problem of asymmetric information, the first task of the banker is to obtain information about the projects in which this money will be invested and the solvency of those that wish to undertake them[22]. This activity, as well as the subsequent monitoring of the debtor and the enforcement of the payments, requires the establishment of a network of information and control. In this sense, various studies in economic history conducted in the frame of "New Institutional Economics" identify that, in certain circumstances, and especially in economies that are in the first stage of capitalist development, the best-placed agents for offering credit to certain individuals or firms are not necessarily the bankers, that is, the specialist financial intermediaries, but other agents engaged in a different principal economic activity.

An example of this is provided by the work of Aidan Hollis and Arthur Sweetman in which they show that, in the case of Ireland in the mid-nineteenth century, the banks were not always the ones equipped to lend money. Here, a number of what were almost charitable credit societies managed to make a profit by lending money to poor Irish families, in a regime that was very similar to today's "micro-credit" systems. The secret of the success of these societies lay in the fact that they were deeply rooted in the local communities, and so, with an intimate knowledge of their customers, they were able to assess their risks correctly. In addition, as the community was interested in the continuity of these institutions, there was considerable social pressure brought to bear to ensure the credits were repaid, so that the percentage of unpaid debts was very low[23].

Another case is described in the studies undertaken by Simon Ville and Grant Fleming, in which they explain how the *pastoral agents*, firms dedicated to the supply of animals, materials, technical and commercial support to Australian and New Zealand farmers during the second half of the nineteenth century, were also best placed for providing them with loans. Although the banks could lend money directly to the farmers, they preferred to do so through the *pastoral agents*, as they did not dispose of much information about the farms, which were small, and highly dispersed productive units, and regarding which, therefore, it was costly to obtain information. By contrast, the *pastoral agents*, thanks to the fact that they had established a good network in the territory and maintained commercial relations with the farmers, knew them much better and were able to evaluate perfectly the risk associated with each credit. Thus, the banks lent money to the *pastoral agents* and they, in turn, lent it to the farmers. As the agents were better informed, they were in the best position to act as bankers[24]. In short, when obtaining information is costly, those who are able to put this information to more than one use can profit much better from this information network.

As we have seen, one of the main tasks of the banker is enforcing contracts, in other words, ensuring that borrowers return the money they lend. When the environment in which they operate is complex and this activity is very expensive, it is logical that institutions emerge that reduce the transaction costs and ensure that the credit market functions. As Jeremy Baskes explains, this was the case of rural, colonial Mexico in the eighteenth century, where through the operation of the *repartimiento* it was the magistrates that were responsible for financing the breeding and gathering of the cochineal insect, as they were the only ones that dared to pay the small farmers in the Oxaca region up front for this product: 'The *repartimiento* was operated by magistrates vested with judicial power, which they could use to facilitate the enforcement of contracts. These powers enabled officials to collect their own debts at reasonable cost'.[25]

In short, charitable organisations, merchants and even magistrates were more efficient providers of credit to groups of the population in given settings. For similar motives, the Catalan cotton manufacturers might have been the best bankers for their customers in nineteenth-century Spain.

III

As mentioned at the outset to this discussion, the literature has stressed the high degree of involvement of the Catalan textile manufacturers in the commercialisation of their products. This dated back to the eighteenth century and was one of the factors in the absolute dominance of Catalan textiles in Spain in the nineteenth and twentieth centuries. Based on a thorough study of the records of a number of firms, both industrial and commercial, as well as court and legal records, I have been able to confirm this commercial involvement in the case of the cotton industry and to explain the forms it adopted and how these changed over the nineteenth century.[26] Before the opening up of the early railway network in the mid-1860s, the cotton manufacturers used various mechanisms to ensure their presence in trading channels: they set up their own stores in a number of big Spanish cities, they participated as limited liability partners in trading companies, they allowed textile merchants to participate in the capital of their industrial firms, and they signed preferential supply contracts with certain trading companies, among other practices. All these mechanisms, however, were incomplete ways of integrating their commercial function, since they did not allow the manufacturers to reach the whole Spanish market directly and, at the same time, they obliged them to distribute the products of other manufacturers so as to be able to bear the costs of their own commercial structures.

All this was to change with the building of the railway network in the mid-1860s. Thanks to the railroads, the cotton firms were able to send their commercial travellers all over Spain; with two or three travellers, an agent based in Madrid and one more in another major city, a firm was able to establish its own commercial structure and to cover the whole of the national market. During the last third of the nineteenth century all the large and medium-sized Catalan cotton firms adopted this new system, though this did not stop the fact that a large part of their production continued to be channelled through independent merchants.

What we wish to stress here is that while operating these commercial structures - both those adopted prior to the railways and the system of commercial travellers and fixed agents that ended up winning the day – credit practices were to play an important role. The manufacturers had various reasons for wishing to be present in the channels of distribution of their products: they believed that by ridding themselves of intermediaries they would strengthen their sales at the expense of those of their competitors and they were keen to obtain feedback from the consumers so as to adapt production rapidly to their tastes. Another major reason was that in this way they could be better informed about their customers' solvency. The fact that most of their sales were made on credit made it even more necessary to have their own employees in the various regional markets, in short to be able to count on a network of information in the field.

This is quite apparent in the correspondence maintained by the firms. For example, when the cotton firm "Muntadas Hermanos" set up their own store in Madrid in 1841, and used this as a base for creating a portfolio of customers in the central zone of Castilla, they were initially highly reticent about offering credit terms to new customers that were quite unknown to them. Andrés Ramires, a retailer in Villarubia, asked to buy goods on credit from them. As they did not know him, the Muntadas were only prepared to sell to him for cash.[27] Ramires insisted and the Muntadas offered him, by letter, a three-month credit of 10,000 *reales* if he could give them the name of someone they knew who could act as guarantor.[28] The two names that Ramires gave were unknown to the Muntadas, and so it was not possible to give him credit terms: '... once you know people, guarantors are superfluous; but as we have the misfortune to be new in this market and not to have any business relations in La Mancha, we do not wish to scatter our business interests haphazardly'.[29] Direct knowledge of the customer or, failing that, the guarantee of a third party were conditions *sine qua non* for giving credit. Logically, in 1841 and only recently established in Madrid, the "Muntadas Hermanos" knew few customers whom they could trust and, therefore, to whom they could offer credit. It was precisely with the idea of changing this situation that they decided to establish their new base of operations in this territory. Proof of this is the fact that by 1843 their store had already opened accounts with 160 customers in the area of the Meseta. The commercial network, with the information that it could provide, allowed them to give credit. Moreover, this network was even more necessary, given the demands of the customers to receive credit.

That the manufacturers' commercial structures fulfilled the typical functions of the banks becomes quite evident when we analyse the correspondence between the manufacturers and their commercial travellers and agents in the last third of the nineteenth century. A significant part of the work of these men in the field was that of screening, monitoring and enforcing contracts. They were responsible for classifying all potential customers as either "good" or "bad", in other words, between those that were worthy of buying on credit and those that could only make cash purchases. To do so they observed and identified which other manufacturers and merchants trusted them, what assets they possessed, which partners –and with what amount of patrimony- were backing the business, whether they honoured their promises and, in general, what their reputation was in the local area. For example, Eusebio Casajús, a traveller for “La Rambla” in Zaragoza, wrote in 1895: ‘You might well receive a visit these days from a young lad, Mr. José M. Alonso, established a short time ago in ready made clothes; you can quote him shop prices; they have given us good references’.[30]

These controls did not only involve discriminating between solvent and more doubtful customers, but it also involved monitoring the situation over time. Having someone in the field was a valuable tool for “sniffing out” any possible problems with present customers. In case of doubt, the travellers went as far as to examine the accounting books of the customers. This was the case of the commercial traveller working for “La España Industrial”, Andrés G. y Gallardo, who in 1880 wrote the following about “Brieva Arévalo y Cia”: ‘This company is fully trustworthy, and nothing can possibly happen to it, I see all its operations and I examine its books when I wish; we should therefore meet their orders …’[31]

The work of the commercial travellers and fixed agents also helped ensure all customer payments were made. Not only did they bring pressure to bear to guarantee payment of all outstanding debts, but also, when a customer defaulted, they represented the company at the meeting of creditors or intervened to renegotiate the debt.

In short, the establishment of the commercial network by the cotton manufacturers had financial implications. Part of the information gathered via this network referred to the solvency of customers and, in this sense, it served a similar function to the networks established by banks today. This facet to their operations was already present in the various attempts made at integrating their commercial function before the advent of the railroads, although it was not until the introduction of the system of commercial travellers in the 1870s that the mechanism was perfected. If knowing consumer tastes was important for the manufacturers, it was just as important, or even more so, to have good information about the customers, and here what interested them most was their financial solvency. From the moment in which they began selling through a current account, from the time that credit was to play a key role in the relations with the customer, the commercial and banking functions became inextricably tied together. In this way, the structure designed to ensure that more of their product reached more customers, also served to gather information about their customer solvency. Just as the manufacturers had decided to become merchants of their products, by giving credit they also became bankers. Like the *pastoral agents* in Oceania in the nineteenth century, they were the best placed to give credit to their customers, since they had at their disposal a network of information which the bankers did not have.

IV

In the first section we have seen that the record archives confirm what the historical literature has long claimed: manufacturers supplied their customers using credit sales, and that this on the whole was an informal system, being unendorsed by commercial paper. In the third section we have seen that among the main tasks of the employees that formed the commercial structure of the cotton firms was that of analysing the solvency of their customers, a task more typical of the banks. It seems more than apparent that in nineteenth-century Spain, selling fabrics meant selling on credit and that this conditioned the activity of the manufacturers, who dedicated themselves conscientiously to their tasks as "bankers". In the second section we have seen similar historical examples, demonstrating that the credit system in Spain's textile trade was by no means unique and, in terms of the picture painted by the literature, much less dramatic. The Catalan cotton manufacturers did indeed operate as bankers, but they were by no means unwilling bankers.

An analysis of how this credit market worked should support this claim. We shall analyse the implications of the fact that most of this credit system was informal. As also pointed out in the historiography, this led to a certain laxity in honouring payment obligations. The fact that there were neither bills of exchange nor promissory notes that specified this obligation to pay within a fixed term made it easier for debtors not to honour their promises. Legally it was more difficult to make debtors pay on demand; or rather it was more costly for the creditors to recoup their money through the courts. Therefore, when a manufacturer agreed to credit sales under these conditions, he was giving a certain advantage to his customer and assuming a greater risk than if the credit had been endorsed by commercial paper. To manage this risk – or to reduce it - the manufacturers invested in information, that is, they paid their employees in the field to undertake the same tasks as those conducted by the banks.

A detailed analysis of the *modus operandi* of credit sales reveals that the manufacturers' risk management was highly professional. First, as we have seen, they screened their new customers on the basis of information gathered by their own commercial travellers. Furthermore, in the case of customers with whom they had already dealt, they established the maximum sums with which they could be credited, depending on the financial strength of each company. In general, they fixed the dates on which payment became due. This might vary between two and four months. Some firms applied the same length of credit terms to all their customers, while others divided them according to the credit terms offered. Above all, however, the system was characterised by its flexibility. If a customer had problems of liquidity, they could delay payment, and the degree of concern caused to the manufacturer would be linked to the firm's previous credit history and the reports it received from its travellers. The manufacturers had to calculate in each instance whether the situation called for flexibility, and hence the customer could be trusted, or whether the alarm bells should be sounded and there was a need to be more exacting. In order to manage this risk correctly each company needed to operate its own information structure in the field.

That there was a trade off between flexibility and the perception of risk can be seen when we analyse the use made of formal credit. As discussed earlier, this system constituted a small part of the credit regime offered by manufacturers to their customers and, yet, it is interesting to ask why in fact at times it was used. The answer is clear: manufacturers insisted upon documentation of the credit when they perceived a greater risk. And this occurred primarily in two circumstances: when the customer was new and when a regular customer started to delay on its payments. An example of this first circumstance is documented in 1857 when 70 per cent of the value of promissory notes that passed through the hands of “La España Industrial” was attributable to new customers. The company protected these purchases with transferable credit documents[32]. A good example of the second circumstance is provided by “La Igualadina Algodonera”, which in October 1866 sold two batches of grey clothing with payment falling due after 90 days to “Juan Ribas y Cia”.

> Neither of these two bills had been honoured by the date they fell due and so the company granted Juan Ribas y Cia an extension with the signing of a promissory note... to the value of thirty-two thousand nine hundred and twenty-one *reales* being the sum of the two aforementioned bills...[33]

In this case, as well as reinforcing the liability for the debt on detecting that the probability of failing to honour the obligation had increased, the manufacturer extended the credit to a customer with problems of liquidity without undermining its own, since it could discount the promissory note in a bank and obtain the full amount of the bills.

In short, if when the risk increased the manufacturers resorted to formal credit agreements, this meant that they were usually prepared to accept informal credit because they knew that the risk they ran was small. The existence of a commercial structure that served the purpose of evaluating financial risks and the presence of a long-term relationship with the customers, which served as a disincentive to opportunist behaviour on their part, allowed the manufacturers to be flexible with their customers without at the same time harming their own interests.

How efficient were the manufacturers in their tasks of risk management? To answer this question we analysed the clients’ default indices of three manufacturers. In the first column of Table 7 we can see the percentage of customers’ debts that were considered uncertain or difficult to enforce. Note that the average values were, generally, between 1 and 6 per cent, with the exception of the period 1877-84 at “La España Industrial”, when values reached almost 10 per cent.

Table 7. Clients' default indices of cotton firms (in %).

"Viladomiu"	in default/debts	in default/sales	lost/sales
1868	1,13	0,30	
1869	7,35	1,15	
1870	3,77	1,03	0,04
1871	8,92	3,57	
1872	5,76	1,87	0,42
1873	3,50	1,60	0,29
1874	3,40	1,50	
1895		4,91	
"Sedó"			
1873-83	5,66	0,51	
1884-99	4,27		
1903-05	3,33		
"España Industrial"			
1854-59	1,58	0,38	0,22
1866-76	5,45	1,04	
1877-84	9,97	2,11	0,12
1886-90	1,97	0,52	0,15

Source:ANC; FV, FS and FEI, ledgers of “Viladomiu”, “Sedó” and “La España Industrial”.

To evaluate these data, that is, to determine whether the default indices were high or low, we need to compare them with the ratios published elsewhere, for example, with the default ratio of Spanish banks in the second half of the twentieth century. If we examine the data in Table 8, where the default ratio is defined as *“uncertain and delayed credits as a share of the total of credits in non-credit resident sectors”* [34], we can see that the values are lower than those in Table 8, but that they do not differ greatly.

Table 8. Clients' default ratio in the Spanish banking system (in %)

1963-75	1976-86	1987-91	1992-6	1997-9
0,9	3,8	3,7	6,2	2,2

Source:Boletín del Banco de España, November 2000.

If we also look at the third column in Table 7, which includes those sums that were considered as having been definitively lost, the values are very modest, never reaching 0.5 per cent of the value of annual sales. This means that the cotton firms were highly skilled in renegotiating their customers' debts, that they were prepared to defer payments and to forego a part of the principal so as to minimise their losses. In the company archives and in those of the courts, there are numerous examples of initiatives of this type. In 1880, the commercial representative of "La España Industrial" in Sevilla, Andrés G. y Gallardo, was responsible for his company's interests in his customers' default, "Martínez Aceña y Santacruz". After investigating the true financial state of the company, he recommended a friendly settlement to the "La España Industrial" cotton company[35] and acted as their representative on the board of receivers, which decided to concede a period of four years for the firm to pay off its debts using six-monthly payments, endorsed by promissory notes.[36]

Thus, all the indications are that the manufacturers acted in a much more professional way as bankers than was previously believed. Here, an important question is whether their financial involvement had a negative effect on the profitability of the cotton firms. The literature indicates that the impossibility of transferring customer debts to the banking system would have forced them to have large sums of money immobilised in the sales process. This greater circulating capital used per unit sold would have affected their profitability. However, we have seen in the first section that the manufacturers, due to the place they occupied in the Catalan business circle, had easy access to the capital market. The leading firms appeared on the Bank of Barcelona's list of clients. Even those that did not could receive credit from other financial entities, from their suppliers, or from any merchant or saver that was prepared to lend them money for a period of time. In short, given that they were well-known companies, with partners that were well connected in the Catalan business community, they were able to obtain financing at a rate of interest that oscillated between 5 and 7 per cent.

If the cotton manufacturers were well known and respected by Catalan entrepreneurs, bankers and savers and, at the same time, they had at their disposal a network of information that allowed them to gauge adequately the risks of offering credit to wholesalers and retailers in the Spanish market, were they not in an ideal position to become the best financial intermediaries between a prosperous Catalan industry and a backward agrarian Spain? Was it not logical then that they should take advantage of this situation to act as arbitrators between cautious savers that trusted them and provincial shopkeepers with problems of liquidity but whom they knew to perfection?[37] The key lies in knowing whether the manufacturers earned money as financial intermediaries, in other words, whether in one way or another they fixed a higher rate of interest for their customers than that which they paid to their creditors.

An analysis of commercial correspondence shows the existence of discounts for early payment. It is logical to conclude that the price paid by those that required all the time extended to them by the manufacturer included this financial reward. The implicit interest rate, therefore, would be the difference between the price paid by a customer paying “late” and the price paid by one making an “early” payment. For example, we know that in 1860 and in 1865 “La España Industrial” operated a discount policy for early payment, and established an implicit annual rate of interest of between 6 and 12 per cent,[38] as did “Jaumandreu", another cotton firm.[39] “Sedó” operated the same policy in 1871, with an interest rate of between 12 and 24 per cent.[40] “Masaveu”, a textile merchant established in Oviedo, paid their invoice before the due date in 1865 so as to benefit from a discount equivalent to an annual interest of 6 per cent[41] and “Fortea”, the Zaragoza merchant, charged an annual interest of 30 per cent on credit to his customers in 1881.[42] Although these discounts for early payment are not always seen, in the cases in which they are explicit, they involved interest rates that were at times equal to, and nearly always greater than, those paid by the cotton companies. In other words, there is evidence that suggests that the manufacturers charged for their financial services.

In short, the Catalan cotton manufacturers were in the best position to act as bankers to their customers. Their direct access to structures of commercialisation within the Spanish market allowed them to mange their credit risk as if they were banks and with similar levels of efficiency. All the indications are that, in one way or another, they charged for this service. When all is said and done, if someone wishing to sell fabrics in nineteenth century Spain had to resign themselves to offering informal credit to the provincial shopkeepers, the latter would not find more flexible or more understanding lenders than the cotton manufacturers and leading textile merchants, since no one knew them like they did.

V

In this study we have analysed the credit systems operated by the cotton textile trade in Spain. Our empirical analysis confirms the traditional view held of the situation that the credit arrangements between manufacturers and their customers were not, in general, documented in transferable commercial paper. Most, in fact, were informal operations and involved manufacturers, as well as merchants, opening accounts for their customers, who settled these invoices at due dates that varied, on average, between three and four months.

Our interpretation of the consequences of these practices is more optimistic than the traditional view. The absence of bills of exchange and promissory notes that documented their customers' debts did not impede the manufacturers from turning to the banking system to finance their circulating capital. Bankers, as well as merchants and investors in general, were prepared to give liquidity to the cotton firms, which would have enjoyed an established reputation and whose active partners would have been fully integrated in the Catalan business circle.[43]

The manufacturers acted, therefore, as their customers' bankers, but it would be wrong to say they were their unwilling bankers. The commercial network they built up allowed them to undertake this function (basically, keeping informed about their customers and bringing pressure to bear on the purchasers of their fabrics) better than anybody. Having their own information network together with the long-term relationships they had built up with wholesalers and retailers were the two key factors in minimising the risks of credit sales. In the textile trade, a veritable credit market was in operation, a market with recognised criteria for selecting customers, with in-built mechanisms to compensate for greater risks – the use of formal credit- and also, in most instances, with implicit rates of interest being applied. The textile manufacturers, along with the merchants, were in the best position to lend money to their customers, simply because they were the ones that knew them best and because, given their place within the Catalan business network, they had easy access to financial resources. Thus, in nineteenth century Spain, the prevailing circumstances led a number of economic agents to act in a manner that might seem strange to us today: namely, cotton manufacturers operated simultaneously as both manufacturers and bankers.

Notes

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[1] See Vicens and Llorens (1958), Cambó (1915), Rahola (1908), Tallada (1944), Sudrià (1982) and Nadal (1985)]

[2] See Castañeda (2001) and also Castañeda and Tafunell (1993), pp.369-370. On the other hand, Xavier Cuadras and Joan R. Rosés maintain that bills of exchange were a source of monetary supply [Cuadras-Morato and Rosés (1998)]. See also Sudrià and Pascual (1999).

[3] See Castañeda (2001), p. 179.

[4] See Catañeda (2001), p. 99-103.

[5] Castañeda (2001).

[6] The name of the account is “Efectos a cobrar”. Viladomiu and Sedó ledgers for several years, ANC.

[7] “Copiador de letras, recibos, cuentas de resaca y otros documentos endosables” [14.7, 14.15 and 14.20; ANC].

[8] Lluís Castañeda says that manufacutrers were not obtaining credit throught the negotiation of these bills but, on the contrary, they were giving liquidity to the international payments compensation system [Castañeda (2001), pp. 97-98].

[9] The “Crédito Mercantil”, a commercial bank, used to lend money to “Sedó” at 6-7 per cent annual interest rate.

[10] Soler (2000), p. 300.

[11] Castañeda and Tafunell (1994).

[12] Castañeda and Tafunell (1997), p. 4. The figure is a minimum estimate, as it includes only those cases of credit sales for which the use of promissory notes was specified in the records of the business agents. The

authors suspect that the use of these documents was not always noted. For an analysis of the business policy of the Bank of Barcelona, see Blasco (2005) and Blasco and Nogués (2004) and (2007).

[13] For an analysis of this market see Castañeda and Tafunell (1999).

[14] Tortella (1973), p. 391.

[15] Castañeda and Tafunell (1994), p. 277.

[16] "Correspondence book of bills, receipts, redrafts and other endorsed documents, 27/06/1856 to 28/05/1858" (ANC, FEI. 14.7); Idem 1869-71 (ANC, FEI. 14.15) and 1879-1881 (ANC, FEI. 14.20). Daybooks and ledgers for 1857 (2.14 y 2.15; 3.11), 1870 (2.36 y 2.37; 3.24) and 1880 (2.51 y 2.52; 3.34 a y 3.34 b).

[17] During those years the trading name of the company was "José Puig y Cia". [ANC, FMS. Daybooks and ledgers 1869-70 (0511.1; 0512.1) and 1871 (0511.2 and 0512.2)].

[18] The method of calculation in the cases of "La España Industrial", "Sedó" and "Viladomiu" (except in 1873) involved relating the customer balances in the year-end balance sheet with the sales values for the same years. Here too we have supposed that the customer balances remained largely unchanged over the year. The formula then applied was: period of payment = 365/(sales/balance). However, in the case of "La Rambla" the credit estimate was calculated directly on each sale and period of time before payment was made and then we obtained a weighted mean value. This data base was prepared with Raimon Soler. The figure for "Viladomiu" in 1873 was also obtained using the direct method.

[19] Hudson studies the credit relations between the various actors involved in the manufacture and trade of wool textiles in the West Riding [Hudson (1986)].

[20] The figures referring to "Fortea" for 1850 and 1881, and those referring to "Herrero", have been obtained from a direct calculation of the time it took to receive or make payment for sales in a wide sample of customers and suppliers. For all other years in the case of "Fortea" we estimated the figures based on the mean quarterly balances of customers and suppliers and on the volume of annual sales, following the same procedure as in Table 6, using the formula: period of payment = 365/(sales/balance).

[21] Freixas and Rochet (1997).

[22] For a good summary of the relations between credit and information, see Godley and Ross (1996).

[23] Hollis and Sweetman (1998).

[24] Ville (1996) and Ville and Fleming (2000). The authors show that that they did not only provide credit to the farmers, but that they also offered different contractual terms in order to attract the most solvent and so as to be able to control better those that were less solvent. A further example is that of the rural credit cooperatives in Germany in the period 1883-1914 [Guinnane (2001)].

[25] Baskes (2005), p. 195.

[26] Prat (2006).

[27] AMTEPM, FM. Store correspondence in Madrid, nº 615, 17/11/1841.

[28] Idem, 10/12/1841.

[29] Idem, 17/12/1841.

[30] AHCVG, FLR. Letter from Eusebio Casajús to "La Rambla", 26/01/1895.

[31] ANC, FEI. Letter from José Andrés G. y Gallardo to "La España Industrial", *26*/10/1870, box 27.92, nº 58.

[32] 1,332,601 *reales* on the total value of the promissory notes of 1,914,690 *reales*.

[33] The extension was for a further four months and the promissory note coincided with the value of the debt, that is, no interest was charged. [AHCA, FTC. Proceedings of "La Igualadina Algodonera vs. Juan Ribas y Cia" (exp. 333, 1867), pp. 9 and 10].

[34] The data are taken from the *Boletín del Banco de España*, November 2000, p. 3 [www.bde.es].

[35] ANC, FEI. Letter from Andrés G. y Gallardo to "La España Industrial", 28/07/1880, box 27.92, nº 46.

[36] Idem, 17/08/1880, box 27.92, nº 50.

[37] This description could also apply to the main merchants in Barcelona, who enjoyed equal possibilities of obtaining funds and a similar knowledge of their provincial customers.

[38] A discount of 3 per cent was given for payment in 30 days, 2.5 per cent in 60 days, 2 per cent in 90 days and 1 per cent in 120 days. Thus, for the first three discounts, there was a 0.5 per cent reduction for each month, equivalent to an implicit rate of annual interest of 6 per cent. In the case of the final discount, there was a 1 per cent monthly reduction, equivalent to an annual rate of 12 per cent [ANC, FEI. Letter from "La España Industrial" to Domingo Alfaro in Malaga, 15/06/1860, correspondence 26.2.14, p. 25].

[39] *"Sres. Jaumeandreu…offer 4 per cent for payment in 30 days, 2 per cent in 90 days and nothing in 4 months …"*[ANC, FEI. Letter from Casimiro López in Malaga to "La España Industrial", 9/09/1860, box 27.27, nº 91].

[40] In 1871 "Sedó" offered a 3 per cent discount to those that paid in two months or less, 1 per cent to those that paid in three months, and no discount for payment in four months [ANC, FMS. 1871 Ledger].

[41] In 1865 "Masaveu" paid cash to the wool manufacturer "Gorina", thereby obtaining a discount of 2 per cent, while Rafael Giménez wrote to him:*"..When we agree that I cannot enjoy a discount for early payment on the goods we do not stipulate the date of payment for the bills which would mean offering you 4 months as is customary..."* [AM. Letter from "Masaveu" to Rafael Giménez in Valencia, 14/02/1865. Correspondence "Castilla" nº7, p. 82].

[42] *"Are you unaware of the terms of sales of this company, which are: 90 days from the date of billing or 30 with a 5 per cent discount"* [BUZ. FF. Letter from "Fortea" to Mariano Talón in Béjar, 5/12/1881, p. 47].

[43] To some extent, these practices are comparable with the "insider lending" described by Naomi Lamoreaux and Lucy Newton in New England and Great Britain, respectively, in the nineteenth century. In these specific instances, also characterised by the relative paucity of information, savers invested in banks that systematically granted loans to the banks' management companies [See Lamoreaux (1994) and Newton (1996) and (2000)]. See also Granovetter (1985) and (2005).

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