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Legal versus economic explanations of the rise in bankruptcies in 19th century France

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Abstract:

This paper aims at giving an explanation of the changes in the number of bankruptcies during the second part of the 19th century and the beginning of the 20th. We wonder in particular whether changes in bankruptcy law, which are substantial during the period, suffice to explain the rise in the proportion of bankrupted firms. We first describe the main features and changes of French insolvency law and show that they contradict the evolution observed at the aggregate level. We then show that existing statistics, which include a regional dimension, allow for a better test of the impact of legal changes. We show that some legal changes had a significant impact, but not all. We also observe that regional variations in bankruptcies are huge and do not correspond to French economic geography, but may rather be understood as a diffusion process from the Paris Court towards the provinces. The major differences among regions also suggest that, even in a civil law country, the letter the law is much less important than local practices.

Keywords: bankruptcy law, failure, law implementation, legal origin, merchant courts, France, 19th century.

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Introduction

The importance of bankruptcy in economic life is well known; nevertheless, little discussion of bankruptcy is to be found in economics textbooks, especially in continental Europe where the tradition of "law and economics" is little developed[1]. Bankruptcies are discussed in the daily economic debate, but more when big firms fail than on a careful analysis of the reasons and consequences of the "common firm" bankruptcy based on well-established statistics. Some proponents of "law and economics" (e.g. La Porta & alii, 1998) recently resuscitated the old lawyers' claim that the impact of bankruptcy law on national economic performance is important, but their argument is mainly based on the comparison of allegedly autonomous legal traditions, with little consideration for actual practices or for legal transformations in the long run. Our position diverges from their: as in the "twentieth century divergence" debate in international relations (James, 2001) or in financial systems (Rajan & Zingales, 2003), we believe that bankruptcy laws in nineteenth century Europe was subject to more change over time than differences among countries (Sgard, 2007), and that gave way to intense debate (as today, see e.g. Pagano, 2001); more importantly, we propose to examine the interaction between law and practice, since we believe that court practices could precede and not always follow legal changes, and that, even in a civil-law country like France, court practice could vary substantially from a direct application of the law.

Existing empirical studies of the history of bankruptcy focus on simple variables in order either to discuss the relationship between the number of bankruptcies and the business cycle or the demography of firms (e.g. Marco, 1989), or to assess the efficiency of the judicial system in terms of cost or length of the bankruptcy procedure (Di Martino, 2005). We

[1] We thank T. Noël, E. Richard and especially E. Serverin, as well as other participants in the project on the history of economic law (FNS, 2003) for their help in our initiation to bankruptcy law. We also thank for their comments participants in session 35 of the International economic history congress (Helsinki, August 2006), in the conference on "Long term perspectives" (Antwerp, October 2006), in the "Unifying the European experience" RTN conference (Barcelona, December 2006), in the conference "not just firms : history, law and economics" (Paris, March 2007) and in the Franco-German workshop on bankruptcy (St Katharinen, July 2007). We finally thank E. Evaux for her help in J.-L Rosenthal for transferring his knowledge for drawing simple maps and his data on partnerships in 1840. We remain responsible for all errors.

consider that most of these studies fault in taking bankruptcy as a situation and not as a decision by economic agents. We believe that an empirical assessment of bankruptcy must start with a model of economic agents' behaviour, which will determine how many debtor-creditors relationships will end-up in court, and how many will be settled outside the court (Claessens & Klapper, 2005). We focus on how debtors and creditors used bankruptcy law in order to find the best solution to their economic problems. Debtors used bankruptcy law in order to minimize their debt level when facing difficulties in servicing it, but they had to convince their creditors and the courts of their good faith, and faced the adverse effects of bankruptcy on their reputation and on the smooth functioning of their business. Creditors used bankruptcy law in order to force their debtors to pay, if they could.

Using that framework, we try to explain the rise in the number of bankruptcies in France in the nineteenth century by the changes bankruptcy law. We use a new database based on the yearly official statistics produced by the judicial system. These statistics provide a number of information on newly opened and recently closed bankruptcy procedures at a national and regional level (and sometimes even at the court level), which allows for an examination not only of changes through time but also of differences across regions, a dimension that happens to be much important for the understanding of bankruptcy in nineteenth century France.

The first part of the paper presents the evolution of French bankruptcy law during the nineteenth century in its historical context. The second part briefly describes the theoretical model we use in order to understand the choices facing debtors and creditors in the face of financial distress. The last part proposes some major stylized facts concerning bankruptcies during that period and tries to understand their relationship with the legal evolution described before.

1. Legal history of bankruptcy

Bankruptcy law occupies around one third of the 1807 Code du Commerce, which defined some of its major characteristics for the entire century. Bankruptcies were under the responsibility of the Commercial courts, which judges were elected among notable commercial merchants in each resort. Appeal was reserved to civil courts, which made Commercial courts a specialized jurisdiction under the responsibility of civil courts. Nevertheless, Commercial courts were quite independent in practice, and commercial law was quite distinct from civil law. Similarly, bankruptcy procedure was separated from the judgment of its possible delinquent or fraudulent origins which were the responsibility of

penal courts under the name of *banqueroute*. Commercial courts were the privilege of merchants (*commerçants*), including every person usually selling goods or services, but excluding farmers, professionals, wage earners and civil servants.

Bankruptcy (*faillite*) was defined as the state of having stopped payments (*cessation de paiements*), but the procedure was started only by a judgment stating that a person or a company (*société*) was in that situation. The procedure could be started either at the initiative of the bankrupt himself (by producing his balance sheet, so the usual name *dépôt de bilan*), by his creditors (*requête*) or by the court itself (*d'office*). The bankrupt was supposed to be jailed, and the judge to name a trustee (*syndic*) responsible for the management of the procedure in the interest of the creditors; this supposed either finding a composition (*concordat*), an agreement with the creditors allowing the perpetuation of the firm (which usually included a reduction and a new schedule for the debts), or organizing the complete liquidation of the debtor's estate (*union*). The procedure started with a verification of the assets and liabilities of the bankrupt firm, which could lead to an immediate stop if assets were insufficient to cover the costs of the procedure itself, in which case the case was settled as *insuffisance d'actif*. The trustee then divided creditors in secured and ordinary ones. The normal situation was to repay first all creditors holding mortgages, other security or special priority, and then grouping the ordinary creditors in a compulsory class (the *masse*) who had to decide on the *concordat* on a majority basis.

Established under an authoritarian government aiming at stabilizing a society much affected by the revolutionary years, and especially at re-establishing traditional authorities and property based wealth at the top of society, the 1807 code was considered as excessively severe and inefficient by many contemporaries and the courts themselves, and has been considered so by the historiography (e.g. Percerou, 1935; Hilaire, 1992; Jobert, 1991; Richard, 2005). It had an excessive recourse to jail, made difficult reaching a *concordat*, and the procedure was excessively slow and costly. It was probably efficient in making bankruptcy a threat to all traders, but not in protecting the interests of the creditors, and even less so in allowing unlucky traders having a fresh start, since, except under a *concordat*, all assets they could accumulate later could always be seized under their bankruptcy case, and they remained marked with the infamous seal of bankruptcy (and deprived of all political and some civil rights) until a very unlikely *réhabilitation* which supposed a complete reimbursement of all debts with interest. Then, debtors facing payment difficulties tried to avoid the courts by settling their case privately with their creditors, something which

frequently led to inequalities among creditors or even fraud[2], sometime also to belated recourses to the courts with chaotic consequences.

These problems, as stated by contemporaries including the novelist Balzac in his famous *César Birotteau* (1838[3]) and many the *Saint-simoniens* (liberal innovators with notable influence in finance and politics) became unacceptable under the more liberal regime after the 1830 revolution. This led to a major change in the law in 1838, which facilitated the conclusion of *concordats* for bankrupts of "good faith" (especially if they had initiated the procedure by producing early their balance sheets) and allowed the courts to decide that even bankrupts under *union* were *excusable* (and regained normal commercial rights – but not all political ones). The procedure was simplified, tax costs were decreased, and the *syndic* was given the right to manage the business of the bankrupt (with his help if necessary) in order to maintain the value of what was being increasingly considered as the creditors' main implicit guarantee.

Further changes led in the same liberal direction. In 1856, the composition by relinquishment of assets (*concordat par abandon d'actifs*) gave the possibility to the bankrupt who benefited it to start a new business without having to fear that his new assets could be seized in order to compensate his creditors. In 1867, the *contrainte par corps*, i.e. the prison for debt was suppressed, as part of a political evolution favouring personal liberties which had also appeared previously in the decrease of the use of jail in bankruptcy procedures[4]. In 1903, the possibility of obtaining a full *réhabilitation* was made easier.

More importantly, following two tentative provisory legislations under the special circumstances of the 1848 Revolution and the Franco-Prussian 1870 war, a special procedure was created called judicial liquidation (*liquidation judiciaire*) in 1889, which allowed the settlement of bankruptcy cases without the still infamous name of *faillite*. That new procedure was supposed to be reserved to bankrupts of good faith which situation was the result of unlucky exogenous circumstances, and who had initiated the procedure. It was then supposed to end-up in a *concordat*, although *union* and *insuffisance d'actifs* were also possible.

In sum, the evolution of bankruptcy law in France followed a liberalizing pattern, like in most other European countries and more or less at the same time (Sgard, 2007). The requirements

[2] Some considered that the nomination of the syndic by the creditors, which was the norm up to 1838, allowed some of them, often with the complicity of the debtor, to appropriate most of the assets (Desurvire, 1992, p. 50s).

[3] The novel was dated from 1838 but it was actually published in December 1837, so clearly before the new law was passed (Sylvos).

[4] According to Guyot & Raffalovitch (1901, p. 135), in some courts, even when the court formally required the bankrupt to be jailed, the sentence was not put into application.

of economic efficiency, especially the need to provide for the maximum repayment to creditors, for the continuity of all existing "good" firms and for the fresh start of unlucky entrepreneurs, became more important than the need to sanction any borrower unable to repay his debts and to exclude him from the community of merchants. Nevertheless, ex-ante incentives to repayment remained high since *concordat* never became a right (so that many bankrupt merchants lost any control over their assets) and *faillite* remained something infamous until today. In all these dimensions, French bankruptcy law accompanied the development of capitalism (Ripert, 2004).

Political economy of bankruptcy legislation

One may interpret the evolution of bankruptcy law and practice as the result of the interaction of economic change and its impact on various social groups and their relative power. Commercial credit was already a very old practice at the start of the nineteenth century, but the industrial revolution required its extension. The extension of markets led to increasingly complex commercial credit networks, covering broader geographic and social spaces. The development of bigger firms producing standardized goods required investment in equipment and in distribution. France was to deal with these needs for credit mostly through commercial credit, that is credit initiated by the industrialists and merchants rather then by banks, even if banks played a role through discounting (Plessis, 2001). This maybe explains why the corporatist-style organization of commercial courts was maintained throughout the nineteenth century (contrary to many other countries) and why bankruptcy could be considered as an instrument for the self-regulation of the commercial society rather than as a purely economic and automatic mechanism (Martin, 1980).

The battle over appropriate bankruptcy law began when capitalists' desire to develop credit conflicted with the reorganization of society under autocratic rules (from Napoleon to the restored Bourbons). Property-owners, who were to dominate the political elite up to 1830 at least, and owned much of the nation's financial assets, didn't favour the emergence of new elites who could use bankruptcy as an instrument for reneging on their debts, and they preached that reputation and experience should be more valued than risk-taking and innovation (the famous "new comers" of Guizot[5]). The special protection of mortgage and secured debt under bankruptcy law was the result of a compromise: property-owners accepted

[5] During the Revolution, the *cahiers de doléances* also contained numerous criticisms of the moral consequences of the King's numerous *arrêts de surséance*, decisions by which he allowed for more liberal procedures in particular bankruptcy cases (Desurvire, 1992, p.44).

that merchants could defect on their debt as long as that debt was due to other merchants, not to them[6]. The organization of commercial court was another one: their independence in normal operations was counterbalanced by the ultimate control of civil-law judges through the appeal courts and the Cassation court, which published and structured the jurisprudence[7]. The power of the civil judges was reinforced by their right to judge a merchant for *banqueroute* (which supposes an offence or a crime) even without the complaint of a creditor, which allowed a more direct intervention in the bankruptcy procedures. But they could not significantly limit the independence and actually the important powers of interpretation of commercial courts, which resulted from the lack of precision of the Code (Dalloz & Vergé, 1877, p. 549 for example).

Merchants and judges in commercial courts defended the need for a bankruptcy system on the basis of the "exogenous" (in today's words) risks of commerce, and the usefulness for the nation of a system forgiving the debt of "unlucky but honest" merchants when sanctioning severely the dishonest ones (see e.g. Guillaumin, 1839, p. 222). A system distributing a debtor's available assets and discharging him from the remaining debts could be accepted on that basis, but only thanks to a permanent ambiguity on the definitions of "luck" and "honesty". For the moral authorities and the property-owners, any unnecessary debt was speculation and then dishonest. For merchants it was the normal way to develop their business. All of them understood that the bankruptcy law would more or less facilitate this behaviour, depending on the balance of power between them. The 1830 Revolution, bringing to the power liberals and especially bankers (two of the regime's prime ministers), was then essential in the passing of the more liberal 1838 bankruptcy law. That law reinforced the power of established merchants (who were to elect commercial judges among themselves) and then the hierarchy within the commercial society, to the detriment of newcomers.

With the economic changes of the middle of the century, the conflict probably changed partly to one opposing big business to smaller entrepreneurs. Under Napoléon III, that conflict developed, mostly between big Parisian business and small provincial firms (Courcelle-Seneuil, 1865). The most important debate was about the liberalization of corporations, which benefited mostly the railways and the financial system, with a wave of new banks and

[6] This led liberal-minded contemporaries to incriminate up to the end of the century property-owners for the number of *insuffisances d'actifs*, which resulted, according to them, from the appropriation of all assets by the owner of the commercial plant (see Guyot & Raffalovitch, p. 144).

[7] The fact that some civil courts could also judge commercially (i.e. following the Code du Commerce) in those places where no commercial court existed also contributed to maintain some implicit right of civil judges on commercial affairs.

financial companies which would end-up only with the 1882 crisis (Thaller, 1903). The 1867 reform suppressing the jail for debt (*contrainte par corps*) which mostly hit small traders (Bayle-Mouillard, 1836, Rossi, 1845-1865), was probably a necessary part of the liberalization of the Second Empire towards its end[8]; but it was probably also a compensation to be given to small businesses for the liberalisation of joint stock firms (in three successive moments: 1856, 1863 and 1867).

The Third Republic, a relatively decentralized regime (thanks to the power given to a Senate dominated by land-owners and deputies defending agricultural interests) brought lawyers back to the power, and decreased the power of the Parisian financial elite[9]. Civil courts tried again to control or even to absorb the commercial courts, or at least to incorporate in commercial courts either the principle of a public accusatory (*ministère public*) defending the public interest irrespective of those of the parties, or professional (i.e. civil law educated) judges[10]. The length of the debate on the 1889 bankruptcy law can only be explained by these conflicts within the judiciary and between the business interests of small and big firms, which relative powers varied heavily among regions.

It must then be clear that the evolution of bankruptcy law cannot be taken as exogenous or as the simple result of a better understanding of the principles of a sound business law. Nevertheless, in this paper, we will mostly test for the impact of the legal evolution on the number of bankruptcies, and, from a principle of parsimony, we will try to analyze it from a unified model focusing on the behaviour of a "merchant" in general.

2. A model of merchant's behaviour under bankruptcy law

Our main theoretical claim here is that bankruptcy is not a clear-cut common knowledge fact, a situation in which a firm is and one that the court can recognize and settle. To enter a bankruptcy procedure is a choice which depends partly from the situation of the firm as known by the actor (debtor or creditor) making the choice, partly from what that actor expects from the decision to enter the procedure, which depends on bankruptcy law and the

[8] Liberals not only quoted Montesquieu on natural civil liberties : they also considered that the *contrainte par corps* was an obstacle to the development of modern, arm-length commercial and credit relationships, which should not depend on the personal fortune of the debtor but on his business talents and projects.

[9] Maybe also the powers of property-owners: a 1872 law for the first time restricted the guarantees of the owner of a merchant's commerce. And the important evolution which made bonds become a substantial part of the debt of many firms in the late nineteenth century was not favourable to property-owners who wanted to diversify in financial assets, since bonds were considered as commercial debts in bankruptcies (for example, interests stopped accruing, see e.g. Guyot & Raffalovitch, 1901, p. 138).

[10] The first suggestion dates back at least to Mirosmenil in the late XVIIIth century.

behaviours all other actors concerned. This "realist" epistemological choice leads to emphasize the strategic and the information dimensions in the bankruptcy process, as well as the characteristics of the legal system and the economic environment[11].

We will simplify the model by supposing that the choice to enter a bankruptcy procedure is either made by the debtor or the creditor, letting aside those cases when the courts take the initiative (less than 10% of all cases during our period[12]). One can consider the start of a legal case as the default situation since both sides must agree on a private settlement (and actually all creditors, as we saw) when a single side can impose the legal procedure.

The choice for a debtor facing a liquidity shortage was between filing for bankruptcy and asking his creditors for a private settlement. We suppose that the private settlement was superior for him in terms of reputation (nobody knew of it except the creditors) and in terms of transaction costs; it also did not bring the risk of the death and liquidation of the firm if no concordat could be obtained. Nevertheless, if there was a conflict among the firm's partners (*associés*) because of asymmetric information among them, it was less likely that a private settlement would be accepted by all of them. It was also probably inferior in terms of the debt reduction that could be obtained at least inasmuch as it maintained the information asymmetry between the debtor and the creditors[13]. The main difficulty was to obtain the agreement of all creditors, since no single debt could be reduced without the agreement of the creditor concerned (who could always sue for bankruptcy).

The choice for the creditor was not entirely symmetric. He also preferred the survival of the firm, but only if the actualized value of the flow of payments it would make was likely to be superior to the present value of its parts. Both a private settlement and a concordat would allow for a survival. The differences between them were the procedure cost and the agency costs. The procedure cost made probably the creditor prefer a private settlement; the agency cost with the debtor made the creditor prefer the bankruptcy procedure, which would provide him with information on the actual situation of the debtor allowing him to adjust the debt reduction to the exact need of the debtor. Furthermore, a legal procedure protected the

[11] The realistic approach differs profoundly from the idealistic approach of finance theory which leads to such optimal systems such as those proposed for example by Aghion & alii, (1992) or Hart & alii, (1997), which suppose that the value of the firm is independent from who controls it, when in the period under study almost all firms were entirely dependent from their owner-manager, and, correspondingly, the bankruptcy procedure did not provide any instrument allowing for the transfer of control of an existing firm.

[12] This hypothesis should be discussed in further research, since judges had a good deal of freedom in declaring a firm bankrupt when creditors filed for bankruptcy, a moment where the influence of the position of the would-be bankrupt in the commercial society could exert itself (Martin, 1980).

[13] We suppose that this information asymmetry would never be suppressed under private agreements given the lack of reliable common-knowledge accounting systems during that period, and the cost of transferring the adequate information in the case of small businesses.

creditor against differences in information among creditors and the risk that some creditors may obtain privileged access to the firm's funds, since equality among non legally-secured creditors was a basic principle of bankruptcy law. In sum, the legal procedure can be seen for the creditor as an option allowing him to ask for the liquidation of the assets in the case an agreement cannot be reached with the debtor and the other creditors. The value of such an option increases with the probability of such a liquidation, with the uncertainty of the debtor toward the actual situation of the firm and with the risk of a conflict with other creditors; its price is the cost of the bankruptcy procedure.

As a conclusion, we can consider that the choice between private settlement and legal procedure resulted mostly from:

- The actual situation of the firm (the probability of a legal procedure increasing when the situation of the firm worsens);
- the information asymmetry among the firm's partners, between debtor and creditor or among creditors (the probability of a legal procedure increasing with these asymmetries);
- the relative costs of the two procedures (the probability of a legal procedure decreasing with its cost);
- the cost for the debtor of the start of a legal procedure: reputation cost in particular (the probability of a legal procedure decreasing with that cost);
- the difference between the value of the firm as a going concern and the value of its assets (the probability of a legal procedure decreasing with that difference);
- the risk of not agreeing on a *concordat* for a given situation in the case a legal procedure was chosen (the probability of a legal procedure decreasing with that risk).

Furthermore, it is likely that the choice of a legal procedure would be made by the debtor the more frequently the less dangerous it was for him in terms of reputation and risk of future liquidation, when the firm's situation was relatively good and the asymmetry in information with the creditors and among creditors were low as well (so the risk not to obtain a *concordat* was low). The creditors' initiative of a bankruptcy procedure would appear when the option value would be high enough. Both would be incited to go to the court by a reduction in the procedure cost.

Once a bankruptcy procedure started, creditors and debtors could again choose between a *concordat* and a *union*, but they had to agree on a *concordat* for it to be accepted when each of them could impose a *union* (with the proviso that the creditors' decision was based on

majority, not unanimity). The advantages of the *concordat* are obvious, since it allowed the debtor to keep control and escape the most infamous aspects of the *faillite*. But the *union* could free the debtor from all its debts (although it was not legally the case), and provided the creditors with low but immediate and risk-free dividends. Again, transaction costs and information asymmetries would intervene in the choice. So among bankruptcies, the probability of a *concordat* being chosen was:

- increasing with the actual situation of the firm;
- increasing with the difference between the value of the firm as a going concern and the value of its assets;
- decreasing with information asymmetries between debtor and creditors;
- increasing with the cost in reputation of the *union* vs the *concordat*;
- increasing with the relative procedural cost of the *union* vs the *concordat*.

Below, we use that simple model to understand better bankruptcy data.

3. The number of bankruptcies: can the law explain it all?

When willing to measure the impact of bankruptcy law not only from a theoretical point of view but with empirical data, a major difficulty is the absence of data on those private settlements that we considered as a major alternative to a bankruptcy procedures in the previous section (information on these settlements was actually better in the eighteenth century, see Deshusses, 2008). We will handle this by wondering whether the main changes in the bankruptcy data can be explained within the framework we presented. Next, the main question will be how to distinguish the effects of the law from those of other variables affecting bankruptcies. The question is the more difficult since changes in the law were frequently anticipated by court decisions (sometimes for a long time), but could also be delayed by reluctant courts, something that will make econometric estimates on yearly data little satisfactory. In this paper, we will concentrate on long run changes from 1820 (or at least 1840) to 1913 and on the broad changes in the law that we presented before.

A last question which is clearly important for a long run analysis like this one is the endogeneity of bankruptcy law. Both political economy theory and archival records suggest that all participants in the bankruptcy procedures (mostly merchant communities as organized in chambers of commerce or more specific lobbies, and the legal professions) tried to modify the law in their favour. And the law was actually modified, as we discussed in part 1. But we will discuss this in another paper.

Here we will start from the main changes in the law and from the model of debtor and creditor choices sketched above in order to understand the main stylized facts of bankruptcies. Before that, we describe briefly our sources.

Sources

One advantage of the Napoleonic centralization and homogenization of the judiciary system is that all bankruptcies have been treated within a common framework (contrasting with the eighteenth century practice, see Hirsch, 1992; Deshusses, 2008; Piant, 2008). Thanks to this, the sources on bankruptcies are abundant, actually too abundant since the files of thousands of bankruptcy cases have been conserved in the courts' archives (kept in the *Archives départementales*). Another innovation of the nineteenth century is the development of statistics: in the case of bankruptcies, a statistical summary of the courts' activity was published from 1830 (yearly from 1840) by the Ministry of Justice under the title *Compte général de l'administration de la justice civile et commerciale* (from now on *Compte general*). It provided for every court the number of cases opened and closed in the year, the number of cases pending at the start and the end of the year. It also gave either at the court level, at the judiciary resort level or at the national level (depending on the year) the number of cases by origin (who initiated the procedure), by end (*concordat*, *union*, etc.), by age (since how long are opened the cases not yet closed at date t), by size class of liabilities and assets, by composition of assets and liabilities (secured vs ordinary debts, property vs other assets), and the importance of dividends obtained by creditors in the case of *concordat* or *union*.

This very rich source provides both variations among time and, to some extent, among courts or regions, allowing a detailed exam of the variables included. Nevertheless, except in some rare cases, it does not include data allowing linking the characteristic of failed firms with the result of the procedure concerning them. This is where individual cases can help, and where the archival records are useful, since they allow precisely to establish whether (for example) bankruptcy cases initiated by the debtor (or debtors with particular characteristics) ended up more frequently in *concordat* (and, in this case, with a higher dividend), or in the case of *union*, with a higher proportion of *excusabilité* or a higher dividend. Furthermore, the individual archives allow us to observe better discrepancies between the law and the practice of the courts, and to understand how the statistics were constructed and then their limitations. We proceed to the study of a sample of these individual files in a companion paper (Hautcoeur & Levratto, 2008). In this paper, we concentrate on the use of both the regional and temporal variations in the official statistics.

Legal and judiciary explanations of the rise in bankruptcies

The number of new bankruptcy procedures opened within the year increased sharply in France during the nineteenth century (graph 1). That increase was more important than those of both GDP[14] (2.4% vs 1.6% yearly increase from 1820 to 1913) and the number of firms (0.8% from 1827 to 1913, see Jobert, 2001, p. 35). The proportion of existing firms that went bankrupt in the course of a year rose from 1 to 4 per thousand from the 1820s to the 1880s, and stabilized (even slightly decreased) afterwards. In more detail, one must remark that, once the new bankruptcy law of 1838 was established, and except for the special legislations that affect the 1848-53 and the 1870-71 periods (the special procedures of these periods did not enter the statistics), the increase in the number of bankruptcies was relatively stable from the 1840s to the 1880s. Later on, the number of bankruptcies stabilized even when the new *liquidations judiciaires* are included in the statistics (as they are in the upper line in the graph); the absolute maximum for the total was reached in 1898 with almost 10,000 new procedures.

Why did the number of bankruptcies rise so rapidly during the century? Why did it stagnate from the 1890s on? The liberal evolution of bankruptcy law has been heralded (Percerou, 1935; Hilaire, 1992; Marco, 1989) as the reason for the increase, and we will here discuss in detail that hypothesis. Let's just start with two remarks:

- The legal explanation looks in contradiction with the stagnation of the last part of the period: the creation of the *liquidation judiciaire* in 1889 is usually heralded as the most important step in the liberalization of bankruptcy law, and as such should have prompted an important wave of new bankruptcies. Instead, we observe a sharp decline in the rate of growth of the number of bankruptcies after 1889 (from 3.7% a year in from the 1870s to the 1880s to 1.7% a year from the 1880s to the 1890s and zero thereafter) (3.25%, 0.7% and -1% respectively for the ratio of bankrupcies to firms).
- If the rise of the number of bankruptcies reflects only the evolution of the bankruptcy law, that is if the proportion of firms suffering liquidity shortage is stable during the period, then the 9 fold increase in the number of bankruptcies compared to the 2 fold increase in the number of firms (supposing this number is independent from bankruptcy law) implies that the proportion of firms suffering liquidity shortage that made private settlements was very high

[14] The number of bankruptcies should increase with GDP if the size of firms was fixed.

(above 80%) early in the period. Otherwise the number of bankruptcies would exceed the number of firms suffering liquidity shortage at the end of the period[15].

Nevertheless, it is worth examining whether the legal explanation is consistent with the other stylized facts we have about bankruptcies.

Legal changes and the composition of bankruptcies

The composition of bankruptcy procedures helps testing whether the legal evolution played a major role in the long run evolution of bankruptcies or not. The major legal changes of 1838 and 1889 were intended to incite debtors to go to courts instead of waiting for an amelioration of their situation or looking for private settlements. In fact, as we observed in section 1 and 2, the evolution of the bankruptcy procedure decreased the sanctions toward the debtor and favoured his attempts at restarting business after a failure, inciting him to go to the court. For sure, it also incited creditors to sue more rapidly because it decreased their bargaining power towards debtors in private settlements, but this impact was likely to be of second order in comparison with the impact on debtors.

What do the data tell us ? Unfortunately, the statistics did not give the origin (*dépôt de bilan* vs *requête des créanciers*) of the bankruptcy for the years before 1840, and were not published between 1870 and 1885 (see graph 2). Nevertheless, they show three things:

- The rapid increase of the number of bankruptcies in the 1840s to early 1860s resulted mostly from the choices of debtors, since they constantly started 60% of the total number of new bankruptcy cases. This probably results from the 1838 law, which specific purpose was to attract debtors to prefer judicial to private settlements.
- In the late 1860s, a dramatic change took place within a few years between 1865 and 1869: the proportion of bankruptcies started by the debtor decreases from 57% (1865-66) to 45% (1868-69). Following many contemporaries, we suggest it resulted from the abolishment of prison for debt, which suppressed the incentive for debtors to file for bankruptcy (*dépôt de bilan*), since they frequently did it earlier mainly because it allowed them to escape the *contrainte.* The fact that the number of *dépôts de bilans* dropped all over France at the same time (something that the details by court confirms, see below map 1) makes that interpretation the more convincing.

[15] To understand this, suppose that 50% of firms with liquidity problems are subject to bankruptcy procedures in the 1820s. Then, when the total number of firms doubles, the number of firms subject to bankruptcy can only increase 4 fold, even if it reaches 100% of the total number of firms. This suggests that for the number of bankruptcies to increase 9 fold, it cannot exceed 20% (precisely 100% / (9/2) = 22.2%) of all firms with liquidity problems at the start of the period. Actually, since it is unlikely that all private settlements disappeared, the proportion must have been even smaller.

- The 1889 law distinguished between *liquidations judiciaires*, which could only be started at the initiative of the debtor, and *faillites*. It was followed by a drop in the proportion of *faillites* started by the debtor (from 40% in 1888 to 28% in 1890). But at the global level, the proportion of bankruptcies (*faillites + liquidations judiciaries*) started by the debtor increased from 40 to 50%. The creation of the *liquidation judiciaire* was then successful in bringing some more debtors to file for bankruptcy before their creditors sued them, but it did not increase the global number of bankruptcies. Maybe the number of private settlements was already negligible at that time, something which would suggest a quite efficient judiciary organization of bankruptcy, contrary to those interpretations which argue for a belated French bankruptcy law (Sgard, 2007). We will test that hypothesis further below.

Court practice and heterogeneity among French regions

The evolution of the proportion of bankruptcies initiated by the debtors suggests that incentives brought by legislative change played a role, but only up to a limit. Studying the regional variations of the bankruptcy data shows that legal practice was much more heterogeneous than usually considered, and must be integrated in the history of bankruptcy. Let us consider the two legal changes of 1838 and 1889.

In the years following the 1838 law, a look at the regional pattern of proportion of bankruptcies initiated by the debtors suggests that the law was important, but also that the law itself only followed a leading practice, that of Paris (map 1).

Paris, which appeal court ruled in last resort on an impressive proportion (around a third) of French bankruptcies during the entire century was a first mover in having a high proportion of bankruptcies initiated by the debtor. Actually, during the early 1840s, Paris was almost the only place (with, to a less extent, Bordeaux and Colmar, two active trading centres) where such bankruptcies dominated, and they dominated heavily (77% of new bankruptcies in 1840). This Parisian specific pattern may result from the specifics of the regional economy (something we will look at below), but it may also result from the particulars of the Parisian Tribunal de commerce, which was considered as a pioneer by several contemporaries. Among these particulars, we must emphasize here a very low

proportion of cases where bankrupts were jailed[16] (map 2) and, by contrast, a relatively severe use of the *contrainte par corps*[17] (map 3).

Actually, some consider that the 1838 law was probably passed in order to "legalize" and extend the Parisian model (more bankruptcies, and a higher proportion of them initiated by the debtor and conducing to satisfying public settlements through *concordats* instead of private settlements). In the following decades, the model was followed in most of France, which converged and lost some of its heterogeneity thanks to the extension of the "good practices" to the entire territory under the rule of the Justice Ministry. Even the change brought by the 1867 law did not substantially alter that increase in homogeneity (table 1): it provoked a decrease in *dépôts de bilan* everywhere, and especially in Paris (where their share dropped from 63 to 46% in just four years).

Table 1: proportion of *dépôts de bilan* in bankruptcies

(27 judiciary ressorts)

	1840	1857	1865	1869
France	0,47	0,57	0,57	0,44
Average of regions	0,30	0,51	0,51	0,44
Stdd deviation/average	0,47	0,24	0,18	0,17
correlation with previous year		0,50	0,73	0,46
Minimum	0,08	0,30	0,38	0,28
Maximum	0,77	0,76	0,68	0,56

The creation of *liquidation judiciaire* in 1889 apparently brought some trouble again. The law was widely discussed from the early 1880s, and when it was passed, it was widely used in some regions and very little in others, to the great surprise of contemporaries. For example, the proportion of *liquidations* in total bankruptcies varied from around 15% in Paris (and 20% in Lyon or Aix) to around 50% in Rennes, Nancy, Douai, Chambéry or Bourges. This may result from the differences in the interpretation of the law from one court to the other[18]. Our interpretation is the following: if the 1889 law did little to incite debtors to go bankrupt in the main commercial centres, it helped the more peripheral regions to catch up. Map 4 shows that the number of bankruptcies as a proportion of the

[16] This could result partly from the fact that most bankruptcies were started by the debtors, which created a favourable presumption (Code de commerce, art. 586; Rivière, 1853, ch.1).

[17] Map 3 compares the number of people jailed through *contrainte par corps* for commercial debts to the number of bankruptcies. If, as was suggested above, people filed for bankruptcy in order to avoid the *contrainte par corps*, this indicator should minimize the differences between Paris and other regions that we emphasize here.

[18] For example, Guyot & Raffalovitch, p. 127, suggest that some courts don't respect the timing constraint which was supposed to limit the access to the procedure.

stock of firms widely varied as late as 1888 among regions, being much more important in the main commercial places like Paris, Lyon, Marseille, Bordeaux (with the exception of the North). In the following decade (1888-1900), the number of bankruptcies increased significantly more in those regions that were behind in 1888, and this was thanks to the *liquidation judiciaire* (the proportion of *liquidations* among the bankruptcies was substantially higher in these regions). This helps to understand why the 1889 law was debated so long: in some regions its impact would be to incite debtors to go bankrupt, when in the most important centres it would mostly simplify the procedure without modifying the attractiveness of bankruptcy in general.

This suggests that if the law had probably some important impact on the number of bankruptcies, we cannot neglect to take into account the heterogeneity among regions in debtors and creditors behaviours, probably in reaction to different court practices which, even in a centralized and civil law country like France, appear to be an important driver of both the global evolution of bankruptcies and some of its discontinuities.

More efficient procedures

Another potential explanation for the rise of bankruptcies is a decrease in procedural costs. These costs were presented during all the century as the most important obstacle toward the recourse to the courts by debtors and creditors alike. They were mostly (if not entirely) independent from the legal evolution itself. For many creditors, the most important of these costs was actually not a financial cost, but the delay between the start of the procedure and the end, since it entailed uncertainty and loss of time. We can calculate various measures of the evolution of that delay. The number of the cases judged within a given year as a proportion of those existing at the start of the year plus those started during the year is the first one. Such an indicator can be biased in the short run by a drop or a sudden rise in the number of new cases, but it is a good long term measure. Except from a decrease in the 1840s (maybe the result of the difficulty the courts suffered when facing a rapid increase in the number of new cases), that indicator rose from around 35% during the 1840s to 55% after 1900 (a proportion similar for *faillites* and *liquidations judiciaires* during that last period). On the long run, that increase could be partly responsible for the preference given by both debtors and creditors to judiciary rather than private settlement.

Another indicator of court efficiency, one measured for that purpose during part of the period we consider, is the age structure of all the files not yet closed at a given date. As shown in

graph 2, the proportion of the cases existing at the end of a year which had been opened for less than 6 months was fairly stable from the late 1870s to 1913 (actually it decreased something in the 1880s and increased thereafter). Again, the creation of the *liquidation judiciaire* helped, since that procedure was something more rapid (actually, it was one of the main reasons for creating it).

However, this aggregated view could be misleading: given the rise throughout the period of rapid judgments recognizing insufficient assets (*insuffisance d'actif*), one may fear that the decent aggregate performance of the courts reflect mostly that rise, and that the duration of the two "normal" procedures, *concordats* and *unions*, actually increased, discouraging firms from going to court. Data from our archival sample give a somewhat more optimistic view than these global statistics: for the firms included, the median procedure duration decreased by almost half (from 7 to 4 months) from 1850 to 1899. Furthermore, if the duration for reaching *concordats* did not decrease (it actually increased slightly), that for settling entire liquidations (*unions*) decreased sharply (from 16 to 7 months), which suggests the reduction in duration was not only the result of the rise in the number of *insuffisances d'actifs*. Taken together, these indications suggest that the decrease in the duration of the procedure may have attracted some debtors or creditors from private to public, judicial settlements, especially before the late 1880s. It may have contributed to the rise in bankruptcies in that period. This should be tested by comparing the relative efficiency of different regions at some date with the relative increase of the number of bankruptcies in the following period.

As concerns financial costs, most of them were related with the taxation of the official documents required at the various stages of the procedure, and with the payment of the *syndic*. In response to a constant demand from economists, from the Chambers of commerce and other business lobbies, the level of the taxes was decreased several times in the early 1830s and during the second half of the century. In the opposite direction, some contemporaries complain about the increasing court's expenses (Tessier du Cros, 1906). If no aggregate statistic is available on that subject, our sample confirms that on average the expenses of the *syndics* (including their own wage) decreased as a percentage of the income they were able to bring in the bankruptcy purse. In sum, all procedural costs decreased throughout the century, which can help explaining the surge in bankruptcy cases[19].

[19] A last and important procedural cost should be measured: the impact of the procedure itself on the amount obtained by the creditors. At this moment, we are unable to measure it. At the aggregate level, the average dividend paid by all bankruptcy procedures closed in a given year decreased among time. Nevertheless, this cannot be considered as suggesting an increase in the procedural cost since the procedures involved were so different and their proportions changed so much. First, the dividend corresponding to a concordat is only the

Then our model suggests that the legal evolution plays a role, but also that it can explain only a part of the story: it has to be coupled at least with the convergence of courts' practices, and maybe with a reduction of procedural costs in order to explain both an increase in the number of *dépôts de bilan* (as expected by the legislator) and a rise in the number of bankruptcies started at the creditors' initiative. We also suggest that the various needs of different regions or types of firms require a more diversified set of legal rules. This would explain why, although in the most important economic regions the 1838 had allowed to reach a satisfying result, a new law in 1889 was considered as useful, and was maybe necessary in some places.

The composition of bankruptcy outcomes

If the legal change and the reduction of procedural costs were to be the only explanation of the rise in the number of bankruptcies, and if, equivalently, the proportion of firms suffering liquidity shortage (and their distribution among degrees of difficulty) were stable over time, one would expect the outcomes of bankruptcy procedures to reflect only the increasing recourse to the courts. Can this be confirmed?

The statistics on bankruptcy outcomes give a fairly pessimistic view of the evolution of bankruptcies. *Concordats* decreased sharply as a proportion of total bankruptcies (graph 3). Paradoxically, at the end of the period they were not even the most common outcome for *liquidations judiciaires*. From above 50% of all bankruptcies in the 1840s, the proportion of *concordats* decreased to below 20% in the 1870s and 1880s. Thanks to the *liquidation judiciaire*, it increased to around 20% in the 1900s (around 10% for *faillites* and 30% for *liquidations judiciaires*). At the same time, bankruptcies closed because of *insuffisance d'actifs*, which represented 20% of all bankruptcies in the 1850s, rose to almost 50% as soon as the 1880s, their rise being again interrupted only by the *liquidation judiciaire*; on average, they represented still 50% of all bankruptcies in the 1900s (60% for *faillites* only). The rest of the procedures ended up either with the *abandon d'actifs* procedure or with the liquidation of all assets (*unions*), producing usually quite small dividends to the creditors.

Is this sharp deterioration of the bankruptcies' outcomes consistent with the facts we observed earlier and with the legal theory of the evolution of bankruptcies? Our model actually

promise of future payments when the dividend after an assets' liquidation is an immediate and certain payment. Second, the changes in the proportion of the different outcomes makes an average dividend little significant of any procedural cost (see next section). What should be measured is the average dividend for bankruptcies sharing similar characteristics (size, procedure, outcome, etc.). For example, dividends for *concordats* alone increased slightly along the century if we follow the aggregate statistics; but this should be confirmed using our sample which will allow linking various characteristics of a bankruptcy.

suggests that the liberalization of bankruptcy law, especially when reinforced by a decrease in procedural costs, should lead to the choice of a legal settlement by firms in a **better** – not a worse – shape, other things being equal.

One may wonder whether this could result from a composition effect: the rise of the proportion of bankruptcies initiated by the creditors, usually concerning firms in worse shape, could explain the global rise of *unions* and *insuffisance d'actifs*. But this question is not theoretically sound, since the origin of the bankruptcy is itself determined by the same variables that influence their outcome. Even if it were legitimate, the explanation would not be sufficient. First, the rise in creditors' *requêtes* is small compared to that of *union* and *insuffisances d'actifs*. Second, the decrease of *concordats* and the rise of *unions* and *insuffisances d'actifs* appeared even among those bankruptcies initiated by the debtors. This results mechanically from the fact that *dépôts de bilan* still represented 45% of total bankruptcies in the 1900s when *concordats* were below 20%.

It is confirmed by our archival sample, which shows that when in 1850 almost all *dépôts de bilan* ended up in *concordat*, this was only the case for a third of them in 1899, when the proportion of *concordats* among the cases initiated by the creditors or the courts decreased to almost zero.

Except if the severity of the courts increased – which would contradict the liberalization of the law – it is then difficult to conciliate this deterioration of the outcomes of the procedures (whatever their origin) with anything else than either a rise in the number of firms suffering liquidity shortage or a worsening of the problems these firms suffered.

We must conclude that

- The evolution of bankruptcy law can explain the rise in bankruptcies (but not their stabilization following 1889): the 1838 law had an important impact; the 1867 law on *contrainte par corps* was also influential, even if against the wishes of its promoters and maybe only in the short run; contrary to the conventional wisdom among legal scholars, the 1889 law appears as having a mostly regional impact on bankruptcy practice.
- Court practice varied heavily among regions (and maybe among courts at a local level), and the variation in court efficiency and practice are a necessary complement in order to understand the variations in the number of bankruptcies.
- Major changes in the composition of bankruptcies, particularly the decrease in the proportion of concordats and the increase in the number of *insuffisances d'actifs*, cannot be explained by the evolution of the law. Then, the change in the law cannot be separated from a

change in the global behaviour of firms, that is, not only their choices when suffering liquidity shortage other things being equal, but a change in their economic behaviour, notably their credit behaviour. We must then look for these economic changes.

A chronology

Summarizing what we observed up to now, we can present the following chronology:

- from 1838 to1867, the increase in bankruptcy cases may result in a large part from a decrease in private settlements. This was the consequence of the 1838 bankruptcy reform and of the 1856 law on *abandons d'actifs*, two liberal reforms that reduced the fear of bankruptcy and induced debtors to file for bankruptcy It also resulted from the diffusion all over the country of the Parisian model of treating liberally the bankrupts, especially those who had initiated the procedure through the *dépôt de bilan*.
- The 1867 abolition of the *contrainte par corps* 1867-89 decreased sharply the incentive to go bankrupt for the debtors. The number of bankruptcies rose more slowly (0.9% per year from 1867 to 1889 compared to 2.8% from 1840 to 1867), the proportion of *dépôts de bilan* dropped initially (and probably did not rise later). The creditors now initiated most bankruptcies. Beside this change, and contrary to the predictions of the incentive-based model of bankruptcy, the proportion of concordats decreased dramatically, suggesting firms took advantage of a more liberal law in order to adopt riskier strategies.
- The 1889 law creating the *liquidation judiciaire* succeeded in simplifying and shortening bankruptcy procedures for one third of them. It led to a significant increase in *concordats* and *abandons d'actif*, so allowing a fresh start to a number of entrepreneurs. It also stimulated a rise in bankruptcies in those regions that had been left behind and had not converged towards the general behaviour following the 1838 law.

Suggestions for a real explanation of the increase in bankruptcies

An alternative explanation would be the following: the increase in bankruptcies was not the result of legal or institutional change in the bankruptcy law and courts. It merely reflected the increase in the number of firms suffering liquidity shortage. Since, as we already mentioned, the number of firms did not increase much, this increase must have resulted from a rise in the proportion of firms suffering liquidity shortage (which may reflect, as suggested by Marco, 1989, a change in the demography of firms, with higher yearly numbers of both "births" and "deaths"). One solution would be a change in the size composition of firms, since small firms are well known for their higher bankruptcy risk.

The bankruptcy statistics apparently suggest the opposite, since it shows that the distribution of bankrupt firms by size remained quite stable in the long run (around 20% of bankrupt firms had assets above 50,000 francs during all the century) (graph 5). But as we have seen, the proportion of bankruptcies closed for *insuffisances d'actifs*, which are not included in the graph, increased rapidly. Since this procedure was employed when the assets could not pay for the mostly fixed procedural costs, we can consider that these firms were mostly small ones. This is confirmed by our archival sample, which shows that the average size of bankruptcies closed for *insuffisances d'actifs* was half the average of the all sample. We can then conclude that the size of bankrupt firms did decrease or, more precisely, that the number of small firms going bankrupt increased sharply. This is reinforced if we compare the size of the firms to the average income, which, although slowly, did increase during all the period, making the small firms appear even smaller.

One may wonder whether this increase in the number of small firms going bankrupt results mostly from the increase in their number or from an increase in competition from bigger firms. The increase in the number of much bigger firms with the liberalization of the corporation (*société anonyme*) in several steps from 1856 to 1867 may play a role. We will discuss this question in later work.

Last, but not least, the increase in the proportion of firms suffering liquidity shortage may have resulted from the increase in risk, leading to more frequent failures. Increased risk could take (in our view) four different forms:

- A macroeconomic one, firms suffering business cycles of increasing volatility without any choice on their part. Some research on business cycles incorporated bankruptcies as an indicator, although it has been very much criticized. It actually never discussed the long term rise in bankruptcies, which is clearly independent. In the medium run, the relative decline in bankruptcies after 1890 and mostly from 1900 on could correspond to the better economic situation after the big depression of the 1870s and 1880s. But this does not explain why the growth rate of bankruptcies actually declined during those last decades compared to the more prosperous 2nd Empire years. Without more precise patterns for the depression or the recovery (for example by region), it is difficult to test that hypothesis. One evaluation of regional firms' health can be constructed through the *patentes* payments. We will try in later work to relate it to bankruptcies in a panel data analysis.

- Second, firms may have invested in more risky projects. But there is no clear reason or indication of such behaviour. It is even difficult to imagine how to measure it.
- Third, firms' structures may have gone more complex, providing for more risks of conflicts among partners, which, as we mentioned above, would create further reasons for debtors to initiate a procedure instead of looking for a private settlement. It is clear that the proportion of firms with complex structures increased along the century. If the number of corporations was small (free incorporation was available from 1867 but the number of new corporations never rose above 1000 in a year before 1899), other structures existed (*sociétés en commandite* and *sociétés en nom collectif*), and even very small firms with only two partners could lead to conflicts (Lamoreaux & Rosenthal, 2005). Partnerships, which could be created very easily (no minimum capital requirement for example), were actually quite concentrated geographically until the 1860s, and their distribution is quite similar to that of the early bankruptcies (map 5). Nevertheless, that distribution changes too little through time for the spread of partnerships to play a significant role in that of bankruptcies (even if a more detailed analysis will be necessary).
- Fourth, firms may have taken on more financial risk, i.e. more debt compared to their equity. This would correspond to an increase in credit and a decrease in credit rationing which are certainly long term features of the century. Let's discuss this hypothesis in some more detail.

Can available data confirm that bankrupt firms were increasingly leveraged as time passed? Actually, the ratio of assets to liabilities for all bankrupt firms decreased from the 1840s to the late 1880s, going from around one third to one fourth, before increasing a little (with increased volatility) in the last decades before World War One. The problem with that indicator is its very aggregate level. Given the very concentrated distribution of bankruptcy assets and liabilities, it may result mostly from the changes in the top 1% of bankruptcies without any change in the behaviour of the remaining 99%. The statistics don't allow us to go in more detail except, for a few years, showing that the assets/liabilities ratio was very different among regions[20]. Our sample helps us a little. It suggests that bankrupt firms were increasingly leveraged, and that there was a relationship between leverage and the outcome of

[20] In 1850, for example, its average value was 0.35, with a standard deviation of 0.17, a maximum value of 0.19 in Paris and a maximum of 1 in Bourges.

the bankruptcy (less *concordats* for highly-leveraged firms). Furthermore, bringing again the previous argument, *sociétés* were increasingly more leveraged than single-owner firms.

An important change in the structure of debt went in a direction opposite to the role of increased leverage: secured debts, especially mortgages, decreased from around 20% of all debts in the bankruptcies of the 1840s to around 10% of those in the 1900s. This should have led to fewer conflicts among creditors and then, as we discussed in section 2, to **less** bankruptcies, not more. Nevertheless, this change may have been compensated by another structural change which was not mentioned in the statistics but resulted logically from the changes in the financial system during our period, and appears in our sample: the rise in the place of banks among the creditors. As creditors specialized in providing credit, banks were in a situation quite different from other commercial creditors, who had no expertise in the bankruptcy procedures. They could organize special departments which could sue debtors in a much more systematic manner when they could not obtain payment through other means. They did not suffer bad reputation for having sued their clients. They also had maybe provided larger amounts of credits than single trade partners of the debtor, so that it was worth entailing the fixed costs of a bankruptcy procedure even for relatively small percentage dividends.

Conclusion

We showed in this paper that one cannot explain the rapid rise in bankruptcies in France during the nineteenth century only through the liberalization of bankruptcy law, even complemented by the reduction in the procedure's costs. Using both a microeconomic model of the choice between private settlement and legal procedure, and the database we are building on bankruptcies from 1820 to 1913, we showed that the number of bankruptcy cases probably reflected, to a degree that remains difficult to measure, the rise in real reasons for bankruptcies, among them most likely an increase in the number of small firms and in their debt leverage. Nevertheless, the data also strongly suggests that the changes in bankruptcy law and in courts' practices played a substantial role, most clearly observed in the 1838 and 1867 reforms. Further work should allow to precise the respective roles of legal evolution and real economic changes, as well as to understand better the reverse causality going from economic and judicial changes toward legal evolution.

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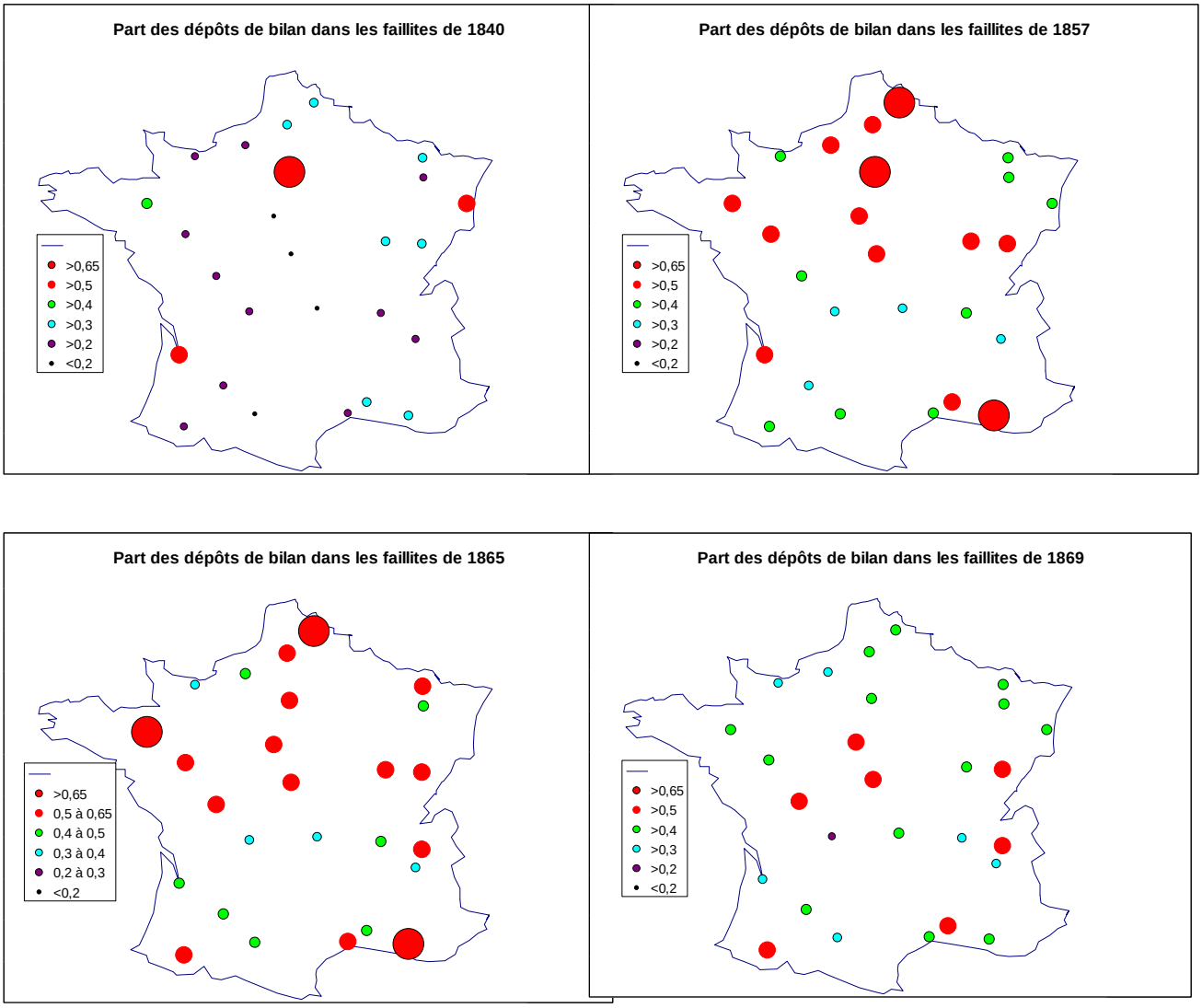
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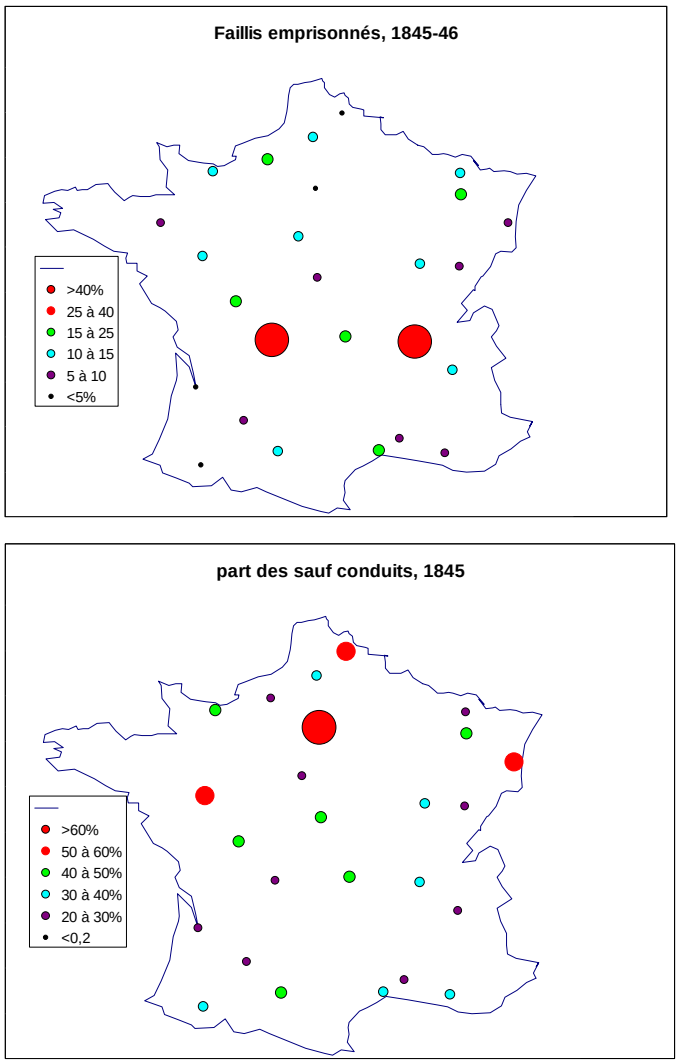
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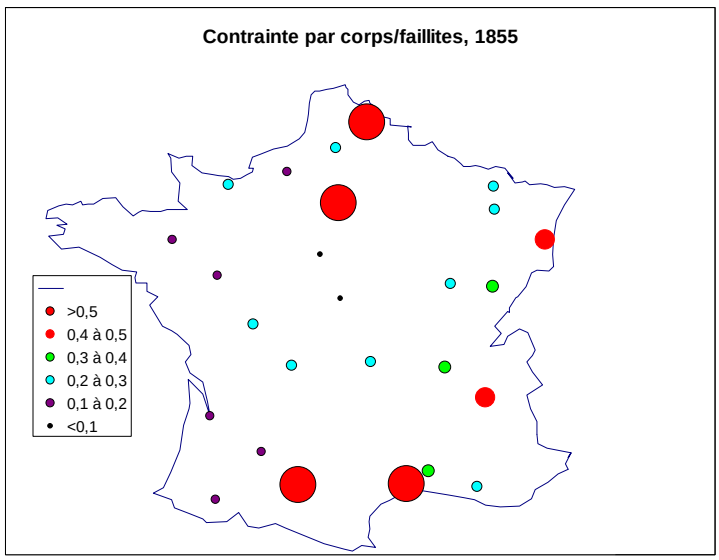
Map 1 : Proportion of *dépôts de bilan* (bankruptcies initiated by the debtors) in total bankruptcies in 1840, 1857, 1865, 1869.



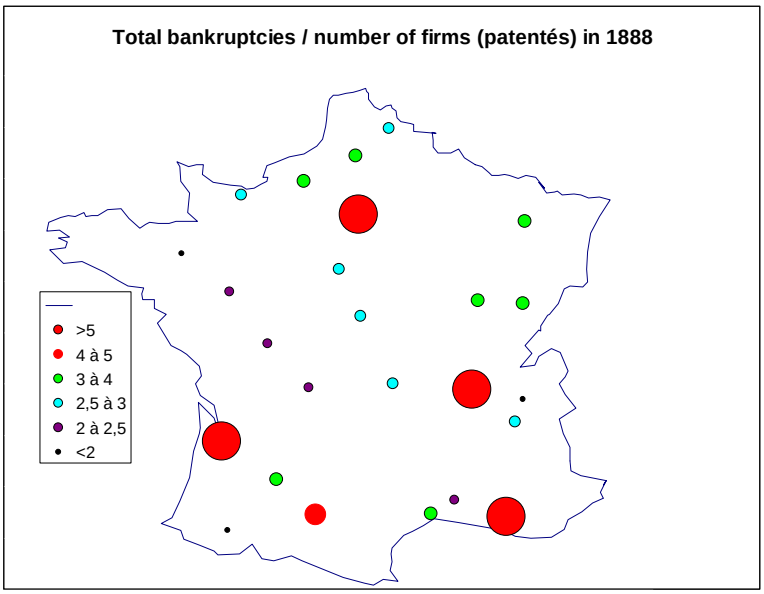
Map 2 : Proportions of bankrupts jailed (1) or without control (*sauf conduit*) in 1845-46



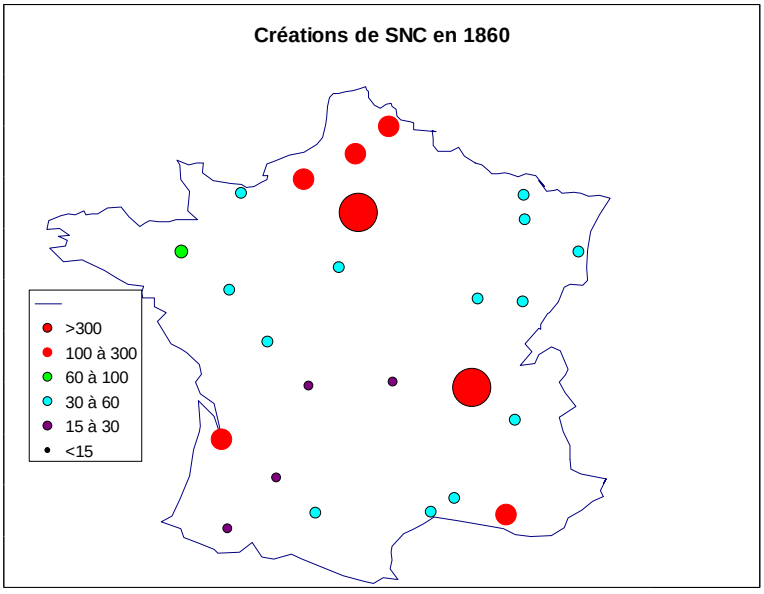
Map 3: Ratio of people jailed through *contrainte par corps* for commercial debts to bankruptcies (1855-56).



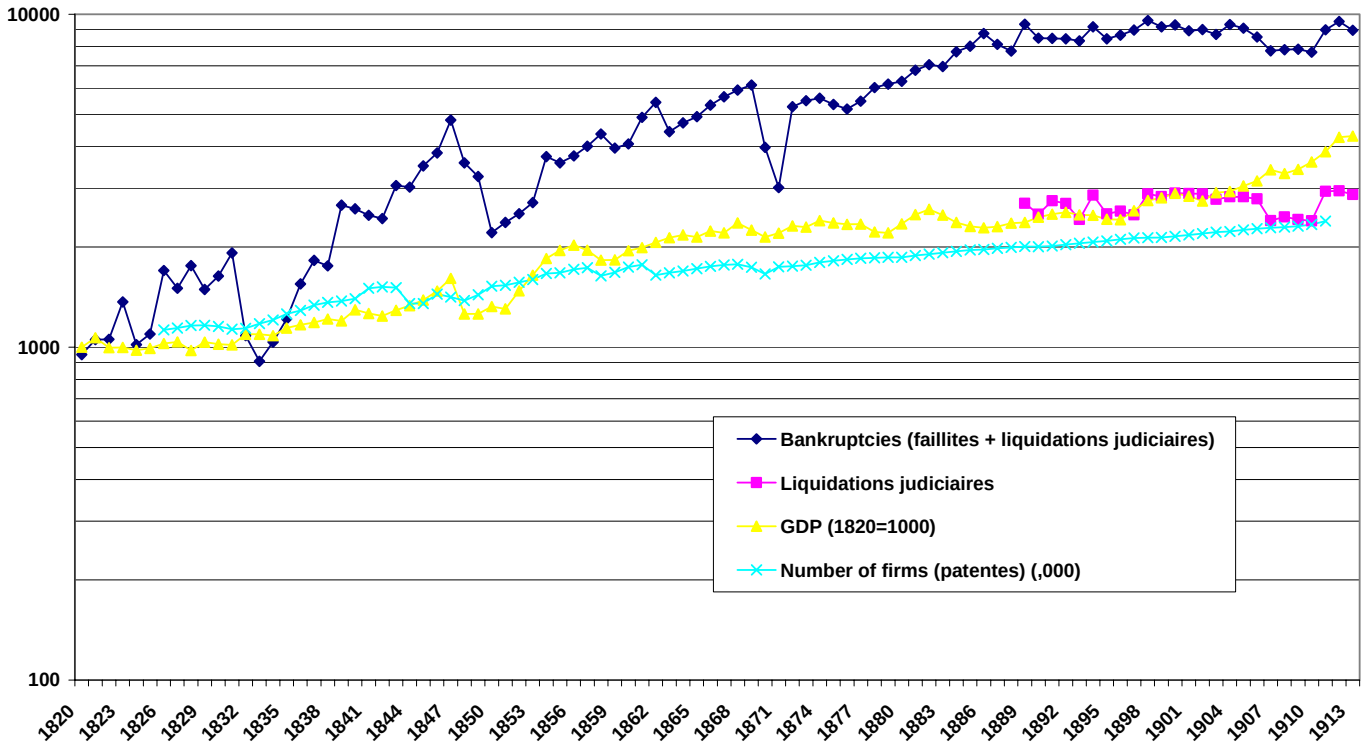
Map 4 : Number of bankruptcies as a proportion of the stock of firms in 1888



Map 5 : New partnerships created in 1860.

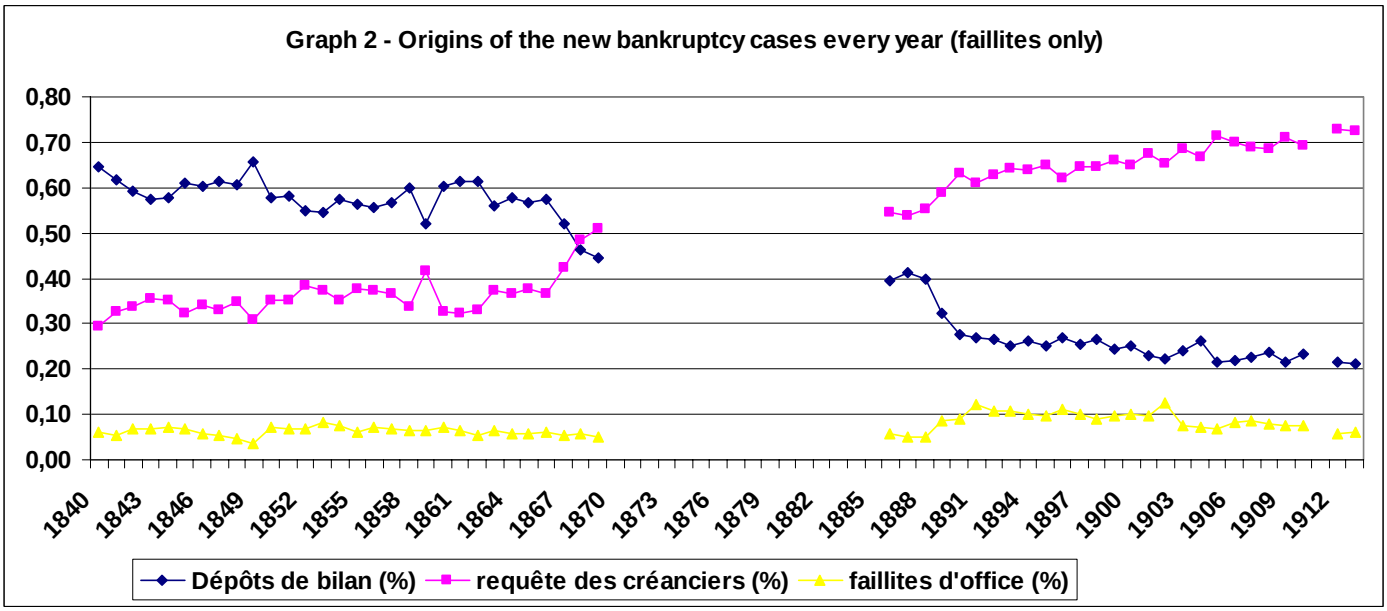


Graph 1 - Number of bankruptcies and comparison with GDP and the number of firms

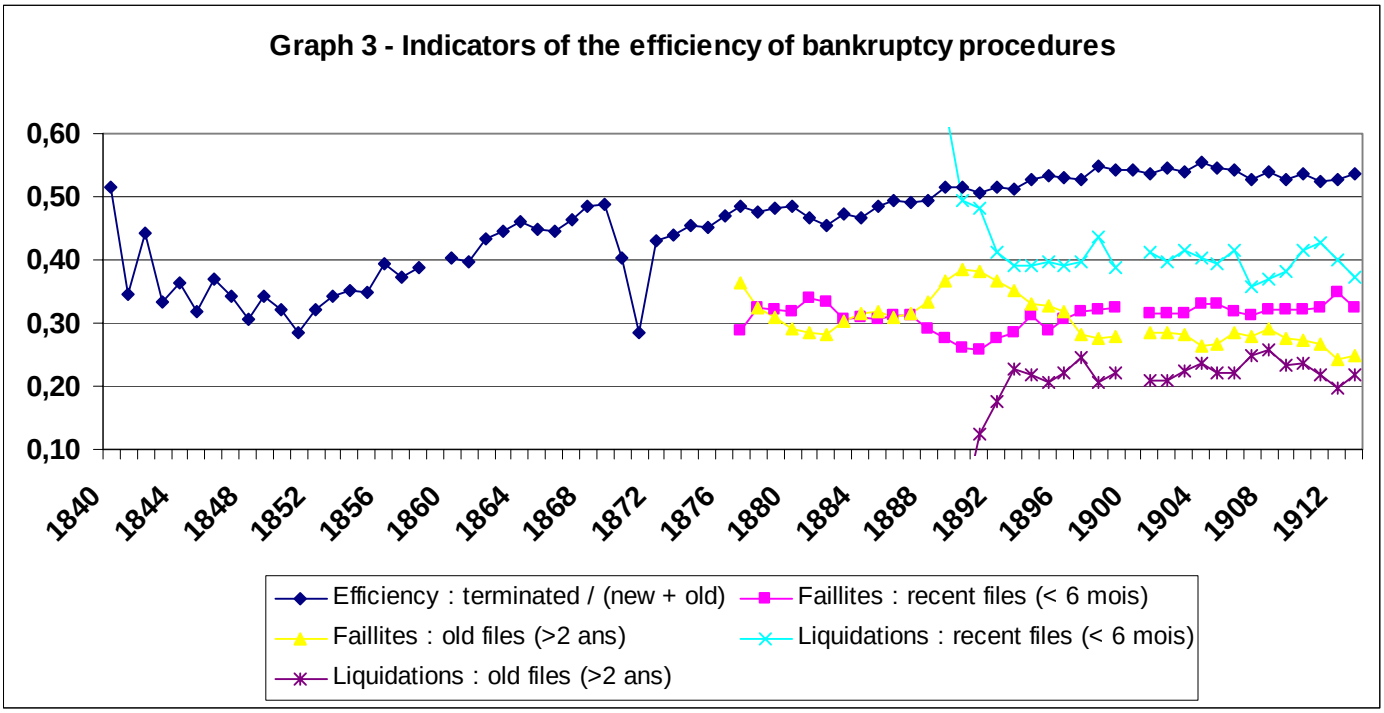


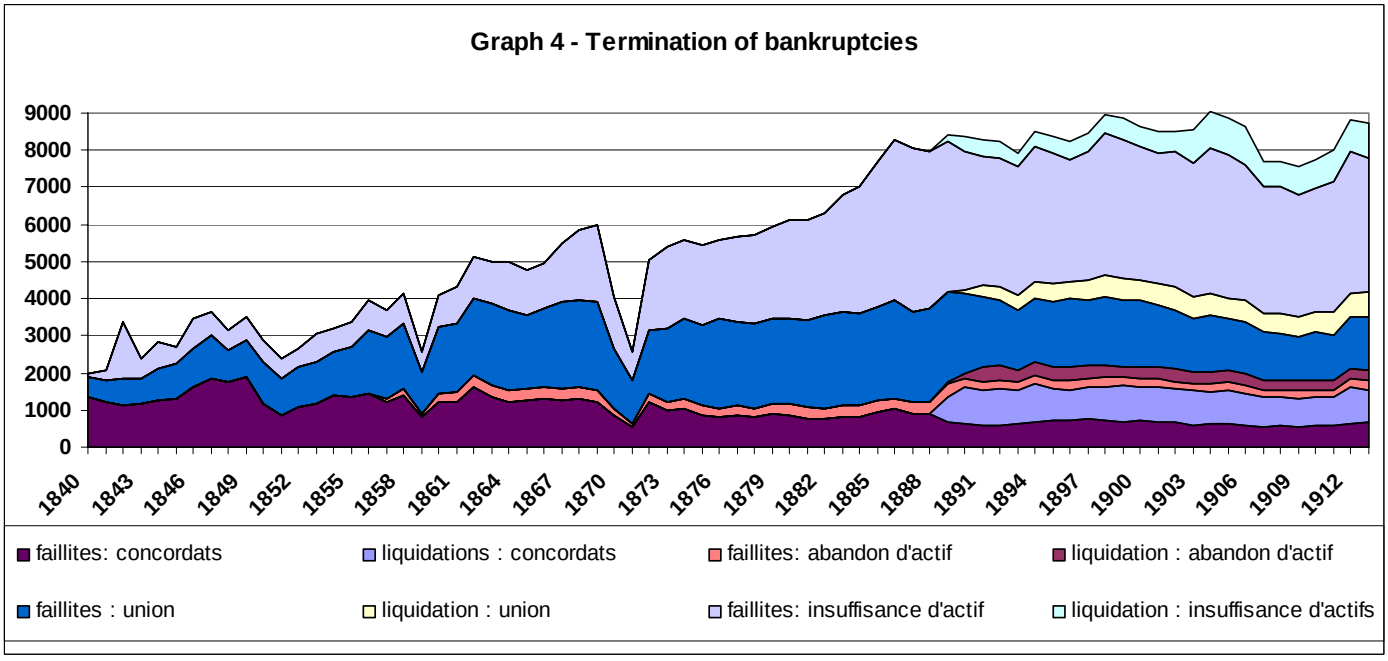
Sources: *Compte général de l'administration de la justice* (various years) for bankruptcies; *Annuaire statistique de la France* (1913) for *patentes*, Lévy-Leboyer & Bourguignon (1985) for GDP.

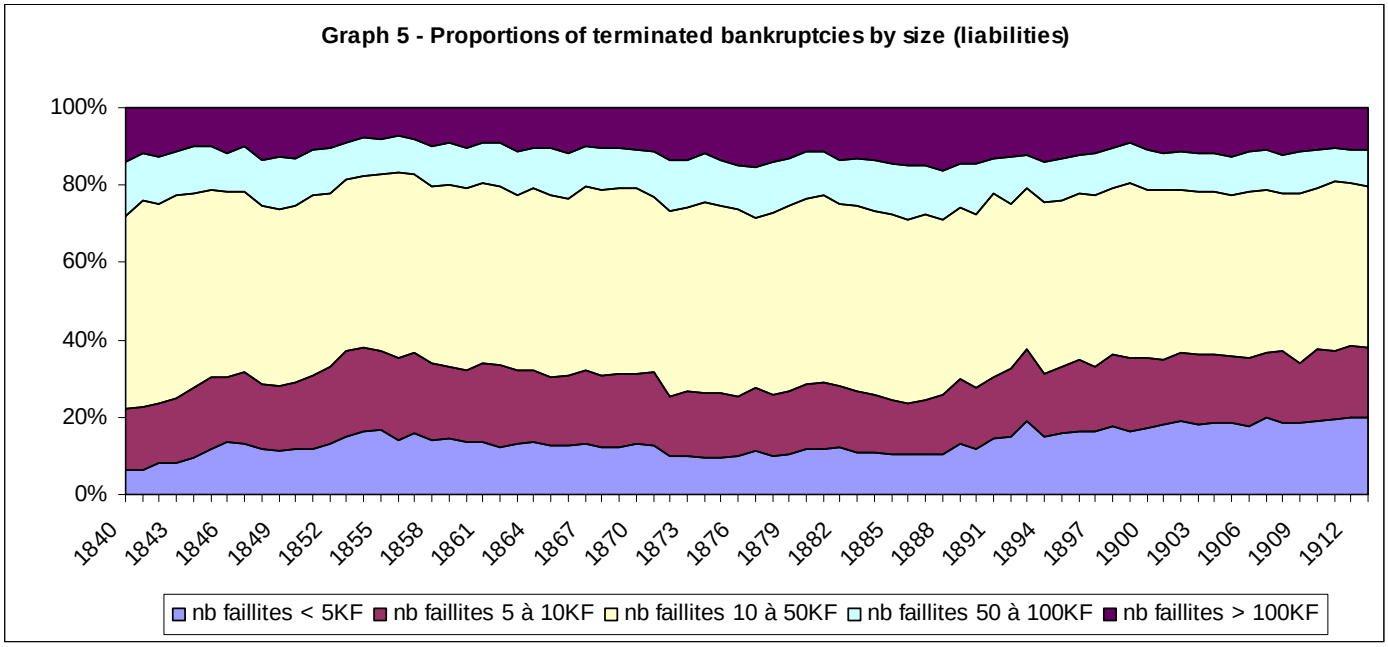
Graph 2 - Origins of the new bankruptcy cases every year (faillites only)



Remark : This graph does not include *liquidations judiciaires*, which can only be started by the debtor, and represent around a third of the total number of bankruptcies from 1890 on.


Graph 3 - Indicators of the efficiency of bankruptcy procedures
0,60
0,50
0,40
0,30
0,20
0,10
1840
1844
1848
1852
1856
1860
1864
1868
1872
1876
1880
1884
1888
1892
1896
1900
1904
1908
1912
Efficiency : terminated / (new + old)
Faillites : recent files (< 6 mois)
Faillites : old files (>2 ans)
Liquidations : recent files (< 6 mois)
Liquidations : old files (>2 ans)


Graph 4 - Termination of bankruptcies
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
1840
1843
1846
1849
1852
1855
1858
1861
1864
1867
1870
1873
1876
1879
1882
1885
1888
1891
1894
1897
1900
1903
1906
1909
1912
faillites: concordats
liquidations : concordats
faillites: abandon d'actif
liquidation : abandon d'actif
faillites : union
liquidation : union
faillites: insuffisance d'actif
liquidation : insuffisance d'actifs


Graph 5 - Proportions of terminated bankruptcies by size (liabilities)
100%
80%
60%
40%
20%
0%
1840
1843
1846
1849
1852
1855
1858
1861
1864
1867
1870
1873
1876
1879
1882
1885
1888
1891
1894
1897
1900
1903
1906
1909
1912
nb faillites < 5KF
nb faillites 5 à 10KF
nb faillites 10 à 50KF
nb faillites 50 à 100KF
nb faillites > 100KF