MOROCCAN COMPANY LAW REFORM AND MANUFACTURING FIRMS' ACCESS TO BANK CREDIT: A BEFORE/AFTER PANEL EVALUATION

SIMON QUINN*

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Abstract

In 2001, Morocco made a radical change to its company law regime: it replaced a company law dating from 19th-century France with modern standards of corporate governance and accountability. This article analyses that reform and evaluates its impact upon manufacturing firms' access to bank credit. Panel data from 2000 and 2004 is used to test the effect of a firm's legal obligations upon the provision of bank overdraft facilities. It is found that such legal obligations are significant, and this is robust when controlling for firm fixed effects. A heterogeneous-treatment specification suggests that the more onerous legal status is more valuable for younger firms. Broadly, this supports claims that legal systems ensuring high corporate governance standards are important in reassuring lenders in developing countries. However, the paper adds a caveat: choosing more onerous legal obligations was *not* significantly more valuable in 2004 than in 2000, *despite* the legal reform. This suggests that, even several years after the reform process, banks may not have appreciated the practical significance of the new legal regime.

*D.Phil student: Department of Economics, the Centre for the Study of African Economies and All Souls College, University of Oxford. This will hopefully form part my D.Phil thesis, which is supervised by Professor Marcel Fafchamps; the work would not have been possible without his very generous assistance. A number of others have been very helpful; more acknowledgements *etc* to follow later. As part of this research, I visited Morocco in 2006 to speak with policymakers, bankers and members of the business community; funding for the trip was generously provided by the George Webb Medley Fund (Department of Economics, Oxford). *E-mail:* **simon.quinn@economics.ox.ac.uk**.

1 Introduction

Development researchers and policymakers increasingly recognise the importance of institutions for corporate governance (see The World Bank (2001, Ch.3)). Strong institutions for corporate governance, it is argued, are essential for reassuring and protecting lenders and investors in developing economies (for example, see The World Bank and the IFC (2008, 29–33)). However, the role of such formal institutions is often difficult to evaluate empirically. In particular, persuasive strategies for controlling for endogeneity of legal obligations can be difficult to develop, while panel datasets bridging reforms to corporate governance regimes are scarce, particularly in the context of developing economies.

In this article, I report an empirical evaluation of one such reform: Morocco's introduction of a new company law regime in 2001. First, I examine the details and timing of the reform process; to my knowledge, this is the only such summary available in English. I then use a representative two-period panel dataset to test empirically the importance of the reform process for banks' assessment of Moroccan manufacturing firms. Specifically, I use a reduced-form approach to test the importance of a firm's legal status for bank overdraft provision, including under heterogeneous-treatment specifications. I control for a variety of observable characteristics and for firm fixed effects.

The research joins a growing literature on the importance of legal institutions in developing economies. Several papers have exploited cross-sectional variation to show the value of legal institutions: Laeven and Woodruff (2007), for example, use variation across Mexican regions to show a positive effect of legal quality on firm size, while La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997) and Qian and Strahan (2007) both use cross-country evidence to argue that better legal protection for creditors leads to improved lending outcomes (see also Djankov, Hart, McLiesh, and Shleifer (2008), Johnson, McMillan, and Woodruff (2002), and Levine (1998)). The paper also relates to a recent literature on the role of formalisation, particularly among micro-enterprises and small enterprises. For example, Bruhn (2008) shows a small positive employment and competition effect from the introduction of business registration in Mexico (see also Kaplan, Piedra, and Seira (2007)). Similarly, McKenzie and Sakho (2007) show that tax registration among micro-enterprises and small enterprises in Bolivia increased profits for firms with between two and five workers, but *decreased* profits both for smaller and larger firms.

This paper seeks to contribute in several ways to this literature. First, the paper deals with medium and large enterprises (median firm size is 60 permanent employees), and considers a sweeping reform designed to change significantly the internal governance of those firms. This complements the business registration literature by providing a point of comparison about the way that larger firms and formal bank lenders may respond to legal reform. Second, the paper uses a representative firm-level two-period panel dataset; the present analysis, then, can control directly for firm fixed effects. Third, as the next section explains, the critical date of legal reform lay *between* the two rounds of the panel; the panel therefore allows a 'before/after' analysis of the change. This allows for a comparison of the effects of legal obligations before and after the reform, while still controlling for firm fixed effects.[1]

[1] It is relatively rare to have panel datasets bridging legal reforms in developing economies. I have been able only to find Klonner and Rai (2006), where data is at the level of the ROSCA, and Banerjee, Gertler, and Ghatak (2002), where data is at the level of the district.

I find that there is a significant and substantial positive effect of adopting more onerous legal responsibilities upon banks' provision of overdraft facilities, and that this result is significant in the decision *whether* to provide an overdraft rather than *how large* the overdraft limit should be. I show that this effect is robust to controlling for a wide variety of other observables and for unobservable fixed effects. I then use a heterogeneous-treatment specification to show that the legal status effect declines with firm age. Broadly, these results support claims that legal systems ensuring high corporate governance standards are important in reassuring lenders. However, I also highlight an important caveat: choosing more onerous legal obligations was *not* significantly more valuable in 2004 than in 2000, *despite* the legal reform. This suggests that, even several years after the reform process, banks may not have appreciated the practical significance of the new legal regime.

2 A new company law regime

In Morocco, standards of corporate governance are manifest through two main legal forms: the 'Société Anonyme' (SA) and the 'Société À Responsibilité Limitée' ($SARL$). The SA form is designed for larger, more formal enterprises. Almost all incorporated Moroccan companies choose to exist as one of these two legal forms (other forms, for example, include cooperatives and partnerships); for example, the census of manufacturing (discussed shortly) shows that, in 2000, over 95% of incorporated manufacturing companies chose either SA or $SARL$ status. A firm's choice of legal form is fundamental in determining its structure, its internal governance and its relations with outside parties. The reform of Moroccan company law was a reform of these two legal statuses; specifically, it involved imposing substantially more onerous obligations on firms choosing to exist as SA. In this section, I analyse Moroccan legislation and commentary in order to explain the history, justification and substance of that reform process.

It is difficult, as a matter of research, to identify with absolute precision the changes wrought by the reforms. Unlike the new SA and $SARL$ statutes (which can be purchased even from street vendors in Casablanca), the text of the old law is not readily available (and indeed has not been directly consulted for this summary). Similarly, and perhaps somewhat incongruously, academic literature on the reform (such as that cited in this summary) provides little detail on the previous legal regime. Thus, this summary draws primarily upon general discussions of the reform provided in *L'Economiste*, the leading Moroccan business newspaper. For that reason, the following summary must essentially be limited to outlining the reforms regarding the SA form. However, even in doing so, it is clear that this form attracted by far the more significant and more controversial overhaul; while the reform process *did* involve a new statute for the $SARL$ form, this law "has not raised much interest"[2] (El Hammoumi 2005), as even a casual survey of *L'Economiste* articles reveals. In effect, it appears that the law on $SARL$ firms, while reformulated, has remained largely unchanged; in contrast, the SA law has undergone a radical overhaul to become substantially more onerous than it was previously.

[2] Original quote: "La loi n 05-96, relative aux autres formes de sociétés commerciales, n'a pas soulevé autant d'intérêt."

2.1 The process of legal reform

This section summarises the process of legal reform. The section argues that the reform brought very substantial changes to standards of corporate governance in Morocco and shows, crucially, that the critical date for the universal application of the new regime was 1 January 2001.

From 11 August 1922 until 20 January 1997, Moroccan SA companies were governed exclusively by French law; a *dahir* of 1922 applied to Morocco the relevant provisions of the French commercial statute of 24 July 1867 (Lazrak 2004, Slaoui and Lecerf 2000, Chbani Idrissi 1996).[3] That law reflected very early notions of corporate governance and accountability; a prominent French lawyer commented in 2005 that the regime allowed an "anarchy" (*L'Economiste* 2005), while one Moroccan businessman interviewed for the present research described the former legal regime as "a jungle".[4] $SARL$ companies were governed by a regime of the same era: a *dahir* implemented in September 1926 (Lofti 1996).

However, as the end of the last century neared, Moroccan legislators came to recognise the need for a new corporate law regime to reflect and support the modernisation both of Moroccan law and the Moroccan economy. Thus, on 2 July 1996, the *Chambre des Représentants* (the lower chamber of parliament) adopted Law 17-95: a new regime to regulate SA companies.[5] The authors (two French lawyers) took as their starting point the French company law of 24 July 1966 (*L'Economiste* 1999b, Lazrak 2004). Law 17-95 was promulgated by *dahir* on 30 August 1996.[6] However, rather than being immediately applicable from that date, the law created a dual regime for its implementation. New SA companies would be required to have corporate statutes in compliance with the law if created after the entry into force of relevant provisions relating to the register of commerce (Article 443, Law 17-95); SA companies created prior to that date would receive an additional grace period to harmonise their corporate statutes with the law (Article 444, Law 17-95). Progress of the new $SARL$ law followed a similar trajectory. A statute to replace the 1926 law was adopted on 7 January 1997 and promulgated by *dahir* on 13 February of that year. This law (Law 05-96) was subject to a similar dual regime (under Articles 121, 128 and 129 of that law).

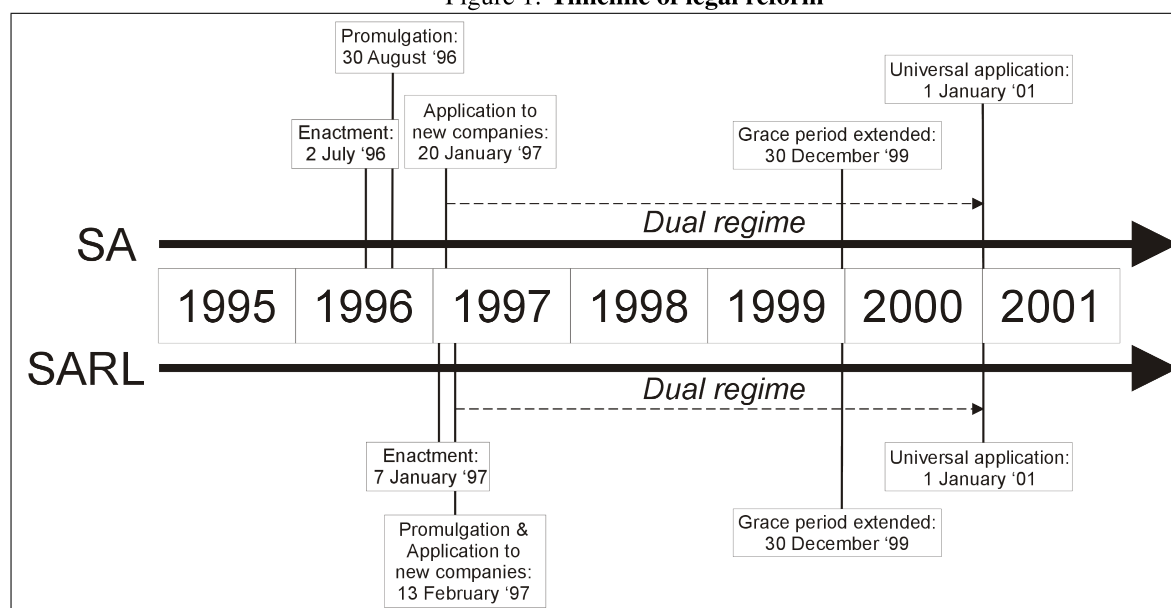
The relevant provisions relating to the register of commerce were duly brought into force on 20 January 1997. Thus, law 17-95 was first applicable from this date, for new companies created in the SA status (Maatouk 2002, *L'Economiste* 1999c, *L'Economiste* 1998a).[7] Law 05-96 would have been operative from the same time (Article 120, Law 05-96), but was not promulgated until 13 February; thus, it applied immediately from this later date. Identifying the required date of harmonisation for existing companies was much less straightforward. The relevant provisions of each law originally provided that the harmonisation of existing company statutes would occur within two years. However, there was confusion from the outset (apparently arising because of an imprecise translation from the (official) Arabic text to the French version) as to when the two-year period would commence

[3] A *dahir* is a Royal Decree; among other functions, it is the legal mechanism by which the Government of Morocco formally brings laws into effect. It is broadly analogous to the Royal Assent in a Westminster system or a presidential signature in the United States.
[4] Interview with the author, Casablanca, September 2006. (Name withheld from publication here.)
[5] *Dahir* no 1-96-124, preamble.
[6] *Dahir* no. 1-96-124. Dates and details cited are provided in the preamble to the *dahir*.
[7] Existing SA companies were entitled to bring their corporate statutes into compliance with the law before this date; however, as subsequent discussion will explain, there were no sanctions for not doing so.

(*L'Economiste* 2000a, *L'Economiste* 1999c); as a consequence, interpretations differed between experts and even between government authorities in different cities (*L'Economiste* 1999a). Eventually, consensus settled upon the more generous interpretation; namely, that the dual-regime articles allowed for a grace period of two *calendar* years following the year that the statutes were first applicable (that is, 1997).

It was anticipated, then, that law 17-95 and law 05-96 would have universal application from 1 January 2000. However, with just three days remaining until the deadline, the parliament intervened by amending the relevant articles of both laws to extend the grace period for a further year (*L'Economiste* 2000b); the amendment was promulgated by *dahir* the following day.[8] Despite calls for another similar amendment a year later, the grace period finally expired on 31 December 2000. Thus, from 20 January 1997 until 31 December 2000, new SA companies created were required to comply with law 17-95, while existing SA companies could 'opt in' to law 17-95 or remain under the old law (*ie* the *dahir* of 1922). The same principle applied to $SARL$ companies.[9] It was not until 1 January 2001, more than four years after its promulgation, that law 17-95 finally applied universally to all SA firms (and, similarly, law 05-96 to all $SARL$ firms). Crucially — thanks to the additional delay — this implementation occurred after the completion of the bulk of the the FACS survey of manufacturing firms in 2000 (a survey which, at any rate, was completed during the very earliest adjustment to the new regime). For this reason, the FACS-ICA panel (outlined shortly) provides a before/after comparison of the effects of the implementation of the new legal regime.[10] Figure 1 summarises the process of reform.

Figure 1: **Timeline of legal reform**



[8] *Dahir* no. 1-99-327 and no. 1-99-328 of 30 December 1999.

[9] There is no information available in the survey data (summarised shortly) about whether particular firms chose to 'opt in' or not.

[10] Article 449 of law 17-95 and Article 126 of law 05-96 provided the consequences of failing to harmonise the corporate statute: a fine of 2000 to 10 000 dirhams could be imposed upon the relevant individuals and a court-imposed grace period of less than six months allowed; if the subsequent grace period was not followed, an additional fine of 10 000 to 20 000 dirhams was allowed (in addition, presumably, to all of the other consequences specified for operating in breach of the relevant laws).

2.2 A comparison between SA and $SARL$ under the new legal regime

A comparison between law 17-95 (regarding the SA) and law 05-96 (regarding the $SARL$) is a comparison between two very different sets of legal obligations; indeed, the very character of the two forms is fundamentally different. "[T]he SA was designed as a joint stock company drawing upon public saving. It it thus distinguished very clearly from the $SARL$, a structure intended for companies of average size and/or of a family character, where the personality of the contributor is generally more important than the capital contributed."[11](Guennouni 2004) In that sense, the $SARL$ can be understood as "a hybrid form which in parts draws its rules from joint stock companies and in parts from partnerships. It is an ideal form for the operation of small- and medium-sized enterprises."[12] (Msalha 2005, 109) This distinction — between a large formal enterprise comprising many contributors (the *société anonyme*, literally the 'anonymous company') and smaller, more informal firms — underpins the many distinctions in substantive law. These differences can be understood along a number of dimensions.

Capital: In line with French law, both the SA and $SARL$ forms have a minimum capital requirement. However, that requirement is much higher in the case of the SA; an $SARL$ must have listed capital of at least 100 000 dirhams,[13] while an SA must have a minimum capital of 300 000 dirhams, or 3 million dirhams if the company issues a prospectus.[14] Similarly, there are significant differences in the transferability of capital: shares in an SA are freely transferrable (Martin 1999, 163), whereas shares in an $SARL$ generally may not be transferred to third parties without the consent of a majority of shareholders representing three-quarters of the shares (Martin 1999, 157-158).[15] Finally, the SA has much wider scope for dealing in its capital: unlike the SA, the $SARL$ may not grant security over moveable interests,[16] nor represent any of its listed capital by negotiable instruments.[17]

Governance: The SA and $SARL$ forms exhibit clearly different governance structures. An SA may choose between two governance structures, both dualist and both quite onerous: a Board of Directors with an Administrator or a Board of Directors overseen by a Board of Trustees.[18] The significance of this will be discussed in comparing the new regime with the old; for now, note merely that both structures provide significant division of management powers. In contrast, an $SARL$ has a unitary structure: it is governed merely by one or more designated managers,[19] empowered (in the absence of specific limitation in the company's own statutes) to take all necessary action in the interests of the company.[20]

Transparency: Improvements in corporate transparency are an important part of the legal reforms, as subsequent discussion will show. However, understandably, there remain significant differences in transparency standards be-

[11] Original quote: "…la société anonyme a vocation à être une société de capitaux et un instrument de drainage de l'épargne publique. Elle se distingue ainsi très nettement de la SARL, structure destinée aux entreprises de taille moyenne et/ou à caractère familial, où c'est la personnalité de l'apporteur qui compte en principe davantage que le capital apporté."

[12] Original quote: "…la société à responsabilité limitée s'apparente à la fois aux sociétés de capitaux et aux sociétés de personnes. C'est un type hybride qui puise ses règles tantôt des sociétés de capitaux, tantôt des sociétés de personnes. C'est un outil idéal pour l'exploitation des petites et moyennes enterprises."

[13] Article 46, law 05-06.

[14] Article 6, law 17-95.

[15] Articles 58 and 60, law 05-96.

[16] Article 54, law 17-95.

[17] Article 55, law 17-95.

[18] See Chapter 1 and Chapter 2 respectively, *Titre* 3, law 17-95.

[19] Article 62, law 05-96.

[20] Article 63, law 05-96.

tween the SA and $SARL$ form under the new law. An SA must have at least one designated auditor at all times (and at least two, if it issues a prospectus).[21] In contrast, while an $SARL$ *may* appoint an auditor, appointment is obligatory only in limited circumstances.[22]

Table 1 summarises these differences.

Table 1: SA **and** $SARL$**: Key legal differences**

	Société Anonyme	***Société À Responsibilité Limitée***
Capital		
Minimum capital requirement	300 000 or 3 000 000 MAD	100 000 MAD
Share transferability	Freely transferrable	Limited (subject to approval)
Granting security	May grant all forms	Limits on moveable interests and negotiable securities
Governance		
Governance structure	Dualist	Unitary
Transparency		
Appointment of auditors	Must always have at least one	Generally need not have any

2.3 The old and the new: a summary of the legal reform

Equally fundamental to my subsequent empirical analysis is the recognition that the legal reform indeed reflected a substantial change; in particular, that the reform significantly increased the *relative cost* of retaining the SA status.

Governance: The previous law reflected a disturbing dichotomy: by providing little guidance on the role of corporate directors, the law allowed *both* for some directors to have nearly unchecked power while other directors were permitted to play almost no part in the running of the company. Thus, in advocating the reform, the Minister for Privatisation (Abderrahmane Saaïdi) argued at the time, "We do not know who does what. The president is often invested a function of prestige without assuming any real responsibilities."[24] (Mossadaq and Oudghiri 1995) Concomitantly, many expressed concern that "administrators were reduced by the old law to ratifying decisions taken by the 'all-powerful' president"[25] with the only real limitation upon the president's power being the corporate object itself (Shamamba 1995).[26] Law 17-95 brought radical change in this area. As explained earlier, the law introduces a 'dualist' system of governance, "inspired by German law, and well known to French corporate law",[27] involving either a Board of Directors and President or a Board of Directors and Board of Trustees; in both cases, providing new checks upon management authority (Oudghiri 1998). In doing so, the law seeks to enliven so-called 'sleeping directors' to be more involved in corporate management; it "encourages creation within the Board of Directors of technical committees charged to study particular questions and to formulate opinions and recommendations."[28] (Alami 1999)

[21] Article 159, law 17-95.

[22] Specifically, there are two cases where appointment is obligatory: (i) where the company has a sales turnover of at least 50 million dirhams (net of taxes), and (ii) where the appointment is granted by a judge on the application of one or more shareholders representing at least a quarter of the listed capital (Martin 1999, 162).[23] In the event that an $SARL$ does appoint an auditor, the auditor has the same powers, obligations and responsibilities as in the SA case: Articles 13 and 83, law 05-96.

[24] Original quote: "Nous ne savons pas qui fait quoi. Le président est souvent investi d'une fonction de prestige sans pour autant assumer de véritables responsabilités".

[25] Original quote: "Les administrateurs en étaient réduits à entériner des décisions prises par le "tout puissant" président." The article was paraphrasing comments by Abdelaziz Squalli, Professor at the *Faculté de Droit de Fès*.

[26] Original quote: "A ce jour, la seule limite connue au pouvoir du PDG était l'objet social."

[27] Original quote: "Notion nouvelle inspirée du droit allemand et bien connue du droit français des affaires"

[28] Original quote: "En effet, l'article 51 encourage la création au sein du conseil d'administration de comités techniques chargés d'étudier des questions précises et de formuler des avis et recommandations." See Article 51, Law 17-95.

Transparency: A significant complaint under the old regime was the untrustworthiness of corporate accounts. Moroccan firms, it was often claimed, would routinely produce three sets of records: one for the manager, one for the tax authorities and one for the bank.[29] Law 17-95 is one important component of reforms to counter this problem.[30] The new conditions regarding auditors have already been outlined; it bears noting that, under the previous regime, auditors did not have a "permanent presence" in the company's operations (Oudghiri 1998).[31] Thus, the reform also strengthens the effect of the minimum capital requirement; it "puts an end to practices of posting a fictitious capital having no relationship with the capital actually contributed."[32] (*L'Economiste* 1998b)

This relates closely to new rights to information: unlike the previous regime, law 17-95 "envisages the shareholder having access to all documents necessary to understand the management of the company. It also involves obligations to provide information in the management report relevant to subsidiary companies, significant shareholdings and takeovers."[33](Oudghiri 1998) Finally, the transparency requirements bring new standards regarding conflicts of interest. "In effect, under the former law, a director was able to make contracts with the company, to borrow money from the company and to guarantee his or her own debts by the company, all without the shareholders being informed of these actions."[34](Alami 1999) These practices are ended by the new statute, which requires such contracts to be subject to prior authorisation by the Board of Directors, to be the subject of an auditor's report and to be approved by the next ordinary general meeting.[35]

Minority rights: The previous law did not grant genuine rights to minority shareholders; thus, it was said of those SA companies not bringing their statutes into early compliance with the new law that "they may continue to exercise on minorities the dictatorship of the majority"[36] (Oudghiri and Ikram 1999) The new law redresses this. Aside from the right to information and the expanded role for auditors just outlined, the legislation allows individuals or groups of shareholders holding ten percent of the capital to demand the convening of a general meeting.[37]

Third parties: Under the old law, third parties had little legal reassurance in dealing with a company; because the relations between companies and their administrators were merely contractual, a third party always bore the risk that a company administrator having ostensible authority was not *actually* authorised to deal on the company's behalf. The new law rectifies this, by implementing what is sometimes known elsewhere as the 'indoor management rule': "[a]ny limitation of the powers of the capacities of administrators may not be constested as against third parties. Third parties may, consequently, act with reassurance: the law protects them."[38] (Alami 1999) Further, whereas the old law

[29] One businessman interviewed for this research wryly suggested a fourth set: for the manager's wife.

[30] There are other components here, too; for example, an initiative of the Central Bank of Morocco (Bank Al-Maghrib) that requires every credit file to have attached a copy of the financial statements that were filed with the Commerce Tribunal.

[31] Original quote: "…la présence permanente des commissaires aux comptes…".

[32] Original quote: "Cette disposition met ainsi fin aux pratiques qui consistaient à afficher un capital fictif sans rapport avec celui réellement apporté."

[33] Original quote: "La loi prévoit la mise à la disposition des actionnaires de tout document nécessaire à l'appréciation de la gestion de la société. Il est également fait obligation de mentionner les informations relatives aux filiales, participations et prises de contrôle dans le rapport de gestion." See *Titre V*, law 17-95.

[34] Original quote: "En effet, sous l'emprise de l'ancienne loi, un administrateur pouvait passer des contrats avec la société, emprunter de l'argent à la société, faire cautionner par la société ses engagements personnels, sans même que les actionnaires soient informés de ces opérations."

[35] Articles 56–62, Law 17-95.

[36] Original quote: "Ils pourront continuer exercer sur les minoritaires la dictature des majoritaires."

[37] Article 116, law 17-95.

[38] Original quote: "Toute limitation des pouvoirs des administrateurs est inopposable aux tiers. Ces derniers peuvent par conséquent agir en toute quiétude: la loi les protège."

allowed the company to take legal personality from the time of the constitutive meeting, the new law requires registration on the Register of Commerce as a precondition; this provides reassurance to third parties, particularly those needing to deal with 'founders' of the company prior to registration, by making the corporate status of the company a matter of public record (Oudghiri 1998).

Table 2 summarises the key reforms.

Table 2: **Key legal reforms: the SA form**

	Before	***After***
Governance		
Management structure	Unitary	Dualist
Limitations	Only the corporate object	System of review
Management involvement	Allowed 'sleeping directors'	Encourages active involvement
Transparency		
Auditors	Played a relatively lesser role	Active and ongoing role
Right to information	Almost none	Extensive and ongoing
Conflicts of interest	Clear conflicts allowed	Prior and subsequent authorisation required
Minority rights		
Procedural rights	Almost none	May convene a general meeting
Third parties		
Risk of corporate statute breach	Borne by the third party	Borne by the company
Corporate legal personality	Upon constitutive meeting	Upon registration

3 Data

3.1 The census of manufacturers

A census of manufacturers is conducted annually in Morocco by the Ministry of Commerce, Industry and Telecommunications ('MCIT'). It has run since 1985 and its coverage is almost universal. This paper does not use the census for substantive empirical analysis; rather the census is used to show, in aggregate terms, the effect of the legal reform process on manufacturing firms' choice of legal status. I use the pooled set of firms recorded in the census from 1996–2003. Table 3 shows that about 40% of all SA manufacturing firms recorded in the census during that time are also recorded as having changed to $SARL$ status.

Figure 2 shows that, of the 1513 firms changing from SA to $SARL$ status, the vast majority (over 1100) changed in the year 2000 or 2001. The census, then, supports the narrative of Moroccan commentators just analysed; the legal reform made substantial changes to Moroccan firms' obligations, which induced a significant response. The reforms sought to make the SA status a more rigorous and more exclusive form; for better or for worse, they clearly had this effect.

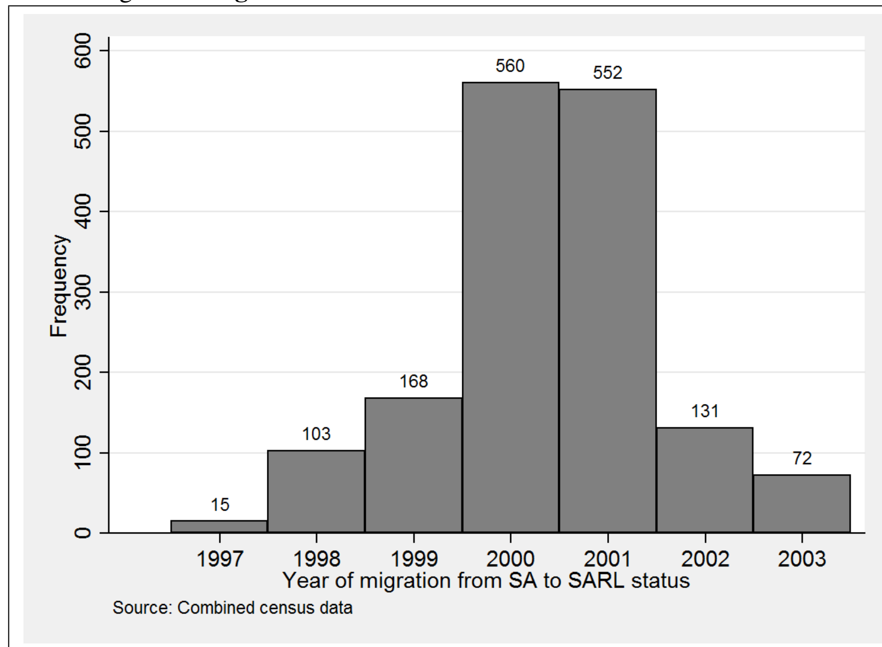
3.2 The FACS-ICA panel

The manufacturing census involves a relatively small number of variables and, crucially, does not have substantial information on relations with banks. To analyse the bank-firm relationship, then, I use instead the two-period FACS-ICA panel.

Table 3: **Status changes in the census (1996–2003)**

	Number of firms	
$SA \rightarrow SA$	2,214	20.6%
$SA \rightarrow SARL$	1,513	14.1%
$SARL \rightarrow SA$	27	0.3%
$SARL \rightarrow SARL$	3,985	37.1%
Multiple switches recorded, $SA \leftrightarrow SARL$	88	0.8%
Other status (predominantly unincorporated firms)	2,907	27.1%
	10,734	

Figure 2: **Migration from SA to $SARL$ status: The census data**



The FACS (‘*Firm Analysis and Competitiveness*’) Survey was conducted in late 2000 as a collaborative venture between the MCIT, the World Bank and the University of Oxford. The sample was drawn by unstratified random sampling across the six largest regions and the seven largest production sectors. The FACS survey excluded firms which, either at the time of the preceding census or at the time of the FACS survey itself, had fewer than 10 employees. A total of 859 firms were interviewed.

The ICA (‘*Investment Climate Assessment*’) Survey was conducted in 2004. It was designed as a follow-up to the FACS survey and was again a collaborative project of the MCIT, the World Bank and the University of Oxford. Significant portions of the FACS survey — including the entire accounts section — were replicated in the ICA survey. A

total of 746 firms was interviewed, 546 of which had been interviewed for the FACS survey. The data analysed here is the subset of firms in the FACS-ICA panel that were recorded as being *either* SA or $SARL$ form in *both* the FACS and ICA surveys. This leaves a panel of 512 firms. Of these, I drop 24 firms where key variables were either missing or implausible; this leaves a balanced panel of 488 firms.

The firms under consideration are, therefore, medium and large enterprises; the distribution of permanent employees is approximately log-normal (truncated below at 10, as noted) with a median of 60. Figure 3 shows the distribution of panel firms by province; Table 4 shows the range of firm sectors by region.

Figure 3: **Firm locations by province, FACS**

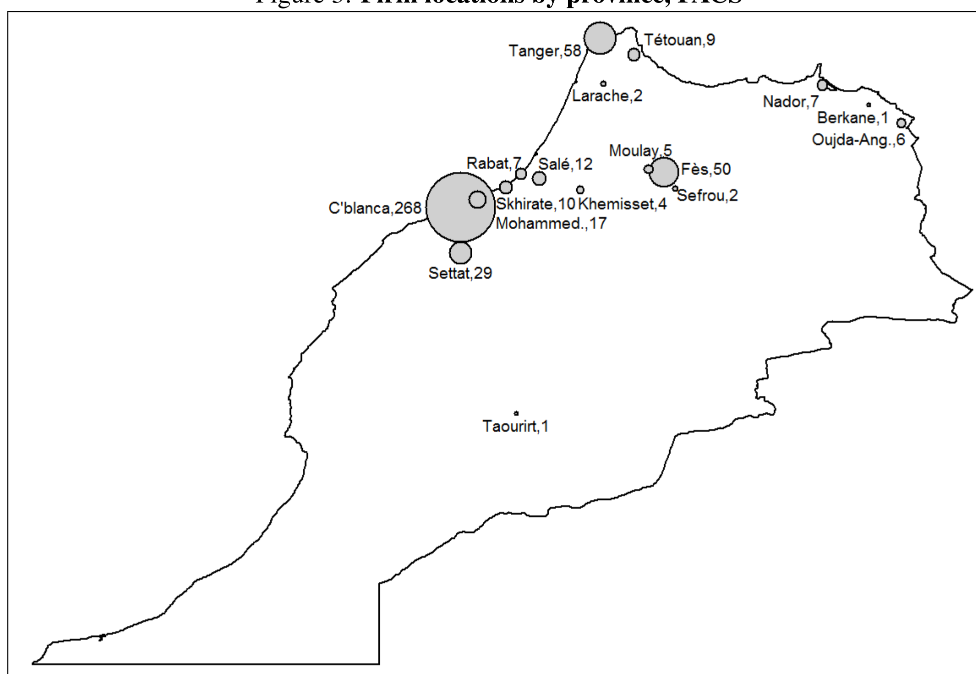
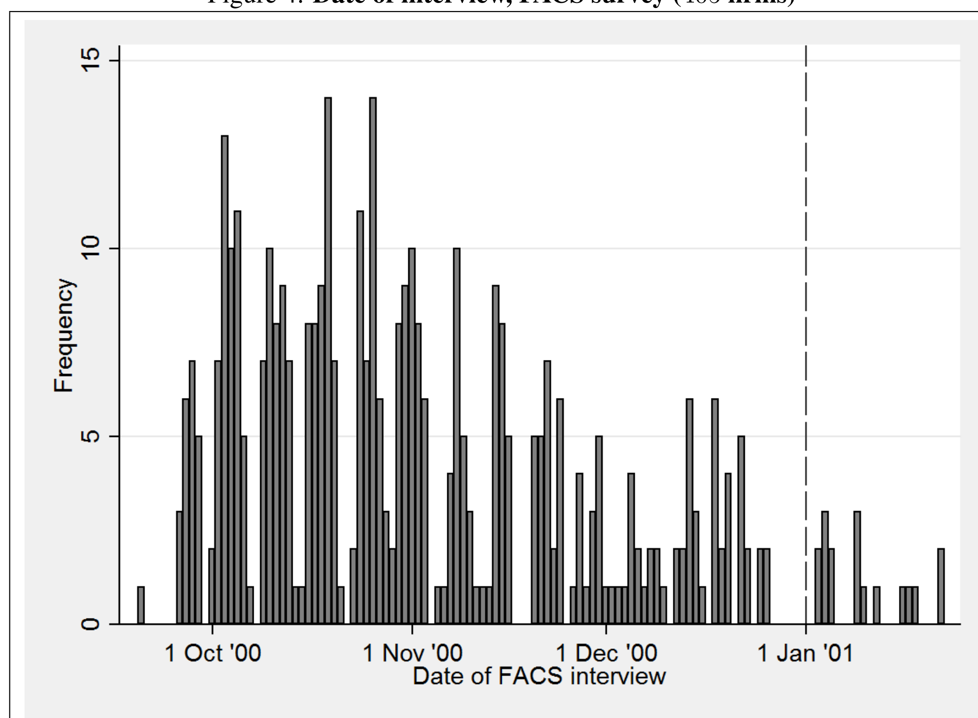


Table 4: **Region and sector for panel firms, FACS**

	Casablanca	Fès	Nador	Rabat	Settat	Tanger	
Chemicals	32	1	1	4	7	3	48
Electrical	14	0	1	0	1	0	16
Food	12	9	9	0	9	6	45
Garment	99	29	0	15	0	27	170
Leather	27	6	0	1	1	1	36
Plastics	29	5	1	5	5	2	47
Textile	71	7	3	8	7	30	126
	284	57	15	33	30	69	488

Figure 4 shows the date of first interview for firms in the FACS survey, where recorded (only 405 of the 488 firms had (plausible) recorded dates). The figure confirms that the vast majority of first-round interviews occurred prior to the introduction of the new legal regime. Only 17 firms are recorded as having been interviewed after that date (as shown). One option would be to drop these firms; however, I choose not to do this. As the previous discussion and census data showed, *many* firms were still in the process of compliance with the new statutes after the 1 January implementation; thus, while the law formally applied from that date, it is not reasonable to treat the date as providing an absolutely sharp discontinuity. Rather, the point is that the first round was conducted during the reform *process*, so that the ICA survey then provides a point of comparison as to how market participants ultimately reacted.

Figure 4: **Date of interview, FACS survey** (405 **firms)**



3.3 Firm-bank relations

Table 5 shows the distribution of primary bank by region from the FACS survey (bank names were not recorded in the ICA survey). The table shows that there is a wide range of banks involved, primarily French (or subsidiaries thereof). In due course, this information will provide a basis for controlling for bank fixed effects.[39]

I am concerned in this paper to evaluate the impact of legal status upon banks' willingness to provide overdraft facilities (and, indeed, the size of the overdraft limit provided). I choose overdraft limit as the dependent variable — rather than, for example, bank lending behaviour — because the overdraft limit provides the clearest indication of a bank's overall assessment of a firm. Many successful firms in the data do not have bank loans; it is very plausible

[39] This approach clearly requires the simplifying assumption that no firm changes bank between survey rounds. The ICA survey has a question about the number of years that the firm has banked with its principal bank; 23 firms in the panel responded that they had been with their bank for fewer than four years. Thus, while the assumption that firms did not change bank seems not to be literally true, it seems reasonable — particularly given that the role of bank fixed effects is simply as a control, rather than a variable of direct interest.

Table 5: **Bank and region, FACS**

	Casablanca	Fès	Nador	Rabat	Settat	Tanger	
BCM	65	14	1	3	13	17	113
BCP	23	9	3	5	0	10	50
BMCE	36	5	7	7	4	13	72
BMCI	19	2	0	0	3	1	25
CDM	42	6	0	2	2	8	60
Other	26	6	3	7	3	9	54
SGMB	45	9	0	3	3	4	64
Wafabank	28	6	1	6	2	7	50
	284	57	15	33	30	69	488

— indeed, very likely — that this is *not* because banks would be unwilling to lend but because such firms have no borrowing need. This kind of endogeneity is much less likely in the case of an overdraft limit; it can reasonably be assumed that every firm would like the largest overdraft limit possible (after all, there is no requirement that it *use* the overdraft facility), so a bank's decision about whether to provide an overdraft provides a reasonable measure of a bank's confidence in a firm's ability to repay. Table 6 summarises firm overdraft limits in each round of the panel. It shows that, from the first round to the second round, there was a reduction in the mean (log) overdraft, though not the median; moreover, it shows that there were substantially more firms with no overdraft facility in the second period. Figure 5 shows the distribution of overdraft limits between the two rounds of the survey (with a 45-degree line superimposed); it augments Table 6 by showing that many of the firms with no overdraft facility in the second period did have such a facility in the first period, *and vice versa*.

Table 6: **Summary statistics for overdraft limits**

	N	Mean	S.Dev.	1st Q.	Median	3rd Q.	Min.	Max.	Zeroes
Log (overdraft limit + 1), FACS	488	10.9	5.7	11.5	13.1	14.5	0.0	18.6	100
Log (overdraft limit + 1), ICA	488	10.3	6.2	0.0	13.1	14.5	0.0	18.4	125

Figure 5: **Distribution of overdraft limits, FACS & ICA**

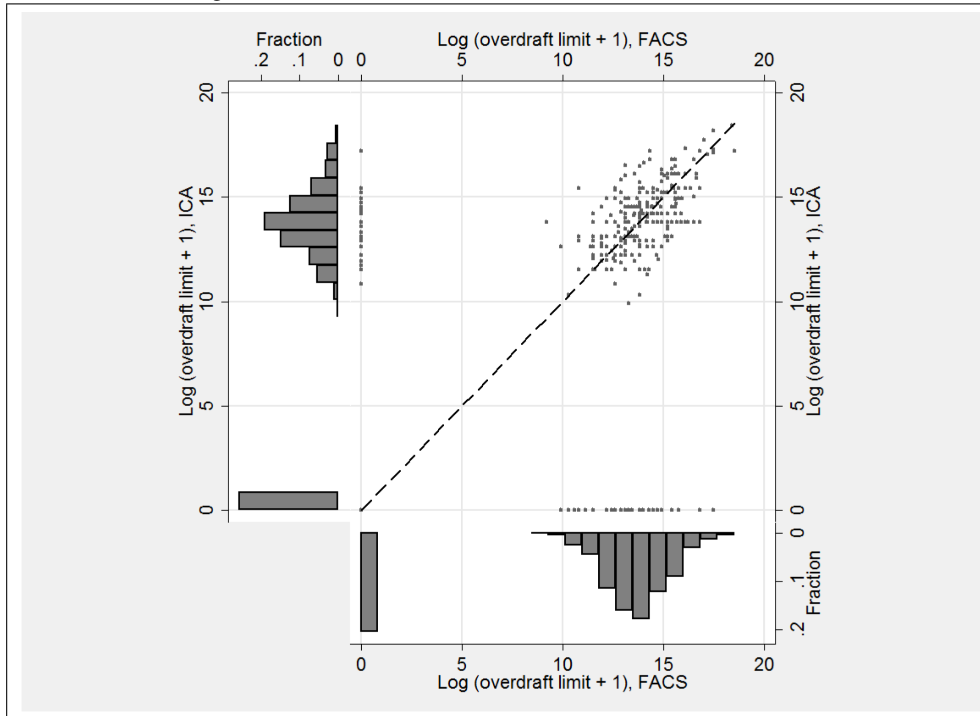


Table 7 suggests that firms' choice of legal status may have been important in banks' overdraft decision; for example, it shows that an SA firm switching to $SARL$ status was approximately twice as likely to lose its overdraft facility than a firm remaining as SA. This suggestion, however, demands a more rigorous analysis. Table 8 summarises the key variables that this analysis will use.

Table 7: **Change in legal status and change in overdraft provision**

	Gained overdraft	Kept overdraft	Lost overdraft	Never had overdraft	
SA → SA	5	70	7	4	86
SA → SARL	1	70	16	8	95
SARL → SA	0	6	2	0	8
SARL → SARL	39	172	45	43	299
	45	318	70	55	488

Table 8: **Key explanatory variables**

	N	Mean	S.Dev.	1st Q.	Median	3rd Q.	Min.	Max.	Zeroes
Log (permanent employees)	976	4.2	1.1	3.3	4.1	5.0	2.3	8.0	0
Age (years)	976	18.2	12.5	9.0	15.0	23.0	1.0	80.0	0
Director-General's years directing (FACS)	976	11.1	8.3	5.0	10.0	15.0	0.0	50.0	4
Dummy: Female Director-General	976	0.0	0.2	0.0	0.0	0.0	0.0	1.0	938
Log (machines and equipment)	976	15.0	1.8	13.8	14.9	16.1	6.9	20.7	0
Log (land and buildings)	976	14.4	3.5	14.0	15.0	15.8	0.0	21.4	46
Log (long-term debt)	976	13.1	5.6	13.4	15.0	16.2	0.0	20.3	144

4 Empirical analysis

4.1 Specifications

I use a straightforward difference-in-difference regression specification,

$$y_{it} = \gamma S_{it} + \boldsymbol{\delta}_1 \boldsymbol{x}_{1it} + \boldsymbol{\delta}_2 \boldsymbol{x}_{2i} + \eta_i + \epsilon_{it}, \tag{1}$$

where $\boldsymbol{x}_{1it}$ is a vector of time-varying parameters (understood to include a time dummy) and $\boldsymbol{x}_{2i}$ is a vector of time-invariant parameters (understood to include the constant 1). This specification can then be used both to explain the *level* of overdraft limit (since overdraft limits are approximately log-normal with zeroes, I use $y_{it} \equiv \log(\text{overdraft limit}_{it} + 1)$) and *whether* an overdraft is provided at all (I use a linear probability specification: $y_{it} \equiv \mathbf{1}(\text{overdraft limit}_{it} > 0)$). I will estimate using OLS as a benchmark comparator, but the more relevant estimator is clearly a fixed-effect regression; denoting $\tilde{z}_{it} \equiv z_{it} - \overline{z}_i \, \forall z$,

$$\widetilde{y}_{it} = \gamma \widetilde{S}_{it} + \boldsymbol{\delta}_1 \widetilde{\boldsymbol{x}}_{1it} + \widetilde{\epsilon}_{it}. \tag{2}$$

I am also interested to understand how the 'treatment effect' varies across different firms; in particular, how the effect varies with firm size, firm age and, additionally, with time. For this, I use a standard heterogeneous treatment specification: for some submatrix $\boldsymbol{m}_{it}$ of $\boldsymbol{x}_{1it}$, I use a difference-in-difference specification with interaction; I estimate both as OLS and fixed-effect specifications:

$$y_{it} = \gamma S_{it} + \boldsymbol{\phi} \cdot (\boldsymbol{m}_{it} \times S_{it}) + \boldsymbol{\delta}_1 \boldsymbol{x}_{1it} + \boldsymbol{\delta}_2 \boldsymbol{x}_{2i} + \eta_i + \epsilon_{it}, \tag{3}$$

$$\widetilde{y}_{it} = \gamma \widetilde{S}_{it} + \boldsymbol{\phi} \cdot (\widetilde{\boldsymbol{m}_{it} \times S_{it}}) + \boldsymbol{\delta}_1 \widetilde{\boldsymbol{x}}_{1it} + \widetilde{\epsilon}_{it}. \tag{4}$$

Under both specifications, the conditions for unbiased estimation under the fixed-effect specification are standard: $\mathbb{E}(S_{it} \cdot \epsilon_{it}) = 0; \mathbb{E}(\boldsymbol{x}_{1it} \cdot \epsilon_{it}) = \mathbf{0}$ (and, in the interaction case, additionally, $\mathbb{E}((\boldsymbol{m}_{it} \times S_{it}) \cdot \epsilon_{it}) = \mathbf{0}$).

4.2 Selection correction

In principle, the panel component of the ICA survey was a random subset of the FACS survey. Since the FACS survey was representative of the population at the time, basic analysis of the panel should provide consistent estimates. However, there is still a practical possibility of endogenous attrition — in particular, attrition caused by firms dropping below 10 permanent employees (and therefore not being included in the second round) and attrition caused by my dropping 24 firms with missing or implausible values for key variables. I deal with this by an Inverse Probability Weighting methodology (see Wooldridge (2002a, 587–590), Wooldridge (2002b) and Moffitt, Fitzgerald, and Gottschalk (1999)). This method requires the assumption of 'selection on observables':[40]

$$\Pr(p_{it} = 1 \,|\, y_{it}, \boldsymbol{x}_{1it}, \boldsymbol{x}_{2i}, \boldsymbol{z}_{i1}) = \Pr(p_{it} = 1 \,|\, \boldsymbol{z}_{i1}), \tag{5}$$

where p_{it} is an indicator for the appearance of firm i in the panel (so, in this context, $p_{i0} = p_{i1} \,\forall\, i$) and $\boldsymbol{z}_{i1}$ is some vector of firm-specific variables observed in the FACS survey. I estimate equation 5 by probit, then weight every observation in subsequent analysis by a firm-specific predicted inverse probability: $\left(\widehat{\Pr(p_{it} = 1 \,|\, \boldsymbol{z}_{i1})}\right)^{-1}$. For the vector $\boldsymbol{z}_{i1}$, I use all of the subsequent explanatory variables and both outcome variables (that is, whether a firm has an overdraft facility and what overdraft facility it has) from the FACS survey. The results are reported in Table 9.

Recall that the FACS survey involved 859 firms. Of these, 63 reported a legal status other than SA or $SARL$; I exclude these on the basis that they fall outside the population of interest. This leaves 793 firms, of which 783 have sufficient data in order to fit the selection probit (the 488 firms retained for the panel are then a strict subset of the 783 firms). I am required, therefore, to assume that the additional 10 omitted firms are omitted 'at random'. (This assumption is not necessarily accurate, of course, but it is necessary — and, after all, it amounts to only about 1% of the relevant firms.)

Making these assumptions, the subsequent results can be interpreted as consistent estimates for *the population of Moroccan manufacturing firms (in the selected regions and sectors) which, in 2000, had at least 10 permanent employees and had either SA or $SARL$ status*. Unweighted estimation results (available on request) support all of the same conclusions as the results reported here.

4.3 Results

OLS estimates indicate that legal status was significant in determining the level of (positive) overdraft limit, even when controlling for an extensive set of firm characteristics (Table 10, page 22, OLS.1-OLS.3). However, this result does not hold when running the same specifications under fixed effects (same table, FE.1-FE.3). Table 11 (page 23) shows the equivalent results when including the zero-overdraft cases. Under both OLS specifications (OLS.1-OLS.3) and fixed-effect specifications (FE.1-FE.3), legal status is significant in determining the overdraft limit; using the fixed-effect coefficients, legal status has an average treatment effect of about 17% on overdraft limits. Taken together,

[40] This refers, of course, to selection into *sample*, not selection into *treatment*; the latter is obviously allowed to depend upon fixed effects. Note that I *could* relax this assumption given that the ICA survey is itself (approximately) a representative cross-section of manufacturing firms in 2004; I could therefore use the methodology of Bhattacharya (2008) to allow for sample selection on *unobservables*. But the IPW method is simpler and more direct; moreover, issues of selection correction are not a primary focus of this paper.

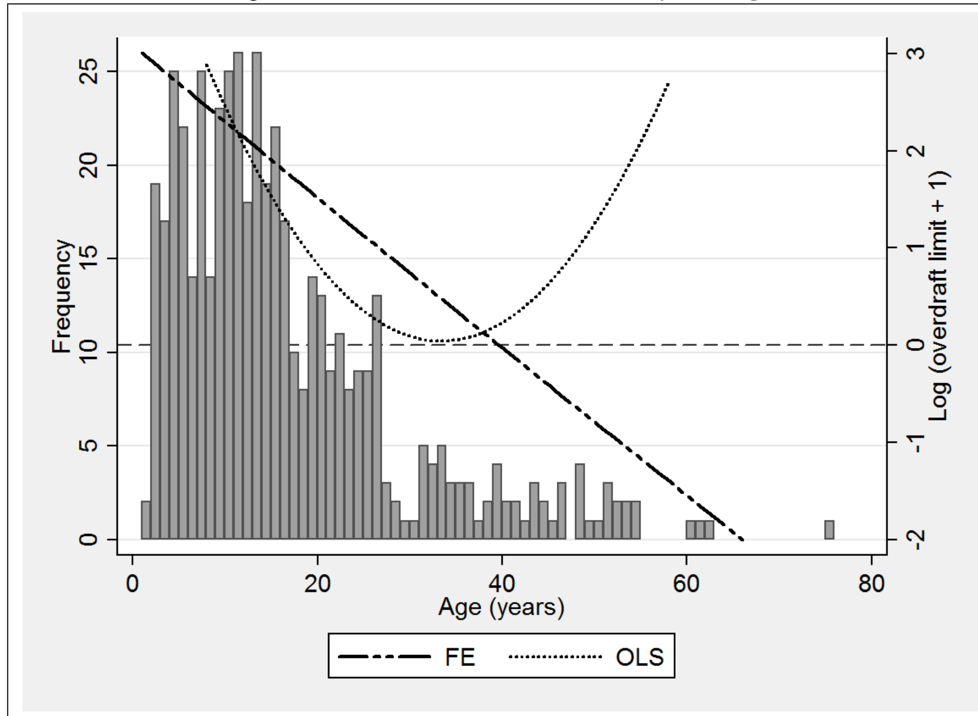
these results suggest that legal status is important in determining *whether* a firm provides an overdraft, but not on *how large* the consequent overdraft limit should be. Table 12 (page 24) provides further support for this conclusion: using a linear probability model, it shows that, in both OLS and fixed-effect specifications, legal status contributes about 10 percentage points to the probability of having an overdraft.[41]

I extend the analysis, then, to consider heterogenous treatment: *given that legal status has a significant effect on overdraft provision, how does that effect vary across different circumstances?* The first obvious point of comparison is time. The SA status was substantially more onerous as a result of the reforms, while there was effectively no change to the $SARL$; one would expect, therefore, that the effect of the SA status would *increase* across survey rounds. Table 13 (page 25) considers this: it shows OLS regressions for each time period separately (OLS.1 and OLS.2), then pooled with heterogeneous treatment (OLS.3), then a fixed-effect specification with heterogeneous treatment (FE.1). Neither the pooled OLS nor the (preferred) fixed-effect specification show a significant positive time-treatment effect; indeed, on both estimates, the time-treatment coefficient is negative (though not significant). Though this is a non-result, it is nonetheless interesting: given all of the previous discussion about the substantial additional responsibilities of the SA form, one might have expected a strong positive result on the time-treatment interaction. In short, firms continuing under the SA status ought to have been 'rewarded' by their banks for the more onerous standards of corporate governance to which they had submitted; intuitively, this should hold whether one thinks that the SA status is important because of internal governance, better information transparency to banks or even as a signal of management quality. The failure to find such a result is suggestive, at least, that banks did not appreciate the substance of the reform process; that they did not modify earlier methods of assessing firm quality in light of the new institutional regime. To the extent that policymakers might draw any guidance from a non-result such as this, it is that legal reforms designed to improve lender confidence may need to be communicated to lenders very directly in order to ensure that lenders understand specifically the basis for any new confidence.

Finally, I consider heterogeneous treatment across firm size and firm age; Table 14 (page 26) reports the results. As discussed earlier, the SA form was primarily designed for larger and more formal firms; the reform process only further emphasised this characterisation. One might expect, then, that larger firms would enjoy a larger relative benefit from the SA status. However, the estimation produces negative coefficients that are not significant, both in OLS (OLS.1) and fixed-effects (FE.1). One possible explanation for this result not being strongly positive is that smaller firms may enjoy a substantial *signalling* benefit from choosing the SA status: that is, banks may be particularly responsive to the status among smaller firms because banks might otherwise expect management quality among those firms to be particularly poor. Consideration of treatment heterogeneity by age adds further support to this suggestion: a basic fixed-effect specification (FE.2) shows that the treatment effect declines significantly with firm age; this, too, may be explained by some firms (in this case, younger firms) using the SA status to signal strong management quality. Figure 6 illustrates this using a quadratic specification under fixed-effects (FE.3). In doing so, it also shows that the OLS estimates on age-heterogeneity (OLS.3) are completely misleading; a further reminder, perhaps, of the benefit of panel data in this context.

[41] A variety of conditional logit specifications show the same general conclusion. Indeed, the results was initially identified using a conditional logit in the original technical summary of the FACS-ICA panel: see Fafchamps and El Hamine (2005, Ch.3, Table 5).

Figure 6: **Relative effect of SA status by firm age**



5 Conclusion

This paper has presented three main results. First, firm legal status is significant in determining firm overdraft limits, but this operates through the decision of *whether* to provide an overdraft rather than *how much* to provide. This provides some further support for claims that legal systems ensuring high standards of corporate governance are important in reassuring lenders.

Second, despite the extensive, controversial and costly process of legal reform, the SA status was *not* shown to have a significant positive *additional* effect after the reforms. It was suggested that this may be the result of banks not appreciating the potential value of the new legal obligations. This, of course, does not make the reforms a 'failure'; the process may have brought many other benefits and lenders may come to appreciate the new obligations in due course. However, this does suggest that similar reforms in future — whether in Morocco or elsewhere — may benefit from clearer and more direct government communication with lenders about the content of the reforms. The law may provide sound *basis* for lenders to feel reassured, but this does not imply that lenders will naturally appreciate the new regime and adjust quickly.

Third, the paper showed that the SA status was significantly more valuable for younger firms; further, the paper failed to reject that the value of the status does not change across firm size. These outcomes provoke many questions that lie beyond the capacity of the reduced-form methodology; what the present research *cannot* show is the *reason* that firm legal status has a significant positive effect. Is a firm's choice of the SA status valuable because the status reassures banks that the firm will be better managed that it otherwise would be? Or is the status valuable as a costly signal of

firm management quality and other unobservable variables? In short, is the status effect an *incentive effect* and/or an *information effect*? This is a fundamental question prompted by the present research, and a question whose answer may have important further implications for understanding the way that legal obligations affect firm-bank relations in an emerging economy. However, it is a question that, in this context at least, can only really be answered by a more structural approach. It is a question left for future research.

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Table 9: **Probability of survey retention**

	Probit	Marginal effects
	(1)	(2)
Dependent variable: ***Dummy: Firm retained for round 2***		
Eventual outcome variables:		
Log (overdraft limit + 1)	0.096 (0.041)**	0.036 (0.016)**
Dummy: overdraft limit > 0	-1.251 (0.556)**	-.378 (0.12)***
Legal status:		
Dummy: SA (0 = SARL)	-.318 (0.111)***	-.121 (0.042)***
Basic characteristics:		
Age (years)	0.032 (0.013)**	0.012 (0.005)**
Age (years)$^2/100$	-.033 (0.021)	-.013 (0.008)
Log (permanent employees)	0.124 (0.053)**	0.047 (0.02)**
Director-General's years directing (FACS)	-.004 (0.007)	-.001 (0.003)
Dummy: Female Director-General	-.280 (0.22)	-.109 (0.087)
Firm assets:		
Log (machines and equipment)	0.045 (0.043)	0.017 (0.016)
Log (land and buildings)	0.012 (0.043)	0.005 (0.016)
Dummy: Land & buildings missing or zero	0.257 (0.82)	0.092 (0.275)
Firm liabilities:		
Log (long-term debt)	-.141 (0.036)***	-.053 (0.013)***
Dummy: long-term debt < 0	-1.029 (0.464)**	-.390 (0.15)***
Dummy: long-term debt missing or zero	-2.431 (0.528)***	-.679 (0.05)***
Other:		
Region dummies	✓	✓
Bank dummies	✓	✓
Const.	0.827 (0.657)	
Obs.	783	783
McFadden's PsuedoR^2	0.08	

Confidence: ******* $\leftrightarrow$ **99%, **** $\leftrightarrow$ **95%, *** $\leftrightarrow$ **90%**.

Parentheses show robust (unclustered) standard errors.

Firm age is corrected across surveys so that every firm is recorded as ageing four years between rounds.

Table 10: **Explaining positive overdraft limits**

	OLS.1	OLS.2	OLS.3	FE.1	FE.2	FE.3
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable: ***Log (overdraft limit + 1)***						
Legal status:						
Dummy: SA (0 = SARL)	1.158 (0.088)***	0.34 (0.108)***	0.283 (0.103)***	0.222 (0.164)	0.181 (0.161)	0.154 (0.167)
Basic characteristics:						
Age (years)		0.02 (0.015)	0.015 (0.014)			
Age (years)$^2/100$		0.004 (0.018)	0.002 (0.016)		-.009 (0.067)	0.0004 (0.067)
Log (permanent employees)		0.239 (0.104)**	0.117 (0.069)*		0.125 (0.135)	0.096 (0.129)
Director-General's years directing (FACS)		-.003 (0.005)	-.005 (0.006)			
Dummy: Female Director-General		-.264 (0.06)***	-.355 (0.052)***			
Firm assets:						
Log (machines and equipment)		0.273 (0.032)***	0.175 (0.032)***		0.093 (0.055)*	0.101 (0.055)*
Log (land and buildings)		0.115 (0.042)***	0.077 (0.028)***		-.040 (0.056)	-.042 (0.057)
Dummy: Land & buildings missing or zero		1.607 (0.647)**	1.014 (0.449)**		-.500 (0.881)	-.542 (0.887)
Firm liabilities:						
Log (long-term debt)			0.309 (0.028)***			0.068 (0.098)
Dummy: long-term debt < 0			4.937 (0.411)***			1.403 (1.494)
Dummy: long-term debt missing or zero			4.243 (0.482)***			0.579 (1.480)
Other:						
Region dummies	✓	✓	✓			
Bank dummies	✓	✓	✓			
Time dummy (0 = FACS)	0.426 (0.086)***	0.069 (0.093)	0.124 (0.092)	0.111 (0.086)	0.112 (0.141)	0.143 (0.14)
Const.	13.096 (0.118)***	6.344 (0.352)***	4.360 (0.43)***	13.552 (0.081)***	12.282 (1.197)***	11.270 (1.751)***
Obs.	751	751	751	751	751	751
R^2	0.15	0.409	0.456	0.008	0.02	0.047

Confidence: ***** ↔ 99%, ** ↔ 95%, * ↔ 90%.**

Parentheses show robust standard errors, clustered by region in specifications OLS.1, OLS.2 and OLS.3.

Observations are weighted by the inverse predicted probability of survey retention, derived from Table 9.

Information on firm Directors-General is drawn only from the first round, and is therefore treated as time-invariant.

Firm age is corrected across surveys so that every firm is recorded as ageing four years between rounds. Age therefore drops out in the fixed-effect specification.

Table 11: **Explaining positive and zero overdraft limits**

	OLS.1	OLS.2	OLS.3	FE.1	FE.2	FE.3
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable: ***Log (overdraft limit + 1)***						
Legal status:						
Dummy: SA (0 = SARL)	2.946 (0.246)***	1.669 (0.219)***	1.793 (0.316)***	1.681 (0.655)**	1.743 (0.665)***	1.598 (0.673)**
Basic characteristics:						
Age (years)		0.007 (0.012)	-.019 (0.027)			
Age (years)$^2/100$		0.009 (0.018)	0.006 (0.031)		0.101 (0.302)	0.164 (0.305)
Log (permanent employees)		0.658 (0.324)**	0.127 (0.222)		0.553 (0.577)	0.398 (0.579)
Director-General's years directing (FACS)		0.096 (0.007)***	0.081 (0.018)***			
Dummy: Female Director-General		-1.968 (0.62)***	-1.670 (0.892)*			
Firm assets:						
Log (machines and equipment)		0.214 (0.07)***	-.155 (0.091)*		-.075 (0.215)	-.074 (0.218)
Log (land and buildings)		0.116 (0.204)	0.05 (0.201)		-.153 (0.167)	-.162 (0.168)
Dummy: Land & buildings missing or zero		0.804 (3.256)	-.667 (3.362)		-3.373 (2.794)	-3.589 (2.800)
Firm liabilities:						
Log (long-term debt)			0.972 (0.115)***			0.615 (0.345)*
Dummy: long-term debt < 0			13.313 (3.027)***			9.172 (5.534)*
Dummy: long-term debt missing or zero			13.362 (2.037)***			8.487 (5.226)
Other:						
Region dummies	✓	✓	✓			
Bank dummies	✓	✓	✓			
Time dummy (0 = FACS)	-.165 (0.178)	-.486 (0.213)**	-.271 (0.384)	-.422 (0.354)	-.401 (0.599)	-.528 (0.628)
Const.	9.254 (0.459)***	0.934 (2.312)	-3.953 (2.344)*	10.178 (0.312)***	10.837 (4.325)**	2.163 (6.088)
Obs.	976	976	976	976	976	976
R^2	0.084	0.137	0.131	0.025	0.032	0.041

Confidence: ***** $\leftrightarrow$ 99%, ** $\leftrightarrow$ 95%, * $\leftrightarrow$ 90%.**

Parentheses show robust standard errors, clustered by region in specifications OLS.1, OLS.2 and OLS.3.

Observations are weighted by the inverse predicted probability of survey retention, derived from Table 9.

Information on firm Directors-General is drawn only from the first round, and is therefore treated as time-invariant.

Firm age is corrected across surveys so that every firm is recorded as ageing four years between rounds. Age therefore drops out in the fixed-effect specification.

Table 12: **Explaining whether an overdraft is provided (Linear Probability Model specification)**

	OLS.1	OLS.2	OLS.3	FE.1	FE.2	FE.3
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable: ***Dummy: Overdraft provided***						
Legal status:						
Dummy: SA (0 = SARL)	0.145 (0.017)***	0.1 (0.022)***	0.109 (0.018)***	0.105 (0.049)**	0.113 (0.05)**	0.103 (0.05)**
Basic characteristics:						
Age (years)		0.0001 (0.001)	-.001 (0.002)			
Age (years)$^2/100$		-.0009 (0.001)	-.001 (0.002)		0.012 (0.022)	0.017 (0.022)
Log (permanent employees)		0.036 (0.018)**	0.004 (0.012)		0.029 (0.043)	0.019 (0.043)
Director-General's years directing (FACS)		0.007 (0.0005)***	0.006 (0.001)***			
Dummy: Female Director-General		-.136 (0.044)***	-.109 (0.065)*			
Firm assets:						
Log (machines and equipment)		0.0008 (0.006)	-.021 (0.006)***		-.010 (0.016)	-.011 (0.017)
Log (land and buildings)		0.001 (0.016)	-.002 (0.016)		-.013 (0.013)	-.014 (0.013)
Dummy: Land & buildings missing or zero		-.059 (0.261)	-.138 (0.269)		-.300 (0.221)	-.316 (0.222)
Firm liabilities:						
Log (long-term debt)			0.056 (0.01)***			0.046 (0.026)*
Dummy: long-term debt < 0			0.724 (0.245)***			0.675 (0.428)
Dummy: long-term debt missing or zero			0.767 (0.174)***			0.669 (0.405)*
Other:						
Region dummies	✓	✓	✓			
Bank dummies	✓	✓	✓			
Time dummy (0 = FACS)	-.036 (0.01)***	-.040 (0.013)***	-.028 (0.023)	-.044 (0.027)	-.045 (0.046)	-.059 (0.048)
Const.	0.707 (0.032)***	0.467 (0.165)***	0.202 (0.152)	0.756 (0.024)***	0.929 (0.322)***	0.279 (0.462)
Obs.	976	976	976	976	976	976
R^2	0.062	0.092	0.077	0.026	0.035	0.041

Confidence: ***** ↔ 99%, ** ↔ 95%, * ↔ 90%.**

Parentheses show robust standard errors, clustered by region in specifications OLS.1, OLS.2 and OLS.3.

Observations are weighted by the inverse predicted probability of survey retention, derived from Table 9.

Information on firm Directors-General is drawn only from the first round, and is therefore treated as time-invariant.

Firm age is corrected across surveys so that every firm is recorded as ageing four years between rounds. Age therefore drops out in the fixed-effect specification.

Table 13: **Heterogenous treatment by time**

	OLS.1	OLS.2	OLS.3	FE.1
	(1)	(2)	(3)	(4)
Dependent variable: ***Log (overdraft limit + 1)***				
Legal status:				
Dummy: SA (0 = SARL)	1.643 (0.306)***	1.653 (0.419)***	1.726 (0.239)***	1.936 (0.724)***
Dummy: SA × time			-.159 (0.651)	-.688 (0.774)
Basic characteristics:				
Age (years)	-.026 (0.032)	0.057 (0.048)	0.006 (0.012)	
Age (years)$^2/100$	0.064 (0.025)***	-.061 (0.071)	0.011 (0.019)	0.198 (0.287)
Log (permanent employees)	0.466 (0.186)**	0.82 (0.479)*	0.658 (0.324)**	0.585 (0.576)
Director-General's years directing (FACS)	0.094 (0.009)***	0.096 (0.016)***	0.096 (0.008)***	
Dummy: Female Director-General	-1.626 (1.113)	-2.437 (0.354)***	-1.967 (0.622)***	
Firm assets:				
Log (machines and equipment)	0.455 (0.205)**	0.007 (0.138)	0.215 (0.073)***	-.084 (0.215)
Log (land and buildings)	0.031 (0.13)	0.179 (0.296)	0.117 (0.203)	-.152 (0.168)
Dummy: Land & buildings missing or zero	3.488 (2.696)	1.254 (4.592)	0.8 (3.272)	-3.450 (2.825)
Other:				
Region dummies	✓	✓	✓	
Bank dummies	✓	✓	✓	
Time dummy (0 = FACS)			-.445 (0.339)	-.366 (0.612)
Const.	-.093 (1.126)	1.122 (4.001)	0.884 (2.175)	10.380 (4.265)**
Obs.	488	488	976	976
R^2	0.164	0.126	0.137	0.033

***Confidence:* *** ↔ 99%, ** ↔ 95%, * ↔ 90%.**

Parentheses show robust standard errors, clustered by region in specifications OLS.1, OLS.2 and OLS.3.

Observations are weighted by the inverse predicted probability of survey retention, derived from Table 9.

Information on firm Directors-General is drawn only from the first round, and is therefore treated as time-invariant.

Firm age is corrected across surveys so that every firm is recorded as ageing four years between rounds. Age therefore drops out in the fixed-effect specification.

Table 14: **Heterogenous treatment by firm size and age**

	OLS.1	OLS.2	OLS.3	FE.1	FE.2	FE.3
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable: ***Log (overdraft limit + 1)***						
Legal status and interactions:						
Dummy: SA (0 = SARL)	2.500 (0.723)***	2.686 (0.224)***	4.953 (1.002)***	1.879 (2.240)	3.053 (1.100)***	3.085 (1.863)*
(Dummy: SA) $\times$ Log (permanent employees)	-.188 (0.139)			-.033 (0.488)		
(Dummy: SA) $\times$ Age		-.055 (0.017)***	-.294 (0.094)***		-.076 (0.042)*	-.079 (0.148)
(Dummy: SA) $\times$ Age$^2/100$			0.44 (0.14)***			0.003 (0.223)
Basic characteristics:						
Age (years)	0.006 (0.012)	0.047 (0.024)*	0.124 (0.051)**			
Age (years)$^2/100$	0.011 (0.016)		-.184 (0.086)**			-.026 (0.339)
Log (permanent employees)	0.713 (0.338)**	0.658 (0.324)**	0.658 (0.328)**	0.544 (0.593)	0.532 (0.566)	0.527 (0.575)
Director-General's years directing (FACS)	0.096 (0.007)***	0.079 (0.01)***	0.086 (0.011)***			
Dummy: Female Director-General	-1.960 (0.618)***	-1.952 (0.572)***	-1.918 (0.574)***			
Firm assets:						
Log (machines and equipment)	0.215 (0.069)***	0.212 (0.074)***	0.214 (0.07)***	-.067 (0.215)	-.082 (0.216)	-.080 (0.215)
Log (land and buildings)	0.12 (0.203)	0.121 (0.193)	0.111 (0.192)	-.156 (0.169)	-.145 (0.168)	-.146 (0.169)
Dummy: Land & buildings missing or zero	0.86 (3.230)	0.824 (3.158)	0.667 (3.203)	-3.427 (2.813)	-3.413 (2.815)	-3.429 (2.827)
Other:						
Region dummies	✓	✓	✓			
Bank dummies	✓	✓	✓			
Time dummy (0 = FACS)	-.484 (0.212)**	-.565 (0.181)***	-.582 (0.172)***	-.261 (0.375)	-.178 (0.377)	-.139 (0.676)
Const.	0.65 (2.359)	0.508 (2.167)	-.005 (1.928)	11.200 (4.128)***	11.389 (4.061)***	11.500 (4.427)***
Obs.	976	976	976	976	976	976
R^2	0.138	0.14	0.146	0.032	0.036	0.036

Confidence: ***** $\leftrightarrow$ 99%, ** $\leftrightarrow$ 95%, * $\leftrightarrow$ 90%**.

Parentheses show robust standard errors, clustered by region in specifications OLS.1, OLS.2 and OLS.3.

Observations are weighted by the inverse predicted probability of survey retention, derived from Table 9.

Information on firm Directors-General is drawn only from the first round, and is therefore treated as time-invariant.

Firm age is corrected across surveys so that every firm is recorded as ageing four years between rounds. Age therefore drops out in the fixed-effect specification.