

**Corporate Governance Regulation, Legal Origin and Small Business
Access to Credit: A Cross-European Comparison**

Daniela Maresch

Institute for Innovation Management

JKU Linz

Altenbergerstasse 69, 4040 Linz – Austria

daniela.maresch@jku.at

Andrea Moro

Cranfield School of Management

Cranfield University

Bedford, MK43 0AL – UK

andrea.moro@cranfield.ac.uk

Matthias Fink

Institute for International Management Practice

Anglia Ruskin University Cambridge

Cambridge, CB1 1PT – UK

matthias.fink@anglia.ac.uk

Corporate Governance Regulation, Legal Origin and Small Business

Access to Credit: A Cross-European Comparison

Abstract

In this cross-European study, we investigate the impact of two specific corporate governance mechanisms (shareholder rights and regulations on related-party transactions) on firms' decision to apply for credit and the banks' lending decision. We argue that this impact is contingent upon the legal origin that shapes the regulatory institutional setting in which the corporate governance mechanisms are embedded. We perform a cross-European comparison based on 45,596 firm-level observations from 13 countries. Logit regression reveals that corporate governance does not directly influence the banks' lending decision or the firms' decision to apply for credit. Rather, the impact of corporate governance on firms' credit access unfolds through regulatory institutional contexts that are shaped only by specific legal origins. Our findings help to explain why firms in different countries are financed so differently by highlighting the relevance of the embeddedness of corporate governance mechanisms in regulatory institutional settings. For research, our findings call for more multi-level work. For business practice, our findings imply that a well-designed governance regime regarding shareholder protection can foster firms' access to bank finance, and thus innovation and economic growth. For legislators, we highlight the importance of ensuring a fit between corporate governance mechanisms and the specifics of the national regulatory environment.

Keywords: Corporate Governance, Credit Access, Legal Origin, Europe, Comparison

Introduction

Corporate governance mechanisms and their effects differ considerably across

different countries (La Porta, Lopez-de-Silvanes, Shleifer, & Vishny, 1997, 1998). Well-functioning corporate governance, which is concerned with ensuring that those who supply finance to businesses get a return on their investment (Shleifer & Vishny, 1997), mitigates – amongst other things – the risk that managers will cheat the shareholders and that the controlling shareholders will cheat the minority shareholders. Thus, corporate governance is crucial for the sustainable success of a firm. As only successful firms are able to repay their loans, banks should also consider corporate governance regulations when taking their lending decisions.

The role of corporate governance in banks' financing of firms has attracted substantial scholarly attention in the past. Previous studies have focused on the impact of corporate governance on the external financing of firms (Demirguc-Kunt & Maksimovic, 1998), the cost of debt (Anderson, Mansi, & Reeb, 2004; Fields, Fraser, & Subrahmanyam, 2012; Francis, Hasan, Koetter, & Wu, 2012; Klock, Mansi, & Maxwell, 2005; Sengupta, 1998) credit ratings (Ashbaugh-Skaife, Collins, & LaFond, 2006), loan sizes and maturities (Lin, Chen, & Yen, 2014), and bond covenant restrictions (Qi, Roth, & Wald, 2011). While these studies aim to shed light on the effect of corporate governance on the terms and conditions of bank lending, the intriguing question of whether and how corporate governance impacts on firms' access to bank credit has remained rather opaque. Hope, Thomas, & Vyas (2011) were the first to explore the impact of corporate governance mechanisms on firms' access to bank credit. We advance this stream of research on credit access by investigating the impact of two specific corporate governance mechanisms that address the conflicts of interests between shareholders and debt holders: (i) mechanisms aimed at mitigating agency conflicts between shareholders and managers (i.e. shareholder rights), and (ii) mechanisms aimed at mitigating conflicts between minority shareholders, controlling shareholders and managers (i.e. regulations on related-party transactions). We examine the effects of shareholder rights and

regulations concerning related-party transactions on the firm's ability to obtain credit, by looking at two different scenarios: first, when the firm obtains the loan it applies for, and second, when the firm is discouraged from applying for a loan because it fears a rejection by the bank. However, it has been shown that the power of specific corporate governance mechanisms is contingent on the regulatory institutional setting in which they are embedded and through which they are enforced (Beck & Lavine, 2003; La Porta et al., 1998; Nakajima, 1999a, 1999b). Thus, we also account for the legal origins that shape countries' regulatory institutional settings (Reynolds & Flores, 1989) and perform a cross-European comparison based on over 45,596 firm-level observations from 13 countries grouped into four clusters, each with distinct legal origins.

Our logit regression reveals that corporate governance does not directly influence the banks' lending decision or the firms' decision to apply for credit. Rather, the impact of corporate governance on firms' credit access unfolds through regulatory institutional contexts that are shaped only by certain legal origins. Our findings add another jigsaw piece to the "corporate governance puzzle" (La Porta et al., 1998) of why firms in different countries are financed so differently. First, we extend the investigation of the direct effects of corporate governance mechanisms and the regulatory institutional setting on firms' access to external finance by tracing the effects across these two levels. By doing so, we test for the effects of the specific corporate governance mechanisms embedded in the regulatory institutional setting and gain a more comprehensive insight into the interplay of the two levels of analysis. Second, our analysis builds on a unique and rich multi-source dataset, which allows us to tap the full potential of a more fine-grained analysis at the firm level. For business practice, our findings imply that, with a well-designed governance regime regarding shareholder protection, policy makers can influence firms' access to bank finance, and thus innovation and economic growth, in a favourable way. Our results call for corporate governance regimes

that account for the embeddedness in the specific regulatory institutional setting. Legislators can glean from our results the need to ensure a flexible adoption of specific regulations that are imposed, for example, by supranational entities, to suit the specific characteristics of the national regulatory environment.

2. Theoretical background and development of hypotheses

Bank debt is a major source of firms' financing. Due to the economic importance of bank loans, a growing stream of literature explores the determinants of bank loan contracting. Both the access to bank loans and the price and non-price terms of the loan contract essentially depend on the probability that firms will default on their debt obligation and the degree of bank protection provided in such an event (Bhojraj & Sengupta, 2003). Protection can be granted by covenants, guarantees or the legal environment. As recommended by Filatotchev and Wright (2011), we take an agency theoretical perspective. Theoretical papers emphasize that, in order to compensate for higher default risk, banks are more likely to increase interest rates and tighten non-price terms when the firm's information risks and/or agency risks are severe (Rajan & Winton, 1995).

Information risks and agency risks impact the likelihood that a firm will default on its credit. Information risk represents the risk that firm managers are hiding relevant information that could show lending to the firm to be riskier than is perceived by the bank. Under greater information risk, banks face greater uncertainty when assessing a firm's creditworthiness. The agency risk manifests itself in two different ways (Ge, Kim, & Song, 2012): First, conflicts of interests between managers and external stakeholders, such as banks, may arise. Managers may act self-interestedly and aim at maximizing their personal wealth at the expense of external stakeholders. From the banks' point of view, such behaviour may increase the probability of the firm defaulting on its credit (Lin et al., 2014). Second, conflicts

of interests between shareholders and debt holders may occur. Jensen and Meckling (1976) argue that shareholders have an incentive to engage in investments with the potential for high returns but little chance of success as soon as a debt contract has been put in place. This is because shareholders will receive most of the returns if the investment succeeds, but the creditor will have to bear most of the costs if the investment fails (John & Senbet, 1998). Further, shareholders have an incentive to underinvest in projects with a positive net present value when they believe that most of the returns will be received by the creditor (Myers, 1977). In either case, the shareholders' behaviour will impair the bank's position as it will increase the firm's probability of default.

Previous research suggests that corporate governance mechanisms affect both information and agency risks and, as a consequence, may impact on the price and non-price terms of loan contracts. More precisely, corporate governance mechanisms aimed at improving corporate transparency should be able to reduce information asymmetries between managers and banks. The findings of Sengupta (1998), who explores the impact of corporate disclosure on the cost of debt, are in line with this reasoning: He provides evidence that high disclosure quality contributes to lower interest costs. Also Cumming and Knill (2012) in their global study report a positive effect of disclosure requirements on the supply of venture capital. Similarly, Anderson et al. (2004) document that the independence and size of the board of directors and audit committee are negatively related to the cost of debt. This suggests that characteristics of the board of directors and the audit committee increase the reliability of financial reports and, thus, decrease information asymmetries. Hope et al. (2011) provide evidence that greater credibility of financial statements eases firms' perceived financing constraints.

Further, corporate governance mechanisms can mitigate agency problems between managers and debt holders by strengthening the monitoring of managers and confining the

managers' self-dealing activities (Ge et al., 2012). The findings of Bhojraj and Sengupta (2003) suggest that firms with better corporate governance mechanisms, i.e. stronger outside control of the board and greater institutional ownership, are rewarded with lower bond yields. With regard to bank lending, previous research documents that firms with higher-quality boards of directors, reflected e.g. by board independence, board size or longer director tenure, benefit from higher credit ratings (Ashbaugh-Skaife et al., 2006), lower loan spreads (e.g., (Fields et al., 2012; Francis et al., 2012) and both larger loan sizes and longer maturities (Lin et al., 2014). Further, Lo, Wong, and Firth (2010) provide evidence that the probability that a firm will engage in transfer price manipulations decreases when its board consists of relatively more independent directors and fewer directors representing the parent company, when the firm's CEO and chair positions are occupied by different people, and when the firm's audit committee includes financial experts.

Whereas previous research documents that corporate governance mechanisms are able to reduce information asymmetries and agency problems between firms' managers and banks, empirical evidence suggests that corporate governance mechanisms are not suitable for resolving conflicts of interests between shareholders and debt holders. This is because corporate governance mechanisms are primarily designed to protect shareholder interests, which may differ from the debt holders' interests. Prior studies show that corporate governance mechanisms that protect shareholders harm credit ratings (Ashbaugh-Skaife et al., 2006) as well as the price and non-price terms of the loan contract. (Chava, Livdan, & Purnanandam, 2009; Jiraporn, Chintrakarn, Kim, & Liu, 2013; Klock et al., 2005) find a positive relationship between shareholder rights and the cost of debt. Furthermore, Qi et al. (2011) document that firms with stronger shareholder rights have more bond covenant restrictions. Thus, corporate governance mechanisms that are desirable for shareholders may not be regarded as desirable by debt holders.

Most of the above-mentioned studies focus on the impact of corporate governance mechanisms on the firm's credit rating or the price and non-price terms of the loan contract. Hope et al. (2011) were the first to explore the impact of a specific corporate governance mechanism, namely, the review of the firm's annual financial statements by an external auditor, on credit access. We extend their work as follows: First, we investigate the impact of two different corporate governance mechanisms that may affect the conflicts of interests between shareholders and debt holders: (i) mechanisms aimed at mitigating agency conflicts between shareholders and managers (i.e. shareholder rights), and (ii) mechanisms aimed at mitigating conflicts between minority shareholders, controlling shareholders and managers (i.e. regulations on related-party transactions). Second, we analyse both the probability of applying for but not obtaining a loan and the probability of being discouraged from applying for a loan due to fear of rejection, since firms will be credit constrained in either case.

Shareholder rights are designed to mitigate agency conflicts between managers and shareholders. However, by aligning the interests of managers and shareholders more closely, the probability that the managers will shift wealth from the creditors to the shareholders increases (e.g. Ortiz-Molina, 2006). Due to this shift, the firm's probability of defaulting on the bank's loan increases. If banks observe shareholder rights, they should be able to anticipate the greater risk they incur because of the convergence of interests of managers and shareholders, at the time when the lending decision is taken. Due to the increased perceived risk, banks will more likely deny access to credit if the shareholder rights are strong. On the basis of this argument, we formulate the following hypothesis:

H1a: The stronger are the shareholder rights, the lower is the probability that firms will obtain credit.

In addition to corporate governance mechanisms that focus primarily on the resolution of agency conflicts between managers and diffuse shareholders, there are also corporate governance mechanisms that deal with the resolution of conflicts of interests among managers, controlling shareholders and minority shareholders. Both managers and controlling shareholders may expropriate minority shareholders by transferring resources from the firm through related-party transactions, e.g. by extracting cash from the firm by selling goods or services to the firm through self-dealing transactions or by obtaining loans with preferential terms (Johnson, La Porta, Lopez-de-Silanes, & Shleifer, 2000). Empirical evidence suggests that related-party transactions are associated with losses in value for minority shareholders (e.g., Bae, Kang, & Kim, 2002.; Berkman, Cole, & Fu, 2009; Cheung, Rau, & Stouraitis, 2006). In order to reduce the agency problem involved in related-party transactions, corporate governance rules either aim at ensuring arm's-length terms and conditions by regulating the disclosure and approval requirements or empower minority shareholders to sue those who expropriate and hold them liable for prejudicial related-party transactions. Further, prejudicial related-party transactions can be deterred through fines and criminal sanctions (Djankov, Hart, McLiesh, & Shleifer, 2008).

While regulations on related-party transactions reduce agency conflicts between minority shareholders, managers and controlling shareholders, their impact on agency conflicts between the shareholders and the bank is unclear. We argue that banks will be more likely to grant credit when more rigid corporate governance rules lead to related-party transactions that are at arm's-length. This is because rules that constrain the power of managers and controlling shareholders in favour of minority shareholders also protect other stakeholders, albeit to a lesser extent. Accordingly, we formulate the following hypothesis:

H1b: The stronger is the regulations on related-party transactions, the higher is the

probability that firms will obtain credit.

However, corporate governance rules may not only impact the banks' decision to grant credit, but also the firms' decision to apply for loans. In order to increase their chances of success, firms will try to foresee the bank's lending decision, since there is no point in investing effort into filing a loan when they know that the bank will deny it. Hence, firms will also try to anticipate how the corporate governance rules might affect the banks' lending decision in deciding whether or not to apply for a loan. Assuming that firms' managers are able to anticipate banks' behaviour correctly, we expect there to be an increase in the probability of firms being discouraged from applying for loans if – as hypothesized – corporate governance rules reduce the probability of firms obtaining credit. In contrast, if, as hypothesized, corporate governance rules increase the probability of firms obtaining credit, we expect there to be a reduction in the probability of firms being discouraged from applying for loans. Thus, we formulate the following hypotheses:

H1c: The stronger are the shareholder rights, the higher is the probability that firms will be discouraged from applying for credit.

H1d: The stronger is the regulations on related-party transactions, the lower is the probability that firms will be discouraged from applying for credit.

Both shareholder rights and rules on related-party transactions represent specific regulations that are embedded in the respective country's regulatory institutional setting. The current regulatory institutional setting is the result of historical development (Lounsbury, 2002). It is shaped by the origin of the country's legal system, which in the European context tends to be either English common law, or French, German or Scandinavian civil law

(Reynolds & Flores, 1989). While specific regulations vary between single countries, regulatory institutional settings with a common legal origin share key principles and patterns (La Porta et al., 1997; Wise, 1990). Thus, in order to understand the effects of specific regulations on business practices, higher levels of constraints and opportunities that are relevant to these practices need to be considered as well (Friedland & Alford, 1991). Moreover, the effects have to be traced across these levels (Stinchcombe, 1991). For the specific corporate governance regulations under investigation here, this higher level that contains or enables specific corporate governance regulations is the regulatory institutional setting (Filatotchev, Jackson, & Nakajima, 2013).

The country's regulatory institutional setting is relevant in determining the effects of corporate governance because specific regulations will only affect business practice when they are applied and enforced (Sacco, 1991). More specifically, the effectiveness of specific regulations depends on how well they fit with the regulatory institutional settings in which they are embedded (Monateri, 2003). This is because all legal scholars (such as legislators, judges or attorneys at law) and their behaviour are embedded in the country's institutional settings. Following the concept of embedded agency (Giddens, 1984; Sewell, 1992), the social actors in the legal system have a common understanding of that legal system and this common understanding shapes the way in which they interpret, apply and further develop regulations. In that way, they reproduce the legal tradition and reinforce the particularities of the institutional setting that are rooted in its legal origin (Pistor, Keinan, Kleinheisterkamp, & West, 2003; Thornton & Ocasio, 1999).

Ideally, there will be a fit between specific regulations and the regulatory institutional setting in which they are embedded (Thornton, 2002), as regulations are mainly developed, applied and enforced within the same country, and thus by legal scholars with a common legal background. However, this fit may be lost when regulations are developed supra-

nationally, such as by the European Union (for examples of such regulations concerning corporate governance see Andenas and Kenyon-Slade, 1993), but applied and enforced nationally (Wise, 1990). In this case, the effectiveness of the specific regulation will depend on how well countries manage to adapt their national regulations to supra-national requirements or how well supra-national regulations are implemented in the national regulatory institutional setting.

Countries' success in ensuring a fit between specific regulations and the regulatory institutional setting in which they are embedded may vary (Hayek, 1960; Marrayman, 1985). However, the better the adaptability, and consequently the fit, the more effective the specific regulations will be (Posner, 1973; Thornton, 2002). Beck, Demirgüç-Kunt, and Levin (2002) present empirical evidence that differences in the adaptability of regulatory institutional settings explain cross-country differences in corporate financing. More specifically, more effective shareholder rights and rules on related-party transactions will reduce the risks for banks in relation to the financing decision (Demirguc-Kunt & Maksimovic, 1998). As argued above, the effectiveness of these two corporate governance mechanisms will impact on both the probability of firms obtaining credit and the probability of firms being discouraged from applying for credit. On the basis of these arguments, we propose the following hypotheses:

H2a: The negative effect of shareholder rights on the probability of firms obtaining credit is moderated by the origin of the legal system.

H2b: The positive effect of regulations on related-party transactions on the probability of firms obtaining credit is moderated by the origin of the legal system.

H2c: The positive effect of shareholder rights on the probability of firms being discouraged from applying for credit is moderated by the origin of the legal

system.

H2d: The negative effect of regulations on related-party transactions on the probability of firms being discouraged from applying for credit is moderated by the origin of the legal system.

3. Data and methodology

3.1 Data

Our analysis uses data from the Survey on the Access to Finance of Enterprises (SAFE), which is run on behalf of the European Commission and the European Central Bank. SAFE is an on-going survey that has collected information about firms' access to finance at semi-annual intervals since 2009, systematically covering at least thirteen euro area countries (namely Austria, Belgium, France, Finland, Germany, Greece, Luxemburg, Ireland, Italy, Malta, the Netherlands, Portugal and Spain).

The firms in the sample used by SAFE are randomly selected from the Dun & Bradstreet database. The sample is stratified by firm-size class, economic activity and country, and the sample size for each economic activity is chosen to guarantee satisfactory representation across the four largest activities: industry, construction, trade and services. Agriculture, forestry, fishing, financial intermediation, public administration, activities of households, extra-territorial organizations, and bodies and holding companies are excluded. Moreover, the sample sizes are selected on the basis of representation at country level. The individual surveyed in each firm is a top-level executive and the questionnaire is administered in the local language.

We merge the SAFE dataset with information from the quarterly Bank Lending Survey (BLS), which contains information about the banks' lending in the past three months and the banks' propensity to lend in the next six months. We include the observations of the

banks' propensity to lend to small/medium-sized firms in the previous three months in order to control for credit availability in the market. We also include data from Eurostat in order to use homogeneous data on GDP growth, unemployment rates, inflation and the Herfindahl-Hirschman Index of bank concentration (HHI). Finally, data on shareholder rights and regulations on related-party transactions come from the World Bank's Doing Business dataset on protecting minority investors.

3.2 Methodology

Our analysis relies on logit regression (Hosmer & Lemeshow, 2000), since the two dependent variables considered are binary. The panel dataset used is unmatched at the firm level. Thus, we are prevented from implementing fixed-effects panel regression that would have allowed us to consider the evolution of lending relationships over time at the firm level. Shareholder rights and regulations on related-party transactions may differ at the country level and with firm size. This fact could generate clustering effects on the errors of the regression. We therefore estimate standard errors robust to clustering of errors by considering 39 different clusters (thirteen countries and three firm-size classes, namely micro, small and medium-sized firms, in each country). In addition, we estimate our regressions by including the weights that restore the proportions of the economic weight (in terms of the number of employees) of each size class, economic activity and country.

We estimate a set of regressions, in which we enter shareholder rights and regulations on related-party transactions, and their interaction with legal origin. This approach avoids multicollinearity problems linked to the fact that the variables for shareholder rights and regulations on related-party transactions are correlated with each other.

In addition, we implement a number of robustness checks. Corporate governance mechanisms are related to the culture of a country. Countries representing a more risk-averse culture tend to develop regulations that grant more protection against possible agency

conflicts. Our analysis could therefore suffer from endogeneity linked to the omitted variable of culture. In order to examine whether the results are affected by endogeneity, we instrument the variables for shareholder rights and regulations on related-party transactions (when they are statistically significant) with variables that measure the country's culture. We find very good candidates in Hofstede's cultural dimensions (Hofstede, 1981, 1983). We use four dimensions: power distance (PD) (defined as the extent to which less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally); individualism (IND) (the degree of interdependence a society maintains among its members); masculinity (MAS) (whether the society is driven by competition, achievement and success, with success being defined by the winner/best in field); and uncertainty avoidance (UNC) (the way that a society deals with the fact that the future can never be known). We do not consider the residual two dimensions, namely indulgence (the extent to which people try to control their desires and impulses) and pragmatism (how people relate to the fact that so much of what happens around us cannot be explained), since we do not see a logical relationship between these dimensions and our corporate governance variables.

Moreover, our analysis might be subject to sample selection bias, as we either use a dataset that includes only those firms that applied for a loan (11,332 out of 45,596) or one that includes only those firms that did not apply for a loan (34,264 out of 45,596). Thus, we re-estimate our model implementing the (Heckman, 1979) selection approach. In this case, we rely on the dataset that contains observations from all firms (i.e. both firms that applied for a loan and firms that did not apply – 45,596 observations) and employ the binary response model with sample selection, where the dependent variable indicates whether or not the firm applied for a loan. The approach we rely on is similar to the one used by Piga and Vivarelli (2004) and Piga and Atzeni (2007). The dataset offers a very limited choice of variables for the selection models. We decided to use the following variables: (i) Change in the profit of

the firm. According to Myers and Majluf (1984), firms finance their activity by first using retained profit, then reverting to debt, and using equity as a source of last resort. Thus, more profitable firms are more likely to be able to “self-finance” their activities and are therefore expected to be less likely to apply for a loan. (ii) Firm’s independence. Firms that belong to a group can often rely on finance provided by the holding company, and are thus expected to be less likely to apply for a loan. (iii) Firm’s turnover. Bigger firms need more finance for their on-going activities and are thus, *ceteris paribus*, more likely to file for a loan. We are aware that these variables may play a role in the bank’s lending decision or in the firm’s decision not to apply for a loan for fear of rejection. However, the fact that these selection variables have a lower correlation with the dependent variables than with the dummy variable that measures whether or not the firm applies for a loan, provides additional support to our choice. We also test alternative selection models, such as firm size in terms of employees, since smaller firms are more likely to avoid applying for a loan, because they need less finance and can easily exploit informal bootstrap finance instead of bank loans, or change in costs. The results obtained using these models do not differ from those obtained using our original selection model.

Finally, we check whether the results are affected by the estimation approach used. In order to examine this potential issue, we re-estimate the regressions using probit estimation.

3.3 Dependent variables

In order to examine the probability of firms being denied credit, we rely on one of the questions asked in the SAFE, namely whether firms have obtained the credit they have applied for in the last six months. We use the answer to this question (the firm obtained all the credit = 1; the firm did not obtain the credit = 0) as our first dependent variable.

Firms can also be credit constrained by the firm’s management deciding not to apply for a loan because it fears a rejection from the bank (discouraged borrowers). Thus, firms can

also be credit constrained due to self-selection. The SAFE dataset collects information about this aspect as well. It asks firms that have not applied for a loan if their decision was based on an expected rejection from the bank. We use the answer to this question (the firm is a discouraged borrower = 1; the firm is not a discouraged borrower = 0) as our second dependent variable.

3.4 Independent variables

We use two different independent variables, namely “shareholder rights” and “regulations on related-party transactions”. To enable international comparison, we have chosen a comprehensive international dataset, as called for by La Porta et al. (1998). For both independent variables, we rely on indices provided by the World Bank’s Doing Business dataset on protecting minority investors. The data in this dataset are collected by means of a questionnaire administered to corporate and securities lawyers and based on securities regulations, company laws, civil procedure codes and court rules of evidence.

The index used for the variable “shareholder rights” is called the “Extent of shareholder governance index”. This index, which was introduced in the Doing Business 2015 survey, measures shareholders’ rights in corporate governance and comprises three different dimensions: (i) shareholders’ rights and role in major corporate decisions, (ii) governance safeguards that protect shareholders from undue board control and entrenchment, and (iii) corporate transparency (e.g., on ownership stakes and compensation). The index ranges between 0 and 10, with higher values indicating stronger shareholder rights.

The index used for the variable “regulations on related-party transactions” is called the “Extent of conflict of interest regulation index” and is based on a methodology developed by Djankov, Hart, et al. (2008) as well as Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008). It measures the protection afforded to shareholders against the risk that directors or controlling shareholders will misuse the firm’s assets for their personal gain, and comprises

three different dimensions: (i) transparency of related-party transactions, (ii) ability of minority shareholders to sue and hold interested parties liable for self-dealing, and (iii) access to evidence and allocation of legal expenses in legal disputes. Again, the index ranges between 0 and 10. Higher values indicate stronger regulations on related-party transactions.

In addition, we use four dummy variables that cluster the countries according to their legal origin, which is based on La Porta et al. (1997). We group the surveyed countries into those of English origin, French origin, German origin and Scandinavian origin. Finally, as both shareholder rights and regulations on related-party transactions are affected by legal origin, we generate an interaction variable by multiplying the country coefficients for the dummies.

3.5 Controls

We include a set of controls for firm characteristics, the economic context, and the moment in time when the data were collected.

As far as firm characteristics are concerned, the SAFE dataset discloses information about whether the firm belongs to the construction/mining, manufacturing, retailing, or services industry. We include three dummies in order to account for these industries. SAFE also includes data about the size of the firms, which are grouped into micro, small and medium-sized firms. We use two dummies that identify micro (MICRO) and small (SMALL) firms.

Information about the age of the firm is reflected by clustering firms according to four age categories: younger than two years, between two and five years, between five and nine years, and older than nine years. We use 2_YEARS, 2_5_YEARS, and 5_9_YEARS dummy variables to identify the age group. Older firms are more likely to be successful in applying for a loan (Berger & Udell, 1995; Petersen & Rajan, 1994) since they have an established reputation that banks rely on when taking lending decisions (Martinelli, 1997).

The dataset offers a very limited choice in terms of variables that measure the performance of the firm. We choose the change in turnover (CHANGE_TURNOVER) and the change in labour costs (CHANGE_LABOUR_COSTS) in order to control for the performance of the firm. Both are categorical variables, which take a value of -1 if the firm faces a reduction in turnover or labour costs, 0 if there is no change, and +1 if there is an increase.

Regarding the financial strategy of the firm, we include dummies that identify whether the firm has used trade credit (TRADE_CREDIT), leasing (LEASING), retained earnings (RETAINED_EARNINGS) or additional equity (EQUITY) during the last six months in order to finance its activities.

Since the independent variables are time-invariant at a country level, we do not include a control for the country. However, we consider a set of macroeconomic variables that are country-specific and time-varying to capture the macroeconomic context in which the firm operates. In particular, we include the changes in the gross domestic product (GDP), inflation rate (INFLATION) and overall unemployment rate (UNEMPL). Moreover, we account for the overall financial context by using the European Central Bank's BLS coefficients for small/medium-sized firms (CREDIT_ACCESS). This index measures whether banks applied more rigid rules for the provision of credit (positive values) or more lenient ones (negative values). Additionally, we consider the structure of the financial industry by using the HHI of bank concentration in each country, as previous research suggests that bank competition has an impact on credit access (Carbó-Valverde, Rodríguez-Fernández, & Udell, 2009; Neuberger, Pedergnana, & Rähke-Döppner, 2008).

The dataset provides unmatched observations for eight semesters. Thus, we use seven dummies that identify the semester in which the data were collected.

4. Descriptive statistics

The dataset we use contains 45,596 complete observations from thirteen countries for the period between the first semester of 2009 and the second semester of 2012. The dataset is reduced to 11,332 observations, if only those firms that applied for a loan are considered. The difference can be attributed to firms that did not need finance (and thus did not apply for a loan) and firms that were discouraged from applying for a loan (discouraged borrowers). The summary statistics are reported in Table 1. The first column reports data for the entire dataset, the second for firms that applied for a loan and the third for firms that did not apply for a loan.

TABLE 1 HERE

The majority of firms in the sample are small and well-established: 72% are either micro or small and more than three quarters are older than 9 years. The dominant industry is services (36%), followed by manufacturing (23%). Only about one third of the firms enjoyed an increase in turnover (34%), whereas 28% did not experience any change and 38% suffered from a contraction. In terms of financing, firms appear to use leasing and trade credit quite intensively. The BLS coefficient is +7.26, implying that, on average, credit is not readily available.

The independent variable “shareholder rights” assumes values between 0 (Luxembourg) and 7.8 (France), the average being 5.66. Similarly, the values for our second independent variable “regulations on third-party transactions” ranges between 0 (Luxembourg) and 8 (Ireland) with an average of 5.49. In order to reduce collinearity issues

and simplify the interpretation of the results we mean-centre the scale.

Moving from the overall dataset to the sub-sample that considers only those firms that actually applied for a loan (11,332 observations), the distribution of the firms' ages and the development of their performance are very similar to those of the overall sample. In terms of financing, firms that apply for loans also appear to use more alternative sources of finance, such as trade credit (42.6%) or leasing (40.8%).

5. Results

The analysis is split into two stages: First, we examine whether shareholder rights and regulations on related-party transactions affect a bank's decision to grant a loan. Second, we explore whether shareholder rights and regulations on related-party transactions discourage firms from applying for a loan because they fear being rejected by banks.

5.1 Bank lending decision

The results regarding the impact of shareholder rights and regulations on related-party transactions on a bank's decision to grant a loan are shown in Tables 2A and 2B.

TABLE 2A

TABLE 2B

In regression A we only enter the controls. It is highly significant and R^2 is .0678. The industry dummies are significant except for SERVICES. The size of the firm affects its

access to credit: very small firms (MICRO) appear to be credit constrained, whereas the variable is not significant for slightly bigger firms (SMALL). With respect to the age of the firm, those between 2 and 5 years of age appear to be the least likely to obtain a loan. The change in labour costs (CHANGE_LABOUR_COST) is not significant. Alternative sources of finance are negatively related to obtaining credit, suggesting that banks are not happy to provide credit when firms use other sources of finance: In order of the effect, EQUITY, TRADE CREDIT and RETAINED_EARNINGS are all strongly negatively related to obtaining a loan, whereas LEASING is not significant. As expected, the European Central Bank's BLS coefficient (CREDIT_ACCESS) is negatively related to credit access: the less prone banks are to lend, the less likely it is that firms will be successful in their loan applications. Economic expansion (GDP) is positively related to credit access, whereas the change in unemployment is negatively related.

Regression B includes shareholder rights (SHARE_GOV). It is significant and has an R^2 of .0691. RETAINED_EARNINGS becomes not significant. SHARE_GOV is not significant, albeit borderline. Regression C drops SHARE_GOV, but enters the interaction of this variable with the four legal origin clusters. The regression is significant and R^2 improves to .0783. The regression does not present problems of collinearity. There are no major changes in the effects of the controls except for INFLATION, which becomes significant and negatively related to loan approval. Among the four independent variables, only SHARE_GOV_ENG and SHARE_GOV_GERM are significant.

Regression D includes the variable for regulations on related-party transactions (REL_PARTIES). The regression is significant and there is no change in either the R^2 or the significance levels of the covariates. REL_PARTIES is not significant. In regression E we drop REL_PARTIES but enter the interaction of this variable with the four legal origin clusters. The regression is significant and the R^2 improves to .0742. The regression does not

present problems of collinearity. There are no major changes in the results for the controls, except for INFLATION and HHI, which become significant and negatively related to loan approval. Among the four independent variables, only REL_PARTIES_ENG and REL_PARTIES_SCA are significant.

5.2 Discouraged borrowers

The results regarding the impact of shareholder rights and regulations on related-party transactions on whether the firm is discouraged from applying for a loan are reported in Tables 3A and 3B.

TABLE 3A

TABLE 3B

In regression F we enter only the controls in order to facilitate the comparison. It is highly significant and R^2 is .0282. Among the industry dummies, only MANUFACTURING is significant. The size of the firm affects its access to credit: very small firms (MICRO) are more likely to be discouraged from borrowing than small firms (SMALL). With respect to the age of the firm, firms between 2 and 5 years of age appear most likely to be discouraged from borrowing. The change in labour costs (CHANGE_LABOUR_COST) is not significant. The alternative sources of finance are positively related to discouragement from applying for credit, which suggests that firms anticipate the banks' unwillingness to provide credit when they are using other sources of finance: both EQUITY and TRADE CREDIT are positively

related to discouragement from borrowing. Among the variables that measure the macroeconomic environment, only UNEMPLOYMENT is significant, and is positively related to discouragement from borrowing.

Regression G investigates the impact of shareholder rights (SHARE_GOV). It is significant and has an R^2 of .0283. There are no changes in the significance levels of the covariates. SHARE_GOV is not significant. Regression H drops SHARE_GOV, but includes the interaction of this variable with the four legal origin clusters. The regression is significant and the R^2 improves to .0355. The regression does not present problems of collinearity. There are no major changes in the results for the controls, except for RETAINED_EARNINGS, which becomes significant again and positively related to a firm being discouraged from applying for a loan. Among the four independent variables, only SHARE_GOV_ENG and SHARE_GOV_SCA are significant.

Regression I includes the variable for regulations on related-party transactions (REL_PARTIES). The regression is significant and R^2 is .0285. No changes arise in the significance levels of the covariates. REL_PARTIES is not significant. In regression J we drop REL_PARTIES, but include the interaction of this variable with the four legal origin clusters. The regression is significant and the R^2 improves to .0357. The regression does not present problems of collinearity. There are no major changes in the controls except for RETAINED_EARNINGS and HHI, which become significant and positively related to discouragement from applying for a loan. Among the four independent variables, only REL_PARTIES_ENG and REL_PARTIES_SCA are significant.

5.3 Robustness checks addressing endogeneity

The analyses presented so far provide clear results. Nevertheless, some additional robustness checks are needed before we comment on the results.

As discussed in the methodology section, the shareholder rights and regulations on

related-party transactions are embedded in a country's regulatory institutional settings and widely affected by the country's culture. In fact, we already include legal origin in our analyses by clustering the observations according to their legal origin (English, Scandinavian, German or French). However, it could be argued that what we are measuring is actually a reflection of the country's culture and not two of its corporate governance mechanisms. In this case, our results could be affected by endogeneity in terms of omitted variables. In order to examine this issue, we re-estimate the regressions with significant independent variables by instrumenting them with Hofstede's cultural dimensions (Hofstede, Neuijen, Daval, & Geert, 1990; Hofstede, 1981, 1983), i.e. power distance (PD), individualism (IND), masculinity (MAS), and uncertainty avoidance (UNC). These instrumenting variables also appear to be very good candidates from an econometric point of view, since they show a high correlation with our independent variables: All Pearson's correlation coefficients are between +/-0.20 and 0.55 and significant, except for IND, which presents weaker correlations of approximately +/-0.10. At the same time, the correlation of Hofstede's cultural dimensions with the dependent variables (i.e., loan obtained and being discouraged from applying for a loan) is weak (below 0.05 and in many cases not significant).

If the interactions between shareholder rights and regulations on related-party transactions on the one hand and legal origin on the other hand in fact measure culture, we should end up with instrumented variables that are significant. The results are reported in Tables 4 (loan obtained) and 5 (discouraged from applying for a loan).

 TABLE 4

TABLE 5

In the loan obtained case, we enter the variables that were significant in our original regression C as well as those that were significant in regression E simultaneously. In both regression C instrumented and regression E instrumented, the instrumented independent variables are not significant. This finding is reassuring, as it suggests that our independent variables in regression C and E were in fact measuring the interaction between the respective corporate governance mechanism and legal origin and not the country's culture. The regressions presented in Table 5 examine the same issue for discouraged borrowers. In regression H instrumented and regression J instrumented, as well, the instrumented independent variables are not significant, suggesting that there is no problem with endogeneity. These findings are in line with those of Beck and Lavine (2003), who also found the effects of legal origin to be robust regarding aspects of national culture.

5.4 Robustness checks addressing selection bias

In the second robustness check, we investigate whether our results are affected by sample selection bias. In order to deal with this issue, we re-estimate the regressions by relying on the Heckman sample selection model (Heckman, 1979). We model the selection process using variables that measure the change in profitability, the change in turnover and whether the firm belongs to a group. In this case we rely on 44,816 observations: the missing 780 observation are linked to missing values for the variables used in the selection process (i.e. INDEPENDENT, CHANGE_PROFIT and CHANGE_TURNOVER). Detailed results are not reported here.

As far as the loan obtained analysis is concerned, all regressions are significant and there are no major changes in the signs or significance levels of the controls. Regarding the

dependent variables, SHARE_GOV becomes significant (it was not significant before, but only marginally), whereas Scandinavian origin becomes insignificant when included in the regression with CONFLICT_INTEREST. Neither change is completely unexpected, as both covariates were borderline in the original regressions.

As far as discouraged borrowers are concerned, there are no major changes in the controls or the independent variables with regard to the regressions presented above. The only change concerns SCA, when it is entered with SHARE_GOV. This change is not completely unexpected, as the variable was previously significant (even if very borderline) and becomes insignificant in the regression with the Heckman selection process.

As discussed, we also re-test the regressions using alternative selection processes. However, we obtain very stable results with respect to those reported in Tables 2A, 2B, 3A and 3B. All in all, the robustness checks addressing selection bias confirm our previous findings.

5.5 Robustness checks regarding alternative approaches

Finally, we re-estimate the regressions using a different econometric approach, namely probit regression instead of the original logit regression. This allows us to explore whether our results are sensitive to the econometric approach used in our estimations. Detailed results are not reported here. However, there is no change in either the significance or the sign of the variables entered in the regression.

All in all, the results of the robustness checks suggest that our original findings are robust to sample selection, alternative regressions, alternative independent variables and different estimation techniques.

6. Discussion and conclusions

In this cross-European study, we investigate the role of two specific corporate

governance mechanisms (i.e. shareholder rights and regulations on related-party transactions) in firms' decision to apply for credit and the banks' lending decision. Further, we argue that the impact of these two specific corporate governance regulations on firms' credit access is contingent upon the regulatory institutional setting in which they are embedded. Thus, we account for the legal origin that shapes countries' regulatory institutional settings.

Regarding the impact of the two corporate governance mechanisms on the banks' lending decision, we find mixed results. For the banks' lending decision, the governance aspect of "shareholder rights", as such, is irrelevant. A more fine-grained look reveals that strong shareholder rights enhance the likelihood of firms obtaining credit in the English and German legal traditions. Hence, the origin of the regulatory institutional setting is decisive for the impact shareholder rights have on the banks' lending decision.

The governance aspect of "regulations on related-party transactions" does not directly impact banks' lending decisions either. However, in the English legal tradition, strong protection of minority shareholders significantly diminishes firms' chances of a positive lending decision by a bank, whereas the interaction term is positive in the Scandinavian legal tradition, suggesting that strong protection of minority shareholders in settings shaped by the Scandinavian legal tradition enhances firms' chances of a positive lending decision from a bank.

Turning the attention to the impact of the two corporate governance mechanisms on the firms' decision to apply for a loan, we do not find direct effects from either "shareholder rights" or "regulations on related-party transactions". However, our analysis reveals significant effects when the legal origin of the regulatory institutional setting is considered. We find that strong shareholder rights vis-à-vis a firm's management increases its likelihood of applying for a loan in the English tradition and decreases it in the Scandinavian tradition.

Regarding the impact of the corporate governance aspect of "regulations on related-

party transactions" on firms' decision to apply for a loan, we also uncover interesting results in the English and Scandinavian legal traditions. In the English legal tradition, tight regulations on related-party transactions decrease the likelihood of firms applying for loans. On the contrary, in the Scandinavian legal tradition, tight regulations on related-party transactions enhance the likelihood of firms applying for loans.

Overall, our empirical findings support our arguments that the legal origin of the regulatory institutional environment matters both for the banks' lending decision and the firms' decision to apply for a loan. However, corporate governance mechanisms that address the risk of firms' management cheating the shareholders and the risk of the controlling shareholders cheating the minority shareholders do not directly influence the banks' or the firms' credit decisions. Rather, the impact of corporate governance on firms' credit access unfolds in regulatory institutional contexts shaped by specific legal traditions only.

For regulatory institutional settings with a German legal tradition, the results are straightforward: stronger protection of shareholder rights enhances firms' chances of receiving a positive lending decision from a bank. However, firms do not anticipate this positive effect in their decision to apply for a loan. These empirical findings are in contrast to our expectation derived from earlier studies (e.g., Chava et al., 2009; Jiraporn et al., 2013; Klock et al., 2005; Ortiz-Molina, 2006). Still, accounting for the regulatory institutional setting in which the corporate governance mechanisms are embedded resolves what, at first sight, looks like a contradiction. La Porta et al. (1998) find that countries with a German legal tradition are more successful in adapting their laws, and thus in securing the fit between specific regulations and their regulatory institutional environment. They also identify the German legal tradition as the institutional context in which law enforcement is the strongest. Hay, Shleifer, and Vishny (1996) argue that, in institutional settings with a well-functioning enforcement of the law, more flexible regulation is superior. Flexible rules provide more

room to the parties involved to design contracts according to their specific needs. In sum, these characteristics provide a fertile ground for the positive effects of corporate governance mechanisms to unfold in regulatory institutional settings with a German legal tradition. However, the countries with a German legal tradition are also characterized by the comparatively lowest ownership concentration (La Porta et al., 1998). Thus, due to the small number of firms with controlling shareholders, who potentially compromise the interests of minority shareholders, the impact of strong regulations on related-party transactions is limited in such contexts. Banks seem to recognize the particularities of settings with a German legal tradition when it comes to the interaction between specific corporate governance mechanism and the regulatory institutional setting.

Regarding the effect of corporate governance mechanisms on firms' access to finance, the regulatory institutional settings with English and Scandinavian legal origins represent the flip sides of the same coin. Strong protection of shareholder rights and weak regulations on third-party transactions in settings shaped by the English legal tradition make a positive bank lending decision more likely. Firms correctly anticipate the relevance of the context for the impact of corporate governance mechanisms on the banks' lending decision. The results for the Scandinavian legal tradition show nearly the inverse picture. These findings on the one hand partially contradict our expectation that banks will be more likely to grant credit when shareholders are protected from opportunistic managers and when more rigid corporate governance rules lead to related-party transactions that are at arm's-length. On the other hand, they underpin our claim of the relevance of the regulatory institutional setting and its legal origin. These two legal traditions produce quite different regulatory institutional settings. Compared to settings with a Scandinavian legal tradition, in settings with an English legal tradition, the quality of law enforcement and accounting have been found to be considerably lower, while the law has been found to be more adaptable (La Porta et al.,

1998). It can be argued that, due to its high adaptability, there is a good fit between specific corporate governance mechanisms and the regulatory institutional setting in economies with an English legal tradition, which makes strong shareholder rights functional for investors (Bailey & Rubin, 1994) as well as creditors, due to the reduced risk they incur. Further, banks in countries with a low concentration of ownership, such as countries with English origin (La Porta et al., 1998), might prefer it if shareholders speak with one strong voice. At the same time, a lower quality of accounting in the English legal tradition might diminish the effectiveness of transparency rules aimed at protecting minority shareholders. A lower quality of law enforcement in the English legal tradition might further weaken the effectiveness of such specific corporate governance mechanisms as it will reduce the credibility of minority shareholders' sanctioning power (Dwyer, Schurr, & Oh, 1987). Thus, the differences between the regulatory institutional settings shaped by the English and Scandinavian legal traditions provide plausible explanations of our findings. In both settings, firms anticipate the impact of the prevailing governance mechanisms on banks' lending decisions.

Finally, in the regulatory institutional settings that are rooted in the French legal origin, specific corporate governance mechanisms impact neither the banks' credit decision, nor the firms' decision to apply for credit. As these settings are characterized by the comparatively lowest adaptability, the specific regulations do not fit the regulatory institutional setting and are ineffective due to these settings' comparatively lowest quality of law enforcement and accounting. La Porta et al. (1998) report a remarkably high ownership concentration for settings with a French legal tradition. High concentration of ownership can be interpreted as a strategy for reducing the agency and information risk between shareholders and managers in settings with weak corporate governance regulations (La Porta et al., 1998). The rationale behind this argument is that large shareholders can monitor management more effectively and crowd out minority shareholders who do not have such

monitoring capacities. As a result, in contexts such as those shaped by the French legal tradition, corporate governance mechanisms become irrelevant to investors (Shleifer & Vishny, 1986).

The practical implications of our findings are straightforward and far-reaching. They imply that economies with a well-designed governance regime regarding shareholder protection can influence firms' access to bank finance, and thus innovation and economic growth, in a favourable way (King & Lavine, 1993; Rajan & Zingales, 1998). Our results call for corporate governance regimes that account for the embeddedness in the specific regulatory institutional setting. Legislators need to ensure a flexible adoption of specific regulations, which are, for example, imposed by supra-national entities on national regulatory environments rooted in English, Scandinavian, German, or French legal origins.

With our findings we contribute to a vivid stream of research on the impact of the law on access to finance, in several ways. First, we extend the investigation of the direct effects of corporate governance mechanisms and the regulatory institutional setting on firms' access to external finance – as pursued by La Porta et al. in their seminal studies (La Porta, Lopez-de-Silvanes, & Shleifer, 2013; La Porta et al., 1997, 1998) and further developed by Hope et al. (2011) with a focus on bank finance – by tracing the effects across these two levels through the inclusion of interaction terms in our regression models. We stress the importance of accounting for indirect effects of corporate governance measures as also highlighted by the findings by Aguilera, Filatotchev, Gospel, and Jackson (2008). In that way, we are able to test for the effects of specific corporate governance mechanisms embedded in the regulatory institutional setting and gain a more comprehensive insight into the interplay of the two levels of analysis. Second, our analysis builds on a systematic dataset that merges data comprising consistent information on corporate governance mechanisms for 13 European countries with representative firm-level data comprising over 45,000 observations. With this rich empirical

basis we break new ground by tapping the full potential of a more fine-grained analysis with a more holistic perspective as called for by Filatotchev and Nakajima (2010).

In interpreting the results presented in this paper, the limitations linked to the imposed topical and geographical focus of the study, the underlying data, and the method applied have to be kept in mind. Without replicating this study in other geographical contexts and with other corporate governance variables, we cannot claim generalizability to other areas. Notwithstanding these limitations, our findings advance the understanding of the role of corporate governance in bank lending and provide rich insights for research, business practice and legislators.

References

- Aguilera, R. V., Filatotchev, I., Gospel, H., & Jackson, G. 2008. An Organizational Approach to Comparative Corporate Governance. *Organization Science*, 19(3): 475–492.
- Andenas, M., & Kenyon-Slade, S. 1993. *E.C. financial market regulation and company law*. London: Sweet and Maxwell.
- Anderson, R. C., Mansi, S. A., & Reeb, D. M. 2004. Board characteristics, accounting report integrity, and the cost of debt. *Journal of Accounting and Economics*, 37: 315–342.
- Ashbaugh-Skaife, H., Collins, D. W., & LaFond, R. 2006. The effects of corporate governance on firms' credit ratings. *Journal of Accounting and Economics*, 42: 203–243.
- Bae, K., Kang, J., & Kim, J. 2002 Tunneling or value added? Evidence from mergers by Korean business groups. *Journal of Finance*, 57, 2695-2: 2695–2740.
- Bailey, M. J., & Rubin, P. H. 1994. A positive theory of legal change. *International Review of Law and Economics*, 14: 467–477.

- Beck, T., Demirgüç-Kunt, A., & Levin, R. 2002. *Law and Finance: Why does Legal Origin Matter?* No. 9379.
- Beck, T., & Lavine, R. 2003. Stock markets, banks, and economic growth: Panel evidence. *Journal of Banking and Finance*, 8(3): 423–442.
- Berger, A. N., & Udell, G. F. 1995. Relationship Lending and the Lines of Credit in Small Firm Finance. *Journal of Business*, 68(3): 351–381.
- Berkman, H., Cole, R. A., & Fu, L. J. 2009. Expropriation through loan guarantees to related parties: Evidence from China. *Journal of Banking and Finance*, 33: 141–156.
- Bhojraj, S., & Sengupta, P. 2003. Effect of Corporate Governance on Bond Rating and Yields: The Role of Institutional Investors and Outside Directors. *Journal of Business*, 76: 455–475.
- Carbó-Valverde, S., Rodríguez-Fernández, F., & Udell, G. F. 2009. Bank Market Power and SME Financing Constraints. *Review of Finance*, 13: 309–340.
- Chava, S., Livdan, D., & Purnanandam, A. 2009. Do Shareholder Rights Affect the Cost of Bank Loans? *Review of Financial Studies* 22: 2973–3004.
- Cheung, Y. L., Rau, P. R., & Stouraitis, A. 2006. Tunneling, propping, and expropriation: evidence from connected party transactions in Hong Kong. *Journal of Financial Economics*, 82: 343–386.
- Cumming, D., & Knill, A. 2012. Disclosure, Venture Capital and Entrepreneurial Spawning. *Journal of International Business Studies*, 43(6): 563–559.
- Demirguc-Kunt, A., & Maksimovic, V. 1998. Law, finance and firm growth. *Journal of Finance*, 53: 2107–2137.
- Djankov, S., Hart, O., McLiesh, C., & Shleifer, A. 2008. Debt Enforcement around the World. *Journal of Political Economy*, 116(6): 1105–1149.
- Djankov, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. 2008. The law and economics

- of self-dealing. *Journal of Financial Economics*, 88: 430–465.
- Dwyer, F. R., Schurr, H. P., & Oh, S. 1987. Developing buyer-seller relationships. *Journal of Marketing*, (11-27).
- Fields, L. P., Fraser, D. R., & Subrahmanyam, A. 2012. Board quality and the cost of debt capital: The case of bank loans. *Journal of Banking and Finance*, 36: 1536–1547.
- Filatotchev, I., Jackson, G., & Nakajima, C. 2013. Corporate governance and national institutions: A review and emerging research agenda. *Asia Pacific Journal of Management*, 30: 965–986.
- Filatotchev, I., & Nakajima, C. 2010. Internal and External Corporate Governance: An Interface between an Organization and its Environment. *British Journal of Management*, 21(3): 591–606.
- Filatotchev, I., & Wright, M. 2011. Agency Perspectives on Corporate Governance of Multinational Enterprises. *Journal of Management Studies*, 48(2): 471–486.
- Francis, B., Hasan, I., Koetter, M., & Wu, Q. 2012. Corporate Boards and Bank Loan Contracting. *Journal of Financial Research*, 35: 521–552.
- Friedland, R., & Alford, R. R. 1991. Bringing society back in: Symbols, practices, and institutional contradictions. In W. W. Powell & P. J. DiMaggio (Eds.), *The new institutionalism in organizational analysis*: 232–263. Chicago: University of Chicago Press.
- Ge, W., Kim, J. B., & Song, B. Y. 2012. Internal governance, legal institutions and bank loan contracting around the world. *Journal of Corporate Finance*, 18: 413–432.
- Giddens, A. 1984. *The construction of society*. Berkley: University of California Press.
- Hay, J. R., Shleifer, A., & Vishny, W. 1996. Towards a theory of legal reform. *European Economic Review*, 40(3-5): 559–567.
- Hayek, F. 1960. *The constitution of liberty*. Chicago, IL: The University of Chicago Press.

- Heckman, J. J. 1979. Selection Bias as a Specification Error. *Econometrica*, 47(1): 153–161.
- Hofstede, G. 1981. Culture and Organisations. *International Studies of Management & Organisation*, 10(4): 15–41.
- Hofstede, G. 1983. National Cultures in Four Dimensions: A Research-based Theory of Cultural Differences among Nations. *International Studies of Management and Organisation*, 13(1-2): 46–74.
- Hofstede, G., Neuijen, B., Daval, O. D., & Geert, S. 1990. Measuring Organisational Cultures: a Qualitative and Quantitative Study Across Twenty Cases. *Administrative Science Quarterly*, 35: 286–316.
- Hope, O. K., Thomas, W., & Vyas, D. 2011. Financial credibility, ownership, and financing constraints in private firms. *Journal of International Business Studies*, 42: 935–957.
- Hosmer, D. W., & Lemeshow, S. 2000. *Applied Logistic Regression*. *Wiley Series in Statistics and Probability*. New York: Wiley.
- Jensen, M. C., & Meckling, W. H. 1976. Theory of the Firm: Managerial Behaviour, Agency Costs, and Ownership Structure. *Journal of Financial Economics*, 3(4): 305–360.
- Jiraporn, P., Chintrakarn, P., Kim, J. C., & Liu, Y. 2013. Exploring the agency cost of debt: Evidence from the ISS governance standards. *Journal of Financial Services Research*, 44: 205–227.
- John, K., & Senbet, L. W. 1998. Corporate governance and board effectiveness. *Journal of Banking and Finance*, 22: 371–403.
- Johnson, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. 2000. Tunneling. *American Economic Review*, 90(2): 22–27.
- King, R., & Lavine, R. 1993. Finance and growth: Schumpeter might be right. *Quarterly Journal of Economics*, 108(3): 717–738.
- Klock, M. S., Mansi, S. A., & Maxwell, W. F. 2005. Does corporate governance matter to

- bondholders? *Journal of Financial and Quantitative Analysis*, 40(4): 693–719.
- La Porta, R., Lopez-de-Silvanes, F., & Shleifer, A. 2013. Law and Finance After a Decade of Research. In G. M. Constantinides, M. Harris, & R. Stulz (Eds.), *Handbook of the Economics of Finance*: 425–491. Amsterdam: Edgar Elgar.
- La Porta, R., Lopez-de-Silvanes, F., Shleifer, A., & Vishny, R. W. 1997. Legal Determinants of External Finance. *Journal of Finance*, 52: 1131–1150.
- La Porta, R., Lopez-de-Silvanes, F., Shleifer, A., & Vishny, R. W. 1998. Law and Finance. *Journal of Political Economy*, 106: 1113–1155.
- Lin, C. Y., Chen, Y. S., & Yen, J. F. 2014. On the determinant of bank loan contracts: The roles of borrowers' ownership and board structures. *Quarterly Review of Economics and Finance*, 54: 500–512.
- Lo, A. W. Y., Wong, R. M. K., & Firth, M. 2010. Can corporate governance deter management from manipulating earnings? Evidence from related-party sales transactions in China. *Journal of Corporate Finance*, 16: 225–235.
- Lounsbury, M. 2002. Institutional transformation and status mobility: The professionalization of the field of finance. *Academy of Management Journal*, 45(1): 255–266.
- Marryman, J. H. 1985. *The civil law tradition: An introduction to the legal system of Western Europe and Latin America*. Stanford, CA: Stanford University Press.
- Martinelli, C. 1997. Small firms, borrowing constraints, and reputation. *Journal of Economic Behavior & Organization*, 33: 91–105.
- Monateri, P. 2003. The weak law: contaminations and legal cultures. *Transnational Law & Contemporary Problems*, 13(2): 575–.
- Myers, S. C. 1977. Determinants of corporate borrowing. *Journal of Financial Economics*, 5: 147–175.
- Myers, S. C., & Majluf, N. S. 1984. Corporate Finance and Investment Decisions When

- Firms Have Information Investors Do Not Have. *Journal of Financial Economics*, 13: 187–221.
- Nakajima, C. 1999a. *No Title. Conflicts of Interest and Duty: A Comparative Analysis in Anglo-Japanese Law*. London (UK): Kluwer Law International.
- Nakajima, C. 1999b. No Title. In S. Ali (Ed.), *Risky Business: Perspectives on Corporate Misconduct*: 109–149. Kingston: Caribbean Law Publishing Company.
- Neuberger, D., Pedergnana, M., & R athke-D oppner, S. 2008. Concentration of Banking Relationships in Switzerland: The Result of Firm Structure or Banking Market Structure? *Journal of Financial Services Research*, 33(2): 101–126.
- Ortiz-Molina, H. 2006. Top Management Incentives and the Pricing of Corporate Public Debt. *Journal of Financial and Quantitative Analysis*, 41(2): 317–340.
- Petersen, M. A., & Rajan, R. G. 1994. The Benefits of Lending Relationships: Evidence from Small Business Data. *Journal of Finance*, 49(1): 3–37.
- Piga, C. A., & Atzeni, G. 2007. R&D Investment, Credit Rationing and Sample Selection. *Bulletin of Economic Research*, 59(2): 149–178.
- Piga, C. A., & Vivarelli, M. 2004. Internal and External R&D: A Sample Selection Approach. *Oxford Bulletin of Economics and Statistics*, 66(4): 457–482.
- Pistor, K., Keinan, Y., Kleinheisterkamp, J., & West, M. 2003. Innovation in corporate law: A comparative analysis of ten jurisdictions. *Journal of Comparative Economics*, 31(4): 676–694.
- Posner, R. A. 1973. *Economic analysis of the law*. Boston, MA: Little-Brown.
- Qi, Y., Roth, L., & Wald, J. K. 2011. How legal environments affect the use of bond covenants. *Journal of International Business Studies*, 42: 235–262.
- Rajan, R., & Winton, A. 1995. Covenants and Collateral as Incentives to Monitor. *Journal of Finance*, 50(4): 1113–1146.

- Rajan, R., & Zingales, L. 1998. Financial dependence and growth. *The American Economic Review*, 88: 559–586.
- Reynolds, T. H., & Flores, A. 1989. *Foreign law: Current Sources of Codes and Basic Legislation in Jurisdictions of the world*. Littleton, Colombia: Rothman.
- Sacco, R. 1991. A dynamic approach to comparative law. *American Journal of Comparative Law*, 39(2): 343–401.
- Sengupta, P. 1998. Corporate disclosure quality and the cost of debt. *Accounting Review*, 73(4): 459–474.
- Sewell, W. H. 1992. A theory of structure: Duality, agency, and transformation. *American Journal of Sociology*, 98(1): 1–29.
- Shleifer, A., & Vishny, R. W. 1986. Large Shareholders and Corporate Control. *Journal of Political Economy*, 94(3): 461–488.
- Shleifer, A., & Vishny, R. W. 1997. A Survey of Corporate Governance. *Journal of Finance*, 52(2): 737–783.
- Stinchcombe, A. L. 1991. The contradictions of fruitfulness of theorizing about mechanisms in social science. *Philosophy of the Social Science*, 21(3): 367–387.
- Thornton, P. 2002. The rise of the corporation in a crafts industry: Conflict and conformity in institutional logics. *Academy of Management Journal*, 45(1): 81–101.
- Thornton, P., & Ocasio, W. 1999. Institutional logics and the historical contingency of power in organizations: Executive succession in the higher education publishing industry, 1958–1990. *American Journal of Sociology*, 105(3): 801–843.
- Wise, E. 1990. The transplant of legal patterns. *American Journal of Comparative Law*, 38(1): 1–22.

Table 2 Descriptive statistics

“Entire Sample” reports the statistics for all observations included in the analysis. “Applying firms” reports the statistics for the sub-sample of firms that applied for a loan (whether granted or not by the bank). “Not applying firms” reports the statistics for the sub-sample of firms that did not apply for a loan, either because they did not need one or because they self-selected not to apply.

	<i>Entire Sample</i>					<i>Applying firms</i>					<i>Not Applying firms</i>				
	Obs	mean	std.dev.	min	max	Obs	mean	std.dev.	min	max	Obs	mean	std.dev.	min	max
Loan_application	45,596	0.2485	0.4322	0	1						34,264	0.0862	0.2807	0	1
Discouraged_Borrowers	45,596	0.0648	0.2462	0	1										
Loan_Obtained	45,596	0.1617	0.3682	0	1	11,332	0.6508	0.4768	0	1					
Construction	45,596	0.1317	0.3382	0	1	11,332	0.1433	0.3504	0	1	34,264	0.1279	0.3340	0	1
Manufacturing	45,596	0.2269	0.4188	0	1	11,332	0.2653	0.4415	0	1	34,264	0.2141	0.4102	0	1
Services	45,596	0.3596	0.4799	0	1	11,332	0.3223	0.4674	0	1	34,264	0.3720	0.4833	0	1
Micro	45,596	0.3595	0.4799	0	1	11,332	0.2689	0.4434	0	1	34,264	0.3894	0.4876	0	1
Small	45,596	0.3629	0.4808	0	1	11,332	0.3803	0.4855	0	1	34,264	0.3571	0.4792	0	1
<2years	45,596	0.0225	0.1483	0	1	11,332	0.0229	0.1494	0	1	34,264	0.0224	0.1479	0	1
2 to 5 years	45,596	0.0842	0.2776	0	1	11,332	0.0753	0.2638	0	1	34,264	0.0871	0.2820	0	1
5 to 9 years	45,596	0.1403	0.3473	0	1	11,332	0.1309	0.3373	0	1	34,264	0.1434	0.3505	0	1
Change_Turnover	45,596	-0.0468	0.8425	-1	1	11,332	-0.0440	0.8634	-1	1	34,264	-0.0477	0.8355	-1	1
Change_Labour_cost	45,596	0.2592	0.7292	-1	1	11,332	0.2671	0.7512	-1	1	34,264	0.2566	0.7217	-1	1
Retained_earnings	45,596	0.3113	0.4630	0	1	11,332	0.3512	0.4774	0	1	34,264	0.2981	0.4574	0	1
Trade_credit	45,596	0.3361	0.4724	0	1	11,332	0.4263	0.4946	0	1	34,264	0.3063	0.4610	0	1
Leasing	45,596	0.3243	0.4681	0	1	11,332	0.4086	0.4916	0	1	34,264	0.2964	0.4567	0	1
Equity	45,596	0.0590	0.2357	0	1	11,332	0.0704	0.2559	0	1	34,264	0.0553	0.2285	0	1
Credit_Access	45,596	7.2614	10.4131	-14	60	11,332	7.0479	9.5058	-14	60	34,264	7.3320	10.6955	-14	60
GDP	45,596	-0.5176	2.9150	-8.5	4	11,332	-0.7811	2.9000	-8.5	4	34,264	-0.4304	2.9148	-8.5	4
Inflation	45,596	1.9167	1.2054	-1.7	4.7	11,332	1.8904	1.2134	-1.7	4.7	34,264	1.9254	1.2027	-1.7	4.7
Unempl_Overall	45,596	10.9578	5.7537	3.25	25.7	11,332	11.5299	5.7975	3.25	25.7	34,264	10.7686	5.7267	3.25	25.7
HHI	45,596	0.0890	0.0774	0.02	0.37	11,332	0.0761	0.0636	0.02	0.37	34,264	0.0933	0.0810	0.02	0.37
pd	45,596	40.5445	16.9993	0	61	11,332	43.3208	15.9582	0	61	34,264	39.6263	17.2320	0	61
ind	45,596	66.4785	17.2641	25	87	11,332	66.2654	16.8274	25	87	34,264	66.5490	17.4058	25	87
mas	45,596	51.5226	19.6893	10	82	11,332	53.0496	17.4788	10	82	34,264	51.0175	20.3427	10	82
unc	45,596	66.6570	17.5847	26	100	11,332	69.3548	15.4684	26	100	34,264	65.7647	18.1427	26	100
Rel_Parties	45,596	0.00	0.8225	-1.395	2.605	11,332	-0.0198	0.6983	-1.395	2.6	34,264	0.0065	0.8596	-1.395	2.6
Share_Gov	45,596	0.00	0.8560	-1.806	1.028	11,332	0.1765	0.8004	-1.806	1.03	34,264	-0.0584	0.8657	-1.806	1.03

Table 2A Obtaining credit – Shareholder rights

Dependent Variable: Whether or not the bank provided the loan; Independent Variables: Industry (Construction, Manufacturing, Services), Firm characteristics (dummy variables for Micro and Small firms); Age of the firm (dummy variables for younger than 2 years, between 2 and 5 years, between 5 and 9 years); Firm performance (categorical variable on the change in labour costs); Firm sources of finance (dummy variables for Retained earnings, Trade credit, Leasing and Equity); Macroeconomic controls (Credit access, GDP, Inflation, Unemployment and HHI); Shareholder rights and their interaction with German, English, Scandinavian and French origin; dummy variables for French, English and Scandinavian origin.

	<i>Regression A</i>			<i>Regression B</i>			<i>Regression C</i>		
	Number of obs	11,332		Number of obs	11,332		Number of obs	11,332	
	Wald chi2(24)	2951.84		Wald chi2(25)	7187.14		Wald chi2(28)	19883.51	
	Prob > chi2	0.0000		Prob > chi2	0.0000		Prob > chi2	0.0000	
	Pseudo R2	0.0678		Pseudo R2	0.0691		Pseudo R2	0.0783	
<i>Loan Obtained</i>	Coeff	Robust Std.Err.	p<0	Coeff	Robust Std.Err.	p<0	Coeff	Robust Std.Err.	p<0
Construction	- 0.3086	0.0814	***	- 0.3208	0.0798	***	- 0.3369	0.0820	***
Manufacturing	- 0.1960	0.0674	***	- 0.1956	0.0667	***	- 0.2182	0.0673	***
Services	- 0.0761	0.0510		- 0.0794	0.0511		- 0.0775	0.0522	
Micro	- 0.6689	0.1989	***	- 0.6735	0.1923	***	- 0.6808	0.1778	***
Small	- 0.2374	0.1929		- 0.2433	0.1898		- 0.2451	0.1698	
<2years	- 0.0318	0.1368		- 0.0916	0.1306		- 0.0940	0.1330	
2_5years	- 0.4055	0.0838	***	- 0.4234	0.0805	***	- 0.4011	0.0738	***
5_9years	- 0.1831	0.0670	***	- 0.1905	0.0711	***	- 0.1850	0.0737	***
Change_labour_cost	0.0615	0.0541		0.0544	0.0520		0.0446	0.0508	
Retained_earnings	- 0.1303	0.0635	**	- 0.1158	0.0655		- 0.1307	0.0688	
Trade_credit	- 0.2088	0.0829	**	- 0.2041	0.0820	**	- 0.1755	0.0789	**
Leasing	0.0129	0.0709		0.0167	0.0708		0.0089	0.0715	
Equity	- 0.3599	0.1006	***	- 0.3378	0.0965	***	- 0.3832	0.0971	***
Wave	Included in the regression								
Credit_Acc	- 0.0110	0.0045	**	- 0.0092	0.0049	*	- 0.0101	0.0046	**
GDP	0.0978	0.0164	***	0.0935	0.0166	***	0.1081	0.0148	***
Inflation	- 0.0944	0.0517		- 0.0888	0.0501		- 0.1396	0.0514	***
Unemployment	- 0.0554	0.0088	***	- 0.0627	0.0101	***	- 0.0644	0.0104	***
HHI	- 2.1537	1.7679		- 0.2982	2.1974		1.4080	2.5108	
Share_Gov				0.2063	0.1302				
Share_Gov_germ							1.3068	0.3413	***
Share_Gov_eng							1.7394	0.3607	***
Share_Gov_sca							- 0.3988	0.4073	
Share_Gov_fra_sou							0.1637	0.1262	
cons	2.5799	0.3026	***	2.4521	0.3207	***	2.5431	0.3189	***

** sig .05; *** sig .01

Table 2B Obtaining credit – Regulations on related-party transactions

Dependent Variable: Whether or not the bank provided the loan; Independent Variables: Industry (Construction, Manufacturing, Services), Firm characteristics (dummy variables for Micro and Small firms); Age of the firm (dummy variables for younger than 2 years, between 2 and 5 years, between 5 and 9 years); Firm performance (categorical variable on the change in labour costs); Firm sources of finance (dummy variables for Retained earnings, Trade credit, Leasing and Equity), Macroeconomic controls (Credit access, GDP, Inflation, Unemployment and HHI); Regulations on related-party transactions and their interaction with German, English, Scandinavian and French origin; dummy variables for French, English and Scandinavian origin.

<i>Loan Obtained</i>	<i>Regression A</i>			<i>Regression D</i>			<i>Regression E</i>		
	Number of obs	11,332		Number of obs	11,332		Number of obs	11,332	
	Wald chi2(24)	2951.84		Wald chi2(25)	3291.19		Wald chi2(28)	18614.34	
	Prob > chi2	0.0000		Prob > chi2	0.0000		Prob > chi2	0.0000	
	Pseudo R2	0.0678		Pseudo R2	0.0678		Pseudo R2	0.0742	
	Coeff	Robust Std.Err.	p<0	Coeff	Robust Std.Err.	p<0	Coeff	Robust Std.Err.	p<0
Construction	- 0.3086	0.0814	***	- 0.3088	0.0806	***	- 0.3532	0.0791	***
Manufacturing	- 0.1960	0.0674	***	- 0.1962	0.0677	***	- 0.2355	0.0688	***
Services	- 0.0761	0.0510		- 0.0761	0.0509		- 0.0858	0.0530	
Micro	- 0.6689	0.1989	***	- 0.6692	0.2007	***	- 0.6894	0.2061	***
Small	- 0.2374	0.1929		- 0.2376	0.1933		- 0.2447	0.1962	
<2years	- 0.0318	0.1368		- 0.0319	0.1367		- 0.0468	0.1353	
2_5years	- 0.4055	0.0838	***	- 0.4055	0.0832	***	- 0.4176	0.0804	***
5_9years	- 0.1831	0.0670	***	- 0.1833	0.0679	***	- 0.1865	0.0714	***
Change_Labour_cost	0.0615	0.0541		0.0614	0.0533		0.0543	0.0514	
Retained_earnings	- 0.1303	0.0635	**	- 0.1300	0.0650	**	- 0.1373	0.0698	**
Trade_credit	- 0.2088	0.0829	**	- 0.2092	0.0852	**	- 0.1938	0.0810	**
Leasing	0.0129	0.0709		0.0132	0.0714		0.0127	0.0689	
Equity	- 0.3599	0.1006	***	- 0.3598	0.1008	***	- 0.3521	0.0943	***
Wave	Included in the regression								
Credit_Acc	- 0.0110	0.0045	**	- 0.0110	0.0045	**	- 0.0090	0.0045	**
GDP	0.0978	0.0164	***	0.0980	0.0146	***	0.1068	0.0180	***
Inflation	- 0.0944	0.0517		- 0.0944	0.0519		- 0.1380	0.0544	**
Unemployment	- 0.0554	0.0088	***	- 0.0553	0.0095	***	- 0.0560	0.0149	***
HHI	- 2.1537	1.7679		- 2.1572	1.8199		- 4.6505	1.5348	***
Rel_Parties				0.0032	0.1206				
Rel_Parties_germ							0.2254	0.2722	
Rel_Parties_eng							- 0.2853	0.0713	***
Rel_Parties_sca							8.3838	1.6169	***
Rel_Parties_fra_sou							0.0212	0.2136	
cons	2.5799	0.3026	***	2.5804	0.3020	***	2.8594	0.3956	***

** sig .05; *** sig .01

Table 3A Discouraged borrower – Shareholder rights

Dependent Variable: Whether or not the firm is a discouraged borrower; Independent Variables: Industry (Construction, Manufacturing, Services), Firm characteristics (dummy variables for Micro and Small firms); Age of the firm (dummy variables for younger than 2 years, between 2 and 5 years, between 5 and 9 years); Firm performance (categorical variable on the change in labour costs); Firm sources of finance (dummy variables for Retained earnings, Trade credit, Leasing and Equity), Macroeconomic controls (Credit access, GDP, Inflation, Unemployment and HHI); Shareholder rights and their interaction with German, English, Scandinavian and French origin; dummy variables for French, English and Scandinavian origin

<i>Discouraged Borrowers</i>	<i>Regression F</i>			<i>Regression G</i>			<i>Regression H</i>		
	Number of obs	34,264		Number of obs	34,264		Number of obs	34,264	
	Wald chi2(24)	9224.44		Wald chi2(25)	19264.42		Wald chi2(28)	19367.52	
	Prob > chi2	0.0000		Prob > chi2	0.0000		Prob > chi2	0.0000	
	Pseudo R2	0.0282		Pseudo R2	0.0283		Pseudo R2	0.0355	
	Robust			Robust			Robust		
	Coeff	Std.Err.	p<0	Coeff	Std.Err.	p<0	Coeff	Std.Err.	p<0
Construction	0.1746	0.1051		0.1754	0.1056		0.1975	0.1040	
Manufacturing	0.2285	0.0702	***	0.2287	0.0697	***	0.2573	0.0690	***
Services	0.0467	0.0703		0.0466	0.0703		0.0498	0.0703	
Micro	0.6995	0.1001	***	0.7001	0.1020	***	0.7127	0.0865	***
Small	0.3089	0.0931	***	0.3092	0.0952	***	0.3205	0.0745	***
<2years	0.2120	0.1409		0.2227	0.1476		0.2115	0.1534	
2_5years	0.4601	0.0828	***	0.4641	0.0820	***	0.4442	0.0850	***
5_9years	0.2408	0.0550	***	0.2426	0.0548	***	0.2383	0.0552	***
Change_labour_cost	- 0.0151	0.0364		- 0.0137	0.0368		- 0.0050	0.0366	
Retained_earnings	0.1205	0.0799		0.1201	0.0802		0.1601	0.0729	**
Trade_credit	0.2887	0.1161	**	0.2885	0.1156	**	0.2699	0.1155	**
Leasing	0.0885	0.0583		0.0873	0.0593		0.1067	0.0588	
Equity	0.3266	0.1242	***	0.3236	0.1275	***	0.3646	0.1236	***
Wave	Included in the regression								
Credit_Acc	0.0038	0.0029		0.0035	0.0027		0.0031	0.0025	
GDP	0.0294	0.0289		0.0301	0.0283		0.0256	0.0208	
Inflation	- 0.0602	0.0354		- 0.0596	0.0340		- 0.0142	0.0411	
Unemployment	0.0443	0.0052	***	0.0458	0.0064	***	0.0427	0.0061	***
HHI	1.0615	1.2904		0.6829	1.6172		2.8188	1.9837	
Share_Gov				- 0.0451	0.1019				
Share_Gov_germ							- 0.1853	0.2583	
Share_Gov_eng							- 0.8150	0.3450	**
Share_Gov_sca							1.7066	0.4432	***
Share_Gov_fra_sou							0.0667	0.0945	
_cons	- 3.6710	0.1331	***	- 3.6508	0.1478	***	- 3.9061	0.0986	***

** sig .05; *** sig .01

Table 3B Discouraged borrower – Regulations on related-party transactions

Dependent Variable: Whether or not the firm is a discouraged borrower; Independent Variables: Industry (Construction, Manufacturing, Services), Firm characteristics (dummy variables for Micro and Small firms); Age of the firm (dummy variables for younger than 2 years, between 2 and 5 years, between 5 and 9 years); Firm performance (categorical variable on the change in labour costs); Firm sources of finance (dummy variables for Retained earnings, Trade credit, Leasing and Equity), Macroeconomic controls (Credit access, GDP, Inflation, Unemployment and HHI); Regulations on related-party transactions and their interaction with German, English, Scandinavian and French origin; dummy variables for French, English and Scandinavian origin

	<i>Regression F</i>			<i>Regression I</i>			<i>Regression J</i>		
	Coeff	Robust Std.Err.	p<0	Coeff	Robust Std.Err.	p<0	Coeff	Robust Std.Err.	p<0
	Number of obs	34,264		Number of obs	34,264		Number of obs	34,264	
	Wald chi2(24)	9224.44		Wald chi2(25)	10482.77		Wald chi2(28)	21547.33	
	Prob > chi2	0.0000		Prob > chi2	0.0000		Prob > chi2	0.0000	
	Pseudo R2	0.0282		Pseudo R2	0.0285		Pseudo R2	0.0357	
<i>Discouraged Borrowers</i>	Coeff	Robust Std.Err.	p<0	Coeff	Robust Std.Err.	p<0	Coeff	Robust Std.Err.	p<0
Construction	0.1746	0.1051		0.1775	0.1058		0.2081	0.1060	
Manufacturing	0.2285	0.0702	***	0.2317	0.0704	***	0.2665	0.0697	***
Services	0.0467	0.0703		0.0484	0.0706		0.0526	0.0710	
Micro	0.6995	0.1001	***	0.7066	0.0985	***	0.7240	0.0788	***
Small	0.3089	0.0931	***	0.3113	0.0913	***	0.3233	0.0669	***
<2years	0.2120	0.1409		0.2083	0.1410		0.2230	0.1468	
2_5years	0.4601	0.0828	***	0.4541	0.0845	***	0.4512	0.0844	***
5_9years	0.2408	0.0550	***	0.2396	0.0552	***	0.2425	0.0530	***
Change_Labour_cost	- 0.0151	0.0364		- 0.0145	0.0366		- 0.0023	0.0372	
Retained_earnings	0.1205	0.0799		0.1171	0.0802		0.1488	0.0726	**
Trade_credit	0.2887	0.1161	**	0.3040	0.1173	***	0.2818	0.1118	**
Leasing	0.0885	0.0583		0.0812	0.0579		0.0908	0.0604	
Equity	0.3266	0.1242	***	0.3246	0.1244	***	0.3387	0.1237	***
Wave	Included in the regression								
Credit_Acc	0.0038	0.0029		0.0042	0.0028		0.0031	0.0027	
GDP	0.0294	0.0289		0.0266	0.0283		0.0260	0.0219	
Inflation	- 0.0602	0.0354		- 0.0643	0.0388		- 0.0019	0.0419	
Unemployment	0.0443	0.0052	***	0.0440	0.0056	***	0.0398	0.0108	***
HHI	1.0615	1.2904		1.0601	1.2091		3.1914	0.6698	***
Rel_Parties				- 0.0720	0.0870				
Rel_Parties_germ							- 0.1270	0.1865	
Rel_Parties_eng							0.1646	0.0580	***
Rel_Parties_sca							-10.7309	1.9486	***
Rel_Parties_fra_sou							- 0.1879	0.1639	
cons	- 3.6710	0.1331	***	- 3.6926	0.1463	***	- 3.9245	0.1997	***

** sig .05; *** sig .01

Table 4 Instrumented regression – Obtaining credit

Dependent Variable: Whether or not the bank provided the loan; Independent Variables: Industry (Construction, Manufacturing, Services); Firm characteristics (dummy variables for Micro and Small firms); Age of the firm (dummy variables for younger than 2 years, between 2 and 5 years, between 5 and 9 years); Firm performance (categorical variable on the change in labour costs); Firm sources of finance (dummy variables for Retained earnings, Trade credit, Leasing and Equity), Macroeconomic controls (Credit access, GDP, Inflation, Unemployment and HHI); Instrumented variables: Regulations on related-party transactions interacted with Scandinavian and English origin and Shareholder rights interacted with German and English origin.

<i>Loan Obtained</i>	<i>Regression C instrumented</i>			<i>Regression E instrumented</i>		
	<i>Coeff</i>	<i>Std.Err.</i>	<i>p<0</i>	<i>Coeff</i>	<i>Std.Err.</i>	<i>p<0</i>
	Number of obs 11,332			Number of obs 11,332		
	Wald chi2(26) 3033.48			Wald chi2(26) 3605.92		
	Prob > chi2 0.0000			Prob > chi2 0.0000		
Share_Gov_eng_IV	0.0960	0.3528				
Share_Gov_germ_IV	1.5035	0.8517				
Rel_Parties_sca_IV				-13.3511	10.6711	
Rel_Parties_eng_IV				0.2905	0.4284	
Construction	-0.1942	0.0505	***	-0.1292	0.0718	
Manufacturing	-0.1298	0.0413	***	-0.0659	0.0532	
Services	-0.0464	0.0307		-0.0273	0.0331	
Micro	-0.4143	0.1158	***	-0.3811	0.1301	***
Small	-0.1480	0.1091		-0.1412	0.1272	
<2years	-0.0383	0.0829		-0.0330	0.0750	
2_5years	-0.2542	0.0468	***	-0.2251	0.0604	***
5_9years	-0.1140	0.0413	***	-0.1198	0.0383	***
Change_Labour_cost	0.0366	0.0314		0.0395	0.0305	
Retained_earnings	-0.0795	0.0375	**	-0.0309	0.0503	
Trade_credit	-0.1146	0.0486	**	-0.1508	0.0551	***
Leasing	-0.0008	0.0445		0.0225	0.0370	
Equity	-0.2124	0.0605	***	-0.1891	0.0584	***
Wave	Included in the regression					
Credit_Acc	-0.0075	0.0026	***	-0.0107	0.0037	***
GDP	0.0587	0.0087	***	0.0540	0.0147	***
Inflation	-0.0845	0.0388	**	-0.0180	0.0374	
Unemployment	-0.0342	0.0052	***	-0.0365	0.0072	***
HHI	-0.6639	0.8501		3.6152	3.8298	
_cons	1.6053	0.1764	***	1.2273	0.2926	***

** sig .05; *** sig .01

Table 5 Instrumented regression – Discouraged borrower

Dependent Variable: Whether or not the firm is a discouraged borrower; Independent Variables: Industry (Construction, Manufacturing, Services); Firm characteristics (dummy variables for Micro and Small firms); Age of the firm (dummy variables for younger than 2 years, between 2 and 5 years, between 5 and 9 years); Firm performance (categorical variables on the change in labour costs); Firm sources of finance (dummy variables for Retained earnings, Trade credit, Leasing and Equity), Macroeconomic controls (Credit access, GDP, Inflation, Unemployment and HHI); Instrumented variables: Regulations on related-party transactions interacted with Scandinavian and English origin and Shareholder rights interacted with Scandinavian and English origin.

	<i>Regression H instrumented</i>			<i>Regression J instrumented</i>		
	Number of obs	34,264.0		Number of obs	34,264.0	
	Wald chi2(26)	16,667.0		Wald chi2(26)	17,152.6	
	Prob > chi2	0.0000		Prob > chi2	0.0000	
<i>Discouraged Borrowers</i>	Coeff	Robust Std.Err.	p<0	Coeff	Robust Std.Err.	p<0
Share_Gov_eng_IV	- 0.4587	0.8588				
Share_Gov_sca_IV	0.8323	0.4584				
Rel_Parties_eng_IV				0.0794	0.1512	
Rel_Parties_sca_IV				- 4.9998	2.7181	
Construction	0.1028	0.0580		0.1027	0.0579	
Manufacturing	0.1289	0.0360	***	0.1287	0.0359	***
Services	0.0257	0.0351		0.0257	0.0351	
Micro	0.3529	0.0420	***	0.3529	0.0418	***
Small	0.1525	0.0346	***	0.1525	0.0345	***
<2years	0.1120	0.0733		0.1117	0.0733	
2_5years	0.2429	0.0426	***	0.2428	0.0426	***
5_9years	0.1244	0.0293	***	0.1242	0.0293	***
Change_Labour_cost	- 0.0020	0.0170		- 0.0019	0.0170	
Retained_earnings	0.0795	0.0395	**	0.0794	0.0394	**
Trade_credit	0.1386	0.0638	**	0.1390	0.0635	**
Leasing	0.0563	0.0313		0.0561	0.0312	
Equity	0.1804	0.0620	***	0.1801	0.0620	***
Wave	Included in the regression					
Credit_Acc	0.0010	0.0013		0.0010	0.0013	
GDP	0.0169	0.0091		0.0169	0.0091	
Inflation	- 0.0083	0.0336		- 0.0088	0.0327	
Unemployment	0.0222	0.0023	***	0.0222	0.0023	***
HHI	1.7593	0.9098		1.7533	0.8954	**
_cons	- 2.1313	0.0877	***	- 2.1299	0.0857	***

** sig .05; *** sig .01