How Do Banks Assess Entrepreneurial Competence?

The Role of Voluntary Information Disclosure

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Abstract

This research adds to the literature on relationship lending in the small business context by discussing the roles of entrepreneurial competence and voluntarily disclosed information as determinants of credit access. More specifically, we propose that the loan manager's evaluation of the information voluntarily disclosed by the entrepreneur

is an important complement to publicly available financial data and soft information collected through observation and third parties in framing the loan manager's perception of the entrepreneur's competence. Further, we argue that banks charge lower interest rates if the loan manager perceives the entrepreneur to be competent. Econometric analysis based on 433 bank-firm relationships supports these hypothesised relationships. The results imply that entrepreneurs need to communicate their competence effectively to loan managers, and that banks should utilise their loan managers' personal evaluations as inputs to lending decisions.

Keywords: Small and Medium Enterprises, Competence, Interest rate, Lending Relationship

1. Introduction

The finance gap experienced by small entrepreneurial firms attracts considerable scholarly attention (Ang, 1992; Cassar, 2004; Howorth, 2001; Wingborg and Landström, 2000). Prior research argues that the gap emerges because of asymmetry of information: lenders struggle to discriminate 'good' entrepreneurs (those who will repay the loan) from 'bad' entrepreneurs (those who will not), due to the limited quantity and accuracy of information available (Diamond, 1984). Research suggests that lenders use various strategies, such as collateral and covenants, to ensure that the borrower's

behaviour meets their expectations (Stiglitz and Weiss, 1981). However, these strategies carry substantial transaction costs, which can be harmful, especially in the small business context. An alternative strategy is to find means of gathering more information. Indeed, strategies that provide lenders with usable information have important implications because any reduction in the information asymmetry benefits everyone except the 'bad' entrepreneurs: (1) the 'good' entrepreneurs gain easier access to finance; (2) the society benefits from firms that stay in business and grow; and (3) banks face lower defaults on the credit provided.

In fact, the major problem lenders face in dealing with small entrepreneurial firms is that the financial information that is publicly available on small businesses is opaque (Berger et al., 2001; Berger and Frame, 2007; McMahon and Holmes, 1991; Mason and Stark, 2004), for several reasons. First, ownership concentration and the desire to maintain control over the enterprise affects the way these firms disclose information (Ang, 1992; Binks et al., 2006; Moskowitz and Vissing-Jørgensen, 2002). Second, there are differences in information disclosure requirements for different forms of finance (Beck and Demirguc-Kunt, 2006; Wingborg and Landström, 2000). Third, accounting standards and taxation strategies affect the way in which firms disclose financial figures (Griffith, 1995). Finally, the public information that is available is typically retrospective and thus its usefulness in terms of forecasting the firm's future potential is limited, especially in the case of new growth-oriented ventures.

Prior studies suggest that transaction lending (lending based on publicly available financial data) does not properly satisfy the financial needs of SMEs and that, in order to deal with the information asymmetry lenders face, relationship lending can be an effective alternative or addition to it (Berger and Udell, 2006). Relationship lending relies on 'soft' information, which the literature defines as information that the loan manager accesses over and above the official financial figures (Berger and Udell, 2006). It is found to be an important complement to the 'hard' information derived from official financial figures, especially when assessing a firm's future potential. Such soft information accumulates over time and is often measured using the length and strength of the relationship between the bank and the client. Interestingly enough, the relationship lending literature so far neglects another factor that can reduce the information asymmetry: voluntarily disclosed information. In fact, the accumulation of soft information is usually conceptualised as occurring over the course of the relationship, but it is not assumed that the client actively discloses information. The present study argues that, not only hard information and relationship length and strength, but also the client's voluntary disclosure of information, all play a role in the lending relationships between banks and SMEs.

The present research further argues that an important conduit for conveying the effects of the different sources of information onto the actual lending decisions is the loan manager's perception of the entrepreneur's competence. Perceived competence is

relevant for lenders since it is an indicator of the venture's future potential (Baron and Markman, 2003; Brown and Zehnder, 2007), or how successful entrepreneurs and their firms are likely to be in creating and exploiting business opportunities (Chandler and Hanks, 1994). The effects of soft and voluntarily disclosed information in particular are likely to be mediated by perceived competence, while hard information affects lending decisions more directly due to the official financial figures being direct inputs into banks' computer systems.

The empirical analysis of a dataset comprising publicly available financial data and primary survey data on 433 bank-SME relationships in Northern Italy shows that the information voluntarily disclosed by the entrepreneur influences the loan manager's perception of the entrepreneur's competence over and above the effects of hard financial figures and soft information accessed by the loan manager independently of the entrepreneur' willingness to disclose it. In addition, the analysis finds that perceived competence affects the interest rate charged by the bank and mediates the impact of voluntarily disclosed information on the interest rate.

This article makes the following contributions. For the entrepreneurship literature, this study raises the importance of the loan manager's personal perception and evaluation of the information that the entrepreneur voluntarily discloses – as a complement to soft information and hard financial information – in determining the former's perception of the competence of the latter and, consequently, the firm's access

to credit. The main implication for practising entrepreneurs is that they can influence how loan managers perceive their competence through their information disclosure behaviour and benefit as a result from reduced interest rates. For banks, the main implication is that they should delegate more lending authority to local loan managers as the key people who interact with entrepreneurs and therefore have access to willingly disclosed information and soft information in addition to the publicly available financial figures.

2. Theoretical framework

2.1. Entrepreneurial competence and the lending decision

Competence as a complex phenomenon (Russell, 2001; Wasilczuk, 2000) goes beyond one cognitive dimension, trait, knowledge, skill, or personal characteristic. It focuses on the ability to successfully meet complex demands in a particular context; it includes the mobilisation of knowledge and skills as well as social and behavioural components such as attitudes (Mulder, 2006). Competence builds on skills and knowledge (Davidsson and Honig, 2003) but it is not attached to specific routines or organisations. Instead, competence is an attribute specific to individual actors, signalling their ability to meet particular expectations (Grant, 1996) through their behaviour (Bird, 1995). In the entrepreneurial context, competence affects the likelihood that the entrepreneur will deploy the assets in such a way as to successfully

meet the expectations of the firm's stakeholders and, thus, it is a determinant of future performance (Lans et al., 2011; Russell, 2001; Wasilczuk, 2000).

Indeed, Chandler and Jansen (1992) report a positive link between entrepreneurs' self-assessed competence and firm performance. Chandler and Hanks (1994) find that competence moderates the relationship between the quality of the business opportunity and subsequent firm performance as well as the link between access to resource-based capabilities and firm performance. Baron and Markman (2003) discover a positive correlation between entrepreneurs' social competence and their ability to obtain finance and attract key employees, while Holt and Macpherson (2010) argue that social competence and an awareness of others' needs, wishes, ambitions and objectives are central to the foundation and potential success of a small firm. Thus, competence is a key factor in determining the future performance of the venture (Man et al., 2002).

However, the assessment of an entrepreneur's competence is dependent on the assessor's subjective perception: for instance, Huck and McEwen (1991) report that self-assessed competence of entrepreneurs differs according to their gender. Mulder (2006) finds low correlations between entrepreneurs' self-assessed competence and the assessments of their competence by consultants and co-workers. Further, Howorth and Moro (2006) show that the loan manager's perception of the entrepreneur's ability is a

component of the trust relation between these actors and affects the entrepreneur's access to credit.

2.2. Information asymmetry and the assessment of entrepreneurial competence

2.2.1. An agency theory perspective on the lending decision

Research on the lending relationship between small firms and banks approaches the analysis of the roles of different sources of information from the agency theory point of view (Jensen and Meckling, 1976). The lender (principal) has to deal with a borrower (agent) who has conflicting interests and who has more information about their own abilities and motives than the lender has. Because of the need to reduce information asymmetry, banks face ex ante costs associated with the need to collect as much relevant information as possible (Stein, 2002), while borrowers face ex ante costs related to information production and disclosure.

In fact, small firms typically face difficulties in satisfying banks' formal information requirements (Berger et al., 2001; Kotey, 1999) and because of such difficulties they can be held up (Howorth et al., 2003). In addition, banks generate ex ante costs by asking for guarantees and collateral from small businesses in order to deal with opportunistic behaviour (Binks et al., 2006; Hernández-Cánovas and Koëter-Kant, 2011; Zecchini and Ventura, 2009). Ex post costs can arise because of adjustments to

the agreement between the bank and the entrepreneur, necessary because the firm has not performed as expected (Coase, 1990).

Research suggests that loan managers build their evaluations of entrepreneurs' creditworthiness by leveraging the diverse types of information available to them (García-Teruel and Martínez-Solano, 2007; Hernández-Cánovas and Koëter-Kant, 2008; Lehmann and Neuberger, 2001; Scellato and Ughetto, 2010). The following sections discuss the roles of different information types in more detail.

2.2.2. Publicly available 'hard' information

Many different cultural, strategic, legal, and relational factors explain why only a limited amount of information is included in small firms' financial reports. Ang (1992) points out that small enterprises are characterised, among other things, by capital structures comprising a mix of personal and firm wealth. The entrepreneur's personal wealth influences their access to finance and there is evidence of a lack of separation between business and personal risk (Ang, 1992; Ang et al., 1995). Indeed, entrepreneurs tend to invest their entire wealth in the venture from the very beginning (Avery et al., 1998). The lack of separation impacts on the transparency of the firm's accounts: when the firm is run as a sole proprietorship, the bank(s) can access the entrepreneur's personal wealth in order to be repaid; when the firm is run as a limited liability company, entrepreneurs are often asked to provide personal collateral and personal guarantees (Berger et al., 2006). This means that the overall amount of personal wealth

invested in the firm also includes the personal wealth used as collateral/guarantee, which is not disclosed in any part of the financial report. Reliance on trade credit (Howorth, 2001; Summers and Wilson, 2002) and specific financing tools such as leasing and factoring (Beck and Demirguc-Kunt, 2006) introduces an extra layer of complexity to the firm's financial structure. Furthermore, entrepreneurial firms rely on personal loans and bootstrap finance, such as loans from friends and relatives, personal credit card loans, and personal bank loans (Wingborg and Landström, 2000). These sources of finance are only partially and opaquely disclosed in the financial report.

Moreover, entrepreneurs can enjoy a range of additional pecuniary and non-pecuniary benefits from their business, which are hard to spot even with a careful examination of the financial report: Moskowitz and Vissing-Jørgensen (2002) estimate that entrepreneurs' pecuniary benefits can be up to 20% of their investment in the firm; Hamilton (2000) explains the limited entrepreneurial earnings with, among other things, the fact that entrepreneurs can use cash from the firm to pay for their personal expenses and use the firm's assets for personal purposes. Official financial figures are also affected by accounting standards and tax regulations (Keuschnigg and Bo, 2004): firms implement strategies to reduce their taxes, which affects the figures disclosed in financial reports (Griffith, 1995).

The arguments presented so far illustrate ways in which hard information can be biased, precluding the loan manager from properly evaluating the entrepreneur's

competence and creditworthiness. Nevertheless, previous research suggests that the analysis of official information provides some useful insights into a firm's current and prospective performance. Mramor and Valentincic (2003) suggest that financial ratios and lagged liquidity indicators have predictive relevance for spotting the firms that will not fail. Pompe and Bilderbeek (2005) find that all the ratios they examine have some predictive relevance, particularly for more mature businesses. Further, Beaver et al. (2005) find that the predictive capabilities of ratios are unaffected by changes in accounting standards, suggesting that ratios are robust tools. Recently, Bottazzi et al. (2011) have found that economic variables such as growth prospects, productivity and size play a role in determining the probability of default, over and above the indicators of financial performance. However, a study of US pharmacies by Thomas and Evanson (1987) provides evidence to the contrary.

In conclusion, previous empirical evidence does not unanimously advocate or discredit the use of official financial figures for estimating the firm's current or prospective performance and the entrepreneur's competence. Banks often rely on such information in combination with the collateral provided by the firm and/or by the entrepreneur (Berger and Udell, 2006). Nevertheless, theoretical arguments and empirical evidence suggest that loan managers need additional information from other sources on which to base their assessments of entrepreneurs' competence and the subsequent lending decisions.

2.2.3. Soft information

An alternative to taking lending decisions based on hard financial data and the collateral provided (transaction lending) is relationship lending (Berger and Udell, 2006), which relies on a variety of private information gained over the course of a long-term relationship (Berger et al., 2001; Berger and Udell, 1995; Hernández-Cánovas and Koëter-Kant, 2008; Petersen and Rajan, 1994; Petersen and Rajan, 1995). Berger and Udell (2006) argue that in relationship lending the collection of information on a client is a continuous process that goes beyond the information available in official documents. This additional information remains confidential to the provider of funds, who uses it as a basis for taking further lending decisions. Brown and Zehnder (2007) suggest that relationship lending improves banks' ability to evaluate their business clients' level of risk and increases the repayment rate of the loans provided.

Empirical research has demonstrated the value of relationship lending and the different factors that influence its role, in the US and various European countries alike. In their seminal work set in the US context, Berger and Udell (1995) find that the length of the relationship negatively affects the interest rate charged to the client. Similarly, Angelini et al. (1998), by looking at Italian SMEs, observe that not only the length of the relationship but also the age of the firm affect the bank's decision over whether to lend and what interest rate to charge. Harhoff and Körting (1998) and Elsas (2005) examine lending relationships in Germany and find that the closeness of the relationship

affects credit access. In another study of German banks, Grunert et al. (2005) demonstrate that both hard and soft information affect credit decisions. Further, Hernandez-Canovas and Martınez-Solano (2010) find the level of regional concentration in the banking sector to be relevant in Spain. Other factors found to exert a significant effect in the context of relationship lending and SMEs in diverse European countries include trust (Howorth and Moro, 2012), the number of banks that are financing a firm (Ongena and Smith, 2000), the physical closeness of the bank to the borrower (Alessandrini et al., 2009; Neuberger et al., 2008), quality of management and market positioning (Grunert et al., 2005), and the socio-economic context (Lehmann et al., 2004).

Common empirical indicators of soft information, such as the length of the relationship or the frequency of loan manager visits and the intensity with which they examine the borrower's performance, provide the lender with access to soft information, regardless of whether or not the borrower is happy to disclose the information. Similarly, a bank can receive information about a client's competence in running their business, as well as current and prospective performance, from third parties, such as the client's suppliers and customers (who, in a situation of high bank concentration, may themselves be the bank's customers). This information flow may happen without the client knowing about it. All in all, the way soft information has been analysed so far does not account for the role of voluntary disclosure in the acquisition of relevant

information: either soft information refers to information collected outside the relationship (such as reputation) or it refers to informal information that the loan manager accesses in repeated interactions with the firm but independently from the entrepreneur's willingness to disclose it. However, the entrepreneur holds additional information relevant for the loan manager's decision making which the loan manager can access only if the entrepreneur chooses to disclose it.

2.2.4. Voluntarily disclosed information

We define voluntarily disclosed information as information about the firm's current and prospective performance that is valuable for the loan manager's decision making but that can only be accessed if the entrepreneur chooses to disclose it. This information is neither available in public databases (hard information) nor can it be accessed via third parties or through observation (soft information). Examples of voluntarily disclosed information include the entrepreneur's opinions about new market opportunities, potential new threats and market developments, current results of R&D projects, detailed financial information about production costs, and even what kind of permissible adjustments have been made to the official financial figures in order to minimise the tax impact on the firm. Thus, the very strength of voluntarily disclosed information is that it can cover a broad spectrum of topics that may be relevant for the loan manager's decision making. However, the loan manager might be completely unaware of it, if they rely solely on traditional hard and soft information.

Given its highly specific nature, voluntary disclosure of information requires a certain level of trust, for the entrepreneur needs to know that the information they provide will not be used against their interests. A recent review of the entrepreneurship-related trust literature by Welter (2012) suggests that a high level of trust supports sensitive information disclosure, since this kind of communication only takes place in high-trust situations (Doz, 1996; Squire et al., 2009).

Research shows that in trusting situations both entrepreneurs and loan managers can benefit from improved credit access at a lower cost (Howorth and Moro, 2012). Therefore, when the required level of trust is available, voluntary information disclosure can be a rational strategy for the entrepreneur to improve the lending relationship. Here, Howorth and Moro (2006) show that good entrepreneurs tend to be proud of their performance and are therefore happy to disclose information about their past success. Good entrepreneurs who are more proactive in disclosing information to loan managers provide rich additional information that helps the loan managers to evaluate the entrepreneurs' competences.

The downside of voluntary information disclosure is that a bad entrepreneur may be motivated to disclose false information in order to provide a better impression to the loan manager. The chance of the entrepreneur manipulating the loan manager is closely related to the level of trust within the relationship (McEvily et al., 2003). However, in the specific context of the relationship between the entrepreneur and the loan manager it

is quite hard for the entrepreneur to 'window dress' bad performance successfully: the loan manager can spot distorted information by cross-analysing it with information collected from other sources (Berger et al., 2001). As soon as a loan manager spots dishonest behaviour on the part of the entrepreneur, they will cease to rely on the voluntarily disclosed information and will take extra care in examining any other data available about the entrepreneur and their business. Thus, in the long run, it is not just the disclosing behaviour that matters but the fact that the loan manager perceives the entrepreneur to have a proactive approach to disclosing information, perceives them to provide the right amount of additional information and perceives such information to be complete and accurate.

2.3. Hypotheses

So far, this article has argued that three different sources of information play a role in forming a loan manager's perception of their entrepreneur client's competence, which, as an indicator of the firm's future performance and creditworthiness, serves as a conduit for these effects to influence the firm's access to credit. This section presents five hypotheses for subsequent empirical examination and provides a summary of the arguments leading up to each hypothesis.

A principal argument in this research, following the relationship lending literature, is that the publicly available hard information in the financial report does not provide a comprehensive picture of the entrepreneur's competence. Nevertheless, banks

traditionally use these figures as inputs in their lending decisions. Against this backdrop, the present study proposes that the information that a loan manager derives from their small business client's financial reports affects their perception of the client's competence. The study thus offers the following hypothesis:

H1. Publicly available hard financial information influences the loan manager's perception of the entrepreneur's competence.

In line with previous research on relationship lending, this research further argues that soft information, accessed by the loan manager over the course of the customer relationship, is an important complement to publicly available hard data in loan managers' assessments of entrepreneurs' competence to manage and develop their businesses. This argument leads to the second hypothesis:

H2. Soft information affects the loan manager's perception of the entrepreneur's competence.

Moreover, this research suggests that there is a positive relationship between the loan manager's perception of the entrepreneur's active information disclosure behaviour (that is, the overall quality of the information voluntarily disclosed) and their perception

of the entrepreneur's competence: the greater the amount of information disclosed, the

better the quality of this information, the more timely it is, and the more complete it is

(Elsas and Krahnen, 1998; Gustavsson and Wänström, 2009), the easier it is for the loan

manager to discriminate between good and bad entrepreneurs. Therefore:

H3. The loan manager's perception of the quantity, quality, completeness, and

timeliness of an entrepreneur's voluntary information disclosure exerts a

positive effect on the loan manager's perception of the entrepreneur's

competence.

Finally, previous studies suggest that both hard and soft information support the

credit access of SMEs and reduce the interest rates charged (Berger and Udell, 2006;

García-Teruel and Martínez-Solano, 2007; Hernández-Cánovas and Koëter-Kant, 2008;

Hernández-Cánovas and Koëter-Kant, 2011; Hernandez-Canovas and Martınez-Solano,

2010). In addition, perceived competence is found to help the loan manager to evaluate

the risk incurred in financing a business, aiding the selection of good customers and

increasing the repayment rate of the loans provided (Brown and Zehnder, 2007). Using

the interest rate as an indicator of the credit conditions applied by the bank, this study

expects a high level of perceived competence to benefit an entrepreneur by giving them

access to lower interest rates since financing them is perceived as less unsafe. We

further argue that perceived competence mediates the effects of hard, soft and voluntarily disclosed information on the interest rate. Against this backdrop, the present study develops two additional hypotheses:

H4: The loan manager's perception of the entrepreneur's competence exerts a negative effect on the interest rate charged to the firm.

H5: The loan manager's perception of the entrepreneur's competence mediates the effects of the different sources of information on the interest rate charged to the firm.

Figure 1 provides a graphical illustration of the hypothesised relationships.

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3. Methodology and Data

3.1 Data

The research team collected the data for this study in South Tyrol and Friuli Venezia Giulia, in the widely studied and economically successful north east of Italy. The Italian banking system comprises large and small banks. While the large banks

mainly rely on transaction lending, the small banks tend to apply relationship lending. The nine banks that participated in the data collection belong to the latter group. A random sample of small and medium-sized firms (defined as per European Commission (2003), that is businesses with a turnover smaller than 50 million Euros, with fewer than 250 employees and with less than 43 million Euros in total on the balance sheet, excluding agricultural firms) was selected from the clientele of each bank. The selection process comprised the following steps: first, the banks generated a list of all customers fulfilling the aforementioned criteria for being categorised as SMEs. Next, the banks sorted the customers either alphabetically or based on a unique customer identification number. Finally, they picked every n^{th} customer to be included in the sample. Since both alphabetical order and sorting based on the customer identification number are independent from the characteristics of the client and the relationship, the selection process generated a random sample of SMEs.

The banks asked their loan managers to fill in the questionnaire, evaluating the competence of the entrepreneurs they assist and their level of satisfaction with various aspects of the information disclosed by each entrepreneur. In addition, the central loan office of each bank provided financial information on the firms from the bank's information system. These information systems contain data from the public database maintained by the Chambers of Commerce which in turn collects data from firms' annual financial reports as well as from the Bank of Italy database (Centrale Rischi). In

the latter, the credit provided by banks to each of their customers is recorded and updated monthly. The final sample comprises 433 bank-firm relationships.

3.2 Measures

Interest rate. The dependent variable, the interest rate, is measured as the interest rate specifically charged by the bank to the customer on the line of credit, that is, credit that can be claimed back by the bank at very short notice and that is rolled over on an annual basis. The data for this measure were derived from the banks' information systems. We decided to use this particular measure as the loan price since loan managers have some room for manoeuvre regarding the interest rate charged on the line of credit and this rate can be renegotiated easily, whereas the interest rate charged on long-term debt is usually fixed at the beginning of the loan period. Thus, the interest rate on the line of credit reflects the loan manager's current evaluation of the client.

Perceived competence. The survey instrument administered to the loan managers measured their perception of the entrepreneur's competence with a four-item scale based on Thompson et al. (1996), Mayer and Davies (1999), and Chandler and Jansen (1992). For example, one of the items was: 'The entrepreneur knows very well the market in which she/he operates'. Appendix A provides the full list of scale items with the sources. The loan managers were asked to evaluate the individual items on a 5-

point Likert scale from 'totally disagree' (1) to 'totally agree' (5). The Cronbach's alpha value for the four items is .82.

Information disclosure. Four items, measured on a 5-point Likert scale from 'very poor' (1) to 'very good' (5), capture the loan manager's satisfaction with the quantity, quality, completeness, and timeliness of the information disclosed by the entrepreneur. One of the items is: 'Are you satisfied with the amount of information received?' Appendix A displays the full list of items. The Cronbach's alpha value for the four items is .89.

Hard information. Two financial indices serve as indicators of hard financial information. The first index is the log of the firm's short-term bank debt (defined as debt with a residual life of less than one year or that can be claimed back by the bank at short notice) divided by the firm's annual turnover (measured in tens of thousands of Euros). This is a ratio that was found in the Pompe and Bilderbeek (2005) study to be a predictor of financial distress. It explains the impact of bank finance on annual turnover. More competent entrepreneurs tend to limit the ratio since, the more a firm relies on bank finance to run its operations, the less room the entrepreneur has for manoeuvre, because external stakeholders (the lenders) can constrain the entrepreneur's decisions either by refusing additional funding or claiming back the funds provided. Hence, this study expects to observe a negative relationship between this ratio and the loan

manager's perception of the entrepreneur's competence. In addition, because firms with a lower ratio are perceived as less risky, they should be granted lower interest rates.

The second index capturing hard information is the share of short-term debt in the firm's total bank debt. The ratio parallels the short-term debt/total assets of Mramor and Valentincic (2003) and Pompe and Bilderbeek (2005), the long-term liabilities/total assets of Beaver (1966), and the total liabilities to net worth of Thomas and Evanson (1987). The ratio used here, by avoiding total assets and the net worth figure, is not affected by accounting strategies and indicates the robustness of the firm's financial structure: A bank can ask a firm to pay back its short-term debt at very short notice. Thus, competent entrepreneurs tend to leverage more long-term debt in order to reduce their dependence on short-term bank debt and, thus, give themselves more room for manoeuvre in exploiting business opportunities. Therefore, this analysis expects to see a negative relationship between this ratio and the loan manager's perception of the entrepreneur's competence. Furthermore, since a higher proportion of long-term debt implies a more solid and less risky debt structure (the firm has less risk of being asked to repay the debt at short notice), firms with a low ratio are perceived as less financially risky and thus should be charged a lower interest rate.

Soft information. The empirical analysis includes two variables that capture soft information through the intensity of the lending relationship, which is how soft information has traditionally been measured in the relationship lending literature. An

intense relationship, defined as one in which the partners meet frequently over a long period of time, increases the amount of information the loan managers can access, largely independent of the entrepreneur's willingness to disclose this information. The first variable is the number of meetings between the loan manager and the entrepreneur: the more meetings, the more intense the relationship, and the easier it is for the loan manager to access information irrespective of the entrepreneur's willingness to disclose it. The second variable is the (log of the) length of the relationship (Berger and Udell, 1995; Petersen and Rajan, 1994): the longer the relationship, the greater is the loan manager's access to historical private information. In addition to being measures of soft information in their own right, another role these two variables play in this study is to ensure that the information disclosure index indeed carries the effect of voluntary information disclosure, and not simply information that has accumulated over the course of the relationship through observation or third parties.

Control variables. The empirical model specification includes two control variables. The first one, in line with the work by Bottazzi et al. (2011), who suggest an important role for economic variables in credit evaluation, is the log of the annual turnover of the firm. This measure is a very good proxy for the size of the firm (Bottazzi et al., 2011). Larger firms are more solid and are the result of previous business growth and development. Hence, it is fair to assume that the owners of larger firms are, ceteris paribus, perceived as more competent than their counterparts in smaller firms. In

addition, larger firms have more negotiating power. Due to their higher perceived competence and negotiating power, firms generating a higher annual turnover can command a lower interest rate. The second control measure is a full set of bank dummies identifying the bank in the lending relationship. This measure controls for potential variations in bank-specific (and regional) lending policies and practices.

Table 1 displays the means and standard deviations of the model variables as well as their intercorrelations.

INSERT TABLE 1 ABOUT HERE

3.3 Analysis strategy

This analysis opts for structural equation modelling (SEM) for the hypothesis testing, for three principal reasons. First, SEM is a robust technique for examining mediation hypotheses, as it allows a detailed examination of indirect effects. Second, since two of the research constructs are factors, modelling them as latent variables in SEM allows the analysis to account for measurement error. Third, SEM enables the analysis to include a method factor (Podsakoff et al., 2003) for a rigorous control of common method variance, which is a potential problem with these data because one of the main explanatory variables (information disclosure) and a dependent variable

(perceived competence) were measured with the same research instrument at the same time using the same informant.

The analysis strategy consists of four steps. The first step ensures the dimensionality, reliability, and validity of the measurement models for the two latent variables (Anderson and Gerbing, 1988). The second step estimates the structural model using maximum likelihood estimation. The third step controls for the accuracy of the initial model estimates by including a single unmeasured latent method factor to control for common method variance, as Podsakoff et al. (2003) recommend. This procedure controls for systematic variance among the items associated with the two latent variables in the model. Having established the relationships of interest in the model and adjusted them for method variance, the final step of the analysis is to include the control variables in the model specification in order to investigate the extent to which the idiosyncratic characteristics of the banks, captured through the bank dummies, and the size of the clients, measured as the log of the annual turnover, may influence the substantive interpretation of the model results.

4. Results

4.1 Measurement model assessment

The first step examines the two factors that are modelled as latent variables (competence and information disclosure). The exploratory principal components

analysis with direct Oblimin rotation results in two factors with Eigenvalues over 1 that explain 71% of the variance in the data. The rotated solution shows that all items that belong to the information disclosure scale clearly load on the first factor (loadings .82–.89), and all four items measuring the entrepreneur's perceived competence load on the second factor (loadings .77–.85). Thus, all items are retained for further analysis.

The next step assesses the reliability and validity of the model constructs by means of confirmatory factor analysis (CFA). All indicators load significantly (0.1% level) on their intended constructs, with parameter estimates ranging from .64 to .87 (Appendix A displays the loadings for each item). Even though the chi-squared test of model fit is significant ($\chi^2_{18df} = 38.55$; $p = .003$), the other conventional fit indices, which are not as sensitive to sample size, suggest a very good fit between the model and the data: the comparative fit index (CFI) is .99, which exceeds the recommended minimum of .95; the root mean square error (RMSEA) is .05, which is below the recommended maximum of .06; the standardised root mean squared residual (SRMR) is .02, which is below the recommended maximum of .08 (Hu and Bentler, 1999).

We also compute the average variance extracted (AVE) for both constructs. With AVE scores of .51 (competence) and .68 (information disclosure), both constructs exceed the threshold of .50: the indicators explain more of each construct than other, external influences (Fornell and Larcker, 1981). The AVE also serve as a measure of discriminant validity: as indicated in Table 1, the correlation between information

disclosure and competence is moderately high at .53 but the square roots of the two AVE values (.72 and .82) are higher than .53, indicating that the present measurement model has good discriminant validity (Fornell and Larcker, 1981).

4.2 Structural model assessment

The first step of the structural model assessment estimates the base model including only the hypothesised relationships (Model 1 in Table 2). Even though the chi-squared test of model fit is significant, all of the other fit indices meet the conventional thresholds for maximum-likelihood estimation (Hu and Bentler, 1999). Therefore, it is safe to interpret the path coefficients.

INSERT TABLE 2 ABOUT HERE

The estimates relating to the first endogenous variable, competence, show that information disclosure is by far the most significant predictor, exerting a positive effect on the loan manager's perception of the entrepreneur's competence. One of the indicators for hard information, the short-term debt / turnover ratio, is also significant and the coefficient has a negative sign as expected. Finally, both traditional measures of soft information show significant effects on perceived competence. While the effect of the length of the relationship is positive as proposed, interestingly, the coefficient of frequency of meetings is negative. Possibly, when the loan manager is dissatisfied with

the firm's performance and the entrepreneur's competence, there is more need for formal meetings. By and large, the estimates of Model 1 support H1-H3: all three types of information have a significant influence on the loan manager's perception of the entrepreneur's competence.

Concerning the coefficients pertaining to the second endogenous variable, the interest rate, the estimates demonstrate that perceived competence exerts a significant negative effect on the interest rate charged to the client. This result clearly supports H4. The final hypothesis (H5) suggested that competence also mediates the effects of the three information sources on the interest rate. To test this hypothesis, we examined the indirect effects of the variables capturing the various information sources.

The indirect effect of information disclosure on the interest rate via perceived competence is negative and significant (standardised coefficient: -.10, $p < .001$). A comparison of the indirect effect and the total effect of this variable shows that 56% of the effect of information disclosure is mediated by perceived competence. The other two variables that have significant indirect effects are the short-term debt / turnover ratio and the length of the relationship. The former has a small positive indirect effect (.016, $p < .05$), which is contrary to the expected negative effect, but it should be noted that only 12% of the effect of this variable is mediated. In other words, the main effect of this variable on the interest rate is a direct and negative one (Model 1, Table 2). The

length of the relationship shows the expected negative indirect effect on the interest rate

(-.02, *p* < .05) and 26% of the effect of this variable is mediated by competence.

In summary, the estimations provide partial support for H5. Competence mediates

the effects of soft information, especially voluntary disclosure, on the interest rate

charged by the bank, while the effect of hard information on the interest rate is

predominantly direct. This is not a surprising finding. Hard information is commonly a

direct input in lending decisions, while the information voluntarily provided by the

entrepreneur to the loan manager is not part of the formal decision-making process.

Therefore, it is logical that the different pieces of private information about the client

flow into the price of the loan via the loan manager's perception of how well the

entrepreneur can do their job.

The next two steps in the model estimation process introduce control mechanisms

with the aim of ensuring that the previous interpretations are robust. The first robustness

check addresses the effect of common method variance. In order to deal with the model

identification problem, common when there is a single unmeasured latent method factor

(Podsakoff et al., 2003), the analysis sets one of the parameters in each set of items

loading on the method factor (perceived competence and information disclosure) to be

equal. As Model 2 in Table 2 shows, controlling for any systematic variance among the

items that constitute the factors 'competence' and 'information disclosure' changes the

estimates, albeit only modestly. The effect of information disclosure on competence is

still positive and significant, as is the effect of the length of the relationship. The short-term debt / turnover ratio only exerts a direct effect on the interest rate, which is in line with the Model 1 estimations that showed that only a marginal share of this variable's influence is mediated by perceived competence.

The second robustness check adds the control variables to the model specification in order to establish whether they influence the substantive interpretation of the hypothesised relationships. The new estimates, accounting for the effects of the bank dummies and the firm's annual turnover, show almost equivalent hypothesised relationships to Model 1, the only difference being that the two traditional measures of soft information (frequency of meetings and length of relationship) now also have direct and significant effects on the interest rate. The mediation results remain virtually identical to those of Model 1.

In conclusion, while there is some variation in the results of the different model specifications, this variation is relatively marginal: some variables (e.g., frequency of meetings) become significant at low levels in certain models but not in others. However, four effects appear to be robust across all model specifications.

First, the short-term debt / turnover ratio, an indicator of hard information, exerts a direct negative effect on the interest rate. While some model specifications suggest that this variable also has a significant effect on competence and that competence partially mediates its effect on the interest rate, the scope of this mediation (7-12%) is

so small that it seems more prudent to conclude that the effect of this variable on the interest rate is direct. Therefore, this result supports neither H1 nor H5 unambiguously.

Second, the length of the relationship has a consistently positive and significant direct effect on perceived competence and a negative indirect effect on the interest rate via competence. This finding lends support to H2 and H5.

Third, information disclosure has a positive and significant direct effect on perceived competence and a negative and significant indirect effect on the interest rate via perceived competence. This finding supports H3 and H5.

The fourth effect that is robust across all model specifications is that perceived competence exerts a consistently significant and negative effect on the interest rate, thus supporting H4.

In terms of H5, two of the four robust findings support this hypothesis while the third robust finding is equivocal. However, the findings do support the interpretation that perceived competence mediates the effects of soft information on the interest rate charged by the bank. Moreover, the mediation effect appears to be particularly strong in the case of voluntarily disclosed information.

5. Discussion and Conclusion

The empirical results assign a significant role to voluntarily disclosed information in forming the loan manager's perception of the entrepreneur's competence, as a

complement to data derived from official financial reports and soft information collected through observation and third parties. Besides highlighting the role of voluntarily disclosed information, which is of benefit to the relationship lending literature in the SME context, the results of this study also have important implications for agency theory, which underlies much of the literature on bank-firm relationships. These are discussed next.

Conventionally, agency theory focuses on how to reduce the risk of opportunism in the presence of information asymmetry by developing legal tools (detailed contracts) or monetary tools (managers' remuneration) in order to align the behaviour of the agent with that expected by the principal (Fama, 1980; Jensen and Meckling, 1976). These mechanisms cannot completely reconcile the agent's and the principal's objectives and do not come without a price: they stimulate the entrepreneur's opinion that the loan manager is not supportive and cannot be trusted. This may reduce the entrepreneur's willingness to disclose information, which in turn reinforces the loan manager's perception of receiving insufficient information, stimulating a non-cooperative game (Axelrod, 1981). Consequently, in the relationship between entrepreneur and loan manager, traditional coordination mechanisms tend to increase agency problems rather than reduce them.

The present research findings suggest that, in lending relationships, loan managers have an alternative. They may engage in measures that foster disclosure (Wathne and

Heide, 2000): by nurturing voluntary information disclosure, they increase their knowledge of the entrepreneur's competence, which reduces information asymmetry.

Previous literature on cooperation points at reciprocal relationships as a potential solution (Axelrod, 1981; Fink and Kessler, 2010). Thus, when entrepreneurs disclose information and loan managers reciprocate by granting more flexible banking relationships (less formal intrusiveness or easier access to credit), the loan managers are providing the entrepreneurs with incentives to disclose additional information. Similarly, by responding positively to the incentive, the entrepreneur signals an absence of opportunism and thus provides the bank with an incentive to grant more favourable lending conditions. In such a game, with an indefinite number of anticipated moves, both the entrepreneur and the loan manager are better off after each round of the game if they cooperate instead of cheat (Axelrod, 1981).

However, relying on perceived competence and voluntarily disclosed information also has a dark side, as the loan manager can misinterpret both the disclosing behaviour and the actual information. In the worst case, the entrepreneur can take advantage of a close relationship to cheat the loan manager by disclosing incorrect or misleading information. In fact, the chance of the entrepreneur manipulating the loan manager is closely related to the level of trust within the relationship (McEvily et al., 2003) as trust has been shown to be linked to reduced levels of scepticism towards the interaction partner (Rennie et al., 2010; Thorgren and Wincent, 2011), reduced monitoring

(Williams, 2001), rigidity in failing to adapt one's evaluation of a partner in response to changing circumstances (Barnett and Carroll, 1995), and a failure to realise that the effect of the relationship has become negative (Miller and Friesen, 1980; Patzelt and Shepherd, 2008). Researchers stress that a high level of trust may lead to an even higher risk of fraud (Shapiro, 1987) and a systematic bias in the assessment of an exchange partner (Kahneman et al., 1982). All in all, over-reliance on voluntarily disclosed information can make the loan manager blind to obvious difficulties in a firm, as they may too easily give the benefit of the doubt (Kautonen et al., 2010) or simply react too late in the case of misconduct (Thorgren and Wincent, 2011). Therefore, it is important to note that it is not trust between the loan manager and the entrepreneur, but the voluntary information disclosure itself that reduces the threat of opportunistic behaviour in the lending relationship: the relationship between the entrepreneur and the loan manager needs sufficient closeness and trust to facilitate the voluntary disclosure of information but it also needs sufficient distance to avoid the negative side of socialisation (Gargiulo and Ertug, 2006; Wicks et al., 1999).

In summary, the present research suggests that publicly available hard financial data, soft information collected through observation and third parties, and voluntarily disclosed information each play a role in loan managers' perceptions of entrepreneurs' competence. In particular, entrepreneurs' information disclosure behaviour increases their perceived competence, reduces the perceived threat of opportunism in the eyes of

the loan managers and, by increasing their knowledge about the entrepreneurs, improves loan managers' ability to discriminate between good and bad customers. This shows up in lower interest rates for entrepreneurs whom the loan managers perceive as having voluntarily provided high-quality information. Thus, banks should give their loan managers more leeway to tap the potential of information that is voluntarily disclosed through the social relationship (Stein, 2002). In addition, information disclosure may stimulate loan managers to reciprocate with cooperative behaviour: they may grant entrepreneurs easier access to credit.

The present research expands agency theory by pointing out the importance of social interaction and personal relationships in the formation of perceptions that reduce opportunistic behaviour, suggesting that the disclosing behaviour of the agent can benefit the principal and that such behaviour can be supported by the principal's provision of incentives to benefit the agent.

In interpreting the presented findings, the reader must keep in mind certain limitations. The empirical study is based on northeast Italy, an area characterised by Latin and German cultures. The disclosing behaviour and the reciprocation of cooperative behaviour may be affected by cultural aspects (Fink and Harms, 2012). In addition, the impact of disclosing behaviour on the lending relationship due to increased perceived competence may be reduced in financial systems that rely mainly on transaction lending (such as the Anglo-Saxon one). Thus, the findings need to be tested

by replicating the study in different contexts (Hubbard et al., 1998). The data used in the analysis are cross-sectional: the present research does not take into consideration the evolution of perceived competence as the result of a set of interactions between the entrepreneurs and loan managers. This topic is an attractive area for future research.

Notwithstanding the limitations attached to the characteristics of the dataset and the context, the study indicates that disclosure by the entrepreneur is an important determinant of the perception of competence in the loan manager's mind, and thus may influence lending relationships more than has hitherto been acknowledged.

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Appendix A Psychometric scale items and item-level descriptive statistics

Competence	Mean	SD	Loading	Source
The entrepreneur knows very well the market in which she/he operates	4.10	.71	.64	Chandler and Jansen (1992); Thompson, Stuart, and Lindsay (1996)
The entrepreneur is good at selecting the required resources	3.69	.80	.74	Mayer and Davies (1999); Thompson, Stuart, and Lindsay (1996)
The entrepreneur is good at managing resources	3.79	.78	.82	Chandler and Jansen (1992); Mayer and Davies (1999)
The entrepreneur is good at understanding the market evolution	3.80	.78	.65	Chandler and Jansen (1992); Thompson, Stuart, and Lindsay (1996)
Information disclosure				
Are you satisfied with the amount of information received?	3.55	.80	.81	
Are you satisfied with the quality of the information received?	3.67	.79	.87	
Are you satisfied with the completeness of the information received?	3.65	.82	.84	
Are you satisfied with the timeliness of the information received?	3.45	.90	.77	

Note: N=433. The loading is the standardised parameter estimate from the confirmatory factor analysis.

Figure 1 Theoretical Framework and Hypotheses
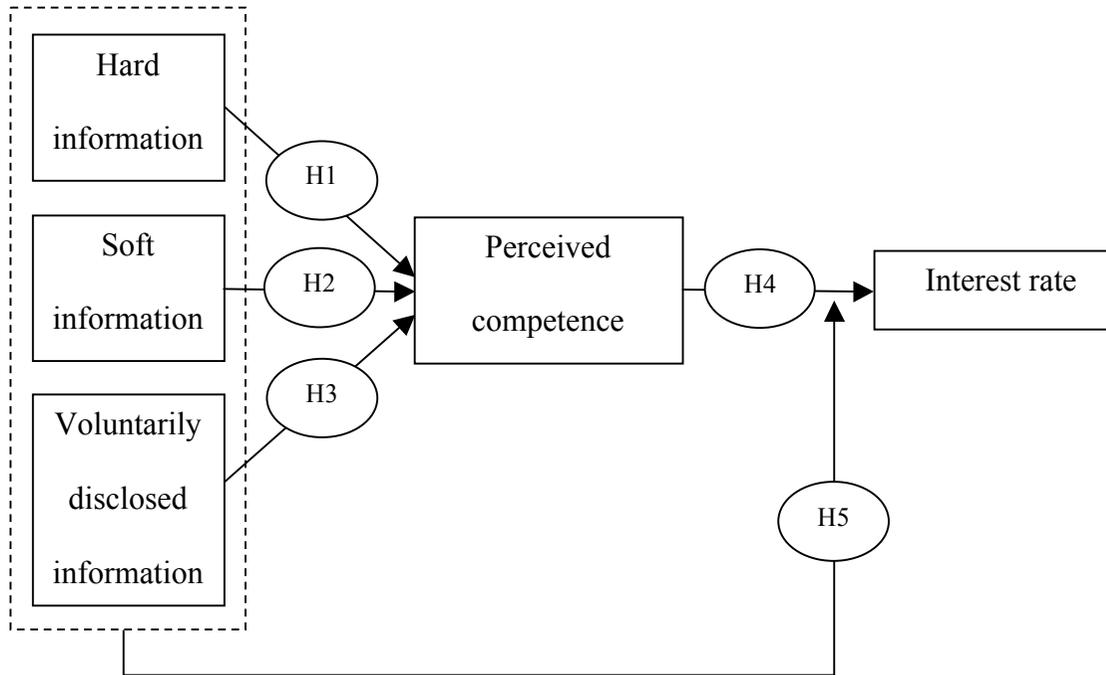
Table 1 Descriptive statistics

Variable	Mean	SD	Correlations						
			1.	2.	3.	4.	5.	6.	7.
1. Interest rate	5.37	1.44	1						
2. Perceived competence	3.84	.62	-.16	1					
3. Information disclosure	3.58	.72	-.06	.53	1				
4. Short-term debt / turnover[1]	6.42	50.93	-.11	-.02	.11	1			
5. Short-term debt / total debt	.71	.32	-.00	.03	.01	.02	1		
6. Frequency of meetings	2.97	1.23	-.03	.04	.20	-.03	-.15	1	
7. Length of relationship (log)	2.04	.86	-.07	.11	.05	.04	-.09	-.04	1
8. Turnover (log)	13.76	1.30	-.26	.05	.05	-.21	.17	-.05	.07

Notes: *N*=433. Pearson correlations. Coefficients greater than .1 are significant at the 5% level. [1] This measure has been divided by 1000 for efficiency of presentation.

Table 2 Results of the structural equation model estimation

	Model 1: Base model		Model 2: Method factor		Model 3: Controls[1]	
	Competence	Interest rate	Competence	Interest rate	Competence	Interest rate
Perceived competence		-.20** (.07)		-.27** (.09)		-.19** (.07)
Information disclosure	.63*** (.04)	.11 (.07)	.39** (.13)	.09 (.07)	.63*** (.04)	.10 (.07)
Short-term debt / turnover	-.13** (.04)	-.13** (.05)	.03 (.07)	-.10* (.05)	-.12** (.05)	-.19*** (.04)
Short-term debt / total debt	.06 (.05)	-.01 (.05)	-.06 (.07)	-.03 (.05)	.06 (.05)	.01 (.04)
Frequency of meetings	-.08* (.05)	-.05 (.05)	-.04 (.07)	-.04 (.05)	-.11* (.05)	-.10* (.05)
Length of relationship (log)	.11** (.04)	-.05 (.05)	.11* (.06)	-.04 (.05)	.11* (.05)	.10* (.05)
Turnover (log)					.05 (.05)	-.31*** (.05)
χ^2	86.99 (48 df)		46.60 (35 df)		299.70 (102 df)	
CFI / RMSEA / SRMR	.979 / .043 / .027		.994 / .028 / .019		.909 / .067 / .034	

Notes: N=433. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (one-tailed test). Standardised coefficients (standard errors).

[1] In addition to log turnover, this model specification contains a full set of bank dummies (7 dummies for 8 banks) whose coefficients are not reported.