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SMALL BUSINESS LOAN REQUESTS: WHO GETS THE CASH?

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Small Business Loan Requests: Who Gets the Cash?

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The results indicate that small firms do face credit squeezes in a recessionary macroeconomic environment. Paradoxically, the probability of making a successful loan request is positively associated with the amount of funding required.

I. Introduction

Access to capital, be it personal wealth, business profits or simply the ability to raise a bank loan is widely perceived to be a significant constraint upon the development of the small business sector in the UK. For example, whilst 15% of waged employees questioned in the British Social Attitudes Survey had ‘actively considered starting their own business’, when further questioned as to why they had not done so over half reported that lack of capital was the deciding factor (Blanchflower and Oswald, 1997). Yet this may not simply be a problem at the pre-start stage for potential entrepreneurs, but also for existing small businesses looking for working or development capital (Ang, 1991, Cowling, 1997b).

If we broadly accept that cash-flows in smaller business are less certain than in larger firms, then access to bank debt to help overcome impending liquidity crises is fundamental to survival. Paradoxically, such crises can also be the result of overtrading as much as undertrading. Equally, capital investment is less likely to be characterised by a smooth continuum of projects which require funds, but by more discrete, one-off requirements for a single large-scale project.

It is the aim of this paper to ask one simple question: Who gets the cash? Thus the focus will be on identifying those firm level and loan specific characteristics which distinguish between small business who successfully applied for bank funds and those who were turned down.
The empirical evidence was generated from a survey of UK small firms in 1991 which dealt with a wide range of issues concerning the relationship between small firms and their banks.

II. Sample, Variables and Model
To consider the probability that a small firm loan request was granted by the bank we use evidence from a random sample of small businesses collected from an Association of British Chambers of Commerce survey. In total data on 211 firms is analysed (see Middleton et al, 1992, for further details). The characteristics of the sample are as follows;

Employment - the sample mean is 25 employees, and ranges from 1 to 180.
Sectoral Distribution - some 23.7% of firms are in manufacturing, 7.7% in construction and the remaining 68.6% spread across the service sectors. Age - the mean age of firms is 11 years, although the range is from start-ups to 30 year old, established firms. Debt Finance - in 1991, 46.4% of firms sought a bank loan. A further 31.0% did so in 1990. Aside from the tiny proportion that had never sought a bank loan, 1.4%, the remainder had done so prior to 1990. For the most part firms sought either a new overdraft facility (revolving line of credit in the US), 25.0%, or an extension to an existing facility, 44.0%. The remaining 31.0% had sought fixed term loans. In line with the high incidence of overdraft facilities, the majority of lines of credit were of no fixed payback, 57.9%. Of the rest, 16.4% were for less than five years, 17.9% for 5-10 years, and 7.9% for 11-20 years duration.

Loan Approval - On this, we find that some 12.8% of loan requests were turned down by banks. This evidence is consistent with US results reported in Buck et al (1991) who found that between 6% and 22% of small businesses are being denied loans, and UK evidence from Binks and Ennew (1996) and CBRC (1996) which report loan refusal rates of 10% and 16% respectively.
The empirical model used to examine the determinants of bank loan requests can be expressed thus;

\[ LA[1,0] = \alpha + \Sigma R + \Sigma L + e \]

where, \( LA \) is defined as 1 if the loan request was approved and 0 if it was denied; \( \Sigma R \) is a vector of firm specific risk characteristics, and \( \Sigma L \) is a vector of loan conditions and bank-firm relationship variables. The variables are summarised in the Appendix. 

Before I explain some of the coefficients of the model, I would like to emphasise that a priori, we expect that loan denial is positively associated with firm risk. In line with Keasey and Watson (1995) we expect firm size (EMPLOY) to be negatively correlated with risk and thus loan denial as failure probability declines with size. We also anticipate that service sector dummy (SECTOR) might be negative, given the typically lower survival rates of such firms compared to those in other sectors (Cowling and Mitchell, 1997). Other important firm specific variables include age (AGE) and legal status (LEGAL), defined as 1 if limited liability and 0 if not. On age, we anticipate that older firms face a lower probability of a loan request being denied due to longer-term relationships with banks (Petersen and Rajan, 1994) and also an increased probability of survival (Cressy, 1996). Taking on board the recent empirical work of Keasey and Watson (1997), which focused on the cost of bank finance, we also incorporate a variable AGESq in order to examine the possibility of a ‘U’ shaped relationship between age and approval probability to capture potential life-cycle effects. In addition we also adopt their strategy of restricting the sample of firms analysed to those below thirty one years of age as it is difficult to conceive of what additional relationship (information flow) benefits could be achieved beyond this point. On legal status, Storey (1994) argues that limited liability yields a small firm credibility which from the banks point of view can offer benefits if it reflects the seriousness of the business.

Other loan specific factors which we might expect to influence loan approval are the size of the lending bank (BANK), whether the loan decision was made at a local branch or regional head office (DEC), and loan size. Further we also consider the purpose of the loan captured as a dummy (FA) if the loan would be used to finance
investment in fixed assets, and a dummy (INFO) to capture the nature and the
closeness of the firm and bank relationship as hypothesised by Petersen and Rajan.
Thus we anticipate that a closer relationship between bank and borrower will, holding
all other factors constant, result in an increased probability of a given loan request
being approved. We also incorporate time-dummies to allow for shifts in banks
willingness to approve loans generated through changes in the level of bank
competition and changes in the macroeconomic environment.

Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>11.30</td>
<td>7.56</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>Employ</td>
<td>25.13</td>
<td>33.15</td>
<td>1</td>
<td>180</td>
</tr>
</tbody>
</table>

Number of cases = 211

III. Empirical Results

The results indicate that there were four key factors in the banks decision to grant the
firms loan request. These were; the time at which the loan request was put forward by
the firm; where the banks final decision on the loan was made; whether the firm
sought funds for investment in fixed assets, and; the size of the loan requested. As
regards the timing of the loan request, there is evident consistent with the notion that
banks reduce their overall supply of loanable funds during economic downturns. In
the UK, the economy began its downward spiral into recession during 1990 but the
actual trough was in 1991. The significance of the 1991 time dummy and the
insignificance of the 1990 dummy appear to capture this effect.
Table 2  Regression Results  Dependent Variable = Loan Approved [1,0]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>S.E.</th>
<th>Wald Stat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1.627</td>
<td>1.171</td>
<td>1.929</td>
</tr>
<tr>
<td>Agesq</td>
<td>-0.455</td>
<td>0.182</td>
<td>6.229</td>
</tr>
<tr>
<td>Bank</td>
<td>0.069</td>
<td>0.480</td>
<td>0.021</td>
</tr>
<tr>
<td>Dec</td>
<td>-1.056</td>
<td>0.504</td>
<td>4.395</td>
</tr>
<tr>
<td>FA</td>
<td>0.743</td>
<td>0.377</td>
<td>3.891</td>
</tr>
<tr>
<td>Legal</td>
<td>0.555</td>
<td>0.511</td>
<td>1.180</td>
</tr>
<tr>
<td>Sector</td>
<td>0.617</td>
<td>0.547</td>
<td>1.271</td>
</tr>
<tr>
<td>Employ</td>
<td>-0.106</td>
<td>0.294</td>
<td>0.129</td>
</tr>
<tr>
<td>Info</td>
<td>0.301</td>
<td>0.590</td>
<td>0.261</td>
</tr>
<tr>
<td>LS50</td>
<td>1.981</td>
<td>1.253</td>
<td>2.499</td>
</tr>
<tr>
<td>LS100</td>
<td>2.972</td>
<td>1.200</td>
<td>6.135</td>
</tr>
<tr>
<td>T90</td>
<td>-0.482</td>
<td>0.912</td>
<td>0.279</td>
</tr>
<tr>
<td>T91</td>
<td>-1.626</td>
<td>0.797</td>
<td>4.160</td>
</tr>
<tr>
<td>Constant</td>
<td>0.587</td>
<td>1.706</td>
<td>0.118</td>
</tr>
</tbody>
</table>

N=211
-2 Log Likelihood = 140.877
\(\chi^2=0.001\)

The level at which the banks final lending decision was made also affected the probability of a given loan being approved or rejected. Here a loan decision made a local branch office was more likely to be turned down than a loan decision made at a regional branch office. This effect is consistent with the earlier findings regarding loan collateralisation reported in Cowling (1997b). In that case local lending officers were more likely to request collateral on a given loan. The original interpretation may still be valid here in as much as it might suggest that less experienced and more junior bank staff are more cautious about their lending decisions due to the relative smallness of their total lending portfolios, and hence the greater relative significance of a single default. Another possible explanation being the career implications of becoming known as a poor judge of lending prospects. Better to exercise prudence and build up a record of sound lending than risk your career on backing a risky entrepreneurial venture.
Our result on fixed assets are consistent with banks being less concerned about risk when there are assets which can be appropriated in the event of default. It might also be interpreted as a signalling effect on the part of firms, in the sense that investment in fixed capital stock implies a longer-term commitment to the industry or marketplace.

Finally, we find that loans in excess of £100,000 were significantly more likely to be approved. This has important when considering the findings of Cressy (1996) who reports that in periods of recession the average loan size actually increases which he interprets as banks switching towards ‘quality’ lending rather than quantity.

IV. Conclusion
The intention of this paper was to examine the determinants of bank decisions to approve or deny small business loan requests. Initially, we find that only a relatively small number of loans are in fact refused by banks, but further investigation adds to our understanding of these decisions. Importantly, there is evidence consistent with small businesses facing credit squeezes during recessionary periods, which presumably causes great hardship to some firms trying to keep afloat. In cases where funds were available, the results suggest that more substantial requests for funding have a greater chance of success. Importantly, it appears that banks do not pay great attention to firm level characteristics when making their decisions.

REFERENCES


APPENDIX: VARIABLES

Dependent variable
LA If loan was approved by the bank=1, otherwise=0.

Independent variables
\ln(Age) Log of firm age.
\text{Age}^2 \text{Age squared}/100.
\text{Bank} If customer sought funds from big-4 bank=1, otherwise=0.
\text{Dec} If final loan decision was made at a local branch=1, otherwise=0.
\text{FA} If loan was for investment in fixed assets=1, otherwise=0.
\text{Legal} If firm had limited liability status=1, otherwise=0.
\text{Sector} If firm was in a service sector=1, otherwise=0.
\ln(\text{Employ}) Log of employment size.
\text{Info} If firm owner perceived its bank to have good or very good information regarding the firm and its owner=1, otherwise=0.
\text{LS100-LS50} Dummy variables representing loan size bands £100,000 and £50,000.
\text{T90-T91} Dummy variables used to reflect the year in which the loan was requested. (reference year=1989).