

Who Needs Credit and Who Gets Credit?

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Summary:

Who Needs Credit and Who Gets Credit?

- This study uses data from the 2003 Survey of Small Business Finance to explore, among privately held small firms, who needs credit and who gets credit.
- We break the credit allocation process down to three steps:
 - Who needs credit?
 - Who applies for credit?
 - Who gets credit?

Summary:

Who needs credit?

- There are three groups of firms that need credit:
 - Firms that apply for credit.
 - Firms that apply for and are granted credit.
 - Firms that apply for and are denied credit.
 - Firms that need credit but do not apply.
- Who doesn't need credit?
 - All other firms.

Summary:

Why is this study important?

- No study of which we are aware analyzes the “No-Need” firms.
 - Almost half of all small firms.
- Many existing studies ignore “discouraged” firms that need credit but don’t apply.
 - “Discouraged” firms are more than twice as numerous as “Denied” firms.
 - To improve availability of credit, it is critically important to better understand these firms.
- Many studies pool “discouraged” firms with “denied” firms to analyze credit allocation.
 - This can lead to faulty inferences if the two groups differ systematically.

Summary: Key Findings

- “No Need” firms look a lot like “Approved” firms and appear to follow the Pecking-Order theory of capital structure.
 - Firms use internal rather than external finance if they are
 - Larger
 - More Profitable
 - More Liquid
 - Less highly levered
 - Higher credit quality at both firm and owner level.

Summary: Key Findings

- “Discouraged” firms look a lot like “Denied” firms but show significant differences:
 - Smaller
 - More liquid
 - Younger
 - Have controlling owners who:
 - are female,
 - Are Black
 - Have less personal wealth

Summary: Key Findings

- Results for “Denied” firms vs. “Approved” firms are consistent with existing literature, esp. studies using the 1993 SSBF. Denied firms are more likely to be:
 - Smaller
 - More highly levered
 - Worse firm and owner credit quality
 - Less personal wealth
 - Black-owned

Literature

- The literature in the area of credit availability dates back at least to Paul Wendt (JF 1946), who examined the post-WWII availability of credit to small firms in California.
- "Loans were typically in amounts less than \$5,000, matured in three years and were made to retail, service or small manufacturing concerns for the purposes of business purchase or establishment of new business."

Literature

- Seminal study in this area is the 1994 JF article by Mitch Petersen and Ragu Rajan.
 - First published study to analyze data from the first (1987) SSBF.
 - That survey did not ask about approved vs. denied loans; only about terms of approved loans.
 - Consequently, P-R look at the loan rate and at trade credit paid late as proxies for the availability of credit.

Literature

- Next major study was by Allen Berger and Greg Udell (JB 1995), which focused specifically on lines of credit to better address the importance of relationships in the bank loan decision.
 - Focus was on the loan rate and whether or not collateral was required by the lender.

Literature

- Third major study in this area was Cole (JBF 1998), the first published study to analyze the 1993 SSBF, which added information on the loan approval decision, allowing for the modeling of this decision.

Literature

- Since 1998, scores of studies have following including (among MANY others):
 - Berger, Klapper and Udell (JBF 2001) about lending to opaque small firms;
 - Petersen-Rajan (JF 2002) on Distance;
 - Cole, Goldberg and White (JFQA 2004) and Berger, Miller, Petersen, Rajan and Stein (JFE 2005) on differences in lending by large and small banks;
 - Berger-Udell (JBF 2006) on lending technologies, as well as the previous paper by Black and Berger 2008.

Data

- One of the contributions of this study is that it is among the first to analyze the latest and last iteration of the SSBF: the 2003 version.
 - Major improvements of the 1998 and 2003 SSBFs include the addition of information on the wealth of the primary owner, a critical variable omitted from the 1993 survey; and the D&B credit score for each firm.
 - In addition, the 2003 SSBF enables us to separate out applications for renewals of lines of credit (40% of total applications but rarely turned down) from new applications for credit.

Data

- We impose a number of restrictions on the 4,240 firms in the 2003 SSBF to deal with issues of data availability and to omit “middle-market” firms with sales revenues greater than \$10 million.
- We end up with a sample of 3,623 firms that are broadly representative of about 5 million small firms operating in the U.S. as of year-end 2003.

Methodology: Classification of Firms

- First, we classify firms into one of five categories of “borrower” types based upon their responses to three questions about their “most recent loan requests” during the previous three years:
 - Did they apply?
 - Were they approved or rejected?
 - Did they need credit but not apply because they feared rejection?

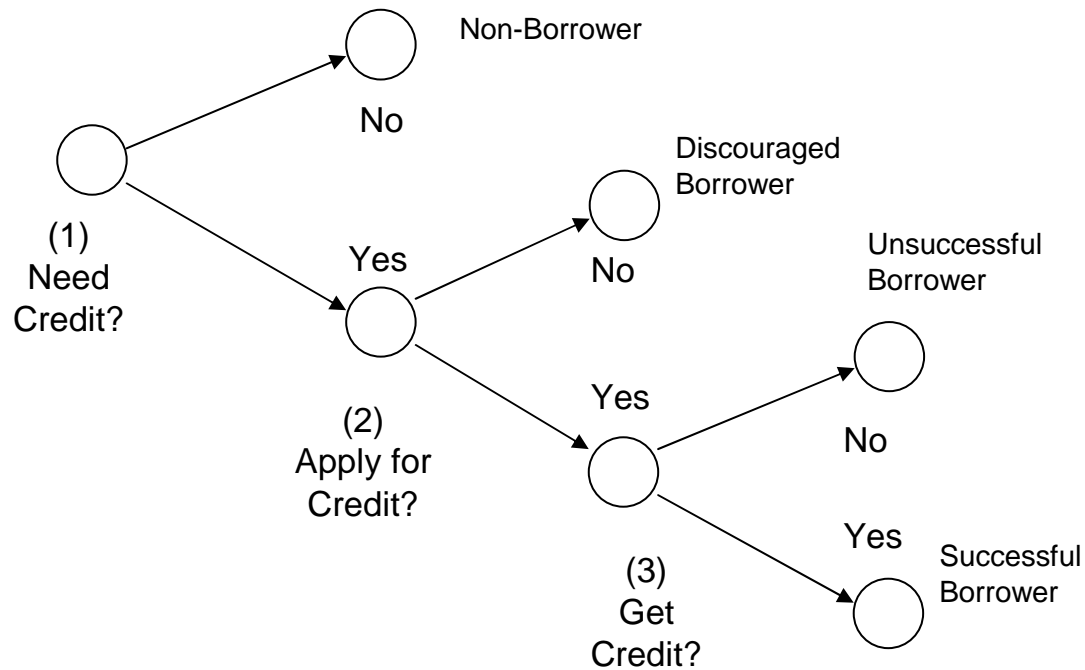
Methodology:

Classification of Firms

- If they did not apply and did not indicate they needed credit but feared rejection, we classify them as "non-borrowers." (N=1,850)
- If they did not apply because they feared rejection, we classify them as "discouraged." (N=317)
- If they applied and always were rejected, we classify them as "Denied." (N=126)
- If they applied and were sometimes denied and sometimes approved, we classify them as "Denied&Approved." (N=58)
- If they applied and always were approved, we classify them as "Approved." (N=1,272)

Methodology: Three Step Selection Process

Figure 1:
Who needs and who gets credit?
A sequential model



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Methodology:

Univariate and Multivariate Test

- Once we have classified each firm, we calculate univariate statistics for each group and test for significant differences in means across groups.
- We then run a sequence of three logistic regression models to explain each step of the credit approval process:
 - 1. Need credit?
 - 2. Apply for credit?
 - 3. Get credit? (Approved or denied?)

Results: Table 1

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Results: Table 1 (cont.)

Results: Table 3

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Results: Table 3 (cont.)

Results: Table 4

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Results: Table 4 (cont.)

Results: Table 5

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Results: Table 5

- When we exclude the 573 applications to renew a line of credit (of which there are only 15 denials, too few to analyze), we find that, if anything, our results are strengthened.
- Each variable that is significant when the LC renewals are included also is significant when they are excluded, often with higher t-values.
- Each variable that is insignificant remains insignificant when the LC renewals are excluded.
- We conclude that the LC renewals are not driving the results.

Summary and Conclusions:

- In this study, we examine the availability of credit to small privately held U.S. firms using data from the 2003 SSBF.
- We make at least three important contributions to the literature.

Summary and Conclusions

- First, we provide the first rigorous analysis of the differences in our four types of firms: non-borrowers, discouraged borrowers, denied borrowers and successful borrowers.
- Our findings have important implications for interpreting previous research that has combined these groups in ways that our results suggest are inappropriate, such as pooling discouraged borrowers with denied borrowers in analyzing availability of credit.

Summary and Conclusions

- Second, we provide an analysis of credit availability that properly accounts for the inherent self-selection mechanisms involved in the credit application process: who needs credit, who applies for credit conditional upon needing credit, and who receives credit, conditional upon applying for credit.
- Previous researchers have pooled firms that do not need credit with those needing credit and have pooled discouraged borrowers with denied borrowers. Hence, our results shed new light upon the credit-allocation process.

Summary and Conclusions

- Third, we provide the first evidence from the 2003 SSBF on the availability of credit to small firms. This survey includes methodological improvements on the previous SSBFs (1987, 1993 and 1998) that enable us to better address the issue of availability of credit to small firms.
 - One of the most important is the identification of applications to renew existing lines of credit, which enables us for the first time to differentiate the availability of new credit from renewals of existing credit.
 - One of the most disturbing findings from this analysis is that Black-owned firms are 15 to 30 percent more likely to be rejected than other firms, even after incorporating the extensive set of control variables available from the SSBF.