Do social ties trump collateral in determining loan performance? Evidence using same day loan repayments

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Banks are better equipped to monitor and enforce a better repayment discipline among borrowers as compared to individual lenders. Their monitoring and enforcements power further improves with collateral based lending. However, there are certain issues that still prevail with the collateral based lending mechanism. (i) Borrowers having positive NPV projects do not necessarily have pledgeable collateral. Moreover, asymmetric information between borrower and lenders may lead to inappropriate valuation of their projects and its pledgeable value. (ii) Frequent political intervention of debt contracts make enforcement of collateral extremely difficult. (iii) Sometimes, collateral may lead to reduced monitoring and excessive risk taking.

The failure of collateral based lending has led to the emergence of group lending with joint liability. Under group lending, each individual group member gets a separate loan, but the group is liable to repay total loans lent to the members of the group. The group loan is essentially leverages the social capital, particularly in emerging economies, and uses it as collateral. Hence, it is important to understand the overall performance of collateral based individual lending vs. group lending where banking responsibilities of selection, monitoring, verification and enforcement are basically done by the group itself.

However, it would not be appropriate to simply compare the default rates of collateral based individual lending with joint liability based group lending, as the difference may arise due to other factors. For instance, the borrowers of two types of lending may have distinct characteristics which may impact the default probability differently. Similarly, time may play an important role in determining the default rate. Hence, the performance of a loan cannot be only attributed to the loan structure.

To overcome the above limitation, Agarwal, Tantri and Vishen (2019) in their study "*Do social ties trump collateral in determining loan performance? Evidence using same day loan repayments*" compared default rates of collateral based individual lending with joint liability based group loans where the same individual is required to repay both the types of loans on the same day. The sampling design effectively neutralised both time invariant and time varying factors at the borrower level. Besides, the study has explicitly accounted for time varying borrower's characteristics like, income, assets, age and number of household members in the analysis.

They utilised credit transaction level data from a large non-banking financial company (NBFC) in India. The NBFC provides diverse range of financial services to rural poor in three states in India, *viz*. Uttarakhand, Odisha and Tamil Nadu. It has more than 200 branches with more than 8lakh customers and its loan book value remains greater than Rs30bn. The dataset contains information about both individual and group loans. Individual level information is given for all loan categories that helped to examine the default probability of an individual borrowed at an individual level or on group level. The NBFC collected information about income and assets of all individuals at regular intervals. It has mostly provided loans with a tenure of one year. The interest rates are computed based on other credit information, as it was not mentioned explicitly in the data set.

The study has taken a sample data consists of more than 14 thousand unique individual borrowers who have taken at least one individual loan and one group loan. Finally, the sample has information related to 36.5 thousand loans where 20.4 thousand loans are at group level and 16.1 thousand loans are given at individual level. Out of total 1.1mn repayments in the sample, 825.2 thousand are group loans and 235.4 thousand are individual loans. Further, several borrowers have loans with simultaneous repayment instances for their group loans and individual loans. The sample captures

more than 1mn such loan repayment instances where 796.9 thousand and 234 thousand repayments are related to group loans and individual loans respectively.

The sample is further specified with those repayments where the borrower is required to pay both group loan and individual loan on the same day. Then, two more subsamples are created with (i) borrowers having both individual and group loans with different repayment frequencies and (ii) borrowers having both individual and group loans with same repayment frequencies. The study uses panel data modelling technique with fixed effects to test the hypothesis.

The study shows that social ties are more potent than collateral based lending in enforcing loan contracts.

> *First*, the analysis starts by comparing default rates of loans where an individual borrower has at least one group loan and one individual loan running simultaneously. The study shows that group loans out-perform individual loans by 12.36 percentage points. In other words, the default probability of joint liability based group loans is 12.36 percentage points lower than the collateral based lending.
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> *Second*, the group lending out performs individual lending by 10.26 percentage points when a single borrower is required to repay a group and individual loan on the same day.
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> *Third*, the out-performance of group lending prevails by 8.48 percentage points while they consider only overlapping (same day) loan repayment instances of both the individual lending and group lending with different repayment frequencies.

The study has also examined whether the out-performance of group lending disappears if the collateral of individual lending can be easily monitored and enforced. In this analysis, gold is taken as strong collateral which can be easily monitored and enforced, whereas all others are considered as weak collateral. Notably, the above results hold even when the collateral of individual loans are easily enforceable. Therefore, out-performance is not due to weak enforcement of collateral. The findings remain intact even when they considered only those credits which are given for same purpose. The group lending out-performed by 9 percentage points in this scenario. The out-performance remains with similar magnitude even if the purposes are different. The out-performance of group loans increase further during a period of economic distress.

The social ties have significant impact than collateral in enforcing loan repayment even among those borrows who have access to bank credit. Hence, group lending can be utilised to increase financial inclusion in emerging economies.