2.1 Group Lending and Joint Liability Based on Peer-To-Peer Lending: A New Model for Financial Inclusion in Rural India

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Abstract

In developing countries, formal and informal credit markets coexist. The formal credit market is mainly dominated by banks and Non-Banking Financial Companies (NBFCs). The present article proposes a new method of lending, where other participants, including individuals, pension funds etc. can participate in the rural credit markets and thus may contribute in reducing the share of informal credit in the markets. The article proposes a new central platform (which can be a Digital Public Infrastructure (DPI)), which would not only onboard both the creditors and debtors, but also give space to moneylenders to enter the formal credit markets.

Keywords

Financial Inclusion, Group Lending, Joint Liability, Rural Credit Markets, Peer-to-Peer (P2P) Lending Models

Introduction

Financial inclusion means making sure people can use the financial products and services they need—such as savings accounts, payment systems, credit, and insurance. These services should be both affordable and genuinely helpful for the communities they're meant to support. The World Bank considers financial inclusion as an important factor not only in reducing poverty and improving overall well-being, but it also addresses to the struggle faced by such a population with limited access to these financial resources.

This lack of access to financial services has had significant negative effects on both their lives, and also the overall economy. It results into many characteristic features as:

- **Lack of Financial Services:** The world's poor population have no reliable means of receiving and making daily payments. This inability restricts their upward mobility due to less and insecure liquid money.

- **Lack of Financial Products:** Limited access to credit. The informal sector employs the majority of the world's poor. This includes small and marginal farmers, artisans, small scale vendors etc. Despite their ability to make small investments in their enterprise, lack of formal credit restricts their ability to do so.
- **Lack of Savings:** Poor population are unable to develop assets and collaterals which could help build financial resources needed for investing in enterprise, or improving life in general. Saving also protect people from disastrous effects faced during uncertain times.

Literature Review

Financial inclusion is a burning issue in rural India, which needs to be addressed with positive outcomes. There are very few sources of credit for rural people which are formal, for example:

- **Co-operative Credit Societies**: Co-operatives were meant to serve as the most affordable source of credit for rural communities in India. However, they haven't been able to fully meet farmers' financial needs, allowing moneylenders to maintain their hold on the market. In practice, it's the large farmers who have benefited the most from these societies, while the small farmers—who were the original focus of the cooperative movement may still struggle to get all the credit they require from these institutions.
- **Commercial Banks**: Commercial banks have been unable to provide cheap credit to farmers because of following reasons

  i. Farmers often can't offer adequate security or collateral.

  ii. Lenders face challenges when trying to recover loans.

  iii. Agricultural records are often unclear or outdated.

  iv. The loans provided are usually too small, in numbers leading to higher overall transaction costs for the commercial banks

- **Regional Rural Banks**: They were set up by the Government to extend credit to farmers, artisans, landless workers and rural people in general. However, the loan extended by them yet needs to cover the credit needs of larger population

  Due to the various shortcomings in the formal sectors, the people now have to turn towards informal sectors of credit like *sahukaars*. Often these moneylenders exploit people and charge a high rate of interest from rural people.

Problems with Current Models

As per studies conducted by various scholars, a common feature of rural credit markets in the developing countries is the coexistence of formal and informal credit markets (Hoff & Stiglitz, 1990; Besley & Coate, 1995; Kochar, 1997; Bell et al., 1997; Mohieldin & Wright, 2000; Anderson & Malchow-Moller, 2006; Boucher & Guirkinger, 2007; Barslund & Tapp, 2008).

This statement is supported by two different arguments:

1. One line of argument is that Government rules imposed on formal lenders can actually help create or strengthen the informal credit market (Bell, 1990; Bell et al.; 1997; Kochar, 1997; Anderson & Malchow-Møller, 2006). In many low-income countries, policymakers have capped the interest rates that formal institutions are allowed to charge, hoping to encourage borrowing from formal sources and curb what they view as exploitative informal lending. However, these ceilings often restrict formal lenders as they find the loan provisions to be riskier and therefore unprofitable at the regulated rates. Several studies (Bell, 1990; Hoff & Stiglitz, 1990) show that such regulations generally failed to deliver the intended results. As a result, informal lenders continue to dominate rural credit markets. As a result, their interest rates may actually rise because of these policies. This has led researchers to question how effective government interventions in the formal credit sector really are (Hoff & Stiglitz 1993).

2. A second explanation centers on credit rationing that arises from information gaps between lenders and borrowers. Since adverse selection and moral hazard are common in lending, formal institutions tend to restrict credit to applicants who can put up acceptable collateral. Informal lenders, by contrast, are often willing to extend loans to people without substantial assets. Being community insiders, they usually know their borrowers better and can rely on alternative arrangements—such as interlinked contracts (Bell, 1988; Bardhan & Udry, 1999)—to reduce the risk of default (S. Tang & S. Guo, 2010)

Proposed New Model

The present article proposes a new model based on Group Lending and Joint Liability approach. The suggested model consists of following sequential six steps:

Step 1: Formation of the Group and Decision on Volume of Loan:

All the credit seekers would make a group of 4-5 people who they can trust, as the loan would be given collectively to the group. If one of the people is not able to pay

back the loan then the group would have to suffer and a penalty will be imposed on the group depending upon the scale of default. People can also choose to change groups once all the credit is repaid to the central organization. Each village would be assigned an official or a member of the village who can operate computers well.

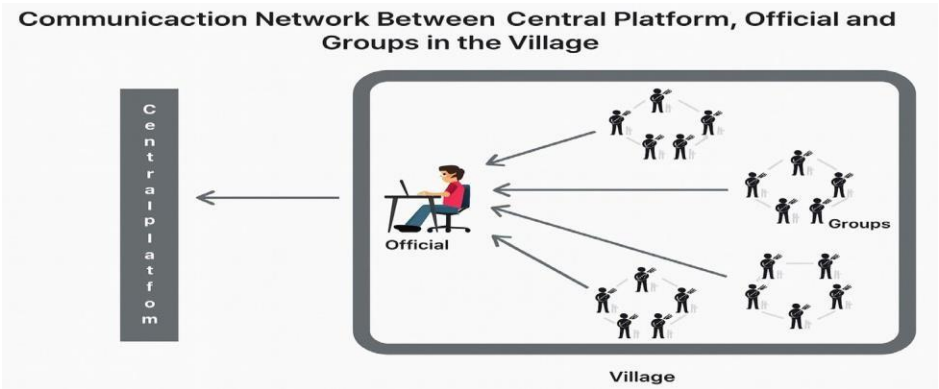


Figure 1: Communication Network between Central Platform, Oficial and Groups in the Village

The model is based on a fundamental observation that a group always tend to exclude outliers. Even if a member of the group tries to take more credit than required by using the fraudulent data, the overall credit provided to the group would increase. This would increase the liability of the entire group because they would have to pay more money as interest. Further, on the occasion of default, the entire group has to suffer. So, the members of the group would discourage the behaviour of taking more loan than required.

Step 2: Data Collection and Peer Verification

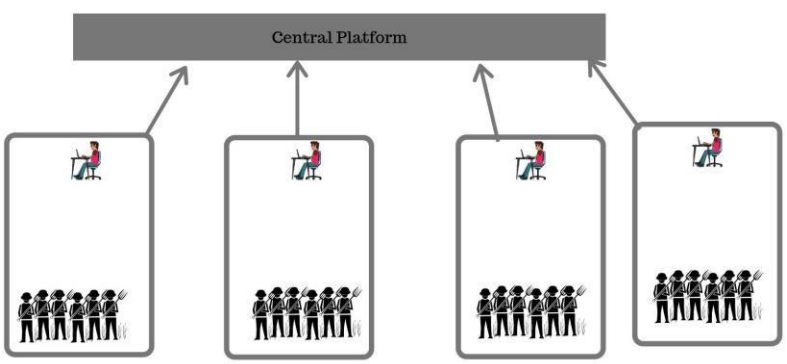
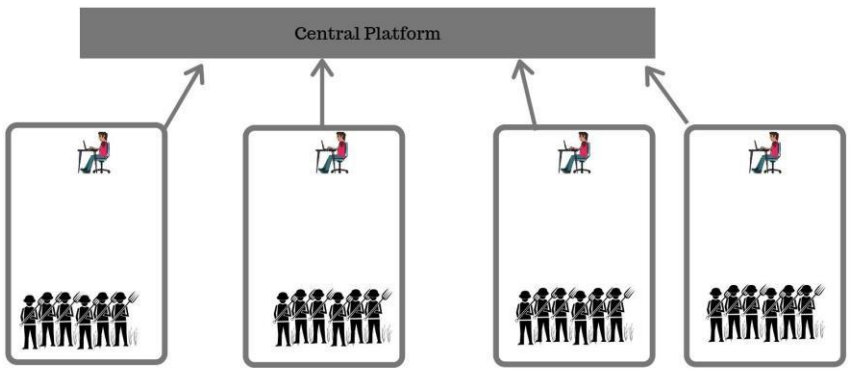


Figure 2: Data Collection by the Concerned Oficial

The whole group will reach out to the concerned official; who would fill in all the details of the members of the group *i.e.* land ownership, sources of incomes, other liabilities, family size and other required fields. Each member of the group will cross check the data of all their group members.

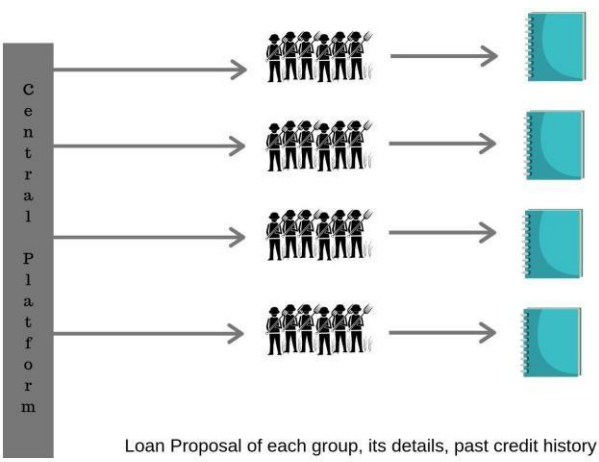
Step 3: Applying for Loan

Once the group decides that it needs a loan, it would approach the official concerned and would give him the proposal of the loan. The proposal would include the amount of credit they are seeking including detailed calculations of expenses under various heads e.g. cost of seeds and fertilizer, cost of raw materials, electricity for handicrafts and so on. The members would again verify if any member of the group is claiming more money than he requires.



Each farmer group would add the would add the details for which loan is needed i.e. crop type, seed price, and so on. The other farmers would again cross check. If a farmer tries to take more loan then the group would have to pay more interest and so the group would dicourage this.

Figure 3: Loan Application by the Group



Loan Proposal of each group, its details, past credit history and the amount that is to be loaned to the group as decided by the central platform would be made public

Figure 4: Details Published in Dashboard

Step 4: Publishing Loan Demand

A central platform may exist in Government for coordinating and placing the loan demand on their dashboard. This information will be available to the public, along with the other data like credit history, land holdings etc of the groups seeking loans. This would attract potential investors like people from urban areas, other big farmers and sahukars/moneylenders, investors etc. The central platform shall announce the percent of assured interest to investors to gain potential investment.

Step 5: Provisioning of Loan by Lenders

The officials of the central platform would give priority to the moneylender(s) of that village and he would have to buy at least 20% of the loan. Once the moneylender buys x% of the loan and the platform owns (100-x)%, out of which the other investors can also buy shares in the loan from the central platform. The moneylenders will still get the interest on a loan that he used to get earlier, if it is less than 20%. The central platform however, would charge in less interest so that the groups still get the loan at an affordable rate.

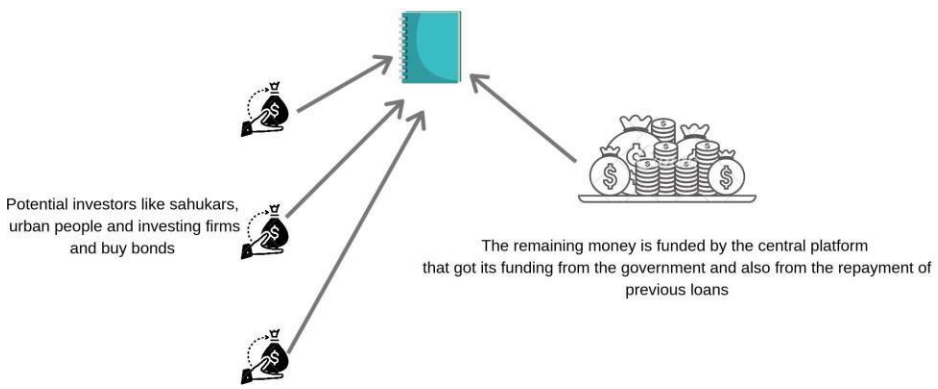


Figure 5: Financing Provision

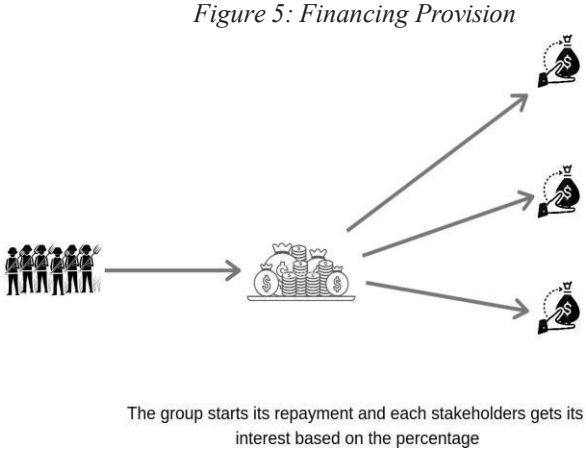


Figure 6: Repayment Mechanisms of Loan

Step 6: Repayment of Loan and its Distribution

After the prescribed gestation period, the regular repayment of the loans starts from the farmers, artisans etc. to the central platform who in turn transfers the funds to the investors according to their shareholdings.

Various Perspectives of the Suggested Model

The Need of Joint Liability and Group Lending and its Benefits:

Group Lending and Joint Liability are necessary in this model as the farmers lack the collateral against the requisite amount of loan. The farmers and the people in rural areas don't have collateral for the security of the credit, hence the concept of social collateral is taken into picture here. This model was tested and implemented in various parts of the world like Grameen Bank in Bangladesh, Bandhan Bank in West Bengal etc.

Studies have shown that there can be both advantages and disadvantages of introducing group lending. The positive effects may be seen, where loan partners can repay some part of the loan of members to improve group's perception and reduce credit rate for next time. The negative effect arises when the entire group defaults, as compared to when at least one of the group members would have not defaulted in the first case. (Besley & Coate, 1995).

The key idea is that lending institutions can tap into "social collateral." In a group-lending setup, the groups are drawn from communities with strong social ties, this added pressure acts a powerful incentive to repay and can offset some of the downsides associated with group lending. More broadly, the notion of using the sanctioning power of certain individuals to improve outcomes has important implications for how contracts are designed when formal market institutions interact with informal, community-based ones (Besley & Coate, 1995).

In this model, villagers are allowed to form their own groups, which effectively lets local knowledge guide the screening process. As Ghatak (1999) shows, borrowers with safer projects tend to team up with others like themselves, while those with riskier profiles end up grouped together. Because of this sorting, high-risk borrowers face higher interest charges and closer monitoring from both the lender and the platform, whereas safer borrowers receive more favorable terms. Although risky borrowers shoulder heavier expected joint-liability payments—since their partners are more likely to fail—the reduction in overall interest rates that comes from attracting safe borrowers back into the market can raise the welfare of everyone involved. By drawing on local information embedded in social networks, joint-liability group lending can therefore help overcome credit market failures.

Need of Moneylenders as Stakeholders and Their Role Play

It has been known that the moneylenders have been working from a few centuries in India. Although they play a usurious role in most of the developing nations, they still have been able to maintain their monopoly in the field of informal lending. The money lenders have a significant edge over the traditional banking systems because they have the access to local information of the borrowers, which the banks lack. This allows them to screen the loans that are riskier and over the years they develop a group of trustworthy people, only to whom they extend credit. Another reason is that they also know the methods to enforce repayment of the loan.

Keeping moneylenders under a central platform helps in avoiding debt trap conditions for farmers as well regulation on their own selfish interests. One method of regulation is by licensing them and thus keeping a tab on their usurious roles.

Requirement of Fund and Entry of Peer-to-Peer (P2P) Platform

This model suggests that in the initial phase, Government/ Central Platform has invested more funds to increase the confidence of farmers/artisans and to displace conventional moneylenders from monopolistic portion. Once the model is successfully implemented for 2-3 years, then it may could be open for other lenders, as because this would train the various models for the calculation of interest rates, probability of default etc. and so on based on the historical values.

Another challenge could be that the moneylender, in case of a bad loan can focus on only getting his share back. This could be tackled by having a rating system for moneylenders. Each moneylender gets a rating based on what percentage of previous loans he was able to retrieve. If the credit overall fails, but the moneylender gets selfish in retrieving his share, the rating of the moneylender would reduce. This could even lead to exclusion of moneylender from the platform itself.

Variable Interest Rates and Its Need

In Akerlof's (1970) lemons framework, if there are enough high-risk borrowers in the market, the equilibrium interest rate can rise to a level that pushes safe borrowers out altogether. Ghatak (1999) shows that the joint-liability feature of group lending changes this outcome by encouraging borrowers with similar risk profiles to form groups. Once the borrowers sort themselves, the effective cost of borrowing differs between safe and risky clients. On completion of the project, a risky borrower would have paid more interest, to cover for their group members, who are likely to have defaulted. Since safer borrowers get better effective interest rates under this arrangement, they are drawn back into the credit market. As a

result, the market interest rate falls, the borrower pool becomes safer on average, and overall repayment improves.

Regular Repayment: A Habit-Forming Schedule

There are various advantages of a regular repayment schedule. They help in screening out the undisciplined borrowers early-on (De Aghion, Morduch, 1999). This also helps the group members and moneylenders to increase the supervision of defaulting members. Another advantage of schedule payment is to force the households to seek for additional regular sources of income, instead of relying on a risky and very seasonal source of income i.e. farming. The members of the group can jointly also try to start an additional source of income. It also encourages the habit of saving in rural households. This eventually helped them to build funds and thus reducing dependency on microfinance firms in future leading to self-sustainability.

Requirement of Fund and Entry of P2P Platform

This model suggests that in the initial phase, the Government via the central platform has to invest more funds to increase the confidence of farmers/artisans and to displace moneylenders from monopolistic positions. Once other investors begin to observe the rate of returns on the loans, they may themselves begin participating in the process, reducing the dependence on government funds for newer loans.

Different P2P Models for Adoption

There are various P2P models existing in the world. The type P2P adopted may depend on various parameters like location, product, economy etc. Some of the existing models are discussed below.

In U.K., there are 2 main P2P lending platforms *i.e.* Zopa and Funding Circle. Both the platforms can be used to take loans for different things from buying a car to the expenses of a wedding to consolidating a more expensive loan. Zopa doesn't take any collateral so their procedure for preventing default is checking their credit history, current income and variables. They also spread the money of lenders in a diverse portfolio automatically. In case of default, the loan is sold to a collection agency and then they pursue the defaulter. In the case of a funding circle, there are 2 types of loans, first that are backed by an asset, which on default leads to confiscation of the asset. The second type of loan is with a monthly repayment schedule. Again, in case of default, the loan is again sold to the collection agency.

In the USA, the main P2P lending platform is prospering marketplace. They also lend for a variety of purposes as Zopa. They prevent default by screening the

applicants of loans using a set of eligibility criteria for the borrowers. The criteria include annual debt to income ratio below 50% and no bankruptcy filed in the last 24 months among many others. Use of collection agencies is not explicitly mentioned in their default prevention policy.

In Australia, Society-One is the P2P lending platform. They also lend for many purposes, like consolidation of loan, wedding, livestock loans etc. They screen loans using criteria as the individual should be a permanent citizen of Australia, income at least $30,000 p.a etc.. In case of default, the loan is again passed through a collection agency. In New Zealand, Harmoney is present. They also screen loans using the criteria, and then sort the loans in different grades. The lenders can then lend the loan on the basis of the various information that is made public by Harmoney, where collection agencies are used in case of default.

In India, the P2P lending platforms are not autonomous but are regulated by the RBI. PaisaDukan, Rupee-Circle, Microgram are the main ones in India. All the platforms work similarly, i.e. first screen the loans that satisfy the eligibility criteria. Once the loans are screened, then they are sorted into different grades. It is the responsibility of the lender to check the loans and invest on the basis of their risk appetite. Rupee-Circle also uses collection agencies and other legal procedures. But all the fees of such processes are cut from the lender themselves, before they are paid back.

Latvia has **Mintos** working as P2P in their country. They have originators working for them, who verify the loans and check the details of the loans. They are required to invest a minimum of 10% into the loans. In case of default, the entire responsibility is of the originators. If the originator fails to recover the loan, the entire investment of the lenders is lost.

In Ireland, there is Linked-Finance. They lend mostly for business purposes unlike Zopa and Funding Circle, who loan mostly for personal reasons. They have the same models of verifying and then classifying the loans. The loans are again passed through the collection agencies in case of default.

Hence in most of the current models, except Mintos of Latvia, the bad loan is passed through collection agencies. In current model too, the bad loans are finally passed to moneylenders themselves.

Possible Challenges and Suggested Solutions

There could be various challenges arising in this model, and possible solutions to them are listed below:

- **Breakdown of Joint Liability Due to Weak Social Capital**

  Group lending relies heavily on social collateral: borrowers discipline each other because default imposes a cost on the group.

  However, in many Indian villages, the social ties may be weak, fragmented, or divided by caste and politics. Furthermore, the borrowers may collude to collectively default (Besley & Coate, 1995).

  Result: This may lead to failure of joint liability, leading to strategic default or inability to enforce peer pressure.

  Solution: A stricter penalty can be imposed on wilful defaulters, where they could be excluded from other government benefit programs, to create a deterrence.

- **High Information Verification Burden and Risk of Misreporting**

  The model assumes villagers truthfully verify each other's income, landholdings, liabilities, and credit needs.

  In practice however, misreporting can be mutual, or group members may collude to inflate loan amounts. Even the local officials may be bribed or influenced, who may put wrong data in the platform, creating an information asymmetry. Cross-checking of the data for any such malice would become costly in time and resources.

  Result: the platform may inherit the same information asymmetry and adverse selection problems that plague banks.

  Solution: increasing transparency, capturing the information from reliable sources, with checks and social audits

- **Dependence on Moneylenders May Reinforce, and not Reduce their Power**

  The model requires moneylenders to purchase at least 20% of each loan.

  Risks include that the moneylenders could dominate bidding and influence loan terms, allowing risky borrowers to be portrayed as safe ones. Their local power and coercive enforcement ability may persist within the "formal" platform. They may also strategically buy shares in loans only when they expect high returns, cherry-picking better groups.

  Result: Instead of reducing informal-sector dominance, the platform might formalize it.

Possible Solution: Incentivise moneylenders to purchase riskier loans more by allowing them to charge a higher interest rate. This interest rate would be higher than "safer" borrowers, but lower for the group had they gone directly to the moneylender in the informal credit market.

- **Limited Digital and Administrative Capacity at the Village Level**

  The model depends on accurate data entry, digital literacy, and smooth operation of a central platform.

  However, various observations in villages can be a hindrance. Village-level officials may lack training or resources, which may make the entry and scrutiny of data of borrowers erroneous. Further power outages, connectivity issues, and low digital awareness may hinder participation. Operational errors can further lead to misclassification, delays, or disputes.

  Result: Implementation bottlenecks may undermine trust in the system.

  Possible Solution: Use of schemes like *BharatNet, PM Kaushal Vikas Yojana, PM Digital Saksharta Abhiyaan* to build local workforce, and empower debtors to give right information, avoiding errors.

- **Investor Reluctance and Risk Perception in an Open P2P Rural Credit Market**

  P2P lenders—urban individuals, pension funds, or institutions—may hesitate to fund risky rural borrowers because rural incomes are volatile and seasonal. Joint liability also does not eliminate systemic risk (monsoon failure, market shocks). Further, limited repayment history and weak enforceability may increase perceived default probability.

  Result: The platform may struggle to attract enough diversified capital, especially in early years.

  Possible Solution: The government will have to start the investment and funding process, along with the moneylenders as a pilot project and proof of concept. Once it is observed that sufficient returns are being generated, more investors can take the lead role.

Conclusion

Rural credit markets in India are still characterised by lack of financial inclusion, information gaps and presence of unofficial lenders. This is despite continuous efforts of the government and banks. The above Model suggests use of local information

networks, digital infrastructure and moneylenders, reducing the structural flaws. It combines group lending, joint liability and a central P2P platform.

Moneylenders in the model are not sidelined or bypassed, but are regulated. This would help in cohesion of informal markets with formal ones. Moneylenders bring in their informational advantages, and coercion methods, which prevents groups from defaulting. However, the effectiveness of the model will rely on factors like strength of social ties, accuracy of borrowers' data, and willingness of outside investors to interact with rural credit markets.

Despite these obstacles, this model provides a logical way to increase capital in rural credit market, and reduces reliance on informal lending. The model reduces competition between formal and informal markets and actors, increasing collaboration between them. The model has the potential to improve rural financial systems, while making contributions to general development objectives. This model thus relies on community-based monitoring, utilizing the traditional actors of credit markets with new digital platform, and bringing in capital from a variety of sources.

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Mr. Srajit Kumar is an Officer Trainee of the Indian Revenue Service (Customs & Indirect Taxes), 2025 batch, who has undergone the Special Foundation Course at the National Communications Academy – Finance (NCA-F), Ghitorni, New Delhi. He completed his B.Tech. in Computer Science and Engineering from the Indian Institute of Technology (IIT) Kanpur in 2021, where he engaged deeply with interdisciplinary research and technological problem-solving.

During his time at IIT Kanpur, he worked under the mentorship of Prof. B. V. Phani and Dr. Ramswarup Bhaskar on projects related to financial inclusion in rural India, contributing to analytical and technology-driven approaches in development-focused research. Following graduation, he joined Oracle in Bangalore, where he gained hands-on experience in cloud computing, network systems, and file management architectures, further strengthening his technical foundation for public-sector digital transformation.

Beyond academics and professional pursuits, he enjoys playing the guitar, dancing, and engaging in board games, reflecting a balanced blend of creativity, teamwork, and personal expression.