

Interest Rate Subvention in Indian Agriculture: A Demand-Side Analysis and Proposed Alternatives

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EXECUTIVE SUMMARY

The migrant worker crisis engendered by the current lockdown in India is a strong reminder of the sub-optimal policies that have left the rural economy underdeveloped. There is a pressing need to make agriculture economically viable, and the dependence of farm incomes on the harvest cycle, the requirement of large upfront investment in agricultural inputs, the dominance of informal moneylenders and the lower ability of small and marginal farmers to save necessitate sound agri-credit policies that enable easy availability of small-, medium-, and long- term institutional credit in rural areas. Institutionalisation is important in order to give farmers access to cheaper credit and reduce the possibility of exploitation by moneylenders; even today approximately 30% of agricultural households borrow exclusively from non-institutional sources. Crop failure, loan defaults, and loan waivers remain central to the discussion on agri-credit policies. One scheme that seeks to tackle the objectives of institutionalisation, cheap credit and prevention of defaults is the interest subvention scheme (ISS).

Unfortunately, while agri-credit policies in India have been extensively studied from the banks' perspective, a demand-side analysis remains under-studied. This has led to a mismatch between the present policy paradigm and the needs of the farmers, of which the ISS is poised to be a conspicuous example. It has not only failed to achieve its twin objectives of institutionalisation and incentivising prompt repayment, but, quite apart, also led to some unintended consequences such as diversion of funds towards arbitrage opportunities, the dominance of short-term production loans (as opposed to long term investment loans) in overall credit, and the likely disproportionate benefits to large farmers at the cost of small and marginal farmers.

In this paper, we seek to explain how this may happen by creating a model that analyses the behaviour of a farmer in deciding whether to borrow from a formal or informal source. We find that the non-interest costs (transactions costs and losses incurred on account of delays in disbursement of credit) of borrowing from a formal source may be so high that they lead the farmer to borrow from an informal source, such as an APMC agent. The failure of the ISS can at least partly be attributed to the neglect of such demand-side factors.

In light of this failure, we conclude it is more effective for the government to invest funds elsewhere in projects that would increase agricultural productivity and incomes in the long run. However, the provision of cheap formal credit is still important. We believe that a microfinance institution (MFI)-like lending mechanism, appropriately tailored to the needs of agriculture, may be best suited to achieving this aim. Drawing on the experience of various MFIs internationally and the existing literature, we outline best practices that reduce the costs of borrowing for farmers while also managing risks and liquidity for MFIs, thereby ensuring their viability.

INTRODUCTION

One of the key focuses of agricultural policy in India has rightly been credit. The dependence of farm incomes on the harvest cycle, the requirement of large upfront investment in agricultural inputs, the dominance of informal moneylenders and the lower ability of small and marginal farmers to save necessitate a policy push towards easily available small-, medium-, and long- term institutional credit in rural areas. What started out as an almost exclusive focus on lending through co-operative banks, beginning with the Co-operative Societies Act (1904), has now transformed into the establishment of institutions like NABARD which aim to combine the resources of commercial banks with the ground-level knowledge of co-operative banks.¹

The Interest Subvention Scheme² (ISS) was introduced in 2006, allowing farmers to obtain short-term crop loans up to Rs. 3 lakhs at a concessional rate of 7%, thereby providing a subvention of 2% (agricultural being a priority lending sector, interest rates are capped at 9%). The prompt repayment incentive provides an additional subvention on timely repayment of the loan (subject to a maximum repayment period of one year from the date of disbursal). The scheme was introduced with the objective of a) incentivising farmers, especially the small and marginal farmers (SMF), to borrow from institutional/ formal sources instead of informal moneylenders, and b) incentivizing them to repay loans on time.³ Public sector, private sector, cooperative, and rural regional banks issue loans at the subsidised rate; the subvention amount is then transferred to them after they file half-yearly claims with the government. A recent RBI directive requires loans to be made only through Kisan Credit Cards (KCC).⁴

Unfortunately, as has been the case with several other Asian countries⁵, the scheme has not brought significant benefits, and the inclusion of SMF remains questionable. While a significant amount of analysis has been done with regard to supply-side factors that make banks more likely to lend to larger farmers, we believe that there are demand-side factors that may place SMF out of the formal credit market. The following model explores these demand-side factors, which remain under-studied.

THE MODEL

¹Mohan, Rakesh. "Agricultural credit in India: Status, issues and future agenda." *Economic and Political Weekly* (2006): 1013.

² Here we only mention those features of the scheme related to pre-harvest crop loans.

³ Sudha Narayanan, "The productivity of agricultural credit in India." *Agricultural economics* 47, no. 4 (2016): 399.

⁴ "RBI asks banks to extend farm loans eligible for subvention only via KCCs". The Hindu Business Line. February 26, 2020. <https://www.thehindubusinessline.com/money-and-banking/rbi-asks-banks-to-extend-farm-loans-eligible-for-subvention-only-via-kccs/article30924477.ece>

⁵ Gilberto M Llanto. "Overcoming obstacles to agricultural microfinance: looking at broader issues." *Asian Journal of Agriculture and Development* 4, no. 1362-2016-107676 (2007): 23.

We assume a typical farmer to be a rational agent who undertakes a cost-benefit analysis in order to decide their source of credit (viz. formal or informal) at the beginning of the crop cycle. After having decided which crop to grow and having considered the amount of land under cultivation, the farmer determines the required loan amount, say L. Their decision regarding where to source the credit from then depends on the cost of securing the loan from each source, which can be broken down into three components:

- a) Interest cost: even without the subvention, this is more likely to be higher for the informal source.
- b) Transaction costs: The cost that the farmer incurs in simply getting the loan sanctioned. It could be explicit (bank fees⁶, cost of obtaining the required documents, travel costs, bribes to the bank officials, cost of getting a guarantor, etc.) or implicit, i.e., the cost of the time foregone in conducting the transaction. Such costs are likely to be higher for formal sources and, as we later argue, likely to be particularly significant for SMF.
- c) Time cost: Refers to the loss suffered by a farmer due to delay in disbursement of the loan. We hypothesise that the greater the delay, the greater the time costs as the crop cycle gets delayed further and agricultural activities are highly time dependent.

Banks are less willing to lend to SMF because of multiple factors, including the high cost of disbursing a small loan, higher risk, lower influence as compared to larger farmers, and lower or no value of collateral. The delay in disbursement of the subvention amount to banks⁷ adversely affects their profitability because of foregone interest income; this is another factor which skews lending in favour of large farmers who are less likely to default. To minimise the risk, banks engage in credit rationing⁸ and may also ask SMF for a guarantor, often a wealthy individual, who may demand compensation from the farmer to act as one. The farmer may be required to bribe bank officials for resolving the procedural issues in the loan process, or other government officials (patwaris, for instance) for obtaining the necessary documents. The bank's reluctance leads to a delay in disbursement, increasing the time cost, and necessitates multiple trips. The opportunity cost of a trip is much higher for a SMF as compared to a large farmer because the former is likely to be the only one working on their farm and to employ more labour-intensive techniques. The other monetary costs may also be more burdensome for them due to

⁶ Shiva, Vandana, and Kunwar Jalees. *Farmers suicides in India*. (New Delhi: Research Foundation for Science, Technology and Ecology, 2005).

⁷ As stated earlier, under the ISS, banks are required to lend at subsidized rates and then file half-yearly claims to recoup the subvention amount. Refer: Bankers Institute of Rural Development, *Study Report on Impact of Interest Subvention Scheme (ISS) for Crop Loans on Cooperative Banks*. Lucknow: 2015.

⁸ There is evidence that this leads to loans that are not commensurate with requirements and necessitates lending outside of the KCC, such as in the form of gold loans. See: Swaminathan, Madhura, and Sandipan Bakshi, eds. *How Do Small Farmers Fare?: Evidence from Village Studies in India*. Tulika books, 2017. See also: Sarap, Kailas. "Factors affecting small farmers' access to institutional credit in rural Orissa, India." *Development and Change* 21.2 (1990): 281-307.

lower income. Thus, for SMF, the combined transaction and time costs of the formal source are so high that they cause the total cost of borrowing from there to exceed that of borrowing from the informal source, despite the interest subvention.

ARGUMENTS AGAINST ISS

In light of the foregoing analysis, we argue that ISS has failed to achieve its twin objectives. To begin with, the scheme cannot hope to institutionalise credit for SMF unless it makes the loan process considerably easier for them. Furthermore, it can at best address strategic default, and not involuntary default unless there is risk management and mitigation in agriculture. For instance, a farmer who loses their entire crop, say due to pest infestation⁹, is likely going to be unable to repay the principal, let alone pay the interest.¹⁰ ISS, in such a case, would do little to ensure prompt repayment. In fact, some scholars suggest that defaults are mainly due to under-financing and delays in the sanctions and disbursement of loans.¹¹ Furthermore, Indian agriculture is subject to a large degree of uncertainty stemming from monsoon reliance. The last two statements imply that in the case of default, the farmer is absolutely unable to repay the loan, even with lower interest payments, pointing to a structural deficiency in the current credit system rather than a lack of incentives for repayment. Indeed, this argument is corroborated by data which suggests that ISS has not led to prompt repayment, and, quite to the contrary, NPAs in agricultural loans have risen sharply from 2.5% in 2014 to 8% in 2019.¹²

It has led to unintended consequences as well. As argued earlier, ISS may be disproportionately benefiting larger farmers to the detriment of the SMF. Moreover, institutional credit is now skewed in favour of short-term loans (see figure 1), which is particularly problematic given the low magnitude of public investment in agriculture in India.¹³ There is evidence to suggest that the loans awarded under ISS are diverted elsewhere, possibly towards arbitrage opportunities. Some discuss how the cost of inputs as a proportion of short-term credit financed by institutional sources was 99.97% in 2012-13, which is inconsistent with the fact that about 64 percent of total outstanding credit was sourced from institutional agencies. Moreover, the pattern of credit disbursement suggests lower loan issues in months

⁹ The possibility of such events rises with climate change. Thus, it becomes even more urgent to rethink our agricultural credit policies to accommodate increasing risk.

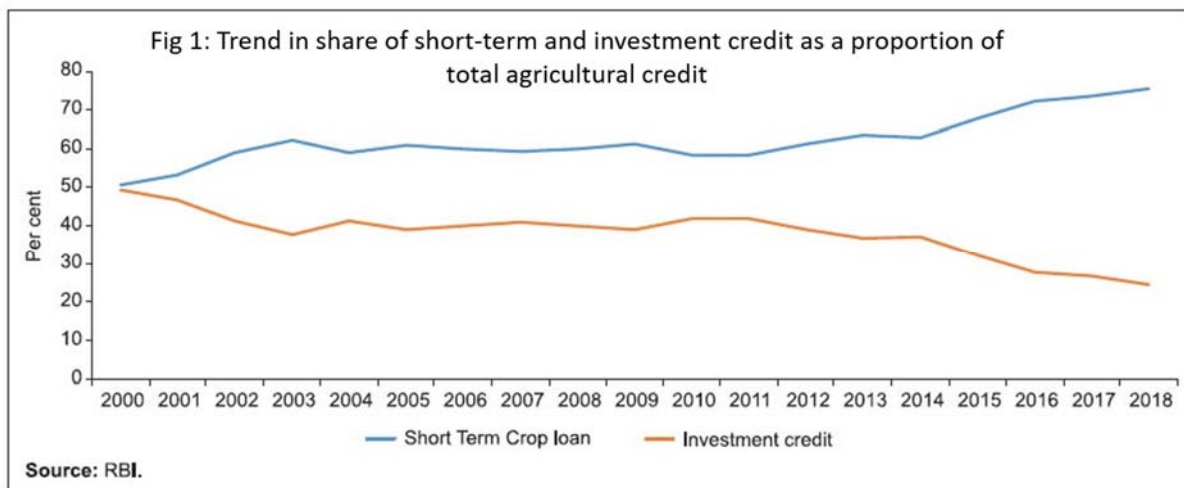
¹⁰ While the scheme does provide for a further subvention on the restructured amount in case of a natural calamity, such provisions do not cover all eventualities, especially those occurring on smaller geographical scales.

¹¹ Kahlon, A. S. "Institutional Credit and Overdues: Borrowers' Angle." *Economic and Political Weekly* (1991): 243.

¹² Merwin, Radhika. "Is the budgetary thrust on agriculture lending helping farmers?" *The Hindu Business Line*. January 28, 2020. <https://www.thehindubusinessline.com/economy/agri-business/is-the-budgetary-thrust-on-agriculture-lending-helping-farmers/article30675236.ece>

¹³ See for a further discussion of why this might be problematic: Golait, Ramesh. *Current issues in agriculture credit in India: An assessment*. Reserve Bank of India, 2007.

of maximum agricultural activity.¹⁴ Lastly, RBI data suggest that the ratio of agri-credit to agri-GDP far exceeds 100% in some states, which indicates a possibility of diversion of credit for non-agricultural purposes. This could be because of the high incidence of crop loans outside KCC (say, against gold as a collateral) which may possibly exceed the actual requirement.¹⁵



POLICY RECOMMENDATIONS

It is easy to see that credit subsidies, especially when viewed in isolation, will both fail to achieve their own objectives and the overarching objective of agricultural growth. There exist better ways of allocating scarce funds¹⁶, such as investing in the development of market infrastructure that would enable farmers to get a better price for their produce or in irrigation systems.¹⁷ Given that transaction and time costs are more serious than the interest cost,¹⁸ the first step must be to reduce the former so as to expand the share of institutional credit. This must then be supplemented with risk management and mitigation policies for both farmers and lending institutions, which will ultimately boost productivity.

As we explain now, a microfinance institution-like approach¹⁹ seems best suited for the Indian landscape; the existing network of cooperative banks could, for instance, be developed further for this

¹⁴ Hoda, Anwarul, and Purna Terway. "Credit Policy for Agriculture in India-An Evaluation: Supporting Indian Farms the Smart Way: Rationalising Subsidies and Investments for Faster, Inclusive and Sustainable Growth." 2015.

¹⁵ Merwin, *Budgetary Thrust*.

¹⁶ Unnikrishnan, Dinesh. "Government extends interest subvention but it's a flawed solution for farm woes." Firstpost. July 22, 2015. <https://www.firstpost.com/business/interest-subvention-wont-end-farmer-woes-govt-must-rethink-funding-model-2356416.html>

¹⁷ The lack of public investment disproportionately hurts SMF, who, unlike large farmers, cannot use their own funds to undertake investment.

¹⁸ Survey data suggests that farmers perceive time and transaction costs to be more serious vis-à-vis interest cost. See: Subramanian, R., and Sunil Shivananjappa. "Investigation on the Problems Faced by the Farmers in Obtaining and Repayment of Agricultural Credit in Karaikal District, India." *Int. J. Curr. Microbiol. App. Sci* 6.11 (2017): 3966-3971.

¹⁹ The suffix 'like' is used to indicate that the core principles of the argument have been observed in or can easily be implemented in the grassroots-level functioning of MFIs. We don't intend to recommend a particular institution as an alternative to ISS, but to only highlight some desirable principles that do not uniquely map to any particular institution.

purpose. By developing close connections with farmers and exploiting local synergies, MFIs can not only reduce costs for their potential clients, but also make the agri-lending business viable. With improvements in communications technology, MFIs can also explore how to utilise this to lower the cost of delivery of their financial services. Although mobile connectivity is not available in all rural areas in India, it will increase and MFIs must be ready to exploit this opportunity. Using the specialised knowledge they gain from village-level interactions or from agronomists, they can bundle services - provision of technical knowledge, provision of inputs of assured quality at the borrowing centre, and help for establishing an alternative source of livelihood, such as livestock rearing - with the provision of credit. This reduces transaction costs for farmers in the following manner:

- a) It allows for risk mitigation by enabling the usage of high-quality inputs (fertilizers, seeds, pesticides, etc.) that reduce losses from distress events, so that the MFI can forego the collateral requirement or offer farmers greater flexibility in pledging their assets as collateral²⁰
- b) The travel costs are spread over credit as well as inputs, and can be lowered further if temporary borrowing centres can be set up in existing rural establishments such as post offices and schools²¹

Moreover, as opposed to credit subsidies, these measures are non-price distortionary, long-term solutions to the credit crunch. Note that a conventional approach to insurance (risk management for farmers) is unlikely to work for SMF because low levels of income mean they would prefer having cash in hand. At the same time dealing with distress events by restructuring the amount is not an efficient solution as it “ignores the possibility of chronic distress due to structural anomalies of an economy which can push the farmer into a debt trap”.²²

We recognise that the viability of agricultural MFIs is central to being able to achieve these aims; additionally, greater viability can also lower costs. To increase viability, MFIs should firstly diversify their portfolio well by capping their share of agricultural lending as agricultural returns are often highly correlated and the risks are much higher than in other entrepreneurial activities. Secondly, agriculture is typically subject to cyclical cash flows wherein farmers may require staggered cash disbursements to meet production schedules, and be able to make lump-sum payments only at or after harvests. By adapting their loan products to farmers’ cash flows (i.e. offering them flexible repayment schedules),

²⁰ Uganda’s Centenary Rural Development Bank, for example, accepts livestock, personal guarantors, land without titles, household items, and business equipment as loan collateral. In the Indian context, such flexible collateral requirements would reduce the transactions costs that farmers incur in, say, securing land revenue records from the patwari, finding a guarantor, etc. See: Peck, Robert, et al. "Managing risks and designing products for agricultural microfinance: Features of an emerging model." (2005).

²¹ This practice has been shown to be cost effective even for the microfinance institution; for example, Constanta, a MFI based in Georgia, as shown in Peck Christen, *Managing Risks*.

²² Renita D’Souza. “Improving Access to Agricultural Credit: New Perspectives” ORF Occasional Paper No. 230, January 2020, Observer Research Foundation.

MFIs can ensure better repayment rates. While this may create challenges for liquidity management (MFIs may end up facing periods of excess and tight liquidity over the course of the year), such challenges could be addressed by negotiating liquidity facilities with banks - NABARD can be an important player in this regard - or by diversifying the loan portfolio. Thirdly, the government can create local databases of farmer characteristics that are available to lending organisations, much like the CIBIL score; MFIs can decide how the data can be used to evaluate creditworthiness. In addition to giving them a better idea of the risk they are exposed to, this can also reduce time costs if it allows the institution to make credit decisions faster.²³ For instance, farMart, a fintech player based out of Delhi NCR uses fifty data points including personal information to assess credit risk. Their loans are cashless, instead being offered as virtual credit cards that farmers can use at input shops with which farMart has tie-ups, thereby preventing diversion of funds.²⁴

Lastly, if such policies succeed in institutionalising credit, they also open a window to push long-term loans that would lead to the much-needed mechanical and infrastructural investment in Indian agriculture, especially for those farmers with whom MFIs have already developed a strong relationship. MFIs can extend loans for long-term investments incrementally, allowing farmers, say, to gradually acquire more equipment rather than all at once. They may likewise explore the possibility of leasing equipment to farmer-clients as a way of financing long-term investments.

The following table summarizes the differences between ISS and an MFI-like approach based on parameters discussed above, and suggests that the latter might be a better alternative.

²³ Moreover, the bundling of services which mitigates risk and thereby makes MFIs more willing to lend to the SMF, would also reduce time costs (as mentioned earlier, high time costs stem partially from banks' reluctance to lend to SMF).

²⁴ Ibid.

	ISS	MFI-like approach
Cost for farmers	High despite the subvention due to time and transaction costs, often arising from banks' reluctance to lend to SMF	Lower transaction and time costs due to risk mitigation strategies and greater information availability.
Institutionalisation	Inability to achieve this despite it being an objective of the scheme due to the persistence of high levels of non-interest costs	Overall lower costs incentivise SMF to borrow from the institution while risk mitigation strategies increase institutional willingness to lend to them
Default	Addresses strategic default but, by not remedying structural deficiencies in agriculture, addresses involuntary default marginally at best.	Bundling of services reduces risk and increases the ability to repay the loan; the greater certainty of and greater benefit from obtaining a future loan in case of no default itself incentivises repayment. Structural deficiencies and strategic default are both addressed.
Scope	Given unintended consequences of implementation and inability to address structural deficiencies, this cannot serve as a long-term solution.	It addresses structural deficiencies and hence is a more sustainable solution.
Impact on long-term agricultural investment	Skews borrowing in favour of short-term loans, which discourages long-term investment in agriculture.	Short-term borrowing relationships can be built on to encourage long-term borrowing for investment.
Profitability of lending institutions	Highly dependent on timely disbursement of subvention claims from the government.	Default risk mitigation, access to better information on creditworthiness, diversification of loan portfolio and adaptation of loan products to the cash flow needs of farmers, all ensure better profitability for the institution.

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