Analysis of Agriculture Credit and Insurance to Farmers in India: Issues, Challenges and Way Forward

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ABSTRACT

With nearly 55% of the population dependent on agriculture, it is without a doubt that India is highly dependent on agriculture. This dependency creates the demand for agricultural credit and insurance. Agricultural credit is the financial assistance that is provided to farmers in terms of short/long-term loans. On the other hand, agricultural insurance is a safety measure that is taken up by farmers to safeguard their income and to compensate for their losses. Agricultural credit and insurance go hand in hand as discussed further in the paper.

The government has focused significantly on this sector. In the 2024-25 interim budget, nearly 20 lakh crore has been allocated to agricultural credit. At the same time, the paper discusses how the government continues to implement the Kisan Credit Card (KCC) scheme and Interest Subvention scheme successfully. The incumbent government also took up the highly aspirational Pradhan Mantri Fasal Bima Yojana (PMFBY) during their tenure. In the recent interim budget, PMFBY received allocation and it was stated that nearly four crore farmers are currently enrolled in the scheme.

Although there have been various positive steps taken by the government there remain various loopholes that stop farmers from availing the proper benefit of these schemes. The problems range from bias in private credit, lack of infrastructure, financial illiteracy, improper credit reach, inefficient adoption of government policies, research gap, etc. These have been analyzed in the paper. At the same time, regional-wise discrepancies when it comes to credit and insurance have also been highlighted. The paper mainly focuses on addressing these problems with proper market research, ease of availing loans, accountability by the government for proper implementation, and standardization of how government policies are implemented in the various states. At the same time, the credit and insurance policies taken up by a few agriculturally developed nations have been assessed to strengthen our solution.

INTRODUCTION

The multi-faceted agrarian economy of India needs to be constantly analyzed because the agriculture sector is the second largest contributor to the Gross Domestic Product(GDP) of the country. India is also the second largest producer of food grains in the world with food grain production touching an estimate of 330.5 million metric tonnes. The most unique feature is that although it is the second largest contributor in terms of GDP it employs almost 55% of the population of the country. This statistic is of significant importance because it goes on to highlight how dependent the farmers are on how the government treats them.

A very important aspect of agricultural growth is credit and insurance. They should be analyzed together because they are highly interconnected. To safeguard their income and protect their crops the farmers often insure their crops. To insure they need to pay a premium which is compensated for from the credit they receive. Agricultural credit refers to money that is used to finance agricultural purposes. It is of much use to farmers as they can help in availing loans, agricultural investments, accessing resources, better technology, managing risks, and increasing the standard of living. This is a sector that significantly affects the quantity and quality of agricultural outputs and hence impacts GDP.

On the other hand, insurance is the backbone of many agriculturally driven economies. Insurance is extremely important in a country like India where nearly 60% of the country faces unpredictable weather conditions. Another very important thing to analyze is that insuring the crop can lead to agricultural investment and increase productivity because farmland that is insured will have a higher probability of availing credit. Also, almost 75% of rural women's income is dependent on agriculture so if we truly want to work for their betterment agricultural insurance should be emphasized.

THE MULTILAYERED CONCEPT OF CREDIT

Non-institutional sources of credit charge an interest rate of 25% or more for small and large loans whereas commercial banks charge an interest rate of approximately less than 12% (this rate is higher if the loan amount is very high). Farmers would hence prefer institutional sources but institutional sources of credit availing this credit is quite complex. The credit is provided to farmers mainly for three purposes- productive, unproductive, and consumption purposes. This distinction might seem unnecessary but it is pivotal to understanding the nature of credit and how it influences farmers. Farmers easily avail loans for productive needs like fertilizers, farm-based investments, manures, giving wages, rent, etc because the very act of procuring these services provides monetary benefit. Hence institutional sources have more faith in investing for such purposes.

This is a constraint because it completely reduces the other needs that farmers might have. This includes consumption needs which are essential for survival, money for marriages, religious functions, festivals, etc. The primary matter of concern here is that the amount of revenue that the farmers earn is quite meager, not enough to sustain consumption as well as other monetary needs of the farmers This creates a cycle of dependency between farmers and moneylenders which is not favorable.

GOVERNMENT POLICIES AND THEIR IMPLICATIONS

THE INCREASING DEPENDENCY ON COMMERCIAL BANKS

In recent times almost 70% of the flow of commercial banks is through institutional credit signifying a very high dependence. The share of cooperative banks was only 22 percent. Although this static is something that many might consider a good step there is another layer to it that needs to be accessed. Commercial banks, although helpful, do not cater to the real needs of farmers. Bank employees are not able to understand the problems that farmers have. For instance, the average share of long-term credit in total direct finance has not only reduced but decelerated. The need for long-term credit is in the space of investments. Agricultural investments lead to innovation, which leads to higher yield and ultimately increases the standard of living. Another factor is the fact that farmers are not truly well-versed with the term financial literacy. The technical know-how of how the bank functions and its different policies are for the most part not known to farmers. Farmers are very well at the mercy of the workers for the commercial banks. There is a possibility that they might not even be provided the amount that they are eligible for.

Institutional sources of credit are useful only if they are regulated with proper intervention by the government. Also, the reach of these policies should be to every nook and corner of this country so that farmers can take advantage.

Since 1947, farmers' living conditions have remained stagnant despite enormous technological advancements in agriculture. (Bandaru, 2019). This is why government initiatives are so important because if implemented properly they can very well fill this gap.

KISAN CREDIT CARD

Kisan Credit Card (KCC) was a scheme taken up by the government of India in 1998 to provide timely credit to farmers for meeting their short/long-term goals. It is facilitated through Commercial banks, Cooperative banks, and Regional Rural Banks under the overall guidance of the department of Financial Services. To avail of this scheme farmers can apply online through the portal of various banks by filling out an application with their details. The bank authorities then check the validity of the documents and do background research, which if they find satisfactory they issue KCC. This scheme is widely popular and also is considered a boon to farmers. The reason for the success of this scheme lies in the fact that even the smallest of issues that farmers face were acknowledged. In rural areas, there remains the problem of collateral as a lot of farmers considering their low income might have very little disposable income. The advantage of KCC is that farmers do not need to submit a security deposit to qualify for a loan, they can just provide legal papers that show their land holding. On top of this Collateral free loan limit for short-term agri-credit has been raised from ₹1.00 lakh to ₹1.60 lakh by RBI. The scheme also does not differentiate between various agricultural needs for example earlier there was a distinction in availing loans this including particular crops, input needs, seasons, size of borrowing, and so on. This led to farmers having to make multiple loan applications for different stages of the farming process thus complicating every step. The KCC has bought uniformity and consolidated the system. Moreover, loans are provided even for the consumption needs of the farmer. Earlier there was no fixed time for the time lag between applying for credit and its disbursement but this scheme has made it compulsory for KCC to be issued within 14 days from the receipt of a completed application. All the charges including processing fees, inspection, and service charges for loans up to ₹3.00 lakh were waived off. Credit is also provided to farmers for allied activities in agriculture thus making it inclusive.

Though the KCC can be termed as a good scheme for farmers various implementation issues have stopped KCC from reaching its full potential. First and foremost is that for short-term loans farmers use KCC to draw money out of ATMs. According to the 2011 census, almost 69% of people reside in rural areas but only 19% of banks are deployed in rural areas. The number of ATMs deployed has increased by a meager 6.7%[1] from 2021-2022 whereas the amount of cards availed during the same period has increased by 56.1%[2]. Of the 14.5 crore farmers (according to the

[1] Reserve Bank of India - State Wise and region wise deployment of atms. (n.d.). https://www.rbi.org.in/Scripts/StateRegionATMView.aspx

[2] Reserve Bank of India - Publications. (n.d.). https://www.rbi.org.in/Scripts/PublicationsView.aspx?id=21587

2011 census) only 2.94[3] crore farmers have been given access to formal credit through KCC up till 2022. This number also does not give the real picture as there may be farmers with multiple KCC cards. KCC offers farmers to draw credit anytime of the year but only the crops which are drawn strictly within the season get insurance coverage. There is a high stamp duty charged on higher loan amounts. The application process can be done online but the application has to be finally submitted to their respective banks. Many farmers do not even have a functioning bank near them and sometimes these applications are rejected by bank officials. Moreover farmers need to own land to be eligible. Most importantly farmers need to deposit all their money to avail KCC at one particular point of time which is not possible during crop failure.

INTEREST SUBVENTION SCHEME

In 2004-05, the central government announced an initiative to double the volume of agricultural credit over three years, announced a debt waiver program in 2008 to help distressed farmers, and in 2010-11 introduced an interest subvention (i.e., subsidy) program to provide subsidized credit to borrowers who repay the loan in time. The interest subvention scheme is an extension of the KSS scheme where farmers can By making the loans more affordable, interest subvention programs are meant to serve the dual purpose of increasing access to credit and improving loan repayment rates. Under this scheme, farmers are given KCC loans at a subvented interest rate of 7% per annum for loans up to ₹3 Lakhs. For this, at present, interest subvention at 1.5% is being given to concerned Financial Institutions (Scheduled Commercial Banks (SCBs)/ Small Finance Banks/ RRBs/ Cooperatives/ Computerised PACS ceded with SCBs) providing the loan. Therefore, short-term loans for agriculture and allied activities including animal husbandry, dairy, fisheries, etc. up to Rs.3.00 lakh is available to farmers at an interest rate of 7% per annum. An additional 3% subvention is also given to farmers for prompt and timely repayment of loans; thus reducing the effective rate of interest to 4% per annum for the Farmer if he repays the loan in time. Another positive aspect of this scheme is its dedication to helping small and marginalized farmers. For this various steps have been adopted, including post-harvest loans which can be availed by farmers for consumption needs, storage, or manufacturing. These kinds of loans are very rarely provided by

[3] *Meeting of parliamentary consultative committee on agriculture and farmers' welfare held*. Press Information Bureau. (n.d.-b). https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1809265

institutional sources. Also, Negotiable Warehouse Receipts (NWRs) are provided where farmers who keep their produce in these specified warehouses receive NWRs which serve as proof of ownership and quality of the stored commodities. These NWRs can be used as collateral to avail loans. This helps ensure income security for farmers as these warehouses allow farmers to sell their produce when they can avail the maximum benefit from the market.

PRADHAN MANTRI FASAL BIMA YOJANA

The Pradhan Mantri Fasal Bima Yojana (PMFBY) which was launched in 2016 is a significant scheme started by the government to provide insurance to every farmer in the country. It aims to safeguard farmers' livelihood against crop losses due to various risks. Farmers pay a small premium depending on the type of crop they grow. This premium ranges from 2% for Kharif crops, 1.5% for Rabi crops, and 5% for commercial crops. If the farmers are insured they can avail compensation. This compensation is the difference between the actual and expected yield which is calculated based on the data of the last seven years. Moreover, this scheme considers the kind of risk in a designated area to be the same.

Drawbacks of the scheme

Despite the many advantages and wide popularity of this scheme, its popularity has been dying over time, due to many issues in the program, it lost the trust of farmers and the public. The actual premium rate has been fixed but the premium amount paid by farmers increases with an increase in the sum insured. The premium subsidy also increases when the total insured farmers, total area insured, and the number of crops notified by the states for crop insurance increase. The growth in the number of farmer applications was 41% in 2021-22 but in 2022-23 it was only 33.4%[4]. The crop insurance claims of around ₹2761.10 crore under the PMFBY were still pending till 2021-22. Out of the pendency of claims, the maximum was in Rajasthan (₹1,387.34 crores), followed by Maharashtra (₹336.22 crores), Gujarat (₹258.87 crores), Karnataka (₹132.25 crores) and Jharkhand

[4] *Enrollment of farmers and claim settlement under Pradhan Mantri Fasal Bima yojana*. Press Information Bureau. (n.d.). https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1984068

(₹128.24 crores)[5]. Even the benefited farmers as a percent of total insured farmers between 2016-17 to 2018-19 are less than 40% in both Kharif and Rabi seasons. Before 2016-17, the claim to premium ratio was greater than one. Claim to premium ratio declined after 2016-17, and it became lower than one[6].

The reasons that have been stated for the delay of claims range from delay in state share of subsidy, delay in sharing of yield data by the states to the insurance companies, payment failure due to National Electronics Fund Transfer (NEFT) rejections, and claims under process. Even after formulating a good policy, there are many loopholes in the implementation of the scheme.[7] There have been state-wise delays of claims pending due to delays in the release of the state share of the subsidy. This has been presented below[8]:

States	State subsidy pending	Claims pending due to state subsidy
Maharashtra	1291.6	694.6
Tamil Nadu	914.2	115
Gujarat	859.5	258.8
Telangana	468.5	951.2
Jharkhand	362.5	659.4
Others	705.56	329.2

[5] *Govt says crop insurance claims worth rs 2,761.10 CR pending under Pmfby till 2021-22*. The Economic Times. (n.d.). https://economictimes.indiatimes.com/news/economy/agriculture/govt-says-crop-insurance-claims-worth-rs-2761-10-cr-pending-under-pmfby-till-2021-22/articleshow/102533507.cms?from=mdr

[6] *The ailing PM fasal bima yojana needs a structural redesign*. The Wire. (n.d.). https://thewire.in/agriculture/the-ailing-pm-fasal-bima-yojana-needs-a-structural-redesign

[7] *Farmers Protest Forceful Insurance Premium deduction in Haryana*. Down To Earth. (n.d.). https://www.downtoearth.org.in/news/agriculture/farmers-confronting-banks-against-forceful-deduction-of-crop-insurance-premium-for-pmfby-56739

[8] Agriculture, Animal Husbandry and Food Processing (2022 ... (n.d.-a). https://loksabhadocs.nic.in/lsscommittee/Agriculture, Animal Husbandry and Food Processing/17_Agriculture_Animal_Husbandry_and_Food_Processing_54.pdf

Due to this many states like Andhra Pradesh, Bihar, Gujarat, Jharkhand, Telangana, and West Bengal have discontinued PMFBY during particular seasons/year as it has become a costly scheme and is not providing financial assistance to farmers.

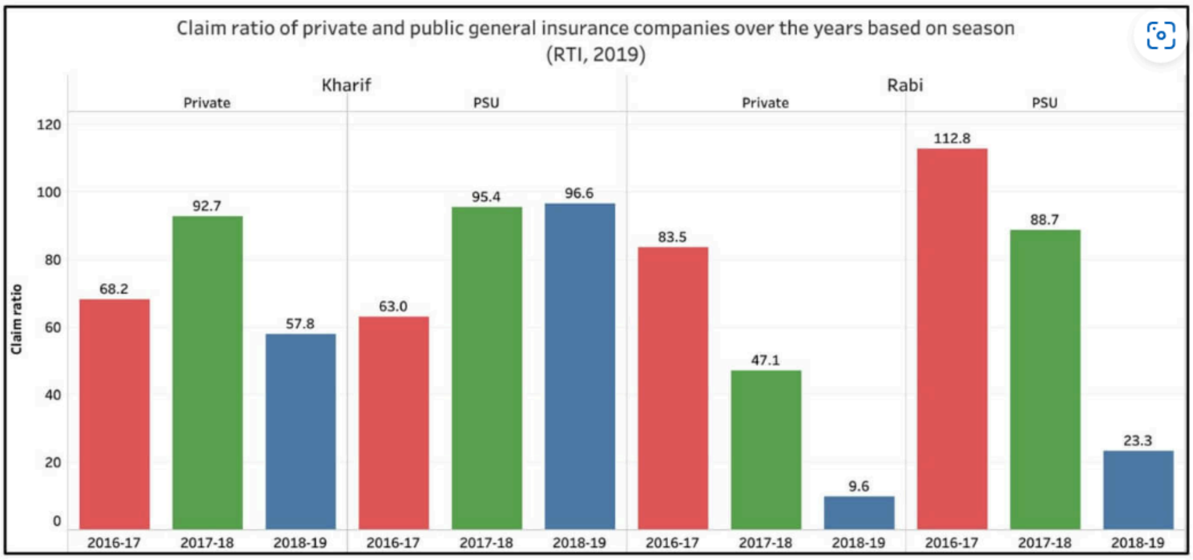
Exploitation by Private Insurance Companies

A total of 18 companies are empanelled to implement the PMFBY of which 5 are public sector companies and the remaining 13 are private companies. In 2017-18 the private companies paid claims amounting to 76% of the gross premium collected whereas public sector companies paid claims worth 93% of the gross premium[9]. Clearly there is a high discrepancy in the claim settlement ratio, which suggests that private sector companies might be rejecting legitimate claims or are stricter in claim assessment. Not only this the private insurance companies have doubled their profit compared to government firms from 2017- 2022 under this scheme. Almost 10 out of the 13 private insurance companies have earned ₹24,350 crore between 2016-17 and 2020-21 with their lucrative business models under the PMFBY whereas two government owned firms out of five made a loss of ₹3,344 crore in the same period. The stark difference between the profit-making of private and government-owned companies came to the fore when in 2018-19 and 2019-20, all five government firms incurred losses of ₹2,506 crore under the scheme while private companies earned a profit of ₹9,278 crore in the same duration. Private insurance companies received ₹69,697 as gross premium and paid ₹45,317 crore crore in claims making a profit of ₹24,350 crore. It happened when the government firms held 55% of the crop insurance market from the total 2.47 crore loanee farmers, while private companies owned the remaining 45%[10]. This data goes on to show how private insurance companies are looting farmers and not providing ample claim settlement. This

[9] Muthyanolla, S. K., & M, P. K. (2019, October 11). *Part-3: Public & Private Insurance Companies in implementation of PMFBY*. FACTLY. https://factly.in/part-3-public-private-insurance-companies-in-the-implementation-of-pmfby%EF%BB%BF/

[10] *Private companies earned double profits than Govt. firms in Union Crop Insurance Scheme*. NewsClick. (n.d.). https://www.newsclick.in/Private-Companies-Earned-Double-Profits-Than-Govt-Firms-Union-Crop-Insurance-Scheme

data is even more concerning because 13 out of 18 insurance companies under PMFBY are private owned, thus causing farmers to rely on them.



Note: *Until 2018-19

Source:https://factly.in/wp-content/uploads/2019/10/implementation-of-PMFBY_gross-claim-ratios-of-public-and-private-insurance-companies-yearly-based-on-season.jpg

The above picture clearly shows the distinction between public and private insurance companies in the Rabi and Kharif seasons. It is visible that the public sector has had a higher claim settlement ratio over the years. At the same time, there is a difference in the claims in the rabi and Kharif seasons due to crops covered, weather patterns, and regional variation in crop losses.

Reasons for failure

- Some farmers have been forced to take up PMFBY and have had forceful deductions of premiums. This instance has happened with farmers of Ahulana village of Sonipat.
- When farmers grow a crop different from the one for which they took out their loan, they can not claim on the policy despite having paid the loan. Even banks are forced to deduct premiums. Non-compliance on the part of farmers would lead them to give up the interest subvention of 7%.

- The scheme targeted to cover almost 50% of the gross cropped area by 2018-19 but only 30% of the gross cropped area has been covered till 2019-20. The reach of the scheme has not reached its full potential.
- Payments were delayed by a season or sometimes even a year which has cost farmers their lives. Statistics from the Ministry of Agriculture show that for the 2017 kharif season, of claims worth ₹159.48 billion, settlements of only 27 percent had been made by the first week of May 2018. ₹5,875 crore, or 45 percent, of the expected claims (for the kharif and rabi crop seasons) has been paid to farmers as of July 21, 2019. Claims related to the Kharif crop, which was gathered in November last year, are estimated to be worth ₹10,257 crores, with ₹4,649 crores, or 45 percent, resolved.
- A lot of farmers even demanded simplification of enrollment and claim settlement process, direct contact with the insurance agencies, timely payment of compensation, adequate dissemination of information, and more accountability in the claim settlement process. There were some of the demands by the farmers in West Bengal.
- Some further issues faced by farmers in different regions of the country are that the amount insured is meager as the agencies do not put ample effort into calculating losses and even correct procedure is not followed.
- Another major issue faced by the farmers is that losses caused by wild animals are not covered under this or any insurance scheme for this matter. This is a significant drawback of the PMFBY.

Intervention by the government

In order to deal with the problem of increasing delay in claims, the standing committee on agriculture, animal husbandry, and food processing recommended the Department of Agriculture and Farmers Welfare that in order to mitigate the suffering of the farmers due to delay in the settlement of claims, the PMFBY should be more technology-driven and ensure that all the Institutional Mechanism works in tandem so that registration of farmers, conducting of Crop Cutting Experiments (CCEs), settlement of claims, etc becomes hassle-free and farmer-friendly. The Committee had also recommended that a timeline be fixed for Insurance Companies (ICs) to settle their claims and in case of non-adherence to the timelines the Insurance Companies be penalised. The Committee had further recommended that when the reason for the delay is non-payment of subsidy by the State, the premium paid by farmers be returned along with interest within a fixed time frame. A very important reason for the delay in claim settlement is that the government underestimates the overall expenditure on the scheme. The allocated budget estimates to PMFBY in 2021-22 was ₹16,000 crore, which came down to ₹15,500 crore in the recent budget (2022-23).

The success of this scheme very well depends on how responsive and accountable are the state governments. For instance in the Beed district of Maharashtra, one of the poorest districts, which faces heavy losses due to failure of rains or heavy rains, the state government recognized the need for a special use case of PMFBY in Beed district. Under this, if the premium collected by the insurance agencies is less than the compensation to be paid then the state government would pay the bridge amount. If the compensation was less than the agencies would end up keeping 20% of the amount as handling charges and reimburse the rest to the state government. This model allows insurance agencies to actually not fall into losses as in the case of heavy destruction the brunt is faced by the state government, so this scheme provides a sense of security to the companies. At the same time it creates an extra source of funds for the state government when the harvest is good. The farmers face the benefit of having insurance in even one of the poorest districts in the country.

AN ANALYSIS OF PRIVATE CREDIT

Informal credit has helped farmers when no other source of credit was available but they have also exploited them due to this monopoly. This helplessness of the farmers has led to the government stepping up for them. The Government of India (GoI) has undertaken several initiatives.

In recent years private credit has significantly dominated the agricultural credit market. Credit is a great source not only to bridge the gap between the rich and the poor but also to create agricultural development. Although private credit has been of substantial importance, the issue lies in the fact that the concept of private credit is not very accessible to a farmer. Forty percent of the households have bank accounts, but only 38 percent of the 117,200 branches of scheduled commercial banks are working in rural areas. This statistic just goes on to highlight how far we are to achieving financial inclusivity. The term financial inclusivity is something that the commercial banks as well as the government need to consider if they want these initiatives to be successful, for this understanding the nuances is very important.

There are other varieties of reasons that have stopped farmers from availing of formal loans. These reasons range from the farmer's poor income, inability to open accounts due to lack of minimum account opening requirements, lack of trust, inefficient adoption of anti-money laundering measures, and lack of inadequate information. Even the transaction cost is quite high for farmers as the farmers have to obey certain rules and regulations whereas there is no such obligation in the informal sector. This also leads to another problem which is that a lot of farmers in India stick to multiple borrowings, so informal lenders are complementary. Sometimes there is a delay in sanctioning loans which hampers agricultural productivity thus giving another reason to rely on the informal sector. According to a report by NABARD published in 2023 of the many reasons for failure to avail loans - 1.7% of them had their applications rejected, 4.2% of them found the process complex and lengthy and 17.9% were not able to meet the collateral requirements. Along with this due to the poor infrastructure in rural areas, banks do not want to open their branches there.

There is a direct link between the level of agricultural development in a state and institutional credit flow. This is proved by the fact that states like Haryana receive rupees 34,012 per hectare whereas Odisha receives rupees 6,370 per hectare. The coefficient of variation in the level of institutional credit was 81% in 2007-08 which is quite high.

REGIONAL PREFERENCE

The commercial banks are mostly set up in the more commercial parts of the rural areas, which ends up excluding the target population. Since they are probably residing in the least developed parts of the rural areas. Also, density of the population is also considered while setting up these banks. Although transportation is a solution there is no guarantee of connectivity. Also, no data is available on how much the buses end up charging.

DISCRIMINATION BASED ON LAND SIZE AND ANNUAL INCOME

It was noticed that farmers who own comparatively larger land sizes are more dependent on financial sources of credit whereas farmers with small land sizes normally resort to informal sources. According to a report in 2017, The Net Farm Income of formal borrowers (Rs. 43,740/ha) is significantly greater than that of informal sector borrowers (Rs. 33,734/ha). However a very interesting result that was found was that there is an inverse relationship between farm size and productivity. So if the small farmers are actually given proper credit measures they can lead to better output.

CASTE PREFERENCE

It has been noticed that about 9% of the Scheduled Tribes (STs) and Scheduled Castes (SCs) farmers receive loans from formal sources. But the percentage of formal borrowers in Other Backward Class (OBC) and general caste farm households were higher at 46% and 32%, respectively. This is also because of the fact that SCs and STs own comparatively smaller areas of land. But the crux of the matter is that financial inclusion includes everybody

LEGAL IDENTITY CRISIS

Many minorities, refugees, and women do not own birth certificates or any legal identity, this is a hindrance as it stops them from availing credit.

Also, many women might want credit to escape their abusive households but banks do not provide credit to women who do not own any assets. At the same time, male guarantee is sometimes necessary to avail credit.

STATE WISE ANALYSIS

The amount of credit in the economy has significantly increased yet credit availability and credit distribution should go hand in hand. State-wise analysis of data shows that there is no consistency or standardization. Southern states receive the highest amount of credit in the country followed by the northern states. The western and northeastern states of the country receive comparatively less. During 2016 - 17 the share in institutional credit for the southern states was 35.7% and for the northern states was 20.27%. Whereas for the northeastern states it was only 1.81% and for the eastern states was 9.95%.

AN ANALYSIS OF DISPROPORTIONATION

Commercial banks are the largest source of credit in the country and considering they are an institutional source there should be standardization and fairness but there is a huge gap in the amount of credit that is provided to different states. According to data by the Reserve Bank of India, in 2023 Andhra Pradesh received ₹2,08,418 crores, Tamil Nadu received ₹288990 crores, and Haryana ₹3,30,235 crores. Whereas states like West Bengal received ₹47472 crores, Assam ₹14635 crores, and Meghalaya ₹668 crores. The amount credited has actually decreased for Meghalaya since 2019. Not only for commercial banks but also in the case of regional rural banks in 2023 the amount of money credited to the Southern region was nearly ₹165341 crores, to the northern region was ₹63302 crores, and to the northeastern states was ₹13911 crores. We also find a direct positive relationship between the amount of credit provided and the state-wise distribution of offices for scheduled commercial banks. The number of offices ranges from 12407 in Kerala, 7663 offices in Andhra Pradesh, 5326 in Haryana, 3085 in Assam, and 374 in Meghalaya. There is a discrepancy not only in terms of the amount of money given but also in the way the government initiatives are implemented. The KCC scheme which was a milestone in terms of rural credit in India has also been implemented to a different extent in each state. During 2016 - 17, Odisha had the highest density of KCC (one card per 1.09 ha), followed by Kerala and Andhra Pradesh. Whereas Rajasthan and Gujarat had the lowest density. Considering the great success of the KCC scheme the initiative should be adopted effectively for the betterment of the farmers so that availing rural credit will be easy for them.

This is just the case for rural credit. When it comes to agriculture insurance PMFBY is a very well-known initiative by the government but there have been huge differences in the way it has been taken up by different states. In 2022-23 the number of farmers enrolled under the scheme was 390.74 lakhs in Rajasthan, 175.4 lakhs in Andhra Pradesh, 107.44 lakhs in Maharashtra, 42.53

lakhs in Uttar Pradesh, 4.90 lakhs in Assam, 0.92 lakhs in Jammu and Kashmir and 0.04 lakhs in Manipur.

THE IMPORTANCE OF CREDIT AND INSURANCE STANDARDISATION

The reasons for this difference in institutional credit and insurance for farmers are wide-ranging. A very important reason is that institutional sources are not ready to invest capital in regions with poor infrastructure. This is one of the reasons why the northeast does not avail a lot of credit. At the same gross irrigated area is also taken into consideration. This puts regions that might not have proper irrigation facilities in a disadvantageous position. Also credit- deposit ratio is also another factor that is given significance. As of 2017, the Credit–deposit ratio in the Eastern Region was only 43.0, against 88.5 in the Western Region and 86.6 in the Southern Region. In Bihar and Jharkhand, the Credit–deposit ratio was as low as 32.0 and 29.1 respectively, while it was above 100 in Tamil Nadu and Andhra Pradesh (104). Certainly, the managerial efficiency of institutions in a region has a role in this matter, in addition to credit absorption capacity and other factors.

The statistics mentioned above are a cause of concern because farmers often rely on institutional sources of credit as they feel they won't be exploited but if there is no fairness in terms of credit availability and the number of offices set up, the farmers will end up having to rely on moneylenders. This will lead them to be in a cycle of indebtedness. Also, some of these states that get comparatively lesser credit add significantly to the GDP and should not be ignored. In the state of Assam Gross State Value Added of Agriculture and the allied sector at constant (2011-12) prices were ₹39,71,202 lakhs, ₹70,72,591 lakhs in Bihar, and ₹27,27,989 lakhs in Jharkhand.

Another factor to note is that even today the amount that is targeted for farmers does not truly reach them. For example in 2018-19, in the state of Uttar Pradesh which gets a comparatively high amount of credit, the amount targeted was ₹13,07,000 lakhs but the amount disbursed was ₹5,57,290.1 lakhs. In Telangana, there was a difference of ₹1,06,570.3 lakhs between the targeted and disbursed amount. This data is concerning because these states earn a higher level of credit in comparison to the other states of the country and still this money is not enough. This is why there needs to be standardization in the amount of money in terms of credit and insurance so that there is no regional discrimination and farmers can actually benefit. This also reduces administrative burden and increases operational efficiency. Moreover, it helps financial institutions to mitigate risk better and leads to market stability.

A CASE STUDY OF GLOBAL POLICIES

ANALYSIS OF CREDIT

The Philippines which is a primarily agrarian nation once faced some of the same issues that India faces today. But extremely well-targeted policies helped the country to support its farmers in terms of credit. One of these policies was The Masagana 99 Program, which was one of the first major interventions by the government to bring self-sufficiency in rice production. One of the main purposes of adopting this scheme was because institutional sources of credit were reluctant to help farmers due to the lack of collateral. Recognizing the fact that credit is an essential need for farm productivity the government decided to intervene by helping the farmers to raise the per-hectare yield of paddy (palay) from the prevailing national average of 40 cavans (1.9 m tons) to 99 cavans (5 m tons). Loans were provided to farmers at relatively low rates of interest depending upon the viability and profitability of the project rather than the collateral available. In 1973, the government-owned Agricultural Credit Administration (ACA) issued loans totaling P 600 million to about 631,000 farmers cultivating an area of 923,000 ha. Total credit to rice production, processing, and marketing were about 87% higher in 1973 in comparison to 1972. Not only was agricultural credit provided but also proper guidance to farmers in the form of farm plans, budgets, agro-economic advice, supervised use of loan proceeds, and loan collection.

This model is very well suited for India because it tackles two main problems that India faces- the lack of collateral and financial literacy. The credit facilities if made available in terms of viability of the project will give farmers a chance to actually take up agricultural projects that can benefit them and also at the same time this will give incentive to farmers to actually take farm productivity seriously.

Another country that has significantly helped its farmers by providing agricultural credit is the United States. It has taken up various measures such as the Product Credit Association (PCA), the

PCA's was established under the Farm Credit Act of 1993. The PCAs are owned and governed by farmer borrowers for this they had to buy stocks in the association. Having farmers to govern allows the government to actually work on areas where there are real issues. One of these is credit rationing. Credit rationing occurs when low-risk borrowers are provided less credit to avoid attracting high-risk borrowers. This leads to disadvantages for both groups. This is where the PCA steps in to provide loans to high-risk farmers. Hence the PCA goes hand in hand with commercial banks, rather than competing with them they compliment them. Also since they are directly coming under the government they are very accountable and serve the farmers.

At the same time in America, the Farm Credit System has been one of the major lenders to farmers nationwide. The reason for the need of FCS was because the credit from commercial banks was short-term and at high-interest rates for agriculture. Long-term loans are much more necessary for small farmers as the point of these loans is not just to produce output but also to invest. In 1971, the FCS was made much more inclusive. This included rural home loans, leasing and other related activities, and international and rural utility lending. Moreover, it also strengthens the borrowers with the help of the Distressed Loan Restructure, the Right of First Refusal, and giving special notice to non-interest earning farmers. Under this the farmer is eligible to file a restructure application before remedies are executed, appeal rights, has the right of first refusal in case the lender decides to acquire their assets and at the same time, the borrower can refuse the sale of farmers loans. At the same time, a federal Farm Credit Board with 13 members was created (one from each of the 12 farm credit districts and one appointed by the Secretary of Agriculture) to develop policy for FCA. This was done to give voice to the issues they face. This security that is given to the farmers along with credit is what has actually led to the success of FCS in the United States. This model of providing security to farmers is something that India can adopt because this will give an incentive to even small and marginalized farmers to borrow.

ANALYSIS OF INSURANCE

Today insurance is one of the major components of the US agricultural economy with 90% of all crops insured covering nearly 400 million acres among 135 crops. Crop insurance safeguards farmers' income and provides a consistent and affordable food supply to US citizens. The major reason for the success of insurance is the adoption of the Federal Crop Insurance Scheme in 1938.

The scheme is extremely inclusive, covering almost all agricultural commodities, and even crops are insured for market price declines and wildlife damage. There were almost 26 different policies in 2019 ranging from Yield based policies, whole farm revenue protection, dairy revenue protection, rainfall index, revenue-based policies, etc. These options that have been provided by the government actually allow farmers to have a safety net as loss is not just because of a natural calamity. It could also be because of changes in trade policies, market fluctuations, oversupply or fall in market prices. India on the other hand only has four thus there remains the need for a more inclusive network of policies.

In the United States farmers under the Federal Crop Insurance Scheme farmers get two options either to avail of the Crop Hail policy or the Multiple Peril Crop Insurance(MPCI). This distinction especially for hail-based losses was done because hail has the power to destroy a significant part of a planted field while leaving the rest undamaged. Moreover, this policy can be availed at any time during the year. India does not have any separate scheme for hail-based damage. Under the MPCI farmers have yield-based and revenue-based insurance coverage options. The program is regulated by the Risk Management Authority (RMA). The RMA sets the interest rates that can be charged and determines and determines which crop can be insured in different parts of the country.

To give an example of how the indemnity is paid to the farmers a situation can be considered where a person has a 100 percent share in 50 acres of canola in the unit with a production guarantee (per acre) of 650 pounds, the projected price is $.1220, harvest price is $.1110, and production to count is 31,000 pounds. If the elected yield protection:

1. 50 acres x (650 pound production guarantee x $.1220 projected price) = $3,965.00 value of the production guarantee
2. 31,000 pound production to count x $.1220 projected price = $3,782.00 value of the production to count
3. $3,965.00 - $3,782.00 = $183.00
4. $183.00 x 1.000 share = $183.00 indemnity

If revenue protection is elected:

1. 50 acres x (650 pound production guarantee x $.1220 projected price) = $3,965.00 revenue protection guarantee
2. 31,000 pound production to count x $.1110 harvest price = $3,441.00 value of the production to count
3. $3,965.00 - $3,441.00 = $524.00
4. $524.00 x 1.000 share = $524.00 indemnity

Clearly, the indemnity received in the case of revenue protection is higher but still farmers get the option of yield protection because revenue protection schemes consider both decrease in yield and price fluctuations and have a higher premium rate. As a result, if a farmer is not very rich or is in a market situation where prices do not fluctuate a lot, the farmer will much prefer the option of yield protection.

Another important measure taken up is that the level of loss is calculated by a qualified expert who inspects and scientifically quantifies the magnitude of the loss. Also, the benefits are provided for all kinds of crops irrespective of farm size or the kind of loss. At the same time, the company keeps accurate measures of the crop yield and damage which allows it to quantify the risk caused. If the farmer does not like the assessment of how much loss has been calculated they can appeal for dispute resolution. This allows farmers to receive the maximum compensation for the losses incurred.

GOVERNMENT INTERVENTION

As we closely study the problems as stated in the paper we come to the realisation that government intervention can truly help in solving the problem. Some of these measures are stated below.

- For the success of PMFBY proper loss assessment is very necessary and this is done by keeping proper records of crop-cutting experiments (CCE). There is no adequate institutional and human capacity to complete the CCEs. For instance in a state like Andhra Pradesh with more than 28,000 villages there is a need to conduct 100,000 CCEs in one season. This is not plausible and if it is it will have many errors. The government needs to increase the number of people and also efficiently train them to conduct CCEs. The government should also strictly ensure the 12% delay in settlement of claims by Insurance companies after one month of receipt of yield data.

- Karnataka has taken a unique road to the success of PMFBY. The state started its online portal called Samrakshane, which records all farmer information and presents CCE information digitally to stakeholders. Each primary worker in the Agriculture Department of Karnataka is handed out a smartphone with a CCE application developed by the National Informatics Centre loaded in it. All CCEs are captured through this mobile application and the data is pushed straight into the server along with photos, videos, and GPS coordinates. There may not be Internet connectivity everywhere, but even if offline, the mobile app identifies the GPS coordinates and marks them in the pictures. This prevents the worker from faking CCE data. This model can be used by other states as well, especially those that have that level of technological advancement in the state.
- Digitalization of Kisan Credit Cards in India will help it to be more inclusive. As discussed in the paper only 45% of the farmers have operational KCCs. A reason behind this is that at present to avail of credit the farmer needs to visit a bank branch many times to provide documents and submit applications. For many farmers, the nearest bank might be another town. This disincentives farmers from availing of KCC. The Turn Around Time (TAT) between loan application and disbursement is also very high. Digitalization will also ensure accountability by reducing TAT significantly. For this banks should be permitted to view previous loan and land records. RBI can collaborate with FinTech companies to create an app that will digitalize KCC and make it more accessible and efficient.
- Having a proper infrastructure base so that an adequate amount of bank offices and ATMs can be set up in rural areas. For the schemes to be successful they need to have proper reach and that is only possible through infrastructural development.
- Adoption of the Beed model as in the case of Maharashtra can be very useful because some of the issues faced by the Beed district are synonymous with the entire country. These issues are acute poverty and weather fluctuations. Depending upon the specific conditions of the state, the state governments can work with agricultural insurance companies. If the premium amount is more than the compensation then the state government can keep 20% of the amount and if it is the opposite case then they can keep the bridge amount. This is

beneficial to the state government as it is a source of credit but most importantly it allows farmers a sense of security as they do not have to face the brunt of any issue. They have a reliable source to insure their crops and take loans also. This model can be taken up by other states.

- ❖ It was successful in Maharashtra because of the proper arrangement of duty at the Taluka level (intermediate gram panchayat) and the participation of KrishiMitra for filling out application forms
- ❖ Radio Jingles are published through Akashwani (AIR) day to day in a stipulated period through which farmers are motivated to participate in the scheme.
- ❖ To ensure the flow of credit to the agriculture sector; which will contribute to food security, crop diversification, and enhancing growth and competitiveness of the agriculture sector besides protecting farmers from production risks

- There needs to be a special focus on states like Assam, Manipur, Odisha, Jharkhand, West Bengal, etc who receive very little credit and even do not have enough farmers enrolled under PMFBY. As we have established in the paper, a very big reason for this is because these states are not agriculturally developed so what the government can do is start investing in these states by allocating proper funds. This initial loss (in terms of providing finances by allocating funds) is necessary so that the mentioned states can catch up and their farmers can receive benefits that accrue to the nation.
- The Federal Crop Insurance Scheme that was adopted in the United States is a model even India can adopt. The US model spreads risk between the public and private insurance companies. A similar Public-Private Partnership model can be adopted by India as well where the private companies sell policies and handle claims to maintain efficiency but the overall functioning is administered by the government to ensure that the private firms are not looting.
- Research drives solutions. Proper market research is extremely necessary before implementing any other corrective measures. A reason for the very obvious success of the Federal Crop Insurance Scheme was because they very closely studied the European model that was implemented and also they kept proper data on the amount of crop yield and the losses. This detailed understanding of the market is also extremely necessary to set interest

rates because without proper data the amount of loans demanded cannot be understood to match supply.

CONCLUSION

This paper highlights the issues that farmers face when it comes to agricultural credit and insurance. Although various strides have been taken to adopt changes through the KCC scheme, PMFBY, and Interest Subvention Scheme amongst many others there are still various loopholes that exist in their implementation. These loopholes are lack of financial literacy, very little infrastructural investment, discrepancy among various states, biases in private credit etc. The paper brings forward these issues that farmers in different parts of this country face.

These highlighted issues can be worked upon by proper analysis and by understanding the nuances and complexities that these problems have. For instance, the PMFBY although a good scheme does not truly work in the context of the Beed district in Maharashtra. Because of this reason, the state government tweaked the scheme to create a model that helps the farmers the most. This initiative on a national scale is what will ultimately help the farmers. Even the issue that many farmers state when it comes to insurance is that attacks caused by wild animals are not insured against. The PMFBY scheme needs to be upgraded and should be more inclusive.

The paper further provides various other policy solutions as mentioned above which aim to decrease the research gap, understand farmers better, give them proper guidance, create standardization amongst states, focus on infrastructural development, promote financial literacy, give proper importance to women availing loans or insuring crops etc. The main aim is to understand farmers better and help them to be self-reliant so that they are not exploited. This will also allow India, which is primarily an agrarian nation,to dominate the agricultural market

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