# Moral Hazard Problems in the Rural Agricultural Credit Market: An Analysis of the Debt Crisis of Farmers in the North Twenty-Four Parganas District of West Bengal

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## Abstract

Indebtedness is one of the most important causes of farmers' distress in West Bengal. It also increases the burden of non-performing assets in financial institutions and leads to a serious problem of credit allocation. Lending operations entail a certain level of risk due to asymmetric information. The asymmetric information creates moral hazard problems in the agricultural credit market. The aim of the research work is to find out the responsible factors that can influence the repayment performance of the farmers and identify the moral hazard problem in some selected rural areas of the North 24 Parganas district of West Bengal. The logistic regression method was applied to over 300 borrower farmers in the selected study area to assess their repayment performance and identify moral hazard issues. The research identifies that moral hazard problems among farmers lead to credit repayment issues and adverse credit discipline. Diversification of credit for unproductive activities and the expectation of loan waiver scheme would be the main reasons for the moral hazard problem. Proper monitoring by the officials of the financial institutions for productive utilization of credit, along with an assessment of risk management, are the preconditions of good lending activities.

*Key words*: Indebtedness, Farmers' distress, Asymmetric information, Moral hazard, Diversification of credit

Agriculture is a vital component of the West Bengal economy. Agricultural credit is a crucial input for farmers to finance farm investments and the adoption of new technologies. The farming community favours institutional credit due to its favourable terms, such as reasonable interest rates and subsidies. The economic importance of formal agricultural credit is very significant due to the prevalence of small and marginal farmers in West Bengal. However, institutional credit has not yet reached all farmers. The formal and informal credit market operated simultaneously in rural credit market in West Bengal. Farmers are often perceived to have access to credit from informal financial institutions due to the inadequacy and inaccessibility of formal credit. The continuous existence of informal moneylenders in rural agricultural markets is considered as the manifestation of the inadequacy of the formal financial systems. High interest rates and inadequacy of formal credit in rural areas often lead to suboptimal credit use by the farmers, resulting in lower agricultural productivity, indebtedness, and agrarian distress. Formal credit markets often deviate from an idealized market due to imperfect information about the risk associated with farmers' strategic loan repayment behaviour, which is not disclosed to the financial institutions. The inherent risk of uncertainty of imperfect information often leads to moral hazard issue in the rural credit market. Moral hazard issues are quite prevalent in the organized credit market, leading to a non-optimal determination of the market-clearing interest rate that ultimately causes credit rationing. This is an inherent characteristic of the rural credit market. The moral hazard problem can increase the debt burden and adversely affect the repayment performance of the farmers. Poor repayment performance by borrower farmers can increase the burden of non-performing assets on financial institutions and hinder the expansion of credit. The quality of information about a borrower's creditworthiness influences credit contract terms and conditions. Reliable information reduces default risk, improves profitability, and ensures higher credit demand fulfilment through flexibility in terms and conditions. However, scanty information about borrower creditworthiness increases default risk, monitoring and enforcement costs, and ultimately leads to exorbitant interest rates with stringent credit terms and conditions. The present study attempts to identify the factors that influence the institutional credit repayment performance of the farmers and address the presence of moral hazard problems in specific rural areas of the North 24 Parganas district in West Bengal.

Static productivity and low profitability in agriculture can increase farmers' debt burden and negatively impact their repayment performance. The main factors affecting farmers' debt include education level, non-farm income, farm size, and non-institutional credit. Farmers face numerous challenges in obtaining institutional credit, leading them to fall into the debt trap of non-institutional sources of credit. The efficient

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operation of the credit delivery system is crucial for accelerating the growth of the farming sector and rescuing the peasantry from the incessant debt trap [17]. Farmers often borrow money for cultivation and consumption purposes but often fail to repay the full amount or part of the loans due to insufficient agricultural output. A significant portion of loans remain outstanding, primarily due to the widening gap between farm inputs and produce prices [14]. Rural India has experienced significant expansion in commercial agriculture, but farmers often experience a "thick fog of uncertainty" due to a diminishing role in providing assistance to the agricultural sector, and the real value of subsidies provided to farmers has declined exceptionally in recent decades [17]. The conditions of farmers in West Bengal are very deplorable. Their source of income is highly volatile because they are facing double risks, that is, production and marketing risks. Around 70% of farmers' incomes come from non-farm sources, indicating a decline in agriculture as the primary rural livelihood. The farm sector becomes non-viable as income is insufficient to meet daily needs. According to the Rangarajan Expert Committee report, 35% of farmers in West Bengal may be considered poor [9]. The sole reasons for increasing debt distress are escalating expenses associated with agricultural inputs and relative stagnation of commodity prices, expansion in the monetization of agriculture [13], [14], changes in rural debt relations, stagnation of rural wage rates [4], [6], and increases in consumption expenditures by rural households [9]. Repayment of a loan can be attributed to various factors, including adverse shocks like natural calamities, earnings or employment shocks, or health shocks, as well as moral hazard problems linked to easier access to loans [2]. Diversification of credit in unproductive activities where income creation is very limited could be one of the important reasons for indebtedness among the farmers in West Bengal. Implementation of Rural Debt Waiver Scheme has destroyed the credit discipline among the farmers in West Bengal [11]. The Indian government's push for formal borrowing sources has led to an increase in agricultural credit, making it crucial to understand the effectiveness of these policy interventions and how borrowers respond to loans from formal sources. Research suggests that loan waivers can alter farmers' borrowing behaviour. Households who obtain loans for agricultural investments from formal sources are more likely to engage in higher social spending, indicating a moral hazard in the use of loans from formal sources. Households may form expectations that formal loan monitoring and enforcement are not strong enough, and thus exercise less control in utilisation of these loans [2]. The government's intervention and announcement of loan waiver policies may potentially lead to moral hazard. Households that could have avoided using their loans for consumption purposes may be more likely to default. It encourages individuals to use their loans less cautiously, hoping for future loan waiver announcements and reduced default penalties [2].

## MATERIALS AND METHODS

The research is completely based on primary household data, which comprises a questioner survey of the borrower farmers in some selected rural areas of North 24 Parganas district, West Bengal. The multi-stage sampling method has been executed to collect 300 samples of household data during March 2023 to August 2023. The district is considered as the initial stage, followed by subdivisions, blocks, villages, and borrower farmers. (Table 1) displayed the distribution of sample farmers based on their institutional agricultural credit repayment performance. (Fig 1) showed the distribution of sample farmers according to the size of their land.

The credit-deposit ratio of RRB in North 24 Parganas district is extremely low and has a low financial inclusion index [8]. There are two distinct agro-ecological zones prevailing in the district – Gangaetic alluvial zone and Coastal alluvial zone. The district consists of five subdivisions. Basirhat is the only subdivision that comprises two distinct agro-ecological zones. Baduria block has been selected from Gangaetic alluvial zone and Hasnabad block was selected from Coastal alluvial zone for the research work. Three villages from each block have been chosen, and finally, fifty borrower farmers from each village have been selected.

Table 1 Category wise distribution of sample farmers

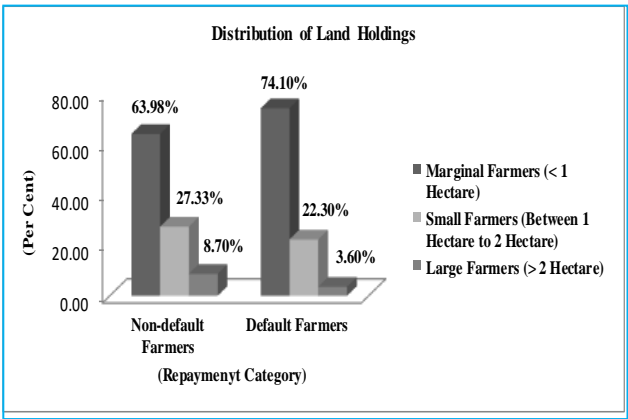| Category of farmers | No. of household farmers | Percentage |
|---|---|---|
| Non-default farmers | 161 | 53.67% |
| Default farmers | 139 | 46.33% |



Fig 1 Categorization of sample farmers according to land holdings

In this research work, we have two categorical dependent variables, i.e., default farmers (completely unable to repay institutional credit) and non-default farmers (regularly or irregularly repaying institutional credit). The logistic model is applied to identify the responsible factors of repayment performances. In order to identify the key determinants of repayment, we first computed a dichotomous variable indicating whether the famers defaulter or not.

After estimating logistic regression model, an extensive review was conducted to assess the presence of multicollinearity and the degree of association. The Variance Inflation Factor (VIF) values of continuous explanatory variables indicate the absence of significant multicollinearity issues. The research work found no significant correlation between the categorical variables. The computed table are provided in Appendix – 1.

Table 2 Explanatory variables of logistic regression model

| Indicators | Variable | How the variable is measured |
|---|---|---|
| Socio- economic attributes | Working participation rate | Ratio of employed persons in the family to total members in the family |
| | Farming exposure | Years of farming practice |
| | Literacy | 0 – Illiterate |

| | | 1 – School education (Up to higher secondary) |
|---|---|---|
| | | 2 – Above school education |
| Agricultural attributes | Net income sourcing from agriculture per hectare | Net annual farming income per hectare (Rupees) |
| | expenditure for agriculture per hectare | Agriculture expenditure in rupees per hectare (Annual) |
| | Operating land holdings | Net cultivated land in hectare |
| | Cropping intensity | 0 - Low (Average cropping intensity of land <125) |
| | | 1 – Moderate (Average cropping intensity of land <150) |
| | | 2 – High (Average cropping intensity of land >150) |
| Lending attributes | Annual institutional interest rate | Cost of institutional credit per hundred rupees (Percentage) |
| | Annual interest rate of non-financial institution | Cost of non-financial institutional credit per hundred rupees (Percentage) |
| Borrowing history | Borrowing history of repayment in last availed agricultural loan | 1 – Poor (Number of instalments failed to repay in last availed agricultural loan >1) |
| | | 0 – Good (Number of instalments failed to repay in last availed agricultural loan ≤1) |
| Monitoring attitude of lenders | Supervision | 1 – Properly supervised by the lending institution |
| | | 0 – Otherwise |
| Utilization attitude of farmers | Expectation about loan waiver scheme | 1 – The borrower expected loan waiver scheme |
| | | 0 – Otherwise |
| | Diversification | 1 – If the borrower diversifies the financial institutional credit (Exclude repaying back dated debt) |
| | | 0 – Otherwise |
| Financial attributes | Total savings | In rupees |
| | Other source of income (Excluding agricultural income) | Earnings other than agricultural sources in rupees (Monthly) |
| Accessibility of market | Distance | Distance between market place and farming place (K.M.) |
| | Constant of the Regression Model | |

## RESULTS AND DISCUSSION

*Descriptive statistics analysis*

The average working participation rate of non-default farmers is 0.44, greater than that of default farmers. The result of the t-test indicates that the mean difference in working participation rate between the two groups was statistically significant (Table 3). Non-default farmers have a higher farming experience of 22.96 years (Table 3) due to their higher average age in (Fig 2) and the t-test implies the presence of a statistically significant difference between the two groups in terms of mean years of experiences.
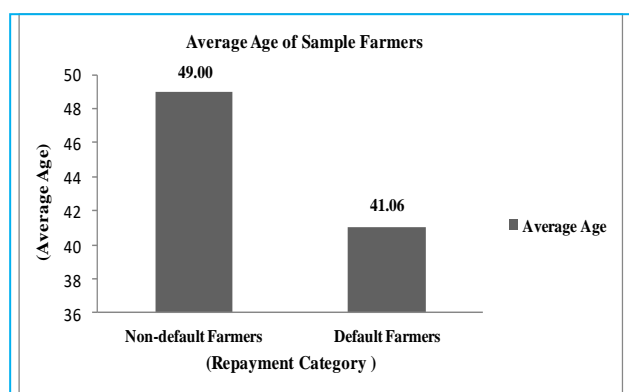


Fig 2 Category-wise average age of sample farmers

The mean operated land holdings of non-default farmers and default farmers are 0.96 hectares and 0.73 hectares, respectively, and the mean difference is statistically significant at the 5% level (Table 3). The average annual farming income and annual farming expenditure per hectare of non-default category farmers are Rs. 83,759.01/- and Rs. 77,055.90/-, respectively (Table 3), higher than those of default category farmers because they hold higher average operated land holdings (Table 3), and 85.73 per cent of non-default farmers have moderate and higher cropping intensity land (Table 4). The study found that non-default farmers have a significantly higher monthly off-farm income of Rs.23,590.06/- compared to default farmers in Table 3 because non-default farmers have a comparatively higher working participation rate (Table 4). The research revealed that around 5.59 per cent of non-default farmers obtain medium and long term institutional agricultural credit, whereas 14.39 per cent of default farmers obtain medium and long term institutional agricultural credit (Fig 3). The annual interest rate of such credit is much higher than that of short-term institutional credit and the Kissan Credit Card Scheme. The financial institution offers interest-rate subsidies to farmers with good borrowing histories. In (Table 4), 58.39 per cent of non-default farmers have a good borrowing history, higher than that of default category farmers, and get interest subsidies from financial institutions. Thus, the average annual institutional interest rate of default category farmers is 6.75% (Table 3), higher than the other category of farmers.
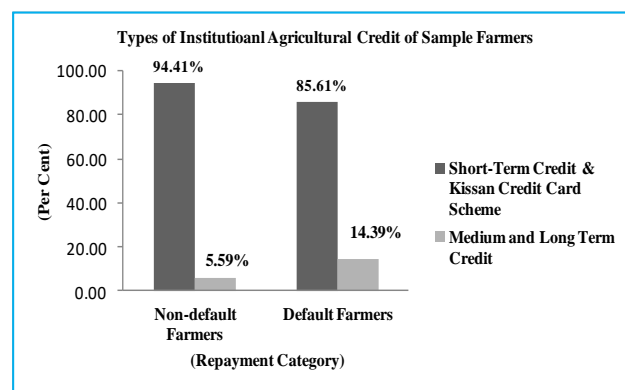


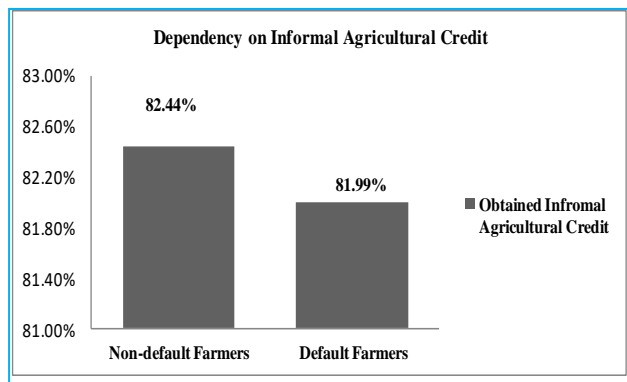Fig 3 Repayment category-wise types of agricultural credit

Fig 4 Repayment category-wise dependency on informal agricultural credit of sample farmers

The study revealed that around 82.44% of default farmers obtain informal credit (Fig 4), higher than non-default farmers. Thus, the average annual informal interest rate of default category farmers is 21.25% (Table 3), higher than the other group of farmers.

The distance between a farmer's farming location and the market place indicates the level of market accessibility for the farmers. The average distance between the farming location and the market of non-default farmers is 3.12 km, indicating effective market accessibility. The average total savings of non-default farmers is Rs. 41,310.56/- (Table 3), significantly higher than that of default category farmers due to higher average working participation rates and monthly off-farm income. Effective market accessibility appears to contribute to higher savings and better financial outcomes for farmers.

Table 3 Descriptive summary of continuous explanatory variables

| Indicators | Non delinquent farmers mean (S.D) | Delinquent farmers mean (S.D) | t- Statistics |
|---|---|---|---|
| Working participation rate | 0.44 (0.14) | 0.39 (0.14) | 3.19*** |
| Total farming experience | 22.96 (10.46) | 15.37 (7.49) | 7.29*** |
| Operated land holdings | 0.96 (0.83) | 0.73 (0.54) | 2.89** |
| Farming income per hectare (Annual) | ₹ 83759.01 (10567.05) | ₹ 81343.88 (10003.71) | 2.03** |
| Farming expenditure per hectare (Annual) | ₹ 77055.90 (9434.04) | ₹ 74984.17 (8337.42) | 2.02** |
| Off-farm income (Monthly) | ₹ 23590.06 (16383.86) | ₹ 19755.40 (16063.21) | 2.04** |
| Interest rate of financial institution (Annual) | 5.22 (1.69) | 6.75 (1.50) | - 8.32*** |
| Interest rate of non-financial institution (Annual) | 20.64 (10.20) | 21.25 (11.73) | - 0.48 |
| Distance (K.M) | 3.12 (2.15) | 3.45 (2.17) | 1.33 |
| Total savings | ₹ 41310.56 (24785.39) | ₹ 35812.95 (21547.58) | 2.06** |

***Significant level at 1%, **Significant level at 5%

Table 4 Descriptive summary of categorical explanatory variables

| Indicators | Non delinquent farmer | Delinquent farmers | $\chi^2$ - Statistics |
|---|---|---|---|
| Literacy | | | |
| Illiterate | 33 (20.50%) | 19 (13.67%) | 9.16*** |
| School Education (Up to HS) | 109 ((67.70%) | 86 (61.87%) | |
| Above School Education | 19 (11.80%) | 34 (24.46%) | |
| Cropping intensity | | | |
| Low | 23 (14.28%) | 35 (25.18%) | 10.44*** |
| Moderate | 68 (42.24%) | 66 (47.48%) | |
| High | 70 (43.48%) | 38 (27.34%) | |
| Borrowing history | | | |
| Good | 94 (58.39%) | 53 (38.13%) | 12.25*** |
| Bad | 67 (41.61%) | 86 (61.87%) | |
| Supervision | | | |
| Supervised by the lender (Financial institution) | 81 (50.31%) | 37 (26.62%) | 17.55*** |
| Otherwise | 80 (49.69%) | 102 (73.38%) | |
| Misutilization of financial credit | | | |
| Mutualized the financial credit in unproductive activities | 48 (29.81%) | 72 (51.80%) | 15.02*** |
| Otherwise | 113 (70.19%) | 67 (48.20%) | |
| Expectation on loan waiver scheme | | | |
| Expecting loan waiving | 98 (60.87%) | 124 (89.21%) | 31.14*** |
| Otherwise | 63 (39.13%) | 15 (10.79%) | |

***Significant level at 1%, **Significant level at 5%

The findings of the study indicated that 20.50 per cent of non-default farmers were illiterate, while the illiteracy of default farmers was 13.67%. But 67.70 per cent of non-default farmers have a school education, which is higher than that of default farmers. However, default farmers have a higher percentage share of college educated farmers compared to non-default farmers. The $\chi^2$ test shows a statistically significant difference for the distribution of illiterates, school education, and college-educated household farmers between the two groups (Table 4). (Table 4) shows that 85.72 per cent of non-default farmers hold moderate and high-intensity land, higher than that of default category farmers, and have a significant difference in the distribution of different intensities of land between the two groups. The financial institution provided interest-rate subsidies to farmers with good borrowing histories. The results of the research suggest that 58.39 per cent of non-default farmers have good borrowing histories and are receiving these subsidies. However, 38.13 per cent of default farmers

have good borrowing histories and have received interest subsidies from financial institutions (Table 4). Proper monitoring or supervision by the officials of financial institutions can help reduce defaults. Table 4 shows that officials of the financial institutions supervised 50.31 per cent of non-default farmers and 26.62 per cent of default farmers. Thus, proper monitoring and supervision can increase the repayment performance and reduce willful defaulting. Diversifying the institutional credit for unproductive activities or family consumption purposes can be one of the important reasons for creating moral hazard problem [2]. The result of the study, 51.80 per cent of default farmers diversified their institutional credit for unproductive activities and family consumption purposes, which was much higher than that of non-default farmers (Table 4). Expectations about the loan waiver scheme of the government can reduce the repayment discipline and create willful defaulters [2]. 89.21 per cent of default farmers expect loan waiver scheme, which is much higher than that of non-default farmers, creating willful defaulting (Table 4).

*Econometric result analysis*

The research involved 300 borrowing farmers. The log likelihood statistics of the fitted model is -88.09. It is used to evaluate the comparison of the nested model. The test statistics of likelihood ratio chi-square test is 238.09. The probability of obtaining the chi-square statistics is .000 given that the null hypothesis is true or in the other words, this is the probability of obtaining this chi-square statistics (238.09) if there is no impact of the explanatory variables. The model is statistically significant in this instance due to the p-value being below 0.000 which would guide us to the conclusion that at least one of the regression coefficients in the model is not equal to zero. In addition, the McFadden's Pseudo R-square value for the regression model is 0.5747 and count R-square value is 0.903.

*Interpretation of estimated coefficients*

The working participation rate significantly improved the repayment performance of the farmers (Table 5). It reduced dependency and increased income sourcing in the family. Additional income enhanced the repayment performance of the farmers [15]. Higher farming experience improves skills, knowledge, and productivity among farmers, increasing earnings and management skills. A negative and significant coefficient in Table 5 implies that increasing the duration of farming experience will reduce the probability of default [15]. Operated land holdings have a positive and significant effect on the repayment performance of the farmers (Table 5). Farmers with large operating land holdings produce a higher amount of output and have a better chance of earning. A higher amount of income allows farmers to enhance their repayment performance [10-11], [15].

Table 5 Maximum likelihood estimates of logistic regression model

| Explanatory variables | Estimated coefficient | Standard error | Z | P>|Z| |
|---|---|---|---|---|
| Work participation rate | -2.85172 | 1.632955 | -1.75 | 0.081* |
| Farming exposure | -0.1569256 | 0.0294988 | -5.32 | 0.000*** |
| Operated land holdings | -1.406791 | 0.4436762 | -3.17 | 0.002*** |
| Farming income per hectare (Annual) | -0.000336 | 0.000019 | -1.77 | 0.078* |
| Farming expenditure per hectare (Annual) | -0.0000528 | 0.0000241 | -2.19 | 0.028** |
| Off-farm income (Monthly) | -0.00000703 | 0.0000127 | -0.55 | 0.580 |
| Interest rate of financial institution (Annual) | 0.8162831 | 0.1313169 | 6.22 | 0.000*** |
| Interest rate of non-financial institution (Annual) | 0.034491 | 0.018139 | 1.90 | 0.057* |
| Distance (K.M) | 0.182362 | 0.0998116 | 1.83 | 0.068* |
| Total savings | 0.00000557 | 0.00000963 | 0.58 | 0.563 |
| Education (Reference: Illiterate) | | | | |
| Schooling (Up to HS) | 0.2470913 | 0.6050656 | 0.41 | 0.683 |
| Above schooling | -0.1450169 | 0.7919636 | -0.18 | 0.855 |
| Cropping intensity (Reference: Low intensity) | | | | |
| Moderate intensity | -1.13639 | 0.5750291 | -1.98 | 0.048** |
| High intensity | -2.251567 | 0.6531827 | -3.45 | 0.001*** |
| Borrowing history (Reference: Good past borrowing history) | 0.7061158 | 0.401546 | 1.76 | 0.079* |
| Supervision (Reference: Not properly supervised by the lending institution) | -1.755176 | 0.4358255 | -4.03 | 0.000*** |
| Expectation loan waiver scheme (Reference: Not expecting loan waiver scheme) | 3.139666 | 0.5706393 | 5.50 | 0.000*** |
| Diversification (Reference: Not diversify the credit getting from financial institution) | 2.318835 | .4836923 | 4.79 | 0.000*** |

*Significant level at 10%, **Significant level at 5%, ***Significant level at 1%

Log likelihood = -88.089
Number of observations = 300
LR Chi$^2$ (50) = 238.09
Prob > Chi Square = 0.0000
Pseudo R Square or McFadden's R Square = 0.5747

Higher annual expenditure on agriculture increases the fertility of land and produces a higher amount of agricultural product [10]. It enhanced farmers' income and positively influenced the repayment performance of the farmers (Table 5).

Higher amount of annual agricultural income increased the credibility of the farmers. Higher credibility implies higher repayment attitude [11]. Thus, higher amount of annual agricultural income has a positive and significant impact on

repayment behaviour (Table 5). The increasing interest rates of financial institutions and non-financial institutions always created burdens. Exorbitant interest rates pull farmers into a high interest-bearing debt trap and adversely impact the repayment attitudes of farmers [12], [18]. A positive and significant coefficient of both variables implies that the increasing interest rate of financial institutions and non-financial institutions has a negative impact on repayment performance (Table 5). In our research, distance between the farming place and marketing place measure the accessibility of market. Proper access to the market creates a competitive environment and offers multiple options for selling the produce. Farmers are hesitant to adopt high productivity practices for fear of incurring losses due to the low level of market access [13]. Thus, proper market accessibility has a competitive advantage for farmers and has a positive impact on repayment performance.

Increased distance between farming and marketing locations indicates decreased market accessibility. A positive and significant coefficient implies that increasing the distance from the farming place to the market place increases the probability of default (Table 5). Higher cropping intensity on land produces a higher amount of output and increases the farmers' income. A higher level of income enhances the credibility of farmers and has a positive impact on repayment behaviour [18]. A negative coefficient indicates that moderate and high-cropping-intensity landowners are significantly more capable of repaying their credit than lower-cropping-intensity

landowners (Table 5). Proper supervision and monitoring of institutional credit by officials can enhance the productive utilization of credit and increase productivity [10]. Thus, it has a positive and significant impact on the repayment performance of the farmers (Table 5). The loan waiver scheme is beneficial for farmers who are completely unable to repay institutional credit, but affluent farmers often willfully default to get the benefits of the scheme [10]. Thus, it can reduce the credit discipline among the farmers and significantly affected the repayment performance (Table 5). Diversification of credit for unproductive activities and family consumption purposes can restrict income creation and reduce the credibility of farmers [10]. It adversely impacts the repayment performance of the farmers. A positive and significant coefficient implies that diversification of credit has a negative impact on the repayment behaviour of farmers (Table 5). Willful defaulting and diversification of credit by the farmers can create moral hazard problem because the financial institutions are completely unaware of such activities [2], [10]. We can use the farmers' borrowing history as an indicator of their creditworthiness. A good borrowing history indicates higher creditworthiness and a positive reputation for the farmer. Financial institutions offer subsidies to farmers with a good borrowing history. A positive and significant coefficient of borrowing history implies that farmers who have a good borrowing history are less likely to default (Table 5). Therefore, we could use the farmers' borrowing history as a signal to screen the farmers and mitigate the problem of moral hazards [2], [10].

Table 6 Variance inflation factor of continuous explanatory variables of the logistic regression model

| Variables | VIF | $(\frac{1}{VIF})$ |
|---|---|---|
| Total savings | 1.23 | 0.813819 |
| Farming exposure | 1.22 | 0.821609 |
| Annual institutional interest rate | 1.06 | 0.944983 |
| Other source of income (Excluding agricultural income) | 1.05 | 0.952487 |
| Operating land holdings | 1.05 | 0.953286 |
| Working participation rate | 1.05 | 0.955573 |
| Net income sourcing from agriculture per hectare | 1.04 | 0.963917 |
| Annual interest rate of non-financial institution | 10.3 | 0.967873 |
| Expenditure for agriculture per hectare | 1.02 | 0.977027 |
| Distance | 1.01 | 0.985382 |
| Mean VIF | 1.08 | |

Table 7 Contingency coefficient table of categorical explanatory variables of the logistic regression model

| | Crop intensity | Literacy | Borrowing history | Supervision | Expectation about loan waiver scheme |
|---|---|---|---|---|---|
| Literacy | 0.0795 | | | | |
| Borrowing history | 0.1267 | 0.0886 | | | |
| Supervision | 0.0785 | 0.1357 | - 0.0298 | | |
| Expectation about loan waiver scheme | 0.1374 | 0.0891 | 0.0727 | - 0.0672 | |
| Diversification | 0.1356 | 0.0901 | 0.0926 | -0.0446 | -0.0745 |

## CONCLUSION

The study aimed to identify the factors that influence farmers' repayment behaviour. The research also identified the moral hazard problem in agricultural credit market in the study area. Moral hazard issues can hinder the effective recovery of institutional loans and heighten the pressure on non-performing assets. It also reduces the expansion of credit in the agricultural credit market and hinders economic development in the agricultural sector. If a farmer borrowing a loan for income generation is likely to generate future income, leading to long-

term financial improvement. However, if a loan is used for unproductive purposes, it can lead to a debt trap, causing the household to borrow more to repay the previous loan. This can negatively impact the household's economic status. Even if households are aware of this and avoid using investment loans for consumption purposes, government interventions like loan waivers could change their behaviour. The government's intervention and announcement of loan waiver policies may potentially lead to moral hazard problem. Farmers that could have avoided using their loans for consumption purposes may be more likely to default. The policy encourages farmers to use

their loans for non-productive purposes, hoping for future loan waiver announcements and reduced default penalties. The agricultural debt waiver and relief schemes have provided relief to farmers, but the schemes may endanger the possibility of making the farmers willful defaulters. Lending activities always involve some degree of risk. Proper assessment of risk management is the precondition of good lending activities. The asymmetry of farmers' information makes it difficult to make accurate assessments of their risk and creditworthiness. Proper utilization of credit is very limited, as most farmers in West Bengal are experiencing financial difficulties. Proper supervision and monitoring by the officials of the financial institutions can mitigate the problems of willful default and the diversification of credit for unproductive activities.

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