

## BEYOND THE PLOUGH: ANALYZING ECONOMIC PROSPERITY AND DEBT AMONG WEST BENGAL FARMERS (2002-03 TO 2018-19)

Dr. Ajad Singh<sup>1</sup>, Dr. Animesh<sup>2</sup>, Dr. Mukesh Kumar<sup>3</sup>

<sup>1</sup>Associate Professor, Department of Economics, Motilal Nehru College, University of Delhi, New Delhi., India.

<sup>2</sup>Associate Professor, Department of Economics, Hansraj College, University of Delhi, New Delhi., India.

<sup>3</sup>Associate Professor, Economics Department-Motilal Nehru College (Delhi University) New Delhi, India.

DOI: <https://www.doi.org/10.58257/IJPREMS36231>

### ABSTRACT

This study examines the economic conditions of agricultural households in West Bengal using data from the 59th and 77th rounds of the National Sample Survey Organisation (NSSO). It investigates shifts in landholding patterns, income trends, consumption expenditure, and indebtedness among farmers from 2002-03 to 2018-19.

Findings reveal a significant rise in marginal farmers and a decrease in average landholding size, indicating increased land fragmentation. While overall household earnings grew, driven by non-agricultural income, agricultural income declined, highlighting challenges within the agricultural sector. Consumption expenditure surged, outpacing income growth, suggesting potential financial stress. The debt burden on farmers escalated significantly, with small and marginal farmers experiencing the highest increases.

These trends underscore the necessity for targeted policies to support agricultural productivity, enhance credit accessibility, and promote sustainable agricultural practices to ensure the long-term viability of farming in West Bengal.

**Keywords:** Farmer, West Bengal, Indebtedness, NSSO, Marginal Farmer, Agricultural Income

### 1. INTRODUCTION

West Bengal, located in the eastern region of India, presents a diverse geographical and economic landscape. Spanning the fertile Gangetic plains to the tea-growing hilly terrains of Darjeeling, the state's varied topography fosters a rich mosaic of agricultural and economic activities.

Agriculture, traditionally the backbone of West Bengal's economy, plays a crucial role in sustaining both livelihoods and the state's economic stability. In recent decades, the state has experienced significant growth in its industrial and service sectors, yet agriculture remains the largest sector, deeply intertwined with the socio-economic fabric of rural communities (Sarkar, 2007; Ray & Goswami, 2015).

West Bengal is one of the leading producers of rice, jute, and tea in India, contributing substantially to national agricultural output. Alongside crop production, livestock farming—particularly milk and poultry—forms a vital component of the rural economy, offering supplementary income and employment opportunities for agricultural households (Mukhopadhyay et al., 2018).

According to the Census of India (2011), over 70% of the state's population resides in rural areas, where agriculture is the primary source of income. This high dependence on agriculture underscores the importance of the sector for rural employment, income generation, and social well-being (Bhattacharya & Ghosh, 2014).

Despite its prominence, the agricultural sector in West Bengal faces several challenges, including income volatility, rising production costs, and increasing indebtedness among farmers. These issues have been exacerbated by periodic natural disasters, fluctuations in commodity prices, and limited access to institutional credit (Chakraborty & Basu, 2019). Over the years, various government policies, including those related to rural credit, price support, and agricultural subsidies, have been implemented to address these issues.

However, the impact of these measures on income stability, consumption patterns, and the overall economic prosperity of farmers remains a critical area of inquiry (Mitra, 2017).

Rural-urban dynamics in West Bengal reflect a complex interplay between traditional agricultural practices and modern economic transformations. While rural areas are still predominantly engaged in agriculture, urban centers such as Kolkata and Howrah have seen rapid industrialization and growth in the service sector, contributing to increasing economic disparities between urban and rural regions (Roy, 2013).

This dual economy highlights the need for a nuanced understanding of the economic conditions of agricultural households to comprehend the broader economic and social trends within the state.

## 2. LITERATURE REVIEW

The literature on rural indebtedness, landholding patterns, credit access, and income dynamics provides critical insights into the complex socio-economic challenges faced by farmers across India. The following studies align with the objectives of this research, particularly concerning West Bengal, and offer a broader understanding of similar trends across other regions.

### Shifts in Landholding Patterns and Credit Access

Singh and Atri (2024) examined the economic transitions experienced by farmers in Karnataka, focusing on data from 2002-03 to 2018-19. Their study highlights a significant reduction in landholding sizes, especially among marginal and small farmers. Despite the reduction in farm sizes, credit access increased during the same period, allowing farmers to meet both agricultural and non-agricultural needs. However, this increased credit access has also led to rising levels of indebtedness. The authors call for sustainable land management and improved financial inclusion to stabilize the economic conditions of Karnataka's farmers, reflecting a similar need in West Bengal for balancing landholding sizes and credit.

Kaur (2020) conducted a detailed study on rural indebtedness in Punjab, analyzing the severe levels of debt among farmers and rural laborers. Kaur's findings show that smaller landholders, who comprise a significant proportion of West Bengal's agricultural sector, often rely on informal credit sources, contributing to higher debt burdens. The study recommends strengthening institutional credit delivery to mitigate rural indebtedness, a critical aspect for West Bengal farmers facing similar challenges with land fragmentation and informal credit.

### Trends in Agricultural Income and Consumption Expenditure

Ray and Kumar (2019) specifically focused on West Bengal and the dynamics of indebtedness in Nadia district. The study emphasized how high-interest rates and the diversion of loans to non-productive purposes have contributed to growing indebtedness among farm households. The researchers observed that despite a rise in agricultural incomes, consumption expenditure, especially on non-essential items, remained high, which exacerbated the debt burden. This reflects a key concern in West Bengal's rural economy—income growth that does not correspond to reduced debt levels due to increasing consumption expenses.

Bagchi and Bera (2010) provide further insights into rural credit systems through their case study of a village in Jalpaiguri district, West Bengal. They highlighted the inadequacy of savings among rural households to meet farming expenses, which forces them to rely heavily on credit, often leading to indebtedness. Their findings suggest that without sufficient institutional credit mechanisms, rural farmers are pushed towards informal borrowing, which affects their overall income and consumption patterns. This aligns with the objective of analyzing income and expenditure trends among West Bengal farmers.

Singh and Singh (2024) offer a comparative analysis of income and consumption trends among farmers in Bihar, using data from the same period as West Bengal (2002-03 to 2018-19). They noted positive income growth but emphasized that disparities between landholding sizes resulted in varying levels of indebtedness and consumption patterns. Their findings call for targeted policy interventions to ensure equitable income distribution across different farming categories, an important aspect for West Bengal policymakers.

### Indebtedness Across Landholding Sizes

The study by Kaur (2020) provides a broad understanding of how indebtedness varies across different landholding sizes, focusing on marginal and small farmers. Kaur's research points out that smaller landholdings tend to result in greater indebtedness due to limited income opportunities and the reliance on informal credit sources. This scenario is particularly relevant in West Bengal, where the majority of landholdings are small, and farmers face similar financial pressures.

Singh and Atri (2024) demonstrated how marginal farmers in Karnataka experienced increased indebtedness despite improved credit access. This phenomenon, caused by a combination of shrinking land sizes and rising agricultural input costs, is reflective of the situation in West Bengal. Similar patterns of land fragmentation, along with increasing debt burdens among smallholders, have been reported, underscoring the need for more accessible and affordable credit mechanisms.

In another relevant study, Ray and Kumar (2019) specifically addressed the issue of indebtedness in West Bengal's Nadia district, examining how farm size impacts debt levels. They found that smaller landholders were more likely to fall into debt due to limited income sources and the diversion of loans towards consumption rather than productive investments. The study reinforces the importance of understanding indebtedness patterns across different landholding sizes in West Bengal.

Bagchi and Bera (2010) further explored the role of credit in rural West Bengal, emphasizing the need for policy reforms to ensure that farmers, particularly those with smaller landholdings, have access to timely and affordable credit. They concluded that without adequate institutional support, smallholders would continue to face rising debt burdens, leading to economic instability.

Collectively, these studies highlight the complex interplay between landholding size, income growth, consumption expenditure, and credit access in rural India. By focusing on these aspects, this research aims to provide a nuanced understanding of the economic well-being of farmers in West Bengal, offering valuable insights for policymakers to design more effective interventions to alleviate rural indebtedness and promote sustainable agricultural practices.

### Objective of The study

1. Examine Shifts in Landholding Patterns and Credit Access for Farmers in West Bengal from 2002-03 to 2018-19.
2. Analyze the Trends in Annual Agricultural and Gross Income for Farmers and their Consumption Expenditure in West Bengal.
3. Investigate Indebtedness Across Different Landholding Sizes Among Farmers in West Bengal.

## 3. RESEARCH METHODOLOGY OF THE STUDY

### Research Methodology

This study on the economic prosperity and debt among West Bengal farmers utilizes data from two Situation Assessment Surveys (SAS): the 2003 survey from the 59th round and the 2019 survey from the 77th round. The SAS 2003, conducted by the National Sample Survey Office (NSSO), aimed to evaluate the standard of living of farming households by gathering comprehensive information on income, expenditure, assets, indebtedness, and farming practices. In West Bengal, the 2003 survey covered 3,958 farmer families, totaling 21,556 individuals, drawn from a stratified multi-stage sampling design encompassing 6,638 villages across rural India.

The SAS 2019, part of the 77th round, merged the Land and Livestock Holdings Survey with the Situation Assessment Survey. This iteration focused on various aspects of agricultural households, including land and livestock holdings, income, and technological awareness. For West Bengal, this survey included 3,297 farmer families, representing 15,369 individuals, with data collection spanning two visits over the agricultural year from July 2018 to June 2019.

Comparing the two rounds presents challenges due to changes in survey definitions. The 2003 survey defined a "farmer household" as one with land and agricultural activity in the past year, while the 2018-19 survey defined an "agricultural household" based on substantial income from agricultural activities and self-employment in agriculture. Despite these differences, macro-level comparisons are feasible and valuable for analyzing trends over time.

To facilitate a consistent comparison of income between 2002-03 and 2018-19, nominal values were adjusted for inflation using the 2016-17 Consumer Price Index (CPI) as the base year. CPI values from the Reserve Bank of India were converted from the 1986-87 base year to the 2016-17 base year. For instance, CPI values were recalculated to reflect changes in purchasing power, providing a clearer picture of economic shifts over the study period. This methodological approach ensures that the analysis of changes in income, debt, and other economic indicators is accurate and meaningful.

## 4. ANALYSIS OF THE STUDY

### Landholding Patterns and Credit Accessibility

In this analysis, we examine the changes in landholding patterns and credit accessibility among farmers in West Bengal between the years 2002-03 and 2018-19, as presented in Table 1. This analysis aims to understand how the proportions of different landholding categories have shifted over time, observe trends in average landholding sizes, and assess changes in the percentage of loanee families across various landholding categories.

**Table 1:** West Bengal Farmers' Landholdings and Loan Accessibility Trends (2002-03 and 2018-19)

Year	Farmer Category	Farmer Households	%age Family	Avg Land (Acre)	%age Loanee
2002-03	Marginal(< 1 Acre)	4,157,705	60.1	0.4	54.3
	Small (1-1.99 Acre)	1,580,954	22.8	1.4	44.6
	Medium (2-4.99 Acre)	975,938	14.1	3.0	46.8
	Large (5 Acre & more)	207,926	3.0	7.5	45.6
	Overall	6,922,523	100.0	1.2	50.8
2018-19	Marginal(< 1 Acre)	5,243,770	78.4	0.4	50.4

Year	Farmer Category	Farmer Households	%age Family	Avg Land (Acre)	%age Loanee
	Small (1-1.99 Acre)	979,890	14.6	1.4	51.9
	Medium (2-4.99 Acre)	430,080	6.4	2.8	52.4
	Large (5 Acre & more)	35,245	0.5	6.8	69.0
	Overall	6,688,985	100.0	0.7	50.8
The results are estimated by the author from SAS 2002-03 and SAS 2018-19.					

The landholding patterns in West Bengal have undergone significant changes over the period from 2002-03 to 2018-19. In 2002-03, marginal farmers, those with less than 1 acre of land, constituted 60.1% of all farmer households. By 2018-19, this proportion had increased dramatically to 78.4%. This substantial rise in marginal farmers indicates a trend towards smaller landholdings over time. Conversely, the proportion of small farmers (1-1.99 acres) decreased from 22.8% to 14.6%, and medium farmers (2-4.99 acres) saw a reduction from 14.1% to 6.4%. The category of large farmers (5 acres and more) also diminished significantly, from 3.0% to a mere 0.5%.

The average landholding size among agricultural families has shown a declining trend. In 2002-03, the overall average landholding was 1.2 acres. By 2018-19, this average had decreased to 0.7 acres. This reduction reflects the increasing fragmentation of landholdings, likely driven by population growth and inheritance practices, which divide land among family members over generations. Among specific categories, marginal farmers maintained an average of 0.4 acres, while the average landholding for small farmers remained steady at 1.4 acres. Medium farmers saw a slight decrease in average land size from 3.0 to 2.8 acres, and large farmers experienced a reduction from 7.5 to 6.8 acres.

The accessibility of credit for farmers has also evolved over this period. In 2002-03, 54.3% of marginal farmers had access to loans. By 2018-19, this percentage had slightly decreased to 50.4%. Interestingly, the percentage of loanee families among small farmers increased from 44.6% to 51.9%, and for medium farmers, it rose from 46.8% to 52.4%. The most notable change occurred among large farmers, with the percentage of loanee families increasing from 45.6% to 69.0%.

The shift towards a higher proportion of marginal farmers and the decrease in average landholding size can be attributed to several socio-economic factors. The fragmentation of land due to inheritance laws, urbanization, and the sale of land for non-agricultural purposes has likely contributed to smaller landholdings. The increase in the percentage of loanee families among small, medium, and large farmers indicates a growing reliance on credit, possibly due to rising input costs, the need for modernization, and fluctuating agricultural incomes. The significant increase in credit access for large farmers suggests that while their numbers have decreased, their operational needs and the scale of their agricultural activities might have increased, necessitating greater financial support.

In conclusion, the analysis of landholding patterns and credit access in West Bengal reveals critical trends of land fragmentation and an evolving credit landscape, reflecting broader socio-economic changes in the state's agricultural sector. These trends underscore the need for targeted policies to support small and marginal farmers, enhance credit accessibility, and promote sustainable agricultural practices to ensure the long-term viability of farming in West Bengal.

### Farmer's Earning and Consumption Expenditure Pattern in West Bengal

In this analysis, we examine the trends in farmer's income and consumption patterns in West Bengal, based on data from the Situation Assessment Surveys of 2002-03 and 2018-19. The analysis will explore annual earnings from agricultural activities, overall household earnings, and annual consumption expenditures. The goal is to understand how income and consumption expenditure have shifted over time, particularly considering the distinction between agricultural income and gross income, which includes non-agricultural earnings.

#### Farmer Agricultural and Gross Earning Trends in West Bengal

**Table 2:** Farmer's Annual Earning from Agricultural Activites in West Bengal

Farmer_Category	2002-03	2018-19	Relative % Change
Marginal(< 1 Acre)	11,962	14,294	19.5
Small (1-1.99 Acre)	28,478	27,875	-2.1
Medium (2-4.99 Acre)	53,098	77,053	45.1
Large (5 Acre & more)	110,355	82,282	-25.4
Overall	24,489	20,677	-15.6

Farmer_Category	2002-03	2018-19	Relative % Change
Data are in rupees (Rs.) at constant prices of 2016-17. Estimated from SAS 2002-03 and SAS 2018-19.			

The data in Table 2 show the annual earnings of farmers from agricultural activities, adjusted to constant prices of 2016-17. Marginal farmers, with less than 1 acre of land, saw a modest increase in agricultural income, rising from Rs. 11,962 in 2002-03 to Rs. 14,294 in 2018-19, representing a 19.5% relative change. Small farmers (1-1.99 acres) experienced a slight decline in agricultural income, with earnings dropping from Rs. 28,478 to Rs. 27,875, a 2.1% decrease. Medium farmers (2-4.99 acres) enjoyed a significant increase, with their income growing from Rs. 53,098 to Rs. 77,053, reflecting a 45.1% rise. However, large farmers (5 acres and more) faced a substantial decrease in income, with earnings falling from Rs. 110,355 to Rs. 82,282, a decline of 25.4%.

Overall, there was a 15.6% decrease in agricultural income across all farmer categories, from Rs. 24,489 in 2002-03 to Rs. 20,677 in 2018-19. This decline in overall agricultural income suggests challenges in the agricultural sector, possibly due to factors like market volatility, changing climatic conditions, and increased input costs. Marginal and medium farmers seem to have fared better relative to large farmers, who may have faced greater difficulties in sustaining their agricultural productivity.

Table 3:Farmer Household Annual Earning Level in West Bengal

Farmer_Category	2002-03	2018-19	Relative % Change
Marginal(< 1 Acre)	54,216	70,829	30.6
Small (1-1.99 Acre)	63,911	83,841	31.2
Medium (2-4.99 Acre)	92,473	146,948	58.9
Large (5 Acre & more)	157,886	154,297	-2.3
Overall	64,938	78,069	20.2
Data are in rupees (Rs.) at constant prices of 2016-17. Estimated from SAS 2002-03 and SAS 2018-19.			

Table 3 provides insight into the overall annual earnings of farmer households, including income from non-agricultural activities. Marginal farmers' earnings increased from Rs. 54,216 in 2002-03 to Rs. 70,829 in 2018-19, a relative change of 30.6%. Small farmers saw their income rise from Rs. 63,911 to Rs. 83,841, an increase of 31.2%. Medium farmers experienced a substantial growth in earnings, from Rs. 92,473 to Rs. 146,948, a 58.9% increase. Conversely, large farmers' earnings slightly decreased from Rs. 157,886 to Rs. 154,297, a 2.3% decline.

Overall, the annual earnings for all farmer households rose from Rs. 64,938 in 2002-03 to Rs. 78,069 in 2018-19, marking a 20.2% increase. This overall increase in earnings indicates that non-agricultural activities have become an important income source for farmer households, helping to offset the decline in agricultural income. The more significant increase in earnings for medium farmers suggests their greater ability to diversify income sources, while the slight decrease for large farmers could imply higher dependence on agricultural income and greater vulnerability to agricultural challenges.

#### Annual Consumption Expenditure Trends in West Bengal

Table 4:Farmer Household Annual Consumption Expenditure Trend West Bengal

Farmer_Category	2002-03	2018-19	Relative % Change
Marginal(< 1 Acre)	35,926	72,016	100.5
Small (1-1.99 Acre)	34,054	88,329	159.4
Medium (2-4.99 Acre)	38,702	99,188	156.3
Large (5 Acre & more)	52,047	137,368	163.9
Overall	36,374	76,497	110.3
The consumption expenditure are in rupees (Rs.) at constant prices of 2016-17.It is only out of pocket expenditure during the year. It is Estimated from SAS 2002-03 and SAS 2018-19.			

Table 4 presents the trends in annual consumption expenditure for farmer households, adjusted to constant prices of 2016-17. Marginal farmers' expenditure increased significantly from Rs. 35,926 in 2002-03 to Rs. 72,016 in 2018-19, representing a 100.5% change. Small farmers experienced an even larger increase, with their expenditure rising from Rs. 34,054 to Rs. 88,329, a 159.4% growth. Medium farmers saw their expenditure grow from Rs. 38,702 to Rs.

99,188, a 156.3% increase. Large farmers' expenditure rose from Rs. 52,047 to Rs. 137,368, marking a 163.9% increase.

Overall, the annual consumption expenditure for all farmer households increased from Rs. 36,374 in 2002-03 to Rs. 76,497 in 2018-19, reflecting a 110.3% rise. This significant growth in consumption expenditure across all categories suggests an increase in the cost of living and a possible improvement in living standards. However, it also indicates that consumption growth has outpaced income growth, leading to potential financial stress, especially for marginal and small farmers.

The trends observed in these tables reveal several socio-economic dynamics affecting farmers in West Bengal. The decline in agricultural income, particularly among small and large farmers, highlights challenges within the agricultural sector, such as limited market access, climate variability, and rising input costs. Marginal and medium farmers have shown resilience, possibly through better adaptation to changing conditions and diversification into non-agricultural activities.

The increase in overall household earnings, despite the decline in agricultural income, underscores the growing importance of non-agricultural income sources. Many farming households have members engaged in wage labor, private jobs, or non-farm businesses, which help stabilize household income. This diversification is crucial for mitigating the risks associated with agriculture and improving overall economic well-being.

The significant rise in consumption expenditure across all categories points to an improved standard of living but also raises concerns about financial sustainability. The substantial increase in out-of-pocket expenditure on non-durable goods suggests that farmers are spending more on essential needs, possibly driven by higher prices and better access to goods and services. However, this trend also indicates that income growth has not kept pace with consumption growth, potentially leading to increased indebtedness and financial strain.

In conclusion, the analysis of income and consumption patterns among West Bengal farmers between 2002-03 and 2018-19 reveals a complex interplay of economic challenges and adaptations. The declining agricultural income, coupled with rising overall household earnings and consumption expenditure, highlights the need for policies that support agricultural productivity, promote income diversification, and address the rising cost of living. Ensuring sustainable economic development for farmer households requires a multifaceted approach that considers both agricultural and non-agricultural factors.

### Trends of Indebtness and its burden on Farmer in West Bengal

Loans are crucial for farmer families, providing the necessary capital to invest in seeds, fertilizers, equipment, and other essentials for agricultural activities. Access to affordable credit is vital for all categories of farmers to maintain and enhance productivity, manage risks, and improve livelihoods. This analysis delves into the trends in farmers' indebtedness, annual interest burden, and changes in interest rate patterns in West Bengal, based on data from 2002-03 and 2018-19.

Farmer Indebtness Trends in West Bengal

**Table 5:** Debt Burden on Indebted Farmer in West Bengal

Farmer_Category	2002-03	2018-19	Relative % Change
Marginal(< 1 Acre)	20,700	39,773	92.1
Small (1-1.99 Acre)	29,739	81,089	172.7
Medium (2-4.99 Acre)	53,758	89,062	65.7
Large (5 Acre & more)	69,570	135,745	95.1
Overall	28,127	49,901	77.4

Data are in rupees (Rs.) at constant prices of 2016-17. Estimated from SAS 2002-03 and SAS 2018-19.

The data in Table 5 reveals significant increases in the debt burden across all categories of farmers. Marginal farmers, those with less than 1 acre of land, saw their average debt nearly double, from Rs. 20,700 in 2002-03 to Rs. 39,773 in 2018-19, representing a 92.1% relative change. Small farmers (1-1.99 acres) experienced an even larger increase, with their debt burden rising from Rs. 29,739 to Rs. 81,089, a 172.7% growth. Medium farmers (2-4.99 acres) saw their debt increase from Rs. 53,758 to Rs. 89,062, a 65.7% rise. Large farmers (5 acres and more) experienced a 95.1% increase in debt, from Rs. 69,570 to Rs. 135,745.

Overall, the average debt burden for all farmer categories increased by 77.4%, from Rs. 28,127 to Rs. 49,901. The substantial rise in debt indicates that farmers have increasingly relied on credit to meet their financial needs, possibly due to rising costs of inputs and other agricultural expenses. The higher debt levels among small and marginal farmers

could be attributed to their limited resources and greater vulnerability to financial stress, necessitating higher borrowings to sustain their farming operations.

Farmer Annual cost of Loan Trends in West Bengal

Table 6: Annual Interest Paid by Farmer of West Bengal

Farmer_Category	2002-03	2018-19	Relative % Change
Marginal(< 1 Acre)	3,874	5,655	46.0
Small (1-1.99 Acre)	5,847	8,679	48.4
Medium (2-4.99 Acre)	8,813	8,268	-6.2
Large (5 Acre & more)	11,421	10,245	-10.3
Overall	5,115	6,313	23.4
Data are in rupees (Rs.) at constant prices of 2016-17. Estimated from SAS 2002-03 and SAS 2018-19.			

The Table 6 highlights the annual interest paid by farmers, adjusted to constant prices of 2016-17. Marginal farmers saw a 46.0% increase in annual interest payments, from Rs. 3,874 in 2002-03 to Rs. 5,655 in 2018-19. Small farmers experienced a 48.4% rise, with interest payments increasing from Rs. 5,847 to Rs. 8,679. In contrast, medium farmers saw a decrease of 6.2%, with their interest payments falling from Rs. 8,813 to Rs. 8,268. Large farmers also experienced a decline of 10.3%, with interest payments reducing from Rs. 11,421 to Rs. 10,245.

Overall, the average annual interest paid by all farmer categories increased by 23.4%, from Rs. 5,115 to Rs. 6,313. The reduction in interest payments for medium and large farmers, despite the increase in their debt levels, suggests that these categories may have accessed cheaper credit sources or benefited from more favorable loan terms. On the other hand, the increase in interest payments for marginal and small farmers indicates that they may have faced higher interest rates or taken on more high-interest loans to meet their financial needs.

Interest Rate Trends in West Bengal

Table 7: Trends in The Interest Rate on Loan for Farmer in West Bengal

Farmer_Category	2002-03	2018-19	Relative % Change
Marginal(< 1 Acre)	18.7	14.2	-24.1
Small (1-1.99 Acre)	19.7	10.7	-45.7
Medium (2-4.99 Acre)	16.4	9.3	-43.3
Large (5 Acre & more)	16.4	7.5	-54.3
Overall	18.2	12.7	-30.2
The data is estimated by the author from SAS 2002-03 and SAS 2018-19.			

The data of Table 7 presents the trends in the interest rates on loans for farmers. Marginal farmers experienced a significant reduction in interest rates, from 18.7% in 2002-03 to 14.2% in 2018-19, a decrease of 24.1%. Small farmers saw an even larger decline, with interest rates dropping from 19.7% to 10.7%, a 45.7% reduction. Medium farmers' interest rates fell from 16.4% to 9.3%, a 43.3% decrease. Large farmers enjoyed the most substantial reduction, with interest rates decreasing from 16.4% to 7.5%, a 54.3% drop.

Overall, the average interest rate for all farmer categories fell by 30.2%, from 18.2% to 12.7%. The significant reduction in interest rates across all categories suggests that farmers have benefited from improved access to cheaper credit sources, possibly due to government initiatives and policies aimed at enhancing credit availability and affordability for farmers. The more substantial decrease in interest rates for larger farmers could indicate their better creditworthiness and ability to negotiate favorable loan terms.

The trends in farmers' indebtedness, interest burden, and interest rates in West Bengal reveal a complex financial landscape for agricultural households. The substantial increase in debt levels across all categories indicates a growing reliance on credit to sustain farming operations. This trend is particularly pronounced among small and marginal farmers, who have limited resources and greater vulnerability to financial stress.

Despite the increase in debt levels, the reduction in interest rates and mixed changes in annual interest payments suggest that farmers have benefited from more favorable loan terms over time. The decline in interest rates reflects improved access to cheaper credit sources, which can help reduce the financial burden on farmers and support their agricultural activities.

However, the rising debt levels and the increase in interest payments for marginal and small farmers highlight ongoing financial challenges. These farmers may face higher borrowing costs and greater difficulties in accessing affordable credit, which can exacerbate their financial stress and limit their ability to invest in productivity-enhancing inputs and technologies.

Overall, the analysis underscores the need for targeted policies and interventions to enhance credit accessibility and affordability for all categories of farmers, particularly small and marginal ones. Ensuring that farmers have access to cheap credit can help reduce their financial burden, support their agricultural activities, and improve their overall economic well-being. Additionally, efforts to promote financial literacy and credit management among farmers can further enhance their ability to effectively utilize credit and sustain their livelihoods.

## 5. FINDINGS OF THE STUDY

This study reveals significant shifts in the agricultural landscape of West Bengal. The data shows a marked increase in the proportion of marginal farmers, rising from 60.1% in 2002-03 to 78.4% in 2018-19, indicating a trend towards smaller landholdings. Concurrently, the average landholding size decreased from 1.2 acres to 0.7 acres, highlighting ongoing land fragmentation.

Financially, there were contrasting trends in income and consumption. While agricultural income overall declined by 15.6%, medium farmers experienced a notable increase in earnings, whereas large farmers faced a substantial decrease. Household earnings, however, rose by 20.2%, largely due to diversification into non-agricultural activities. Consumption expenditure surged significantly across all categories, with an overall increase of 110.3%, suggesting an improved standard of living but also raising concerns about financial sustainability.

Indebtedness among farmers also escalated, with the average debt burden increasing by 77.4%. Small farmers witnessed the most significant rise in debt, reflecting heightened reliance on credit amidst rising agricultural costs. These findings underscore the need for targeted policies to enhance agricultural productivity, support income diversification, and manage rising living costs for sustainable economic development in West Bengal's agricultural sector.

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