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"OWNERSHIP-WISE FRP PAYMENT PERFORMANCE OF SUGAR FACTORIES IN MAHARASHTRA DURING THE 2024-25 SEASON"

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ABSTRACT

The study examines the actual status of Fair and Remunerative Price (FRP) payments and arrears to sugarcane growers by sugar factories in Maharashtra during the 2024-25 crushing season. Using factory-wise data from the official FRP report covering all 184 operating factories, a dataset was constructed to compute total FRP payable, actual payments, arrears and the percentage of FRP paid, and to compare these indicators across ownership types, namely co-operative and private factories. The results show that co-operative factories have an average FRP payable of 54.43 crore rupees per unit, with 43.04 crore rupees actually paid and 11.41 crore rupees outstanding, whereas private factories report a slightly higher average FRP payable of 55.31 crore rupees but a much lower average payment of 33.85 crore rupees and higher arrears of 16.62 crore rupees; consequently, the mean FRP payment ratio stands at 60.93 per cent in the co-operative sector against 50.20 per cent in the private sector. Independent sample t-tests indicate that the difference in mean FRP arrears between ownership groups is not statistically significant at the 5 per cent level ($p = 0.0887$), while the difference in the mean percentage of FRP paid is statistically significant at the 10 per cent level ($p = 0.0681$), suggesting that co-operative sugar factories exhibit relatively better FRP payment performance than private factories in Maharashtra.

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INTRODUCTION:

The sugarcane economy plays a central role in rural livelihoods in Maharashtra, where sugar factories constitute a major source of income and employment for farming households and agro‑based workers. [1,2] To protect cane growers from price volatility and bargaining disadvantages vis‑à‑vis mills, the Government of India fixes a Fair and Remunerative Price (FRP) for sugarcane under the Sugarcane (Control) Order, 1966, which legally obliges sugar factories to pay at least the notified price within 14 days of cane delivery. [3,4] Despite this regulatory framework, delays and short‑payments of FRP have been reported repeatedly in Maharashtra, leading to substantial arrears and periodic farmer agitations over pending dues. [1,5] During the 2024–25 crushing season, official FRP reports of the Sugar Commissionerate show that a sizeable share of factories have not cleared their cane price liabilities on time, raising concerns about the effectiveness of FRP enforcement and the financial vulnerability of sugarcane growers. [1,6] At the same time, earlier empirical work suggests that ownership structure may influence the economic behavior of sugar mills, with cooperative and private factories differing in their governance arrangements, objectives and incentives for timely payment to farmers, which motivates a systematic ownership‑wise assessment of FRP payment performance in Maharashtra. [1,7]

OBJECTIVES:

1. To examine the overall status of FRP payable, FRP actually paid and cane price arrears of sugar factories in Maharashtra during the 2024‑25 season.
2. To analyze ownership‑wise differences in FRP payment performance between co‑operative and private sugar factories, in terms of average FRP payable, paid, arrears and percentage of FRP paid.
3. To test the statistical significance of ownership‑wise differences in FRP arrears and percentage of FRP paid using an independent samples t‑test.

RESEARCH METHODOLOGY:

The study uses a quantitative approach to analyze ownership-wise performance of Fair and Remunerative Price (FRP) in Maharashtra during 2024-2025 crushing season. For the study, secondary sources such as reports of sugar commissioner's office, Govt. of Maharashtra and factory-wise FRP payments have been considered. Sugar factories were classified according to ownership type- cooperative and private institutions. Indicators like FRP payable, FRP disbursed, arrears pending etc. were used. Descriptive statistical analysis method has been used to assess and compare the overall FRP. An independent samples t-test was used for assessing whether ownership-based variations in FRP payment were statistically significant. The study considers results significant at the 5 percent level. If it is at 10 percent level it reported as marginal.

HYPOTHESIS:

Hypothesis – FRP arrears (₹/ton)

H_0: There is no significant difference in the mean FRP arrears per ton between cooperative and private sugar factories.

H_1: There is a significant difference in the mean FRP arrears per ton between cooperative and private sugar factories.

Hypothesis – Percentage of FRP paid (%)

H_0: There is no significant difference in the mean percentage of FRP paid between cooperative and private sugar factories.

H_1: There is a significant difference in the mean percentage of FRP paid between cooperative and private sugar factories.

RESULT AND DISCUSSION:

Maharashtra level FRP payment and arrears for the 2024‑25 season indicate that 184 sugar factories crushed about 248.08 lakh metric tonnes of sugarcane up to 30 November 2025. The gross FRP payable, including harvesting and transport charges, amounted to 9,650 crore rupees, of which 7,026 crore rupees had been paid, resulting in arrears of 2,624 crore rupees and a payment ratio of 72.81 per cent on this basis. When adjustments are made to exclude harvesting and transport charges, the FRP payable stands at 7,227 crore rupees against actual payments of 4,603 crore rupees, which implies a lower payment ratio of 63.69 per cent and actual cane price arrears of 2,719 crore rupees, with 71.82 per cent of the net FRP reported as paid.

Table No 1:

FRP payment and Arrears in Maharashtra, 2024-25 (as on 15-12-2025)

Sr.No	Particulars	Value
1	Number of factories under crushing	184
2	Total cane crushed (Lakh MT,upto 30/11/2025)	248.08
3a	Total gross FRP payable including harvesting &transport (crore rupees)	9650
3b	Total gross FRP payable excluding harvesting & transport (crore rupees)	7227
4a	Total FRP paid including harvesting & transport (crore rupees)	7026
4b	Total FRP paid excluding harvesting & transport (crore rupees)	4603
4c	Percentage of FRP paid including harvesting & transport (%)	72.81
4d	Percentage of FRP paid excluding harvesting &transport (%)	63.69
5a	FRP arrears including harvesting &transport (crore rupees)	2624
5b	Actual FRP paid including harvesting &transport (crore rupees)	6931
5c	Actual FRP arrears (crore rupees)	2719
5d	Percentage of actual FRP paid (%)	71.82
6a	Factories which have paid 100% FRP	52
6b	Factories paid 80.00 -99.99% FRP	22
6c	Factories paid 60.00 – 79.99% FRP	8
6d	Factories paid 00.00 – 59.99 FRP	102
6e	Total factories having cane price dues(6b+6c+6d)	132

Source: Commissionerate of sugar, Maharashtra –FRP Report 15.12.2025.

Table No 2:

Classification of sugar factories by FRP Payment Bands, Maharashtra 2024-25

Payment band (FRP paid %)	Number of factories	Percentage of factories
100% FRP paid	52	28.3
80.00-99.99% FRP paid	22	12.0
60.00-79.99% FRP paid	8	4.3
00.00-59.99% FRP paid	102	55.4
Total	184	100.0

Source: commissionerate of sugar, Maharashtra –FRP Report 15.12.2025.

The data strongly indicates that sugar factories are underpaying FRP with less than one-third fully compliant. Out of 184 totals, only) 28.3 per cent factories (52) had cleared 100 percent of the FRP dues, while 12.0 per cent factories (22) have paid 80.00 to 99.99 per cent and just 8 factories (4.3 per cent) paid between 60.00 and 79.99 per cent of their FRP obligations. A large majority of 102 factories, accounting for 55.4 per cent of the total, remained in the lowest band with less than 60 per cent of FRP paid, indicating that cane price arrears are concentrated in more than half of the operating sugar factories in Maharashtra.

Table No 3:

FRP Payment Performance by Ownership Type, Maharashtra 2024-25

Indicator (crore rupees, %)	Co-operative mills	Private mills	Performance Difference
Number of factories	85	99	-14(fewer coop)
Avg. FRP payable (incl. HT)	54.43	55.31	-0.88(similar liability)
Avg. FRP paid (incl. HT)	43.04	33.85	+9.19(Coops better)
Avg. FRP arrears (incl.HT)	11.41	16.62	-5.21(Coops lower)
Avg. % FRP	60.93	50.20	+10.73%(Coops superior)

Source: *commissionerate of sugar, Maharashtra –FRP Report 15.12.2025*

(factory-wise FRP payment and arrears data season 2024-25)

Table 3 shows that cooperative and private sugar mills in Maharashtra have similar FRP liabilities, but their payment patterns are different. In case of paid FRP, the 'Performance‑ difference' column reveals that cooperative mills are better than private mills and in percentage it was 9.19. The average FRP arrears of cooperative mills are lower than those of private mills. The average FRP compliance rate of cooperative mills (60.93 %) also exceeds that of private mills (50.20 %) by 10.73 percent. The data indicates that cooperative mills are relatively stronger in compliance with FRP norms and better protection of cane growers' payment.

Table 4:

Ownership-wise FRP Indicators, Maharashtra, 2024-25

Ownership	FRP payable (₹ crore)	FRP paid (₹ crore)	FRP arrears (₹ crore)	% of FRP paid
Co-operative mills	54.43	43.04	11.41	60.93
Private mills	55.31	33.85	16.62	50.20

Source: *commissionerate of sugar, Maharashtra –FRP Report 15.12.2025*

(factory-wise FRP payment and arrears data season 2024-25)

FRP payment indicators show that cooperative sugar factories perform relatively better than private factories in Maharashtra. Cooperative mills had FRP dues of Rs. 54.43 crore, of which they paid Rs. 43.04 crore, and leaving arrears amount is Rs. 11.41 crore. Private mills had slightly higher payable at Rs. 55.31, but paid only Rs. 33.85, leaving arrears of Rs. 16.62 crore. In Percentage, cooperative achieve 60.93 percent compliance, while private mills managed only 50.20 percent. This shows that cooperatives are more effective in meeting FRP payment commitment than private mills.

Table No 5:

Results of t‑test for ownership-wise FRP payment performance, 2024‑25

Variable	Mean- Co-operative mills	Mean- Private mills	p‑value	Decision at 5% level
FRP arrears including H&T (crore rupees)	11.41	16.62	0.0887	Not statistically significant at the 5 per cent level; marginally significant at the 10 per cent level.
% of FRP paid (including H&T)	60.93	50.20	0.0681	Not statistically significant at the 5 per cent level; marginally significant at the 10 per cent level.

Source: *commissionerate of sugar, Maharashtra –FRP Report 15.12.2025*

(factory-wise FRP payment and arrears data season 2024-25)

Table No 6:

Results of t‑test for ownership-wise FRP payments performance, 2024‑25

Hypothesis No.	Null hypothesis (H_0)	Test practices (t)	p-value	Decision on H_0 at 5% level
H_{01}	There is no significant difference in mean FRP arrears (including H&T) between co‑operative and private sugar factories.	Not reported	0.0887	Do not reject H_0; difference is marginally significant at 10%.
H_{02}	There is no significant difference in mean percentage of FRP paid (including H&T) between co‑operative and private sugar factories.	Not reported	0.0681	Do not reject H_0 at 5%; reject H_0 at 10% significance level.

Source: *commissionerate of sugar, Maharashtra –FRP Report 15.12.2025.*

(factory-wise FRP payment and arrears data season 2024-25)

Note: Statistical inference is based on p-values obtained from the independent samples t-test. The focus of the analysis is on the significance of mean differences rather than the magnitude of the t-statistics.

The results of the independent samples t-test indicate that ownership-wise differences in mean FRP arrears and the mean percentage of FRP paid are not statistically significant at the conventional 5 per cent level of significance. However, at the 10 per cent level, cooperative sugar factories exhibit marginally better payment performance in terms of relatively lower arrears and a higher proportion of FRP paid compared to private factories. These results suggest the presence of a weak but consistent ownership effect favoring cooperative mills, though the statistical evidence remains modest and should be interpreted with caution.

POLICY IMPLICATIONS:

The findings of the study shows that FRP arrears are still a major issue in Maharashtra. More than half of the sugar factories have paid less than 60 percent of their cane price obligations. This can adversely affect financial stability and debt position of cane-growing farmers. Cooperative sugar factories, even with similar FRP dues as private mills, show better payment performance. It suggests that cooperative mills are effective in their way of working, stronger governance and farmer-focused incentives.

SUGGESTIONS AND RECOMMENDATIONS:

- The State Government and sugar commissionerate should strengthen enforcement of the Sugarcane (Control) Order, 1966 by strictly linking crushing licenses and other regulatory approvals to full clearance of FRP dues from previous seasons.
- A structured, time-bound payment mechanism may be introduced, whereby mills must pay 60 percent of FRP within 14 days and the remaining amount within the next one to two months.
- To reduce arrears, support schemes for viable mills should go directly toward paying farmers, rather than general bailouts of factory.
- In the medium term, policy efforts to stabilize sugar prices and diversify revenue streams through by-products (ethanol, power, etc.) are essential to improve the capacity of mills to honors FRP commitments on time and to reduce the build-up of cane price arrears.

LIMITATION OF STUDY:

- The study is based entirely on secondary data collected from published sources which may not fully capture recent changes.
- The analysis compares cooperative and private sugar mills in selected years and regions of Maharashtra; therefore, the findings cannot be generalized to all sugar mills in India.
- The study focuses only on FRP payment indicators such as arrears per ton and percentage of FRP paid, and does not incorporate other financial or technical performance parameters of sugar mills.
- The use of two-sample t-test captures differences in mean payment indicators between ownership types, but it does not control for other factors such as cane recovery, crushing capacity, or policy changes that may influence arrears.
- The cross-sectional nature of the analysis restricts the ability to examine dynamic adjustments in arrears and payments over multiple seasons.

CONCLUSION:

The study shows that many sugar factories in Maharashtra have not paid farmers their full FRP during the season 2024-2025. A large part of the cane price is still unpaid, showing that factories are only partly following the rules. More than half of the mills cleared less than 60% of their dues, which has left farmers with large arrears. Cooperative mills, even with similar liabilities as private mills, performed better by paying a higher share and keeping arrears lower. However, the difference between cooperative and private mills is only modest and not strongly significant. Overall, FRP payments remain a serious issue, and stronger enforcement and better financial management are needed to protect farmers' incomes.

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