



From policy to prosperity: Effects of agricultural subsidies on farmers in Jalgaon district

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Abstract

This study examined how agricultural subsidies affect the economic and social well-being of irrigated land (Bagayat) and dry land (Jirayat) farmers in Jalgaon, Maharashtra. A structured questionnaire was distributed to 110 farmers (56 irrigated and 54 dry landholders) to examine their perceptions across many aspects using a 7-point Likert scale. To identify significant differences in responses, the analysis used independent samples t-tests. The findings show that irrigated land farmers benefit much more from subsidies in terms of lower cultivation costs, higher farm revenue, increased crop output, and a higher standard of living. However, there were no substantial variations in debt reduction, input investment, future planning confidence, social security, access to education and healthcare, or migration trends. These findings show the disparity in subsidy effects among farmer groups, implying the need for more targeted subsidy programs to better help dry land farmers.

Keywords: Agricultural subsidies, economic well-being, social well-being, irrigated farming, dry land farming, Jalgaon district, farmer perceptions, rural development, independent samples t-test, Maharashtra agriculture

Introduction

Agricultural subsidies in India have a substantial impact on both short- and long-term social and economic wellbeing. Subsidies can improve farm profitability and income stability in the short term but can also cause market distortions and environmental issues in the long run. These subsidies have wide-ranging impacts on agricultural productivity, sustainability, and rural livelihoods.

Review of Literature

This section explores the literature using research findings to examine key agricultural subsidy related topics.

Short-term Effects

(Dixon *et al.*, 2020^[1]; Mishra *et al.*, 2024)^[3] Subsidies for fertilisers and power have been shown to boost agricultural output and income in the near run. These subsidies reduce the cost of production inputs, increasing profitability for farmers.

(Wadhwa & Nandal, 2023)^[6] Policies like the Minimum Support Price (MSP) and the Electronic National Agriculture Market (e-NAM) have enhanced market access and fostered crop diversification among smallholder farmers in areas like Haryana, leading to better income prospects.

(Florian & Marco, 2019)^[2] Subsidies serve as a safety net that protects farmers' income from market swings, maintaining a minimal level of economic security.

(Mishra *et al.*, 2024)^[3] In the long term, subsidies can lead to overproduction and market distortions since they frequently stimulate the growth of particular crops over others, potentially leading to inequalities in supply and demand.

(Tandon & Aggarwal, 2021)^[4] Excessive use of subsidised inputs, such as fertilisers, has been related to environmental damage, including soil depletion and higher emissions. This threatens the long-term sustainability of agricultural methods.

(Florian & Marco, 2019)^[2] While subsidies are intended to

improve economic welfare, they can have negative effects on well-being and the natural environment, requiring an overhaul of their long-term sustainability.

(Umali-deininger *et al.*, 2005)^[5] Subsidies sometimes favour larger farmers and specific states, exacerbating regional inequities.

(Mishra *et al.*, 2024)^[3] There is an increasing consensus on the need to shift from input subsidies to more dissociated support measures, such as direct income assistance and agri-environmental schemes, to link agricultural policies with sustainability goals.

(Mishra *et al.*, 2024)^[3] To improve the competitiveness as well as the sustainability of the agricultural sector, investments in research, infrastructure, and extension services are critical.

While agricultural subsidies have offered short-term economic gains to Indian farmers, their broader consequences raise questions about sustainability and equality. The problem is to strike a balance between immediate economic gains and the requirement for long-term agricultural practices and equitable resource distribution. Policy makers are encouraged to consider reforms that address these concerns, ensuring that subsidies improve the social and economic well-being of all farmers.

Research Design and Methodology

The research focused on measuring impact of agricultural subsidies on farmers economic and social well-being in Jalgaon district.

Hypothesis

H₀: There is no significant difference in the impact of agricultural subsidies on the economic and social well-being of irrigated land (Bagayat) farmers and dry land (Jirayat) farmers in Jalgaon district.

H₁: There is a significant difference in the impact of agricultural subsidies on the economic and social well-being

of irrigated land (Bagayat) farmers and dry land (Jirayat) farmers in Jalgaon district.

Data collection and research instrument

A study was undertaken in the Jalgaon district of Maharashtra, India. Data were collected from 110 farmers, 56 with irrigated land and 54 with dry land. Respondents rated economic and social well-being-related items on a 7-

point Likert scale, with response possibilities ranging from "Strongly Disagree" to "Strongly Agree."

Data Analysis and Interpretation

To meet the research objective, the methodology included calculating means and using an independent samples t-test to determine statistical significance.

Table 1: Independent Samples t-tests

Group Statistics					
Subsidy Impact	Farmer Type	N	Mean	Std. Deviation	Sig. (2-tailed)
Subsidies have reduced my cost of cultivation.	Irrigated land	56	5.97	0.921	0.040
	Dry land	54	5.74	1.012	
I have experienced an increase in farm income due to subsidies.	Irrigated land	56	5.36	1.107	0.047
	Dry land	54	5.10	1.274	
Subsidies have helped me invest in better seeds/fertilizers.	Irrigated land	56	5.96	1.297	0.912
	Dry land	54	5.94	1.343	
I have been able to reduce debt because of subsidy benefits.	Irrigated land	56	6.24	0.701	0.430
	Dry land	54	6.17	0.749	
Subsidies have improved my crop productivity.	Irrigated land	56	6.35	0.863	0.046
	Dry land	54	6.18	0.686	
I am more confident in planning for the future due to government support.	Irrigated land	56	6.17	0.926	0.402
	Dry land	54	6.09	0.900	
My family's standard of living has improved due to agricultural subsidies.	Irrigated land	56	6.70	0.744	0.011
	Dry land	54	6.44	0.853	
I feel more socially secure because of these schemes.	Irrigated land	56	6.24	0.648	0.943
	Dry land	54	6.23	0.694	
I am better able to afford my children's education and healthcare.	Irrigated land	56	5.88	0.692	0.879
	Dry land	54	5.90	0.738	
Subsidies have helped reduce rural migration in my area.	Irrigated land	56	5.90	1.078	0.437
	Dry land	54	5.99	0.988	

Interpretation

1. Subsidies have reduced my cost of cultivation.

Mean Scores: Irrigated land – 5.97; Dry land – 5.74, p-value: 0.040, Interpretation: The p-value is less than 0.05, indicating a statistically significant difference. Conclusion: Null hypothesis is rejected. Irrigated land farmers perceive a greater reduction in cultivation costs due to subsidies.

2. I have experienced an increase in farm income due to subsidies.

Mean Scores: Irrigated land – 5.36; Dry land – 5.10, p-value: 0.047, Interpretation: Since the p-value is below 0.05, the difference is statistically significant. Null hypothesis is rejected. Irrigated farmers report a slightly higher increase in income due to subsidies.

3. Subsidies have helped me invest in better seeds/fertilizers.

Mean Scores: Irrigated land – 5.96; Dry land – 5.94, p-value: 0.912, Interpretation: The p-value is greater than 0.05, indicating no significant difference. Null hypothesis is failed to be rejected. Both groups equally benefit in terms of input investment.

4. I have been able to reduce debt because of subsidy benefits.

Mean Scores: Irrigated land – 6.24; Dry land – 6.17, p-value: 0.430, Interpretation: No statistically significant difference found. Null hypothesis is failed to be rejected. Both groups show similar outcomes in debt reduction.

5. Subsidies have improved my crop productivity.

Mean Scores: Irrigated land – 6.35; Dry land – 6.18, p-value: 0.046, Interpretation: The difference is statistically significant (p < 0.05). Null hypothesis is rejected. Irrigated farmers report greater productivity improvements.

6. I am more confident in planning for the future due to government support.

Mean Scores: Irrigated land – 6.17; Dry land – 6.09, p-value: 0.402, Interpretation: No significant difference in future planning confidence. Null hypothesis is failed to be rejected.

7. My family's standard of living has improved due to agricultural subsidies.

Mean Scores: Irrigated land – 6.70; Dry land – 6.44, p-value: 0.011, Interpretation: The p-value indicates a significant difference. Null hypothesis is rejected. Irrigated farmers report greater improvement in standard of living.

8. I feel more socially secure because of these schemes.

Mean Scores: Irrigated land – 6.24; Dry land – 6.23, p-value: 0.943, Interpretation: No significant difference in perceived social security. Null hypothesis is failed to be rejected.

9. I am better able to afford my children's education and healthcare.

Mean Scores: Irrigated land – 5.88; Dry land – 5.90, p-value: 0.879, Interpretation: Very similar scores; no significant difference. Null hypothesis is failed to be rejected.

10. Subsidies have helped reduce rural migration in my area.

Mean Scores: Irrigated land – 5.90; Dry land – 5.99, p-value: 0.437, Interpretation: No significant difference in views on migration. Null hypothesis is failed to be rejected.

Conclusion

The study shows that agricultural subsidies have a more positive impact on irrigated land (Bagayat) farmers than dry land (Jirayat) farmers in Jalgaon district, especially in terms of cost reduction, income enhancement, productivity improvements, and improved living standards. While both groups believe they benefit from government programs, statistically significant variances in important economic indicators indicate discrepancies in subsidy efficacy. Debt reduction, input investment, and social factors such as migration or education support all showed no significant variances, demonstrating that subsidies had a consistent impact on these elements. The study suggests that governments should explore diversified subsidy schemes to better meet the unique constraints that dry land farmers face, resulting in more equitable agricultural development.

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