

Factors Affecting Farmers' Suicide in India

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ABSTRACT

India is an agrarian nation, with 48.9% of its population working in agriculture either directly or indirectly. Agriculture remains the largest economic sector and contributes significantly to the overall socio-economic growth of our nation, despite a gradual fall in its GDP share. It is the primary food source for the expanding population. Unfortunately, because of the unpredictable monsoon, the lack of credit, and the rising costs of seeds, pesticides, and fertilizer, agriculture has become a very critical industry. Farmers are suffering from economic hardship and killing themselves on a large scale in various provinces across the nation. Today, one of the critical issues that the government must address is the issue of farmer suicides.

Keywords: agriculture, farmer suicides, natural disasters, pesticides, economic policies

I. INTRODUCTION

The majority of Indians live in villages, and the majority of villagers work in agriculture, as is well known. More than half of our population depends on agriculture, along with related industries like animal husbandry, forestry, and fisheries, as a vital and dynamic part of our economy. India's economic success is largely dependent on the success of its agricultural sector. Agriculture remains the greatest economic sector and contributes significantly to the overall socio-economic development of our nation, despite a gradual fall in its share of the GDP (Purnanand Nagappa Sangalad and Malakajappa Gyanappa Huddar, 2011). It is the primary food source for the expanding population.

Enormous scale across the nation's provinces. One of the biggest reasons for trouble in the agricultural industry is farmer debt. Farmer households in India have debts totaling almost half (49%) of their income. Due to the lack of institutional credit, small and marginal farmers receive loans at higher interest rates from private money lenders (Purnanand Nagappa Sangalad and Malakajappa Gyanappa Huddar, 2011). As a result, they are unable to repay the private money lenders' loan and fall victim to a vicious debt cycle. For Indian farmers, the World Trade Organization (WTO) has a negative effect. Prior to the WTO agreement, Indian agricultural product prices were less expensive than those charged outside.

India is an agrarian country with around 48.9% of its people depending directly or indirectly upon agriculture. Nowadays the problem of farmers' suicides is one of the vital concerns that need to be addressed by the Government. Considering the paramount importance of this issue, the National Crime Records Bureau (NCRB), for the first time (2014), has collected detailed data on farmers' suicides. Farmers include those who own and work on field (viz. cultivators) as well as those who employ or hire workers for field work or farming activities. It excludes agricultural labourers. A total of 5,650 farmers have committed suicides during 2014, accounting for 4.3% of total suicides victims in the country.

The problem of farmer suicides has become a serious matter. The toll is increasing year after year. According to the National Crime Record Bureau (NCRB), as many as 5,650 farmers committed suicide in India last year. This works out to one farmer suicide in every 100 villages or one farmer suicide in every block in the country last year. State-wise, Maharashtra accounted for the highest number of farmer suicides (2568) distantly followed by Telangana (898), Madhya Pradesh (826), Chhattisgarh (443) and Karnataka (321). These five states together accounted for about 90 per cent of total farmer suicides (ADSI Report, 2014).



Source: <https://www.fairobserver.com/world-news/india-news/the-truth-about-indian-farmer-suicides/>

NCRB pointed out that bankruptcy or indebtedness was the main cause, accounting for 20.6 per cent, closely followed by family issues (20.1 per cent), failure of crops (16.8 per cent), illness (13.2 per cent), whereas alcoholic addiction accounted for 4.9 per cent cases. These five causes together accounted for 75.6 per cent of total farmer suicides. Small and marginal farmers accounted for about 72.4 per cent of total farmer suicides. After a farmer commits suicide, government quite often swings into action and provides hectic financial relief to the family of the deceased. This entails heavy pressure on state exchequer, on one hand and causes irreparable loss to the family and society, on the other (ADSI Report, 2014).

India is an agrarian country with around 70% of its people depending directly or indirectly upon agriculture. But farmers' suicides in India is worrying. As per the Central Government despite a multi-pronged approach to improving income and social security of farmers, over 12,000 suicides were reported in the agricultural sector every year since 2013. Farmer suicides account for approximately 10% of all suicides in India. There is no denying that the menace of farmer's suicides exists and runs counter to the aspirations of reaping benefits of our demographic dividend. In this article, we are analysing the farmers' suicides in India and its related data, the reasons and the way forward.

II. REASONS FOR INDIA'S FARMERS' SUICIDES

1. **Natural Disasters:** Due to factors like excessive rain, floods, droughts, delays in the rain, heavy cyclones, etc., farmers are unable to harvest both qualitative and quantitative output from their farms as a result of global warming, deforestation, and other man-made factors. Farmers frequently struggle to recoup the cost of their goods. These factors make agriculture a guaranteed loss-making venture. The marginal and small farmers, however, are without an alternative sources of income. They continually give agriculture their whole attention. They become insolvent as a result of ongoing losses, and the frustration of this drives them to take their own lives.
2. **Water Level Fall:** Sufficient irrigation infrastructure is required for the sector to expand sustainably. Water shortages lead to the discontinuation of irrigation and watershed development projects since there is no institutional system in place to conserve the rainwater. Therefore, farmers must continue to miss out on the advantages of the good rainfall.
3. **Low Productivity and Monsoon Uncertainty:** Changes in the monsoon have an impact on farmers' livelihoods and agricultural output. Due to the uneven distribution of arable land and the unpredictable nature of the monsoon, the majority of farmers are marginal farmers. Farmers commit suicide as a result of finding it impossible to meet family needs.
4. **Farmers' Debt Result of Crop Failure:** The growing disparity between the expense of cultivation and the cash received from the prices of produce has made agriculture unprofitable. For all crops, the average difference between cultivation costs and receiving prices is a significant percentage. However, the returns from agriculture were out of proportion to the investment; as a result, farmers were unable to use their agricultural income to pay for the expense of cultivation. Agriculture-related social structures make the issue even worse. Farmers who work as renters from time to time and who cannot support their families due to high daily expenses that exceed their income or who are unable to meet their needs commit suicide.

5. **Costly Methods Modern Agriculture:** Following the green revolution and the development of new technology, farming has been much simpler and more productive thanks to hybrid seeds, insecticides, pesticides, and farm growing techniques. But since they are so expensive, these breakthroughs and technologies are out of reach for poor small and marginal farmers.
6. **Reduced Agricultural Subsidies:** Agricultural subsidies may also encourage producers to misuse fertilizers and pesticides, which could have a severe influence on the environment by causing soil degradation, groundwater depletion, and other issues. Due to market volatility, the government eliminated various sorts of subsidies. Agriculture has suffered as a result of subsidy reductions and fertilizer regulation. It raised input costs and decreased the profitability of agriculture.
7. **Insufficient Education:** Farmers are unable to give their children the required education because of their poverty. As a result, the farmers' sons also become farmers, and this pattern continues. They suffer as a result because they are uninformed of the programs or do not know how to use the government advantages that are available to them.
8. **Lack of Transit Systems:** It is the main barrier to effective marketing. There are no highways connecting the rural areas to the market. Transport issues result in a large amount of wasted agricultural product.
9. **Lack of Essential Infrastructure:** The lack of suitable social support infrastructure at the village and district levels, uncertainty surrounding the region's agricultural sector, and lack of infrastructure amenities like power and clean drinking water have an impact on the farmers' mental and physical health. They occasionally start abusing drugs and drinking more. All of these items drew deadly illnesses and caused them to perish.
10. **The Economic Policies of India:** India's economic policies are typically driven by urban consumers, as seen by the necessity to enact price restrictions in the event of a price increase and to remove them once the price is under control. Such regulations reduce profit margins and harm farmers' ability to escape the debt cycle.

III. OBJECTIVES

- To analyze the trends and pattern of farmers' suicide in India.
- To estimate the determinants of farmers' suicide in India.
- Farmers' suicide significantly influenced by loan amount disbursed to agriculture sector, rainfall, number of KCC cards issued, irrigation level and number of farmers insured.

IV. METHODOLOGY

The present study made use of the secondary data from the National Crime Records Bureau Reports, NABARD annual reports and others. The present study considered period from 1995 to 2014 to analyse the trends in farmers' suicide and 2014 to estimate regression model. The data collected for the research are analyzed with the help of simple statistical techniques such as Regression, AGR, CAGR, percentage and graphs to come to meaningful conclusions.

Where, FS= Number of Farmers' suicide, Loan = amount disbursed to agriculture sector, R = Rainfall, KCC = KCC cards issued, I= irrigation level, FI= number of farmers insured.

V. RESULTS AND DISCUSSIONS

India is an agrarian country with around 48.9% of its people depending directly or indirectly upon agriculture. Nowadays the problem of farmers' suicides is one of the vital concerns that need to be addressed by the Government. Considering the paramount importance of this issue, the NCRB, for the first time, has collected detailed data on farmers' suicides in 2014. Farmers include those who own and work on field (viz. cultivators) as well as those who employ or hire workers for field work or farming activities. It excludes agricultural labourers. A total of 5,650 farmers have committed suicides during 2014, accounting for 4.3% of total suicides victims in the country. Bankruptcy or Indebtedness and Family Problems are major causes of suicides, accounting for 20.6% and 20.1% respectively of total farmers' suicides during 2014. The other prominent causes of farmers' suicides were Failure of Crop (16.8%), Illness (13.2%) and Alcoholic Addiction (4.9%).

Table 1: Trends in suicide Reported under Farming and Agricultural Activity

Year	Males	Females	Persons	Male as % of total	AGR
2006	14664	2396	17060	85.95	-0.414
2007	14509	2123	16632	87.23	-2.509
2008	14145	2051	16196	87.33	-2.621
2009	14951	2417	17368	86.08	7.2364
2010	13592	2372	15964	85.14	-8.084
2011	12071	1956	14027	86.05	-12.13
2012	11951	1803	13754	86.89	-1.946
2013	10489	1283	11772	89.10	-14.41
2014	10889	1471	12360	88.09	4.9949

Source: Compiled from various ADSI reports

The above table 1 revealed the gender composition of Farm suicides, according to the data, the male farmers' suicide higher than females. Considering the period 2006-2014 as a whole, about 85 per cent of all farm suicides were by male farmers. As farmers' suicides were concentrated among males, the pattern of growth of male suicides determined the overall pattern of farm suicides. It reached a peak in 2004, when 15,929 male farmers committed suicide. The highest growth rate in farmers' suicide recorded in the year of 1996. After global economic crisis (2008) farmers' suicide started to decline, but in the year of 2014, because of severe drought again the farmers' suicide has started to increase.

Table 2: Land holding status of farmers who committed suicide

States	Marginal Farmers	Small Farmers	Medium Farmers	Large Farmers	Total
Andaman and Nicobar Islands	7	1	0	0	8
Andhra Pradesh	64	48	47	1	160
Arunachal Pradesh	0	0	0	0	0
Assam	4	10	7	0	21
Bihar	0	0	0	0	0
Chhattisgarh	136	195	89	23	443
Goa	0	0	0	0	0
Gujarat	3	8	30	4	45
Haryana	0	2	10	2	14
Himachal Pradesh	14	18	0	0	32
Jammu and Kashmir	11	0	1	0	12
Jharkhand	0	0	0	0	0
Karnataka	51	149	117	4	321
Kerala	44	43	18	2	107
Madhya Pradesh	403	267	150	6	826
Maharashtra	627	1335	544	62	2568
Manipur	0	0	0	0	0
Meghalaya	0	0	0	0	0
Mizoram	0	0	0	0	0
Nagaland	0	0	0	0	0
Odisha	0	5	0	0	5
Punjab	3	14	7	0	24
Rajasthan	0	0	0	0	0
Sikkim	22	0	13	0	35
Tamil Nadu	48	17	3	0	68
Telangana	129	366	377	26	898
Tripura	0	0	0	0	0
Uttar Pradesh	13	38	11	1	63
Uttarakhand	0	0	0	0	0
West Bengal	0	0	0	0	0
India	1579	2516	1424	131	5650

Source: ADSI report 2014

Land holding status of farmers who committed suicide found from the above table 2. It shows that 44.5% and 27.9% of victims were small farmers and marginal farmers respectively, they together accounted for 72.4% (4,095 out of 5,650) total farmer suicides. 53.1% and 14.5% of small farmers who committed suicides were reported in Maharashtra (1,135 out of 2,516) and Telangana (366 out of 2,516) respectively during 2014. Among marginal farmers, 39.7% and 25.5% respectively of farmers' suicides were reported in Maharashtra (627 out of 1,579) and Madhya Pradesh (403 out of 1,579). However, 47.3% of well off farmers (large farmers) who have committed suicides were also reported in Maharashtra during 2014. This is because of indebtedness, uncertainty of monsoon, non-availability of credit, increasing prices of seeds, pesticides and fertilizers.

The regression results of the determinants of farmers suicide for the period of 2014 has reported in the above table 3. The results include loan amount disbursed to agriculture, rainfall, number of KCC cards issued, irrigation and number of farmers insured as the independent variables. Irrigation and number of farmers insured have significantly influenced the farmers' suicide. The results reveal that, farmers' suicide declines as the increase in rainfall, KCC cards issued and irrigation level. The R squared value is 0.77, which means that 77% of farmers' suicide explained by the above said independent variables. Hence the study hypothesis has been accepted.

VI. CONCLUSION

The analysis of the factors influencing farmer suicide in India has led to the general conclusion that the amount of irrigation and the proportion of insured farmers have played a significant role in explaining farmer suicide. The regression analysis's findings showed that farmer suicide decreases as rainfall, KCC cards issued, and irrigation level rise. The study also showed that small farmers and marginal farmers made up 44.5% and 27.9% of the victims, respectively. Together, they accounted for 72.4% of all farmer suicides, with Maharashtra taking the top spot with about 50% of the total number of farmer suicides. With these few observations, the study recommends that policymakers prioritize helping small and marginal farmers when formulating policies.

Additionally, small farmers should be encouraged to develop additional sources of income, and the government should assume responsibility for offering training to the farmers so they can pick up new skills. Meaningful crop insurance policies are also required. According to the findings, promoting irrigation projects and issuing KCCs are crucial strategies in the fight against agrarian distress. The study's findings also emphasize the relative significance of rainfall shocks, which could be mitigated by the implementation of crop insurance that is based on rainfall.

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