



AN EXPLORATORY STUDY ON SPATIAL PATTERNS OF FARMER SUICIDES IN KARNATAKA

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Abstract: Despite decades of investment on agricultural development and various policy attempts, India has witnessed one of the highest farmer suicide rates in the world. As per reports of National Crime Records Bureau (NCRB), a total of 3.21 lakh farmers committed suicide in India since 1995, which is 13.1 per cent of all reported suicide cases (24.53 lakh). As per latest report of Accidental Deaths and Suicides in India 2015, a total of 12,602 persons involved in farming sector (consisting of 8,007 farmers/cultivators and 4,595 agricultural labourers) have committed suicides during 2015, accounting for 9.4 per cent of total suicides victims (1.34 lakh) in the country. Karnataka recorded the highest number of farmer suicides in the southern region and the second highest in India, in 2018. In this backdrop, the present paper is analyzed and explores the spatial pattern of farmer suicides in Karnataka. The analysis suggests that long term comprehensive polices are to be required to reduce indebtedness among agricultural households and prevent suicide in farm sector.

Keywords – Farmer suicides, agriculture, indebtedness, rural, Karnataka.

I. INTRODUCTION

India is largely an agrarian society with majority of its population working in the primary or the agricultural sector. Most of them find their livelihood by depending directly or indirectly on the agrarian economy. According to Census 2011, out of the total workers of 481.7 million, there are 118.7 million cultivators and 144.3 million agricultural labourers, which means approximately 60 per cent of the total workers were employed in agriculture and allied sector. However, the agriculture sector has been facing several challenges such as adverse climatic conditions, serious droughts, rising temperature, floods, lack of better prices, crop failure, exploitation by middlemen, debt burden, etc in various degrees around the globe. Agriculture credit is not reaching small farm holders in India. In the latest report of Internal Working Group to Review Agricultural Credit (2019) by the Reserve Bank of India (RBI) observed that the bulk of loans disbursed by commercial banks, which formed the majority of farm credit, was cornered by big land holders. Together, these issues have pushed farmers into debt and distress. Many have abandoned their farms, moved to cities or even been driven to suicide.

Despite decades of investment on agricultural development and various policy attempts, India has witnessed one of the highest farmer suicide rates in the world. As per reports of National Crime Records Bureau (NCRB), a total of 3.21 lakh farmers committed suicide in India since 1995, which is 13.1 per cent of all reported suicide cases (24.53 lakh). As per latest report of Accidental Deaths and Suicides in India 2015, a total of 12,602 persons involved in farming sector (consisting of 8,007 farmers/cultivators and 4,595 agricultural labourers) have committed suicides during 2015, accounting for 9.4 per cent of total suicides victims (1.34 lakh) in the country. During 2015 across states, most farmer suicide cases were reported in Maharashtra (4,291) followed by Karnataka (1,569), Telangana (1,400), Madhya Pradesh (1,290), Chhattisgarh (954), Andhra Pradesh (916) and Tamil Nadu (606). Together, these seven suicide prone states accounted for 87.5 per cent of total farm suicides in the country (11,026 of 12,602 farm suicides). This clearly indicates that the incidence of suicides among farmer households is deeply rooted. The farmer suicide incidences have been headlining news in print and electronic media for several years due to various reasons in Indian agriculture, are the most widely discussed burning issue.

The farmer suicides affect adversely on agricultural production in general and farming households in particular. In this backdrop, the present paper is analysed the incidence and spatial patterns of farmer suicides in Karnataka. There are various social safety measures to deal with the suicides but the problem is not over yet. Against this, the present study is taken up with twin objectives of describing the incidence of suicides in farm sector at macro level and to analyzing the magnitude and spatial patterns of farmer suicides in Karnataka. The paper is based on secondary sources of information and data, which were obtained from the reports of National Crime Records Bureau-NCRB, Ministry of Agriculture, Economic Survey, NSSO, news papers and other relevant documents.

II. INCIDENCE OF SUICIDES IN FARM SECTOR

Agriculture is one of the primary sources of employment for more than 50 per cent of the population in India (2011 census), but it fails to provide security to those who are involved in farming activities. India has been experiencing widespread suicides among farming community and it is worrying not only for respective agricultural households but also policy makers, social scientists, political parties, administrators and researchers. The first state in India where suicides were reported was Maharashtra with particular reference to Vidarbha region. Notably the farm suicides are reported even in agriculturally well-developed ones like Punjab and Haryana.

The incidence of farmer suicides in Vidarbha region of Maharashtra appeared in media reports from the beginning of 1998 (Mohanty, 2013). Further, farmers' suicide is not only reported in Maharashtra, but also from Punjab, Uttar Pradesh, Kerala, Karnataka and other parts of India. Various interrelated factors have been identified for suicides across different regions and farm sizes in India. While a major portion of literature on this theme found that farm related factors like indebtedness and crop failure are attributed for farm suicides other studies reported that other factors like family problems are responsible for suicides. This is a complex and sensitive issue and hence careful analysis and logical interpretation alone will make scientifically complete and comprehensive.

Suicide data in India are collated by the NCRB, a wing of the Ministry of Home Affairs, Government of India, New Delhi. The NCRB began recording farm data in its annual Accidental Deaths and Suicides in India reports way back in 1995. The suicide rate for India from 1995 to 2015 is shown in the in Table 1. A total of 3.21 lakh persons involved in farming sector have been committed suicide in India since 1995, which is 13.1 per cent of all reported suicide cases (24.53 lakh). In 2014, Maharashtra continues to be the leader with over 2,500 farmer suicides followed by Telangana with 898 farmer suicides and Madhya Pradesh with 826 suicides. The three states accounted for 45.5 per cent, 15.9 per cent and 14.6 per cent suicides respectively from total suicides. According to Sainath (2007), on an average, one Indian farmer committed suicide every 32 minutes between 1997 and 2005.

Table 1: Share of Farmers' Suicides from All Suicides in India (1995-2015)

Year	Suicides in Farming Sector	Total Suicides	Farmers' suicides as % of Total suicides
1995	10720	89178	12.0
1996	13729	88241	15.6
1997	13622	95829	14.2
1998	16015	104713	15.3
1999	16082	110587	14.5
2000	16603	108593	15.3
2001	16415	108506	15.1
2002	17971	110417	16.3
2003	17143	110579	15.5
2004	18241	113697	16.0
2005	17131	113914	15.0
2006	17060	118112	14.4
2007	16632	122637	13.6
2008	16196	125017	13.0
2009	17368	127151	13.7
2010	15964	134599	11.9
2011	14027	135585	10.3
2012	13754	135445	10.2
2013	11772	134799	8.7
2014	12360	131666	9.4
2015	12602	133623	9.4
Total	3,21,407	24,52,888	13.1

Source: NCRB, various years.

From table 1, it can be inferred that around 16 per cent of farm suicides to total suicides were reported during four years (1996, 2002, 2003 and 2004). These years witnessed not only deficit rainfall but also drought in many parts of the country. During these years there would have been serious problem in getting good harvest and farm income thereby the farmers would have been in distress amounting resorted to suicide. However, table further shows that after 2013 the farm suicides are declining to single digit. This is possibly on two factors as suicide issue became largely debatable among academic circle and policy domains besides among public. Therefore, the NCRB started finetuning the suicide data and documented and hence it may show a declining trend of late.

Among the suicide prone states, Maharashtra topped the list with 3,030 suicides, which accounted nearly 38 per cent of the total 8007 suicides (Table 2). Most suicides committed by male farmers, however, the share of suicide by female farmers accounted just 5.5 per cent. This shows a serious concern that the main bread winner of female members commits suicides-a great loss to the family. Moreover, in general female headed farm households are less in magnitude and naturally the share of suicides by female farmers is less.

In addition to these, the female headed farm households are less as the landed property is generally in the name of male members resulting to show lessor magnitude of female farmers' suicides. Also, among Indian societies, particularly the farm households a major responsibility including decision making and planning of cropping patterns and other issues related to farm operations lies with the male members as compared with their counterparts. Rarely male members discuss these issues with female members in farm household in general. All these would have been resulted on the smaller number of female suicides among Indian farm households.

Table 2: Distribution of Suicide Farmers (excluding agricultural labourers) by Gender across major Suicide Prone States in 2015

Sl No		Male	Female	Total	%
1	Andhra Pradesh	468	48	516	6.44
2	Chhattisgarh	815	39	854	10.67
3	Karnataka	1173	24	1197	14.95
4	Madhya Pradesh	556	25	581	7.26
5	Maharashtra	2921	109	3030	37.84
6	Punjab	99	1	100	1.25
7	Telangana	1205	153	1358	16.96
8	Uttar Pradesh	113	32	145	1.81
	<i>Total (8 states)</i>	<i>7350</i>	<i>431</i>	<i>7781</i>	<i>97.18</i>
9	Other States	216	10	236	2.82
	All India	7566 (94.5)	441 (5.5)	8007 (100)	100

Note: Data in the brackets indicate percentage to the total.

Source: NCRB (2016). Accidental Deaths & Suicides in India-2015.

Thus, the above discussions show that farmers' suicides are serious in India and a few states like Maharashtra, Telangana, Karnataka and Chhattisgarh are showing high incidence of farmers' suicides in India. In fact, some of these states the general condition of farming community is relatively better and nonetheless farmers are in distress. In fact, Karnataka Government set up High Powered Committee to study the nature of suicides and possible solutions to prevent them. Expectedly it attracted both appreciation and criticisms among different sections including academics, planners and farmers. Nevertheless, it is a bench mark study on an important theme of farmers suicides in India. Based on this study, the administrators started devising various interventional strategies for safeguarding the victims' family. Followed by this, next section explains the magnitude of suicides over a period of time across districts.

Due to various other factors like extreme weather, climate change and warming are also contribute for the crisis in farming. For instance according to a recent study in India around 96.40 million ha of cropped area accounting to 30 percent of total cropped area is degraded thereby affecting crop cultivations. Similarly occurrence of new pests and diseases also lead to crop destruction and economic loss. Recently a new warm was found invading into minor millet crops, first sighted in Karnataka and spread to neighboring states very soon, causing huge damage to millets. Likewise natural calamities like tsunami and cyclone affected the coastal districts impacting heavy crop loss. All these put severe pressure on the already ailing farmers and at times unable to bear the distress farmers take extreme step of committing suicide.

III. MAGNITUDE AND SPATIAL PATTERNS OF THE FARMER SUICIDES IN KARNATAKA

Karnataka is one of the major states in India with large number of suicides reported among farmers, despite the existence of various farmer welfare schemes. The phenomenon of suicides amongst farmers in Karnataka has been a recurrent theme in the agricultural sector since 1998 and no history of farmers committing suicide when crops failure (Assadi, 1998). A study on farmer's suicide for the first time in Bidar district of Karnataka was undertaken by Vasavi (Vasavi, 1999). The Bidar district is prone for recurrent drought and economic backwardness, that affect farm sector and leads to suicides. Later, Deshpande (2002) studied agro-economic causes of agrarian crisis and farmers suicides in the state of Karnataka by selecting 99 suicide cases across 17 districts.

According to the report of NCRB (2016), Karnataka stood third in the number of farmer suicide cases in 2015. Of the total 12,602 cases across the country, 3,030 farmers ended their lives in Maharashtra, 1,358 in Telangana, and 1,197 in Karnataka. As per NCRB statistics, Karnataka has witnessed a total 31,000 farmer suicide cases in the last 15 years (2000 to 2015). Against these, it is fitting that the present study has been taken up in the state of Karnataka.

Trends in farmer suicides in Karnataka from 2015-16 to 2018-19 are shown in the Table 3. The data show that around 4000 farmers committed suicides in the state during four year periods (2015-16 to 2018-19). Further, 139 suicide cases are pending and under review by the agriculture department. There were 1062 farmers committed suicides during 2015-16, which clearly shows that on an average more than three farmers killed themselves every day. In 2018-19, 572 farmer suicides have been accepted as those relating to agriculture, while another 128 cases are under review. In 2017-18, there were 1,040 farmers ended their lives which is 45 per cent more than the 572 cases reported during 2018-19. If the pending 128 cases too are considered as farmer suicides taking the total number to 700, the decline would still be 33 per cent. This is a sharp decline witnessed in farmer suicides in Karnataka and it is lowest number of farmer suicides in the last three years.

The reason behind the dip in the suicide rate may be attributed to the loan waiver scheme announced and introduced during 2017-18 by the coalition government led by Congress and Janatha Dal (S) in the State. But, the daily news paper Deccan Herald (May 11, 2019) expressed the doubts on such data provided by ministry of agriculture or sharp decline in the farmer suicides (from 1040 cases to 572) in Karnataka, while agrarian distress is widespread due to recurring droughts. Since NCRB has published the data across state wise on farmer suicides only till 2015 and only new upcoming data from NCRB could reflect the actual number of farmer suicides in Karnataka.

Table 3: Trends in Farmers suicides in Karnataka (2015-16 to 2018-19)

Year	Total	% changes over previous year
2015-16	1062	--
2016-17	925	-12.9
2017-18	1040 (11)	+12.4
2018-19	572 (128)	-45
Total	3599 (139)	

Note: Data in the brackets are pending cases

Source: Department of Agriculture (2019)

The incidence of farmer suicides in Karnataka across major regions or spatial is analysed and data are depicted in the Table 4. Regionwise analysis shows that the Mumbai region comprising six districts namely Belagavi, Vijayapura, Bagalkot, Haveri, Dharwad and Gadag are the worst affected with 28 per cent (1025/3599) of the total farmer suicides in the Karnataka. Comparatively, 23 per cent (826/3599) of the total farmer suicides reported in six districts of the Hyderabad- Karnataka region (Bidar, Kalaburgi, Raichur, Ballari, Koppal and Yadgiri). The Mandya, Mysore, Hassan, Chamarajanagar and Ramanagara districts (Cauvery belt region) also suicide affected districts in the Karnataka, which accounted 24 per cent of the total farm suicides with majority of them are sugarcane growers. Overall these three regions are more suicide prone affected in the State, which accounts for more than 75 per cent (2830/3738) of the total farm suicides. Further, the spatial analysis clearly shows that the farmer suicide incidences are reported from both dry and irrigated land regions.

Table 4: Distribution of Farmer suicides across major Regions of Karnataka (2015-16 to 2018-19)

	Region/district	Reported	Pending	Total
I	Mumbai Karnataka			
	Belagavi	293	13	306
	Vijayapura	104	1	105
	Bagalkot	91	0	91
	Haveri	271	15	286
	Dharwad	186	4	190
	Gadag	80	1	81
	Total	1025	34	1059
II	Hyderabad-Karnataka			
	Bidar	203	8	211
	Kalaburgi	191	7	198
	Raichur	112	11	123
	Ballari	75	1	76
	Koppal	73	10	83
	Yadgiri	172	11	183
	Total	826	48	874
III	Cauvery Belt			
	Mandya	275	10	285
	Mysore	269	11	280
	Hassan	247	0	247
	Chamarajanagar	20	0	20
	Ramanagara	58	7	65
	Total	869	28	897
	All (I+II+III)	2720	110	2830
IV	Other Districts/region	879	29	908
	Karnataka State	3599	139	3738

Source: Data compiled from the Department of Agriculture (2019)

The Malnadu region – coastal area – is determined by cash crops – Arecanut, Coconut, Coffee where farmers normally get assured price and marketing is ensured. Moreover, people in these areas are highly literate and know the value of human life. All these contributed for the low incidence of farmers' suicides. But the crux of the issue is that farmers suicides are found as common across the state of Karnataka – moderately displayed its economic growth in the recent past. Interestingly different agro-climatic regions are suitable for cultivating fine cereals, pulses, oilseeds, sugarcane, coffee and sandalwood. In other words, the natural resource endowment is suitable for growing diverse cropping here. An advantage for the farming community.

IV. CONCLUSIONS

Reports of suicides among farmers coming from most regions in the state are causing much concern. On the other hand, Karnataka has experienced frequently widespread 75 per cent of the area continuously under drought situation. The phenomenon of suicide by farmers among agricultural households are especially worrisome for the State because the majority of the workforce is dependent on agriculture for its livelihood. Large number of farmer suicide incidences in most of the years is a clear indication that the agricultural sector under threat. Every day in print and electronic media invariably there is news related to farmers' suicides. Rapid increase in indebtedness among agricultural households is at the root of farmers' taking their lives. Recent suicides by farmers in many parts of India are linked with increase in indebtedness to non-institutional sources. Several empirical studies have shown that, suicide households have a much higher level of total debt with higher dependence on traders and moneylenders, and also a higher proportion of debt utilization for un-productive consumption purpose. The NSSO estimates have also revealed that there is high dependence on non-institutional channels for credit. Since Independence, one of the primary objectives of India's agricultural policy has been to improve farmers' access to institutional credit and reduce their dependence on informal sources of credit.

Moreover, suicides are linked with many factors. Only the comprehensive and circumstantial evidences will establish the real cause for suicides. In addition to vicious economic reasons, institutional factors like breaking up of joint family system is also cited as cause for increasing suicides. The incidence of suicides in farm sector is a proof of agrarian crisis. There are incidences of debt ridden farmers have committed suicides across India despite the announcement of farm loan waiver scheme by respective State governments. There is no doubt about that farm loan waiver scheme provides relief for indebtedness households to some extent and encourages them to cultivate crops or investment in agriculture. However former RBI governor Raghuram Rajan and agricultural economist Ashok Gulati are not supported to waive farm loan. According to them income supportive schemes are more viable than farm loan waiver scheme. This clearly shows that farm loan waiver scheme alone not much help to prevent suicides among farmers or to tackle agrarian crisis. Long term comprehensive policies are to be required to reduce indebtedness among agricultural households and prevent suicide in farm sector. To address the growing farmer suicides is one of the key recommendations of National Commission on Agriculture under Dr MS Swaminathan committee. The Swaminathan Commission studied the multiple problems faced by farmers and submitted the report in 2006 to the Government of India with recommendations of various reforms in different aspects of agriculture. Farmers and their unions are demanding the implementation of the recommendations of the Swaminathan Commission's report to reduce farm distress.

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