

# Farmer Suicides in India

## Trends across Major States, 1995–2011

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In an effort to understand the trends of farmer suicides, this article uses data from the National Crime Records Bureau to estimate the suicide mortality rate of farmers and non-farmers for India and its states. The methodology used corrects for an error present in previous studies and alters some commonly held views about the level and trend of farmer suicides in India.

Between 1995 and 2014, more than 3,00,000 farmers—cultivators and agricultural labourers—have committed suicide in India. This is roughly equivalent to a staggering figure of one farmer suicide every 30 minutes. The phenomenon of suicide by farmers is especially worrisome for India because the majority of the workforce is dependent on agriculture for its livelihood. According to data from the latest census in 2011, about 55% of Indian workers were employed in agriculture, either as cultivators or as agricultural labourers.

### Quantifying Farmer Suicides

What would be a good way to quantify the problem of farmer suicides? An immediate measure is the total number of farmer suicides, which unless normalised by the population of farmers, is not informative about the severity of the problem. So a more meaningful measure would be the suicide mortality rate (SMR) of farmers, that is, farmer suicides normalised by the population of farmers. This measure is inadequate as it does not take into account the situation of non-farmers. For instance, in a particular year, both farmer SMR and non-farmer SMR might be high. This might be due to some circumstances that affect suicides in the whole population. Thus, in such a year, even a high value of the SMR for farmers would not be informative about problems specific to farmers.

A better measure would be SMR ratio, that is, the ratio of farmer SMR and non-farmer SMR. This measure is a good way to capture the severity of farmer suicides because it controls for the population of farmers and also takes account of the situation of non-farmers. Hence, the SMR ratio can be used to capture the severity of the problem of farmer suicides as much as it is a

reflection of possible problems specific to the agrarian economy.

Many recent studies, including Nagaraj (2008) and Mishra (2014) have used the SMR ratio to quantify the problem of farmer suicides. In this note, we point to an error made by them in computing estimates of both the farmer SMR and the non-farmer SMR, and therefore, the ratio of the two. We explain the source of the error and present corrected estimates of the SMR ratio for 19 major Indian states from 1995 to 2011. Our corrected estimates of the SMR ratio alter some of the commonly accepted perceptions about the level and trend of farmer suicides at the national level and across states.

### Source of Error

The primary source of data for analysing the phenomenon of farmer suicides in India has been the Accidental Deaths and Suicides in India (ADSI), an annual publication of the National Crime Records Bureau (NCRB) of the Ministry of Home Affairs, Government of India. The NCRB has been publishing the ADSI, which contains data on suicides in the country, disaggregated by states and major cities, since 1967. Copies of the ADSI have been digitised and made available on the NCRB's website.<sup>1</sup> Apart from providing data on the number of suicides, the ADSI also gives information on the causes of suicides. From 1995, the ADSI added another dimension of information and started publishing suicide data disaggregated by professions.

Between 1995 and 2013, the ADSI roughly used similar categories of professions. For instance, in 1995, the categories of professions listed in the ADSI were the following: housewife, self-employed, service, student, unemployed, retired persons and others. The category, self-employed, was further broken down into the following subcategories: business activity, professional activity, farming/agriculture and others. Similarly, the category, service, was broken down into the subcategories of private, and public sector undertaking.

While there are some small changes in categories between 1995 and 2013,

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the category of self-employed (farming/ agriculture) has remained constant throughout this period. Evidently, this category will provide us information on suicides committed by farmers. But before one proceeds further, one needs to ask who are counted in the category of farming/agriculture within the self-employed? Does it refer only to what the census defines as cultivators? Or, does it refer to cultivators and agricultural labourers? The NCRB report does not provide an answer in the ADSI.

Most researchers reasonably assumed, that the ADSI category of farming/agriculture in self-employed referred only to cultivators. This is because in the case of agricultural production, it is natural to identify the self-employed with the census category of cultivators. These are the people who earn their living from farming, but with the important qualifier that they own the land, or have leased in the land. Thus, agricultural labourers would not fall in the category of the self-employed because they hire out their labour power to others (those who own or lease in land). With this assumption, the SMR of farmers would be computed as the ratio of farmer suicides (reported by the ADSI) and the population of cultivators (reported by the decennial census). Using this methodology, Nagaraj (2008: Table 3, p 7) found that the SMR of farmers was higher than the SMR for the general population, and especially so for male farmers. Mishra (2014: Table 3, p 14) reported the same pattern—male farmer SMR higher than male non-farmer SMR—for the country as a whole for most of the period between 1995 and 2012.

The publication of the ADSI in 2014 indicated that this assumption was incorrect. It now appears that the ADSI category of farming/agriculture in self-employed referred to cultivators as well as agricultural labourers, and not to cultivators alone. The categorisation of professions in the 2014 ADSI is a little different from the format used in previous years. Unlike previous years, ADSI 2014 has subdivided the category, self-employed in agriculture, into agricultural labourers, and farmers. The subcategory of farmers has been further subdivided into those owning land, and those leasing

in land. When one compares the figures reported under this category in 2014 with the figures reported under the category of farming/agriculture in self-employed in the previous years' reports, one notices a big discrepancy.

For instance, the total number of suicides for the category "self-employed persons (farmers)" in India in 2014 was 5,650. The total number of suicides for the category "self-employed (farming/agriculture)" in India in 2013 was 11,772. This would suggest that farmer suicides more than halved between 2013 and 2014. Since this is clearly implausible, one has to compare data under the category "self-employed (farming/agriculture)" of 2013 (and earlier years) with the category "self-employed persons (agriculture [total])" of 2014. Once that is done, the total number of farmer suicides is found to have risen from 11,772 in 2013 to 12,360 in 2014, an increase of about 5%.

The important point is that while computing the SMR of farmers for years before 2014, one needs to divide the number of farmer suicides by the population of cultivators and agricultural labourers, and not the population of cultivators alone, as previous researchers have done (Nagaraj 2008; Mishra 2014). Normalising the number of farmer suicides reported by the NCRB in the ADSI by the population of cultivators (from the census) overestimates the suicide rate of farmers because the reference population in the denominator leaves out agricultural labourers (which is, however, included in the numerator). By an analogous argument, this procedure will underestimate the suicide rate of non-farmers.

In this note, we present estimates of the SMR ratio for the period between 1995 and 2011 that corrects for this error. To arrive at estimates of the SMR ratio we use data from the following sources: (i) data on farmer and non-farmer suicides are taken from the ADSI; (ii) data on the population of farmers and non-farmers have been interpolated from population figures of main and marginal workers in the Census of India in 1991, 2001 and 2011. Thus, we compute the SMR of farmer as:

$$\text{SMR of farmers} = \frac{\text{number of farmer suicides}}{\text{population of farmers}}$$

where, population of farmers is the sum of (1) main and marginal cultivators, and (2) main and marginal agricultural labourers. In a similar manner, we compute the SMR of non-farmers as

$$\text{SMR of non-farmers} = \frac{\text{total suicides less farmer suicides}}{\text{total population less population of farmers}}$$

Even though the suicide data is available till 2014, our analysis is till 2011 because that is the last year for which the population data is available. To include later years would involve extrapolating population data beyond 2011, a practice that is far less reliable than interpolation.

The correct way of computing farmer suicide rates that we have used in this article not only provides better quantitative estimates of the severity of the problem of farmer suicides, it also explains the disagreement about the quantitative dimension of the problem of farmer suicides in the extant literature. On the one hand, researchers using time series data from the NCRB and the Census of India have suggested that the suicide mortality rate of farmers is higher than non-farmers. On the other hand, demographers using cross-sectional data from a nationally representative sample survey of suicides in India between 2001 and 2003 have suggested the opposite, that is, suicide rates of farmers is lower than that for non-farmers (Patel et al 2012). The error in the methodology used by Nagaraj (2008) and Mishra (2014) have led them to overestimate (underestimate) the suicide rate of (non-farmers) farmers. Probably this explains why they have arrived at conclusions that are opposite of those arrived at by Patel et al (2012).

### Trends at All-India Level

In Figures 1, 2 and 3 (p 63), we present the trend of farmer suicides at the all-India level from 1995 to 2011.<sup>2</sup> We see that the SMR ratio has been lower than 1 for all years since 1995, implying lower incidence of suicides among farmers than among non-farmers. This is true not

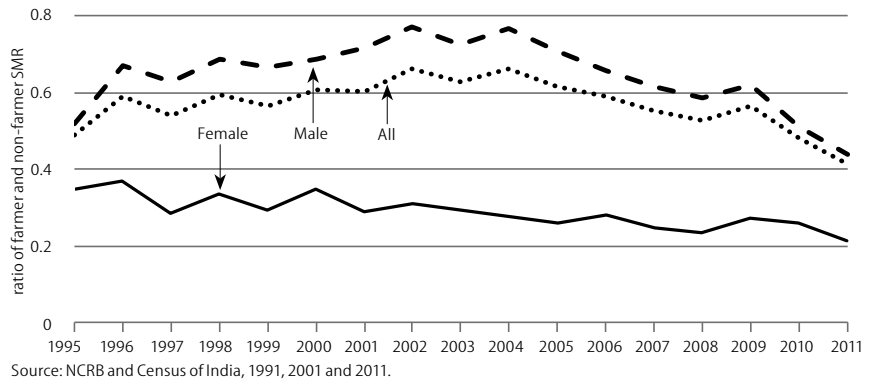
only for females, but also for males and the whole population. This finding contrasts with Nagaraj (2008) and Mishra (2014) who found the SMR ratio to be higher than 1 for the country. As pointed out, this difference stems from overestimated farmer SMR and underestimated non-farmer SMR. The SMR ratio for females is much lower than for males, for all years since 1995; the male SMR ratio has been more than twice the female SMR ratio at the all-India level.<sup>3</sup>

The mid-2000s is an important break point—the all-India SMR ratio for the whole population displays an increasing trend till 2004, and declines thereafter. While the all-India SMR ratio for males follows the same pattern as the whole population, the SMR ratio for females shows a declining trend from 1995 onwards. This suggests that the incidence of suicides among farmers increased faster than the incidence of suicides among non-farmers between 1995 and 2004, but the trend reversed thereafter.

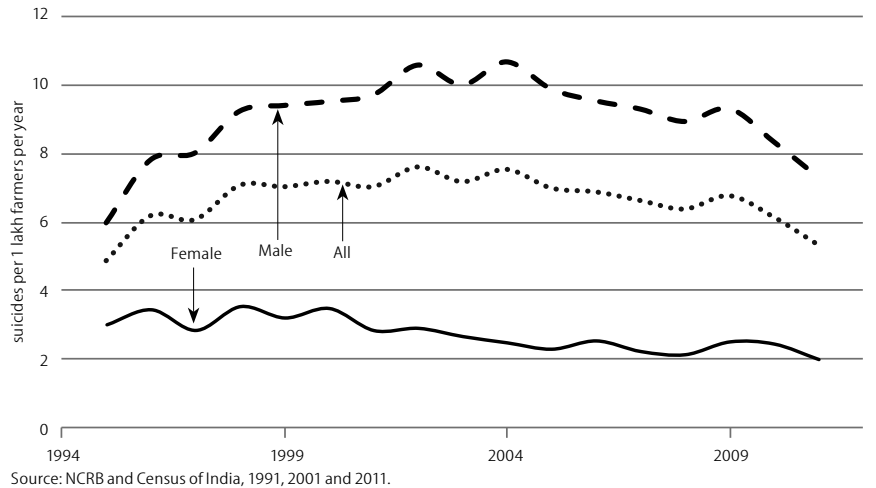
The estimates of the SMR ratio for farmers and non-farmers are presented in Figures 2 and 3. From Figure 1, we see that the SMR for all farmers and for male farmers displays an inverted-u shaped pattern. On the other hand, the SMR for female farmers was stable till the early 2000s, and has been declining since then. The SMR for all non-farmers in Figure 2 shows a different trend: it increased continuously between 1995 and 2011, other than a brief dip in the early 2000s. The SMR for male non-farmers displays an even more pronounced increase, and especially so after 2005. On the other hand, the SMR ratio for female non-farmers is composed of two distinct phases: a period of rapid increase till the late 1990s, followed by a period of equally rapid decline and very slow growth.

From Figures 2 and 3, we can conclude that the SMR ratio seen in Figure 1, for males and for the whole population, increased between 1995 and 2004 because the SMR of farmers increased faster than the SMR for non-farmers. Since 2004, the fall in the SMR ratio, for males and for the whole population, has been driven by a falling SMR for farmers and a rising SMR for non-farmers. This

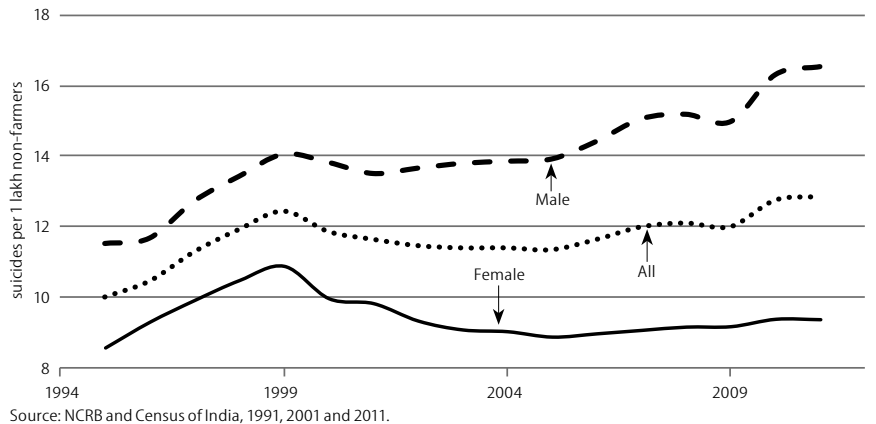
**Figure 1: Ratio of Farmer SMR and Non-farmer SMR, 1995–2011**



**Figure 2: Farmer SMR, 1995–2011**



**Figure 3: Non-farmer SMR, 1995–2011**



suggests that, at the all-India level, the severity of the problem of suicides increased among farmers, relative to non-farmers, between 1995 and 2004. Since 2004, we see an opposite pattern: the severity of the problem of suicides has grown rapidly among non-farmers, even as it has declined among farmers.

**Pattern across States**

The all-India level picture hides important state-level variations. In this section,

we investigate this cross-state variation by analysing data on 19 major states that have together accounted for more than 97% of all farmer suicides in India every year since 1995. Tables 1, 2 (p 64) and Table 3 (p 65) present estimates of the SMR ratio—the ratio of farmer SMR and non-farmer SMR—for 19 major states for the period 1995 to 2011 for all farmers, male farmers and female farmers, respectively. The states in these tables have been arranged in decreasing order

## NOTES

of the average (arithmetic mean) SMR ratio over the whole period (1995–2011). There are several interesting trends that emerge from the data presented in the tables.

First, if we analyse the SMR ratio for all farmers, the estimates in Table 1 suggest that the problem of farmer suicides is concentrated in two states, Kerala and Maharashtra. In fact, if we use a value of the SMR ratio of 1 as a cut-off to identify severe problems of farmer suicides, then Kerala (for all years) and Maharashtra (from 2001 to 2008) emerge as cases of concern.<sup>4</sup>

Second, from Table 2, we see that for male farmers, the problem is widespread.

While Kerala and Maharashtra continue to remain severely affected, with SMR ratios above-1, many more states join the list. For instance, Chhattisgarh has an SMR ratio above-1 for most years; Karnataka, Uttar Pradesh and Madhya Pradesh, each have some years when the SMR ratio was above-1; Uttarakhand had two years of above-1 SMR ratio.

Third, for female farmers, the data in Table 3 suggests that the problem is largely non-existent: only Kerala in 2006 had a SMR ratio above-1. For females, the SMR of non-farmers is far higher than the SMR of farmers. This suggests that

the suicide rate among non-farmer women need to be seriously investigated and proper policy responses fashioned.

Fourth, for all farmers, we can divide the states in three groups. The first group lists states where the SMR ratio for all farmers has trended upwards; Maharashtra, Uttar Pradesh, Punjab (since the mid-2000s), Assam and Haryana fall in the first group. The second group lists states where the SMR ratio for all farmers has been flat: Karnataka, Bihar, Himachal Pradesh, Jharkhand and Uttarakhand are in this group. The third group of states has a declining SMR

**Table 1: Ratio of Farmer SMR and Non-farmer SMR**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average
Kerala	1.67	1.33	1.51	2.01	1.89	1.90	1.52	2.38	2.65	1.49	1.89	2.00	2.29	1.55	1.71	1.79	1.72	1.84
Maharashtra	0.30	0.65	0.55	0.67	0.69	0.89	1.05	1.12	1.15	1.29	1.23	1.33	1.28	1.19	0.83	0.81	0.88	0.93
Punjab	0.99	1.59	1.21	0.85	0.54	0.55	0.44	0.51	0.26	0.80	0.54	0.79	0.75	0.54	0.86	0.64	0.78	0.74
Chhattisgarh							1.02	0.83	0.68	0.81	0.74	0.85	0.89	1.01	0.80	0.38	0.00	0.73
Karnataka	0.79	0.84	0.63	0.61	0.69	0.80	0.81	0.72	0.86	0.62	0.62	0.53	0.69	0.55	0.77	0.87	0.69	0.71
Uttar Pradesh	0.36	0.58	0.52	0.61	0.65	0.67	0.89	0.52	0.44	0.60	0.69	0.60	0.56	0.89	0.76	0.73	0.63	0.63
Madhya Pradesh	0.47	0.78	1.00	0.70	0.83	0.73	0.57	0.55	0.62	0.72	0.68	0.62	0.57	0.51	0.41	0.37	0.38	0.62
India	0.49	0.59	0.54	0.59	0.56	0.61	0.60	0.66	0.63	0.66	0.62	0.59	0.55	0.53	0.56	0.48	0.42	0.57
Andhra Pradesh	0.50	0.69	0.35	0.57	0.57	0.45	0.42	0.48	0.47	0.62	0.58	0.62	0.35	0.44	0.52	0.49	0.45	0.50
Rajasthan	0.00	0.53	0.67	0.70	0.62	0.75	0.49	0.58	0.55	0.66	0.33	0.27	0.43	0.49	0.54	0.23	0.18	0.47
Uttarakhand							0.26	0.38	0.44	0.39	0.37	0.72	0.50	0.68	0.38	0.65	0.35	0.47
West Bengal	0.55	0.70	0.61	0.57	0.50	0.57	0.52	0.68	0.43	0.33	0.35	0.41	0.40	0.27	0.39	0.33	0.26	0.46
Gujarat	0.50	0.50	0.57	0.58	0.39	0.54	0.51	0.51	0.54	0.46	0.55	0.40	0.23	0.36	0.41	0.36	0.39	0.46
Haryana	0.42	0.32	0.12	0.52	0.39	0.47	0.30	0.38	0.43	0.36	0.33	0.41	0.38	0.29	0.51	0.59	0.71	0.41
Assam	0.28	0.12	0.30	0.24	0.14	0.20	0.29	0.52	0.34	0.57	0.51	0.51	0.43	0.30	0.56	0.60	0.55	0.38
Jharkhand							0.36	0.25	0.25	0.16	0.54	0.41	0.29	0.25	0.52	0.49	0.25	0.34
Tamil Nadu		0.30	0.36	0.36	0.25	0.30	0.34	0.53	0.36	0.53	0.44	0.14	0.14	0.15	0.32	0.14	0.17	0.30
Bihar	0.39	0.28	0.21	0.21	0.22	0.20	0.32	0.36	0.24	0.20	0.23	0.24	0.29	0.21	0.36	0.26	0.36	0.27
Himachal Pradesh	0.14	0.34	0.16	0.24	0.27	0.22	0.15	0.16	0.19	0.33	0.12	0.10	0.08	0.87	0.09	0.26	0.24	0.23
Odisha	0.37	0.27	0.24	0.39	0.23	0.16	0.20	0.25	0.27	0.29	0.19	0.22	0.17	0.16	0.11	0.11	0.08	0.22

Farmer SMR (non-farmer SMR) is the number of farmer (non-farmer) suicides per lakh farmers (non-farmers). Farmers refer to cultivators and agricultural labourers.

Source: NCRB, Census of India in 1991, 2001 and 2011.

**Table 2: Ratio of Male Farmer SMR and Male Non-farmer SMR**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Kerala	1.60	1.33	1.45	1.73	1.67	1.71	1.37	2.10	2.41	1.32	1.68	1.70	2.01	1.38	1.48	1.46	1.39
Maharashtra	0.51	1.00	0.89	1.03	1.12	1.32	1.54	1.66	1.72	2.02	1.96	2.04	1.94	1.77	1.18	1.15	1.21
Punjab	0.75	1.28	1.02	0.70	0.43	0.44	0.42	0.40	0.19	0.60	0.40	0.60	0.59	0.43	0.66	0.48	0.55
Chhattisgarh							1.50	1.20	0.88	1.21	1.00	1.14	1.10	1.46	0.95	0.35	0.00
Karnataka	0.71	0.88	0.75	0.66	0.86	0.92	0.98	0.87	1.02	0.72	0.74	0.60	0.74	0.59	0.85	0.96	0.71
Uttar Pradesh	0.42	0.57	0.51	0.74	0.80	0.72	1.13	0.61	0.50	0.63	0.77	0.61	0.58	0.99	0.77	0.81	0.66
Madhya Pradesh	0.66	1.12	1.24	0.92	1.17	0.99	0.89	0.82	0.91	1.17	1.16	1.00	0.87	0.71	0.54	0.46	0.53
India	0.52	0.67	0.63	0.69	0.67	0.69	0.72	0.77	0.72	0.77	0.71	0.66	0.62	0.59	0.62	0.51	0.44
Andhra Pradesh	0.55	0.95	0.52	0.85	0.78	0.56	0.60	0.63	0.55	0.75	0.69	0.68	0.42	0.52	0.61	0.58	0.53
Rajasthan	0.00	0.81	1.10	1.04	0.88	0.95	0.72	0.81	0.81	0.98	0.48	0.37	0.61	0.64	0.76	0.31	0.22
Uttarakhand							0.43	0.70	0.69	0.55	0.36	0.94	0.64	1.01	0.59	1.01	0.52
West Bengal	0.48	0.66	0.62	0.49	0.44	0.51	0.46	0.62	0.45	0.36	0.34	0.36	0.35	0.26	0.37	0.28	0.22
Gujarat	0.63	0.73	0.82	0.86	0.54	0.79	0.75	0.67	0.66	0.58	0.66	0.47	0.28	0.40	0.47	0.41	0.41
Haryana	0.47	0.37	0.14	0.60	0.41	0.53	0.37	0.41	0.47	0.39	0.33	0.41	0.39	0.30	0.52	0.55	0.62
Assam	0.29	0.12	0.30	0.23	0.12	0.18	0.25	0.50	0.30	0.56	0.44	0.46	0.43	0.30	0.57	0.59	0.54
Jharkhand							0.61	0.41	0.41	0.26	0.81	0.64	0.34	0.31	0.72	0.62	0.33
Tamil Nadu		0.34	0.45	0.50	0.32	0.36	0.41	0.71	0.43	0.65	0.52	0.17	0.17	0.17	0.39	0.16	0.19
Bihar	0.39	0.29	0.22	0.21	0.21	0.28	0.40	0.35	0.27	0.23	0.21	0.28	0.33	0.22	0.38	0.29	0.32
Himachal Pradesh	0.29	0.67	0.25	0.34	0.58	0.42	0.35	0.32	0.34	0.55	0.25	0.19	0.14	1.38	0.17	0.50	0.45
Odisha	0.45	0.37	0.27	0.49	0.31	0.19	0.23	0.28	0.29	0.28	0.18	0.24	0.15	0.18	0.12	0.13	0.10

Male farmer (non-farmer) SMR is the number of male farmer (non-farmer) suicides per lakh male farmers (non-farmer);

Source: NCRB, Census of India in 1991, 2001 and 2011.

**Table 3: Ratio of Female Farmer SMR and Female Non-farmer SMR**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Kerala	0.44	0.29	0.35	1.39	1.03	0.75	0.53	0.95	0.63	0.45	0.48	1.06	0.85	0.59	0.89	1.28	1.32
Maharashtra	0.06	0.28	0.19	0.28	0.22	0.35	0.40	0.39	0.33	0.26	0.21	0.25	0.21	0.19	0.15	0.14	0.18
Punjab	0.42	0.14	0.00	0.00	0.00	0.00	0.19	0.00	0.14	0.14	0.00	0.00	0.19	0.00	0.42	0.00	0.46
Chhattisgarh							0.41	0.30	0.34	0.25	0.29	0.39	0.50	0.38	0.48	0.41	0.00
Karnataka	0.86	0.65	0.32	0.42	0.31	0.48	0.34	0.31	0.36	0.27	0.23	0.27	0.41	0.33	0.42	0.51	0.46
Uttar Pradesh	0.06	0.56	0.44	0.36	0.33	0.48	0.48	0.21	0.21	0.45	0.49	0.40	0.44	0.60	0.63	0.58	0.40
Madhya Pradesh	0.21	0.41	0.68	0.39	0.42	0.37	0.25	0.26	0.31	0.27	0.22	0.20	0.20	0.19	0.21	0.20	0.14
India	0.35	0.37	0.29	0.34	0.29	0.35	0.29	0.31	0.29	0.28	0.26	0.28	0.25	0.23	0.27	0.26	0.21
Andhra Pradesh	0.42	0.33	0.11	0.19	0.26	0.25	0.12	0.19	0.28	0.31	0.32	0.44	0.17	0.24	0.27	0.25	0.24
Rajasthan	0.00	0.13	0.19	0.22	0.28	0.48	0.18	0.23	0.16	0.17	0.05	0.08	0.06	0.18	0.14	0.07	0.09
Uttarakhand							0.08	0.07	0.06	0.17	0.39	0.50	0.35	0.34	0.12	0.22	0.10
West Bengal	0.70	0.71	0.48	0.78	0.60	0.65	0.57	0.75	0.22	0.05	0.20	0.41	0.43	0.18	0.25	0.36	0.26
Gujarat	0.34	0.21	0.29	0.21	0.18	0.15	0.16	0.21	0.28	0.18	0.26	0.20	0.07	0.19	0.20	0.15	0.25
Haryana	0.00	0.00	0.00	0.20	0.24	0.14	0.09	0.19	0.13	0.15	0.13	0.11	0.00	0.00	0.06	0.19	0.41
Assam	0.07	0.00	0.09	0.05	0.12	0.11	0.22	0.22	0.26	0.13	0.39	0.24	0.02	0.04	0.18	0.14	0.11
Jharkhand							0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.08	0.05	0.19	0.04
Tamil Nadu		0.22	0.19	0.12	0.14	0.17	0.16	0.20	0.20	0.28	0.25	0.08	0.08	0.10	0.18	0.08	0.12
Bihar	0.27	0.19	0.11	0.18	0.17	0.02	0.11	0.22	0.02	0.00	0.18	0.14	0.11	0.07	0.31	0.05	0.36
Himachal Pradesh	0.00	0.04	0.06	0.16	0.00	0.00	0.00	0.01	0.06	0.12	0.00	0.00	0.01	0.37	0.00	0.02	0.04
Odisha	0.17	0.06	0.09	0.18	0.02	0.05	0.11	0.09	0.11	0.22	0.14	0.11	0.17	0.04	0.03	0.04	0.01

Female farmer (non-farmer) SMR is the number of female farmer (non-farmer) suicides per lakh female farmers (non-farmer). Source: NCRB, Census of India in 1991, 2001 and 2011.

ratio for all farmers: Andhra Pradesh, Chhattisgarh, Gujarat, Madhya Pradesh, Odisha, Rajasthan, Tamil Nadu and West Bengal are in this group.

### Concluding Remarks

We have presented estimates of the SMR of farmers and non-farmers in India and for 19 major states for the period 1995–2011. Our estimates of farmer suicide rates highlight several important facts. For the country as a whole, the SMR ratio, that is, the ratio of farmer SMR and non-farmer SMR, has always been lower than 1. This means that the suicide rate of farmers has been lower than the suicide rate of non-farmers from 1995 to 2011. We also see that the SMR for male farmers has been consistently and significantly higher than for female farmers. While there could be serious data issues that are driving this result, the existing evidence suggests that the problem of farmer suicides has affected male farmers much more severely than female farmers. In addition to this fact about levels, we also see an important fact about trends: the SMR ratio for India has increased between 1995 and 2004, and has declined since then. The main conclusion that emerges from an analysis of the data for the whole country is that the problem of farmer suicides is not an all-India phenomenon.

Our analysis of state-level data shows that the problem of farmer suicides is

much concentrated in a few states. We see this most clearly when we investigate the pattern of the SMR ratio for male farmers. While Kerala and Maharashtra are clearly the worst affected states, the other states that have seen above-1 SMR ratio for male farmers (in some years) are: Chhattisgarh, Karnataka, Uttar Pradesh, and Madhya Pradesh. In terms of trends, besides the usual suspects of Kerala and Maharashtra, states like Uttar Pradesh, Haryana, Assam and Bihar have also been witnessing a rising trend of farmer suicides. Thus, it seems best to analyse the phenomenon of farmer suicides as affecting these states, and not as a countrywide phenomenon. This might also help in designing policies that take account of state-specific factors—like cropping patterns, extent of irrigation, accessibility of rural credit for formal institutions, provisions of crop insurance—that contribute to the troubling phenomenon of farmer suicides.

To pre-empt any misinterpretation of the evidence presented in this note, we would like to conclude with a disclaimer. Although high rate of suicide of farmers, as measured by an above-1 SMR ratio, are found to be concentrated in some states, this should not lead to the inference that the agrarian crisis is also concentrated in these few states. The general state of low farm income, stagnation of the rate of capital accumulation, declining growth rate of the agricultural sector,

etc, suggest that the phenomenon of agrarian crisis is far more widespread. But, it is true that the manifestation of agrarian crisis in terms of farmer suicides, an extreme step in any situation, seems to be concentrated in some states.

### NOTES

- 1 <http://ncrb.nic.in/accddeaths.htm>.
- 2 Detailed data are available from the authors upon request.
- 3 It is possible that the NCRB data underestimates the suicides of female farmers far more than the suicides of male farmers. Hence, part of the reason behind the huge difference between the SMR ratio of male and female farmers could be the NCRB data. Studies that have used data collected from fieldwork, including Nagaraj (2008), have underlined the under-reporting of farmer suicides in NCRB data. The wild fluctuations in the NCRB data raise concerns of reliability. For instance, while Chhattisgarh had very high suicide rates till 2009, it reported zero suicides in 2011. However, at this point, we do not have access to any alternative sources of data to correct for such problems.
- 4 Also, Punjab (1996 and 1997), and Chhattisgarh (2001 and 2008).

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