IMPACT OF RURAL HEALTHCARE EXPENDITURE ON INDEBTEDNESS AMONG MARGINAL AND SMALL FARMERS OF PUNJAB

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Abstract:

The present study was undertaken in Bhatinda and Sangrur districts (where maximum farmer suicides were reported) of Punjab during 2010-11. Healthcare expenditures were significant in increasing the indebtedness (which has in turn been a proximate cause of farmer's suicides) of marginal and small farmers of Punjab. The rural healthcare facilities in Punjab through government health services were inadequate, non qualitative and not available at times. The worst affected due to this were poor especially landless labourers, marginal and small farmers residing in rural areas, who have meager financial resources. The subsequent financial burden of private healthcare services is responsible for credit acquisition from non institutional sources at exorbitant rate of interest by these underprivileged sections of the rural society. One of the major reason for this pathetic state of rural healthcare in Punjab, is low priority being accorded to rural healthcare which is evident from decreasing state expenditure on healthcare.

KeyWords: Indebtedness, Expenditures, Inflation, Credit acquisition, Debt burden, Institutional/ non institutional source of credit.

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The agriculture sector in India is presently facing serious ecological and economic crisis. The agricultural productivity has nearly stagnated due to resource degradation (soil and water especially) leading to consistent rise in the cost of production or squeezing of profit margins/income levels of farmers (Government of India, 2007). The worst affected are resource poor marginal farmers (having land holdings below 1 hectare) and small farmers (having land holdings below 2 hectares) resulting in high incidences of indebtedness and suicides among them. The most concerning fact is that cases of farmer suicides due to indebtedness were reported from states like Maharashtra, Andhra Pradesh, Karnataka, Kerala and Punjab which were considered to be agriculture prosperous states.

The debt burden of farmers in Punjab has shot up by a staggering 500 per cent over the past ten years to Rs. 35,00 millions and over 89 per cent of farmers in Punjab were under debt with per farm family debt estimated to be Rs. 1,78,934, and per ha outstanding debt to be more than Rs. 50,000 (Patil, 2012). Healthcare expenditures have been significant in causing or increasing the indebtedness of farmers, which has in turn been a proximate cause of farmer's suicides, as nearly 41.6 % of total credit acquired by marginal and small farmers was for healthcare purposes (NSSO, 2005). Therefore, to have better insight into healthcare scenario in Punjab and credit availed by marginal and small farmers for healthcare purposes, the present study in the year 2010-11 with following objectives was undertaken:

1. To estimate the level of credit acquisition for healthcare purposes by marginal and small farmers in Punjab.
2. To assess the present scenario of public healthcare services in rural areas of Punjab.

Methodology:

In the present study primary data was collected using personal interview method from 300 farmers (i.e. 150 marginal and 150 small farmers) spread over two districts namely Bhatinda and Sangrur districts of Punjab, for estimating variables like income and expenditure level of marginal and small farmers, purpose wise credit acquisition by these farmers and reasons for availing expensive private healthcare services. Secondary data was collected from government reports / publications, journals, internet, newspaper etc. for evaluating the healthcare scenario in rural areas of Punjab.

Results and Discussion:

I) Income and expenditure of marginal and small farmers

The annual/monthly income of marginal and small farmers from all sources was estimated to be less than their total expenditure. Table. 1 shows that total annual income was estimated to be Rs. 56,428 per marginal farm and Rs 1,05,680 per small farm whereas their average annual expenditure were estimated to be Rs. 79,769 per marginal farm and Rs 1,46,378 per small farm. The annual income of both categories of farmers fell short by their annual total expenditure by 41.4 % in case of marginal farmers and 38.5 % in case of small farmers (Table. 1). The consumption expenditure constituted major part of total annual expenditure of marginal and small farmers. It was estimated to be Rs. 44,760 or 56.1% and Rs. 65,892 or 45 % of total annual expenditure per farm for marginal and small farms respectively. One of the reason for higher consumption expenditure was substantial increase in cost of living with average annual inflation for the last decade estimated at 7.3 % (Economic Survey of India, 2010). The marginal farmers were incurring annual production expenditure of Rs. 22,325 per farm or Rs.11,750 per acre (as average farm size of sample marginal farmers is 1.9 acres) whereas the small farmers were incurring annual production expenditure of Rs. 51,526 or Rs. 12,268 per acre (as average farm size of sample small farmers in 4.2 acres). The annual agricultural production expenditure per farm was only 28.8 per cent and 39.8 per cent of total annual expenditure of marginal and small farmers. However as per recommendations of Punjab Agriculture University (PAU), Ludhiana the annual production expenditure for crops which these farmers were producing i.e. wheat, rice and fodder crops is Rs. 15,500 per acre (including labour and machinery charges). Therefore, these farmers were under utilizing resources by Rs. 3750 per acre or 24.2 per cent in case of marginal farmers and Rs. 3232 per acre or 19.6 per cent in case of small farmers due to lack of finance. This is a matter of concern as low investments lead to low income thereby forcing the farmers to acquire more credit for meeting their financial obligations. Moreover, even for making the existing production expenditure which is less than the recommended level, the farmers have taken loans and were highly indebted (Table.1).

Table 1- Annual expenditure and income (Rs./ farm) of marginal and small farmers in Punjab

A	Annual expenditure	Marginal farmers	Small farmers
1	Consumption expenditure (monthly/ farm)		
	a) On food items	2755	3878
	b) On non food items	183	298
	c) On education of children	376	535
	d) Miscellaneous	416	780
	Sub total (monthly)	3730	5491
	Sub total (Annual)	44760(56.1)	65892(45)
2	Agricultural prod. expenditure (annual/farm) including labour charges	22325 (28.8)	51526(39.2)
	Agri. prod. expenditure / acre	11750	12268
3	Payments of old debts (annual / farm)		
	a) Short term credit	5088	13170
	b) Medium/long term	7596	15790
	Sub total	12684 (15.9)	28960 (19.8)
	Average annual total expenditure (1+2+3) (100)	79769 (100)	146378 (100)
B	Total average annual income/farm	56428	105680
	Difference of expenditure and Income	23341 (41.4)	40698 (38.5)
C	Agri. prod. expenditure/acre (as per recommendation of PAU, Ludhiana)	15500	15500
D	Present annual agri. prod. expenditure/acre	11750	12268
E	Difference	3750 (24.2)	3232 (19.6)

*figures in parenthesis () are in %age

II) Credit acquisition by marginal and small farmers

The credit was acquired by marginal and small farmers for various purposes/uses as per requirement from various sources. The maximum credit was acquired for production purpose by both marginal and small farmers i.e. nearly 45.6 % and 41.1 % respectively of the total credit taken. The short term production credit (which is 57.4 and 52.5 % for marginal and small farmers) was acquired for purchase of agricultural inputs such as seeds, fertilizers and agro chemicals whereas, medium/long term credit (estimated to be 38.9 % and 31.3 % for marginal and small farmers) was acquired for purchase of farm machinery, implements, farm buildings, livestock's, irrigation structures etc. The second important purpose for which credit was acquired by marginal and small farmers was for payment of old debts i.e. 16.6 % and 19.2 % of total credit respectively. The third important purpose for which credit was acquired by marginal and small farmers was for

healthcare i.e. nearly 15.1% and 17.3% of the total acquired credit respectively. Similarly, marginal and small farmers acquired credit for social/religious ceremonies i.e. 11.9 % and 14.2 % respectively, which includes expenses incurred on birth, death, marriages and other social functions not only in own family but also in relative families. Small farmers were spending more money comparatively on these ceremonies as they have better social status than marginal farmers (Table 2).

Table 2– Credit acquisition (in Rs.) by marginal and small farmers for different purposes

		Short term Credit		Medium/long term Credit		Total Credit	
	Use of Credit	**Marginal**	**Small**	**Marginal**	**Small**	**Marginal**	**Small**
1	Production Purpose	10794 (57.4)	15547 (52.5)	15930 (39.5)	23304 (35.9)	26724 (45.2)	38851 (41.1)
2	Consumption purpose	1536 (8.2)	1691 (5.7)	2859 (7.1)	3569 (5.5)	4395 (7.4)	5260 (5.6)
3	Healthcare purpose	1879 (10)	2938 (9.9)	7046 (17.5)	13398 (20.7)	8925 (15.1)	16336 (17.3)
4	Social/Religious ceremonies	1492 (7.9)	3621 (12.3)	5587 (13.9)	9801 (15.1)	7079 (11.9)	13422 (14.2)
5	Payments of old debts	2832 (15.1)	4923 (16.6)	6990 (17.3)	13259 (20.4)	9822 (16.6)	18182 (19.2)
6	Miscellaneous	262 (1.4)	886 (3.0)	1928 (4.8)	1565 (2.4)	2190 (3.8)	2451 (2.6)
	Total	18795 (100)	29606 (100)	40340 (100)	64896 (100)	59135 (100)	94502 (100)

() figures in parentheses are %ages

Moreover credit which is sought for agricultural production purpose is diverted to other purposes which are mostly unproductive like consumption of liquor, social/religious ceremonies etc. resulting in accumulation of debt burden on the farmers. The miscellaneous category includes credit taken for purchase of two wheelers, color televisions, mobile phones etc. Under this category nearly 4.9 % and 3.5 % of total credit was acquired by marginal and small farmers (Table 2).

III) Healthcare scenario in rural Punjab

The healthcare credit was having major share in total credit acquisition by marginal and small farmers as cheap medical facilities through government health services are inadequate, non qualitative and not available at times. There are less number of sub centres (SC's), primary health centres (PHC's) and community health centres (CHC's) than their actual requirement in the rural areas of Punjab. According to Indian Public Health Norms (IPHS) there should be one SC for 5000 people (3000 in hilly areas), one PHC for 30,000 people (20,000 for hilly areas) and one CHC for 1,20,000 people (80,000 for hilly areas). But in rural areas of Punjab there are only 2950 SC's against the requirement of 3657 (according to rural population estimates of 2011 census), 446 PHC's against the requirement of 610 and 129 CHC 's whereas 152 are required which means a shortage of 707 SC's, 164 PHC's, and 23 CHC's exists in rural areas of Punjab (Table 3).

Table 3- The availability and requirement of rural healthcare institutions in Punjab

(in numbers)

Particulars	**SC 's**	**PHC 's**	**CHC 's**
1. Availability			
a) Sixth Plan (1981-85)	2602	130	10
b) Seventh Plan (1985-90)	2852	460	70
c) Eighth Plan (1992-97)	2852	484	105
d) Ninth Plan (1997-2002)	2852	484	105
e) Tenth Plan (2002-2007)	2858	484	126
f) Eleventh Plan (up to March 2010)	2950	446	129
2. Requirement			
a) As per 2001 census	3219	537	134
b) As per 2011 census	3657	610	152
c) Shortage as per 2011 census	707	164	23

() figures in parentheses are % ages ; Source : Rural Health Statistics, 2010

The number of health institutions in rural areas of the state have not increased or remained more or less stagnant from the year 1985 to 2007 which highlights poor commitment of state governments towards healthcare, whereas the population in rural area of Punjab which constitutes 63.3 % of total state population has increased significantly over the years (Table 3).

Due to less number of public health institutions than their actual requirement, these institutions in rural areas are overburdened both in terms of area and number of persons

dependent. One PHC covers nearly 108 sq. kms whereas one CHC caters to 374 sq. kms of area which sounds unbelievable. Some of the basic facilities in these government health institutions are not available such as electricity (661 SC's and 20 PHC's), water (594 SC's and 12 PHC's). Similarly 1122 SC's, 44 PHC's and 13 CHC's were having no building at all (Table 4).

Table 4 - Facilities in public health institutions in rural areas of Punjab (as on march 2010)

Particulars	SC 's	PHC 's	CHC 's
1. Total no. of institutions	2950	446	129
2. Population covered by one	6198	40997	141743
3. Population to be covered as per IPHS	5000	30000	120000
4. Av. rural area covered (sq. kms) by a	16.37	108.28	374.29
5. Av. no. of villages covered by one	4	28	98
6.Institutions without buildings/to be constructed	1122	44	13
7. Institution without electricity	661	20	-
8. Institution without regular water supply	594	12	-

Source : Rural Health Statistics, 2010

Moreover, acute manpower shortages also exist in these institutions as there exists a shortage of 216 doctors (i.e. 41.9 % shortage) in CHC's, and only 22 CHC's out of 129, having all four specialist doctors. Similarly a shortage of 52 % health workers (male), 40 % shortage of laboratory technicians and 42.6 % block extension educator in PHC's exist (Table 5). Furthermore, the absenteeism of medical staff, poor/outdated/non working medical equipments and lack of basic infrastructure are some of the other problems which rural inhabitants face.

Table. 5- Manpower availability in rural health institutions of Punjab (as on march 2010)

Particulars	Required	Available	Shortage
A) SC's			
1. Health workers (HW) (male)	2950	1900	1050 (35.6)
2. Health worker/ANM (female)	2950	3903	-
B) PHC's			

1. Health asstt./ ANM's (female)	446	353	93 (20.9)
2. Health asstt./ ANM's (male)	446	213	233 (52.2)
3. Doctors	446	410	36 (8.1)
4. No. of PHC's working with a doctor	446	378	68 (15.2)
5. Lab. technician's	446	266	180 (40.4)
6. Pharmacist	446	422	24 (5.4)
7. Block extension educator	68	39	29 (42.6)
C) CHC's			
1. Doctors (CHC's)	516	300	216 (41.9)
a) Physicians	129	70	59 (45.7)
b) Obst. & Gynecologists	129	75	54 (41.9)
c) Pediatrician	129	54	75 (58.1)
d) Surgeon	129	101	28 (21.7)
2. With all four specialists	129	22	107 (83)
3. Radiographers	129	109	20 (15.5)

Source : Rural Health Statistics, 2010 ; () figures in parentheses are %ages

III) Health Expenditure of State

One of the major reason for this pathetic state of rural healthcare in Punjab, is ever decreasing state expenditure on health as revealed by the share of health sector in the overall budget as the state expenditure on health sector which was 7.19 % of the total state budget in 1985-86 subsequently decreased over the years to 3.86 % in 2009-10 (Statistical Abstract of Punjab, 2010). The meagre resource allocation to health sector has adversely affected both access and quality of health services. Low public sector spending on health services results in over-dependence on private sector for getting health services. In other words out-of-pocket expenditure comprises major share of expenditure on health care in Punjab especially in rural areas where households undertook nearly 76.1 per cent of the total healthcare spending from their own sources whereas public spending was only 18 per cent, and all other sources like NGO's, charitable trusts etc. contribute only 5.9 per cent of total health expenditure. The ratio of 1:4 for public to private health expenditure reflects the inadequate quantity and quality of public health services in rural areas of Punjab (Ghuman and Mehta, 2009).

Table 6 – Share of Health Expenditure in Total Expenditure of Punjab.

Year	Expenditure (in Rs. Crore)	% age of total expenditure
1985-86	-	7.19
1991-92	-	5.67
2001-02	618.17	4.86
2002-03	610.34	4.12
2003-04	729.56	4.24
2004-05	773.83	4.05
2005-06	695.85	3.82
2006-07	689.02	3.72
2007-08	756.47	3.28
2008-09	829.23	3.38
2009-10	1141.81	3.86
2010-11*	1281	3.84

Sources: Statistical Abstract of Punjab (2010); * Expected expenditure

India has about 315 million poor people and 74 per cent of these reside in rural areas. Moreover, the concentration of poverty among landless agricultural labourers, marginal and small farmers accounts for nearly 50 per cent of total poor in India (Kumar et al., 2011). The rural people, who are more prone to diseases like tuberculosis, cancer, liver dysfunction etc. due to nutritional imbalance, lack of proper sanitation facilities and residual effect of agro-chemicals are forced to avail the services of private medical treatment, which are quite costly. The poor rural people pay from their own sources which are many times inadequate, forcing them to acquire credit sometimes at exorbitant rate of interest, thereby increasing the debt burden on them. Therefore, it was found during the study that although nearly 11 % marginal and 9.4 % small farmers were suffering from serious ailments requiring immediate medical assistance but due to lack of funds were unable to avail these services.

Although Government of India has launched a new massive health policy known as National Rural Health Mission (NRHM) with the objectives to improve the availability of and access of quality health care to people, especially those residing in rural areas, the poor, women and children (NRHM, 2005). The pace of implementation of this scheme is very slow as Accredited Social Health Activist (ASHA) who are the key player, to work as an interface between the community and the public health system are less in number and the states have not made any arrangement for their training. In India as a whole out of the total 228,327 ASHA's

proposed to be selected only 145,546 ASHA's were selected and in most of the states the progress of NRHM is very tardy (Garg and Nath, 2007). A government funded review of National Rural Health Mission (NRHM) revealed its slow progress due to problems in the implementation of the NRHM due to administrative constraints, governance issues, inadequacies in human resources as well as the poor investment in public health services in the recent past (Shrivastava, 2008). Furthermore, financial irregularities and corruption in implementation of NRHM in almost all states, has raised doubts regarding efficiency of this scheme (Annon, 2012).

Similarly the Punjab government had introduced two reforms in health policy. First was the opening of health-care services to the private corporate sector. Private sector hospitals were given land and facilities at concessional rates and were expected in return to provide free treatment to yellow card holders (people below the poverty line) upto 10 per cent of outpatients and 5 per cent of inpatients. The second policy decision was setting up of Punjab Health Systems Corporation (PHSC) in October 1995 by the state government, under the World Bank-sponsored State Health Systems Development Project II, in which more than 150 health-care institutions run by the government were transferred to PHSC. In these hospitals doctors were contractually appointed on an honorarium of Rs. 30,000 per month and with this money they were supposed to keep temporary staff of one nurse, one health worker and one safai karamchari. Nearly 1200 doctors were appointed out of which 800 doctors left these jobs within one year for permanent jobs in neighboring states like Haryana and Himachal Pradesh. Therefore, both these measures failed miserably, as to mobilize more resources, the hospitals no longer provided free services and instead charged all patients a user fee, including people below the poverty line. Moreover, the complex and cumbersome procedures in these institutions were constraining the access of the poor to the health care services.

IV) Impact of healthcare cost on indebtedness

In order to evaluate the impact of health care costs on indebtedness level of the marginal and small farmers in the study area, the magnitude of indebtedness was regressed against several socio-economic variables which included the expenditure incurred on health care of the children. The results of the regression analysis are shown in Table 7.

Table 7: Determinants of indebtedness among marginal and small farmers: Regression Analysis

Variables	Marginal farmers		Small farmers	
	β	t-value	B	t-value
Constant	0.4172	1.243	0.5378	0.978
Age of the Head of the Family	0.0479	1.421	0.0389	1.597
Education of the Head of the Family	-0.0018	1.457	-0.1481*	2.159
Dependency Ratio (%)	0.2267**	2.965	0.0718	1.341
Non-Farm Income	-0.3104*	2.316	-0.3478**	2.689
Consumption Expenditure	0.1983*	2.523	0.2987*	2.378
Expenditure on Health Care	0.3278**	3.248	0.2764**	2.892
Non-Institutional Debt as Proportion of Total Debt (%)	0.2954*	2.491	0.2118**	3.141
R^2	0.7284		0.8163	
F-ratio	17.09**		28.33**	

* Significant at 1 per cent level ; ** Significant at 5 per cent level.

The value of coefficient of multiple determination or R-square came to 0.7284 in case of marginal farmers and 0.8163 in case of small farmers which indicated that the independent variables included in equation could explain 72.84 percent and 81.63 percent of the variation in the indebtedness of marginal and small farmers. The regression coefficients of dependency ratio, consumption expenditure, expenditure on health care and proportion of non-institutional sources in the total debt were found to be significantly positive which indicated that these variables directly affected the indebtedness level of the marginal farmers. On the other hand, the coefficient of non-farm income came to significantly negative on both farmer categories, indicating a decline in indebtedness with the increase in non-farm income of marginal and small farmers. However, the coefficients of educational level of the head of family was negative which indicated that higher educational level of the farmer caused a decline in the indebtedness of both marginal and small farmers in the study area.

Conclusion:

Commercialization and privatization of health services during post-globalization phase have excluded a sizeable number of population particularly belonging to socially disadvantaged groups like landless labourers, marginal and small farmers, and poor from the coverage of health

services provided by organized sector in rural areas. The subsequent financial burden of private healthcare services is responsible for credit acquisition by these underprivileged sections of the society. Therefore, policy measures like increasing the share of state's expenditure on healthcare especially in rural areas, improving the existing healthcare facilities, filling up of vacant posts in these institutions, frequent surprise visits by higher officials to check absenteeism, compulsory rural postings of staff and fixing accountability of employees can improve the rural health scenario in the state. As non-farm income was found to be having negative relationship with indebtedness level of marginal and small farmers hence, creating non-farm employment opportunities for these farmers can help in reducing their debt burden.

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