

A MICRO LEVEL ANALYSIS OF UTILIZATION OF AGRICULTURAL SAVING: CAUSES AND PROSPECTS

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. Abstract

It has been observed by several scholars that due to the higher marginal propensity to consume at lower and middle income levels, farmers have gone to improve living and nutrition standards including better education and health care rather than ploughing back it in to agriculture sector. Even growth of income of large cultivators; spread of financial institutions in the rural areas and the deceleration of investment in physical assets have resulted in increased outflow of savings from the agriculture sector to non-agricultural sectors. This study has been explored the reason of outflow of agricultural surplus to non-agriculture sector in the state of Uttar Pradesh by a multistage stratified random sampling design with the help of a detailed structured questionnaire.

Most of the farmers preferred investment in agriculture due to lack of capital to invest in other business, which needs huge investment at a time, profit from cash crops, risk and competition in other business and less risk in agriculture. Most of the farmers in state preferred investment in non-agriculture sector to earn extra income, due to lower return from smallholdings in agriculture, to fulfill the needs of family, hard work and less profit in agriculture, increasing cost of inputs and lower prices of the agricultural product.

The results supported the view about the outflow of agricultural savings to non-agricultural sector, mainly in eastern region of the state. All these trends indicate that there was substantial out flow of the savings in agriculture sector to non-agricultural sector but it is not due to the neglect of agriculture. Importance of agriculture sector is still pertinent and reflected by large investment in the agriculture by the sample households, particularly by medium and large farmers. In spite of increasing cost of cultivation, hard fieldwork and decreasing returns, preference to invest in agriculture is not decreasing in farmers.

Key words: Agricultural saving, investment, non-agriculture sector, preferences, education

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Introduction

The growth of Indian agriculture depends upon what the farmers do with the additional incomes generated. The income from cultivation partly depends upon the nature of crops grown and partly upon the intensity of cultivation. The technological break-through in agricultural production through HYV seeds-fertilizers revolution has accelerated the transformation of Indian farm economy from subsistence level to a profitable business since green revolution periods. Consequently, farmers were motivated to save and invest in order to expand their incomes and shrink in rural poverty.

Agriculture contributed more than 52 % of total output of India's economy in early 1950s. Recently, its share has steadily declined to about 13%. Transformation of Indian economy from agriculture to non-agriculture sector got a strong drive after 1980-81. Though, the lethargic incorporation of labor force in the non-agricultural sector raises concerns among policy makers and scholars. This disproportion share of agricultural and non-agricultural sectors in income and employment created a widening gap between the earnings of agricultural and non-agricultural labour. This has been converted into a growing rural-urban divide and inter-sectoral disparities.

In India, there has been an unbalanced surplus transfer progressively increasing inequality between villages and towns. The Government of India has succeeded in transferring agricultural families saving and skills for investment into non-agricultural fixed and human capital. The transfer of agricultural capital surplus in excess of investment in agriculture to non-agricultural uses has damaged the rate of growth of the total output.

A number of studies have been conducted in India covering various aspects of inter-sectoral resource transfers focused on understanding the mechanism through which resource transfers have influenced the relative growth of the sectors. Mellor (1967, 1971) and Mellor and Lele (1972) discuss the magnitude of the resource flows of agriculture and non-agriculture sector under various conditions of economic growth and highlight their relationship with changing technology and economic and institutional devices. In case of India the study finds that all the three mechanisms, i.e., government accounts, price relationships and private accounts have transferred resources to the agriculture sector, which is not a case of successful development. So a wide range of devices may be used to facilitate such resource transfers, including the increasing

agricultural taxes, lowering the relative agricultural prices and direct investment outside agriculture by wealthy agriculturalists. A contrasting argument is given by Michael Lipton (1978, 1980) that resources are transferred to the non-agricultural sector than to the agriculture sector presumably on the assumption that the rate of return to investment is higher in the non-agriculture sector.

There was an extensive discussion during the 1975 conference of the Indian Society of Agricultural Economics about the determinants of investment and the need for mobilization of rural surpluses. Some of the studies pointed out that a number of farm households were diverting a large part of increased income to non-farm investment or consumption. Singh and Gugnani (1975) observed that due to the higher marginal propensity to consume at lower and middle income levels, farmers have gone to improve living and nutrition standards including better education and health care rather than ploughing back it in to agriculture sector. Several researchers analyzed that the intra-sectoral flow of savings and investment becomes more important than the inter-sectoral transfer of savings because the distribution of land and thus of incomes is largely uneven among farmers, so on some farms a large proportion of additional income has been invested in farm activities, but a number of farm households where additional avenues of profitable investment on farm are drying up divert saving to non-farm investment (Bansal ,1969;Panikar ,1969;Panchamukhi,1975Joshi ,1992)

Several studies by Mundle (1975, 1977, 1981) regarding the estimation of resource flows between agriculture and non-agriculture, explained that the drain of resources from agriculture hampers capitalist development in agriculture and reduces the differentiation of pleasantry limiting thereby the growth of market for industrial goods in the agriculture sector. Some studies has estimated the direction of flows and concluded that financial flows have favoured agriculture, which in turn have led to a saving potential in the agriculture sector. These studies has drawn attention to lower growth in rural debts and higher rate of repayment defaults, implying an increase in the non-capital formation uses of the credit advances, which is indicated by relative shift of investment pattern of rural household in favour of non-farm activities (Mody 1983,1984;Griappa ,1984;Shetty,1990)

Backward and stagnant technology in the rural sector was tended to reduce the effective uses of current investment. Many scholars have pointed out growth of income of large cultivators; spread of financial institutions in the rural areas and the deceleration of investment in physical assets have resulted in increased outflow of savings from the agriculture sector to non-agricultural sectors.

Objective- In this backdrop, the main theme of this paper is to explore the reason of outflow of agricultural surplus to non-agriculture sector in the state of Uttar Pradesh.

The paper is organized in to four sections. Section one describe briefly the methodology and study design. In section two estimates of outflow of agricultural surplus to non-agriculture sector have been worked out. Income and investment, per farm saving and its use for different purposes and reasons for preference to invest the savings in agriculture sector and non-agriculture sector have been discussed in this section. Section three summarized the main findings of the paper.

I- Study Design and Methodology

A multistage stratified random sample design was adopted for the primary data collection from 256 selected rural households to study the investment behaviour of farmers. Data on various aspects of socio-economic conditions of the households, their income levels and saving and investment pattern were collected with the help of a detailed structured questionnaire for the period of 1 Aug 2014 to 30 Sep 2015. In the first stage two districts, one each from the eastern and western regions of U.P. was selected. Bijnor district was selected of west U.P. and Faizabad district of east U.P., as they represent the average situation prevailing in the two regions. In the second stage, two blocks were selected from each district, one with good irrigation facilities, and the other with poor irrigation facilities to take into account the variations in resource endowment.

In the third stage, two villages were selected from each of the selected blocks, one with better infrastructure facilities in terms of roads and banks and the other with relatively poorer infrastructure facilities. In the final stage, 32 cultivating households were selected from each of the selected villages. Eight households were randomly selected in each village and from each category (according to the size of holding representing marginal (<1 hectare), small (1 to 2 hectares), medium (2 to 4 hectares) and large cultivators (>4 hectares).

II -Outflow of agricultural surplus to non-agriculture sector-Outflow of agricultural surplus to non-agriculture sector is an important issue in India. Various scholars explained that a number of farm households were diverting a large part of their income to non-farm investment.

A: Income and Investment by Sample House Holds-

All categories of sample households earned more than 58% in Faizabad and more than 78% in Bijnor district of their income by agriculture sector. However, their investment in agriculture sector accounted for 53 % and 58% in both the districts respectively. Income from agriculture sector on large farms was 55% while their investment in sector was 50% of total investment. Income from agriculture sector on large farms was 73% while their investment in agriculture was about 64 % of total investment in Bijnor districts. Investment in non-agriculture sector by marginal farmers in both districts was higher than agriculture sector.

Table 1: Per Farm Income and Investment by Sample House Holds

Land Holding	Income Source			Pattern of Investment		
	Agriculture sector	Non-Agriculture sector	Total	Agriculture sector	Non-Agriculture sector	Total
Faizabad						
Marginal	41833 (65.3)	22242 (34.7)	64075 (100.0)	12278 (40.6)	17982 (59.4)	30260 (100.0)
Small	49948 (67.1)	24500 (32.9)	74448 (100.0)	36837 (55.7)	29317 (44.3)	66154 (100.0)
Medium	70947 (53.8)	60868 (46.2)	131815 (100.0)	105723 (57.3)	78682 (42.7)	184405 (100.0)
Large	133686 (55.6)	106681 (44.4)	240367 (100.0)	146166 (50.8)	141663 (49.2)	287829 (100.0)
All Farms	74107 (58.0)	53573 (42.0)	127680 (100.0)	75251 (52.9)	66910 (47.1)	142161 (100.0)
Bijnor						

Marginal	58138 (84.7)	10499 (15.3)	68637 (100.0)	13864 (36.4)	24262 (63.6)	38126 (100.0)
Small	73730 (83.4)	14679 (16.6)	88409 (100.0)	45459 (55.1)	37114 (44.9)	82573 (100.0)
Medium	132997 (81.6)	30050 (18.4)	163047 (100.0)	112361 (54.1)	95171 (45.9)	207532 (100.0)
Large	213592 (73.1)	78599 (26.9)	292191 (100.0)	210855 (63.7)	120100 (36.3)	330955 (100.0)
All Farms	119616 (78.1)	33457 (21.9)	153073 (100.0)	95635 (58.0)	69161 (42.0)	164796 (100.0)

Source: Primary survey data, note: Figure in parenthesis indicates percentage to total.

B: Per Farm Saving and Its Use for Different Purposes

The study had enquired from the sample households about number of children are reading in the city and an average per month expenditure on education of them and also their saving and its utilization for different purposes in last five years. More than 90 % of large farmers' children were reading in the city in both districts. About 80 % small and medium farmers' children were also reading in city in Bijnor district. This indicates the interest of all categories of farmers to increase the educational level in Bijnor district and higher investment in education in western UP. The results supported the view of the outflow of agricultural savings to non-agricultural sector as only 15 % and 20% of the total saving was invested in agriculture sector in both districts in last five years.

The average investment from the saving in five years was highest in agriculture among different purposes on all size of farms in Bijnor district. Marginal and small farmers in Bijnordistrict invested one-fourth and one-third of their saving in agriculture. This is rather an encouraging picture for agriculture, particularly in western Uttar Pradesh. Marginal and small farmers also invested significant amount of their savings into plots and buildings, vehicles and non-farm business in last five years in Bijnor.

Table 2: Per Farm Saving and Its Use for Different Purposes by Sample Households in Last Five Years

	Faizabad	Bijnor
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Sources	Marginal	Small	Medium	Large	All Farms	Marginal	Small	Medium	Large	All Farms
Agriculture Sector	4921 (14.16)	6643 (14.48)	20979 (12.28)	52956 (17.06)	21375 (15.21)	2819 (23.69)	5783 (33.09)	41056 (16.81)	152447 (21.59)	50526 (20.63)
Increase current Consumption	1173 (3.38)	2584 (5.63)	4054 (2.37)	12604 (4.06)	5104 (3.63)	469 (3.94)	563 (3.22)	7562 (3.10)	10135 (1.44)	4682 (1.91)
Buildings/Plots	5065 (14.58)	6838 (14.90)	25800 (15.11)	53991 (17.39)	22923 (16.31)	1968 (16.54)	2362 (13.51)	62395 (25.55)	64500 (9.14)	32806 (13.39)
Durable Householdgoods	1030 (2.96)	991 (2.16)	9751 (5.71)	9979 (3.21)	5438 (3.87)	768 (6.45)	934 (5.34)	5988 (2.45)	14377 (2.04)	5517 (2.25)
Jewellery/Gold etc.	1921 (5.53)	2593 (5.65)	5216 (3.05)	29477 (9.49)	9802 (6.97)	412 (3.46)	494 (2.83)	17686 (7.24)	13041 (1.85)	7908 (3.23)
Education of Children	1225 (3.53)	2654 (5.78)	6618 (3.88)	20750 (6.68)	7812 (5.56)	490 (4.12)	588 (3.36)	42450 (17.39)	116545 (16.51)	40018 (16.34)
Shares & Debentures	0 (0.0)	0 (0.0)	1807 (1.06)	2695 (0.87)	1189 (0.85)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Banks & Post offices	1946 (5.60)	2027 (4.42)	9878 (5.78)	13058 (4.21)	6727 (4.79)	778 (6.54)	1922 (10.99)	7835 (3.21)	152889 (21.66)	40856 (16.68)
Non Agriculture Business	4457 (12.83)	4017 (8.75)	22624 (13.25)	45524 (14.66)	19155 (13.63)	2026 (17.03)	2139 (12.24)	27314 (11.19)	106559 (15.09)	34510 (14.09)
Vehicles	12048 (34.67)	16235 (35.38)	61156 (35.81)	68427 (22.04)	39466 (28.08)	1783 (14.98)	2431 (13.91)	31774 (13.01)	74695 (10.58)	27671 (11.30)
Other Purposes	965 (2.78)	1304 (2.84)	2898 (1.69)	1029 (0.33)	1549 (1.10)	386 (3.24)	263 (1.51)	117 (0.05)	746 (0.11)	378 (0.15)
Total Saving in Five Years	34751 (100.0)	45885 (100.0)	170781 (100.0)	310489 (100.0)	140540 (100.0)	11900 (100.0)	17479 (100.0)	244177 (100.0)	705935 (100.0)	244872 (100.0)

Source: Primary survey data, Note: Figure in parenthesis indicates percentage to total.

About 35% of the farmers in Faizabad reported the agriculture sector as area of preference to invest their savings. However, approximately same proportion of farmers preferred non-agriculture sector in the district. A good ratio of the farmers were also sought to invest in both sectors in Faizabad district. Nearly 43% of medium farmers were reported the preference to

investment in agriculture sector and most of the large farmers preferred both sector to invest in Faizabad. But there was a different scenario in Bijnor district. More than 50% of the farmers interested to invest in agriculture sector (Table.3). Proportion of farmers, who preferred agriculture sector for investment, increased with increase in size of holdings in the district. Most of the marginal farmers were interested to invest in non-agriculture in both districts. All these trends indicates that there was substantial out flow of the savings in agriculture sector to non-agricultural sector, particularly in the eastern region of Uttar Pradesh but it is not the neglect of agriculture in the region. Importance of agriculture sector is still pertinent and reflected by huge investment in the agriculture by the sample households in both districts, particularly by medium and largefarmers.

Table 3: Households Reporting Area of Preferences to Invest the Savings

Area of Preference to Invest the Savings	Marginal	Small	Medium	Large	All Farms
			Faizabad		
Agriculture sector	10(31.25)	11(34.38)	14(43.75)	10(31.25)	45(35.15)
Non Agriculture sector	17(53.13)	12(37.5)	9(28.13)	9(28.13)	47(36.72)
Both Sectors	5(15.62)	9(28.13)	9(28.13)	13(40.62)	36(28.12)
Total	32	32	32	32	128
Bijnor					
Agriculture sector	15(46.87)	15(46.87)	19(59.37)	20(62.5)	69(53.91)
Non Agriculture sector	16(50.0)	12(37.5)	8(25.0)	5(15.62)	41(32.03)
Both Sectors	1(3.12)	5(15.62)	5(15.62)	7(21.87)	18(14.06)
Total	32	32	32	32	128

Source: Primary survey data

C: Reasons for preference to invest the savings in agriculture sector and non-agriculture Sector

The sample households were asked to give one reason for preference to invest in agriculture and one reason for preference to invest in non-agriculture sector. Most of the farmers, particularly marginal and small farmers in both districts preferred investment in agriculture due to lack of capital to invest in other business, which needs huge investment at a time (Table 4). Profit from cash crops attracts most of the medium and large farmers to invest in agriculture in both districts.

Due to parental occupation, a good proportion of farmers in both districts preferred investment in agriculture. Risk and competition in other business and less risk in agriculture was also a reason to invest in agriculture.

Most of the farmers of all categories in both districts preferred investment in non-agriculture sector to earn extra more income. Most of the marginal and small farmers preferred non-agriculture sector to invest due to lower return from their small size holdings.

Table 4: Reasons for Preference to Invest the Savings in Agriculture Sector

(No. of persons reporting in %)

Reasons for Preference to Invest the Savings in Agriculture Sector	Marginal	Small	Medium	Large	All Farms
	Faizabad				
No money to invest in other business	46.88	31.25	12.50	0.00	22.66
To nourish big family by agriculture	6.25	9.38	6.25	3.13	6.25
There is less risk in agriculture	12.50	3.13	0.00	6.25	5.47
No Knowledge of other business	15.63	9.38	3.13	12.50	10.16
Hard work & good investment make agriculture much profitable	3.13	12.50	6.25	6.25	7.03
To increase productivity of land	3.13	0.00	6.25	6.25	3.91
No time for other business with service	6.25	3.13	9.38	15.63	8.59
To get pure food grains	0.00	3.13	0.00	15.63	4.69
Investment in Orchards gives more profit	0.00	0.00	9.38	6.25	3.91
Investment in cash crops makes good profit	0.00	3.13	25.00	15.63	10.94
We have to invest in agricultural land , it is parental occupation	6.25	21.88	6.25	6.25	10.16
Much competition in other business	0.00	3.13	15.63	6.25	6.25
Total	100.00	100.00	100.00	100.00	100.00
Bijnor					
No money to invest in other business	50.00	31.25	9.38	6.25	24.22
To nourish big family by agriculture	12.50	12.50	9.38	18.75	13.28

There is less risk in agriculture	12.50	0.00	6.25	6.25	6.25
No Knowledge of other business	9.38	15.63	12.50	9.38	11.72
Hard work & good investment make agriculture much profitable	0.00	6.25	6.25	12.50	6.25
To increase productivity of land	0.00	12.50	9.38	3.13	6.25
No time for other business with service	6.25	3.13	9.38	9.38	7.03
To get pure food grains	3.13	6.25	12.50	9.38	7.81
Investment in Orchards gives more profit	0.00	0.00	3.13	0.00	0.78
Investment in cash crops makes good profit	0.00	0.00	18.75	12.50	7.81
We have to invest in agricultural land , it is parental occupation	6.25	12.50	3.13	9.38	7.81
Much competition in other business	0.00	0.00	0.00	3.13	0.78
Total	100.0	100.0	100.0	100.0	100.0

Table 5: Reason for Preference to Invest the Savings in Non-Agriculture Sector

(No. of persons reporting in %)

Reason for Preference to Invest the Savings in Non-Agricultural Sector	Marginal	Small	Medium	Large	All Farms
	Faizabad				
For extra & more income	21.88	37.50	3.13	9.38	17.97
No profit to invest in marginal & small holdings	34.38	15.63	0.00	0.00	12.50
Only farming can't give sufficient money in increasing Inflation	15.63	6.25	31.25	18.75	17.97
Non farm business gives more profit	9.38	9.38	12.50	6.25	9.38
To involve family members rather than farming	6.25	0.00	3.13	9.38	4.69
Lower prices of the product in agriculture	6.25	15.63	21.88	12.50	14.06
To fulfil the needs of big family	3.13	3.13	6.25	9.38	5.47
Already invested a large amount in agriculture	0.00	0.00	9.38	12.50	5.47

in past years					
Price of inputs in agriculture are increasing	0.00	3.13	9.38	6.25	4.69
There is more hard work & less profit in agriculture	3.13	9.38	3.13	15.63	7.81
Total	100.00	100.00	100.00	100.00	100.00
Bijnor					
For extra & more income	21.88	31.25	9.38	9.38	17.97
No profit to invest in marginal & small holdings	25.00	18.75	0.00	0.00	10.94
Only farming can't give sufficient money in increasing Inflation	15.63	6.25	6.25	9.38	9.38
Non farm business gives more profit	6.25	9.38	12.50	12.50	10.16
To involve family members rather than farming	12.50	3.13	6.25	9.38	7.81
Lower prices of the product in agriculture	6.25	12.50	18.75	12.50	12.50
To fulfil the needs of big family	0.00	6.25	3.13	12.50	5.47
Already invested a large amount in agriculture in past years	0.00	0.00	21.88	18.75	10.16
Price of inputs in agriculture are increasing	12.50	6.25	6.25	3.13	7.03
There is more hard work & less profit in agriculture	0.00	6.25	15.63	12.50	8.59
Total	100.00	100.00	100.00	100.00	100.00

Source: Primary survey data

To fulfill their needs in increasing inflation forced a number of farmers to invest in non-agriculture sector to earn extra income in both districts. Due to hard work and less profit accordingly in agriculture was an important reason for the investment in non-agriculture. Increasing cost of inputs and lower prices of the agricultural product makes agriculture less profitable, so most of the farmers in both districts preferred non-agriculture sector for investment.

III. Conclusion

The study has estimated current saving in the form of financial and physical assets. Financial saving was not large on marginal and small farms but was substantial on the medium and large farms in both districts. Investment from own savings in the last five years was highest in agriculture among different purposes on all size of farms in Bijnor district. Marginal and small farmers in Bijnor district invested a good proportion of their saving in agriculture. On the other hand, medium and large farmers in the district also diverted their savings in other uses because they already invested sufficient amount in the agriculture. This is rather an encouraging picture for agriculture, particularly in western Uttar Pradesh. However, in Faizabad, purchase vehicles, plots and buildings ornaments, and non-farm business was mostly preferred by the farmers for investment.

Proportion of farmers, who preferred agriculture sector for investment, increased with increase in size of holdings in the district. Most of the farmers preferred investment in agriculture due to lack of capital to invest in other business, which needs huge investment at a time, profit from cash crops, risk and competition in other business and less risk in agriculture. Most of the farmers in both the districts preferred investment in non-agriculture sector to earn extra income, due to lower return from smallholdings in agriculture, to fulfill the needs of family in increasing inflation, hard work and less profit in agriculture, increasing cost of inputs and lower prices of the agricultural product.

The results supported the view about the outflow of agricultural savings to non- agricultural sector, mainly in eastern region of the state. All these trends indicate that there was substantial out flow of the savings in agriculture sector to non-agricultural sector but it is not due to the neglect of agriculture. Importance of agriculture sector is still pertinent and reflected by large investment in the agriculture by the sample households in both districts, particularly by medium and large farmers. In spite of increasing cost of cultivation, hard fieldwork and decreasing returns, preference to invest in agriculture is not decreasing in farmers of both the districts.

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