

Doubling Farmer's Income: The Case of India

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Abstract

Agriculture, in most of the developing and under-developed countries, is the primary sector responsible for employment and livelihood of majority of population, especially rural. This sector is entrusted with the responsibility of poverty alleviation in rural areas and contribution to overall economic growth. Hence, designing optimal policy and setting objectives have always been a concern area for the policy makers. In the last fiscal year, policy objective of doubling farmer income by the year 2022, was announced by the government. This paper analyses the historical aspects of doubling of farmer's income using NSSO situation assessment survey and draws projection for the future at degenerate level across land holding and states. What actually would it require to double the farmer's income, the optimal mix of policies that should be adopted by the government for successful achievement of objective?

Key words: Doubling of farmer's income, NSSO situation assessment survey, policy mix in agriculture sector.

Introduction

Agriculture is the mainstay of the Indian economy even in this era, mainly due to the immense contribution of this sector to the employment generation, livelihood creation, and its contribution to poverty alleviation. Having said so, one must not forget the reduced contribution of agriculture to the GDP of the nation and the rising incentives for the population in favor of shifting to other means of livelihood and subsequent migration to the urban clusters. Such trends, accompanied by the reduced profitability of the farmers and the deficient rainfall have been a cause of worry in the recent decade due to the alarming issue of farmer suicide. This situation of acute agrarian distress attracted government's intervention by the announcement of the Union Finance Minister Sh. Arun Jaitley in the annual Union Budget 2016–17, and the Government of India set it's one of the objectives for the aggrieved farmers to double the income of farmers by the year 2022. In this regards *Chand et al (2015)* contribute to the recent literature on farm incomes in India is by suggesting that “growth in agricultural sector's income post 2011–12 has staggered to around 1%, and it is the principal cause of sudden increase in agrarian distress, during recent years.”

The honourable PM of India, in the year 2015-16, spoke about his vision of doubling farmer's income by the year 2022, the year marked by occasion of 75th year of independence. Statistically, taking 2015-16 as base year for calculations, it would require growth rate of 10.4% per annum for doubling of income by 2022-23. It is important to note that doubling of farm income at constant prices is theoretically not same as doubling of farm income in real terms. Historically, it took 22 years to double real income of farmers i.e., from year 1993-94 to 2015-16.¹ During these years the nominal income of the farmers increased by 9.18 times, but taking away the effect of inflation, the real income doubled only by end of 2015-16.

¹ calculated using CPI-AL, (consumer price index for agricultural labourer) index to measure change in price level in rural India, taking base as 2004-05.

In the limelight of this gleaming policy, there lie doubts in the minds of many about the prospects of this policy and whether there has been any past experience of doubling of farmer's income (*Gulati 2016*). Based on a different database than used by *Chand (2016)*, this paper attempts to analyze the impact on incomes of agricultural households. This invariably implies the inability to compare studies' estimates with others. For the purpose of the analysis, the data were sourced from National Sample Survey Office's (NSSO) survey on Situation Assessment Survey of Farmers, which was conducted in the year 2003 (hereafter survey 2003) and exactly a decade later the Situation Assessment Survey of Agricultural Household which was conducted in 2013 (hereafter survey 2013).

Comparability Issues

The reports published by NSSO corresponding to the two surveys (*NSSO 2005, 2014*) present the sampling distribution technique. The differences in the sampling process of the households in 2003 and 2013 allow the study to define the line of comparability between the two. In the 2013 survey, NSSO modified the definition of an agricultural household. As per new definition a household, which is getting a monetary sum from selling its production of more than Rs. 3,000 from agricultural and allied activities which may include field crop cultivation, horticultural crops, sericulture, fodder, bee-keeping, poultry, fishery, animal husbandry, piggery, and vermiculture etc.). Along with above, NSSO also adds that at least one member of the household must be self-employed in agriculture or allied activities. The employment status can be of binary status i.e. of principal or in a subsidiary in the past 365 days. Thus, the study first applies some filter on the NSSO data for establishing comparability between the two rounds.

Table: 1 - showing ratio of mean income (per month in Rs.) from Sources in 2013 to the mean income (per month in Rs.) from Sources in 2003, across Indian States²

<i>Different Indian states of India</i>	<i>Income out of pure wages</i>	<i>Net income from cultivation</i>	<i>Net income out of rearing animals</i>	<i>Net income out of non-farm income</i>	<i>Gross Income of the farmers</i>
<i>Punjab</i>	1.57	1.81	2.38	0.69	1.68
<i>Rajasthan</i>	1.37	1.61	3.98	1.64	1.64
<i>Haryana</i>	1.21	1.86	1.45	0.58	1.94
<i>Bihar</i>	1.29	0.79	0.45	0.56	0.84
<i>Assam</i>	0.68	1.16	2.46	0.52	1.03
<i>Uttar Pradesh</i>	1.01	1.39	3.77	0.98	1.32
<i>Jharkhand</i>	1.10	0.79	5.89	0.57	1.14
<i>West Bengal</i>	1.19	0.63	1.45	0.77	0.92
<i>Chhattisgarh</i>	1.26	2.06	1.59	0.00	1.58
<i>Odisha</i>	1.42	1.78	33.36	1.55	2.09
<i>Gujarat</i>	1.35	1.19	1.86	1.31	1.37
<i>Madhya Pradesh</i>	1.18	1.49	1.54	0.58	1.76
<i>Maharashtra</i>	1.28	1.55	1.83	1.48	1.48
<i>Karnataka</i>	1.28	1.67	1.93	1.48	1.53
<i>Tamil Nadu</i>	1.25	1.17	3.94	2.44	1.49

² For the purpose of comparability across two periods, the 2003 incomes were adjusted to prices of 2013. This was done using Consumer Price Inflation-AL series. Hence, the comparison is purely in real terms than otherwise. The data are sourced from Unit level data of NSS 2003 and 2013.

<i>Kerala</i>	1.22	1.44	1.59	1.61	1.37
<i>Andhra Pradesh</i>	1.58	1.57	3.62	1.08	1.68
<i>All India</i>	1.23	1.43	3.22	1.01	1.35

As opposed to the NSSO's survey in 2013, the threshold of income cut-off was not defined in the agricultural household in the survey 2003. In order to compare the averages across the two surveys, the study draws a parallel adjusted level of income of Rs. 3000 at 2013 prices of the households in the 2003 survey. Therefore, worth of Rs. 3000 at 2013 prices is calculated to be Rs. 1345. Thereby, to facilitate comparison between the two surveys, only the households in the 2003 survey with annual income from agriculture of no less than Rs. 1,345 are included in this study. Secondly, due to the availability of data on income received, the study incorporated only four sources of income namely receipt from crop cultivation, wages, receipt from nonfarm business and receipt from farming of animal, thus the sample is restricted only to those very households living on the above-mentioned sources of income. In the later segment, the study will review if the absence of data in remittances could affect our estimates for those states with a large number of out-migrants from agricultural households. Hence, the feasibility of the comparison of results obtained from survey 2003 and 2013 is permissible by the NSSO report corresponding to 2013. This is possible because the study takes the differences into account, if any, across the survey.

Table: 2 - showing ratio of mean income (per month in Rs.) from Sources in 2013 to the mean income (per month in Rs.) from Sources in 2003³

³ The data are sourced from Unit level data of NSS 2003 and 2013.

<i>Class size of Land Owned</i>	<i>Income out of pure wages</i>	<i>Net income from cultivation</i>	<i>Net income out of rearing animals</i>	<i>Net income out of non-farm income</i>	<i>Gross Income of the farmers</i>
<i>Greater than 10</i>	1.24	2.07	3.59	1.33	2.03
<i>4.01 to 10.0</i>	1.82	1.78	7.89	1.34	1.86
<i>2.01 to 4.00</i>	1.27	1.55	5.38	1.24	1.58
<i>1.01 to 2.00</i>	1.24	1.51	3.32	1.62	1.53
<i>0.41 to 1.00</i>	1.27	1.42	2.62	1.09	1.54
<i>0.01 to 0.40</i>	1.08	1.08	2.79	0.68	1.09
<i>Less than 0.01</i>	1.02	0.35	3.41	0.64	1.14
<i>All class sizes</i>	1.22	1.34	3.23	1.04	1.35

Changes from 2003 to 2013

It is clearly visible that the average monthly total income of agricultural households in the full sample increased in nominal terms by over three times from Rs. 2,115 in 2003 to Rs. 6,426 in 2013. However, what is more, crucial to look at is the real income growth for an in-depth study. To facilitate a comparison in real terms, one needs to convert the income of households surveyed in 2003 to 2013 prices. This was done in the study using the Consumer Price Index for Agricultural Labourers (CPI-AL). This will allow investigating the difference in average real income from various sources and average total real income changed between 2003 and 2013 across the major states and at the all-India level.

At the all India level, there seems no evidence of doubling of incomes. Out of 17 states, Odisha is an outlier, the only state that supports the null hypothesis of doubling of incomes. The decline in the average monthly incomes in the states of West Bengal and Bihar confirms the justification for government intervention in agricultural activities of Eastern states, in particular. It seems highly unlikely that inclusion of remittances could have altered the calculations for these states. It is noticeable in some states that even with a large number of people migrating out of agriculture; incomes of agricultural households have not declined in real terms. This indicates the prevalence of other factors, apart from income, leading to the decline in Bihar and West Bengal.

At the all-India level, doubling of monthly net income from cultivation also seems a highly unlikely phenomenon. Apart from Chhattisgarh, no other state favors this result. In fact, states like Bihar, Jharkhand and West Bengal confirm a decline in income from cultivation in real terms. In contrast to income from cultivation, in many states, there has been a doubling of net income from farming of animals. This can be attributed to growth from a low level of Rs. 109 in 2003. However, such a doubling is not evident in net income from nonfarm business despite it too starting from a paltry average of Rs. 237 in 2003.

Based on the size of land ownership, there are significant instances of income getting doubled for those set of households having a land area over 10 hectares. Moreover, the study finds that there is evidence of an increase in income by more than 1.5 times from cultivation of crops for households with at least on a hectare of land holding.

Historically, India economy is not the only one wherein policy makers have set the objective of doubling of farmer's income, Chinese policy makers have also implemented a similar policy in 2008. China planned to double their farmer's income over a period of twelve years, i.e. from 2008 to 2020, unlike India's policy span of mere seven years. The policy makers have worked

out the period keeping in background the well-established infrastructure and functioning institutions in the economy. Although, there are bounds to what may be gained as investments go into raising yield because the existing average yields in China are approximately twice as that of India. Realising such, the Chinese policy has majorly focused on expanding the non-agricultural sector so that the surplus labour may be transited to large and medium cities from agriculture, which will expand the channels income generation of farmers and to facilitate such a planned transition it has built an integrated labour market, which is unique experiment ever (Schneider 2016). Further, provision of insurance and institutional finance by both private and public sources have been made along with necessary subsidies for production of food grain. Onto the output side in this broad agricultural development model, the Chinese policy makers have focused on strengthening the existing farmer cooperatives and building new ones, focusing on relatively stable production of grains, expansion of agri-businesses, improvement in agricultural distribution technology, reform of agricultural laws and regulations, facilitating exports of agricultural produce to the world, a minimum grain procurement price to ease out the inflationary pressures and thus creating a new social service system in agriculture. This in the backdrop indicates that Indian policy makers are too optimistic about the conditions. Also, India is a federal state and agriculture being a state subject, a single uniform policy to enhance level of incomes across the economy may not be as effective as may a degenerate policy be.

What Would It Require?

NITI Aayog⁴ analyses five areas of improvement in the livelihood of farmer's household. The concerned areas identified by the apex planning body are inter alia:

1. increasing agricultural productivity,

⁴ Niti Aayog policy paper, 2017.

2. remunerative prices for farmers;
3. focus on land leasing and land titles,
4. risk adaptation and mitigation, and
5. a geographical focus on the eastern region.

The inclusion of the geographical focus identified in the occasional paper is justified on the grounds of declining incomes in Bihar and West Bengal.

The fact that agriculture along with allied activities contributes to occupational livelihood for roughly half of total population of the economy, the focal point of policy planning by NITI Aayog was to come up with a comprehensive policy to alleviate the existent state of affairs in the agricultural sector. The Socio-Economic and Caste Census (SECC), which was conducted in the year 2011, released in 2015, pointed out that 179.10 million households of total 243.90 million households in the economy had their direct or indirect dependence on agriculture and allied activities. Also, the Economic Survey of 2015-16 highlighted that about 49.80 percent of total workforce was employed in the agricultural sector while it only contributed to an extent of 17.40 percent in the financial year 2015-16⁵ in the overall gross domestic product of the economy. Further, the Economic Survey of the year 2016-17 indicated that the expected rate at which agricultural sector is likely to grow was 4.1 percent, on the basis of the ‘initial advance estimates’ of the Central Statistics Office⁶ (CSO), while the actual growth rate recorded was 4.9 percent. With this context in the backdrop NITI Aayog proposed its four pronged comprehensive policy plan. The framework, firstly, highlighted the role of remunerative prices for the agricultural produce by means of Minimum Support Prices (MSP) and various marketing reforms. Under marketing reforms focused on providing remunerative prices to the

⁵ Calculated at 2011-12 constant prices

⁶ CSO's estimates <http://pib.nic.in/newsite/PrintRelease.aspx?relid=175399> and MOSPI's policy paper http://mospi.nic.in/sites/default/files/press_releases_statements/Modification_Rev%20Policy_16.11.2016.pdf

farmers, the think-tank has highlighted as to how currently existing agricultural marketing – under the Agricultural Produce Market Committees (APMC) acts implemented across major states have led to fragmentations and policy distortion, largely as a result of a huge number of intermediaries and poor infrastructure. The plan highlights that because of the APMC acts, farmers are required to sell a large number of commodities in local *mandis* where different layers of intermediaries often manipulate the price, which has created large dependency of these farmers over different commission agents and thus it deprives them of their fair share. In addition, such an intervention has led to a steep rise in non-institutional agricultural debt and there are tendencies of debt cycle for small farmers as usury rate of interest are charged over the debt amount.

The policy paper also highlights the observed distortion in patterns of cropping caused by Minimum Support Price regime. MSP regime is accused of favouring cultivation of paddy, wheat and cane. This had caused a marked reduction in the net acreage of other crops like millets, sorghum and grains, on one hand, while it has resulted in unplanned accumulation of unwarranted stocks of cereals, which has created its storage concerns. While the Economic Survey of 2015-16 pitched for replacement of procurement based PDS with DBT and freeing the market control on domestic movement and imports, the Niti Aayog, on the other hand, has suggested a system of “price deficiency payments” to cure the distortion caused by the MSP regime. Under this system a subsidy would be provided on targeted produce in case the price falls below MSP-linked threshold. One advantage of this, as highlighted by the action plan, is that it would spread price incentives to producers in all the regions and all the crops considered important for providing price support.

Secondly, the framework called for raising productivity especially for small and marginalized farmers, as they constitute the largest share among the farming community. It is also important to focus on raising productivity in the wake of falling water tables, land holdings per capita

getting shrunk and compounding of agricultural input costs, which have a cascading effect on the farmers. The Niti Aayog has also called for substantive investment in irrigation, seeds & fertilisers and new technology coupled with a shift into high-value commodities such as horticulture, poultry and dairying to double incomes. However, what must be noted here is that public investment required for all this is on the more or less continuous decline. Economist Ashok Gulati attributes the decline in public investment to the expanding subsidies on agriculture. However, this trend has been reversed to some extent since the 9th five-year plan. Gross capital formation in the agriculture sector has gone up from 13.9% during the 10th plan to 19% during the 11th plan period. It is also mooted that the modernisation of farms and adoption of new technologies like adopting GM crops and using new farm equipment. However, this is not as easy as it seems. For Thirdly, it suggested for reforming agricultural land policy. For this, the Aayog has planned to bring in long-due amendments in Leasing and Tenancy laws. Such amendments would have direct bearing onto the small farmers who would engage in leasing-in of land holdings without much administrative hurdles.

Lastly, the apex planning body also recommended for lagging modifications in various relief measures during and post agricultural production. It recommended for modifications in the existing *Pradhan Mantri Fasal Bima Yojana* by capping the amount of subsidy available per farm to each household and extending the coverage time period for both bad and good years. At the outset, the framework, appears to be on right path, but there are various sources of income for Indian agricultural farmers. Therefore, it is valid to focus on degenerate sources of earning of various farmers at the economy level.

A precondition to the analysis of these issues is the need to understand the sources of income of the households. Data from the 2013 survey reveals that the distribution of agricultural household by principal source of income is as follows:

1. cultivation 63.5%,

2. other agricultural activity 1%,
3. livestock 3.7%,
4. pension 1.1%,
5. wage/salaried employment 22%,
6. non-agricultural enterprises 4.7%,
7. remittances 3.3% and
8. others 0.7%.

There are large variations in the distribution of households, when measured on the basis of principal source of income across the states of India. However, the distribution of households on the basis of principal source of income is only one side of the coin. In reality, individuals from agricultural households are engaged in multiple activities in addition to cultivation. This is evident from the fact that among those households who have cultivation as a principal source of income accounts only for 12% but, they do not undertake any additional activity. In households whose primary source is wage income, we see a combination of activities being undertaken by their members. A basic point that we need to recognize is the following: there are a sizeable proportion of households who undertake cultivation, livestock activities and also have individuals engaged in wage/salaried employment. The key takeaway is that in addition to cultivation there are other income sources that can contribute to doubling of income of agricultural households.

Table: 3 - Additional Activities Undertaken by Agricultural Households in India⁷

	<i>Various Allied activities that Households indulge themselves. (in %)</i>				
<i>Principal sources of Income</i>	<i>Livestock/ Cultivation</i>	<i>Livestock and salaried employment</i>	<i>Cultivation and livestock with Salaried employment</i>	<i>Other allied activities</i>	<i>No additional activities</i>
<i>Cultivation</i>	34	17	8	29	12
<i>Livestock</i>	30	14	12	31	13
<i>Other Allied activities</i>	7	22	10	34	17
<i>Non-agricultural enterprises</i>	22	12	24	32	10
<i>Salaried employment</i>	20	14	37	29	0
<i>Pension or other social security schemes</i>	18	7	22	39	14
<i>Remittances from Abroad</i>	21	7	37	26	9
<i>Other Principal sources</i>	6	6	34	35	4

⁷ The data are sourced from Unit level data of NSS 2013.

The apparent importance of the quantum of land possessed is an important determinant of rural livelihoods is shown by the variation of the proportion of average income, measured on monthly basis, from different sources the amount of land possessed by the household. In 2013, the share of income from wages is highest among those with less than one hectare of land. We do not find any striking differences in the share of income from the four sources within each land-size class when we compare data from the 2003 survey with the 2013 survey. The only thing of importance is the rise in the proportion of income comes from the rearing of animals.

Focussing on a key area of land leasing, the NITI Aayog has constituted a committee chaired by T Haque. Land titling and leasing were identified as core areas in the NITI Aayog occasional paper too. Moving ahead, it is important to understand the extent to which legalizing and liberalizing land leasing can improve “agricultural efficiency, equity, occupational diversification, and rapid rural transformation”, and thereby increase the income of agricultural households.

Table: 4 - Average Monthly Income (in Rs.) from Different Sources, Monthly Consumption Expenditure (in Rs.) Per Agricultural Household in 2013 for Each Size-Class of Land Possessed⁸

<i>Class size of Land Owned</i>	<i>Income out of pure wages</i>	<i>Net income from cultivation</i>	<i>Net income out of rearing animals</i>	<i>Net income out of non-farm income</i>	<i>Total Income</i>	<i>Consumption</i>
<i>Greater than 10</i>	1312	35712	2615	1772	41412	14445
<i>4.01 to 10.0</i>	2068	15546	1502	879	19995	10114
<i>2.01 to 4.00</i>	1682	7432	1181	555	10840	7798
<i>1.01 to 2.00</i>	1743	4238	824	600	7405	6430
<i>0.41 to 1.00</i>	2071	2178	644	478	5371	5979
<i>0.01 to 0.40</i>	2556	713	644	483	4396	5402
<i>Less than 0.01</i>	3018	32	1224	470	4742	5139
<i>All class sizes</i>	2146	3194	786	526	6653	6229

Sen⁹ points out that the Rashtriya Krishi Vikas Yojana (RKVY) “attempted to incentivize agricultural planning and investment at the state and district level while decentralizing and untying the fund flow.” It has been argued that the RKVY did contribute to improve agricultural

⁸ The data are sourced from Unit level data of NSS 2013.

⁹ Sen, A., EPW.

growth. Simultaneously, there has to be a singular focus on improving the extent of investments undertaken by agricultural households.

In 2013, among households having a piece of land less than one hectare and net investments is in the region of Rs. 250 to Rs. 540 depending on whether the household has between 0.01–0.4 hectares and 0.41–1 hectare of land. The question is how one can increase net investment in productive assets among the small and marginal farmers.

It was in 2004-07, that the government envisaged the policy of doubling agricultural credit to the farmers to ensure the timely and adequate flow of funds to the farmers. This initiative was a success at the aggregate level. The evidence from NSSO data does not seem to suggest that the doubling of aggregate credit flows had any sizeable impact at the household level in terms of a substantial increase in investments. It is now being recognized that the challenge today is twofold: channel funds to the small and marginal landholders, and rework the mix of short-term and long-term credit in order to incentivize flow of long-term credit relative to short-term credit.

Table: 5 - showing share of mean income (per month in Rs.) from different sources for various class size of Land Holding in NSSO 2003¹⁰

<i>Class size of Land Owned</i>	<i>Income out of pure wages</i>	<i>Net income from cultivation</i>	<i>Net income out of rearing animals</i>	<i>Net income out of non-farm income</i>
<i>Greater than 10</i>	6	84	3	8
<i>4.01 to 10.0</i>	12	81	3	5
<i>2.01 to 4.00</i>	18	72	4	6
<i>1.01 to 2.00</i>	30	57	6	7
<i>0.41 to 1.00</i>	43	39	5	12
<i>0.01 to 0.40</i>	61	15	5	19
<i>Less than 0.01</i>	72	2	10	18
<i>All class sizes</i>	36	49	5	11

¹⁰ The data are sourced from Unit level data of NSS 2003.

: 6 - showing share of mean income (per month in Rs.) from different sources for various class size of Land Holding in NSSO 2013¹¹

<i>Class size of Land Owned</i>	<i>Income out of pure wages</i>	<i>Net income from cultivation</i>	<i>Net income out of rearing animals</i>	<i>Net income out of non-farm income</i>
<i>Greater than 10</i>	4	85	7	3
<i>4.01 to 10.0</i>	9	79	9	3
<i>2.01 to 4.00</i>	16	68	12	4
<i>1.01 to 2.00</i>	25	56	10	9
<i>0.41 to 1.00</i>	38	42	13	8
<i>0.01 to 0.40</i>	59	15	14	12
<i>Less than 0.01</i>	65	1	25	10
<i>All class sizes</i>	32	48	12	8

There has been the bulk of other initiatives taken to improving agricultural output and hence farm incomes. First, the minimum support price for paddy and wheat increased. Second, some states opted for decentralized procurement. Casual empiricism would suggest that increase in minimum support price and decentralized procurement would have contributed in increasing the income of agricultural households. Ideally, one would need longitudinal data in order to analyze the impact of these two measures. In the 2016–17 budget, the Government of India has stated that all states will be encouraged to take up decentralized procurement. Measures like prior registration of farmers and monitoring actual procurement using an online procurement

¹¹ The data are sourced from Unit level data of NSS 2013.

system could have a salutary effect. Third, the idea behind formation of Farmer Producer Organisations (FPO) can increase the probability of farmers getting remunerative prices. In this regard, National Bank for Agriculture and Rural Development (NABARD)¹² and other stakeholders have been working towards the formation and nurturing of FPOs. Fourth, state governments did undertake investments in irrigation. They have borrowed large sums of money under the Rural Infrastructure Development Fund (RIDF) administered by NABARD specifically for irrigation projects. Till date, over 50% of projects funded under RIDF are for irrigation and 30% of the funds were for irrigation (*NABARD 2015*).

Conclusions

Given the slew of measures and initiatives, it would have come as a surprise if the real incomes of agricultural households had not increased in real terms over the period 2003–13. Barring Bihar and West Bengal, in other states, we do see an increase in average income in real terms. It is clearly indicative that focusing only on income from cultivation for facilitating doubling of income will prove to be inadequate and detrimental for the objective.

It is also recommended by many authors, that possibly, one of the means to achieve the target of doubling of farmers' incomes, should be to focus on small and medium farmers instead of a uniform undifferentiated methodological outlook, the eastern region of the country and majority of rain fed regions (*Satyasai and Mehrotra 2016*). This is expected to yield better results as more than 60% of the total area under agriculture and 43% of the total work force employed in agricultural and allied activities in India are in rain fed or dry land regions.

Policy measures aimed at increasing net income of households from animal farming will be the key driver of incomes in agricultural households. There are dire needs of diversification and

¹² *NABARD policy paper 2015*

trends are indicating that workforce has to move from pure agricultural sector to allied and non-agricultural sector for successful doubling of income.

Lastly, it is essential to share responsibility of enhancing the level of farmer's income to states also because agriculture falls under list of state subject. Various policies and measures are region specific and thus role of local expertise can't be denied. The study shows that different states are at different stages of agricultural development and composition of income differ significantly. Therefore, a state specific mechanism should be preferred over generalized or uniform mechanisms.

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