

Impact of Agricultural Diversification on Non-Agricultural Income among the Households – A Case Study in the Mid Hill Zone of Himachal Pradesh, India

JAGAT PAL SINGH

Associate Professor

Department of Economics

Vallabh Govt. College, Mandi H P., India

1. INTRODUCTION

The present study is a case study of the impact of agricultural diversification on non-agricultural income of the households in the mid hill zone of Himachal Pradesh, India. This study reveals that diversification has not only affected the cropping pattern, agricultural income, employment opportunities but also the non-agricultural income of the households in the study area. This impact has been explained with the help of tables before and after agricultural diversification.

2. OBJECTIVES OF THE PRESENT STUDY:

1. To study the pattern of non-agricultural income of households before agricultural diversification.
2. To study the pattern of non-agricultural income of the households after agricultural diversification.
3. To study the impact of agricultural diversification on non-agricultural income of the households.

3. NATURE OF DATA COLLECTED

By conducting personal interview of the selected households, data pertaining to family composition, literacy, operated area (i.e. owned land, leased in and leased out land), household assets and durables, income, employment, consumption expenditure and borrowings have been recorded on a pre tested schedule as it existed at the time of survey. The information relating to the quality and value of agricultural inputs i.e. seeds, fertilizers, manures, implements, insecticides, and pesticides, family human labour days (hired in

or hired out, permanent attached labour), bullock labour days, machinery charges vis-à-vis the value of main and by products of food grain crops and other field crops have been collected for both the pre and post agricultural diversification period along with the problems faced in agricultural diversification as well as suggestions of the households for the further diversification have been recorded.

4. STATISTICAL TOOLS OF ANALYSIS

After arranging the data in homogeneous categories and by working out the averages and percentages, the following statistical tools have been used:

4.1 Tabular Analysis

The non – agricultural income of the households have been worked out with the help of tabular analysis i.e. by deducting the total cost incurred from the total value of output at the prevailing prices in the study area.

5. PATTERN OF HOUSEHOLD PER MONTH NON- AGRICULTURAL INCOME BEFORE AGRICULTURAL DIVERSIFICATION

The pattern of non- agricultural household per month income before agricultural diversification has been worked out in Table 5.1 for the sample households. This table clearly shows that before agricultural diversification, services have been the major source of household income. The per household per month income from services has been recorded 38.46, 44.88, 50.28 and 54.63 percent on the marginal, small, semi- medium and medium size of holdings respectively, whereas for all size of holdings together, this percentage has been worked out 48.99 percent. The contribution of business income has accounted for 10.25, 12.83, 20.68 and 28.38 percent on the marginal, small, semi- medium and medium size of holdings respectively, whereas this percentage for all size of holdings together, has been worked out 18.14 percent of the total per month household income. The income from household industries has been recorded 6.42, 4.56 and 1.92 percent on the marginal, small and semi- medium size of holdings respectively, whereas this percentage has been worked out 3.55 percent among all holdings together. The medium farmers were not engaged in this activity. The percentage contribution of wage in the per household per month income has been recorded 38.79, 29.23, and 15.76 percent on the marginal, small and semi- medium size of holdings respectively, whereas this percentage among all the size of holdings has been worked out 18.41 percent.

Jagat Pal Singh– **Impact of Agricultural Diversification on Non- Agricultural Income among the Households – A Case Study in the Mid Hill Zone of Himachal Pradesh, India**

Table: 5.1

Household per Month Non- Agricultural Income before Agricultural Diversification among the Sample Households

(Value in Rupees)

Particulars	Marginal Holdings	Small Holdings	Semi- Medium Holdings	Medium Holdings	All Holdings
Services	2507.03 (38.46)	3574.19 (44.88)	6983.49 (50.28)	11281.57 (54.63)	5999.10 (48.99)
Business	668.15 (10.25)	1021.77 (12.83)	2872.29 (20.68)	5860.72 (28.38)	2221.34 (18.14)
Household Industries	418.49 (6.42)	363.15 (4.56)	266.67 (1.92)	—	434.72 (3.55)
Wage Work	2528.54 (38.79)	2327.63 (29.23)	2188.94 (15.76)	—	2254.46 (18.41)
Pensions	164.27 (2.52)	289.88 (3.64)	634.74 (4.57)	1391.87 (6.74)	547.38 (4.47)
Others*	232.06 (3.56)	387.04 (4.86)	943.08 (6.79)	2116.71 (10.25)	788.61 (6.44)
Total Income	6518.54 (100)	7963.66 (100)	13889.21 (100)	20650.87 (100)	12245.60 (100)

Note : Figures in parentheses indicate percentages to the column total.

* Others include rent on shops, hired out accommodation, sale of local products etc.

The income from pension has accounted for 2.52, 3.64, 4.57 and 6.74 percent on the marginal, small, semi- medium and medium size of holdings respectively, whereas this percentage for all size of holdings together has been calculated 4.47 percent. The per household per month income from other activities has been recorded 3.56, 4.86, 6.79 and 10.25 percent on the marginal, small, semi- medium and medium size of holdings respectively, whereas this percentage for all size of holdings together came out 6.44 percent. This table clearly shows that the income from services, business, pensions and other activities has shown an increasing tendency with an increase in the size of holdings whereas income from household industries and wage work has shown a decreasing tendency with an increase in the size of holdings. The marginal and small farmers has been engaged in wage work and household industries for a longer time due to their small size of holdings whereas the semi- medium and medium farmers has been engaged in services and business activities for due to their large size of holdings.

6. PATTERN OF HOUSEHOLD PER MONTH NON- AGRICULTURAL INCOME AFTER AGRICULTURAL DIVERSIFICATION

The pattern of household per month non- agricultural income after agricultural diversification has been worked out in Table 6.1 for the sample households. This table shows that the farmers who were earlier engaged in the private sector jobs has now shifted to their own agricultural work due to significant increase in their income after agricultural diversification. The income from services has also shown a decreasing tendency with an increase

Jagat Pal Singh– **Impact of Agricultural Diversification on Non- Agricultural Income among the Households – A Case Study in the Mid Hill Zone of Himachal Pradesh, India**

in the size of holdings, which means that large farmers has now shifted to agricultural sector due to their large size of holdings and commercial crops. The household per month income from services has been worked out 31.49, 30.84, 30.25 and 21.37 percent on the marginal, small, semi- medium and medium size of holdings respectively, whereas this percentage for all size of holdings together has been worked out 28.42 percent. After agricultural diversification due to increase in the income of the households, there has been increase in the business activities which has also shown an increasing tendency with an increase in the size of holdings. The per household per month income from the business activities has now been accounted for 33.21, 44.79, 51.11 and 55.42 percent on the marginal, small, semi- medium and medium size of holdings respectively, whereas this percentage for all size of holdings together has been worked out 46.08 percent. There has been a decrease in the income from household industries as only marginal and small farmers have been engaged in this activity. The percentage of household per month income from household industries has been worked out 5.06 and 2.87 percent on the marginal and small size of holdings respectively. The wage work has been the second most important source of income of the marginal and small farmers before agricultural diversification which has now recorded significant reduction in its percentage share due to their increased income from the commercial agricultural crops.

Table : 6.1
Household per Month Non- Agricultural Income after Agricultural Diversification among the Sample Households

(Value in Rupees)

Particulars	Marginal Holdings	Small Holdings	Semi- Medium Holdings	Medium Holdings	All Holdings
Services	2367.94 (31.49)	2916.81 (30.84)	5200.12 (30.25)	5705.26 (21.37)	4322.15 (28.42)
Business	2496.98 (33.21)	4235.88 (44.79)	8787.30 (51.11)	14794.29 (55.42)	7007.90 (46.08)
Household Industries	380.69 (5.06)	271.78 (2.87)	—	—	291.99 (1.92)
Wage Work	1190.97 (15.84)	507.09 (5.36)	—	—	845.57 (5.56)
Pensions	200.97 (2.67)	344.03 (3.64)	737.52 (4.29)	1562.71 (5.85)	623.53 (4.10)
Others*	881.20 (11.72)	1182.32 (12.50)	2467.11 (14.35)	4631.07 (17.35)	2116.97 (13.92)
Total Income	7518.75 (100)	9457.91 (100)	17192.05 (100)	26693.33 (100)	15208.12 (100)

Note: Figures in parentheses indicate percentages to the column total.

* Other activities include rent on shops, hired out accommodation sale of local products etc.

The household per month income from wage work among the marginal and small farmers has been worked out 15.84 and 5.36 percent respectively, whereas this percentage for all size of holdings together, has been worked out

5.56 percent. The percentage share of household per month income from pensions in the total income has been calculated 2.67, 3.64, 4.29 and 5.85 percent respectively, whereas this percentage for all size of holdings together, has been calculated 4.10 percent. Due to agricultural diversification, there has been expansion in other activities also, as a result of which the household per month income from other activities has been recorded 11.72, 12.50, 14.35 and 17.35 percent among the marginal, small, semi- medium and medium size of holdings respectively, whereas this percentage for all size of holdings together, has been recorded 13.92 percent. This table clearly shows that due to agricultural diversification almost all the holding groups have now got enough work on their own holdings as a result there has been a decreasing tendency in the income from services, household industries and wage work with an increase in the size of holdings. On the other hand, due to agricultural diversification, there has been expansion in the other activities such as business etc. which shows an increasing tendency in the income from business activities with an increase in the size of holdings.

7. IMPACT OF AGRICULTURAL DIVERSIFICATION ON THE HOUSEHOLD PER MONTH NON- AGRICULTURAL INCOME

The impact of agricultural diversification on household per month non-agricultural income has been presented in the Table 7.1. This table clearly shows that there has been an increase in the overall household per month income after agricultural diversification. After agricultural diversification, the income from business has increased but from services, wage work and household industries, the income has fallen due to the reason that the farmers have got enough work in their own agricultural crops. The reduction in the household per month income in case of services has been worked out 2.13, 8.25, 12.84 and 27.00 percent on the marginal, small, semi- medium and medium size of holdings respectively, whereas this percentage for all size of holdings together has been worked out 13.69 percent. This reduction in income occurred due the reason that the households who were engaged in the private jobs prior to the agricultural diversification were earning less while now they are earning more from their own more remunerative agricultural, horticultural and floricultural crops.

Jagat Pal Singh– **Impact of Agricultural Diversification on Non- Agricultural Income among the Households – A Case Study in the Mid Hill Zone of Himachal Pradesh, India**

Table : 7.1

Change in Household per Month Non- Agricultural Income after Agricultural Diversification among the Sample Households

(Value in Rupees)

Particulars	Marginal Holdings	Small Holdings	Semi- Medium Holdings	Medium Holdings	All Holdings
Services	-139.09 (-2.13)	- 657.38 (-8.25)	- 1783.37 (-12.84)	-5576.31 (-27.00)	- 1676.95 (-13.69)
Business	+ 1828.83 (+28.05)	+3214.11 (+40.36)	+5915.01 (+42.59)	+8933.57 (+43.26)	+4786.56 (+39.09)
Household Industries	- 37.80 (-0.58)	- 91.37 (-1.15)	- 266.67 (-1.92)	—	-142.73 (-1.16)
Wage Work	- 1337.57 (-20.52)	- 1820.54 (-22.86)	-2188.94 (-15.76)	—	- 1408.89 (-11.50)
Pensions	+36.70 (+0.56)	+54.15 (+0.68)	+102.78 (+0.74)	+170.84 (+0.83)	+ 76.15 (+0.62)
Others*	+649.14 (+9.96)	+795.28 (+9.99)	+1524.03 (+10.97)	+2514.36 (+12.17)	+1328.36 (+10.85)
Total Income	+1000.21 (+15.34)	+1494.25 (+18.76)	+3302.85 (+23.78)	+6042.45 (+29.26)	+2962.56 (+24.19)

Note: Figures in the parentheses indicate percentages to the column total.

+ Indicates percentage increase.

- Indicates percentage decrease.

* Other includes rent on shops, hired out accommodation sale of local products etc.

The household per month income from business activities has recorded an increase in the income of the households after agricultural diversification. This percentage increase for marginal ,small, semi- medium and medium size of holdings has been recorded 28.05, 40.36, 42.59 and 43.26 percent respectively, whereas this percentage for all size of holdings together, has been worked out 39.09 percent. Contrary to it there has been a reduction in the household per month income from household industries mainly due to the reason that these industries prior to the agricultural diversification were not economically viable because of high cost of production. The reduction in the per household per month income from household industries has been worked out 0.58, 1.15 and 1.92 percent among the marginal , small and semi- medium size of holdings respectively. The income from wage work has been one of the important source of household income of the marginal and small size of holdings prior to the agricultural diversification, which has now recorded reduction in its share in the income of these households due to the reason that after agricultural diversification these households have now got enough work in their own agricultural activities. This reduction in wage income accounted for 20.52, 22.86 and 15.76 percent in the income of the marginal, small and semi- medium size of holdings respectively, whereas this percentage for all size of holdings together, has been worked out 11.50 percent. There has been a slight increase in the per household per month income from pension which has been worked out 0.56, 0.68, 0.74 and 0.83 percent on the marginal , small, semi- medium and medium size of holdings respectively, whereas this percentage for all holdings together, has been worked out 0.62 percent. After

agricultural diversification, there has also been increase in the household per month income from other activities which has been an calculated 9.96, 9.99, 10.97 and 12.17 percent on the marginal, small, semi- medium and medium size of holdings respectively, whereas this percentage for all size of holdings together has been worked out 10.85 percent. This table clearly depicts that there has been a reduction in the household per month income from services, household industries, wage work etc. due to the fact that the farmers are now getting more work in their own fields because of diversification, but contrary to it, there has been an increase in the per household per month income from activities like business, pensions, other activities etc. The overall impact of agricultural diversification shows overall increase in the household per month non- agricultural income which has been worked out 15.34, 18.76, 23.78 and 29.26 percent on the marginal, small, semi- medium and medium size of holdings respectively, whereas this percentage for all size of holdings together, has been worked out 24.19 percent.

8. CONCLUSION:

This study reveals that there is reduction in non – agricultural income of the marginal and small holdings because now these farmers are getting enough work in their own land due to agricultural diversification. On the other hand, agricultural diversification has not only caused increase in the agricultural income of the medium and semi- medium holdings but also led to increase in their non – agricultural income. This is because these farmers have left low paying private jobs and are now producing high income yielding cash crops such as vegetables, flowericultural and horticultural crops and these farmers are doing own business which has resulted increase in their non – agricultural income after diversification.

REFERENCES

1. Government of Himachal Pradesh, *Brief Facts About Himachal Pradesh*, (Directorate of Economics and Statistics), Shimla, 2010-11, 2105-16, 2018-19, pp. I, II, III.
2. Mian Goverdhan Singh, *Socio, Cultural and Economic Survey of Himachal Pradesh* Minerva Book House, Shimla, 1985, p. 1.
3. Government of Himachal Pradesh, *Brief Facts About Himachal Pradesh*, (Directorate of Economics and Statistics), Shimla, 2010-11, p.3.
4. Ramesh Chand, *Agricultural Diversification and Development of Mountain Regions – with Special reference to Himachal Pradesh*, M.D. Publications (P) Ltd., New Delhi, 1997, p. 208.

Jagat Pal Singh– Impact of Agricultural Diversification on Non- Agricultural Income among the Households – A Case Study in the Mid Hill Zone of Himachal Pradesh, India

5. Government of Himachal Pradesh, *Reports on Economics Census 1997, 1980 and 1990*, (Directorate of Economics and Statistics), Shimla, pp. 19-20. p. 87 and p. 137 respectively,
6. Government of Himachal Pradesh, *Statistical Outline of Himachal Pradesh*, (Directorate of Economics and Statistics), Shimla, 1955-56, 1962-63, 1985-86, 1969-70, 1976-77, 1995-96, 2000-01, 2002-03, 2010-11. 2018-19.