American Journal of Business, Economics and Management
2014; 2(4): 113-120
Published online August 20, 2014 (http://www.openscienceonline.com/journal/ajbem)

Agricultural marketing and inclusive growth in India - what does the survey data suggest? The case of two villages in Medak district of Telangana state

M. Ramaulu[1], G. Ramakrishna[2], P. Lalitha[3]

[1]Dept. of Economics, Osmania University, Hyderabad, India
[2]Dept. of Economics, Osmania University, Hyderabad, India
[3]Dept.of Economics and Finance, BITS Pilani, Hyderabad Campus, India

Email address

amramulu@rediffmail.com (M. Ramaulu), profgrk@gmail.com (G. Ramakrishna), plalitha@bits-hyderabad.ac.in (P. Lalitha)

To cite this article

M. Ramaulu, G. Ramakrishna, P. Lalitha. Agricultural Marketing and Inclusive Growth in India - What does the Survey Data suggest? The Case of Two Villages in Medak District of Telangana State. *American Journal of Business, Economics and Management.* Vol. 2, No. 4, 2014, pp. 113-120.

Abstract

This paper is an attempt to study the role of agricultural marketing in impacting the small and large farmers in rural India (Telangana) in terms of their participation in selling activities, obtaining remunerative prices, the problems relating transport of their produce and finally the impact on their economic well being. Our empirical analysis based on primary as well as secondary data suggests that, in spite of inadequate knowledge about the usefulness and functioning of regulated agricultural marketing , the small and marginal farmers of the study area have been benefited due to better prices and other market related facilities. The study uses the binary lgit model to discern the impact of various socio economic variables on the decision of sample farmers to participate in the regulated market practices. The empirical analysis reveals that the small and marginal farmers have improved their economic well being due to the participation. However, there is a need to do a lot to derive more and tangible benefits through regulated markets in rural Telangana.

Keywords

Agricultural Marketing, Inclusive Growth, Awareness, Price Differential, Logit Model

1. Introduction

Agricultural marketing involves the various interconnected services and activities relating the movementof agricultural products from the farm to the final consumer. These activities include planning production, growing and harvesting, grading, packing, transporting, storage, agro and food processing, distribution, advertising and sales. Agricultural market has now become an integral part of agricultural production process. The development of an economy in general and the agriculture sector in particular is closely associated with the facilities available for marketing of goods supplied by agriculture. The marketing of agricultural products is a matter of great concern to the farmers, consumers and traders as it provides a channel for selling agricultural produce; and for consumers a means of satisfying their consumption needs; and for the traders it is a source of profit and lively hood. The basic purpose of a regulated market is to eliminate unhealthy market practices, reduce marketing costs, ensure fair prices and in general protect the interests of farmers. More specifically, regulated agricultural markets aim at ensuring remunerative prices to the producer of agricultural commodities, narrowing down the price differentialetween the producer and the consumer and reducing non-functional margins of the traders and commission agents.

India moved from the food shortage economy in 1950's to the present food surplus economy. Food grain production has increased by more than four-fold from a low level of 51 million tonnes in 1950-51. But, has this phenomenal success helped the small and marginal farmers? The Government of India, besides other programs, established regulated agricultural markets to ensure remunerative prices to the farmers. But, has this led to the inclusion of small and marginal farmers in the growth process? Do farmers prefer to sell their produce in regulated markets? If not, why they are not selling in agricultural markets? What factors determine their participation in agricultural markets? If they are participating, what is the extent of benefits derived by them? What transaction costs are involved? What mode of transport they use? Whether operations held at regulated market are conducive for Inclusive Growth? These are some of the questions we would like to address in this paper taking Medak district of Telangana as the case. For this purpose, regulated agricultural market of Zaheerabad in Medak districts was selected which was established in 1950. It is one of the important and the oldest markets in Medak district of Telangana State. Presently, it comprises of four mandalsviz; namely Zaheerabad, Kohir, Jarasangam and Nyalkal. There is also a sub-market for grains at Kohir. There are about 135 villages in these four mandals. The area of grain market yard at Zaheerabad is about 3 acres. About 45 commissions' agents and 55 wholesale traders are pursuing their business in this market. Green Gram, Black Gram, Red Gram, Bengal Gram and Maize are the five important crops which arrive in the markets. The arrivals in the market during recent years reveals an upward trend ranging from 130,000 quintals in 2007-08 to 6.5 lakh quintals in 2011-12. It is heartening to note that prices have risen during this period from Rupees. 570 to Rupeess. 1730 i.e., a three-fold increase. If we look at the individual crops, Arrivals of Green gram has doubled while price has registered six-fold increase. The arrivals of Bengal gram has declined but prices have marginally increased. The arrivals of Red gram have increased and prices also increased significantly. The arrivals of Maize have substantially increased but prices increased at a slower par (*Annual Reports, APMC's Zaheerabad)*. With this background of the market, a field survey has been conducted in the two villages of Medak district. In addition, secondary data also have been analyzed. More specifically, the objectives of the study include: 1) The identification of the socio economic factors influencing the participation of the farmers in regulated agricultural markets; 2) The study of the perceptions of the farmers about the various factors such as prices, transaction costs, etc; 3) The assessment of the impact of agricultural marketing on the wellbeing of small and marginal farmers in the study area. The paper is organized as follows: the second section deals with the data collection and analysis methods, the third section is about profile of the sample farmers along with a note on regulated market experience in the study area. This section also deals with empirical findings and the final section is on conclusions and policy suggestions.

2. Data Collection Methods and Analysis

The present study is based on both primary and secondary data. We have collected primary data from field survey conducted during 2013 in two villages of Medak district of Telangana state. These villages were selected on the basis of their proximity to the regulated market. Accordingly, Kohir, a distant village from regulated market (about 20 km away from Zaheerabad) and Rejinthala, a nearby village to the regulated market (about 10 km from Zaheerabad) have been selected for the study From each of these villages, 50 farmers belonging to different categories have been selected randomly. Information regarding reasons for selling and not selling the agricultural produce in regulated market, time of disposal of produce, sources of price information to the farmers etc, have been collected by administering a structured questionnaire. The required data have been collected by the authors directly holding interviews with the key informants. The data have been analyzed using simple statistical methods along with a binary logit model to assess the willingness of farmers in participating in a regulated marketing activities. In addition, secondary data were collected from Agricultural Market Committee, Zaheerabad. Using this source, information regarding market arrivals (in quantum and value), market fee collection, number of Commissions' Agents and Traders, villages served by the regulated market etc, have been collected. From each village, 50 farmers belonging to different categories were selected. Discussions were held with market officials to have better understanding of the working of the market and to select the villages having required characters for the study.

To examine the factors determining farmers' participation in regulated market activities, a binary logit model has been used. The model uses farmers' participation as the dependent variable that is dichotomous taking a value of 1 if the farmer participates and 0 otherwise. The model is as follows:

$$P_i = E$$

$$\left(Y = {}^{1}\!/\!_{X_i} \right) = \frac{1}{1+e^{-\left(\beta_0 + \sum \beta_k X_{ik}\right)}} \quad (1)$$

Let

$$Z_i = \beta_0 + \sum \beta_k X_{ik} \quad (2)$$

Then

$$P_i = {}^{1}\!/\!_{1+e^{-Z}} \quad (3)$$

As Z_i ranges from $-\infty$ to $+\infty$, P_i ranges from 0 to 1 and P_i is non-linearly related to Z_i.

In estimable form, the model is,

$$L_i = \text{Ln}\left(\frac{Pi}{1-Pi}\right) = Z_i = \beta_0 + \sum \beta_k X_{ik} \qquad (4)$$

Where, L is the logit. It shows how the log odds in favor of farmers' participation in agricultural marketing as the respective independent variable changes.

The estimable form of the model may be presented as:

$$L_i = \text{Ln}\, P_i/(1 - P_i)] = \beta_o + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9 + \beta_{10}X_{10} + \varepsilon_i. \qquad (5)$$

Where:

L_i = logarithm of the odds ratio. It shows how logarithm odds in favor of fathers' participation change as the respective independent variable changes by a unit;β_o = constant term;

β_k = coefficients;

X_k= for K = 1....10, are the independent variables and subscript i denotes i^{th} observation;

K_1 = age;

K_2= Education, number of schooling years;

K_3=Distance from the market, nearer =1 and 0 otherwise;

K_4 =price per quintal;

K_5 = Gender of the farmer, female=1, male=0;

K_6= market information, if available = 1 and 0 otherwise;

K_7 = Type of the farmer, small, medium=1 and 0 otherwise;

K_8 = transaction costs, if large=1 and 0 otherwise;

K_9= community, SC, ST, BC=1 and 0 other wise;

K_{10}= mode of transport, Bullock cart=1 and 0 otherwise

The model is based on the following hypotheses:

1. Age of the farmer has a positive impact on the participation.
2. Education has a positive impact on the participation.
3. Distance of the market has a negative impact on the participation.
4. Information on prices has a positive impact on the participation.
5. Female farmers do not participate in regulated agricultural marketing.
6. Market information has a positive impact on participation.
7. Small and marginal farmers have insignificant impact on participation
8. Transaction costs have a negative impact on participation.
9. Community of the farmer has a negative impact on agricultural marketing.
10. Traditional transport methods have a negative impact on participation.

3. Profile of Selected sample Farmers and theFindings:

As mentioned earlier, 50 farmers from Kohir village and 50 farmers from Rejinthal village have been selected randomly making the total sample size equal to 100. Nearly two-thirds of these farmers are either small or marginal farmers (Table-1). The main purpose of the study was to examine the small and marginal farmers participation in the agricultural marketing and the benefits derived thereof. It was also noticed that the composition of farmers by size of landholding is similar in both the selected villages. The Chi square test reveals that there is no statistically significant difference (Chi square=110.0 and the significance level=0.23) between the composition of the farmers in both the villages.

Table 1. *Composition of Sample farmers*

Farmer	Village 1	Village 2	All
Marginal Farmers	18 (9)	20 (10)	30 (38)
Small Farmers	8 (4)	17 (8.5)	25 (25)
Medium Farmers	10 (5)	05 (2.5)	15 (15)
Large Farmers	14 (7)	8 (4)	22 (22)
Total	50 (100)	50 (100)	100 (100)

Source; Field data
Note: the numbers in brackets are percentages

The distribution of sample farmers by caste reveals that nearly half of the selected farmers are from backward caste and another one-third farmers belong to Scheduled Castes (Table-2). Further, it is observed that inter-village differences were marginal and statistically not significant as revealed by chi square test (Chi square=99.0 and the significance level=0.24).

Table 2. *Distribution of Sample Households by Caste*

Caste	Village 1	Village 2	All
S.T.	1 (2)	--	01 (1)
S.C.	17 (34)	16 (32)	33 (33)
B.C.	23 (46)	23 (46)	46 (46)
Other	9 (18)	11 (22)	20 (20)
Total	50 (100)	50 (100)	100 (100)

Source; Field data
Note: the numbers in brackets are percentages

The distribution of selected farmers by age reveals the fact that nearly half of them are aged (i.e. above 50 years) and another one-third of farmers are young in age (i.e. below 40). Inter-village comparison reveals that aged farmers are relatively more in Kohir village while young farmers are relatively more in Rejinthal (Table-3). There is no statistically significant difference in the composition of age between two villages (Chi square =110.0 and the significance level = 0.23).

Table 3. *Distribution of Respondents by Age*

Age Group (in years)	Village 1	Village 2	All
Below 30	2	5	7
	(4)	(10)	(7)
30-40	11	15	26
	(22)	(30)	(26)
40-50	9	11	20
	(18)	(22)	(20)
Above50	28	19	47
	(56)	(38)	(47)
Total	50	50	100
	(100.00)	(100.00)	(100.00)

Source; Field data
Note: Figures in brackets are percentages

3.1. Utilization of Regulated Market

Regulated agricultural produce markets are established to ensure better price to the farmers. The field survey reveals that one of the important reasons for farmers selling their produce in regulated markets is the prospect of getting better price in the regulated market. Over 70% of farmers belonging to village 1 and over 90% of farmers belonging to village 2 are selling their produce in Zaheerabad regulated market (Table 4 and 5). Thus, over 80% of farmers reported that they expect to get better prices in the regulated market. Similarly, about 72 % of farmers have reported that one of the reasons for selling in the regulated market has been the accuracy in the measurement.

Table 4. *Reasons for selling in Regulated Market*

(In Percentage)

Type	Reasons					
	A	B	C	D	E	F
Marginal Farmers	63.1	52.6	44.7	60.52	52.6	7.8
Small Farmers	92	84	24	84	80	8
Medium Farmers	93.3	96.6	53.3	60	86.6	40
Big Farmers	95.4	81.8	27.2	86.3	90.9	40.9
All	82	72	38	77	73	20

Note: A=Price, B=measurement, C=Storage, D=Quick disposal, E=Immediately Payment, F=Any other
Source: Field Survey

Table 5. *Reasons for not selling in Regulated Market*

(In Percentage)

Type	Reasons									
	1	2	3	4	5	6	7	8	9	10
Marginal Farmers	36.8	34.2	26.3	5.2	18.4	7.8	2.6	13.1	13.1	7.8
Small Farmers	16	16	12	4	8	4	-	16	12	16
Medium Farmers	20	20	13.3	13.3	6.6	13.3	6.6	20	20	6.6
Big Farmers	27.2	18.1	27.2	13.6	27.2	4.54	9.0	13.6	22.7	18.1
All	27	24	21	8	16	7	4	15	16	12

Note:1=High Transport Cost, 2= Not availability of transport cost, 3=Problems of time, 4= Prices are not remunerative,5= More waiting time,6=Any other reasons, 7=Long distance, 8=Malpractices, 9= Heavy Commission, 10= Low Marketable Supply
Source: Field Survey

Another important reason for selling in regulated market is the immediate receipt of cash for the sale of produce. Generally, farmers face liquidity crunch at the time of harvest. They are eager to dispose of their produce to liquidate their short term and long term debt. The field data revels that not only small but even larger farmers are eager to sell their produce to improve their liquidity position. Over 70% of farmers felt that the reason for selling in regulated market is the possibility of quick sale and getting cash in return. The main reasons for farmers not selling their produce in regulated markets appear to be high transport cost, non availability of transport facilities, long waiting time at regulated market. Small farmers experience more difficulties than large farmers in this regard. For instance, over 36% of small farmers reported that they were not selling their produce in regulated market because of high transport cost while only 27% of big farmers encountered such problem;it is interesting to note that only few farmers (about5) in Reginthala were not selling their produce in regulated market. Invariably all the farmers were taking their produce by private transport to regulated market (Table-6). No agents were coming to the village to purchase agricultural produce. Only officials from sugar factories visit the village to inspect the sugarcane and instruct when the cane should be brought to the factory. In Kohir village, there is a sub-market yard. Therefore, most of the farmers sell their produce in the sub market. Sometime, they take their produce to Zaheerabad Market because of availability of convenient and cheap transport facilities. In fact, large farmers growing cotton sell to purchase agents who visit the village. These agents prefer to contact large farmers as they can get truck loads of cotton.

3.2. Mode of Transport

The transport used for moving produce to market indicates that three wheelers and tractors are important modes of transport (Table-6). More than half of the farmers use three-wheelers and one third producers use tractors. It is also observed that large farmers who generally own tractor prefer to use the tractor for transporting their produce while small farmers make use of three-wheelers.

Table 6. *Mode of Transport*

(In Percentage)

Type	Mode				
	1	2	3	4	5
Marginal Farmers	28.9	7.8	36.8	28.9	2.6
Small Farmers	32	12	64	4	-
Medium Farmers	40	26.6	60	26.6	-
Big Farmers	36.3	22.7	54.5	18.1	-
All	34	15	51	29	1

Note:1= Tractor, 2= Tempo, 3=Three Wheeler, 4=Bullock Carts,5= Others
Source: Field Survey

3.3. Time pattern of Disposal of Produce

Economic conditions of the farmers can be assessed by looking at time-pattern of disposal of produce. Almost all the farmers (both small as well as large) dispose their produce within a month after the harvest (Table-7). It reflects the severity of liquidity problem (i.e., need for cash). The farmers are compelled to sell their produce immediately after harvesting (usuallywhen prices are low). This is true in both the villages under study. It only highlights the need for the efforts to be made by Government to see that farmers receive loan against crops grown so that farmers are able to sell their produce when the prices are favorable.

Table 7. *Time of Disposal of Produce*

(In Percentage)

Type	Time of Disposal of Produce after harvesting			
	1	2	3	4
Marginal Farmers	100	-	-	-
Small Farmers	88	4	-	-
Medium Farmers	93.3	6.6	-	-
Big Farmers	100	-	-	-
All	96	2	-	-

Note:1= Within 4 weeks, 2= 2-4 weeks, 3=8-12 weeks, 4=12 weeks and above
Source: Field Survey

3.4. Source of Price Information

Farmers receive information about prices prevailing in regulated market from local traders, by personally visiting the market and by making phone calls to the market and to the friends (Table-8). It is interesting to note that small farmers depend upon local traders and personal visits to gather information on market prices while large farmers depend upon local traders and phone calls. Large farmers do not take the trouble of personally visiting the market. Surprisingly, media is not one of the important sourcesof market price information to the farmers. It implies that government should make all-out efforts to enhance the role of media in transmitting price information to the farmers.

Table 8. *Source of Price Information*

(In Percentage)

Type	Source of Price Information				
	1	2	3	4	5
Marginal Farmers	-	47.3	47.3	36.8	34.2
Small Farmers	-	48	32	60	28
Medium Farmers	13.3	40	53.3	66.6	6.6
Big Farmers	18.1	40.9	27.2	50	18.1
All	4	45	40	50	25

Note: 1=Media, 2=Local Traders, 3= Personnel visit, 4=Phone, 5= Others
Source: Field Survey

There is a general impression that only large farmers take their produce to regulated market. The field survey, however, reveals that it is the small and marginal farmers, who depend more on regulated market to sell their produce. In the selected villages, small and marginal farmers are selling 80-90% of total sales in regulated market while large farmers are selling only two-third of their total sales in regulated market (Table-9). On the whole, the farmers are selling three-fourth of their produce in regulated market and remaining one-fourth in local/other markets. This is partly because of good road connectivity between the selected villages and regulated market coupled with good privately-operated transport facilities; and partly because of purchase agents who prefer to purchase agricultural produce from large farmers with substantial marketable surplus. The price differential between regulated and local markets is found to be statistically significantas the chi-square value= 66.0 and the significance level = 0.02. Similarly there exists a statistically significant difference between the earnings of the farmers between local and regulated markets (Chi-square value=110.0 with significance level=0.01).

Table 9. *Sales of the produce*

Type	Qty sold	Local Market			Regulated Market			
		Qty	Amount	Price	Qty	Amount	Price	% in sale in Regulated Market
Marginal Farmers	1045 / 38 (27.5)	176 / 38 (4.63)	285700 / 38 (7518.42)	1623.29	869 / 38 (22.86)	1442800 / 38 (37968.42)	1660.29	83.15
Small Farmers	1760 / 25 (70.4)	162 / 25 (6.48)	183000 / 25 (7320)	1129.62	1598 / 25 (63.92)	2236350 / 25 (89454)	1399.46	90.79
Medium Farmers	1770 / 15 (118)	309 / 15 (20.6)	572300 / 15 (38153.33)	1852.10	1461 / 15 (97.4)	3167500 /15 (211166.66)	2168.03	82.54
Large Farmers	5212 / 22 (236.90)	1708 / 22 (77.63)	1544300 / 22 (70195.45)	904.15	3504 / 22 (159.27)	6742770 / 22 (306489.54)	1924.30	67.22
All	9787 / 100 (97.87)	2355 / 100 (23.55)	2585300 / 100 (25853)	1097.79	7432 / 100 (74.32)	13219420 / 100 (132194.2)	1778.71	75.93

Note: Quantity in quintals, Amount in Rs.
Source: Field Survey

3.5. Price Benefit

As mentioned earlier, the purpose of establishing regulated market is to ensure better price to the farmers. The farmers on the whole, received Rs.1800/- per quintal in regulated market against Rs. 1100/- in the local market i.e., about 70% higher. This is true not only in case of large farmers but also true in case of small farmers. However, it appears that large farmers are deriving larger amounts of benefits from regulated market. Farmers, in general, opined that there is a price difference of Rs.123 per quintal between regulated market and outside market (Table-10). However, there is a difference in the perception of the farmers as the first village farmers felt the difference to be as high as Rs.165/- and the framers of second village felt it was only Rs.82/-. On the whole, farmers of both villages unanimously reported that prices in regulated markets are higher. The analysis also revealed that large farmers got larger benefit.

Table 10. *Price Difference between Regulated market and Local market*

Type	Average price difference per quintal in Rs.
Marginal Farmers	103.9
Small Farmers	116
Medium Farmers	190
Big Farmers	120.4
All	123.5

Source: Field Survey

3.6. Awareness about Government Schemes

To educate the farmers regarding agricultural marketing the Government of India has started various schemes like Kisan Call Centre, Digital Mandi, Market portal information, RythuMitra, Gopal Mitra etc.Full potentialities of these schemes can be realized only when there is adequate awareness about these schemes among the farmers. Field study reveals that most of the farmers in both the villages are not adequately informed about these schemes (Table-11).

Table 11. *Awareness among Farmers*

Type	Percentage of farmers having awareness									
	1	2	3	4	5	6	7	8	9	10 Agmark
Marginal Farmers	-	-	-	-	-	-	-	-	-	-
Small Farmers	4	-	-	-	4	-	8	4	-	-
Medium Farmers	13.3	6.6	-	-	-	6.6	13.3	-	-	6.6
Big Farmers	13.6	-	-	-	-	-	13.6	4.5	66.6	4.54
All	6	-	-	-	1	1	7	2	2	2

Note:1=Kisan Call centre: 1800-180-1551, 2=Digital Mandi, 3=SHG (IKP), 4= Future Market, 5=Contract farming ,6=Market portal information, 7=Rythu Mithra, 8=Gopala Mithra, 9= Farmers clubs, 10= Agmark
Source: Field Survey

In what follows are the results of the estimated logit model: The model uses both socio and economic factors as the determinants of the farmers' participation in regulated agricultural market:

Table 12. *Results of the Binary Logit Model*

Variable	B	S.E.	Wald	Sig.	Exp(B)	95% C.I.for EXP(B) Lower	Upper
age	0.992**	0.490	4.102	0.044	2.698	1.033	7.053
education	1.103**	0.551	3.994	0.046	3.006	1.022	8.855
Distance	-0.720	0.587	1.504	0.222	0.487	0.154	1.535
price	2.562*	0.611	17.585	0.000	12.964	3.915	42.936
Gender	-0.020	0.799	0.001	0.980	0.980	0.205	4.690
Market information	2.523*	0.721	12.242	0.001	12.468	3.034	51.234
Transaction costs	-0.001	0.015	0.001	0.970	0.999	0.971	1.030
Type of the farmer	1.164**	0.605	3.720	0.051	3.210	0.981	10.504
Community	0.173	0.536	0.106	0.742	1.193	0.418	3.409
Mode of transport	-0.606	0.528	1.318	0.251	1.834	0.651	5.167
Constant	-3.420**	1.161	9.054	0.003	.031		
-2 Log likelihood 110.22							
Cox & Snell R Square 0.385							
Nagelkerke R Square 0.534							

Note: Estimated using survey data. * indicates significance at 1% and ** indicates significance at 5% level.

The estimation of binary logit model indicates that market participation among the farmers is connected to the market information along with other variables in the study area. The major factors that affected market participation were: age, education, price, type of the farmer and market information. The other variables considered in the model had expected signs but were not statistically significant. Based on these findings the following conclusions are drawn.

4 Conclusion and Policy Suggestions

1. Contrary to the general belief, the study reveals that the small and marginalfarmers are benefitted as their earnings have increased due to the participation in agricultural marketing. Thus itmay be concluded that participation in regulated agricultural marketing paves the way for these farmers to be included in the growth process. Since most of the sample farmers are inclined towards selling their produce in the regulated markets, the government should strengthen infrastructure facilities and provide proper grading and standardization procedures.
2. As revealed by Chi- square tests, it seems there are no differences in the age composition and the caste composition in the two villages of study area. The inter village differences in the composition of the type of farmers are marginal and the difference is not statistically significant. This indicates more or less similar social situation in the villages of Telangana state.
3. Our data analysis indicates that the major factors influencing sales in the regulated agricultural markets are price, storage facilities, quick disposals and the speedy payment. The major factor that hinders the sales is the transport cost.Since price differential is an important variable, strengthening regulated markets and making farmers participate is an important challenge in Telangana. The government should also take the measures to educate farmers on negotiable warehousing receipt scheme and pledge finance to avoid the distress sales..
4. The empirical analysis based on logit model suggests that in spite limited awareness about the agricultural marketing among the farmers it had significant and positive impact on farmers' participation in these activities thus highlighting the importance of market information programs.
5. Age of the farmer, education and price differential appear to influence significantly the farmers' participation in agricultural markets. The other variables such as gender, community, distance, transaction costs and mode of transport have expected signs but statistically not significant. The empirical analysis also reveals that type of the farmer has a significant impact on participation indicating that small and marginal farmers do participate in regulated agricultural markets.
6. The study also reveals that the awareness among the farmers regarding government schemes of agricultural marketing is not adequate and there is a need to intensify and expand the awareness campaigns about the various schemes and the benefits related to agricultural marketing. The use of radio and television media to broadcast market prices regularly should be improved. The local news papers also should play a role in educating people about the latest developments particularly relating price changes. In addition, using web portals to pave the way for global marketing should be implemented. The toll free number for information, 1880-180-1551 should be widely popularized. Finally, the government should concentrate on promoting marketing research and take measures to convert agriculture into agricultural business.

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