

Can Agricultural Marketing Policies Increase Income of Farm Households? - A Case Study of Dakshin Dinajpur District in West Bengal

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ABSTRACT

Agricultural marketing works with two marketing channel input marketing and product marketing. However, product marketing itself has many channels but this study deals with product market only where it creates link between cultivator and final consumer who are purchasing crops in different markets. However government has a control over input marketing in most of the items which are consumed by the farmers in subsidies rate but the most harmful and destructive nature of marketing faced by farmers is product marketing. In peak season of harvesting and especially for non-perishable crops farmers are facing huge loss and on the other hand the middlemen are getting enormous profit for same crops. This study tried to focus on profit gap and the determinants of this profit gap between farmer and middlemen.

Keywords: Agricultural marketing, Profit Gap, Village Hut, Town market

INTRODUCTION

Effective Agricultural marketing makes profit for farmers and encourage them to retain in farming to produce more crops. It works with two major marketing channel say input marketing and product marketing. First one deal with the farm input suppliers such as seeds, fertilizer, pesticide, machineries etc. and another one create the link between cultivator and final consumer who are purchasing crops in different markets. However government has a control over input marketing in most of the items which are consumed by the farmers in subsidies rate but the most harmful and destructive nature of marketing faced by farmers is product marketing. Farmers who are growing the crops most of the time they are getting negligible profit and in most of the cases it comes out due to dishonest attitude of the traders. It happens mostly in peak time of harvesting and obviously for non-perishable goods. Excess supply of these crops creates low demand and compels farmers to sell their crops at lower prices. But the fraudulent traders re-selling these crops in nearby towns at far higher prices. These traders are called middleman or intermediaries and they absorb most of the profit. Jaffer et.al (2005) showed that "lower the number of intermediaries higher is the market efficiency and vice-versa". On the other hand Sudha et.al in 2005 has found that "the producers share in consumer's rupee is higher where no middleman existed than where middleman existed". However regulated market is the government initiative to get profitable price for farmer's crop. Farmers can directly sell their crops in those markets, but this market mechanism is not successful at all. Mathur and Kulkarni showed in 1965 that the problem of agricultural marketing can be solved by regulated market.

A huge profit gap is present in product market as the growers are selling their crops in village Hut because they are able to reach in the town market or in regulated market at all. If farmer sell their crops in town directly they can earn more than of their expected price. But due to transport facility, durability of non-perishable crops and due to shortage of cold storage they bound to sell crops at lower prices. Government has taken number of policies say, Pradhan Mantri Fasal Bima Yojana (PMFBY), Minimum Support Price (MSP), Sufficient cold storage facilities, also used Information and Communication Technology 9 ICT) as M- Kisan, use of mobile phone, E-NAM, farmers portal, Kisan call center etc. to provide direct benefit to farmers. But due to digital poverty and absence of proper device to run these scheme farmers are far behind of these facilities.

Objective of the Study

The objective of the study is to find out the profit gap of farmers when they are selling their crops in village Hut irrespective of near town market where they may get better price. After taking out the profit gap we will try to find out the impact of different factors which are main determinant of such profit disparity. Similarly we will review the comparative proneness of these factors and acceptability of the factors which are really does impact on profit margin. In addition to that we will see the correlation between dependent and independent factors by using Pearson correlation exercise.

Data Processing and Methodology

The study has made mainly based on primary data collected from Dakshin Dinajpur Distret in West Bengal. Total 120 household farmers have surveyed from four villages and 30 household has considered randomly from each village in this district. Surveyed all household are growing both commercial crops and traditional crops. We considered here only vegetables grower farmers who cultivating these crops as cash crop. We want to investigate the difference of profit if farmers sell their crops in near towns and in their common 'Hut' or Mandis. Once this difference is found we regress these profit disparity on several independent variables attached in farming system as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \epsilon$$

Y= Profit Gap (dependent variable)

α = Intercept term

X_1 = Non-institutional credit

β_1 = Coefficient of non-institutional credit

Farmer surveyed in the village's hardly taking loan from non-institutional credit. They are going to institutional sources say in banks. Because banks provide loan after opening bank account with valid land documents or by issuing KCC. Since farmers are owner of their land by generation, they ignored the land registration to avoid registration cost. As a result farmers are not eligible to borrow loan from banks and they borrow money from traders, money lenders at higher rate of interest some time they deal with these money lenders to sell their crops to them only.

X_2 = Transportation cost

β_2 = Coefficient of transportation cost

Transportation cost is another independent variable which tells us if there is better transportation cost farmers may reach at town market to get higher profit.

X_3 = Landholding

β_3 = Coefficient of landholding

Land holding is an important determinant of this regression result. It is expected that if farmers have more land they will produce more and like to sell their crops in town market because overall transportation cost will reduce. So it's profitable to them to carry the produced crops in nearby town market.

X_4 = Level of farmer education

β_4 =Coefficient of level of farmer education

Another important quantitative independent variable of this regression model is level of education. We have considered the educational level as if farmers are 10th pass we considered it as 15 level of education as well. It has assumed that as farmers education in higher they are well informed about the price disparity and will try to sell their crops in better place to earn more profit.

X_5 = Availability of information

β_5 = Coefficient of availability of information

X_6 = Pressure of non-institutional credit lender

β_6 =Coefficient of pressure of non-institutional credit lender

X_7 = Tax burden in town market

β_7 = Coefficient of tax burden in town market

In the above regression equation we want to find out the impact of different independent variables on profit gap. Here X_5 , X_6 and X_7 are Dummy independent Variables where X_5 represent the Availability of information whether informs regarding better price in town market are known to them or not. X_6 is the dummy of pressure of non-institutional credit lender. It depict that is there any pressure of such lender for that farmers are bound to sell their crops at nearby Hut or sell their crops to them only. Dummy X_7 shows that tax burden in town market i.e. is there any pressure of anti-social groups for those farmers have to some taxes or cost to sell their crops in town and if yes it compels them to sell their crops in village Hut at lower price.

In the multiple regression models we can see multiple R is 0.83, R square is 0.69 and adjusted R square is 0.67 and all these values support the model and tell us variables are correlated and as we are adding more independent variable these are acceptable in the regression model.

Regression Statistics	
Multiple R	0.832277228
R Square	0.692685384
Adjusted R Square	0.67347822
Standard Error	3987.745415
Observations	120

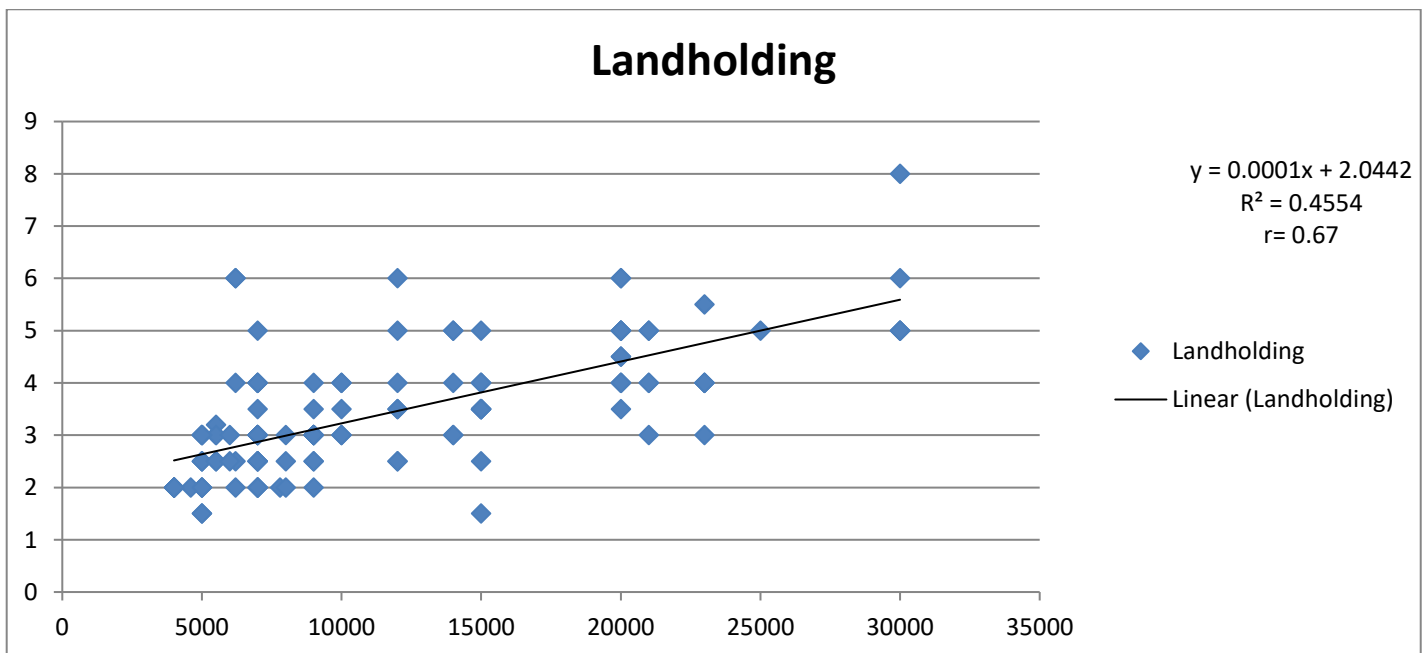
In this summary table we can see coefficient of all variables is positive i.e. these are positive related with dependent variable. Non-institutional credit, transportation cost, landholding and education are predicted the model properly as their p value is less the 0.05 and it is highly significant. On the other hand the independent variables say, availability of information, tax burden, non-institutional credit have higher p value which is more than 0.05. So these do not predict the model as such and we can exclude these variables.

	Coefficients	Standard Error	t Stat	P-value
Intercept	-3173.881067	1484.575542	-2.137904726	0.034698537
Non-institutional credit	0.420674995	0.111279673	3.780339969	0.000252871
Transportation cost	4.409710686	0.870018097	5.068527542	1.59709E-06

Landholding	2010.619687	368.0937384	5.462249088	2.86897E-07	
Education	250.4724379	72.01480254	3.478068801	0.000720162	
Availability of information	319.1299396	792.2663726	0.402806367	0.687858511	
Tax burden	-80.51437621	891.6441767	-0.090298774	0.928211084	
Non-institutional credit pressure	-305.1405385	761.2988826	-0.400815692	0.689319425	
ANOVA					
	Df.	SS	MS	F	Significance F
Regression	7	4014446538	573492362.6	36.06390828	6.26178E-26
Residual	112	1781036712	15902113.5		
Total	119	5795483250			

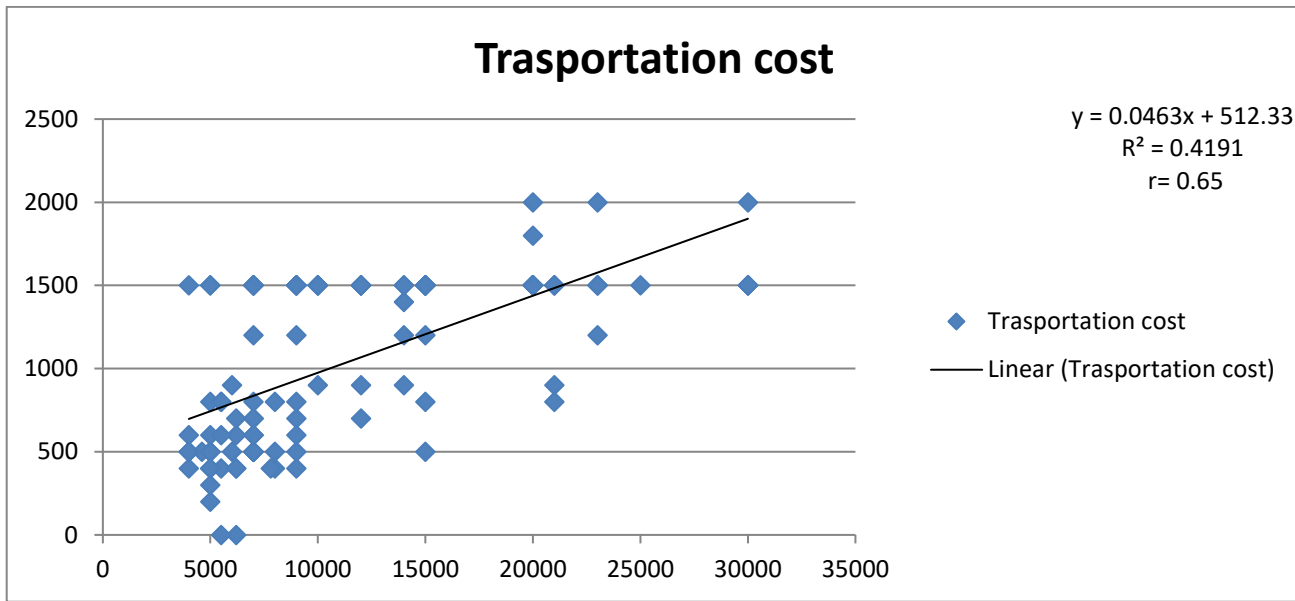
Relation between Profit Gap and Level of Landholding

In this section we want to see the relation between landholding and profit gap of farmers. As we know that if landholding is large farmers can do better practice in farming. They can use modern technique and can produce different new cash crops. Once they get huge production can sell these crops in nearby town. Big landholding also supports the farmers to get set up modern farming infrastructure. But as farmers are poor and have small size of land they are cropping traditional crops and sell it in villages Hut. In the following correlation fitted line we can there is positive but weak correlation having $r = 0.67$ between landholding and profit gap. It means between these two variables there is not strong correlation.



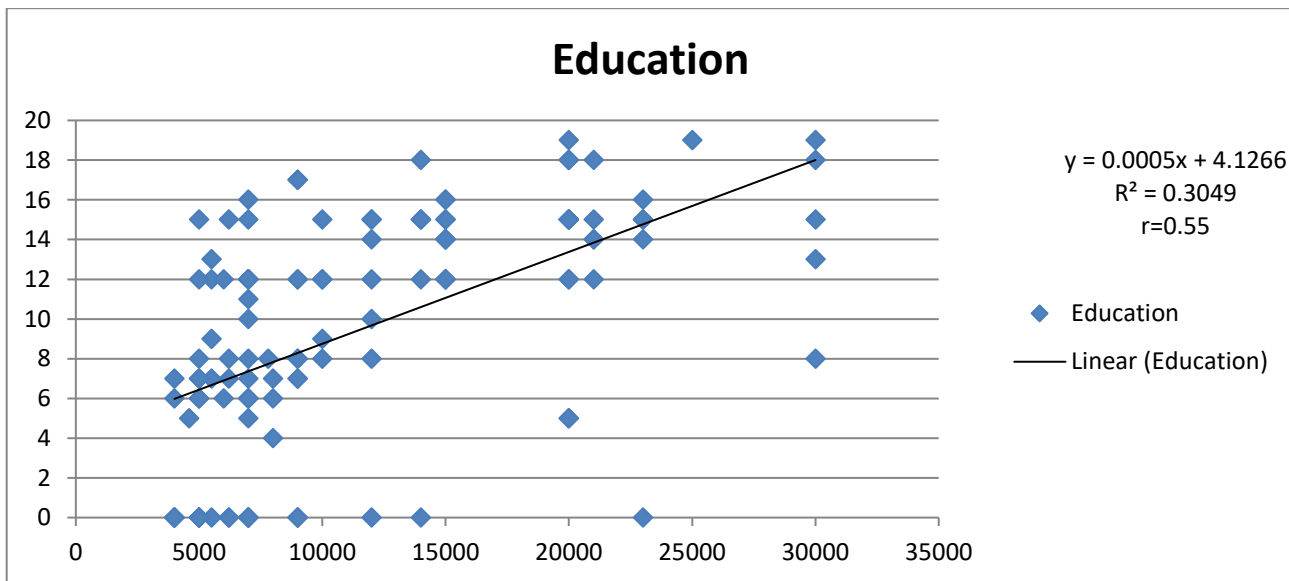
Relationship between Transportation cost and profit gap

Transportation cost will be higher if they sell their crops in town market. However it depends on category of vehicles. If someone carries their crops in self-vehicles cost will reduce and will get higher profit and vice-versa. In this correlation table we can see there is positive weak correlation between transportation cost and profit gap.



Relation between education level of farmers and profit gap

In this section we want to see the relation between education of farmers and profit gap. The correlation table shows that there is positive correlation but the relation weak having $r = 0.55$. But we can say that as education of farmers are increasing they much aware about better price of crops in town market and they try to sell their crops in this market for more profit.



CONCLUSIONS AND POLICY IMPLICATIONS

Although number of policies is available to get better benefit from agricultural marketing, it not implemented all over the nation effectively. Farmers who are aware and able to accept the policies they enjoy lot. Schemes are present but there is lack of awareness. Credit facility, transportation cost, and education level of farmers determines the profit and profit gap became widen if they leave village hut and choose town market to sell their crops. After paying all types of extra cost they can enjoy higher profit in town market. On the other hand if government has a control over middleman or intermediaries farmers may get better price for their crops in village market too. Because dishonest traders or middleman creates artificial demand shortage and makes excess supply in village markets as a result farmers are bound to sell their crops at lower price and these crops traders sell it in town market at three times more prices approximately. Since there is not cold storage facility farmers are bound to sell their crops at lower price. As a result some time they face no-profit-no-loss situation in their farming



occupation. But farmers agricultural occupation may become more profitable if government implements all scheme sincerely. The following policies may be taken for the benefit of farmers

1. There should have control on intermediaries or middleman
2. Sufficient number of Cold storage should be present
3. Government should facilitate transportation cost
4. Institutional credit facility should available
5. Awareness camp should be organized
6. Government regulated market should perform well.

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