"*Pola*"(fair) as an alternative marketing system to the Vegetable and fruit farmers in the Monaragala District in Sri Lanka

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Abstract

The vegetable and fruit growers in the Monaragala district are confronted by a large number of problems especially with regard to marketing. In this respect, it is important to find out advantages and possibilities to improve fruit and vegetable marketing through the '*Pola*' system in the Monaragala District, since alternative market systems, may enhance the benefits to farmers as well as to consumers. This research study was carried out by using a combination of cross sectional survey and case studies. A total of 100 farmers were interviewed and four case studies were carried out. Farmers consider the *Pola* as a good marketing channel when the distance to the market is shorter; and when the cost of transport is less. Farmers consider the *Pola* system as an advantage to their business activity when there are several *Polas* in their area. With experience, farmers find the *Pola* as a good marketing channel. Also it was found that farmer's most preferred market is the *Pola*.

Background of the Problem and Justification

Monaragala is one of the most under-developed districts in Sri Lanka. The land area of the Monaragala District is 5639 square kilometers with a total population of around 300000 inhabitants. The estimated literacy rate of the district is 78 % compared with 87% in the country as a whole. The total labour force in the district is around 118,000 and the unemployment rate is 9% of the total (Hurelbrink, et. al., 1993). Monaragala district lies in the dry zone of the country, of which 50% receives less than 40 inches of rainfall and 47% receives 43-47 inches.

Monaragala is one of the leading districts in fruit and vegetable production. Compared with the national average yields for most fruit and vegetable crops, the district average crop yields in the Monaragala District's production exceed the national yields in most instances (Hurelbrink, et. al., 1993). It is true that recent developments in new technologies in this sector have significantly contributed to improve food production.

However, fruit and vegetable producers who have been producing for 10 years face lots of problems and difficulties especially with regard to marketing. One example is the severe decrease in the price of lime due to the glut of production in 1999. One of the major reasons for this is static demand in respect to the increase of production. This same cause applies to the other crops such as chilies, tomatoes, big onions and mangoes etc. Fruit and vegetable production, in general, is highly seasonal in this district as well as in the whole country, due to climatic pattern and genetic make up of the pertinent crops. Hence, fruit and vegetable prices fluctuate along with the seasons. Prices of these crops fall drastically in the 'glut season' and increase during the 'off season '.

Apart from this, the production pattern of these crops causes the low prices obtained by the producers and the high prices paid by the consumers and other marketing problems such as market price fluctuations, poor roads and transport facilities, and poor bargaining power. Farmers themselves take all the key decisions relating to the cultivation of agricultural commodities but their involvement in marketing and market management is very limited.

The produce of the Monaragala District is sent mainly to Colombo and Dambulla wholesale markets. The majority of the large scale producers do not market their own produce but rely on one or more existing marketing channels. Farmers seem to use more than one channel in an effort to secure the highest possible price. However, their market influence and flexibility are limited due to the volumes produced, non-availability of their own transport system, lack of storage facilities, limited finance, insufficient market information, lack of experience and direct contacts with the market.

There are several marketing channels used by the producers of fruit and vegetable in the Monaragala district. Many farmers send their produce directly to Colombo wholesalers through their transport agents. They have no bargaining power. They have to rely on the prices offered by the Colombo wholesalers. Some wholesalers based in local towns collect the produce directly from the farmers and through local brokers. There are wholesalers from other cities who have their agents in the production areas. Farmers bargain with these local agents or wholesalers but always the price decisions are dominated by the middle-men. Farmers have the option to take their produce to local fairs (*Pola*) where they can sell directly to customers, retailers and wholesalers. Their bargaining power is higher at the market place than anywhere else.

When a community consisting of buyers and sellers meet each other at a regular place and time to market or purchase commodities and goods, the event is marked as " *Pola*" or "Fair" and the place as *Pola* premises. Most of these gatherings take place once or twice a week. But in some areas, they would take place more than twice a week. (Senanayake, 1980).

A *Pola* is a scene where a number of small business activities take place. "The main characteristic of a *Pola* is that relatively small business activities take place at a given time." (Gormsen, 1985). However such business transactions occur throughout the *Pola* day / session, the business rises to its peak and swells with consumers during a particular time span. A *Pola*, in the aspects of marketing plays dual roles; as a first-hand-marketing outlet for producers, both wholesalers and retailer selling direct to consumers and as a common place for buying their daily necessities (Senanayake, 1980).

These fairs mainly support farmers to sell their produce, or their surplus production direct to consumers, thus, by-passing all middlemen. Yet some others make use of these gatherings to market the commodities they purchase (collect) from their neighboring farmers at a good profit. However, in both these occasions, the quantities concerned do not usually exceed one cwt. Equally most big farmers prefer to sell the produce they collect to wholesale buyers or they themselves sell them at the near-by fair (*Pola)* or the market.

It is important to find out advantages and possibilities to improve fruit and vegetable marketing through the '*Pola*' system in the Monaragala District, because alternative market systems, may enhance the benefits to farmers as well as to consumers.

The objective of this study was to find out the farmer's knowledge and attitudes to the Pola as a marketing system.

Materials and Methods

Both secondary and primary data were collected. Secondary data were collected from agricultural-marketing textbooks, research reports, magazines, and other relevant publication on the subject, journals and articles.

In respect of the explanatory nature of the study, both cross-sectional survey and case studies were used. This method is called triangulation. Primary data was collected by using a pre prepared and pre tested questionnaire.

A questionnaire was designed for fruit and vegetable farmers. In this questionnaire survey, the researcher met the respondents individually and had interviews with them. One hundred farmers were interviewed in the Monaragala District. Multi-staged cluster sampling method was used to select the sample from farmers. Out of the ten Secretarial Divisions in the Monaragala district five secretariat divisions were selected at the first stage. One village officers (*Grama Niladhari)* division from each DS division was then selected as a cluster unit. Twenty farmers from one GN division were selected for the interviews. The GN's office or the village temple or any other suitable point was selected randomly to expand the circle around the selected point until the required sample size was achieved.

Apart from cross-sectional survey method to collect information, case studies were also used. Four case studies were carried out at 4 *Polas* (fairs) namely Monaragala, Dombagahawela, Syambalanduwa and Buttala, because these are the most important *Polas* in the District.

The data were entered into Excel computer software package. The analysis was done by using SAS, SPSS, and Mini Tab computer packages. To analyse the data statistical techniques such as frequency distribution, Chi-square test and regression analysis were used. A level of significance of 0.05 was used to determine whether the relationships among variables were significant.

Results and Discussion

Socio-economic situation of the farmers

It was noted by Rupasena(1999) that the characteristics such as educational level, family size and occupational patterns are directly associated with the production and marketing practices of the farmers.

The majority (55%) of the farmers in the studied area were males. On the other hand, females (45%) also play an important role in farming vegetables and fruits. For 51% of the farmers, formal education was limited to the secondary school

level(from grade 6 to 11) and for a considerable number of farmers (42%). it was limited to primary level (below grade 6). Ninety six per cent of the farmers were engaged in full-time farming. About 90% of the farmers obtained a monthly income of less than Rs. 3000.00 which varies from Rs.1000.00 - 6500.00 Their average income was Rs.1925.00. The cause of this situation was the low prices that they obtained for their produces. Hence these farmers are exploited by the middle-men and wholesalers in marketing channels.

The farming experience of the respondents varied from 3-30 years and the average experience of the farmers was 18 years. Sixty six per cent of them had experienced over 10 years while 44 percent of the total sample had farming experience of more than 20 years. This indicates that a majority of them are well-experienced farmers. As it was shown earlier, the Monaragala District is predominantly an agricultural area where 90 % of the inhabitants earn their living from agriculture. Therefore, they have a wide experience in the fruit and vegetable farming.

The age of the farmers varied from 23 – 56 years. One of the major characteristics of the farmers of the Monaragala District was that the majority (89%) of them were relatively young (27%) and middle age (62%) groups (Table 1). The main reason for this is the difficulty in finding other jobs due to high unemployment rates prevailing in the country.

Table 1: Age Composition of the Farmers

Age	Percentage
Less than 30 years	27
30-50 years	62
Over 50 years	11

n =100 , Mean = 38.43

Knowledge and Attitudes of the Farmers about the *Pola* System

The samples of farmers were not interested in selling at the retail *Polas* personally. This is evident from the fact that only 12 % of the farmers sold their produce at retail *Polas*. The main reason for this attitude was that the farmers do not like to stay long hours at the *Pola* as they are needed at the farm round the clock. Eighty three percent of farmers go to buyers who are at the *Pola* and ninety percent of farmers stated that buyers of the produce also visit their farms. None of the farmers act as collectors or intermediaries of the others.

Seventy three percent of the farmers' vegetable and fruit fields were situated at a distance of 6-10 km to the nearest *Pola*. The majority of the sample (54%) considered the *Pola* as a good marketing channel. A Chi-square test was done to identify whether there was a relationship between the distance involved to the nearest *Pola* and the consideration of the *Pola* as a marketing channel. According to the results shown in the table 2, there is a significant relationship between these two factors.

Table 2: Relationship between the Distance to *Pola* and the Consideration of *Pola* as a Marketing Channel

Category of Distance to *Pola*	*Pola* as Marketing Channel	*Pola* - not as a Good Marketing Channel
Less than 5 km	12 (100%)	00 (0.0%)
6-10 km	42 (57.5%)	31 (42.5%)
Over 10 km	00 (0.0%)	15 (100%)

$x^2 = 28.198$, $P < 0.05$

The above table explains that the shorter the distance to the *Pola*, the higher the consideration of the *Pola* as a marketing channel. When the distance to a *Pola* is less than 5 km, 100% of the farmers considered the *Pola* as a good marketing channel. On the other hand, when it is at over 10 km, they (100%) considered the *Pola* less important as a marketing channel.

Table 3 provides information on the relationship between the mode of transport and the consideration of a *Pola* as a marketing channel. It reflects that all (100%) who use bicycles considered a *Pola* as a good marketing channel for them. In contrast many farmers who use public / private transport (53.1%) did not consider *Pola* as a good marketing channel and the farmers who use other means of transport (bullock carts, Two wheeled tractors) also did not consider *Pola* as a good marketing channel. This attitude is probably due to the high cost of transport that the farmers have to bear.

Table 3: The Relationship between the Mode of Transport and the Consideration of *Pola* as a Marketing Channel

Mode of Transport	*Pola* as a Marketing Channel	*Pola* not as a Good Marketing channel
Bicycle	12 (100%)	00 (00.0%)
Public / Private	27 (48.2%)	29 (51.8%)
Other	15 (46.9%)	17 (53.1%)

$x^2 = 11.631$; $p < 0.05$

The majority of the farmers (72%) responded that there was only one *Pola* in their area, while 28% of them responded that there was more than one *Pola*. The average number of *Pola* was two. However, it was found that there is a relationship between the number of *Polas* and the consideration to significance of *Pola* as a marketing channel. When there were more *Polas* in the area, farmers have considered *Pola* as a good marketing channel for their farm produce. As the Table 4 shows the majority of farmers who have one *Pola* in their area (59.7%) did not consider *Pola* as a good marketing channel. On the other hand, most of the farmers who have more than one *Pola* (89.3%) considered *Pola* as a good marketing channel.

Table 4: Relationship between number of *Polas* and Consideration of *Pola* as a Marketing channel

Number of *Pola*	*Pola* as a Marketing Channel	*Pola* not as a good Marketing Channel
Only one	29 (40.3%)	43 (59.7%)
More than one	25 (89.3%)	3 (10.7%)

$x^2 = 19.493$, $p < 0.05$

Most of the farmers (68%) have been dealing at the *Pola* for more than ten years. Some of them (17%) were dealing for 6-10 years while a fewer number of them (15%) have been dealing for less than six years. Under these circumstances, the majority of farmers had long experience in selling farm produce at the *Pola*. It was found that there is a positive relationship between the period of dealing at *Pola* by the farmer and the consideration of *Pola* as a marketing channel. The results are shown in table 5.

Table 5 Relationship between the Period of Dealing at the Pola and the Consideration of Pola as a Marketing channel

Period of Dealing at Pola	Pola as a Marketing Channel	Pola-not as a Good Marketing Channel
Less than 6 years	00 (0.0%)	15 (100%)
6-10 years	38 (55.9%)	30 (44.1%)
Over 10 years	16 (94.1%)	1 (5.9%)

$x^2 = 28.72$, $p < 0.05$

The above table describes that the longer the farmers' experience in dealing at a *Pola* the higher its significance as a marketing channel. Thus, when farmers have six to ten years of experience in dealing at *Pola*, 55.9% of them considered *Pola* as a good marketing channel whereas at over ten years it was 94.1 percent.

The majority of the farmers (83%) sent their farm produce to an identified *Pola*. It is interesting to note that none of the farmers sent their produce to more than one *Pola*. The rest of the farmers (17%) sent their produce to other actors in the supply chain such as the outside wholesaler, village collector and village retailer.

Marketing Information

Marketing information is an important factor to the farmers in production for the marketing of their produce. An attempt was made to ascertain the main marketing information sources available to the farmers and the types of marketing information they received.

Multiple responses were obtained from the farmers in order to rank the responses for sources of marketing information. The results are shown in table 6. The main source of information was a personal visit to the *Pola* with highest

percentage of 76.8 percent of the farmers. Seventy percent of the farmers gave their second priority to the neighbours while the third was colleagues (33%). According to the farmers, wholesalers were the least important source of marketing information.

Table 6: Sources of Market Information

Rank	Sources	Percentage
1	Personal Visit	76.8
2	Neighbours	70
3	Colleagues	33
4	Local Collectors	52
5	Wholesalers	26
6	Extension Officers	00

(Multiple Column Responses > 100) n = 100

To obtain marketing information, one of the most important sources is the marketing extension services (Mahaliyanarachchi, 2000). However, this source was unavailable in this area, but, the farmers seem to have some idea of prices prevailing in neighbouring markets.

Table 7 shows the pattern of market information received by the sample of farmers. It is interesting to see that all the farmers (100%) received market information with regard to wholesale and retail prices. But the majority of the responses for other market information were negative. The negative responses were as high as 100% for the required quantity, availability of market extension services and others (Buyers/Alternative Market channels).

Table 7: Market Information Received

Market Information	Yes (%)	No (%)
Wholesale and Retail Prices	100	00
Existing Market Potential	43	57
Required Quality	28	72
Required Quantity	00	100
Availability of Market Extension Services	00	100
Others (Buyers/Alternative Marketing Channels)	00	100

Farmers mainly depend on traders for marketing information. This emphasises the need for a marketing extension service by a responsible authority either private or public. Most of the farmers need marketing advice on methods of harvesting, storage, quality, prices, outlets and the timing of the sales.

A study conducted in the up-country by Jackson (1985) revealed that 50-60 percent of the commodities marketed at the *Polas* was up-country and low country vegetables. As case numbers 1 and 2 point out, in this study, too, the mostly available produce for sale is up-country and low country vegetables in retail *Polas* in the Monaragala District. Fruits (lime and plantain) were in abundance at the wholesale *Polas*. According to the four case studies the vegetable and fruit traders are the predominant group in the *Pola* .

Senanayake (1980) pointed out that for most vegetables, the rural markets act as a very important marketing outlet. It is further evident from table 8 that vegetables have the highest demand among the farm produce at the *Pola*, which all the farmers in the sample (100%) have given their first priority. Cereals have the second largest demand followed by yams, fruits and others such as dried fish, betel, arecanut.

Table 8: Demand for Farm Produce

Priority	Farm Produce	Percentage*
1	Vegetables	100
2	Cereals	57
3	Yams	88
4	Fruits	51
5	Others	45

*Multiple Column Response > 100 n =100

Farmers' Market Preference

It was found that the farmers' most preferred market was the *Pola* (70%) and 30% of the farmers preferred wholesalers. None of them preferred local collectors, retailers, co-operatives and farmer organizations. One limitation of this information is the non-availability of data on co-operatives and farm organizations. Table 9 shows that the main factor for market preference by the farmers is the higher price. Second was the ready-cash payments followed by accessibility and easy transport.

In the Monaragala district, farmers have limited market outlets to sell their farm produce, among which they are interested in *Polas* and the wholesalers who come to their farm gates. They considered the traders at the *Pola* as the highest price payer next to the consumers. There were a few farmers who brought their produce to central markets such as Dambulla and Colombo for higher prices. Table 10 illustrates the priority order of higher price payers.

Table 9: Factors considered for Market Preference by the farmers

Priority	Reasons	Percentage*
1	Higher Price	81
2	Ready-Cash Payment	55
3	Accessibility	56
4	Easy Transport	76
5	Availability of Loan Facilities	76

*Multiple Column Responses > 100

However, a majority of farmers (58%) were satisfied with the prices at the *Pola* and 30% of the farmers were moderately satisfied. As explained in case No.1 many farmers complained that a few middle-men operating at *Polas* determined the prices and farmers have to accept the prices offered by them. These middle-men do not allow for the development of a relationship between the farmers and the outside traders. A few farmers who have sold their produce direct to the consumers decided the prices themselves. However, a majority of the farmers' (99%) were willing to sell their produce at the *Pola* at a moderate level. The bargaining power of the majority of the farmers (73%) at the *Pola* was at a moderate level and some farmers expressed that the prices were determined through a bargaining process.

Table 10: Higher Price Payer considered by the farmers

Priority	Market Outlet	*Percentage
1	Consumers	92
2	*Pola*	57
3	Wholesalers	58
4	Village Retailer	86
5	Village Collector	13

*Multiple Column Responses > 100

Factors Affecting Selling Prices at *Pola*

Table 11: Factors Affecting Price

Priority	Factors	*Percentage
1	Higher Supply at Pola	82
2	Seasonal Problems	70
3	Low Quality	55
4	Low Demand	33
5	Government Trade Policies	60
6	Low Bargaining Power	48

*Multiple Column Responses > 100

The farmers were asked what factors caused the low prices for their produce at *Pola*. They responded that the reason was over supply. The second reason was seasonal problems followed by low quality, low demand and government trade policies. (Table11).

Table 12 provides information of commercially important farm produce. It was found that during the study period the prices of lime and pumpkin were low because of the peak season (Feb/May) and consequent high supply. It is interesting to note that the average maximum selling price of lime was not more than Rs.3.00 per kg in the Monaragala District. Apart from over-supply of lime, the other reason was that the limes were not sorted and packed according to size and quality. Farmers used to pack the small and damaged ones between the top and the bottom layers in the pack. Most of the traders were aware of this and offered low prices.

Table 12: Sales Information of Farm Produce

Produce	No. of Respondents	Average Quantity sold (kg)	Average Minimum Selling Price per kg	Average Maximum Selling Price per kgs
Banana	60	153.33	8.48	12.32
Lime	37	97.3	2.31	3.0
Pumpkin	49	5737.76	3.33	6.0
Brinjal	14	2151.79	6.43	10

On the other hand, after the peak period (June/ Jan) the price rose up to 80-100 rupees per kg. Therefore, there is a big variation in the price of lime between these two periods. As Mahaliyanarachchi (1999) pointed out, one of the major problems of marketing of lime is the unavailability of a suitable technology to store them until the glut period passes.

The prices of fruits and vegetables are mainly determined by supply. As FAO (1970) has pointed out, prices on free markets reflect the balancing of demand and supply. While it should never be assumed that demand for fruits and vegetables will remain constant, fluctuations on the supply side are generally much greater. Current market prospects can also affect both fruit and vegetable supply substantially in the very short run; some may be left unplucked if the price seems unlikely to give an adequate return. In this study it was observed that this was the case in lime during the peak season in the Monaragala District.

A simple regression model was used to estimate the relationship between the minimum selling price and the quantity sold .The increase in the price of farm produce mainly depends on supply. The increase of quantity depends on a combination of factors: the area planted, the climate of the season, and farmers' ability to control pests and diseases.

A lack of information did not permit a multiple regression model, which includes all the above factors, to be formulated. Hence, it is assumed that all the other factors are constant and only supply/quantity affects the price of banana. The following mathematical model was created on the basis of analysis of price and quantity. The least squared method was used to estimate this model.

Regression model:

Yp = Bo+B1 x
Yp = Banana Price
x = Quantity
Bo = Intercept
B1 = Coefficient

The regression analysis results are presented in Table 13.

Table 13: Summary of the Regression Model

	Model
Bo – Intercept	11.138
B_1 – Coefficient	-0.019
r - Co-relation Coefficient	0.714
R^2 - Coefficient of Determination	0.0510

The value of the coefficient of regression (B_1) is - 0.019 in the model. The equation ($Yp = B0 + B_1 x$) was formulated according to the available data on the minimum selling price and quantity sold. This equation can be used for predicting the price of banana. Thus, every 100 kg increase in the quantity of banana will result in a decrease of price by Rs. 1.90.

Here, the relationship between price and quantity is negative (See Figure1). Since the price of fruits and vegetables is determined by supply, the higher the quantity supplied to the market, the lower the price of produce.

Problems Encountered by the Farmers in Marketing their Produce

Almost all the farmers (100%) stated that the main problem was the low price offered by the traders at the *Pola*. The reasons for this problem can be identified as a lack of graded produce, monopoly of a few middle-men (traders) at the *Pola*, the quality of the produce and the lack of bargaining power of some farmers. As Rupasena (1999) pointed out the rapid price fluctuation of vegetables and fruits also is due to their perishability.

About 57% of the farmers stated that the problem of higher competition among the farmers was their second priority. This is due to the lack of integration of producers (farmers) and alternative market outlets. Transport problems in the rural areas of the Monaragala District was given third priority, focusing attention on the need for good transport system. As shown in the case studies, poor road

facilities in the study area created high transport cost at farm level and it also affects the quality of vegetables and fruits. The problem of distance was the forth priority mentioned by the farmers. This is due to lack of sufficient numbers of *Polas* in an area.

Malpractice such as selling underweight and over reduction for pack weight were identified as other problems encountered by the farmers in marketing their produce at Pola. The results are shown in table 14.

Table 14: Problems Encountered by the Farmers

Priority	Problem	Percentage*
1	Low price at *Pola*	100
2	Higher competition	57
3	Transport problems	70
4	Distance	50
5	Access to *Pola*	50
6	Lack of market Information	80
7	Other	30

*Multiple Column responses>100 n=100

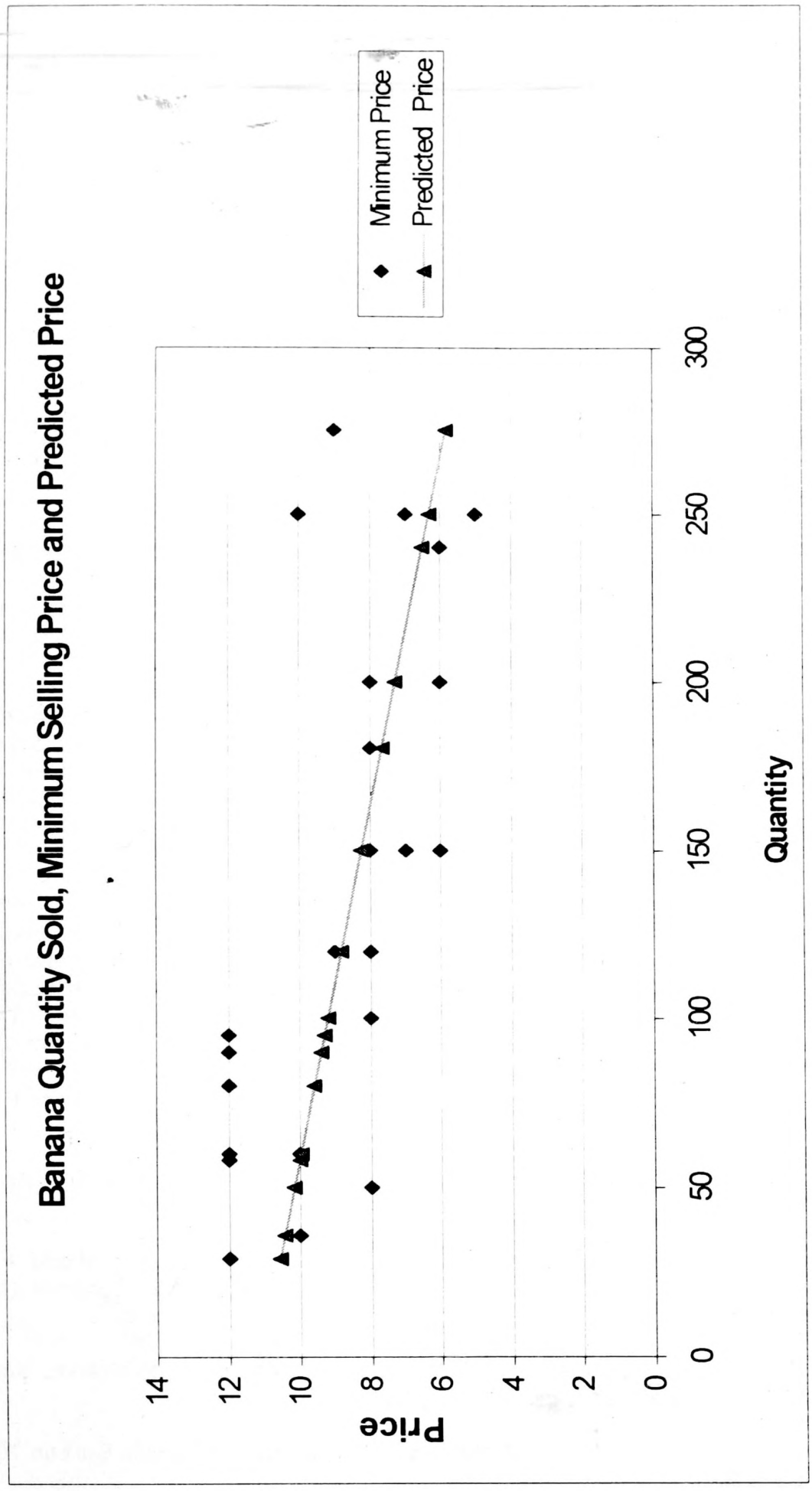

Figure 1: Scatter Diagram of Model

Conclusions

Pola as a marketing source to the farmer

Most of the vegetable and fruit farmers in the Monaragala District follow the *Pola* system as an important marketing centre for dispatching their produce as well as for purchasing their provisions. Farmers considered the *Pola* as a good marketing channel when the distance to the market was short, and when the cost of transport was low. Farmers consider the *Pola* system as an advantageous for their business activities when there were several *Polas* in an area, as the existence of marketing facilities gives a better experience and understanding between consumer, trader and farmer. With experience, farmers find the *Pola* as a good marketing channel. It was also found that the farmers' most preferred market was the *Pola*. The major consumer items supplied by these markets include vegetables, dry provisions, yams, dried fish and chewing stuff.

Marketing process of the farmer

Reasonable prices and ready cash payments were the main factors considered by the sample of farmers in selecting their buyer. At the same time, farmers were not interested in selling at the retail *Polas* except for selling their produce in bulk of wholesale *Polas*. There were only a few retail farmers and producers who do not buy others produce to sell them at the *Pola*.

The appearance of an intermediary between the farmer and the wholesaler tends to increase the price of a commodity. The elimination of profit margin of the intermediary facilitates better understanding between the farmer and the consumer because the consumer is satisfied that he has bought a product at a minimum price, and the farmer is satisfied that he has sold at a reasonable price.

Marketing information

Marketing information is important to the farmers in production and marketing of fruits and vegetables. Especially in the case of small farmers in the district having inadequate information since they mostly depended on information obtained from personal visits to the *Pola* (from traders) and from other farmers. Therefore, farmers and actors in the marketing channel through the *Pola* system should be imparted with accurate, reliable and timely market information.

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