

SOCIO-ECONOMIC IMPACTS OF DEDICATED ECONOMIC CENTER AT THAMBUTTEGAMA

by

N.I.S.Fernando and Y.M. Wickramasinghe
Faculty of Agriculture, Rajarata University of Sri Lanka
Puliyankulama , Anuradhapura,

Abstract

Post harvests losses, quality deterioration and marketing cost relating to channeling perishable farm products from producer to consumer can be minimized with the usage of appropriate post harvest technologies and the shortest channel that consumes shortest possible time. As rural farmers are not financially strong enough to adopt some of the expensive post harvest technologies such as refrigeration, shortening the market channel is the practical way in increasing efficiency in marketing of farm products. Therefore, a good marketing system is needed to minimize the number of days required to move the product from farmer to the consumer.

This study has made attempts to assess the overall efficiency of the Thambuttegama Dedicated Economic Center (TDEC) on marketing of farm products especially vegetables. Data were collected in September, 2008 from randomly selected samples of 65 farmers, 25 wholesalers/ transporters, 10 stall owners (commission agents).

Results of the study revealed that the establishment of the TDEC has reduced the distance to be passed by the farmers, commission agents and buyer. At the same time, quality deterioration of harvested farm product has minimized while the price received by farmers has increased within a range from 5% to 15 %. Furthermore, the ability to purchase high quality agricultural products in required quantities has increased. In addition, some forms of informal trade links between buyers and stall owners as well as stall owners and farmers have developed. Several businesses outside the TDEC have got expanded their scales while some other businesses have generated certain employment opportunities.

Based on the findings it was possible to recommend that displaying daily prices of farm products at the TDEC, establish a market information unit and to expand facilities for commission agents and for vehicle are timely requirements.

Key words: Dedicated Economic Center, marketing channels, Marketing efficiency, market information and trade links.

INTRODUCTION

Background of the study

Thambuttegama is a township which is located in the system 'H' of Mahaweli within the boundaries of the administrative district of Anuradhapura. This area has been mainly developed for agriculture under the accelerated Mahaweli Development Program (CECB, 2005) by allocating one hectare of irrigable lands and 0.2 hectares of homestead for each family (Anon, 2008). Paddy is the main crop cultivated in the lowlands during Maha while crops such as vegetables, pulses, citrus, condiments, and fruits are cultivated in both lowlands and in highlands with marginal irrigation facilities during Yala. The fruits and vegetable cultivation has increased remarkably during last several years due to the growing demand for these products. The marginal water availability and relatively high income of these crops have motivated the cultivation of subsidiary food crops other than paddy.

Modern farming is market-oriented and thus, most of the farmers produce more than what is required for home consumption targeting the market (Mason et. al., 1980). Farmers consider profitability, easiness in cultivation, availability of technical knows how, cost of production and marketability in selecting a crop to cultivate. Vegetables

belong to families of *Cucurbitaceae*, *Leguminaceae*, *Solanaceae* and *Cruciferaeae* are popular among farmers of the system 'H' of Mahaweli. (Wickramasinghe, 2006).

Basically farmers bring their produce to the TDEC and the stall owners (or the commission agents) sell these products to buyers (or transporters) who commute from distance places. The commission agents dealing at Thambuttegama are more concerned about the packing and the quality of the products than the commission agents who are dealing at other similar markets.

Quick movement of perishable farm products like vegetables and fruits through marketing channels and adopting appropriate post harvest techniques are essential components in agricultural marketing and thus, a good marketing system and a convenient market place that facilitates disposing farm products within the shortest possible time after harvesting are necessary. (Sharma 1991) As Berkowitz et. al. (1997) stated, some intermediaries dealing at TDEC do actually purchase items from the seller, store them, and resell them to buyers.

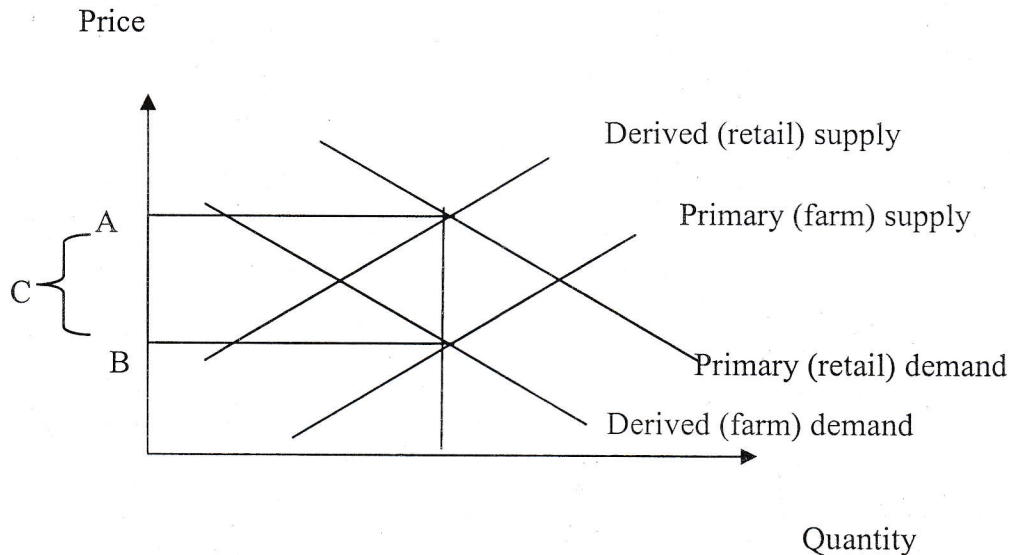
Whole selling of vegetables at Thambuttegama took place at several locations before the establishment of the marketing complex in March 2002. Nearly 150 to 200 people visit this centre daily. The role played by the centre has also increased over time. Ministry of Rural Economy (2003) has pointed out that farmers can exploit the export market if they can provide nicely packed high quality products. Currently packaging is done in a very poor manner and this has led to a substantial post harvest losses though farmers as well as traders are aware of the importance of packaging of vegetables in plastic boxes, today. (Senanayake and Dissanayake, 2004)

The Concept of Economic Centers (DECs)

The DECs were established in Sri Lanka in order to minimize the problems associated with vegetable marketing in rural agricultural communities. Out of different marketing functions to be performed by a vegetable marketing system only four marketing functions (vegetable production, distribution, transportation and pricing) have been positively affected by establishment of the DECs. And also, performance of DECs has not created a significant impact on marketing functions such as vegetable cleaning and grading, packaging, storage, processing, flow of market information and financing for the year (Pushpakumara, 2005).

Contribution of Dedicated Economic Centers to marketing efficiency

Marketing margin is the gap between farm gate price and the final price of a particular good (Figure 1). High marketing margin is caused to have a low price to the producer for their products as well as high cost to the final consumer for the same product and market intermediates are enjoying the lion's share of benefits. (Wickramasinghe and Wijayawardana, 2008).



Source: Wickramasinghe and Wijayawardana. (2008)

Figure, 1: Marketing Margin

In Figure 1, “A” represents the retail price, “B” represents the farm gate price, and “C” represents the marketing margin. Available empirical information shows that the performances of DEC are not contributing to maintain the price stability in the vegetable market. As the role of the middleman has confined only to a commission agent at the TDEC the share of the margin that could be enjoyed by the middleman has shrunk creating an environment where farmers’ could sell their produce at relatively high prices. As a result, producer’s portion for every kilogram of vegetables purchased by the final consumer has increased. DEC are playing a significant role in minimizing the marketing cost and it has become a benefit to both producers and the final consumers (Pushpakumara, 2005).

This study examines the extent to which the TDEC satisfies the producers, sellers and buyers and to identify the socio-economic impacts of the center to the maximum possible extent. Finally, certain desirable changes enabling to raise the efficiency in selling agricultural products have been suggested.

MATERIAL AND METHODS

Three field Surveys were conducted to gather primary data from farmers, commission agents and buyers. Random samples consisting of 50 farmers from the system-H of Mahaweli, 15 farmers from Puttalam district, 10 commission agents and 25 buyers (visiting traders) were interviewed by administering three structured and pre tested questionnaires. Sample sizes are sufficient to represent respective populations of the respondents. Though there are a large number of farmers, due to the homogeneity in their cultural practices the size of the sample used is a fair representation of the population. Field survey was confined to five (05) administrative blocks of system 'H' and a random sample consisting of ten (10) vegetable farmers from each administrative block were interviewed. Secondary data were collected from the office of the Divisional Secretary, Thambuttegama and the Manager of the TDEC and office of the Mahaweli Authority of Sri Lanka, Thambuttegama.

Changes in average distance transported by farmers and buyers, business volume, prices, income and in surrounding business community were the impacts monitored and data analysis was done using simple tabular methods. It was hypothesized that the TDEC has impacted positively on each aspect mentioned above. Furthermore, as the Mahaweli Authority of Sri Lanka has not implemented a program to promote agricultural marketing in the area after the establishment of the TDEC whatever the community has gained was assumed due to the impact of the TDEC.

RESULT AND DISCUSSION

The System "H" of Mahaweli is the zone developed under the Mahaweli Development program in "Kala Oya" basin. Thambuttegama is the administrative center of the System "H" and thus, that town has been developed as an important trade center of the System. As this area is far away from the DEC at Dambulla the Government of Sri Lanka established another DEC at Thambuttegama to facilitate agricultural marketing. Impacts of the TDEC on different sectors of the economy are presented below.

Changes in crop mixture

Objective of the Mahaweli project is to cultivate paddy during Maha season and to diversify paddy fields with vegetables, fruits and other field crops during Yala. Accordingly, at the very beginning, farmers cultivated high value cash crops such as chilli and onions in paddy lands and eventually they have gradually given up chilli cultivation due to high cost and high incidence of pests and diseases. After the establishment of the TDEC, farmers have gradually been expanding the extents of vegetables and fruits at the expense of chilli as these are highly demanded at the TDEC. Since the Mahaweli Authority has not implemented special programs to promote these crops in addition to the regular extension program changes observed in crop mixtures are primarily due to the favorable changes occurred in the marketing environment after establishing the TDEC.

Changes in marketing of farm products

Prior to the establishment of the TDEC some farmers used to sell their farm products at the farmgate while some others transported the products to the Manin market in Colombo. Some have sold their products at Thambuttegama too. Another noticeable matter is that the distance travelled by a farmer has reduced significantly after the establishment of the TDEC. As depicted by the Table 1, 78 % of the sampled farmers agreed with that statement. This reduction in distance is relevant to buyers too as they are catered immediately under the roof of the TDEC. The stall owners or the commission agents do play the role of marketing intermediaries successfully only at the TDEC. As the TDEC is located in the middle of the farming area and due to the shortest trading network quality deterioration has minimized. Furthermore, 77 % of the respondents pointed out that the observed wastage reduction has resulted due to the establishment of the TDEC (Table 1). Further to that, according to farmers, they can sell whatever the volume of farm products they produce.

Table 1: Farmers' views about the TDEC

Description (Statements on TDEC)	Percentage farmer respondents				
	SA	A	N	D	SD
Easy to market farm products	50.8	21.5	27.7	-	-
Reasonable prices for farm products	63.1	16.9	20	-	-
Expedite the agricultural development of the region	69.2	13.9	16.9	-	-
Wastages Minimization	50.8	26.1	23.1	-	-
Reduction in distance to be transported	57	21.5	21.5	-	-

SA – Strongly Agreed, **A** – Agreed, **N**- neutral, **D**- Disagree, **SD**- Strongly disagree

Changes in farmers' income

The present nominal income of the farmer is 5%-15% higher than that when farmers sold their farm products to places other than the TDEC. Of the farmers interviewed 72 %, 80 % and 83% have respectively stated that marketing of farm products become convenient, prices of farm products are reasonable and agricultural development of the region has expedited due to the influence of the TDE (Table 1).

Establishment of the market in close proximity of farms is the main reason for the convenience that farmers and other market participants are experiencing in the vegetable market.

Direct advantages of the TDEC are the reduction of post harvest losses, time saving, ability to receive reasonable price for farm products, generating employment opportunities, increase in farm income, increase in income distribution, reducing rural urban migration of labor and reduction of transportation cost. Indirect advantage is the saving of foreign exchange in terms of saved fuel due to the reduction in distance to be traveled in selling (by farmers) and buying (by Byers / transporters) farm products.

All wholesalers/transporters and commission agents pointed out that because of the establishment of TDEC, their ability to sell farm products at high prices has increased, the support services such as fertilizers, seeds, pesticides, credit facilities offered by the commission agents to farmers and to buyers have developed and the informal dissemination of market information made by commission agents has initiated as a result of the establishment of the TDEC. Farmers are also benefited because of having an opportunity for running a stall at the TDEC. This is an interesting development because this demonstrates the farmers' entrepreneurial ability which is essential at present.

Most of the farmers have purchased at least a two-wheel tractor to transport agricultural products to TDEC instead of using hired vehicles. As stated by the farmers, average transport cost to be made for a hired vehicle is running from

Rs. 300/= to Rs. 800/=, at present.

Gains to wholesalers / transporters

All farmers and the commission agents are with the opinion that wholesalers / transporters are benefited from the establishment of TDEC by making it possible for them to purchase a large variety of products in large quantities at reasonable prices, opening TDEC during convenient business hours, making fresh products available and developing an informal credit facility. All respondents of the buying community survey stated that TDEC has promoted their business activities too.

Nearly one fourth of the members of the buying community are transporters and 76% are wholesalers. Some buyers have commuted from adjoining districts to purchase farm products to sell at weekly fairs, at other retail markets and in retail shops run by them in

their home towns. Individuals who sell vegetables at their own stalls maintain a profit margin around Rs.10.00-20.00 per kilogram, on average. Buyers who distribute farm products to retailers are keeping a profit range of 5% to 10%. The buying community survey revealed that 32% of buyers purchase products by aiming to sell them at weekly fairs, 28% of buyers purchase them to sell at their own stalls in their home towns and 40% of buyers purchase them to distribute to retailers. Buyers have to pay the loading laborer assigned by the commission agent at the rate of Rs.0.50 a Kilogram handled.

Gains to the surrounding community

The surrounding community is also benefited from the TDEC. Commencing new businesses and expanding existing businesses are the benefits yielded by the community. After the establishment of the TDEC, a large number of people visit this place regularly for satisfying their needs and wants. The TDEC is located away from the business area of Thambuttegama town and thus the number as well as the scale of the businesses such as hotels, retail outlets, boutiques that are selling items like chew of beetle, snacks etc. are increasing and some employment opportunities such as clerical staff for stalls and laborers also have created.

Though it is difficult to assess the benefits enjoyed by the consumers as they are scattered all over the island 87.7% farmers, 88% of Wholesalers / transporter and 90% of stall owners expressed that the consumers are also benefited from the TDEC. The benefits enjoyed by the consumer include the availability of fresh products in sufficient quantities at reasonable prices. Consumers who are in the area can do bulk purchasing for special occasions or purposes.

Mode of Transactions at TDEC

Of the total wholesalers / transporters interviewed about 84% pay ready cash for the products they purchase at the TDEC while the rest make a part payment in cash and settle the balance in due course. Out of the Commission agents, 60% use ready cash for their transactions while the rest use both cash and credit. Offering credit facilities depending upon mutual understanding developed between two parties.

Facilities available at the TDEC

All three categories of respondents (farmers, buyers and commission agents) are satisfied with the facilities available at the TDEC. Commission agents have identified emerging

future needs of several facilities such as storage facilities, value addition to agricultural products, facilities for refrigeration and distribution, effective system to control traffic inside the TDEC and a security fence around the premises. Commission agents are facing several difficulties due to the inadequacy of space available to them, dust and the bad order, weak boundaries between stalls, traffic congestion at the TDEC, price deviations among different stalls, lack of price information and farmers' reluctance to use the plastic boxes that were introduced by Institute Post Harvest Technology in transporting vegetables

COCLUSIONS AND RECOMMENDATIONS

Conclusions

Farmers of dry zone, especially in Anuradhapura district, have faced problems in receiving a reasonable price to their agricultural products. Factors such as quality reduction of agricultural products, absence of a good marketing system, long distance between the farm and the market, high time consumed to market farm products etc. are very common to these farmers. The establishment of the TDEC has solved those problems to some extent. The following changes have occurred after the establishment of the TDEC: expansion in vegetable production, ability to sell any volume of vegetables at any time, assured market for farm products, development of an input supply service through commission agents or the stall owners, reduction in time wasted in marketing farm products, reduction in distance that farm products to be transport by the farmers and by buyers / traders, reduction in quality deterioration of products, reduction in per unit cost of marketing farm products, ability to sell products at reasonable prices , receiving marketing information through informal links developed after the establishment of the center, enhanced sources of production inputs, convenience for the buyers to buy any quantity of a range of products at competitive prices, establishment of new businesses and expanding existing businesses in the community, generation of some new employment opportunities and enhanced capital accumulation of the farmers.

Recommendations and policy directives

- Display price information on daily basis at the center in order to minimize price variations among different stalls. It is recommended to construct storage facilities with new technologies such as cold storage to store agricultural products enabling to reduce wastage.

- Introduce an efficient traffic control system to handle vehicles in order to minimize the time wasted by farmers, commission agents and buyers / transporters.
- Establish a market information unit at TDEC to disseminate market information quickly among farmers and buyers. This could be established under the supervision of the site manager and for the dissemination of information cellular phones could be used as it has become a popular communication tool even in rural areas.
- If the government can develop this center as a model that experience could be applied to dedicated economic centers that are located in other parts of the country as well.

REFERENCES

1. Anon, 2008, <http://Mahaweli.gov.lk/other%20pages/Agriculture.html>, Accessed on 25/06/2008
2. Berkowitz N. Eric, Kerin A. Roger, Hartley W. Steven and Rudelius William, 1997, Marketing (forth edition), United States of America.
3. Central Engineering Consultancy Bureau, 2005, Pre-feasibility report submitted to Ministry of Rural Economy (Unpublished).
4. Mason E.R., Patricia M.R. and Herbert L.R., 1980, Marketing Practices and Principles, Third edition, City publisher, USA.
5. Ministry of Rural Economy, 2003, the report of the commission on the Dambulla and Keppetipola Dedicated Economic Market Zones
6. Pushpakumara W.M.P.G.R., 2005, An Evaluation of the Success of Vegetable Marketing through Special Economic Centers (with special reference to Dambulla Special Economic Center), A dissertation submitted to the M.Com. Programme of the faculty of commerce and Management Studies, University of Kelaniya. Sri Lanka (Unpublished)

7. Senanayake S.M.P. and Lakshman Dissanayake, 2004, Study, Verification and Evaluation of Price Mechanism and Trade Practices in Operation-Dambulla and Meegoda wholesale markets, Research report submitted for the Rural Economy Resuscitation fund, Ministry of Rural Economy.
8. Sharma K., 1991, Marketing Management of Horticulture Produce, DEEP & DEEP publications, New Delhi.
9. Wickramasinghe Y.M., 2006, Farmer Response to Changes in Production Environment in System 'H' of Mahaweli, AGRIEAST, Vol 5:01-10, Eastern University of Sri Lanka, Chenkalady.
10. Wickramasinghe Y.M., Wijayawardana K.H.R., 2008, "Production and Marketing of vegetables in Kurunegala District", Management Matters, Vol. 01, (06): 46-52), Faculty of Management Studies, Rajarata University of Sri Lanka.