



Journal of Applied Sciences

ISSN 1812-5654

science
alert

ANSI*net*
an open access publisher
<http://ansinet.com>

An Assessment of Marketing Margins and Physical Losses at Different Stages of Marketing Channels for Selected Vegetable Crops of Peshawar Valley

Muhammad Zulfiqar, Dilawar Khan and Muhammad Bashir
Department of Agricultural Economics and Rural Sociology,
NWFP Agricultural University, Peshawar, Pakistan

Abstract: In Peshawar Valley, the various intermediaries identified in the marketing chain are beoparies, wholesalers, commission agents and retailers. It has been reported that the producer gets only upto 37, 45 and 40%, on average, of the consumer rupee for tomato, potato and onion crops. The margin acquired by the beopary is 17%, wholesaler 23%, commission agent 5% and retailer 18% in case of tomato. In case of potato, margin shared by afore given intermediaries is 13, 19, 5 and 18%, respectively. Share in the onion is distributed in the ratio of 14% by beopary, 21% wholesaler, 5% by commission agent and 20% by retailer. The physical losses of the vegetable crops, studied, have been reported 22, 12 and 9% for tomato, potato and onion, respectively, on average. It is difficult to assess whether the large marketing markups reported in the case of different vegetable crops are necessarily exploitative. The intermediaries are providing additional services at each stage and carrying significant risks particularly in case of tomatoes. Therefore, there is a need to assess/study these marketing margins in detail to arrive a confident conclusion. The steps recommended for improving the functioning of vegetable markets in terms of improved marketing margins for growers and reduce physical losses include: Proper physical marketing facilities, adequate storage facilities, strictly enforced grading and standardization, availability of processing facilities, marketing credit and free flow of information.

Key words: Marketing margin, physical losses, market intermediaries, marketing channels, marketing cooperatives

INTRODUCTION

Vegetable growing is a profitable farming activity on the one hand and an essential part of the human diet on the other. Another important feature of the vegetable is that these can be grown on a small land holding for self-consumption as well as commercial purposes. Due to quick turn over the trend to grow more vegetable is increasing in the farming community. Peshawar valley is an important vegetable growing area due to irrigation facility, fertile land and high demand.

Total area under vegetable is 14132 ha in the valley. In addition to Kharif and Rabi vegetables, potato, onion, garlic, coriander and chillies are produced in the area.

Marketing is an important activity of vegetable production system particularly due to perishable nature of the crop. An efficient marketing system is essential for maintaining reasonable farm prices and keeping consumer prices at relatively accessible level. The growing development and commercialization of the horticulture sector in the province has highlighted the inadequacies of the existing agricultural marketing system. This shows

that the system is not yet geared to meet the requirements of a modern developing agricultural economy. There are various reasons put forward that the system is exploitative, collusive and economically inefficient and operates with high profit margins. The legal and institutional framework is outdated and is based on laws framed as far back as in the British Rule.

The marketing structure for agricultural produce in the region is a fairly diversified. It ranges from marketing arrangements where private enterprise is free to operate to the substantial Government intervention by way of fixation of floor prices, procurement quotas and prices and credit controls etc. However, horticultural commodities are completely in the hands of the private sector with no restriction on their movement and prices are determined by the interaction of supply and demand.

Marketing margins, defined as the difference between the prices paid to the first seller and that paid by the final buyer, also depend considerably on the degree of processing involved, bulk, unit value and perishability. This margin tends to be higher for perishables like fruits and vegetables. Whereas, the marketing margins provide

an understanding of the spread between the producer and the consumer prices, marketing costs can reveal inadequacies in the marketing structure and suggest, for example, the need for greater vertical integration of marketing functions by reducing number of intermediaries and improving services. However, very little research has been done to catalogue and analyze marketing margins and costs particularly in relation to the services offered by the market functionaries.

Several studies have been undertaken elsewhere to underscore the marketing margins of agricultural commodities, with the main focus on fruits and vegetables. In these studies efforts have been made to determine the cost of production of crops, marketing costs, marketing margins at various levels, net returns to producers, gap between price paid by the ultimate consumers and price received by the farmers and their marketing problems. In general, most of the studies show that farmers are being exploited by the middlemen and big marketing margins exist for agricultural commodities, ranging from about 10 to more than 80%^[1-5].

Some of the studies pointed out that marketing intermediaries are performing useful role by providing financial assistance, inputs and other marketing facilities to the farmers and like other businesses their motive is also profit making^[6]. These studies have stated that like other businesses it is competitive in nature and the belief that middlemen make high profits is contrary to the facts.

Objectives of the study were to Study various marketing channels of selected vegetables; to assess marketing margins at various stages of marketing and to assess physical losses at various stages of marketing.

MATERIALS AND METHODS

The study has been based on primary data collection from vegetable growers, beoparies, commission agents, wholesalers and retailers during the year 2001. Marketable surplus producing villages in the close vicinity of Peshawar, Kohat and Mardan were randomly selected for the data collection. Thirty-one vegetable growers who were producing marketable surplus were randomly selected for interviewed. Thirty beoparies of vegetables were randomly picked and interviewed, 10 each from Peshawar, Mardan and Kohat. Thirty-five Commission agents and thirty six wholesalers in all from Peshawar, Islamabad, Mardan and Kohat were contacted for marketing data pertaining to their business affairs. Similarly, 30 retailers were randomly selected, 10 each from Peshawar, Mardan and Kohat for collection of required data. The pricing data was collected for the normal season

and all efforts were made to exclude the both extremes i.e. glut season and off-season. Mostly it has been tried to give round numbers instead of using decimals in the study. Data availed from the above mentioned marketing channels was edited, tabulated and analyzed using simple mathematical techniques to determine marketing margins and physical losses at various marketing channels.

RESULTS AND DISCUSSION

Growers: The grower's data was calculated from various villages including Peshawar, Mardan and Kohat districts having land from 5 acres to more than 10 acres. From tenancy point of view 4 out of 31 i.e. 13% were tenant and rest were owner (39%) or owner-cum-tenant (48%). The farmer's sale prices reported were ranging from 2.50 to 3.5 rupees for tomato, 4.00 to 5.00 rupees for potato and 3.5 to 4.00 rupees for onion per kg. However, on average the sale prices were 3.00, 4.50 and 3.75 rupees per kg for tomatoes, potatoes and onion, respectively. The growers who take their produce to market experience physical losses of 6% for tomato, 2% for onion and 3% for potato, on average mostly due to poor transportation facilities and packing practices.

The tomato growers were of the view that once the crop nears maturity, their top priority is to dispose it off at prevailing price as any delay for better price could deteriorate the produce due to perishability. Regarding onion, the growers who are not in a position to retain for a few months due to weak financial position and urgent consumption and allied expenditure, get relatively lower prices on the plea of higher moisture contents. The weak financial position also affects producer's return for potato crops.

Beoparies: Thirty beoparies were interviewed 10 each from Peshawar, Mardan and Kohat. The experience of these beoparies in the business ranged from 8 to 45 years. After purchasing the vegetables from farmers, 100% of beoparies in Peshawar and Mardan sell their commodities through commission agents while about 60% beoparies in Kohat sell through other means and only 40% sell through commission agents. The beoparies received average marketing margin of 17% for tomato, 13% for potatoes and 14% onion. On district wise, beoparies of district Kohat received maximum margin following by Mardan and Peshawar. On physical sides, at beoparies level, the average physical losses ranged from 5, 2 and 2% for tomato, potato and onion, respectively. The physical losses at beopary level include poor transportation, over packing, retention etc.

The beoparies reported that mostly growers having weak financial position are their main clients. Financially strong growers usually respond according to, market signals and bring out their produce when prices are relatively better especially for potato and onion. The beoparies have further reported that their rate of marketing margin is relative to the risk they bear. More the perishable the commodity more is the risk and more they keep the margin. Additionally they cannot retain a perishable commodity for a longer period for better prices.

Wholesalers: In all, 36 wholesalers were interviewed, 10 each from Peshawar, Mardan and Kohat and 6 from Islamabad. The wholesaler carryout their business on cash as well on loan/credit basis in both the cases, i.e. purchasing and selling with varying degree of extent. Their marketing cost includes rent, packing, wastage, transportation etc. The average marketing margins received by the wholesaler, were 23% from tomato, 19% from potato and 21% from onion. The physical losses at wholesaler level ranged to 4% on average, for tomato and 2% for onion and 3% for potato, respectively. Physical losses at this stage are mostly due to repacking, grading, wastage, retention and transportation etc. The wholesalers mostly purchase from beoparies, particularly tomatoes. Some relatively big growers also bring their produce to wholesalers. The wholesalers are usually having better bargaining position as they can retain the vegetables for some time particularly potato and onion due to their comparatively longer shelf life.

Commission agents: Commission agents interviewed were 35 in all, including 10 from Peshawar, Mardan, 9 from Kohat and 6 from Islamabad. Their job experience varied from 10 years to 21 years. The commission agents were dealing in through both producers and beoparies for transecting the vegetables. The commission charged by a commission agent slightly varies from market to market in the range from 4 to 6% at Peshawar, Kohat, Mardan and Islamabad market. The lowest rate i.e. 4% was reported at Kohat and highest i.e. 6% at Islamabad. However, on average 5% commission was charged on the volume they transected. Besides selling, commission agents also provide certain facilities for boarding/lodging and offer loan etc to their clients.

Retailers: Total 30 retailers, 10 from each Peshawar, Mardan and Kohat were interviewed. There is no particular choice of retailers for purchasing the commodities from wholesalers, commission agents or beoparies but which fetch them better return at a

particular purchase. All the retailers interviewed had their own investment and no one took loan or credit from any source. The marketing margin varies from commodity to commodity and place to place for retailers. The margins received from tomato were higher followed by potato and onion. On average marketing margin of retailer for tomato were 20% at Peshawar, 15% for Mardan and 19% for Kohat. Over all average, the margins for tomato were 18%. For potato, the margin at Peshawar was 15% at Kohat was 20% while at Mardan it were 19%, averaging at 18%. For onion, retailers at Mardan received 21% marketing margin, at Kohat 23% while at Peshawar they receive 16% with overall average of 20%. The physical losses at retailer stage were quite higher. On average, the physical losses for tomato were 7%, for onion 3% and for Potato 4%. The higher rates of physical losses at retailer stage were reported to be due to time factor, being last marketing agent. As it takes time for the vegetables to reach retailers after passing through various channels. The chances of losses are more particularly if tomatoes are left for a day or two, all of those could be lost due to higher perishability of the tomatoes.

During the course of discussion with various intermediaries, farmers and general observations, a number of problems and inadequacies were identified. On physical side, there is generally a lack of proper physical marketing facilities. There is an inadequacy of efficient wholesale markets, warehouses and cold storage space, transport arrangements (especially for the perishables) and processing facilities. There is no efficient system of grading and standardization of vegetables. Small marketable surpluses of the scattered small farmers together with their weak financial position make it difficult for them to withhold the produce for better prices; while the remoteness from organized markets generally influence farmers' decisions to sell locally.

The aforementioned factors have created imperfections in the markets that have given rise to several unfair trade practices generally working against both the producers (sellers) and the eventual consumer.

In case of vegetables, village sales are important only for the relatively less perishables i.e. potato and onion. The perishables i.e. tomato are sold to beoparies or taken to the markets and sold to wholesalers or through commission agents. There are generally four stages through which vegetables pass, i.e. beoparies, commission agents, wholesalers and retailers. Beoparies generally purchase from the villages. Commission agents purchase/sell for a commission while the wholesalers purchase through open auction and sell to the retailers in small lots. No case, in this study, of vegetables sold

through pre-harvest contractors has been found in which a contractor buys standing fields and themselves harvest and market the produce.

There are considerable regional variations in the proportions sold to different agencies for the same crop. These variations depend upon the proximity of regulated markets, availability of institutional marketing agencies and status of road linking with markets, transport facilities available and the general attitudes of the farmers. It was also reported that most of the producers harvest their crops when neighbours start harvesting without realizing as whether their crops are properly matured or not. This seems a psychological problem i.e. farmer thinks that if his crop is delayed, he may not get good price but actually his this very action creates gluts in the markets and subsequently affect the prices adversely for the farmers. Another reason reported by many farmers is the vacation of land to prepare for next crop. This call for appropriate training of the farming community to educate them in making right decisions particularly on right time of harvesting and marketing intelligence.

In case of the studied three vegetables, the grower's share in the consumer price varies from vegetable to vegetable. It is 37% for tomato, 40% for onions and 45% for potatoes. It is obvious from the above that the grower's share in the consumer rupee is the lowest for tomatoes followed by onion and then potatoes. The share of the growers in nearly all cases is low with various intermediaries taking up large percentages. It is very difficult to assess whether the large marketing mark-ups reported in the case of three vegetables are necessarily exploitative. It could be argued that the intermediaries are providing an additional service at each stage and carrying significant risks for which charges are appropriate. In such cases, the marketing structure for agricultural produce is not necessarily exploitative and inefficient. There is however need for continuing in-depth analyses of both marketing margins and costs at each stage of the marketing chain for these three vegetables. These studies should also include evaluation of the efficiency aspects of marketing.

Khair^[7] observed that overall marketing margins for apple varieties were 73% while the producer is receiving 27% of the consumer price. The marketing cost are very high due to exploitative marketing set up, lack of marketing intelligence of farmers, expensive packaging material and transport. Thakur *et al.*^[8] concluded that vegetable production in the hilly areas is highly profitable and can be used to significantly increase the income of small and marginal farmers. There is a need for an integrated approach to tackle the production and marketing problems faced by farmers. Iqbal^[2-5] observed

that the gross margins of producer, preharvest contractor, wholesaler and retailer were 13.11, 30.90, 12.51 and 43.48% for plums in Balochistan, respectively while the margins of preharvest contractor, pharia and retailer for apple were 32.65, 9.90 and 26.99%, respectively. Similarly, net margins of apple were 7.17 and 6.39%. The producer share was 38.65% and the net commission agent share was 3.95%. The net margins of almond for producer, preharvest contractor, wholesaler and retailer were 25.2, 24, 10.2 and 37.2%, respectively. He noted that the producer of almond who self marketed were able to improve his share from 25.2 to 45% while the commission agent charged the commission at the rate of 2% of the auction price. However, similar studies related to the marketing margins of vegetables could be found^[9-12].

CONCLUSIONS

Based on the foregoing discussions and factual scenario observed during the course of this study, following recommendations are made in order to bring reforms in the marketing system in a way that both producers and consumers can opt for maximum benefits.

Producers marketing cooperatives would contribute considerably to removing some of the imperfections. The organization of marketing cooperatives would be particularly beneficial for producers of tomato, potato and onion most of whom cannot afford to take their produce to the organized wholesale markets and are, therefore, obliged to sell to beoparies at relatively low prices.

Provision of an effective marketing infrastructure would considerably alleviate majority of the problems associated with vegetables marketing at present. The physical facilities in the markets that need to be improved on a priority basis include:

- Provision of standard weigh bridges and balances and arrangements to ensure correct weighing of vegetables.
- Provision of sufficient space for trading to take place without hindrance.

As the agricultural sector develops the need for adequate processing facilities in close proximity to the major vegetable producing centers, particularly tomato, will increase. With the effective provision of credit for processing facilities and an increased demand it can be expected that processing facilities at a fairly decentralized level will automatically come up to cope with the local demand. These units could also offer gainful employment to the large non-farm rural population.

One of the most serious bottlenecks to the development of efficient markets is the inadequate flow of information on price and quantities. Although the media, especially radio and newspapers, do disseminate information on the prices of traded commodities in important mandi towns daily, this information does not seem to be relied on generally and farmers continue to rely on the advice of the commission agents and beoparies. Main reason for this is that price is given in ranges and not specific to particular grades. With increased literacy, introduction of grade standards and the better functioning of markets the utilization of the available information will increase. There is, however, a need to educate the farmers in the utilization of this information for their greater advantage.

There is also considerable lack of suitable storage facilities for different types of commodities at all levels of marketing. Moreover, information on proper storage methods and on the principles of good store management is not widely available. Although considerable emphasis is being placed on the rural roads and the provision of adequate storage. It is imperative that if the envisaged increase in horticultural production is to be realized, immediate priority will have to be assigned to these two areas.

There is a need for an in-depth study into alternative storage technologies to determine the most optimal ones for horticultural crops, including the small-scale rural facilities in vegetables growing areas. Scientifically designed inexpensive storage lines should be made available for on-farm storage and necessary training should be imparted to the producers, including the housewives.

Studies are needed to be carried out to determine the appropriateness or otherwise of the role played by the middlemen in the marketing channel and margin it receives.

REFERENCES

1. FAO, 1990. Marketing cost and margins of selected agricultural products in selected Asian countries. Food and Agriculture Organization of United Nations, Rome Italy, Bull. No. 76.
2. Iqbal, M., 1992. Marketing costs and margins of deciduous fruits in Balochistan. Outreach and Transfer of Fruit Technology Project in Balochistan Paper No. 4. Food and Agriculture Organization of United Nations and Department of Agriculture and Cooperatives, Government of Balochistan.
3. Iqbal, M., 1994. Marketing costs and margins of apple in Balochistan. Outreach and Transfer of Fruit Technology Project in Balochistan Paper No. 14. Food and Agriculture Organization of United Nations and Department of Agriculture and Cooperatives, Government of Balochistan.
4. Iqbal, M., 1994. Marketing of plums in Balochistan. Outreach and Transfer of Fruit Technology Project in Balochistan. Paper No. 14. Food and Agriculture Organization of United Nations, Department of Agriculture and Cooperatives, Government of Balochistan.
5. Iqbal, M., 1995. Marketing of almonds in Balochistan. Outreach and Transfer of Fruit Technology Project in Balochistan. Paper No. 23. Food and Agriculture Organization of United Nations, Department of Agriculture and Cooperatives, Government of Balochistan.
6. Sial, M.H. and M.S. Anjum, 1990. Returns to investment by market intermediaries in Rawalpindi-Islamabad market. Pak. J. Agric. Social Sci., 3: 43-53.
7. Khair, S.M., 2000. Distributive marketing margins of apple in pashin. M.Sc Thesis, Agric. Univ. Peshawar.
8. Thakur, D.S., R.D. Sanjay, Thakur and D.K. Sharma, 1994. Economics of off-season vegetable production and marketing in hills. Ind. J. Agric. Marketing. Himachal Pradesh Krishi Vishavavidyalaya Regional Research Station, Kullu Manali, India, 8: 72-82.
9. Chattaopadhyay, M. and D. Sarkar, 1994. Marketing efficiency and marketing channels in a prosperous region of rural west Bengal. Asian Econ. Rev., 36: 565-597.
10. Keno, 1994. Marketing costs of intermediaries in wholesale markets of fruits and vegetables. Technical Bulletin of Faculty of Horticulture, Chibe University, Japan.
11. Khushk, A.M., 2001. Marketing of vegetables and fruits in Asia and the Pacific. Asian Productivity Organization, Tokyo.
12. Singh, R.S., 1996. Marketing of citrus fruits in mid hills of JAK. Bihar J. Agric. Marketing. Univ. Agric. Sci. Technol. Fac. Agric. Postgraduate Studies, R.S. Pura, JAK, India, 4: 242-249.