

## AN ANALYSIS OF MARKETING COSTS AND MARGINS OF POMEGRANATE IN DISTRICT PISHIN, BALOCHISTAN-PAKISTAN

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### ABSTRACT

This study was carried out with the aim to investigate the marketing costs and margins of different intermediaries involved in the marketing of pomegranate in district Pishin Balochistan Pakistan. A pre tested questionnaire was used to gather data from 120 respondents, with 20 wholesalers and 20 retailers. The results indicated that most farmers in the study area relied on the traditional marketing i.e., Producer → Commission Agent/Wholesaler → Retailer → Consumer. The results further revealed that the per acre total cost of pomegranate production was Rs. 425501, with land rent (23.7%) and wooden crates (28.2%) as major cost components. The marketing cost analysis indicated that growers bear the highest marketing cost, particularly in transportation and handling while wholesalers and retailers incur relatively lower costs. The findings further showed that the marketing margin of growers, wholesalers and retailers was 64.2%, 20.2% and 27.1% respectively. The producer's share in the consumer price was found to be 58.1%, which is relatively high; however, a significant portion of value (41.9%) was still absorbed within the marketing system. The price spread for growers, wholesalers and retailers was Rs53.36, Rs.21.11 and Rs.38.78 per kg, respectively. The study concluded that although pomegranate farming is profitable in the study area, growers receive comparatively lower returns due to high production and marketing costs, lack of storage facilities, poor market infrastructure, and limited access to market information. Wholesalers and retailers earn relatively stable margins due to their stronger position in the marketing process. Based on the results, it is recommended that the government should establish regulated markets at the local level, improve storage and transportation facilities, and enhance market information systems to reduce the role of intermediaries and increase the share of growers in the consumer price. Introduce proper grading and packaging, plus branding routines so that the final product can satisfy the needs of high-value local domestic and for export markets.

**Keywords:** Marketing Analysis, Margins, Cost, Pomegranate, Baluchistan

### I. INTRODUCTION

#### 1.1 Background of the study

The prosperity of Balochistan is pretty much kept up by its agricultural sector, in a way that stays steady over time. It makes up more than 29% of the province's Gross Domestic Product, (GDP),

and also gives jobs to around 66% of the provincial labor force (Ahmed, 2020). Balochistan is also famous for its fruit production, and is known as the "Fruit Basket of Pakistan," which makes it an important part of the agricultural industry. Agriculture is not only an important

source of income but also an important livelihood in the province. Due to the favorable climate and soil conditions, a large number of different fruits are cultivated in Balochistan such as pomegranate, apple, grape, date etc. The name "Fruit Basket of Pakistan" underscores the quality as well as quantity of fruits grown and their importance in feeding the nation and in contributing to the economy. In addition, the importance of agriculture in Balochistan can also help in development of agribusinesses, agro-processing industries, and export ventures, and contribute towards the economic development and stability of Balochistan (Shah et al., 2011).

Gross Domestic Product (GDP) of Balochistan is estimated to be around 4.2% of the total GDP of Pakistan, which is slightly decreased from the former estimation of about 4.5% due to the changes in the economic structure and performance of the Balochistan province (GoP, 2023). On a per capita basis, the province's income is still relatively low. This imbalance can be explained by various factors such as the impact of the War on Terror, slow economic growth and high population growth rates. When combined, these will stymie the region's potential to produce wealth and raise standards of living at a rate equal to that of the rest of the country.

The Province of Balochistan has comparative advantage in agriculture production of minor crops such as vegetable and fruits. Though the province is one of the major fruit-producing regions, fruit producers do not always receive a fair price because of poor post-production facilities and a lack of transportation. Also, only about 5% of the agricultural products of Balochistan are used to produce value added products, thereby constraining further expansion in minor crops production sector. Development of additional food processing units would help to increase the employment possibilities and increase return of raw material producers and suppliers (Rana et al., 2021).

Improving vegetable and fruit management will bring a lot of potential in rural economy of Balochistan. Handling with care of these crops can result in greater net returns for farmers, more employment opportunities and wider-spread

economic impacts through greater employment in processing, marketing and packaging. Better management practices also have a positive effect on the active participation of women in the workforce, an important aspect for household stability. The fruits and vegetables industry not only contributes to national consumption, but also has a considerable share of foreign exchange earnings due to exports (Tareen et al., 2020).

### 1.2 Problem Statement

A significant portion of agricultural profits is frequently withheld from farmers in developing nations. This situation arises from multiple interconnected factors, including limited market information, restricted access to major markets, inadequate postharvest systems, and deficient transportation infrastructure. To ensure more equitable distribution and improved outcomes for agricultural producers, it is essential to identify and effectively address the shortcomings and challenges present within agricultural marketing channels (Leach et al., 2020).

The combined complexities of production and marketing activities impede the effective adaptation of cost and margin structures. Contemporary consumers have become increasingly aware of quality deficiencies in agricultural commodities produced using hybrid seeds, pesticides, and other hazardous chemicals. Consequently, green agricultural commodity cost and margin systems have emerged as potentially viable alternatives for enhancing product quality and advancing the agricultural sector (Clay et al., 2020; Langensiepen et al., 2020). However, the cost and margin frameworks for farm products in developing countries demonstrate insufficient flexibility to respond appropriately to real-time market fluctuations. This limited responsiveness typically correlates with several contributing factors, including restricted market intelligence, weak linkages with agricultural research and extension services, inadequate postharvest management systems, unreliable transportation networks, and limited investment capacity resulting from difficult access to formal credit facilities.

While bank financing remains widely accessible and commonly utilized by large enterprises (Balraj et al., 2016), the majority of small and medium-sized agricultural businesses failed to meet repayment capability requirements during the COVID-19 pandemic (Belhadi et al., 2021). Consequently, limited access to institutional credit has emerged as a substantial impediment to their development.

Multiple studies have identified several critical issues contributing to inefficient cost and margin structures for fruits and vegetables. These include inadequate infrastructure, minimal value addition, limited processing capabilities, low farmer incomes, poor safety and quality standards, and excessive intermediaries within marketing chains (Deng et al., 2021). These challenges are exacerbated by low productivity levels, unsustainable water supplies, climate variability, weak institutional frameworks for agricultural research, and insufficient public funding for agricultural extension services.

### 1.3 Study Justification

Given that agriculture constitutes the foundation of most developing economies, examining efficient cost and margin models becomes imperative. This investigation seeks to illuminate the primary concerns and challenges confronting pomegranate growers in Balochistan as they pursue cost and margin efficiency. Storage facilities and postharvest handling practices are crucial determinants of pomegranate quality maintenance and loss reduction. Inadequate storage solutions and improper handling techniques can result in substantial postharvest losses (Butt et al., 2022).

Understanding these problems can facilitate the development of more effective storage solutions and waste reduction strategies. Transportation infrastructure quality significantly influences pomegranate farmers' ability to deliver products to markets. Poor roads and inadequate logistics can increase product losses. The objective is to identify principal problem areas within transport-related cost and margin analysis. The arid climate and insufficient water supply in Balochistan have already rendered water a critical concern, with the region facing increasing climate change

vulnerability. The water shortage situation continues to worsen due to changing precipitation patterns, rising temperatures, and shifting weather conditions.

This situation is particularly consequential for agriculture, with pomegranate production being highly dependent on adequate water availability. However, insufficient research exists on the combined effects of these climatic variables on both water resources and agricultural productivity in Balochistan, particularly regarding pomegranate cultivation. Accordingly, this study aims to examine how climate change exacerbates water scarcity and negatively affects pomegranate production, focusing on the interrelationship between changing precipitation, rising temperatures, and overall water resource availability (Khan et al., 2023).

Furthermore, climate change and associated phenomena such as floods and droughts have substantially affected fruit orchard productivity over recent decades, resulting in significant reductions in orchard acreage. The decline in pomegranate cultivation primarily correlates with drought conditions, in addition to other factors including weak local market prices, expensive inputs, and inadequate transport and storage infrastructure leading to postharvest losses. Consequently, this study's analysis of costs and margins aims to identify key obstacles while simultaneously identifying opportunities for improvement.

Such information facilitates more effective guidance for infrastructure development, enhanced value addition, and more direct market linkages, enabling farmers to obtain equitable profits while reducing dependence on intermediaries. Strengthening pomegranate cost and margin structures would not only benefit local farmers by ensuring fair prices and reducing losses but also contribute to regional economic growth through export promotion and employment creation within agribusiness sectors. Based on this justification, the study is designed with objectives to examine pomegranate marketing channels in the study area and evaluate marketing costs and margins for various intermediaries involved in pomegranate marketing.

## 2. MATERIALS AND METHODS

### 2.1 Study Universe

District Pishin is placed around 45 km away from Quetta. It got separated from the Quetta District back in 1975, and later split again in 1993 to form Killa Abdullah District (GoP, 2000). After that, a portion of it became Karezat district in 2022. The main crops grown in Pishin include wheat, maize, apples, grapes and pomegranates. Some farmers also go for additional cultivation, like tomatoes, onions and potato. Livestock rearing is also quite vital, and it supports the livelihoods of the people of Pishin. The villages Malakyar, Batazai, Tora Shah, Surkhab, Essa Karez, Huram Zai, Yaru and Ibrahim Zai etc comprise the study universe of this research endeavor.

### 2.2 Sample Design and Data Collection

A multi-stage stratified sampling technique was employed to target pomegranate farmers within the study area. The sampling procedure followed the methodological approaches documented by Abid et al. (2006), Sonile et al. (2012), Nwaigwe et al. (2019), and Uzair et al. (2022). The units of analysis comprised pomegranate producers, contractors, middlemen, and other relevant agents participating in the marketing chain.

In the first stage, the Pishin district was deliberately selected based on its significance to pomegranate production in the region. During the second stage, eight villages were randomly chosen from the district. In the final stage, following the approach adopted by Gul et al. (2019) and Saddique et al. (2024), a fixed sample size of fifteen pomegranate growers was randomly selected from each village. Consequently, the primary data collection yielded a total sample of one hundred and twenty pomegranate growers drawn from the eight villages, alongside twenty contractors and twenty retailers operating within the Pishin district.

### 2.3 Analytical Framework

#### 2.3.1 Total cost of marketing (Singh, 2004)

The total costs are related to the delivery of products to end users. Marketing costs are fees associated with product delivery to customer, storage of product in storages, waiting for product

deliveries, product promotion, or product delivery to point of sale.

$$C = C_f + Cm_1 + Cm_2 + \dots + Cm_n \dots \dots \dots 3.1$$

Where C represents the total cost of marketing,  $Cm_1$  is the marketing cost sustained by the farmers and  $Cm_i$  include the cost sustained by the *i*th middle man.

#### 2.3.2 Producer's Price

It consists of the price of selected vegetable or situation determined by the aggregate of the production worth including land, labors, capitals, marketing, and taxation. Asmat (2016) calculated the producer's price by using the following equation:

$$P_G = P_w + C_G \dots \dots \dots 3.2$$

On the right-hand side of the equation is the producer price ( $P_G$ ), which is equal to wholesale price in the primary assembling market ( $P_w$ ) and marketing cost ( $C_G$ ) sustained by the farmers.

#### 2.3.3 Price Spread

It can be determined as the difference between the sale price and purchase price (Sangeetha, 2011). A higher producer shares in consumer rupee and a narrow price spread results in the preferable attention of both i.e. producer and consumer (Kumar and Srivastava, 1993). It can be deliberated by below equation:

$$P_s = S_p - P_p \dots \dots \dots 3.3$$

Whereas, PS is equal to price spread, SP represent the sale price and PP represent the purchase price

### 2.4 Marketing Margin Analysis

Marketing can be described as the operations involved in all business actions which helps the transfer of goods from initial production point till it reaches to the hands of the end consumers (Kohls and Uhl, 1985).

Marketing Margin can be specified as all the cost of the services provided by the middlemen/intermediaries through which the product flows from farmland to end user. The amount of the dollar spent by the end user on food that reaches to the firms involved in the marketing of the product is referred as the marketing margin

(Kassana, 2003). The variation among the rupee spent by the end user and the portion of that rupee gained by the grower is also referred as the marketing margins (Kohls and Uhls, 1985). Marketing margins were estimated based on the data collected on prices of the marketing chain at different stages. Marketing margins were calculated as the percentage of the ratio of price spread to sale price (Ahmad, 2008):

$$MM = \frac{\text{Price Spread}}{\text{Sale Price}} \times 100 \dots\dots\dots 3.4$$

### 2.5 Gross Margin

Gross margin can be defined as the difference between the sale price and purchase price. Gross Margin was calculated by using the following equation (Hussain *et al.*, 2013):

$$G_M = S_p - P_p$$

### 2.6 Net Margin

Net margin can be specified as the difference between the gross margin and total marketing cost. Following equation was used to calculate the net margin (Ahmad, 2008):

$$NM = GM - C \dots\dots\dots 3.5$$

MM = marketing margin, GM = gross margin, NM = net margin, PS = price spread, SP = sale price, PP = purchase price, C = total marketing cost

### 2.7 Producer's Share in Consumer Price

The share of growers involved in the marketing of a product in the rupee which is paid by the end user is referred as the share of producer in consumer price. Asmat (2016) calculated the share of producer in consumer rupee by using the following equation:

$$PS = \frac{RP - C}{RP} \times 100 \dots\dots\dots 3.6$$

Where, PS stands for producer's share in the consumer rupee, RP is the retail price and C is equal to total marketing cost.

### 2.8 Marketing Channels

Following are the general channels used in the marketing of vegetables. In the present research we selected that channel which was followed by majority of the respondents.

#### Channel I:

Producer→ Pre-Harvest Contractor→ Commission Agent→ Wholesaler→ Retailer→ Consumer

#### Channel II:

Producer→ Commission Agent→ Wholesaler→ Retailer→ Consumer

#### Channel III:

Producer→ Wholesaler→ Retailer→ Consumer

#### Channel IV:

Producer→ Retailer→ Consumer

#### Channel V:

Producer→ Consumer

## 3. RESULTS AND DISCUSSION

### 3.1 Total cost of pomegranate per acre

The cost is the summation of the complete practices used in the cultivation of pomegranate per acre. The cost assessment includes land preparation, land rent, irrigation, DAP, pesticide, tractor spray, harvesting and packing, wooden crates, rice straw, newspaper, nails and all labor hours required for different agricultural tasks. The pre-harvest cost of pomegranate production per acre is presented in Table 4.4.

#### 3.1.1 Land Rent

The term land rent describes the payment that farmers make to use agricultural land during a specific cropping season. The land costs represent opportunity costs since they apply to both owned and rented property. Land rent applies different rates because of three factors which include soil fertility and irrigation availability and the specific location of farmland. The study area incurs land rent expenses at Rs. 101151/- per acre which represents 23.7 percent of the complete production expenses for pomegranate.

#### 3.1.2 Land Preparation (Hoeing)

Hoeing is an important intercultural operation in pomegranate orchards to keep the soil loose, weed-free, and well-aerated. Hoeing occurs during the application of fertilizer to guarantee soil productiveness and plants. The average of hoeing cost was Rs. 52200 per acre, accounting for 12.2 percent of cost as a whole.

#### 3.1.3 Irrigation

Irrigation refers to the controlled water to crops which aims to sustain proper soil moisture levels

needed for their growth. In the study area irrigation mainly uses tube wells as its primary method. The total cost of irrigation was Rs.15000 per acre and 3.5 percent of all production.

### 3.1.4 Inorganic Fertilizer Cost

Inorganic fertilizers are used to provide the plants with the essential nutrients for best growth. People also call them as chemical fertilizer sometimes. DAP is also inorganic fertilizer. The total cost of DAP was Rs.39000 per acre and 9.1 percent is total production expenses.

### 3.1.5 Pesticide

Pesticide chemical is used for to destroy or control pests that damage fruits and crops. Pesticides were used in pomegranate orchard and were measured in liters. Spray was applied by the help of tractor. The total cost of pesticide was Rs.18000 per acre and 4.2 percent is total production expenses.

### 3.1.6 Tractor Spray

Tractor spray is important practice in pomegranate orchards for application of pesticides, nutrients and fungicides for healthy crop growth and protect from disease and pests. The total cost of tractor spray was Rs.18000 and 4.2 percent of total production expenses.

### 3.1.7 Harvesting and Packing

There are three main steps for harvesting and packing which are picking, sorting and packing. Picking the pomegranate with the help of scissors or pruning because to avoid fruit damage and harvesting is done when the fruit reaches proper color and size. After harvesting the fruits are cleaned and separated according to size, color and weight. The last step packing which the fruit are packed in wooden crates with protective materials.

The product must pass through this process to achieve market readiness. The total cost of harvesting and packing was Rs.14000 per acre which accounted 3.2 percent of total production.

### 3.1.8 Wooden Crates

Wooden crates are used for safe packing, storage and transportation of the fruits. Pomegranates are packed in wooden crates with protective materials like newspaper and rice straw. The total costs of wooden crates were Rs.120000 per acre and 28.20 percent of total production expenses.

### 3.1.9 Rice Straw

Rice straw is used in pomegranate packing to protect fruit from bruises and scratches. It reduces damage during transportation and it keeps fruits safe inside wooden crates. The total cost of rice straw was Rs.30400 per acre and 7.1 percent of total production expenses.

### 3.1.10 Newspaper

Newspapers are used for wrapping and packing pomegranate to protect them from damage during storage, handling and transportation. So, a newspaper helps to maintain fruit quality and improves the marketing appearance of the produce. The total cost of newspaper was Rs.15000 per acre and accounting for 3.5 percent of the total production.

### 3.1.13 Nails

In the pomegranate packing nails are used to join wooden crates pieces together and make the crates strong. Nailed crates protect pomegranate from damage during handling. The total costs of nails were Rs.2750 per acre and accounting for 0.64 percent of total production.

Table 4.1: Cost of production of pomegranate (per acre)

No.	Inputs	Units	Qty/Acre	Unit Cost (Rs)	Total Cost (Rs)	%age
1.	Land Rent (Cropping Season)	Acre	1	101151	101151	23.77
2.	Land Preparation (Hoeing)	Per Tree	435	120	52200	12.26
3.	Irrigation	Month	2	7500	15000	3.52

4.	DAP (50 kg)	Bag	3	13000	39000	9.16
5.	Pesticide	Ltr	4.5	4000	18000	4.23
6.	Tractor Spray	Hours	10	1800	18000	4.23
7.	Harvesting & Packing	Days	12	1200	14000	3.29
8.	Wooden Crates	Crate	1200	100	120000	28.20
9.	Rice Straw	Bundle	19	1600	30400	7.14
10.	Newspaper	Parcel	2	7500	15000	3.52
11.	Nails	Kg	11	250	2750	0.64
<b>Total</b>					<b>425501</b>	<b>100</b>

Source: Field Survey, 2024.

### 3.2 Marketing Cost

The expenses incurred for marketing purposes start after farmers complete their crop harvesting because they need to transport their harvested fruit to sell them at market locations. The expenses include packing costs and transportation costs and loading and unloading costs and entry fees into the market. The expenses for marketing purposes determine how much profit farmers will make from their farming operations.

#### 3.2.1 Packing Charges

The expenses that growers face to package their harvested pomegranate fruit for market distribution create packing charges. The growers in the study area used standard 7 kg per crates to pack pomegranates because these methods provided secure handling and transportation options. The average production of pomegranate per acre was approximately 1200 crates. The packing cost for each bag amounted to Rs.100 which led to total packing expenses of Rs.120000 that growers paid for every acre they cultivated. Wholesalers and retailers did not bear any packing charges as they utilized the same packaging provided by the growers and only replaced it in case of damage. Therefore, no packing cost was recorded for wholesalers and retailers. The marketing cost of pomegranate of per acre is discussed in table 4.2.

#### 3.2.2 Transportation Cost

Transportation cost refers to the total financial expenditures which result from moving pomegranate products between the agricultural

field and the main market and their subsequent distribution to different market outlets. Farmers used Shahzore (truck) to transport pomegranates from their farms to markets because this method required them to pay transportation costs of Rs. 70 for each crate. Growers spent an average of Rs.84000 per acre on transportation costs which resulted from their production of 1200 crates for every acre of their farmland. Retailers used both rickshaws to transport their merchandise to various destinations. The retailers incurred transportation costs of Rs. 40 for each crate they moved which resulted in total expenses of Rs. 120 per trip because they transported 3 crates on average.

#### 3.2.3 Loading and Unloading

Wholesalers incurred loading and unloading expenses when they received and dispatched consignments as they paid Rs. 60 for each crate which resulted in total costs of Rs. 72000 for per acre. Retailers pay Rs.30 per crate and the total is Rs.90 because they transported 3 crates on average.

#### 3.2.4 Market Entry Fee

The market entry fee is a compulsory charge that growers must pay when they bring their produce to the main wholesale market for sale. The market authorities use these collected fees to finance their administrative and security and operational activities. The study found that pomegranate growers paid an average market entry fee of Rs.80 per trip which resulted in a total annual marketing cost of Rs.204080 per acre. The fee applied only to producers who brought fresh produce directly

to the market while wholesalers and retailers who operate within the market premises on a

permanent or registered basis were not required to pay this fee table 4.2.

**Table 4.2: Marketing Cost of pomegranate (per acre)**

No.	Practices	Growers			Wholesalers			Retailers		
		Qty/Acre	Unit Cost (Rs)	Total Cost	Qty/Acre	Unit Cost (Rs)	Total Cost	Qty/Acre	Unit Cost (Rs)	Total Cost
1	Packing Charges (7 kg)	1200 Crates	100	120000						
2	Transportation Cost per Crate	1200 Crate	70	84000	---	-	---	3 Crates	40	120
3	Loading/ Unloading per Crate	---	---	---	1200	60	72000	3 Crate	30	90
4	Market Entry Fees per Trip	---	80	80	---	---	---	---	---	---
<b>Total</b>				204080/-			72000/-			210/-

Source: Field Survey, 2024.

### 3.3 Marketing Margin of Growers

The results revealed that in the study area pomegranate growers sustained a total cost of Rs.29.72/- per kg of pomegranate which was sold at Rs.83.09/- to wholesalers. The price difference between the growers and consumers of pomegranate was Rs.53.36/- per kg. The marketing margin percentage ratio revealed the growers of pomegranate in the study area acquired 64.21 per cent of the marketing margin in the marketing chain.

### 3.4 Marketing Margin of Wholesalers

The results revealed that in the study area pomegranate wholesalers bought one kg of pomegranate at Rs.83.09/- which was further sold at Rs.104.21/- to retailers. The price spread of wholesalers was Rs.21.11/- per kg. The percentage ratio in the marketing margin showed that the pomegranate whole sellers of the study area got around 20.25 per cent margin in the marketing chain. The gross margin of pomegranate wholesalers was about Rs. The net margin earned

by Pomegranate Wholesalers from the sale of each kg of the pomegranate blossom was approximately Rs.12.54/-. The result has been calculated and it was found to be supportive to the previous study conducted by (Rehman, 2014).

### 3.5 Retailers' Place in the Market

The finding in the present study in the study area pomegranate retailers bought one kg of pomegranate at Rs.104.21/- which was further sold at Rs.143/- to consumers. The price spread of retailers was Rs.38.78/- per kg. The percentage ratio of the marketing margin showed that the retailers in the study area acquired 27.11 per cent marketing margin in chain. The retail price of pomegranate was Rs.38.78/- per kg while the net margin enjoyed by the retailers per kg of pomegranate was Rs.28.79/-. The results that come from the analysis of the data was found supportive with the previous study of (Rehman, 2014).

**Table 4.3: Price differences and Marketing Margin.**

No.	Intermediaries	Growers	Wholesalers	Retailers
1	Total Cost / Purchase Price (per kg)	Rs.29.72	Rs.83.09	Rs.104.21
2	Sale Price (per kg)	Rs.83.09	Rs.104.21	Rs.143
3	Price Spread (PS)	Rs.53.36	Rs.21.11	Rs.38.78
4	Marketing Margin (MM)	64.21%	20.25%	27.11%
5	Gross Margin (GM)	~	Rs.21.11/-	Rs.38.78/-
6	Net Margin (NM)	~	Rs12.54/-	Rs.28.79/-

Source: Field Survey, 2024.

### 3.6 Producer's Share in Consumer Price

The producer's portion in the consumer price for pomegranate is 58.1%, so from the overall amount that consumers hand over, 58.1 percent goes directly to the producer (the farmer). In practice this suggests that the producer gets more than half of what the consumer pays, while the remaining

41.9% is distributed among intermediaries such as wholesalers, retailers, transportation, and marketing costs. A producer shares of 58.1% shows a relatively fair return to farmers, but there is still room to improve the marketing system so that producers can earn a larger portion of the final price.

**Table 4.4: Grower's Share in the price of consumer**

Fruit	Share of growers in Consumer Price
Pomegranate	58.1%

### 3.7 Profit analysis

The estimated findings presented in Table 4.5 indicate that pomegranate cultivation represents a profitable entrepreneurial activity within the study area. Pomegranate farming was commonly practiced in the research region due to relatively high product demand and greater revenue generation for farmers compared to alternative crops.

The analysis revealed that growers obtained a net income of Rs. 1,484,103 per acre, calculated by multiplying the average output per acre (in kilograms) by the prevailing market price. Concurrently, the total cost incurred by producers amounted to Rs. 629,581, derived from the summation of production costs and marketing expenses associated with pomegranate cultivation. The overall average profit was consequently determined to be Rs. 854,522 per acre.

**Table 4.5: Profit of Pomegranate**

No.	Fruit	Total Revenue (TR)	Total Cost (TC)	Profit ( $\pi$ )
1	Pomegranate	1484103/-	629581/-	854522/-

Source: Field Survey, 2024.

#### 4. CONCLUSIONS AND RECOMMENDATIONS

The study concludes that the pomegranate marketing system operating in the research area remains largely traditional in nature, characterized by the presence of multiple intermediaries who contribute to increased cost burdens and diminished overall efficiency. Farmers bear substantial production and marketing expenditures, as they are required to finance labor, agricultural inputs, and transportation services, all of which directly erode their profit margins. Although growers capture a relatively higher proportion of the marketing margin, their capacity for effective negotiation remains constrained by inadequate storage infrastructure and limited access to reliable market intelligence. Intermediaries contribute to a situation wherein consumer prices escalate considerably, as a portion of their costs is transferred throughout the marketing chain.

The research findings demonstrate that pomegranate cultivation in the study area continues to represent a profitable enterprise, notwithstanding the existing challenges and constraints. Enhancing marketing efficiency alongside the reduction of superfluous intermediaries would likely yield improved market outcomes and enhanced income performance for farmers.

Based on the study's findings, the following recommendations are proposed. First, direct marketing channels should be established by linking growers directly with wholesalers, retailers, and exporters, thereby reducing dependence on middlemen and improving profit margins. Second, the formation of farmer groups or cooperatives for collective pomegranate marketing should be encouraged, as such arrangements would strengthen bargaining power and facilitate access to larger markets. Third, proper grading, packaging, and branding practices ought to be introduced so that produce can meet the quality standards required by high-value domestic and export markets. Fourth, organized market chains equipped with adequate storage and transport facilities should be developed to ensure timely product delivery, minimize postharvest losses, and

maintain fruit quality throughout the marketing process.

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