An Analysis of Banana Marketing Channels, Costs, and Constraints with Special Reference to North Garo Hills District, Meghalaya

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ARTICLE INFO	ABSTRACT
	The present study examines the marketing channel, marketing cost, price spread, spatial price differences, and marketing efficiency of bananas using primary data from the year 2023-2024 in North Garo Hills district. Data were purposively collected from the selected districts due to their highest production and productivity compared to other districts in Garo Hills, Meghalaya. A statistical framework and tabulation were employed to achieve the specific objectives of the study. **Keywords**: Banana, Farmers, marketing channels, marketing efficiency.

Introduction:

Agricultural marketing encompasses a wide range of activities including assembling, storage, transportation, processing, and sales, all of which are vital in facilitating the movement of agricultural produce from farms to final consumers. A well-functioning marketing system is crucial for enhancing farmers' incomes, reducing post-harvest losses, and ensuring that consumers receive products in good quality and at reasonable prices. However, in Meghalaya, the agricultural marketing structure remains largely unorganized, informal, and heavily dominated by private traders and middlemen. These intermediaries often control the market by dictating prices, limiting the bargaining power of farmers, and capturing a significant portion of the value created along the supply chain.

Specifically, in North Garo Hills District, farmers face a multitude of challenges that hinder their effective participation in the market. Poor road connectivity isolates rural producers from major markets, increasing transportation costs and post-harvest losses. The lack of adequate storage facilities forces

farmers to engage in distress sales immediately after harvest, often at prices much lower than the potential market value. Additionally, the absence of organized market information systems means that farmers operate with limited knowledge about prevailing prices, market demand, and consumer preferences, further weakening their negotiating position.

As a result of these systemic inefficiencies, producers are compelled to sell their output at low prices to local intermediaries or village-level collectors who take advantage of the situation. This leaves farmers with only a small fraction of the final consumer price, discouraging them from investing in quality improvements or expanding production.

Given these circumstances, a detailed examination of the existing marketing system, marketing practices, and structural bottlenecks is essential. Analyzing these components is not only important for identifying critical gaps and inefficiencies but also for designing targeted interventions that can enhance the functioning of the banana supply chain. Improving infrastructure, strengthening farmer organizations, providing timely market information, and developing better marketing channels are necessary steps toward creating a more equitable and efficient agricultural marketing system in the region.

Review of literature

Kalyankar (2011) conducted a study on the agricultural marketing and supply chain management of bananas in the Nanded district of Maharashtra. Using a field survey and a canvass questionnaire, the study identified several key players in the marketing process, including farmers, pre-harvest contractors, wholesalers, retailers, and consumers. A significant finding was that most banana producers sold their produce to pre-harvest contractors, often resulting in the farmers receiving unfair prices. Both primary and secondary data sources were utilized in the study.

Sivakumar (2015) investigated the marketing efficiency of distribution channels for horticultural crops, particularly emphasizing the complexities and risks associated with the marketing of perishable, seasonal, and bulky produce. The study revealed that producers and consumers often faced poor deals, while middlemen dominated the marketing system without adding substantial value. Data were collected through a questionnaire developed after a pilot study. Analytical tools such as the Shepherd formula, Acharya's model, and the composite index method were applied. The analysis showed that the price spread was highest in Channel I, while Channel III (Farmers–Wholesalers–Retailers–Consumers) emerged as the most preferred marketing channel for bananas.

Mali (2003) examined the growth rates of area, costs and returns, and marketing aspects and constraints in banana production and marketing in the Jalgaon district of Maharashtra. Both primary and secondary data were employed, with primary data collected directly from banana cultivators and sellers and

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secondary data sourced from books, records, and online databases. Analytical tools such as percentage analysis, arithmetic mean, and chi-square tests were used to interpret the data.

Saikia (2018) observed that the banana marketing process involved various intermediaries, including distant pre-harvest contractors-cum-processors, pre-harvest contractors-cum-wholesalers, distant wholesalers, and local traders. The study highlighted the crucial role played by pre-harvest contractors. However, it also noted differences in marketing practices across regions, leading to an in-depth analysis of the banana marketing process from the farmers' perspective.

Senn and Halfacre (1983) jointly conducted a study highlighting the marketing practices involved in horticultural product distribution. Their research identified key operations such as harvesting, preliminary grading, removal of field and green heat, caring, storing, processing, shipping, and selling the produce. The study relied on both primary and secondary data.

Singh (2005) measured the price spread in the banana market of middle Gujarat and found it to be significantly high, primarily due to commissions paid to agents, transportation costs, and weighing charges. The study concluded that the banana marketing system in Gujarat was largely unorganized and inefficient, characterized by very high marketing costs.

Sarma (1989) explored the relatively underdeveloped agricultural marketing system in Assam. The study found that the regulated marketing system was a recent introduction in the state, and due to the lack of supporting infrastructure, agricultural marketing failed to realize its full potential. Both primary and secondary data were used, with primary data collected directly from banana cultivators and sellers.

Parvin (2013) found that banana cultivation could yield positive net returns for farmers, playing an important role in poverty alleviation and income generation. The study, based on primary data collected from banana growers and sellers and secondary data from existing records and literature, concluded that banana trading was profitable for various types of intermediaries.

Acharya and Agarwal (2001) conducted a joint study analyzing different marketing channels used to move commodities from producers to consumers. Their research emphasized that every marketing channel involved costs for each function or service provided. To sustain their activities, middlemen made profits after covering necessary transaction costs. The study underlined the significance of studying marketing margins and price spreads to better understand marketing efficiency and the structure of price formation.

Objectives:

The primary objectives of this study are :

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1. To identify the key marketing channels involved in the distribution and sale of bananas in the study area.

2. To examine and estimate the marketing costs, margins, price spread, and efficiency of these marketing channels within the study area.

3. To identify the constraints faced by banana growers in the region, which affect their production and marketing .

Materials and Methodology Selection of the Study Area :

North Garo Hills District was chosen for its prominent banana production. Among the three blocks—Resubelpara, Kharkutta, and Bajengdoba—Kharkutta was purposively selected due to its high concentration of banana cultivation.

Selection of Villages:

Ten villages were selected based on the prevalence of banana farming, where nearly 80% of households are engaged in banana cultivation and marketing. These villages include Rangga, Imsambal, Chachinath, Megam A.ding, Watregittim, Dilma A.ding, Jambal, Gairong, Sambrak, and Wage A.si.

Sampling Technique:

A stratified random sampling method was adopted. Farmers were categorized into marginal (<1 ha), small (1–2 ha), and medium (2–4 ha) farm sizes. A proportional number of households were randomly selected from each category, leading to a total sample of 100 respondents.

Market Selection:

Three weekly banana markets—A.dokgre (Meghalaya), Damra and Darranggiri (Assam)—were purposively selected due to their high volume and accessibility. Forty intermediaries were sampled randomly from each market.

Sample Size Justification:

While the sample size was constrained by logistical and time considerations, it covered more than 10% of the banana-farming households in the selected villages. This provides reasonable representation for descriptive analysis.

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Period of study:

Although the study claim to cover the 2023–2024 period, the actual data collection occurred between January 2023 and May 2024. While this may not represent the full agricultural year, this time span includes the main banana harvesting and marketing season, making the data broadly indicative of annual trends

Sources of data:

The study is involved in collection of both primary and secondary data.

Limitations

The study relied on primary data collected through personal interviews using structured questionnaires. A significant limitation was that most farmers do not maintain formal records and provided responses based on recall, which may affect data reliability. Though every effort was made to cross-verify and validate responses during data processing, the recall-based nature of data must be acknowledged when interpreting quantitative results.

Analytical Techniques Used in the Study

This study draws upon **agricultural marketing theory**, particularly the **structure-conduct-performance (SCP) paradigm** and **transaction cost economics**. The SCP framework helps to understand how the structure of the banana market (number of intermediaries, infrastructure gaps) affects conduct (pricing and negotiation power) and performance (efficiency and farmer income). Transaction cost theory is used to interpret how costs such as transportation, information asymmetry, and negotiation affect marketing channel choices and outcomes.

Marketing efficiency is conceptually linked to **price spread** and **spatial price difference**. A **lower price spread** (difference between consumer and farmer prices) and **smaller spatial price difference** typically indicate **higher marketing efficiency**, as they reflect fewer intermediary costs and better integration between rural and urban markets. These indicators collectively illustrate the extent of value addition and rent extraction across the chain.

1. **Acharya's Modified Marketing Efficiency (MME) Index**: Chosen for its practical application in assessing the efficiency of marketing perishable crops like bananas. It relates the net price received by farmers to total marketing costs and intermediary margins.

MME = FP / (MC + MM)

Where: FP = Farmer's Price, MC = Marketing Cost, MM = Marketing Margin.

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2. Producer's Share (PS) : Assesses the percentage of the consumer's price that reaches the farmer.

PS = (Pp / Pc) × 100,

where Pp = Price received by the producer; Pc = Consumer price.

3. Spatial Price Difference: Calculates the gap between farm-gate and consumer prices to evaluate market efficiency.

Result and Analysis

Market Intermediaries and Their Functions

Farmers in North Garo Hills often face significant challenges in setting remunerative prices for their produce, largely due to the absence of critical infrastructure such as affordable and efficient transportation systems, a well-organized marketing network, cold storage facilities, and agro-processing units. In the absence of these essential services, farmers are left vulnerable to unfavorable market conditions.

Due to the highly perishable nature of fruits and vegetables, including bananas, timely harvesting becomes crucial. Once the produce reaches maturity, any delay in harvesting or sale leads to rapid deterioration in quality, resulting in substantial post-harvest losses. Given this urgency, farmers are compelled to sell their produce immediately after harvest, often accepting lower prices dictated by local traders or intermediaries, rather than waiting for better market opportunities.

Field observations reveal that many farmers have limited access to timely and accurate market information regarding prevailing prices, demand patterns, supply conditions, and transportation charges. This knowledge gap further erodes their bargaining power during sales negotiations. The absence of a structured mechanism for the dissemination of real-time market information to producers and consumers creates an environment where intermediaries can exploit information asymmetry to their advantage.

Moreover, farmers are often unfamiliar with the pricing practices and market charges levied by various stakeholders within the supply chain, such as commission agents, wholesalers, and retailers. This lack of transparency exacerbates their vulnerability, leaving them at the mercy of intermediaries who often offer prices well below the true market value of the produce.

The marketing chain in the region is multi-layered, typically involving several intermediaries such as village assemblers, agents, wholesalers, and retailers before the produce reaches the final consumer. Each intermediary adds a margin at every stage, inflating the final consumer price while simultaneously reducing the share that accrues to the original producer. Without the necessary support systems like farmer collectives, cooperative marketing structures, or efficient rural markets, farmers continue to face exploitation.

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Addressing these structural inefficiencies by improving rural connectivity, providing cold storage and processing facilities, strengthening farmer organizations, and establishing transparent and real-time market information systems is essential. Only through such reforms can farmers be empowered to set better prices, reduce their dependency on intermediaries, and capture a larger share of the consumer rupee

Marketing Practices and share of Different Marketing Channels.

Table 1: Market intermediaries in the Banana Marketing Channels of North Garo Hills District.

Sl No.	Market Intermediaries	Functions	Limitation
1	Farmers	The planting of plants, preparation of the land, the application of fertilizers, the intercropping, and the harvest of the crop. Sell the produce to a broker, trader or pay a commission to the broker.	Lack of link chain for trading, marketing system, transportation, depilated road condition.
2	Village Assemblers	the village assemblers collect the crop from the farmers and they carry it to the assembling points	Lack of Infrastructure, Limited Market Access, Inconsistent Supply, Lack of Training and Knowledge
3	Agents	Agents play an important role in facilitating the sale of crops between farmers and wholesalers. They invest their own funds in the sale of crops. Invest own money for all operation. Agents transport the crops to wholesale markets.	Instability in price and erratic supply of produce.

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4	Wholesalers	Buying and selling in bulk and varying in size from small to large.	Price instability with erratic supply of produce.
5	Retailers	They primarily consist of individuals, including stall owners, fruit vendors, and hawkers, who buy and sell in small quantities to consumers.	Perish ability of fruits, glut of produce in market, incapacity to sell in bulk.
6.	Local retailers	The local retailers are involved as important market functionary. The local retailers purchase the raw banana from farmer and they sell ripe banana to the customers.	Lack of Infrastructure, Limited Market Access, Inconsistent Supply, Lack of Training and Knowledge
6	Consumers	End user in the chain. Consumption functions in the market.	Fluctuation in price.

Marketing plays a crucial role in the commercialization of agriculture, as the development of the agricultural sector hinges on market assurance. Within the marketing system, key stakeholders such as producers, collectors, wholesalers, and consumers form the essential links in the production and consumption chain. The journey of bananas to consumers involves multiple channels. Specifically, our study area operates with four distinct marketing channels, which are detailed in Table 2. Village assemblers serve as intermediaries who collect crops from farmers and transport them to assembling points.

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Table 2 : Share of Different Marketing Channels in the Trading of Banana in Meghalaya

Channel No.	Marketing Channels	Share in trading(%)
1	Farmers - Village Assemblers - Agents – Wholesalers – Retailers - Consumers.	46
2	Farmers - Agents - Wholesalers - Retailers - Consumers.	30
3	Farmers - Agents - Retailers - Consumers.	15
4	Farmers - Retailers - Consumers.	9
		100

Sources : Calculated by Researcher from Primary data 2023

Table 2 indicates that 46 percent of producers sold their produce through Channel I, followed by Channel II. This finding reveals that Channel I is a popular marketing channel in North Garo Hills district, suggesting a need for its strengthening to improve banana marketing in the area. Channels III and IV primarily operate outside the district and typically have well-established contacts with traders or agents at the point of origin. Channel I is the longest and characterized by high number of market intermediaries. It has been observed that a very small percentage of bananas pass through channels with fewer market intermediaries.

Table 3 : Marketing practices employed by banana farmers.

Sl. No.	Percentage of producer/seller	Details
1	10	Consumer
2	50	Village level collector
3	30	Wholesaler
4	10	Retailer
	100	

Source: Field survey 2023

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Table 4 showing that 10 per cent of respondents is found to sell directly to the consumers, while 50 per cent of the respondent were selling it to the village level collector and   30 percent of respondents sell the banana to the traders. Thus it is observed from the above analysis that most of the farm produce is disposed off through village level collectors, which is found remunerative to the farmers, as farmer's do not spend money in transportation or movement of commodities from the farm house to the ultimate destinations.

Overall, four prominent marketing channels have been identified which has been depicted in Table 2. The banana reaches to the consumer through several channels. It is note that very negligible percent of bananas are transacted through the channels which have comparatively lesser number of market intermediaries. The channel I and Channel II are mostly preferred by banana growers.

The marketing cost, margin and efficiency primary depend on the attributes of channels of marketing. These four channels of the total procurement reflecting the picture of entire banana marketing persist in the study area. The descriptions of different attributes to measure marketing efficiency are presented in the following sections.

Marketing Cost:

Marketing cost are the expenses that all expenditure incurred by the different marketing players in the channel to move the product from producer to final end user. The marketing costs generally constitute packing, transport, commissions and other incidental charges paid to move the produce. It is the vital cost item to determine the efficiency of channel. The marketing cost of four channels has been presented in the Table 4.

Table 4 : Average cost of marketing bananas per quintal by channel (in Rs/qtl).

Market intermediaries	Particulars	Channels			
		I	**II**	**III**	**IV**
Farmers	Sell Price	20000 (50.00)	23000 (57.5)	28000(70)	35000 (87.5)
	Marketing cost	-	1000(2.5)	1000(2.5)	4000(10.00)
	Net Received	20000 (50.00)	22000(55.00)	27000(67.5)	31000 (77.,5)
Village Assemblers	Purchase Price	20000 (50.00)	-	-	-
	Marketing cost	1000 (2.5)	-	-	-

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	Sale price	23000 (57.5)	-	-	-
	Net Margin or Profit	2000 (5.00)	-	-	-
	% of profit	200%		-	-
Agents	Purchase Price	23000(57.5)	23000 (57.5)	28000(57.5)	-
	Sale price	28000(70.00)	28000 (70.00)	35000(87.5)	-
	Marketing cost	1800(4.5)	1800 (4.5)	2000(5.00)	-
	Net Margin or Profit	3200(8.00)	3200 (8.00)	5000 (12.5)	-
	% of profit	177.78%	177.78%	250%	-
Wholesalers	Purchase Price	28000 (70.00)	28000 (70.00)	-	-
	Sale price	35000(87.5)	35000(87.5)	-	-
	Marketing cost	1000(2.5)	1000(2.5)	-	-
	Net Margin or Profit	6000(15.00)	6000(15.00)	-	-
	% of profit	600%	600%	-	-
Retailers	Purchase Price	35000(87.5)	35000(87.5)	35000(87.5)	35000(87.5)
	Sale price	40000	40000	40000	40000
	Marketing cost	2000(5.00)	2000(5.00)	2000(5.00)	2000(5.00)
	Net Margin or Profit	3000 (7.5)	3000(7.5)	3000(7.5)	3000(7.5)
	% of profit	150%	150%	150%	150%

Consumer	Consumer purchase paid	40000	40000	40000	40000

Table 5: Measurement of Marketing Efficiency, Price Spread and Spatial Price Difference (Rs/qtl).

Sl. No.	Particulars	Unit	Channels			
			I	**II**	**III**	**IV**
1	Retailer's Price (PP)	Rs.	40000	40000	40000	40000
2	Total Marketing Cost (MC)	Rs.	5800(14.5)	5800 (14.5)	5000(12.0)	6000 (15.0)
3	Total Margins of Intermediaries (MM)	Rs.	14200(35.5)	12200(30.5)	8000(20.0)	3000(7.5)
4	Net Price Received by Farmer (FP)	RS.	20000(50.00)	22000 (55.0)	27000(67.5)	31000(77.5)
5	Farm Gate Sales	RS.	20000(50.00)	23000(57.0)	28000(70.0)	35000(87.5)
6	Value Added by Marketing system (1 – 5)	Rs.	20000(50.00)	17000(42.5)	12000(30.0)	5000(12.5)
Efficiency Index of Marketing						
Acharya's Method (MME) = ⌊4 /(2 + 3)⌋		**Ratio**	1.00	1.22	2.07	3.40
Price Spread = (Pp/Pc) x 100			50	57.5	70	87.5
Spatial Price Difference = Consumer's Price – Farmer's Price			20000	17000	12000	5000

Sources : Calculated by Researcher from Primary data 2023 - 24

Note: * Figures in parenthesis indicate percentages relative to the consumer's purchase price. Harvesting costs are not included in the producer's marketing expenses. Net profit includes intermediary manpower costs. Net profit excludes the cost of organizing contracts. Price of banana @ Rs. 200/- to - Rs. 350/- ((Rs/qtl).

Acharya's Method for calculating marketing efficiency is another approach used in agricultural marketing to evaluate how effectively the marketing system delivers the products from producers to consumers. It considers the marketing efficiency in the process.

Table 6 : The Marketing Efficiency ratios for four different marketing channels

Channel	MME (Efficiency)	Producer's Share (%)	Spatial Price Difference (Rs)
I	1.00	50	20,000
II	1.22	57.5	17,000
III	2.07	70	12,000
IV	3.40	87.5	5,000

Sources : Calculated by Researcher.

Each channel represents a different marketing route or method from farm to retailer. Table 6 shows that **Channel IV is the most efficient**, as it has the highest MME (3.40) and the highest producer's share (87.5%), along with the lowest spatial price difference (Rs 5,000). **Channel I is the least efficient**, with the lowest MME (1.00), the lowest producer's share (50%), and the highest spatial price difference (Rs 20,000).

In Channel I, the MME of 1.00 indicates that the **value added exactly matches the marketing costs** , there is no net gain in efficiency (the system merely covers its costs without adding extra value).

In **Channel II**, the Marketing Efficiency is 1.22, meaning that for every 1 unit of cost incurred in marketing, 1.22 units of value are added. This channel is **22% more efficient** than Channel I.

In **Channel III**, with an MME of 2.07, the channel adds **more than double the value** relative to each unit of marketing cost. This represents a **107% improvement** over the baseline (Channel I).

Overall, the MME (Modified Marketing Efficiency) ratios indicate **how efficiently each marketing channel converts its costs into added value**.

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> ➤ **Higher MME values** suggest more efficient marketing channels — adding greater value for the costs incurred.

> ➤ **Lower MME values** indicate less efficient channels — where the costs are relatively higher compared to the value added.

By comparing these ratios, producers and stakeholders can identify the most efficient marketing channels and prioritize them to maximize resource utilization and increase profits for farmers and intermediaries. **Channels with higher MME and producer's share are preferred**, as they lead to better returns for the primary producers.

Table 5 presents on marketing costs, margins, producer's share, and spatial price differences across four marketing channels. The **retailer's price** (consumer price) is constant at **Rs 40,000** across all channels. **Total marketing cost** and **intermediary margins** vary across channels, affecting the net price received by farmers. The **farmers' net price (FP)** is highest in **Channel IV (Rs 31,000)**, farmers retain **77.5%** of the final price. It is lowest in **Channel I (Rs 20,000)**, where farmers get only **50%** of the consumer price. **Farm gate sales price** (the price at which farmers sell) is again highest in Channel IV and lowest in Channel I. The **value added by the marketing system** (difference between consumer price and farm gate price) is the **lowest in Channel IV (Rs 5,000)** and **highest in Channel I (Rs 20,000)**, showing that **Channel IV is more direct** and efficient with fewer intermediaries. Thus, **Table 5 clearly shows that Channel IV is the most efficient** marketing channel, providing farmers with higher incomes, lower marketing costs, and minimizing intermediary margins

Marketable Surplus

Table 7 : Farm wise Marketable surplus of banana in the study area.

Sl no.	Particulars	Marginal	Small	Medium
1	Total Production of Banana	400	550	700
2	Retained for Banana by the farmer for home consumption	9 (2.30)	15 (2.80)	18 (2.63)
	Marketable surplus	**391 (97.75)**	**535 (97.27)**	**682 (97.42)**

Sources: Field level study 2023 - 24

Note: Production in terms of quintals' in 2023, Marketing Cost, Marketing Efficiency, Price Spread etc.

The table presents the total production, retained quantity, and marketable surplus of bananas for marginal, small, and medium farmers. The **marketable surplus** of banana is found to be **391 quintals** for marginal farmers, **535 quintals** for small farmers, and **682 quintals** for medium farmers, which constitute **97.75%**, **97.27%**, and **97.42%** of their respective total banana production. The remaining quantity was retained for **home consumption**, **payments in kind**, **gifts to relatives**, and **other non-market purposes**.

The **high marketable surplus** is mainly due to the **perishable nature of bananas**, which cannot be stored for long periods. In addition, the **lack of proper storage facilities** in the study area further compels farmers to sell most of their produce quickly.

The marketable surplus was relatively higher for **marginal farms** (in percentage terms) compared to small and medium farms. This is because marginal farmers tend to sell most of their produce to **maximize their immediate income**

Findings:

Marketing Channels:

Four distinct marketing channels were identified in the study area:

 - ➢ **Channel I** (Farmers → Village Assemblers → Agents → Wholesalers → Retailers → Consumers) was the most commonly used, accounting for 46% of banana sales.

 - ➢ Channels II, III, and IV had lower shares, with Channel IV (Farmers → Retailers → Consumers) being the least used but the most efficient.

2. **Marketing Efficiency:**

 - ➢ **Channel IV** was found to be the most efficient, with a marketing efficiency (MME) of **3.40**, the highest producer's share (87.5%), and the lowest spatial price difference (Rs. 5,000).

 - ➢ **Channel I** was the least efficient, with an MME of **1.00**, a producer's share of only 50%, and the highest spatial price difference (Rs. 20,000).

3. **Price Spread and Producer's Share:**

 - ➢ Channel I had the highest price spread and the lowest producer's share.

> ➢ Channels with fewer intermediaries (like Channel IV) showed better returns for farmers by minimizing marketing costs and margins.

4. **Marketable Surplus:**

> ➢ Due to the perishable nature of bananas and lack of storage facilities, farmers had a high marketable surplus.

> ➢ The marketable surplus was **97.75%** for marginal farmers, **97.27%** for small farmers, and **97.42%** for medium farmers.

5. **Constraints Identified:**

> ➢ Poor road connectivity, lack of cold storage facilities, and absence of organized market information systems severely limited farmers' ability to get fair prices.

> ➢ High transaction costs, price instability, and exploitation by intermediaries further reduced farmer profitability.

> ➢ Lack of organized farmer groups or cooperative societies increased farmers' dependence on middlemen.

6. **Alternative Livelihood Activities:**

> ➢ To supplement their income, many banana growers engaged in poultry farming, jhum cultivation, paddy cultivation, and cattle rearing.

Conclusion :

The study highlights the complex and inefficient nature of banana marketing in North Garo Hills district, Meghalaya.

Although **Channel I** is the most widely used, it is also the least efficient due to the involvement of multiple intermediaries and high marketing costs, which erode the farmers' share of the final consumer price.

On the other hand, **Channel IV** demonstrates the highest marketing efficiency, offering the greatest benefits to farmers through direct sales to retailers with minimal intermediary involvement. However, its limited use suggests the need for significant policy intervention to promote more efficient marketing practices.

Key structural challenges—such as poor infrastructure, lack of storage, absence of market information systems, and farmers' weak bargaining power—exacerbate farmers' vulnerabilities, forcing them into distress sales at lower prices.

To improve banana marketing and farmer profitability, the study recommends:

- ➢ Strengthening rural road networks, transportation facilities, and cold storage infrastructure.
- ➢ Encouraging the formation of farmer collectives or cooperatives to enhance collective bargaining power.
- ➢ Establishing transparent, real-time market information systems accessible to farmers.
- ➢ Supporting policies that promote direct farmer-to-retailer or consumer linkages, possibly using digital marketing platforms.

By addressing these systemic inefficiencies, farmers can capture a larger share of the consumer price, increase their incomes, and contribute more significantly to the rural economy of North Garo Hills

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