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## Economics of live goat marketing in Kalyana Karnataka region of Karnataka

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### Abstract

The present study was conducted to analyze the economics of live goat marketing in the Kalyana Karnataka region, specifically in Bidar and Kalaburagi districts. An ex-post facto research design was employed. Three markets were selected from each district, and from each market 10 sellers, 10 buyers/butchers, and 5 middlemen were chosen, resulting in a total sample of 60 sellers, 60 buyers/butchers, and 30 middlemen. The majority of respondents were primarily engaged in small ruminant rearing, possessed small landholdings, and had a low level of experience in goat marketing. Most butchers were middle-aged and belonged to the Muslim community. Majority of respondents traveled 21-40 km to sell goats, used specially designed vehicles for transportation, and typically sold two or fewer goats aged 4-12 months with body weights of 12-24 kg to meet domestic expenses. The lumbar score method was the most preferred and profitable approach for price fixation, followed by negotiation for final price settlement. Average body weights recorded were: young male kid (15-18 kg), young female kid (8-12 kg), adult female goat (20-30 kg), adult buck (25-35 kg), and spent/culled goat (25-30 kg). The average production cost per goat was ₹4,405.16, of which animal cost constituted the highest share (67.53%), followed by labour (20.17%), feeding (7.79%), and healthcare (2.15%). The average market cost was ₹106.33 (2.36%), with transport expenses being the major component (1.05%), followed by personal expenses (0.73%) and brokerage (0.57%). Farmers earned an average profit of ₹1,721.85 by selling goats at an average age of 13.75 months for an average price of ₹6,233.33.

**Keywords:** Goat markets, lumbar score, average body weight, average market cost

### Introduction

Goats were apparently the first species to be domesticated as livestock since 8000 B.C. in the region of Mesopotamia, which is today's Middle East. This region of domestication was also the cradle for one of the first civilizations, the Sumerians, and goats had a muscular impact on all segments of their life. The significance of this small but useful ruminant for the ancient people was also the reason for being acknowledged as a holy entity for worship at the side of gods and for its recognition in myths and legends. (Hatziminaoglou and Boyazoglu, 2004) [10]. Goat marketing system plays an important role in assuring better income and benefit for producers. The final price between the producer and goat trader also depends on the seasonality and social or religious event in the goat market, market players consider age, live weight, sex, breed etc. in calculating price of goat. Prices offered by butchers to sellers are determined by back calculation from the retail meat prices fixed by their government (Ahamad *et al*, 2019). Trekking animals to market is the most common mode of transport, particularly for livestock from distant areas due to inaccessibility of mechanized transportation or high transport costs (Gupta and Suresh, 2011) [9]. There are some suggestions reported by researchers to overcome constraints in marketing. Provisions should be made by governments and other stakeholders in the agricultural sector to access institutional credit through microfinance institutions and commercial banks sources. This could enable farmers to embark on large scale goat farming projects, obtain good quality breeding animals to increase production and profitability. Also, small size modern

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slaughterhouses to be established to provide technical knowledge. Goat farmers can earn the best profit through commercialization of goat production (Baruwa, 2013) [3]. Keeping the predominance of goat-based livelihoods in the study area and importance of marketing, the present study was taken up to understand the different market dimensions in goat marketing in KK region.

## Materials and Methods

The study was conducted purposively in the state of Karnataka, taking advantage of the researcher's native status and deep familiarity with the region's geography, livestock farmers, and farming practices. Because the researcher is fluent in the local language, it was easier to build rapport swiftly with respondents, facilitating an in depth investigation combined with personal observations. In the Kalyana Karnataka region, the goat population is highest in Kalaburagi, followed by Bidar district. Therefore, the districts of Bidar and Kalaburagi were purposively selected for the study. The goat market occurs in several forms and the selected study area have many markets where, buying and selling of live goats is conducted. Three goat predominant and convenient markets from each selected district were identified for the study. Mailar, Aurad and Basavakalyan markets in Bidar district and Kalaburagi, Sannur and Kalagi markets in Kalaburagi were selected for cross sectional survey to collect data for the study. In the present study 10 sellers, 10 buyers or butchers and 5 middlemen were selected randomly from each identified market thus reaching to the sample size of 60 sellers, 60 buyers or butchers and 30 middlemen for gathering information on live goat marketing. The semi structured interview schedules were developed for data collection from the goat rearers (farmers) or sellers selling their goats, buyers (butchers) purchasing goats and middlemen. The data collected from the sample respondents were coded, tabulated, scored, and presented in the form of tables and graphs. The various need based statistical tools like frequency and percentages, mean, weighted mean score, ranking etc., were calculated and the inferences were drawn considering the results obtained.

## Results and Discussion

### Market Practices Followed by Goat Rearers

**Distance Traveled for Goat Sales:** Table.1 shows that half of the goat farmers (50 %) travel 21-40 km to sell their goats. About 11.67 % travel more than 40 km, while 38.33 % travel less than 20 km. These findings align with those of Senthilkumar *et al.* (2012) [15], who reported that many farmers traveled up to 20 km.

**Average Number of Goats Sold at a Time:** Most goat rearers (76.67 %) sell fewer than two goats in a single transaction; only 23.33 % sell more than two at once.

**Average Market Age of Goats:** According to Table.1, 46.67 % of respondents stated that goats are typically sold at 4-12 months of age, 45.00 % at 12-24 months, and just 8.33 % beyond 24 months. Similar trends have been reported in other studies: Kuldepporwal *et al.* (2006) [11] found many male lambs were sold at 3-4 months, Anand & Gurmej (2009) [2] observed lamb marketing at 4-7 months, and Pankaj & Singh (2008) [13] noted male kids sold at 3-6 months while female kids were retained for breeding.

**Average Market Weight of Goats:** The majority (66.67 %) of respondents estimated that goats are sold at 12-24 kg, followed by 28.33 % who said 4-12 kg, and 5.00 % who reported more than 24 kg. This corresponds with findings from Channappagouda *et al.* (2023) [20] that small ruminants are often marketed at an average weight of around 12.19 kg.

**Updated Market Information:** None of the goat farmers reported receiving updated price information for goats in the market a result that echoes the findings of Senthilkumar *et al.* (2012) [15], where farmers indicated they lacked adequate market intelligence.

**Reasons for Selling Goats:** table. 2 reveals when farmers were asked why they sold goats, farmers ranked meeting household expenses as the top reason (mean = 1.68), followed by agricultural needs (1.20), financial distress (1.02), culling old or unproductive goats (0.98), reducing flock size (0.65), feed/fodder shortages (0.53), purchasing other assets like land or animals (0.52), repaying loans (0.35), and replacing breeding stock (0.20). These priorities are similar to those identified by Dossa *et al.* (2007) [7].

**Mode of Transportation:** The preferred mode of transport was specially designed livestock vehicles (average score = 1.63), followed by two-wheelers (average = 0.80). None of the farmers reported transporting goats by foot, rail, or passenger vehicles. This is consistent with observations by Senthilkumar *et al.* (2012) [15], who noted the dominance of vehicles (e.g., jeeps/trucks) for transporting small ruminants to market.

**Price Fixation Criteria:** According to Table.3, lumbar scoring is the most commonly used method for fixing the price of goats (average = 1.75), followed by age of the animal (0.82), purchase in lots (0.63), and body condition score (BCS) (0.25). While 75 % of farmers always use lumbar scoring, 58.33 % use age sometimes, 46.67 % use lot purchase sometimes, and a large majority (75 %) never use BCS. Notably, none of the participants priced goats based on live weight. By contrast, Dinakar *et al.* (2017) [6] found that most sheep rearers in Mandya preferred using actual weight for pricing (98.50 %), followed by physical appearance (49.50 %) and lumbar score (13.50 %).

**Sale Preference:** Goat rearers expressed a clear preference for selling young male kids (3-12 months) (average score = 1.73), followed by spent/culled goats (1.60), adult bucks (1.08), adult females (0.50), and least preferred were young female kids (3-12 months) (0.13). This matches the findings of Singh *et al.* (2013) [16], who reported that 70% of male goats were sold by 6 months, while females were retained longer for breeding.

### Market practices followed by middlemen

**Number of markets visited for goat marketing:** Table 4, shows that most middlemen (73.33%) visit 1-2 markets, and only a few (26.67%) visit 3-4 markets. This pattern is similar to findings by Dossa *et al.* (2007) [7], who noted that most traders operate within a limited geographical radius.

**Distance traveled for goat sale/purchase:** According to Table 4, a large majority (83.33%) of middlemen travel less than 20 km, while only 16.67% travel more than 20 km to

trade goats. This trend indicates the involvement of only local middlemen in the study area which might be because of smaller markets.

**Average number of goats purchased at a time:** Most middlemen (90.00%) acquire 1-2 goats in a single trip, while only 10.00% purchase 3-4 goats at once.

**Average number of goats sold at a time:** The data show that 80.00% of middlemen sell 1-3 goats in a single transaction, whereas 20.00% sell 4-6 goats.

**Updated market information:** Table 5 indicates that none of the middlemen receive updated market price information. This lack of information flow aligns with studies like Senthilkumar *et al.* (2012) <sup>[15]</sup>, who reported that traders often feel handicapped due to poor market intelligence.

**Profitable price fixation method:** All (100.00%) of the middlemen in this study use the lumbar score method to set prices. None use live weight, and other methods like BCS (body condition score), age, and lot purchase are less common. This contrasts with findings by Dinakar *et al.* (2017) <sup>[6]</sup>, where most producers preferred pricing based on actual weight.

**Price discovery mechanism:** Table 5, reveals that negotiation is the universal method (100.00%) for price discovery among these middlemen. Methods like open auction, closed auction, or undercover deals are not used. Tadesse *et al.* (2022) <sup>[18]</sup> similarly reported that commission agents set prices through negotiation after gauging market demand and buyer willingness.

**Mode of transportation:** Table 6, shows that specially designed livestock vehicles have the highest preference (average score 1.67) among middlemen, followed by two-wheelers (average score 0.53). No middlemen reported using foot transport, rail, or passenger vehicles. This is comparable to observations by Senthilkumar *et al.* (2012) <sup>[15]</sup>, who noted that trucks/jeeps dominate transport for small ruminants in markets.

**Marketing channel:** The majority of middlemen prefer to purchase goats from farmers directly in the market, followed by buying from other middlemen, at farm gates, or via cooperatives. For selling, they most commonly sell to butchers, then other middlemen, farmers, or consumers; organized slaughterhouses are the least preferred. This aligns with findings by Ramesh *et al.* (2012) <sup>[14]</sup>, who also reported that middlemen are major players in rural goat-marketing chains.

**Price fixation criteria:** According to Table 6, lumbar score remains the top criterion for price setting, followed by body condition, age, and lot purchase. Similar patterns have been observed in other studies. For instance, Channappagouda (2019) <sup>[20]</sup> found that many goat traders value lumbar score over weight-based methods.

**Market demand (from middlemen's view):** Middlemen report that demand is highest for young male kids (3-12 months), followed by spent/culled goats, adult females, adult bucks, and least for young female kids (3-12 months).

This matches findings by Sabapara (2016) <sup>[19]</sup>, who noted that many goat rearers sell their kids by 7-12 months.

**Reason for selecting this job:** According to Table 7, the primary reason for becoming a middleman is extra earning, followed by hobby, employment, using existing knowledge/skills, and inheritance.

### Market Practices Followed by Butchers

**Profitable Price-Fixation Method:** As shown in Table 8, the lumbar score method was used by all butchers (100 %) as their preferred way to fix prices, compared with other criteria such as body condition score (BCS), live weight, age, or purchase in lots. These results are consistent with findings by Channappagouda (2019) <sup>[20]</sup>.

**Distance Traveled for Goat Purchase:** Table 8, indicates that half of the butchers (50.00 %) travel more than 60 km to procure goats. About 33.33 % travel 31-60 km, and 16.67 % travel less than 30 km. The results are in accordance with Senthilkumar *et al.* (2012) <sup>[15]</sup> reported that goat farmers came from a distance of up to 20 km.

**Source of Purchase:** According to Table 9, butchers most often buy goats directly from farmers in nearby markets, followed by purchasing at the farmers' farm gates. Least common is buying via middlemen in the market. None of the butchers in this study sourced goats from middlemen delivering to their shops or from their own farms. This aligns with Nepali *et al.* (2007) <sup>[12]</sup>, who showed that wholesalers, butchers, and farmers are all involved in the goat marketing chain.

**Price-Fixation Criteria:** As per Table 9, butchers prefer the lumbar score method, followed by BCS, age of the animal, and purchasing in lots. None use live weight as a basis for pricing. This contrasts with Dinakar *et al.* (2017) <sup>[6]</sup>, whose study among Mandya sheep rearers indicated a strong preference for actual weight-based pricing (98.50%), followed by animal outlook (49.50%) and lumbar score (13.50%).

**Mode of Transportation:** Table 9, shows that butchers largely use specially designed livestock vehicles (average score = 1.67) to transport animals, with two-wheelers (average score = 0.47) being a distant second choice. No butchers reported using foot transport or passenger vehicles. This pattern aligns with the findings of Senthilkumar *et al.* (2012) <sup>[15]</sup>, who found that trucks and jeeps predominate in transporting small ruminants to markets.

### Purchase Preference

Table 9, reveals that butchers most commonly prefer to purchase adult female goats, followed by young male kids (3-12 months), spent/culled goats, adult bucks, and lastly young female kids (3-12 months). These preferences are similar to those reported by Sabapara (2016) <sup>[19]</sup>, who found that many goat rearers sell their kids between 7-12 months.

### Goat Purchase Statistics as Perceived by Butchers

**Weight ranges:** Table 10, shows that among young male kids (3-12 months), 58.33% are perceived to weigh 15-18 kg, and 41.67% weigh 10-14 kg. For female kids (3-12 months), 83.33% weigh 8-12 kg, and 16.67% weigh 13-

18 kg. Among adult females, 51.67% are believed to weigh 20-30 kg, and 48.33% weigh 31-40 kg. For adult bucks, 65.00% weigh 25-35 kg, and 35.00% weigh 36-45 kg. For spent/culled goats, 58.33% are thought to weigh 25-30 kg and 41.67% 31-35 kg.

#### Volume of purchase

60.00% of butchers reported buying 10-20 goats at a time, 33.33% purchase fewer than 10, and only 6.67% buy more than 20 goats in one trip.

#### Transport from market to shop

According to Table 10, about 46.67% of butchers transport 6-12 goats at a time, 41.67% transport fewer than 6, and 11.67% transport more than 12 goats per trip.

#### Average Cost, Profit, and Rearing Patterns

Table 11 indicates that farmers earned an average profit of ₹1,721.85, selling goats at a price of ₹6,233.33 at a mean market age of 13.75 months. Under extensive rearing systems, the average profit was ₹1,737.30, with goats sold at ₹6,248 at about 13.36 months of age. In stall-fed systems, average profit was slightly lower (₹1,644.58), with selling price at ₹6,160 and average age of 15.70 months. These findings suggest opportunities for re-orienting rearing duration or system to improve profitability.

#### Price Spread and Marketing Efficiency

Table 12, indicates that sellers receive 96.50% of the final consumer's rupee, with a price spread of 3.50% per goat. Brokerage costs account for 0.40% of the buyer's price, and overall market efficiency is calculated as 27.60.

**Table 1:** Market practices of goat rearers

C.I	f	%
<b>Distance travelled for goat sale (Kms)</b>		
<20	23	38.33
21 to 40	30	50.00
>40	7	11.67
<b>Avg. no of goats sold at a time (No's)</b>		
< 2	46	76.67
> 2	14	23.33
<b>Avg. market age of goats (months)</b>		
4 to 12	28	46.67
12 to 24	27	45.00
> 24	5	8.33
<b>Avg. market weight of goats (Kgs)</b>		
4 to 12	17	28.33
12 to 24	40	66.67
> 24	3	5.00
<b>Updated market information</b>		
Yes	0	0.00
No	60	100.00

**Table 2:** Reasons for sale of goats

Sl.	Always		Sometimes		Never		%			
No. Particular	f	%	f	%	F	%	n=60	Total	WMS	R
Domestic expenses	42	70.00	17	28.33	1	1.67	60	100.0	1.68	I
Agriculture purpose	20	33.33	32	53.33	8	13.33	60	100.0	1.20	II
Repay loan	3	5.00	15	25.00	42	70.00	60	100.0	0.35	VIII
Other asset purchases (animal/ land)	5	8.33	21	35.00	34	56.67	60	100.0	0.52	VII
Financial distress	9	15.00	43	71.67	8	13.33	60	100.0	1.02	III
Shortage of feed/ fodder resources	7	11.67	18	30.00	35	58.33	60	100.0	0.53	VI
To reduce Flock size	9	15.00	21	35.00	30	50.00	60	100.0	0.65	V
Replacement of breeding stock	0	0.00	12	20.00	48	80.00	60	100.0	0.2	IX
To cull unproductive or aged	18	30.00	23	38.33	19	31.67	60	100.0	0.98	IV

**Table 3:** Transportation mode, price fixation criteria and sale preference followed by goat farmers

Particular	Always		Some times		Never		N=60	% Total	WMS	R
	f	%	f	%	F	%				
On foot	0	0.00	0	0.00	60	100.0	60	100.0	0	III
Railways	0	0.00	0	0.00	60	100.0	60	100.0	0	III
Two-wheeler	16	26.67	16	26.67	28	46.67	60	100.0	0.8	II
Passenger vehicle	0	0.00	0	0.00	60	100.0	60	100.0	0	III
Specially designed livestock carrier	44	73.33	10	16.67	6	10.00	60	100.0	1.63	I
<b>Price fixation criteria</b>										
Body confirmation	0	0.00	15	25.00	45	75.00	60	100.0	0.25	IV
Body weight	0	0.00	0	0.00	60	100.0	60	100.0	0	V
Age of the animal	7	11.67	35	58.33	18	30.00	60	100.0	0.82	II
Lumbar score	45	75.00	15	25.00	0	0.00	60	100.0	1.75	I
Sale e in lots	5	8.33	28	46.67	27	45.00	60	100.0	0.63	III



Sale preference										
Young male kids (3-12 m)	46	76.67	12	20.00	2	3.33	60	100.0	1.73	I
Young female kids (3-12 m)	0	0.00	8	13.33	52	86.67	60	100.0	0.13	V
Adult female	2	3.33	26	43.33	32	53.33	60	100.0	0.50	IV
Adult Buck	5	8.33	55	91.67	0	0.00	60	100.0	1.08	III
Spent/Culled	36	60.00	24	40.00	0	0.00	60	100.0	1.60	II

\*(WMS-Weighted mean score, R-Rank)

**Table 4:** Commonly visited markets (No's), distance travelled, and avg. number of goats marketed at a time

C.I	F	%
<b>Number for markets visited (No's)</b>		
1 to 2	22	73.33
3 to 4	8	26.67
<b>Distance travelled for goat sale/purchase</b>		
<20	25	83.33
>20	5	16.67
<b>Avg. no of goats marketed at one time</b>		
Purchased		
1 to 2	27	90.00
3 to 4	3	10.00
Sold		
1 to 3	24	80.00
4 to 6	6	20.00

**Table 5:** Information on updated market information, profitable price fixation method and price discovery mechanism

Particular	f	%
<b>Updated market information</b>		
Yes	0	0
No	30	100.0
<b>Profitable price fixation method</b>		
BCS	0	0.00
Live weight of the stock	0	0.00
Age of the animal	0	0.00
Lumbar score	30	100.0
Purchase in lots	0	0.00
<b>Price discovery mechanism</b>		
Open auction	0	0.00
Closed auction	0	0.00
Negotiation	30	100.0
Under cover method	0	0.00

**Table 6:** Mode of transportation, marketing channel (purchase), marketing channel (sale), price fixation criteria and market demand

Sl. No.	Particular	Always		Sometimes		Never		N=30	% Total	WMS	R
		f	%	F	%	f	%				
A	Mode of transportation										
1	On foot	0	0.00	0	0.00	30	100.0	30	100.0	0	3
2	Rail	0	0.00	0	0.00	30	100.0	30	100.0	0	3
3	Two-wheeler	6	20.00	4	13.33	20	66.67	30	100.0	0.53	2
4	Passenger vehicles	0	0.00	0	0.00	30	100.0	30	100.0	0.00	3
5	Specially designed livestock carriers	23	76.67	4	13.33	3	10.00	30	100.0	1.67	1
B	<b>Marketing channel preferred by middlemen while purchasing animals</b>										
1	Farmer- Farm gate	6	20.00	21	70.00	3	10.00	30	100.0	1.1	3
2	Farmer- market	22	73.33	8	26.67	0	0.00	30	100.0	1.73	1
3	Other Middlemen	10	33.33	17	56.67	3	10.00	30	100.0	1.23	2
4	Co-operative/FPO	0	0.00	2	6.67	28	93.33	30	100.0	0.06	4
5	Buy back agreement	0	0.00	0	0.00	30	100.0	30	100.0	0	5
C	<b>Marketing channel preferred by middlemen while selling animals</b>										
1	To Farmers/ Other rearers	6	20.00	22	73.33	2	6.67	30	100.0	1.13	3
2	To other Middlemen	10	33.33	15	50.00	5	16.67	30	100.0	1.16	2
3	To Butchers	20	66.67	10	33.33	0	0.00	30	100.0	1.66	1
4	To Organized slaughterhouses	0	0.00	5	16.67	25	83.33	30	100.0	0.16	5
5	Any Others (Restaurant/ consumers etc.,)	4	13.33	13	43.33	13	43.33	30	100.0	0.7	4
D	<b>Price fixation criteria</b>										
1	BCS	0	0.00	30	100.0	0	0.00	30	100.0	1	2

2	Live weight of the stock	0	0.00	0	0.00	30	100.0	30	100.0	0	5
3	Age of the animal	0	0.00	30	100.0	0	0.00	30	100.0	1	2
4	Lumbar score	30	100.0	0	0.00	0	0.00	30	100.0	2	1
5	Purchase in lots	0	0.00	30	100.0	0	0.00	30	100.0	1	2
E	<b>Market demand</b>										
1	Young male kids (3-12 m)	11	36.67	0	0.00	19	63.33	30	100.0	0.73	1
2	Young female kids (3-12 m)	8	26.67	0	0.00	22	73.33	30	100.0	0.53	5
3	Adult female	8	26.67	2	6.67	20	66.67	30	100.0	0.60	3
4	Adult Buck	6	20.00	5	16.67	19	63.33	30	100.0	0.57	4
5	Spent/Culled	6	20.00	7	23.33	17	56.67	30	100.0	0.63	2

**Table 7:** Reason for selecting this job

Sl. No.	Particular	Major		Minor		Not at all		N=30 %		
		%	f	%	f	f	%	Total WMS R		
Extra earning	16	53.33	10	33.33	4	13.33	30	100.0	1.40	1
Employment	5	16.67	20	66.67	5	16.67	30	100.0	1.00	3
Hobby	7	23.33	17	56.67	6	20.00	30	100.0	1.03	2
Inherited	0	0.00	7	23.33	23	76.67	30	100.0	0.23	5
To utilize the knowledge and skill in the field	2	6.67	5	16.67	23	76.67	30	100.0	0.30	4

**Table 8:** Profitable price fixation method and distance travelled

Particular	f	%
<b>Profitable price fixation method</b>		
BCS	0	0.00
Live weight of the stock	0	0.00
Age of the animal	0	0.00
Lumbar score	60	100.0
Purchase in lots	0	0.00
<b>Distance travelled</b>		
<b>C.I</b>	<b>f</b>	<b>%</b>
<30	10	16.67
31 to 60	20	33.33
>60	30	50.00

**Table 9:** Source of purchase, price fixation criteria, mode of transportation, purchase preference

	f	%	f	%	f	%	N=60 %	WMS R	
							Total		
<b>Source of purchase of goats</b>									
Directly from producer or 7	11.67	25	41.67	28	46.67	60	100.0	0.65	II
From middlemen or traders- delivered at the butcher 0	0.00	0	0.00	60	100.0	60	100.0	0	IV
<b>location</b>									
From nearby market (directly) 41	68.33	13	21.67	6	10.00	60	100.0	1.58	I
From nearby market 0	0.00	12	20.00	48	80.00	60	100.0	0.2	III
Own farm produce 0	0.00	0	0.00	60	100.0	60	100.0	0	IV
<b>II. Price fixation criteria</b>									
BCS 7	11.67	51	85	2	3.33	60	100.0	1.08	II
Live weight of the stock 0	0.00	0	0.00	60	100.0	60	100.0	0	V
Age of the animal 0	0.00	47	78.33	13	21.67	60	100.0	0.78	III
Lumbar score 47	78.33	8	13.33	5	8.33	60	100.0	1.7	I
Purchase in lots 10	16.67	10	16.67	40	66.67	60	100.0	0.5	IV
<b>III. Mode of transportation</b>									
On foot 0	0.00	0	0.00	60	100.0	60	100.0	0	III
Two-wheeler 12	20.00	4	6.67	44	73.33	60	100.0	0.47	II
Passenger vehicles 0	0.00	0	0.00	60	100.0	60	100.0	0	III
Specially designed livestock 47	78.33	6	10.00	7	11.67	60	100.0	1.67	I
<b>Purchase preference (Kind of animal)</b>									
Young male kids (3-12 m) 14	23.33	41	68.33	5	8.33	60	100.0	1.15	II
Young female kids (3-12 m) 1	1.67	33	55.00	26	43.33	60	100.0	0.58	V
Adult female 23	38.33	31	51.67	6	10.00	60	100.0	1.28	I
Adult Buck 10	16.67	42	70.00	8	13.33	60	100.0	1.03	IV
Spent/Culled 13	21.67	37	61.67	10	16.67	60	100.0	1.05	III

**Table 10:** Goat purchase statistics perceived by butchers

C.I	f	%
<b>Avg. Body weight of goats (age group-wise) in Kgs</b>		
<b>Young male kids (3-12 months)</b>		
10 to 14	25	41.67
15 to 18	35	58.33
<b>Young female kids (3-12 months)</b>		
8 to 12	50	83.33
13 to 15	10	16.67
<b>Adult female</b>		
20 to 30	31	51.67
31 to 40	29	48.33
<b>Adult Buck</b>		
25 to 35	39	65.00
36 to 45	21	35.00
<b>Spent/Culled</b>		
25 to 30	35	58.33
31 to 35	25	41.67
<b>Avg. no of goats purchased at a time</b>		
< 10	20	33.33
10 to 20	36	60.00
> 20	4	6.67
<b>Avg. no of goats transported at a time</b>		
< 6	25	41.67
6 to 12	28	46.67
> 12	7	11.67

**Table 11:** Average cost incurred in production and marketing of live goats.

1	Animal cost	3000.00	66.51	3280.00	72.64	3046.67	67.53
2	Labour	1065.00	23.61	135.42	3.00	910.07	20.17
3	Feeding	233.10	5.17	942.00	20.86	351.25	7.79
4	Healthcare	103.60	2.30	65.00	1.44	97.17	2.15
	Production cost	4401.70	97.58	4422.42	97.94	4405.15	97.64
<b>Marketing</b>							
1	Transport expenses	48.00	1.06	45.00	1.00	47.50	1.05
2	Feed at market	0.00	0.00	0.00	0.00	0.00	0.00
3	Market fee	0.00	0.00	0.00	0.00	0.00	0.00
4	Own expenditure	33.00	0.73	33.00	0.73	33.00	0.73
5	Labour	0.00	0.00	0.00	0.00	0.00	0.00
6	Brokerage	28.00	0.62	15.00	0.33	25.83	0.57
7	Miscellaneous	0.00	0.00	0.00	0.00	0.00	0.00
	Marketing cost	109.00	2.42	93.00	2.06	106.33	2.36
	Total costs	4510.70	100.00	4515.42	100.00	4511.49	100.00
	Sale price of goat	6248.00		6160.00		6233.33	
	Profit	1737.30		1644.58		1721.85	
	Market age	13.36		15.70		13.75	
	Avg. herd size	57.36		25.80		52.10	

**Table 12:** Price spread and marketing efficiency in marketing of goats

Sl. No.	Particulars	Amount (₹)	%
1	Average price received by seller	6233.33	96.50
2	Average Cost incurred by seller	106.33	1.65
3	Average Brokerage	25.83	0.40
4	Average Cost incurred by buyer	217.50	3.37
5	Cost incurred by trader	0.00	0.00
6	Effective price paid by buyer	6459.17	100.00
7	Price spread (7-1)	225.83	3.50
8	Market efficiency (Ratio 1/8)	27.60	

## Conclusion

The study reveals key market practices among goat farmers, middlemen, and butchers in the region. Goat farmers primarily travel 21-40 km to sell, typically selling fewer than two young goats (4-12 months old, 12-24 kg), and rely exclusively on the lumbar score method for price fixation. They lack access to updated market information, and their

main reason for selling is to meet household expenses. Middlemen operate locally (mostly within 1-2 markets, and under 20 km), buy small numbers of goats (1-2), and also favor the lumbar score method. They negotiate prices directly and transport animals mostly in specially designed vehicles. Their job is driven primarily by the need for extra income. Butchers undertake longer journeys (often over

60 km), buy 10-20 goats per trip, and prefer adult females. They too base pricing on lumbar scores, transport via livestock vehicles, and do not rely on live-weight-based pricing. Economically, farmer profits average around ₹1,720 per goat, and sellers receive 96.5% of the final buyer's price, indicating a narrow price spread. These findings highlight strong reliance on qualitative pricing methods and limited market transparency, suggesting the need for interventions to improve price discovery, information flow, and potentially more objective valuation mechanisms.

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