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Marketing of Non-Timber Forest Products: Comparative Analysis of Organized Large-sized Agricultural Multipurpose Societies and Unorganized Channels in Karnataka

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Abstract: Non-Timber Forest Products (NTFPs) play a crucial role in rural livelihoods by providing food and nutritional security and supplementary income, particularly for tribal and forest-dependent households which accounts for nearly 71.23% of total forest sector revenue in India and contribute significantly to the subsistence economy in tribal regions. The three NTFPs reveal that honey the consumer price was highest under large-sized agricultural multipurpose societies (LAMPs) being ₹633.60 and lowest under UO-I (₹399.00). The PSCR was highest in UO-I (72.68 %) and lowest in LAMPs (45.77%). The marketing efficiency declined from 2.66 in UO-I to 0.84 in LAMPs. In tamarind, the producer share in consumer rupee (PSCR) decreased from 71.43% in UO-I (Unorganised Channel-I) to 40.23% in UO-IV with marketing efficiency from 3.68 to 0.94 respectively. Similarly the lichens, PSCR declined from 91.07% in UO-I to 56.54% in Unorganised Channel IV UO-IV with marketing efficiency from 21.25 to 1.72, respectively. The findings suggest that organized channels enhance market outreach; unorganized channels remain more profitable for collectors. Thus strengthening the LAMPS through transparency, timely payments, and reduction in bureaucratic delays is essential to make organized channels more attractive and to ensure equitable benefit-sharing among forest-dependent communities in the study area.

Keywords: LAMPs, Organised, Unorganised, Marketing, NTFPs

The non-timber forest products (NTFPs) have been used since time immemorial for food, fodder, fiber, medicine, fuel, and cultural purposes, forming an integral part of rural subsistence and livelihood security moreover the households involved in NTFP collection and processing reported enhanced income stability and reduced dependence on agricultural or wage labour and NTFPs are not only ecological assets but also critical economic and social capital for forest-dependent communities (Akomaning 2023, Basavaraj and Akash 2025). These are rich in nutritional value and act as vital supplements during food scarcity (Khan et al., 2024). The sector contributes significantly to employment, with 7.5 million people particularly women engaged annually (TERI 2018). Importantly, NTFPs can substantially contribute to household incomes and poverty alleviation in forest-fringe communities and also extracted sustainably, ensuring biodiversity conservation and ecological balance (Asamoah et al., 2025).

The forestry sector contributes 1.90% to India's GDP (2022–23), of which NTFPs account for 71.23% of total forest sector revenue (Planning Commission, 2011) with annual trade of ₹6,000–10,000 crores (UNDP 2019). At disaggregated level, NTFPs constitute about 20 to 40 per cent of the rural GDP in tribal regions (World Bank, 2006) moreover they are significant for 1/3rd of the tribal population. The Karnataka state accounts the total number of tribal people is about 42, 48,978 which is 6.95 per cent of the total population of the State.

Recent studies show that commercialization of non-timber forest products often leads to inequitable benefit sharing tribal or marginal collectors tend to receive disproportionately low returns due to market intermediaries, lack of bargaining power, poor access to infrastructure, and absence of fair price mechanisms (Abhishek and Parayil 2024, Sahu et al., 2025).

In India, the marketing channels critically determine NTFPs collector's benefits and their livelihood. Accordingly, the government initiative to provide institutional support for tribal development and NTFP marketing. The Large-sized Agricultural Multipurpose Societies (LAMPS) were established in 1970s to streamline NTFPs collection, aggregation, and value addition, ensuring fair returns to tribal collectors. They were designed to function as large cooperative societies at the block level, with the objectives of providing credit, marketing facilities, supply of essential commodities, and ensuring fair price procurement of NTFPs from tribal gatherers. In the same line, Karnataka state, LAMPS have established in the tribal dominated districts such as Chamarajanagar, Kodagu, and Uttar Kannada during the 1970s, under the supervision of the Department of Cooperation and Tribal Welfare. However, the issues like bureaucratic delays, lack of transparency, and weak

institutional capacity reduce their effectiveness. As consequences of this, many collectors in the region often prefer unorganized channels due to immediate cash payments, absence of quality grading, low transaction costs, and easy accessibility. Therefore, thus assessing the comparative assessment of organized market (LAMPS) unorganized marketing channels for NTFPs in terms of price spread, marketing efficiency, and collector's share in the consumer's rupee. The systematic evaluation of both channels is necessary to understand which one provides greater economic benefits to collectors the insights of the study helps the policymakers and development agencies design interventions to strengthen organized channels and make them more attractive to collectors, thereby improving livelihoods and reducing market exploitation. Nevertheless, the previous studies have mainly focused on ecological, nutritional, and livelihood roles of NTFPs however the limited work has been carried out on marketing efficiency between the organized (LAMPS) and the unorganized channels, particularly in tribal dominated regions. This study considered three important NTFPs namely tamarind, honey, and lichens in Chamarajanagar district where forests form a critical part of tribal and rural livelihoods. The honey is one of the most important NTFPs in this region with a production of about 20 tonnes in a season. The lichens, locally known as *Paasi*, form another important NTFP, have documented as many as 97 species of lichens across 47 genera and 25 families, indicating their ecological richness and livelihood potential. The tamarind (*Tamarindus indica*) is equally significant in the district's forest economy collected both from wild stands and from naturally growing trees in forested and semi-forested areas. These NTFPs (tamarind, honey, and lichens) represent the nutritional, ecological, and economic dimensions of NTFPs in Chamarajanagar district.

MATERIAL AND METHODS

Study area: The present study is confined to Chamarajanagara districts with territorial jurisdiction of BR Hills and Male Mahadeshwara forest divisions. The Chamarajanagara district has been purposefully selected for the study because of good concentrations of the forest cover with 2791.60sq. km accounts of about 49.10 percent to the total geographical area of the district.

Selection of market functionaries: The preliminary inquiry has made to prepare a list of marketing functionaries including collectors, village trader, wholesaler, retailers and processors who were operating in the marketing of NTFPs particularly honey, tamarind and lichens. Thus, a total 60 marketing functionaries under the unorganized marketing channel and 60 functionaries who area depends on organized marketing channel governed by LAMPs totally 120 marketing functionaries were selected for the present study. In order to obtain the relevant information on marketing of NTFPs for both organised and four unorganised marketing channel. The price spread, total marketing cost, marketing margin, marketing efficiency, and collectors share in consumer rupee were all computed with help of collected information. Out of these the best channel was identified and based on collector's shares in consumer rupees, market efficiency, market margin and price spread in marketing of NTFPs. The following marketing channels (Unorganised and organised) were identified in the study.

1. Unorganised Channel-I (UO –I): NTFPs collectors - consumers
2. Unorganised Channel II (UO-II): NTFPs Collector - wholesaler - processors –consumers
3. Unorganised Channel III (UO-III): NTFPs collector - Wholesaler - processors - retailers – consumer
4. Unorganised Channel IV (UO-IV): NTFPs Collector – Village agents – Wholesalers- Processor- Retailer – consumer
5. Organised Marketing channel (LAMPS)
6. NTFPs Collector – Registered agents – LAMPs- Traders- Processor – Retailer – Consumers

Analytical Tools

Marketing cost: The total cost incurred on marketing by the collector's and of the various intermediaries involved in marketing of NTFPs.

$TC = PC + \sum MCi$

Where,

TC = Total Cost

PC = Cost incurred on marketing of the NTFPs by the collector

MCi = Cost incurred by the ith middlemen

Price spread: The difference between the price paid by consumer and price received by the collector's is the marketing margin or price spread. Generally, the economic efficiency of marketing system is measured in terms of price spread. Smaller the price spread greater is the efficiency of the market system.

$$Price\ spread = \frac{(Consumer\ price - Net\ price\ recieved\ by\ product)}{Consumer\ price} X\ 100$$

Collector's share in consumer's rupee (CSCR)

$$PS = \frac{FP}{RP}\ X\ 100$$

Where,

CS= Collector's share in consumer rupee

FP= price received by the farmer per unit of output

RP= Retail price per unit of output

Marketing efficiency (ME) of market channel: The marketing efficiency of the market channels in the present study was computed by using Acharya's method (Acharya and Agarwal 2020).

$$\text{ME} = \frac{RP}{MC + MM} - 1$$

Where;
ME= Marketing efficiency
RP= Retailer's Price
MC= Total marketing cost
MM= Total marketing margins

RESULTS AND DISCUSSION

Marketing channel-wise performance indicators of honey: The consumer price was highest in the LAMPs channel (₹633.60), followed by UO-IV, while the lowest was in UO-I (₹399.00) (Table 1). The price spread varied considerably across channels, ranging from ₹109.00 in UO-I to ₹343.60 in LAMPs. The producer's share in consumer rupee (PSCR) was relatively higher in UO-I (72.68%), indicating that collectors received a greater share in the direct unorganised channel, whereas the lowest PSCR was in LAMPs (45.77%). Consequently, marketing efficiency (ME) was highest in UO-I (2.66) and the lowest in LAMPs (0.84). These findings suggest that unorganised Channel-I was more efficient in terms of collectors' returns, while organised marketing through LAMPs ensured higher consumer prices however lowest share for the NTFPs collectors. LAMPs enhanced consumer access and market penetration, were unable to translate benefits into higher profitability for collectors because of higher price spread with Rs 343.60 per kg as against of 109.00 in the UO-I.

Marketing Channel−wise performance of Tamarind: The consumer price was highest in the LAMPs channel (₹92.00), followed by UO-IV (₹87.00), while the lowest was observed in UO-I (₹49.00) (Table 2). The price spread varied considerably across channels, ranged from ₹9.50 in UO-I to ₹38.45 in UO-III. The Producer's Share in Consumer Rupee (PSCR) was relatively higher in UO-I (71.43%), indicating that collectors received a greater share in the direct unorganised channel, whereas the lowest PSCR was in UO-IV (40.23%). Consequently, marketing efficiency (ME) was highest in UO-I (3.68) and the lowest in UO-III (0.94). These findings suggest that unorganised Channel-I was more efficient in terms of collectors' returns, while organised marketing through LAMPs ensured higher consumer prices, however with a lower share for the NTFPs collectors. LAMPs enhanced consumer access and market penetration were unable to translate benefits into higher profitability for collectors because of a higher price spread of ₹36.88 per kg as against ₹9.50 in UO-I.

The performance of lichens marketing channels is presented in Table 3. The consumer price was found to be the highest in the LAMPs channel (₹490.00), followed by UO-IV, while the lowest was in UO-I (₹280.00). The price spread varied considerably across channels, ranging from ₹12.00 in UO-I to ₹148.25 in UO-IV. The Producer's Share in Consumer Rupee (PSCR) was relatively higher in UO-I (91.07%), indicating that collectors received a greater share in the direct unorganised channel, whereas the lowest PSCR was in UO-IV (56.54%). Consequently, Average Absolute Marketing Efficiency (AAME) was found to be the highest in UO-I (21.25) and the lowest in UO-IV (1.72). These findings suggest that unorganised Channel-I was more efficient in

Table 1. Marketing channel-wise performance indicators of honey

Channel	Consumer price (₹)	Price spread (₹)	PSCR (%)	Total MC (₹)	ME
UO−I	399.00	109.00	72.68	22.00	2.66
UO−II	527.74	237.74	54.95	83.80	1.22
UO−III	609.31	319.31	47.59	103.80	0.91
UO−IV	617.80	327.80	46.94	103.81	0.88
LAMPs	633.60	343.60	45.77	111.70	0.84

Table 2. Marketing channel-wise performance of Tamarind

Channel	Consumer price (₹)	Price spread (₹)	PSCR (%)	Total MC (₹)	ME
UO−I	49.00	9.50	71.43	4.50	3.68
UO−III	85.00	38.45	42.35	10.55	0.94
UO−II	79.00	32.25	46.84	9.75	1.15
UO−IV	87.00	36.36	40.23	10.24	0.96
LAMPs	92.00	36.88	43.48	10.82	1.08

Table 3. Marketing Channel-wise performance of Lichens

Channel	Consumer price (₹)	Price spread (₹)	PSCR (%)	Total MC (₹)	ME
UO–I	280.00	12.00	91.07	13.00	21.25
UO–III	440.00	138.98	57.95	46.02	1.83
UO–II	424.00	136.50	60.14	32.50	1.87
UO–IV	451.00	148.25	56.54	47.75	1.72
LAMPs	490.00	79.50	59.18	63.50	3.65

terms of collectors' returns, while organised marketing through LAMPs ensured higher consumer prices, however with a reduced share for the NTFPs collectors. LAMPs enhanced consumer access and market penetration, but were unable to translate benefits into higher profitability for collectors because of a higher price spread of ₹79.50 per kg as against ₹12.00 in UO-I.

The UO-I (direct unorganised channel) was the most beneficial to NTFPs collectors across selected commodities, ensuring both a higher producer's share and marketing efficiency. In the flip side, the LAMPs enhanced the consumer access and organised trade**,** but the benefits did not fully reach collectors because of disproportionately high price spreads. Thus, LAMPs serve as an important organised marketing platform for Non-Timber Forest Products in terms of market penetration and consumer outreach however fails to reduce marketing margins and strengthen collectors' share in consumer rupee.

The direct unorganised channels (UO-I) consistently ensured a higher share of the consumer rupee and greater marketing efficiency for collectors, while organised channels such as LAMPs, higher consumer prices and market penetration, translated into reduced profitability for the primary collectors due to wider price spreads. However, descriptive statistics alone cannot confirm whether these differences are statistically meaningful.

CONCLUSION

The study highlights the contrasting outcomes of organized and unorganized marketing channels of NTFPs in Chamarajanagar district of the selected commodities tamarind, honey, and lichens. The study assessed the marketing performance of honey, tamarind, and lichens across organised and unorganised marketing channels. The analysis revealed that the direct unorganised marketing channel provided highest producer share in consumer rupee and marketing efficiency for collectors as compared to LAMPs. Study concludes that reforms in organized marketing structures are dire need policy interventions should focus on reducing transaction costs, introducing fair grading practices, ensuring prompt payment, and promoting value addition at the local level.

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