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Marketing Analysis of Edible Bird's Nest in Tinanggea Village in Southeast Sulawesi

Andi Alyah Mutifa[1], Ilma Sarimustaqiyma Rianse[2], Wa Ode Yusria[3], Haji Saediman[4*]
Halu Oleo University, Kendari
Corresponding Author: Haji Saediman saediman@yahoo.com

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A B S T R A C T
Edible bird's nest (EBN) is a high-value agribusiness commodity with a complex marketing chain from producers to export markets. This study analyzes the marketing channels and efficiency of EBN in Tinanggea Village, South Konawe District, Indonesia. A quantitative descriptive approach was employed, surveying 30 swiftlet nest entrepreneurs and key intermediaries (one sub-district collector and one wholesaler) via census and snowball sampling. Data were gathered through observations and structured interviews, then analyzed for marketing margins and efficiency. Two distinct marketing channels were identified: a longer chain (Channel I: producer → sub-district collector → wholesaler → exporter) and a shorter chain (Channel II: producer → wholesaler → exporter). Marketing margin analysis revealed that producers received a much lower price in Channel I than in Channel II, resulting in farmer's share percentages of 35.71% and 51.43% respectively. Based on a common efficiency criterion (farmer's share ≥ 50%), Channel I was deemed inefficient, whereas Channel II was efficient. These findings indicate that the more streamlined channel allows producers to capture a greater share of the final price, improving marketing efficiency. The results are consistent with other agribusiness studies showing that shorter supply chains yield higher returns for producers. This research suggests that encouraging direct marketing channels can enhance efficiency and producer income.

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INTRODUCTION

Edible bird's nest (EBN) is a unique and highly valued animal-origin product consumed as a delicacy and health tonic, particularly in East and Southeast Asia (Chok et al., 2021; Looi et al., 2015). It is formed from the saliva of swiftlets (*Aerodramus spp*.) and is often dubbed "the caviar of the East" due to its rarity and exorbitant price (Benjakul & Chantakun, 2022; Haraharap et al., 2023). In international markets, raw unclean EBN can command prices of around US$550–800 per kilogram, while cleaned nests fetch between US$1,800–3,500 per kilogram depending on quality. At the retail level in consumer countries like China, prices can reach approximately US$2,900 per kilogram (Halkam et al., 2024), underscoring the commodity's significant economic value. The global trade volume of EBN is estimated at roughly 2,800 tons per year, worth about US$5 billion, with demand driven largely by Chinese markets where rising incomes have fueled consumption growth (Chok et al., 2021; Tangjitmanngamkul, 2019).

Indonesia plays a dominant role in the EBN industry, supplying an estimated 80% of the world's EBN (Thorburn, 2014). The country's vast swiftlet population and widespread swiftlet house farming contribute to an annual production of around 2,000 tons (Panyaarvudh, 2018). A substantial portion of Indonesia's EBN is exported. Indonesia exported about US$998 million worth of EBN in 2015 and the value increased to US$3.64 billion in 2019 (Badan Pusat Statistik, 2020). This makes Indonesia not only the largest producer globally but also a key player in the export market for EBN. Such figures highlight the importance of efficient marketing and distribution channels to maintain Indonesia's competitiveness and to ensure that benefits are equitably shared along the supply chain.

Despite the lucrative global market, EBN producers (swiftlet house entrepreneurs) often face challenges in marketing their product, especially in rural production centers such as Tinanggea Village in South Konawe District. Tinanggea Village is one such emerging hub of swiftlet nest production where local entrepreneurs harvest and sell *sarang burung walet* (swiftlet nests). Ensuring that these producers receive a fair share of the final export price is critical for sustaining the industry's growth and rural livelihoods. However, long marketing channels with multiple intermediaries can erode producers' share of the value, as intermediaries add costs and mark-ups. Understanding the structure of these marketing channels and measuring their efficiency is therefore crucial for identifying opportunities to improve the marketing system for EBN.

Marketing channels in agribusiness refer to the sequence of intermediaries that a product passes through from producers to end consumers (Kohls & Uhl, 1980; Saediman et al., 2006, 2021). An efficient marketing channel is typically characterized by minimal unnecessary intermediaries and costs, allowing producers to obtain a higher proportion of the consumer price (Acharya & Agarwal, 2019). By contrast, an inefficient channel is marked by large price spreads and disproportionate intermediary profits, leaving producers with a small share of the final price. Researchers often evaluate

marketing efficiency using two dimensions, namely operational efficiency and price efficiency. In practice, price efficiency is commonly assessed via indicators such as the marketing margin and the farmer's share of the consumer price (Natawidjaja et al., 2004; Padangaran et al., 2019; Suswatiningsih et al., 2021). The marketing margin is the difference between the price paid by the final consumer and the price received by the producer, encompassing all costs and profits of intermediaries. The farmer's share (often denoted *Fs*) is the percentage of the final consumer price that is received by the farmer or producer. In many agribusiness studies, a farmer's share above approximately 50% is considered a benchmark of an efficient channel, whereas a share much below 50% suggests inefficiency. This threshold is a rule-of-thumb criterion indicating whether producers or intermediaries receive the bulk of the final price.

Prior research on agricultural marketing channels provides evidence that shorter channels (with fewer intermediaries) tend to improve producers' price share (Ardillah & Hasan, 2020; Kusmawan et al., 2022; Safitri et al., 2019). In the context of edible bird's nest, however, there is relatively little published research on the detailed marketing channels and their efficiency at the micro level. Most existing literature on EBN focuses on production techniques, quality and safety, or macro-level trade and export growth. For instance, Halkam et al. (2024) examined Indonesia's EBN export trends and noted the country's dominant role and the concentration of exports to China, but did not delve into the internal marketing structure connecting village-level producers to exporters. This study addresses that gap by analyzing how EBN is marketed in a specific production center and by evaluating how efficiently the marketing system operates. The research objective is twofold: (1) to map out the marketing channels used for edible bird's nest in Tinanggea Village, including all key actors and price flows, and (2) to assess the marketing efficiency of each channel by analyzing marketing margins, costs, and the farmer's share of the final price. Ultimately, the findings can inform strategies for improving the marketing system, such as by shortening the supply chain or strengthening producers' marketing capacity, to enhance efficiency in the EBN agribusiness.

LITERATURE REVIEW

Marketing Channel and Intermediaries

In agribusiness, a marketing channel is the path through which a product moves from the producer to the end consumer, involving various intermediaries who perform functions like aggregation, transportation, processing, and retailing (Johnson et al., 1996). According to classical marketing theory, intermediaries can add efficiency by bridging gaps between producers and consumers, but each additional intermediary also introduces extra costs and potential markup (Kohls & Uhl, 1980). Kotler & Keller (2016) describe marketing channels as interdependent organizations that make a product available for use by consumers. In the context of EBN, typical intermediaries may include local collectors who gather nests from multiple farmers, wholesalers who bulk and grade the nests for export, and exporting companies that handle international sales. Each intermediary might carry out value-adding

activities (such as cleaning, sorting, or packaging the nests) but will also seek a profit margin for their services.

Marketing Margin and Farmer's Share

The performance of a marketing channel is often evaluated by analyzing the marketing margin and the distribution of that margin among participants (Rahayu et al., 2021; Wohlgenant, 2001). The marketing margin is essentially the price spread, or the difference between the price paid by the final consumer and the price received by the producer. A large margin indicates that a substantial difference exists between what consumers pay and what producers get; this difference covers the marketing costs and profits of intermediaries. To interpret margins, it is useful to break them down: part of the margin goes to covering marketing costs (transport, labor, processing, storage, etc.), and the remainder is the profit of intermediaries. A related concept is the farmer's share of the consumer price, defined as Fs = (Pe/Pp) ×100%, where Pp is the price at the producer (farm-gate price) and Pe is the price at the end consumer (or export buyer). The farmer's share is effectively 100% minus the total marketing margin (as a percentage of final price). For agricultural products, farmer's share values can vary widely. Staple commodities in inefficient markets might give farmers less than 30% of the final price, whereas in more efficient or direct-to-consumer markets, farmers can receive well above 50% of the final price.

Several studies have employed these indicators to assess marketing efficiency for different agricultural products. Putri et al. (2018) and Kohls & Uhl (1980) categorize marketing efficiency indicators into operational and price efficiency, noting that *price efficiency* metrics include the magnitude of marketing margins and the farmer's share of prices. They also examined factors influencing farmers' choice of marketing channels, indicating that farmers often weigh the trade-off between possibly higher prices in longer channels versus quicker, more guaranteed sales in shorter (local) channels. In practice, however, longer channels seldom benefit farmers if the additional intermediaries do not significantly increase the price but do take a cut of the value.

Empirical research from various agribusiness sectors consistently highlights that an inverse relationship often exists between the length of the channel and the farmer's share. For example, a recent analysis of the cinnamon market in Jambi Province found that complex marketing channels were a core problem, which resulted in low farmer's share values (Chatra & Rosi, 2024). The same study reported farmer's share percentages for cinnamon that were substantially below 50% in longer channels, indicating producers were not receiving half of the consumer price. In contrast, when cinnamon farmers sold through shorter channels (e.g., directly to large traders or processors), the farmers' share improved markedly. Similarly, the previously mentioned study on orange marketing showed that in the most efficient channel for Siamese oranges, farmers earned a larger portion of the consumer price than in other channels with extra intermediaries (Kusmawan et al., 2022).

Efficiency Benchmarks

There is no single universal benchmark for an "efficient" marketing channel, but some benchmarks are used in the literature for practical evaluation. One such benchmark, as noted earlier, is the 50% farmer's share

criterion (Prayugo et al., 2025). This simple rule suggests that if producers receive at least half of the final price, the channel can be considered relatively efficient in distributing value; if they receive significantly less, the channel may be deemed inefficient or unfair. This criterion has been applied in various Indonesian agribusiness studies (Iswahyudi & Sustiyana, 2019; Padangaran et al., 2019; Prayugo et al., 2025; Safitri et al., 2019; Taridala et al., 2021) as a convenient threshold. However, it is important to consider context: a farmer's share below 50% might be acceptable if intermediaries are providing valuable services and incurring high costs (for example, cold chain logistics for perishable products might justify larger margins). Conversely, a share above 50% does not automatically mean the channel is optimal, as it might involve other trade-offs such as lower absolute prices or higher risks for producers.

Another approach to gauge efficiency is the marketing efficiency index or composite index (Acharya & Agarwal, 2019). This index can incorporate marketing costs and profits in a ratio form. For instance, Fatima et al. (2022), in a study of rice marketing in Mojokerto, Indonesia, used an efficiency index where higher values indicated better performance. They found that among several rice marketing channels, the one with the highest index (value 9.76) was deemed most efficient, while the lowest (value 8.11) was least efficient. Although the absolute values of that index are not directly comparable to a percentage farmer's share, the conclusion aligns with the general insight that different channels yield different efficiency outcomes. Fatima et al.'s work also underscores those methodological differences (using an index vs. using farmer's share) can lead to different numerical characterizations of efficiency, but the core idea remains to identify which channel delivers more value to producers relative to costs.

In summary, the literature suggests that maximizing producers' welfare in high-value commodities like edible bird's nest requires careful consideration of the marketing channel structure. Shorter, more direct channels are often recommended to reduce excessive margins taken by middlemen. At the same time, ensuring market access and support services (like quality control and market information) is crucial, since intermediaries sometimes play necessary roles beyond just trading – roles that producers might not easily fulfill themselves. Therefore, analyzing the current channels and their efficiency in Tinanggea Village will provide not only a measure of performance but also insights into whether there is scope to improve the system, either by modifying existing channels or by empowering producers within those channels.

METHODOLOGY

Study Area and Respondents

The research was conducted in Tinanggea Village, Tinanggea Subdistrict, South Konawe District, located in Southeast Sulawesi, Indonesia. This area was selected because it has a growing swiftlet farming industry, with many local entrepreneurs engaged in producing edible bird's nests. The village-level focus allowed for an in-depth analysis of the marketing practices in a specific production community. The study targeted the key actors involved in the EBN marketing chain in this locale, namely the producers (swiftlet nest

entrepreneurs who own or manage swiftlet houses) and the intermediaries who connect these producers to the export market.

A census sampling approach was used for the producer level, covering all EBN entrepreneurs in the village. A total of 30 edible bird's nest entrepreneurs (farmers/producers) were surveyed, representing the population of active swiftlet house owners in Tinanggea at the time of study. These producers vary in experience and scale but all harvest and sell *bowl-shaped swiftlet nests*, which is the primary product form considered.

For the marketing intermediaries beyond the farm gate, a snowball sampling technique was employed. Initially, known buyers of the producers were identified, and from them further contacts were obtained. This process revealed a relatively small number of intermediaries in the chain: specifically, one sub-district collector trader (a local aggregator operating at the Tinanggea or sub-district level) and one wholesaler who operates at a higher level (provincial or inter-regional level). These were the only significant intermediaries identified in the study area's EBN marketing channels, given that final export is handled by larger companies (exporters) usually outside the region. The limited number of intermediaries is partly due to the niche nature of the product – edible bird's nests require careful handling and are often sold in bulk to specialized exporters, which naturally constrains the number of middlemen.

Data Collection

Data were collected through a combination of structured interviews, observations, and documentation of prices and costs. A structured questionnaire was used to interview the 30 producers, gathering information on their production volumes, selling prices, choice of marketing channel (to whom they sell), and any expenses or issues in marketing. Similarly, interviews with the collector trader and the wholesaler obtained data on their buying prices, selling prices, marketing costs (such as cleaning, transportation, storage, packaging, etc.), and profit margins. Direct observations were made to understand qualitatively how transactions occur and to validate the information given in interviews.

The data collection took place in early 2025. All interviews were conducted in the Indonesian language (Bahasa Indonesia). Ethical considerations such as informed consent were observed; participants were assured that their responses would be confidential and used only for research purposes. Because the study deals with market-sensitive information (prices, profits), care was taken to cross-verify key figures (such as prices at different levels) by asking multiple respondents and checking consistency.

Data Analysis

The study employs a quantitative descriptive analysis to map the marketing channels and evaluate their efficiency. First, the marketing channels were mapped by tracing the flow of product from producers to the final buyer (exporter). Each distinct route that emerged from the data was characterized as a channel. We labeled the channels as Channel I, Channel II, etc., according to the sequence of intermediaries involved. For each channel, we identified the actors and the product flow: who sells to whom, until the nests reach an export-

oriented buyer. Along with the flow, the price at each stage was recorded, allowing us to construct a price buildup along the channel.

The second step was the marketing margin analysis. For each channel, we calculated the margin at each segment and the overall margin. The overall marketing margin is defined as:

Total Marketing Margin = $P_e - P_p$

where P_e is the price paid by the end consumer (or in this case, effectively the exporter's price since the exporter is the last actor in our observed chain), and P_p is the price received by the producer. Because our channels terminate at the exporter (who then sells to overseas markets), P_e in this study is taken as the price at which the wholesaler sells to the exporter. We also computed intermediate margins: for the sub-district collector and for the wholesaler in the respective channels. The margin for an individual intermediary (say the collector) is $P_{sell} - P_{buy}$ for that intermediary. For example, the difference between the price the collector sells at and the price they paid to producers.

In addition to margins, we analyzed the marketing costs incurred by intermediaries and their profits. Each trader's costs (such as transportation or rent for storage facilities) were recorded, and their profit was estimated as margin minus cost. This detailed analysis (presented in the Results section) helps to see how the total margin is split into actual costs of marketing versus profit mark-ups.

The marketing efficiency of each channel was then assessed primarily using the farmer's share (Fs) percentage and comparing it against the common efficiency benchmark of 50%. The farmer's share is calculated as:

$$Fs\ (100\%) = \frac{Pp}{Pe}\ x\ 100\%$$

Which directly measures the percentage of the final price accruing to the producer. A higher Fs indicates a more efficient channel from the viewpoint of the producer's welfare. We categorize a channel as efficient if Fs ≥ 50%, and inefficient if Fs < 50%, following criteria used in previous studies. It should be noted that this threshold is a guideline; we also interpret efficiency in relative terms (comparing Channel I vs Channel II).

Additionally, the results are interpreted in the context of qualitative efficiency considerations – for instance, whether the marketing channel is performing necessary functions without undue cost, whether the presence of intermediaries is justified by value addition, and how the market structure (competition among intermediaries) might be affecting margins. While our analysis is mainly quantitative, these qualitative aspects are considered in the discussion to provide a well-rounded evaluation.

All monetary values were analyzed in Indonesian Rupiah (Rp). For ease of interpretation, key quantitative outcomes such as prices, margins, and farmer's share are presented in tables. No complex econometric modeling was required for this study; instead, the focus was on straightforward descriptive calculations that could be directly verified with the collected data. The analysis process was also informed by cross-checking with secondary information when available (for example, comparing the exporter price we recorded with prevailing market prices for EBN of similar grade in Indonesia). This was done

to ensure that the observed prices and margins were realistic and not anomalous to just this sample.

RESULT AND DISCUSSION

Marketing Channel for Edible Bird's Nest

The EBN marketing system in the study village was found to operate through two primary channels. These channels differ in the number of intermediaries and directly influence the distribution of prices and margins. Table 1 summarizes the two identified marketing channels, including the actors involved in each sequence.

Table 1. Marketing Channels for Edible Bird's Nest in Tinanggea Village

Channel	Marketing Chain (Sequence of Actors)	Description of Intermediaries
I (Long)	Producer → Sub-district Collector → Wholesaler → Exporter	Involves a local collector at village/sub-district level, who aggregates nests from producers, then a larger wholesaler who sells to an exporting company.
II (Short)	Producer → Wholesaler → Exporter	Bypasses the local collector; producers sell directly to a wholesaler (often in a city), who then sells to an exporter.

In Channel I, the producer (swiftlet nest entrepreneur) sells their harvested nests to a sub-district collector (locally known as *pedagang pengumpul*). This collector is typically based in or near Tinanggea and purchases nests from multiple local producers. The collector's role is to consolidate small quantities from various farmers into bulk amounts. After accumulating a batch, the sub-district collector sells the nests to a wholesaler (sometimes called a big trader, or *pedagang besar*). The wholesaler in this context usually operates at a provincial level or has connections to export firms; they accumulate larger volumes, possibly perform cleaning and grading if needed, and then sell directly to an exporter. The exporter is the final link in our observed chain – an entity that ships the product to international markets (primarily China). It is worth noting that the exporter in this study's context is not located in the village (typically they are in major cities or port areas). We did not directly survey exporters, but we obtained the price at which wholesalers sell to exporters, which serves as the end price in our channel analysis.

In Channel II, the producer skips the local collector and sells directly to a wholesaler/export buyer. Effectively, the producer delivers the nests to a larger trader who might be based in a city (in this case, likely Kendari or another trading hub in Sulawesi) and that trader (wholesaler) then deals with the exporter. Thus, Channel II eliminates one intermediary (the sub-district collector) compared to Channel I. Despite having one less step, the structure of Channel II still ensures that the product reaches an exporter, because the wholesaler in Channel II plays a dual role of aggregating and channeling goods to the export market.

These channels emerged clearly from the interview data. Roughly speaking, they reflect two strategies by which producers market their nests: (a) selling to a nearby collector for convenience (Channel I), or (b) finding a way to sell further up the chain for a better price (Channel II). Some producers, especially those with larger production volumes or better market information, prefer Channel II to obtain higher prices. Smaller producers or those lacking direct connections to wholesalers may stick with Channel I for its ease. In this regard, the local collector is readily accessible and provides an immediate outlet, even if at a lower price.

The presence of just one main wholesaler in both channels suggests a relatively oligopsonistic market structure at the upper level (few buyers for the producers' output). This is in line with broader observations of the EBN trade, where export markets are controlled by a limited number of licensed exporting companies and their agents. The local collector in Channel I can be seen as an agent who reduces transaction costs for the wholesaler by gathering nests from many producers. However, the collector's involvement also means the producer's price is lower, as the collector needs a margin for their livelihood.

To illustrate, producers reported that in Channel I they generally hand over their nests to the sub-district collector shortly after harvest. The collector might even offer services like basic cleaning or sorting, but in this case study, we found most cleaning is done at the wholesaler/exporter level because of the stringent quality requirements for export. The local collector mainly focuses on gathering and transporting the nests to the wholesaler. In Channel II, producers must undertake the effort to transport or send their nests to the wholesaler themselves (or the wholesaler may send an agent to the village periodically). This involves more coordination for the producer but promises a higher selling price since one layer of intermediary is removed.

The channels identified here are relatively short in absolute terms (at most 3 intermediary steps from producer to exporter). In agricultural marketing, this would be considered a moderately short chain. Nonetheless, even within these two channels, the difference of one intermediary can have significant effects on pricing and efficiency, as shown next. Our findings on channels reflect patterns seen in other high-value commodities: producers have options to either sell locally or reach farther markets, and each option yields different profit outcomes. The next subsection quantifies these differences by presenting the price margins and efficiency metrics for Channel I and Channel II.

Marketing Margins, Prices, and Efficiency in Each Channel

The pricing structure and efficiency outcomes of the two channels are presented in Table 2. This table compares key quantitative indicators: the price received by producers, the price paid by the exporter (i.e., final price in the chain as observed), the total marketing margin, the farmer's share of the final price, and an efficiency classification based on the 50% farmer's share benchmark. All prices are given per kilogram of edible bird's nest (Rp/kg), which is a standard unit in the industry.

Table 2. Price, Margin, and Efficiency in Edible Bird's Nest Marketing Channels

Channel	**Producer's Selling Price (Rp/kg)**	**Exporter's Buying Price (Rp/kg)**	**Total Marketing Margin (Rp/kg)**	**Farmer's Share (%)**	**Efficiency Category**
Channel I	5,000,000	14,000,000	9,000,000	35.71%	Not efficient
Channel II	7,200,000	14,000,000	6,800,000	51.43%	Efficient

Notes: *The exporter's buying price is the price at which the wholesaler sells to the exporter, representing the end-point of the observed channel.*

In Channel I, producers sell their edible bird's nests at an average price of Rp5,000,000 per kg to the sub-district collector. The wholesaler then ultimately sells the same product to the exporter at Rp14,000,000 per kg. Thus, the total marketing margin in Channel I is Rp9,000,000 per kg, which is the difference between Rp14,000,000 (exporter price) and Rp5,000,000 (producer price). This margin of Rp9 million per kg is quite substantial. It means that for every kilogram of nests that eventually gets exported, the combined intermediaries in Channel I are taking Rp9 million while the producer gets Rp5 million. In percentage terms, the farmer's share in Channel I comes out to 35.71% of the final price. This indicates that only about a little over one-third of the export price goes to the producer, while the rest (approximately two-thirds) goes to others. Based on our efficiency criterion, Channel I is inefficient, since the farmer's share is well below 50%. The low percentage reflects those producers in Channel I are getting a relatively small portion of the value, which could be due to multiple factors such as the bargaining power of the collector/wholesaler, lack of market information for producers, or possibly high costs in the chain.

In Channel II, producers were able to sell at a much higher price of Rp7,200,000 per kg by directly dealing with the wholesaler (skipping the collector). The exporter's buying price remains Rp14,000,000 per kg in this channel, which interestingly is the same final price as in Channel I for the comparable product. This implies that the export market price is around Rp14 million/kg regardless of the channel. The total marketing margin in Channel II is therefore Rp6,800,000 per kg (14,000,000 minus 7,200,000). This margin is noticeably smaller than in Channel I. Correspondingly, the farmer's share in Channel II is 51.43%, meaning producers receive just over half of the final price. According to our benchmark, this channel is categorized as efficient. Producers in Channel II are capturing more than half of the export value of their product, which is a strong indicator of a more favorable distribution of gains.

Comparing the two channels, the removal of the sub-district collector in Channel II leads to a gain of Rp2,200,000 per kg for the producer (7.2 million vs 5.0 million) and a reduction of the overall margin by the same amount. Essentially, that Rp2.2 million represents the portion that the collector was

taking (as margin or cost) in Channel I. In Channel II, that portion is retained by the producer. The wholesaler's selling price to exporter remains the same in both channels, which suggests that the wholesaler in Channel II likely purchases at 7.2 million directly from producers, whereas in Channel I they were effectively purchasing at 9.0 million from the collector (who in turn paid 5.0 million to producers).

It is insightful to look at the breakdown of the Rp9,000,000 margin in Channel I. This margin is split between the collector and wholesaler. From the data collected, in Channel I the sub-district collector typically bought at Rp5,000,000 and sold to the wholesaler at Rp9,000,000 per kg. That means the collector's margin was Rp4,000,000 per kg. The collector incurred some marketing costs (in our survey, on average about Rp33,333 per kg, including transportation and storage rent). Subtracting these costs, the collector's profit was roughly Rp3.97 million per kg. The wholesaler's margin in Channel I was Rp5,000,000 per kg (buying at 9 million, selling at 14 million). The wholesaler's costs (transport, etc.) were about Rp23,333 per kg, yielding a profit of approximately Rp4.98 million per kg for the wholesaler. Thus, in Channel I, both the sub-district collector and the wholesaler earned significant profits per kilogram (around Rp4 million and Rp5 million respectively), each roughly comparable to or exceeding the producer's own profit from production (the producer's net profit was Rp4.97 million per kg after minor production costs). This distribution clearly favored the intermediaries: the combined intermediary profit (about Rp8.94 million) was nearly double the producer's profit on producing the nests.

In Channel II, since the sub-district collector is absent, the producer's selling price is higher at 7.2 million. The wholesaler in Channel II buys at that price and sells at 14 million, so the wholesaler's margin is 6.8 million. The wholesaler's marketing costs in Channel II were similar (around Rp23,333 per kg), leaving a profit of roughly Rp6.78 million per kg for the wholesaler. The producer's profit per kg in Channel II was about Rp7.18 million (since production costs per kg are low, only Rp17,270, nearly negligible relative to price). With respect to the amount of profit, in Channel II, the producer's profit (7.18 million) is actually slightly higher than the wholesaler's profit (6.78 million) per kg, which is a more balanced outcome than Channel I where each intermediary was making as much as or more than the producer. The farmer's share of 51.43% in Channel II quantitatively encapsulates this improved balance.

These results clearly demonstrate the impact of reducing one intermediary. The producer's share of the final price jumped from 35.71% to 51.43%. In other words, by accessing the wholesaler directly, producers can gain an additional 15.7% of the final price. For a commodity as expensive as EBN, this percentage translates into a large absolute income difference for the producers. For example, if a producer sells 1 kg of nests, under Channel I they get Rp5 million, but under Channel II they get Rp7.2 million. The difference is Rp2.2 million (approximately US$150 at an exchange rate of Rp15,000/USD), which is significant in the local context.

The findings here align with general agribusiness marketing principles and are consistent with other studies' observations. A higher number of intermediaries typically leads to a higher cumulative margin that often does not proportionally increase the final price but rather is absorbed as transaction costs and profits by those intermediaries. In our case, the final price to the exporter remained the same across channels, implying that the presence of the collector did not raise the price the exporter was willing to pay. It only redistributed the pie among more players. Thus, Channel I can be seen as less price-efficient, because the marketing system delivered the product to the exporter at 14 million in either case, but in Channel I it "spent" a greater portion of that value on the way. In economic terms, one might question whether the sub-district collector provided sufficient value-added to justify taking 4+ million per kg. The collector did provide a service (convenience and immediate purchase for farmers, as well as aggregating small lots), but farmers paid a high price for that service in terms of foregone revenue.

It is instructive to compare our farmer's share figures with those from other commodities and regions as a benchmarking exercise. The 35.71% farmer's share in Channel I is akin to what has been observed in some traditional agricultural markets with long chains. For instance, some vegetable farmers in Asia receive 30–40% of consumer prices when produce passes through multiple middlemen. The 51.43% in Channel II is closer to what one might see in more efficient chains or where farmers sell more directly. In the study by Kusmawan et al. (2022) on oranges, while they did not report farmer's share in percentage, their conclusion that Channel I was more efficient than Channel III for oranges suggests that farmer's share was higher in the shorter channels. Similarly, Chatra & Rosi (2024) reported farmer's shares for cinnamon that improved from around 38% to 56% when the marketing chain was shortened. Our EBN findings (36% vs 51%) line up very closely with those cinnamon figures, reinforcing the notion that the pattern of efficiency is consistent across different products: eliminating an intermediary can raise the farmer's share by on the order of 15–20 percentage points or more.

One might wonder if there are any downsides to Channel II from the producers' perspective, aside from the need to find a wholesaler and perhaps incurring some transport effort. During interviews, some producers mentioned that selling to the collector (Channel I) was easier because the collector was a local figure they knew and who would sometimes even pick up the nests directly. Also, the collector would pay immediately in cash. When dealing with the wholesaler (Channel II), producers needed to coordinate delivery (either meeting at a town or sending the product via courier) and sometimes faced a short wait for payment until the wholesaler could inspect the product quality. These practical considerations mean that although Channel II is financially more rewarding, not every producer may be able or willing to use it, especially smaller ones or those who harvest infrequently.

However, there is clearly an incentive for producers to organize or cooperate to utilize Channel II. If multiple producers can pool their product and arrange collective transport to the wholesaler, they could all benefit from the

higher price. This is a scenario where forming a producer group or cooperative could improve market efficiency – a common recommendation in agribusiness development literature when farmers face powerful intermediaries (Lestari et al., 2023; Saediman, 2025a). By collectively bypassing the local collector, producers might also gain more bargaining power at the wholesaler level in the long run.

From the intermediaries' perspective, the local collector's role in Channel I, while profitable, is essentially a redundant layer from an efficiency standpoint. If more producers shift to Channel II, the local collector might be sidelined unless they adapt, perhaps by becoming an agent for the wholesaler with a smaller commission instead of a full margin. The wholesaler, on the other hand, benefits from either channel, but likely prefers Channel II as well (because dealing directly with producers at 7.2 million vs dealing with a collector at 9.0 million could actually lower the wholesaler's procurement cost). Indeed, our data shows the wholesaler's buying price in Channel II (7.2 million) was lower than their buying price in Channel I (9.0 million from collector) – meaning the wholesaler pays less and thus makes a larger profit per kg in Channel II (6.8 million margin) than they did in Channel I (5.0 million margin). So intriguingly, Channel II is win-win for both the wholesaler and the producers, at the expense of the local collector. This situation often arises in supply chains as they modernize: more direct linkages form between producers and high-level buyers, cutting out smaller middlemen, which can increase overall efficiency and benefit the ends of the chain (producers and final buyers).

The efficiency classification based on farmer's share clearly places Channel II as superior to Channel I in the Tinanggea EBN market. Given Channel II's farmer's share of 51%, it meets the criterion of an efficient channel (≥50% share to producers). Channel I, at 36%, does not meet that criterion and is thus inefficient. It is important to note that "inefficient" in this context means the channel's benefit distribution is tilted away from producers; it does not necessarily mean that the channel fails to perform the basic function of getting the product to market. Channel I do get nests from producers to exporters, but it does so in a way that is less remunerative for producers. Additionally, inefficiency often correlates with equity issues. In this regard, producers are often the least powerful players, and an inefficient channel usually indicates they are at a disadvantage in terms of information or bargaining power.

During interviews, producers in Channel I expressed that they had little knowledge of the exporter prices. They mostly saw the local collector's price as the "market price." Only when some enterprising individuals sought information or knew someone dealing with wholesalers did they realize a higher price was possible. This knowledge gap is a classic contributor to inefficient markets: lack of transparency allows intermediaries to widen margins. Improving transparency could naturally force the local collector to offer better prices or risk losing suppliers to Channel II.

Comparatively, in other agricultural markets, similar dynamics are observed. For example, in rice or corn markets, farmers who are aware of mill or wholesale prices tend to negotiate better or skip village traders, whereas

uninformed farmers often sell at whatever price local traders dictate. The EBN market, being more niche and less publicly reported, likely suffers from even greater information asymmetry.

Another perspective is the absolute profitability for producers. EBN farming is known to be a highly profitable venture if successful, given low variable costs and high prices. Even in Channel I, producers had a profit margin of nearly Rp5 million per kg (since production costs are minimal, mostly for maintaining swiftlet houses). Channel II raises that to over Rp7 million profit per kg. Considering that a single swiftlet house can produce multiple kilograms per year (depending on size and swiftlet population), the income difference can be substantial. For example, if an average swiftlet house in Tinanggea produces, say, 10 kg of nests a year, using Channel I would yield Rp50 million to the producer, whereas Channel II could yield Rp72 million for the same output – a difference of Rp22 million (around US$1,500). This is a significant additional income for rural households. Such figures highlight why understanding and improving marketing efficiency is not just a theoretical exercise but has real welfare implications.

Our results underscore a critical policy and development insight: enabling producers to engage in shorter marketing channels can improve their incomes considerably. This could be facilitated by interventions such as organizing producers for collective selling, disseminating market price information, and simplifying logistics for direct sales. Similar recommendations have been made in other agribusiness contexts (Amri et al., 2025; Lestari et al., 2023; Saediman, 2025a, 2025b). Exporters themselves might find it beneficial to source more directly or through fewer layers to ensure traceability and consistent quality, which are important in the international EBN trade.

In summary, the discussion of results confirms that Channel II is the more desirable marketing route for producers from an efficiency standpoint. It offers a greater farmer's share (51.43% vs 35.71%) and meets the efficiency benchmark of ≥50% farmer's share, whereas Channel I do not. The analysis resonates with broader agribusiness findings that eliminating unnecessary intermediaries can substantially improve price transmission to farmers. However, practical considerations for implementing a shift from Channel I to Channel II include improving producers' access to wholesalers and market information, which could be addressed by collective action or support from local agricultural agencies. Our findings provide an evidence base for such initiatives, as they quantify the potential gains from a more efficient marketing system for edible bird's nest at the village level.

CONCLUSION AND RECOMMEDATIONS

This study examined the marketing channels and efficiency of the edible bird's nest trade in Tinanggea Village, South Konawe District. The research identified two main marketing channels, namely a longer channel involving a local collector and a wholesaler (Channel I), and a shorter channel where producers sell directly to a wholesaler (Channel II). Channel I (producer → collector → wholesaler → exporter) and Channel II (producer → wholesaler → exporter) encapsulate the routes by which all surveyed producers sell their

product. The presence of these channels indicates that producers have a choice either convenience selling through local collectors or more direct selling to higher-level traders, and that choice has a major impact on their earnings.

The inclusion of an extra intermediary (the sub-district collector) in Channel I resulted in a significantly lower price for producers compared to Channel II. The total marketing margin was correspondingly higher in Channel I (Rp9,000,000/kg) than in Channel II (Rp6,800,000/kg). This margin difference represents value that, in the longer channel, was absorbed by the additional intermediary. Both the local collector and wholesaler made substantial profits in Channel I, whereas in Channel II the wholesaler alone captured the intermediary margin, part of which was effectively passed on to producers in the form of a higher farm-gate price. These findings underscore how marketing margins are created and allocated across actors, with the number of intermediaries playing a decisive role.

Channel II was found to be markedly more efficient than Channel I. The farmer's share of the final price in Channel II was about 51.43%, exceeding the 50% benchmark that is often used to indicate an efficient marketing channel. In contrast, the farmer's share in Channel I was only about 35.71%, well below the benchmark, signifying an inefficient channel in terms of value distribution. Thus, Channel II is an efficient channel while Channel I is not. This conclusion is in line with similar patterns of efficiency gains in shorter channels as reported in other agribusiness studies, indicating that the result is not an anomaly but rather reflective of a general principle of marketing economics.

The choice of marketing channel has a direct and substantial impact on producer incomes. By switching from the traditional Channel, I to the more direct Channel II, a producer could increase their revenue by roughly 44% per kilogram of product (from Rp5 million to Rp7.2 million). Given the high value of EBN, this translates into large absolute income gains. Therefore, it is in the economic interest of producers to use the more efficient channel whenever possible.

The study points to a few strategies to improve marketing efficiency for EBN in the study village and similar regions. Facilitating greater direct interaction between producers and wholesalers/exporters is key. This could be achieved by forming producer groups or cooperatives that collectively sell in bulk to wholesalers, thereby replicating the role of the sub-district collector but with the profits accruing back to the producers. Improved market information systems would empower producers in price negotiations and in deciding where to sell. Additionally, local authorities or agricultural extension services might consider training producers in basic post-harvest handling so they can meet wholesaler or exporter standards without relying on middlemen. By increasing transparency and reducing transaction costs, such measures would help shift the marketing system towards the more efficient end of the spectrum.

FURTHER STUDY

Future research should address the limitations of this study by broadening its geographic scope and including a wider range of market actors.

A comparative approach across multiple edible bird's nest producing regions could determine if the marketing channel efficiencies observed in Tinanggea hold in other areas, while incorporating additional stakeholders (such as cooperatives, direct exporters, or even end consumers) would provide a more holistic understanding of the supply chain. Future studies could also explore innovative marketing avenues, such as the formation of producer cooperatives as a strategic means to strengthen farmers' bargaining power and streamline post-harvest processing, and the use of digital platforms or e-commerce to help local producers reach broader markets directly.

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