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Socio-economic profile and constraints of fish retailers in an urban market: Evidence from GHMC Fish Market, Hyderabad

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Abstract

The fish retail sector plays a crucial role in urban food systems by ensuring the availability of nutritious food while supporting livelihoods of small-scale traders. The present study examines the socio-economic profile and constraints faced by fish retailers in the GHMC Fish Market, Kukatpally, Hyderabad. Primary data were collected from 30 fish retailers selected through proportionate random sampling out of 60 registered vendors. Data were gathered using a pre-tested interview schedule, supported by key informant interviews and field observations. Descriptive statistics and Garrett ranking technique were employed for analysis. The findings reveal that the fish retail sector is dominated by middle-aged (35–50 years) male retailers (87%) with moderate educational levels, where 44% had secondary education. Most respondents belonged to nuclear families (87%) with a family size of 4–6 members (67%), indicating moderate household dependency on retail income. The establishment of the organized fish market significantly improved livelihood conditions, with 87% of retailers reporting increased satisfaction due to higher consumer inflow. Daily income levels improved substantially, with 53% of retailers earning ₹1000–1300 per day post-construction, compared to a majority earning just above ₹500 earlier. Similarly, average weekly fish sales increased from 83 kg to 282 kg, reflecting nearly a threefold rise. Constraint analysis using Garrett ranking technique identified high transportation cost (72.4) as the most severe constraint, followed by the presence of middlemen (68.6) and high marketing cost (60). These findings are consistent with earlier studies, indicating persistent structural inefficiencies in fish marketing systems. The study concludes that while organized market infrastructure significantly enhances retailer income and sales performance, addressing key constraints such as transportation, market intermediation, and cost inefficiencies is essential for ensuring long-term sustainability and improved livelihoods in the urban fish retail sector.

Keywords: Fish retailers, socio-economic profile, constraint analysis, Garrett ranking technique, urban fish markets

1. Introduction

The fisheries sector plays a significant role in the global food system by contributing to food security, nutrition, employment, and economic development. India ranks third in overall fish production globally, contributing approximately 8% to total world fish production. The sector supports the livelihoods of about 28.06 million people at the primary level and remains a vital component of the national economy. India's total fish production stands at 162.48 lakh tonnes, of which 41.27 lakh tonnes are from marine sources and 121.21 lakh tonnes from inland fisheries. The fisheries and aquaculture sector contributes around 1.1% to the national Gross Domestic Product (GDP) and 6.72% to agriculture and allied activities. Despite this substantial contribution, the per capita fish consumption in India remains relatively low at 6.31 kg, although the sector has recorded a notable growth rate of 10.34% (Handbook on Fisheries Statistics, 2023)^[6].

Fish marketing constitutes a critical link between production and consumption, encompassing all processes involved in the movement of fish from producers to final consumers (Crammer *et al.*, 2001)^[2]. The marketing of fish is inherently complex due to the heterogeneous nature of fish products, which vary in species, size, weight, nutritional

value, storage characteristics, and price (Clucas and Ward, 1996)^[1]. Additionally, fish marketing systems are challenged by high perishability, bulkiness, inadequate storage facilities, high transportation costs, and a considerable price spread across the value chain (Ravindranath, 2008)^[10]. Typically, fresh fish passes through multiple intermediaries before reaching retail markets, where retailers play a crucial role in directly supplying fish to consumers while adapting to local preferences and demand patterns (Kumar *et al.*, 2008)^[9]. Markets also serve as platforms for transmitting price signals and facilitating decision-making among producers and consumers (Upadhyay *et al.*, 2016)^[12].

The socio-economic conditions of fish retailers significantly influence the efficiency and sustainability of fish marketing systems. These conditions are shaped by factors such as income levels, family size, education, access to resources, health status, and occupational stability (Karnad *et al.*, 2014)^[8]. Empirical studies indicate that fish retail markets are often characterized by low income levels, limited access to credit, and inadequate infrastructure, including poor storage and transportation facilities (Devi *et al.*, 2018)^[3]. In many regions, fish retailing is male-dominated, with vendors facing multiple socio-economic challenges that

constrain their earning potential (Verma *et al.*, 2015) ^[13]. However, contrasting evidence from regions such as Ratnagiri and coastal Karnataka highlights the significant role of women in fish retailing, although their participation is increasingly challenged by competition and structural changes in the market (Gunakar and Bhatta, 2016) ^[5].

Fish retailers across different regions face a range of constraints that affect their operational efficiency and profitability. Studies have identified major challenges such as unhygienic market conditions, high transportation costs, inadequate retail infrastructure, lack of cold storage facilities, and intense competition (Uddin *et al.*, 2018; Hatte *et al.*, 2015; Wasave *et al.*, 2018) ^[11, 7, 15]. The presence of multiple intermediaries further reduces the share of retailers and contributes to inefficiencies in the marketing system (Verma *et al.*, 2015) ^[13]. In addition, inadequate infrastructure and poor market amenities have been consistently reported as critical constraints affecting market performance (Vidya *et al.*, 2016) ^[14].

Despite the availability of studies on fish marketing and retailer livelihoods in different geographical contexts, there is a noticeable lack of location-specific research focusing on urban fish retail markets, particularly in rapidly expanding metropolitan regions. The Greater Hyderabad Municipal Corporation (GHMC) fish markets represent an important urban retail system where market dynamics, retailer behavior, and socio-economic conditions interact in complex ways. However, limited empirical evidence exists on the socio-economic profile of fish retailers and the constraints faced by stakeholders in this specific setting. This gap restricts the formulation of targeted interventions for improving market efficiency and enhancing the livelihoods of fish retailers.

In this context, the present study aims to address these gaps by providing a comprehensive analysis of fish retailing in the GHMC fish market at Kukatpally, Hyderabad. The specific objective of the study is:

1. To analyze the socio-economic characteristics of fish retailers and identify the key constraints affecting their livelihood in the GHMC Fish Market.

2. Methodology

The present study was conducted in the GHMC Fish Market from the figure 1, which was purposively selected due to its prominence as one of the largest fish retail markets in the Hyderabad metropolitan region. The market functions as a key distribution center for fish, serving a large urban population.

A total of 60 registered fish retail shops were identified in the market. Out of these, 30 fish retailers were selected as respondents using a proportionate random sampling method. The sample size was determined based on time and resource constraints, and further validated through insights obtained during the pilot study.

Data Collection

Primary data were collected using a pre-tested interview schedule to ensure consistency and reliability of responses. In addition to structured interviews, multiple data collection approaches were employed to improve the validity of the findings. These included key informant interviews, field observations, and telephonic discussions. Triangulation was

carried out wherever necessary to cross-verify the information obtained from different sources and enhance the robustness of the dataset.

Variables of the Study

For achieving the first objective, which focuses on the socio-economic profile and constraints of fish retailers, the following variables were considered:

- **Socio-economic profile variables:** Age, religion, caste, education, family type, family size, income from fish retailing, quantity of fish sold, experience in fish retailing, and level of satisfaction.
- **Constraints faced by fish retailers:** Various financial, infrastructural, social, and marketing-related constraints encountered in the course of their business operations.

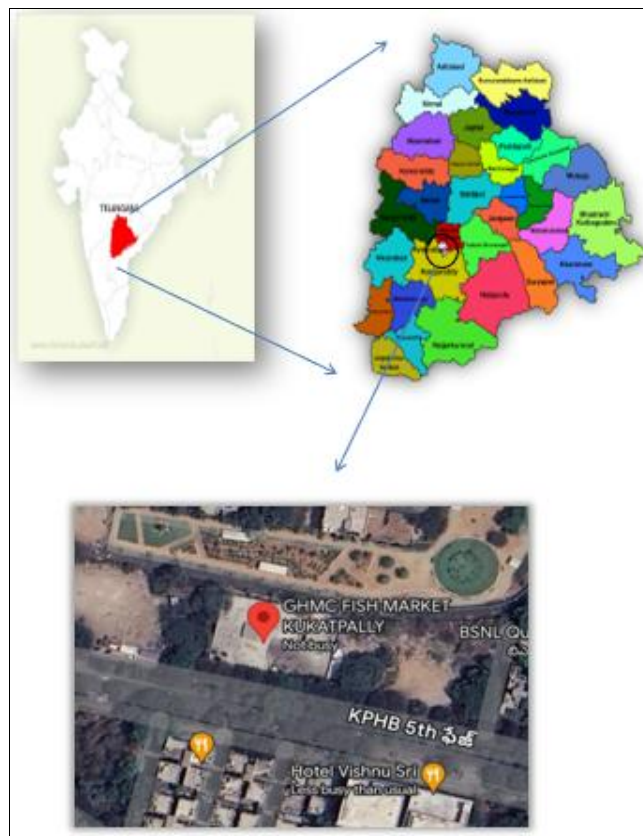


Fig 1: Locale of the study area – GHMC Fish Market, Kukatpally, Hyderabad

Analytical Tools

Descriptive statistical tools such as frequency and percentage analysis were employed to analyze the socio-economic characteristics of fish retailers and the constraints faced by them under the first objective.

For constraint analysis, the Garrett Ranking Technique was used to prioritize the constraints faced by fish retailers in the market. In this method, respondents were asked to rank the problems they encountered, and the ranks were converted into percent positions using the following formula (Garrett and Woodworth, 1969) ^[4]:

$$\text{Percent position} = 100 (R_{ij} - 0.5) / N_j$$

R_{ij} = Rank given for i th factor by j th individual

N_j = Number of factors ranked by j th individual

The percent positions were then converted into Garrett scores using standard tables, and the mean scores were calculated to determine the relative importance of each

constraint.

3. Results and Discussion

3.1 Profile of fish retailers from GHMC Fish Market, Kukatpally, Hyderabad

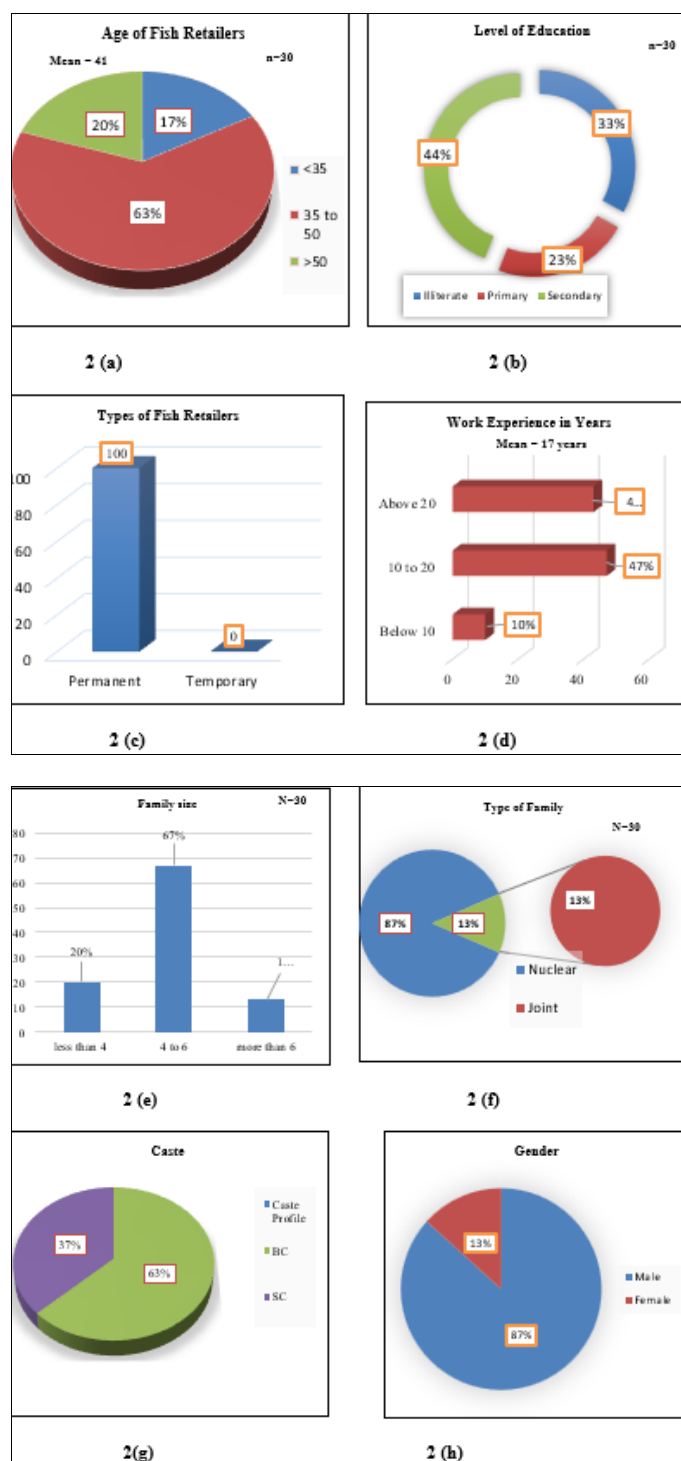


Fig 2: (a,b,c,d,e,f,g,h) Profile of Fish retailers from GHMC fish market, Kukatpally, Hyderabad.

The socio-economic characteristics of fish retailers operating in the GHMC Fish Market are presented in Figure 2 (a–h). The age distribution (Figure 2a) shows that the majority of retailers (63%) fall within the 35–50 years age group, while only 17% are below 35 years, indicating a predominantly middle-aged workforce with limited youth

participation. Educational status (Figure 2b) reveals that 44% of respondents have secondary level education, whereas 33% are illiterate and 23% possess primary education, suggesting constrained formal skill development among retailers. All respondents were found to be permanent vendors (Figure 2c), reflecting a stable and

continuous engagement in fish retailing as a primary livelihood activity. In terms of experience (Figure 2d), 43% of retailers have more than 20 years of experience, 47% have 10–20 years, and only 10% have less than 10 years, indicating strong occupational continuity and sectoral dependence. Family size distribution (Figure 2e) shows that 67% of respondents have 4–6 members, followed by 20% with fewer than 4 and 13% with more than 6 members, reflecting moderate household sizes. A majority (87%) belong to nuclear families (Figure 2f), while only 13% are part of joint families, suggesting a shift in household structure that may influence labor and economic responsibilities. The caste composition (Figure 2g) indicates that 63% of retailers belong to the Backward Class (BC) category, and the market is entirely dominated by Hindu retailers, highlighting a specific socio-cultural pattern. Gender distribution (Figure 2h) shows that the sector is male-dominated, with 87% male and only 13% female participation, which contrasts with findings from coastal regions where women play a more prominent role in fish retailing (Gunakar and Bhatta, 2016) [5]. Overall, the findings suggest that fish retailing in the study area is characterized by a stable, experienced, and predominantly male workforce with moderate educational attainment, while limited youth involvement raises concerns regarding the long-term continuity of the occupation.

3.2 Level of satisfaction

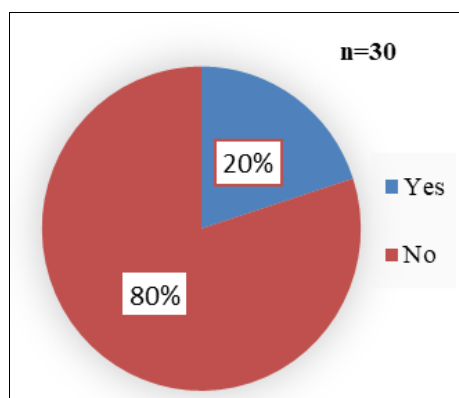


Fig 3 (a): Level of satisfaction before Market Construction

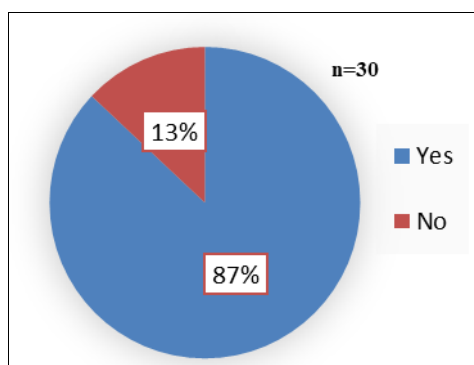
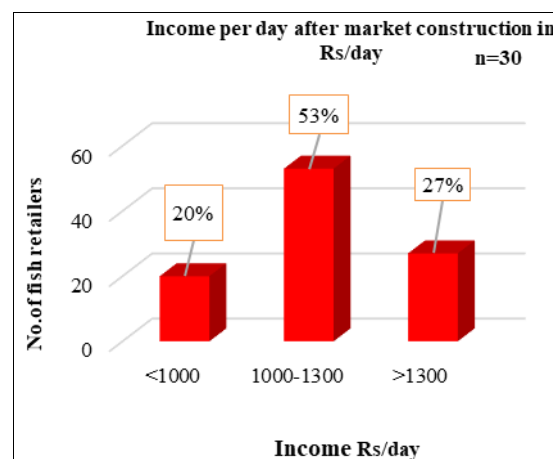
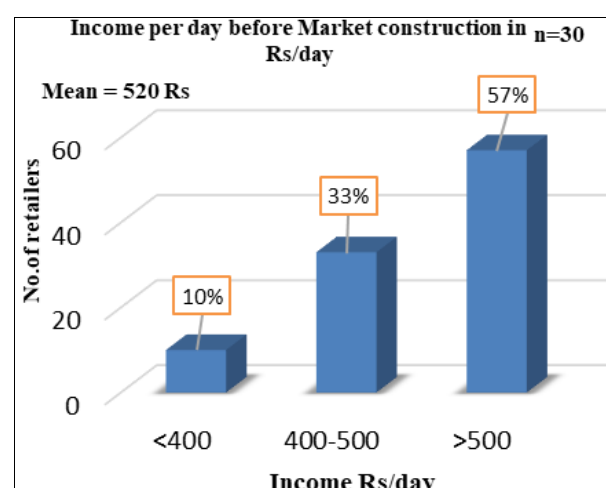


Fig 3 (b): Level of satisfaction after Market Construction

The level of satisfaction of fish retailers before and after the establishment of the GHMC Fish Market is presented in Figure 3 (a–b). Prior to the construction of the organized

fish market (Figure 3a), a majority of retailers (80%) expressed dissatisfaction, primarily due to inadequate infrastructure and low consumer turnout in roadside marketing conditions. However, after the establishment of the fish market (Figure 3b), a substantial improvement in satisfaction levels was observed, with 87% of retailers reporting satisfaction. This positive shift is largely attributed to increased consumer inflow and improved market facilities. Nevertheless, 13% of respondents remained dissatisfied, citing intensified competition among retailers as a major concern. These findings indicate that while the development of organized market infrastructure enhances overall retailer satisfaction and market efficiency, it may simultaneously introduce competitive pressures within the market system.

3.3 Income of fish retailers



The comparison of income levels before and after the establishment of the GHMC Fish Market is presented in Figure 4 (a–b). Prior to market construction (Figure 4a), 57% of fish retailers earned more than ₹500 per day. Following the establishment of the market (Figure 4b), 27% of retailers reported earning above ₹1300 per day, while 53% earned between ₹1000 and ₹1300 per day. This indicates a substantial improvement in daily income levels, suggesting that the development of organized market infrastructure significantly enhanced the earning potential of fish retailers.

3.4. Fish Sales Before and After Market Construction

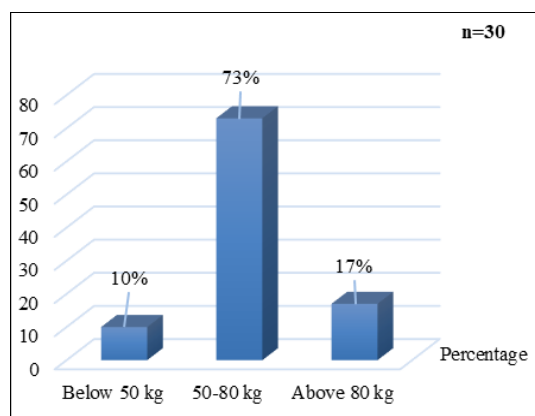


Fig 5 (a): fish sold per week before market construction

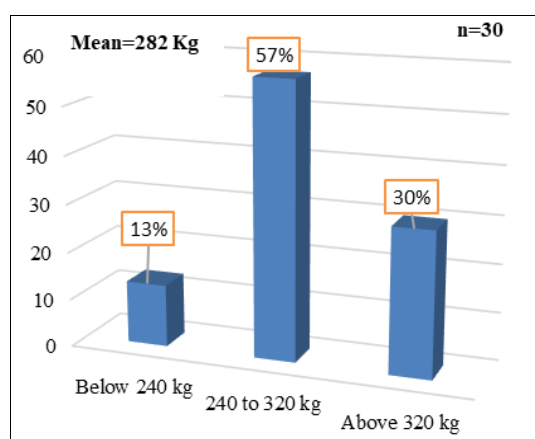


Fig 5 (b): fish sold per week before market construction

The quantity of fish sold per week before and after the establishment of the GHMC Fish Market is presented in Figure 5 (a-b). Prior to market construction (Figure 5a), the average weekly sales were 83 kg, with 73% of retailers selling between 50–80 kg and only 17% selling above 80 kg. After the establishment of the market (Figure 5b), the average weekly sales increased significantly to 282 kg, nearly three times the earlier level. Furthermore, 57% of retailers reported selling between 240–320 kg per week. This indicates a substantial improvement in sales volume, reflecting enhanced market access and increased consumer demand following the development of organized market infrastructure.

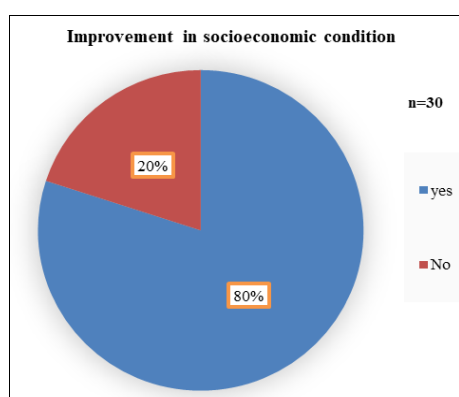


Fig 6: Improvement in socio-economic condition after market construction

The improvement in the socio-economic condition of fish retailers after the establishment of the GHMC Fish Market is presented in Figure 6. Although fish retailers are generally characterized by low income levels, the survey findings reveal that 80% of respondents reported an improvement in their socio-economic status through fish retailing. This finding is consistent with earlier studies, which also highlighted the positive impact of fish retailing on livelihood enhancement (Uddin *et al.*, 2018) [11].

3.5 Garret Ranking Techniques for Constraint Analysis

Table 1: Constraints Analysis of GHMC Fish retail Market

Constraints	Mean score	Rank
High number of middlemen	68.6	2
High cost of transportation	72.4	1
High marketing cost	60	3
Health problems associated with work	30.4	6
Inadequate storage facilities	25.6	7
Long working hours	59.5	4
Price fluctuations	54.2	5

The constraints faced by fish retailers in the GHMC Fish Market were analyzed using the Garrett Ranking Technique, and the results are presented in Table 1. The findings reveal that high cost of transportation emerged as the most severe constraint with the highest mean score (72.4), followed by high number of middlemen (68.6) and high marketing cost (60). These constraints indicate that economic and market-related factors significantly influence the profitability and operational efficiency of fish retailers.

Moderate constraints included long working hours (59.5) and price fluctuations (54.2), suggesting that both labor intensity and market instability also affect retailers' performance. On the other hand, health problems associated with work (30.4) and inadequate storage facilities (25.6) were ranked as relatively less severe constraints, although they still pose challenges to the sustainability of retail operations.

The predominance of transportation costs and the role of intermediaries highlight structural inefficiencies in the fish marketing system, which tend to reduce retailers' margins. These findings are in line with earlier studies that identified transportation costs and middlemen as major constraints in fish marketing systems (Verma *et al.*, 2015; Uddin *et al.*, 2018; Wasave *et al.*, 2018) [13, 11, 15]. Overall, the results suggest that addressing economic and infrastructural constraints—particularly transportation and market intermediation—could significantly improve the efficiency and income levels of fish retailers.

4. Conclusion and Suggestions

The present study on fish retailers operating in the GHMC Fish Market reveals that the retail sector is predominantly characterized by a middle-aged, male-dominated workforce with moderate educational attainment and a strong dependence on fish retailing as a primary livelihood. The prevalence of nuclear families and moderate household sizes further indicates a socio-economic structure closely tied to income generated from daily market activities.

The establishment of the organized fish market has brought about substantial improvements in the livelihoods of retailers. A significant proportion of respondents reported enhanced satisfaction levels, primarily due to increased consumer inflow and improved market infrastructure. This transition from informal roadside vending to an organized market system has positively influenced both income and sales performance. The observed rise in daily income levels and the nearly threefold increase in weekly fish sales clearly indicate the economic benefits associated with improved market access and infrastructure development.

Despite these positive outcomes, the study also identifies critical constraints affecting the efficiency and sustainability of fish retailing. High transportation costs, the presence of multiple intermediaries, and increased marketing expenses emerged as the most severe challenges faced by retailers. These factors continue to limit profit margins and reflect underlying inefficiencies in the marketing system.

Overall, the findings highlight that while infrastructural interventions such as the development of organized fish markets can significantly enhance retailer welfare and market performance, addressing persistent economic and structural constraints is essential for achieving long-term sustainability.

Suggestions

Efforts should be directed towards reducing transportation costs through better logistics and supply chain support. Streamlining the marketing channel by minimizing unnecessary intermediaries can improve retailer margins. Additionally, improving storage facilities and providing institutional support, including access to credit and capacity-building programs, can further strengthen the socio-economic condition of fish retailers. Promoting inclusive participation, particularly encouraging women and younger individuals to engage in fish retailing, may also contribute to the long-term sustainability of the sector.

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