

**ASSESSMENT OF FISH MARKET & MARKETING CHANNEL WITH  
SPECIAL EMPHASIS ON WHOLSALE & RETAIL MARTETS IN SOME  
SELECTED AREAS OF NATORE DISTRICT**

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SPECIAL EMPHASIS ON WHOLSALE & RETAIL MARTETS IN SOME  
SELECTED AREAS OF NATORE DISTRICT**

**By**

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**CERTIFICATE**

This is to certify that the thesis entitled '**ASSESSMENT OF FISH MARKET & MARKETING CHANNEL WITH SPECIAL EMPHASIS ON WHOLSALE& RETAIL MARTET IN SOME OF SELECTED AREAS OF NATORE DISTRICT**' submitted to the Faculty of Agribusiness Management, Sher-e-Bangla Agricultural University, Dhaka, in partial fulfillment of the requirements for the degree of **Master of Science in Agribusiness And Marketing**, embodies the result of a piece of bona fide research work carried out by **SHAWON AHMED**, Registration Number. **18-09239**, under my supervision and guidance. No part of the thesis has been submitted fat nay other degree or diploma.

I further certify that any help or source of information received during the course of this investigation has duly been acknowledged.

**Date:**

**Dhaka, Bangladesh**

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*Dedicated to My  
Beloved Parents*

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***The author***

## ABSTRACT

The survey was carried out on fish marketing system in some selected area place in Natore district to find out the marketing channels and also find out marketing cost and income of wholesalers and retailers in the study area. The survey was conducted from April to September, 2020 in five markets of Natore district. A total of 110 fish traders were randomly selected for the study and data were collected through face to face interview using a well-structured questionnaire. Focus group discussions (FGD) were carried out by a previously made checklist. Key informant interviews (KII) were made to cross-check the collected data from the fish traders. In Natore district a large number of people were involved in the fish marketing channel as *bepari*, *aratdar*, *paiker*, and retailer. Result found that there are three main marketing channel in the study area. Channel three was identifies as the largest marketing channel in the study area since there were five intermediaries between the producer to consumer. In term of marketing cost it was found that the total marketing cost of wholesaler was estimated BDT 2.72/kg of fish. Transportation was the highest cost comprising 29.41% of the total marketing cost. The second highest cost component was the icing comprising 25.73% of total marketing cost and the lowest was security comprising 4.41% of the total marketing cost. The total marketing cost of retailer in the study area was estimated BDT 2.03/kg of fish. Icing was the highest cost comprising 29.55% of the total marketing cost. Transportation was the second highest 27.09% of total marketing cost and the lowest electricity comprising 5.91% of the total marketing cost. Average profit of the wholesaler was calculated BDT 2500 per day. Among the retail market the highest profit was estimated in Abdulpur bazar and the estimated profit was BDT 797.09 tk. Among the all fish species the highest values fish was found as Pabda and per kg price of this species was calculated BDT 704.00. Whereas the lowest values was found as Pungus with BDT 122.21 kg. The study recommend that to improve the fish marketing, it is essential to establishment of ice factory, improvement of fish transport facilities and introduction of fish quality control measures.

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## LIST OF ABBREVIATIONS

<b>FGD</b>	Focus Group Discussion
<b>PRA</b>	Participatory Rural Appraisal
<b>FFGS</b>	Fish Farmer Gross Share
<b>FFNS</b>	Fish Farmer Net Share
<b>WB</b>	World Bank
<b>DoF</b>	Department of Fisheries
<b>FAO</b>	Food and Agriculture Organization
<b>FSYB</b>	Fishery Statistical Yearbook of Bangladesh
<b>BDT</b>	Bangladesh Taka



**CHAPTER 1**  
**INTRODUCTION**

# INTRODUCTION

## 1.1 Background of the study

Bangladesh is a developing country which is located in the north eastern part of South-Asia, between 20°34' and 26°38' north latitude and 88°01' and 92°41' east longitude (WB, 2000). The country is bordered by India on the west, north and north-west, Myanmar on the southeast and the Bay of Bengal on the south. The area of the country is 147,570 sq. km most of which consists of low, flat and fertile land. The country is also blessed with a network of innumerable rivers, tributaries, canals, creeks, lakes, oxbow lakes (baors), natural depression (haors and beels) and huge monsoon floodplains.

Bangladesh is estimated to possess seven to eight million hectares of wetlands in the form of permanent rivers and streams (8,53,863 hectares), estuarine and mangrove swamps (1,77,700 hectares), beels (1,14,161 hectares), Kaptai Lake (68,800 hectares), baors (5,488 hectares), floodplains (27,02,304 hectares), small ponds and tanks (3,71,309 hectares), shrimp farms (2,75,274 hectares) and seasonal culture ponds (1, 30, 488 hectares) (DoF, 2014). At present Bangladesh is ranked fourth in aquatic biodiversity in Asia and the rich freshwater resources comprise of 260 indigenous species and 12 exotic species (DoF, 2014). The marine water of the Bay of Bengal is sacred with about 475 finfish and 36 species of shrimp (DoF, 2014).

In Bangladesh fisheries sector have been playing a very significant role and deserve potential for development in the agrarian economy of Bangladesh. The fisheries sector (marine and inland fisheries) plays a vital role in the country's economy, contributing 4.37% of gross domestic product, 23.37% of Agriculture and 2.01% of export earnings (DoF, 2014). In recent years, this sector performs the highest GDP growth rate in comparison to other agricultural sectors (crop, livestock and forestry).

## **1.2 Geographical location of Natore district**

Natore is a major municipal center in north-west of Bangladesh. Natore District area 1896.05 sq. km, located in between 24°25' and 24°58' north latitudes and in between 88°01' and 88°30' east longitudes. It is bounded by Naogoan and Bogra districts on the north, Pabna and Kushtia districts on the south, Pabna and Sirajganj districts on the east, Rajshahi district on the west.

*Population* Total 698447; male 353201, female 345246; Muslim 549702, Hindu 148339, Buddhist 186, Christian 21 and others 199. Indigenous communities such as santal, oraon, Turi, Bhumij, Kaibarta, Mushar, Malpahadi, mundabelong to this upazila.

*Water bodies* Main rivers: padma, baral, Mara Baral, Baranai, Gurh, nagar; chalanbeel 'is notable. *Administration* Natore Sub-division, under Rajshahi district, was established in 1845 and it was turned into a district in 1984. Natore Municipality was formed in 1869.

## **1.3 Concept of marketing**

According to American Marketing Association (AMA) defines marketing as the performance of business activities that direct the flow of goods and services from producers to users. It includes surprisingly wide range of activities. According to Rewoldt (1977) marketing can be defined as those activities involved in getting goods and services from the producers to the consumers this definition sees marketing as essentially a bridge between two other economic functions. Its purpose is to make it possible for the utilities created by the production process to meet the ultimate economic purpose of serving the consumption process. Marketing can be defined as the process of planning and executing the conception, pricing, promotion and distribution ideas, goods and services to create exchanged that satisfies the individual and organizational objectives (Gregoret and Robert 1994). According to Kotler (1989) proposed that the societal market conceptualized more recent versions of ethnic marketing and green marketing.

## **1.4 Origin of marketing**

According to Drunker (1974) reported that marketing started in Japan in the 7<sup>th</sup> century by Mitsaw family of Tokyo. The west started marketing in the middle of the 19<sup>th</sup> century visible in the academics and business scenes. In America, it took another fifty years later. Marketing research surfaced in the early 20<sup>th</sup> century.

## **1.5 Roles of marketing**

The role of marketing in economics development cannot be exaggerated. According to Adrika (1977) marketing performs so many roles in an economic system which includes the followings:

- Links buyers and sellers, thus makes it possible for exchange relationship.
- Increase the standard of living: aggressive, marketing has been largely responsible for the high marital standard of living of most advanced economics. Through mass low- cost marketing people today enjoy products which were once considered luxuries and which are still considered as such in the societies where marketing is in its infancy.
- Create employment: Marketing functions or activities need people to be effectively involved hence means more jobs for the people. Also since marketing does not operate in isolations, hence more jobs for the other areas of the business to function.

## **1.6 Justification of the study**

Natore is familiar as one of the most important fisheries zone of the country and plays a vital role for the development of fish culture and production. Many varieties of fish species are available in the markets of the district. However, there is almost no study on the species availability and marketing channel of fish in Natore district. The present study was conducted to identify the existing marketing system in different markets of Natore District. To develop fisheries sector, proper emphasis on fish marketing system should be given. Without developing fish marketing system, fisheries sector will not be progress up to a satisfactory level. Fish production can be increased through scientific method but without good marketing system it will ultimately be fruitless. For this reason, proper emphasis should be given to improve the existing fish marketing system as both are interrelated and closely associated with each other.

## **1.7 Objectives of the study**

In the context above, the present study was undertaken to address the following objectives:

1. To identify the fish marketing channel in Natore Sadar.
2. To identify the marketing cost of wholesaler and retailer in the study areas.
3. To identify the returns of wholesaler and retailer in the study areas.



**CHAPTER 2**

**REVIEW OF LITERATURE**

## REVIEW OF LITERATURE

A good number of studies on marketing of different agricultural commodities have been done in Bangladesh except this Natore region. In spite of the great necessity of studies on the marketing of fishes, only a few empirical studies have so far been done in Bangladesh. A brief review of the few important studies made both in Bangladesh and outside Bangladesh is presented below.

**Achajee (2006)** undertook a study on socio-economic characteristics of fishers and to examine the existing open water fish marketing system along with estimation of marketing costs and margin of the intermediaries at different market levels in the system and estimated the seasonal price variation of different species of fish.

**Yousuf (2004)** carried out a study on status of fish marketing in Jamalpur, Bangladesh. This study was dealt with social and economic aspects of fish producers and marketing systems in Jamalpur district. It was found that the price of fish depends on market structure, species, quality, size and weight of fish. It was observed that the price per kg of carp increased with size and freshness of fish.

**Gupta (2004)** observed a number of constraints for fish marketing in Fulpur Upazila of Mymensingh district including higher production cost, lack of capital, higher harvesting and transport cost, higher demand of labors, poor communication facilities, inadequate ice supply, inadequate drainage system, poor water supply, poor sanitary facilities, unhygienic conditions and exploitation by middlemen.

**Majib (2004)** conducted a study on pond fish marketing in selected areas of Mymensingh district. In that study the existing marketing system and costs and margin of market intermediaries were estimated. Five types of marketing channel were found in that study.

**Rahman (2003)** conducted a study in Gazipur fish marketing was found almost exclusively a preserve of the private sector where livelihoods of a large number of people were found to be associated with fish distribution and marketing systems.

**Mollah (2002)** conducted a study on marketing system and price behavior of pond fish in some selected existing marketing system and also estimated marketing costs and margins for various intermediaries. The findings of the study revealed that the costs of aratdar, paikar and retailer were BDT 12.45, 62.32 and BDT 26.22/100 kg respectively. The net marketing margin or profit was calculated at BDT 157.04, 204.21 and 724.49/100 kg of fish respectively for aratdar.

**Biswas (2001)** noted that transportation facilities like boats/mechanical boats, shoulder load, head load and rickshaw and van were used to carry fish and dried fish by the producers while, truck, van, rickshaw, head load, shoulder load were used by the intermediaries in Cox's Bazar and Chittagong districts.

**Siddique (2001)** reported that Indian major carps were sold at higher price than exotic carps. The reasons for the low price of exotic carps were explained by the demand and taste that consumer or local traders are not willing to pay prices for exotic fish. There are seasonal variation in fish prices in Mymensingh region with the highest in summer (March to May) and the lowest in winter (November to December).

**Lofvall (1999)** conducted a study where the middlemen usually buy the fish directly from the farmers or fishermen but do not seem to have formal agreements with particular producers. Traders complaining that earlier the market had been a buyers' market, but farmers now had become tougher in negotiating prices and played traders out against each other. Practically all wholesalers also operate as retailers and have shops in Katmandu, Nepal. Sales per trader amounts to some 200-300 kg/day and their respective market shares are equal. Fish from Nepalese production areas seldom travel by tracks but is more commonly sent by night bus. The fish is usually packed in bamboo ice for chilling and large leaves or jute for protection. The ice fish ratio varies between 1:2 and 1:1 depending on the season.

**Sarker (1999)** undertook a study on marketing of cultured fish in selected areas of Chandpur district. He examined the marketing channels, costs, margins and price spreads, marketing problems and also suggested some measures for improvement of the fish marketing system.

**Hasan and Middendrop (1999)** surveyed two fish markets in south-west Bangladesh; found that the price per kg of carp increased with size for both Indian major carps and exotic carps. Of the six carp's species surveyed, rohu was found to be most expensive followed by catla, mrigal, grass carp, common carp and silver carp.

**Khalil (1999)** found that fishermen and intermediaries in Cox's Bazar and Chittagong districts faced a number of problems such as lack of fishing equipment, ice, and scarcity of capital, higher gher tolls, defective weighing system, low price of fish, lack of marketing facilities, price fluctuation, inadequate transportation facilities as well as political instability.



**Rokeya et al. (1997)** found that five types of people were involved in the distribution network from producer to consumer in Rajshahi markets. Local agent (*dalal*) collect and purchase fish on commission basis, Mahajan then transport the fish to local market and sell the catch to local retailers (nicary), wholesaler (paiker) and distributors (bapari) through commission agents (aratdar). The packing material used for carrying the fishes were mainly wooden box, bamboo basket, earthen pot, aluminum can, drum etc. Banana leaves and aquatic weeds were usually used as ancillary packing material. Fish transportation in Rajshahi includes boat, head load, shoulder load, pull cart, rickshaw and motor vehicle and often used train, bus, truck etc.

**Rahman (1997)** noted that in Bangladesh about 97% of the production is marketed internally for domestic consumption, while the remaining 3% is exported. For proper marketing systems, marketing organizations, fish freezing and storage facilities as well as ice plants should be improved. In addition, he suggested fish quality control, role of cooperatives, credit availability and participation of women in fish marketing should be ensured.

**Dewan (1997)** conducted a study on marketing of fresh water fish in Mymensingh town. He analyzed the structural and organizational features of fish marketing and observes that concentration was higher at aratdar level. He also showed that the marketing channels consisted to Nikeris or carriers, auctioneers, chalanis of dispatchers, aratdars and retailers.

**Mia (1996)** identified three marketing channels in Mymensingh district, the first one was fish farmer-bapary-aratder-retailer-consumer, the second one was fish farmer-bapery-retailerconsumer, and the third one was bapary-aratder-retailer consumer.

**Muir et al. (1996)** noted that markets have become a major issue for many aquaculture sectors, where consumer demands, international competitiveness, health and quality products attributes have assumed far greater importance than in early stages where production level were lower.

**Thomas et al. (1996)** observed that fisher women in Kerala perform major role in preprocessing and fresh fish marketing whereas, fisher women in villages of Tamil Nadu perform major roles in fish marketing and fishing net fabrication in India.

**Khan (1995)** conducted a study on fish marketing in some selected areas of Bangladesh. He analyzed the existing fish marketing system and estimated costs and margins at different stages of fish marketing. The fishes were ruhi, mrigal, boal, tengra, pangus, shing, Magur and koi. The paikar of Mymensingh earned more profit than that of all other traders. In the study area two marketing channels were identified. One was fisherman-aratdar (Commission agent) paikar (wholesaler)-retailer-consumer and the other was fisherman-paikar-consumer. The author also identified the problems of fish marketing in the selected areas. They faced the problems of shortage of capital, fluctuation and low price of fish, perishability of fish, inadequate transportation facilities and high storage charge.

**Prabhakar et al. (1995)** undertook a study on socio-economic conditions of fish marketing intermediaries in Karnataka, India. The main focus of this study was to analyze the socioeconomic condition of intermediaries. It is based on data collected through structured interviews with ten wholesalers and commission agents and 20 retailers during the fishing season of 1988-89. The socio-economic characteristics of fish traders such as caste, religion, gender and number of species in the markets distinguish the fish marketing intermediaries from other agricultural marketing intermediaries.

**Cui (1995)** stated that the fisheries sector in China still needs guidance and assistance, in particular regarding the following areas: 1) Construction of wholesale fish markets; 2) establishing nationwide fish marketing information system; 3) formulation of laws and regulations for fish marketing, standardization of marketing activities and strengthening capabilities of market management and operations; and 4) training of personnel in fish market operations and management.

**Srivastava and Ranadhir (1995)** concluded that the fish prices was highest in case of longest marketing channel as it involved high marketing cost in relation to gross margin in Bhubaneshwar, Orrisa, India.

**Atapattu (1994)** noted that the fish marketing and distribution system in Sri Lanka is concerned as co-operative aspects. Co-operatives specifically designed for the purpose of fish marketing could not be effective in improving the distribution of fish but would also assist in ensuring more equitable incomes for the fishermen.

**Chimbuya and Mutsekwa (1993)** stated that fish distribution in Zimbabwe is mostly handled by trucks which carry consignments from kabob to major urban markets. From smaller water bodies' fishes are transported by public bus or private hair vehicles, though bicycle-mounted traders serve local areas.

**Sadanandanet al. (1992)** noted that the consumer acceptance and price levels in the market place are two of the major factors that determine economic viability in many situations.

**Katiha and Chandra (1990)** fish market system currently operated was fairly integrated as far as inter-market price movements were concerned in Allahabad. However, higher retailers' profit margins accounts for a large proportion of price paid by the consumers, which was a symptom of inefficiency.

**Agarwal (1990)** suggested that the fish marketing should not have the objective of catching and selling of fish but the fish marketing should have the wide scope for exploitation, production, distribution, preservation and transportation of fish in addition to actual sale of fish by reducing middlemen.

**Biswas (1990)** noted that fishermen usually brought their fish to Netrokona mechuamazar, and sold them to aratdars, a small number of fishermen sold to retailer directly, Study showed that fishermen sold 60.35% fish to aratdar, 29.16% fish to retailers and only 10.49% fish directly to consumers. Aratdars sold 88.38% fish to retailers and only 11.62% fishes to consumers directly. Retailers collected 75.20% fish from aratdars and 24.80% fish from fishermen for selling to consumers.

**Panikkar and Sathiadhas (1989)** found that due to lack of infrastructure facilities the supply of fish at the landing center is highly inelastic in Kerala, India. The involvement of a number of middlemen in the marketing chain adversely affects the interests of both fishermen and consumer.

**Panikkar and Sathiad (1989)** has observed that fishermen's share in consumer's money varied from an average of about 40% for cheaper varieties of fish to about 65% for high priced varieties in Kerala, India.

**Chaston (1987)** a fisherman in a small rural community who lands a catch in excess of his needs and seeks to exchange the fish for another product is implicitly involved in the activity of marketing. The role of man as a trader negotiating the exchange of surplus production for another resource has been a behavior component since virtually the beginning of time. Hence it can be said that marketing that it is an ancient tradition and in fact, is unique to humanity because no other system performs this activity.

**Coulter and Disney (1987)** reported that the prices for *Hilsa* was lowest from September to March, though they tend to rise in the middle of this period (December-January). The prices of carps (ruhu and catla) were lowest from March due to intensive fishing from receding floodplains, *beels*, etc. in Dhaka wholesale market.

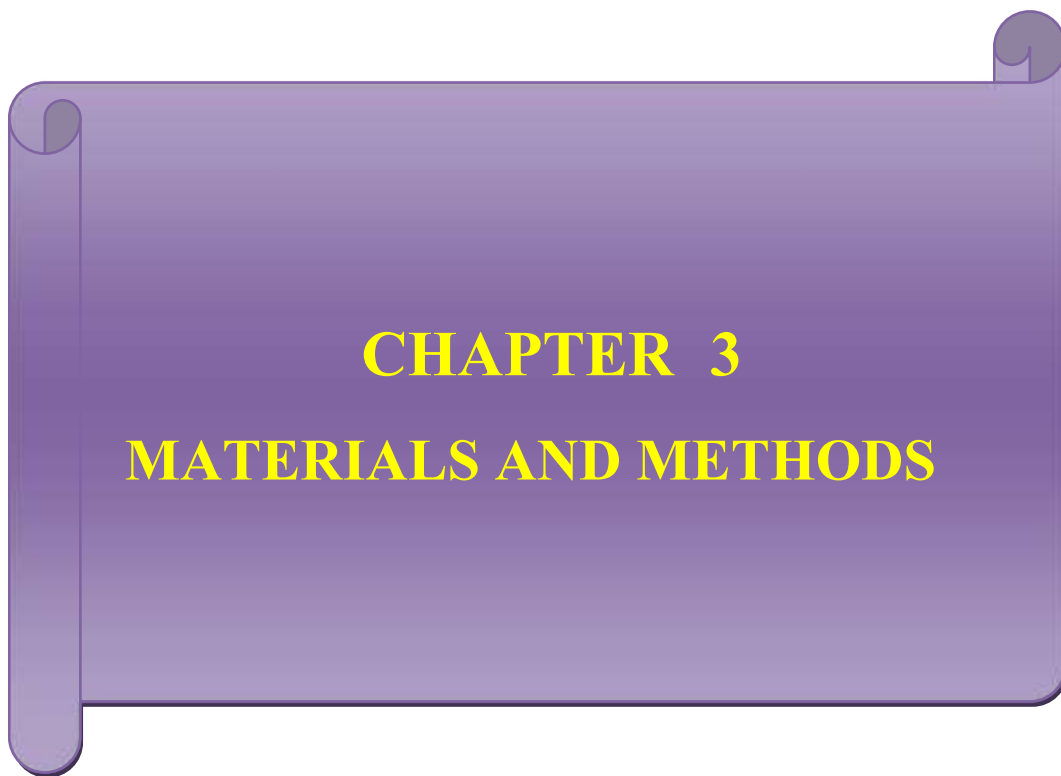
**Adeyemo (1986)** studied six different markets in Lagos, a state of Nigeria. Analysis indicates that's traders secure their initial capital mostly from trade associations. Most traders have on working capital to maintain a regular series of outlets, so wholesalers turn to associations for funds, while retailers turn to wholesalers. They eventually pay back when they sell to consumers.

**Srivastava et al. (1985)** found a lot of marketing constraints on management, production, fish supply, physical infrastructural facilities, costs and organizational and institutional support in inland fish marketing in India.

**Ahmed (1984)** observed different types of organizations/intermediaries involved at various stages of fish marketing in India. Costs, commissions, structure, risk, and profits of various members, price spread and the role of cooperatives and state fisheries development corporations in the marketing system also considered.

**Ahmed (1983)** analyzed the marketing margins of representative intermediaries' action between inland producers on the one hand, and consumers in Dhaka and Pabna on the other hand. The species of fish considered were hilsa, rohu and shing. In all cases it was found that producers were receiving between 50% and 65% of the retail price. The bulk of the marketing margin was earned by the assembler and the distributor and retail margin were only 5-10% of the consumer.

**Schroedter (1982)** stated that several methods for fish transportation were investigated and truck transport seemed to be the most suitable. He observed that an improved supply of fish through better organization and investment in adequate trucks would lower the cost and maintain the quality of fish in the markets of the larger towns and their surroundings.



## **CHAPTER 3**

### **MATERIALS AND METHODS**

## MATERIALS AND METHODS

The present chapter described the research methodology which was done to attain the objectives of the study and described the choice for selecting the methods for data collection.

The survey was carried out for a period of six months from April to September.

### 3.1 Selection of study area

Fish farming is increasing day by day in Natore sadar upazila and many farmers involved in commercial fish farming. For this reason, a fish marketing network is developed among fish farmers, commission agents, fish traders, consumers and other associated groups. For the above reason, Natore Sadar was designated as the survey area. The study area included Nicha bazar, Kadirabad bazar, Malonchi bazar, Tebaria market, Chatiyantola bazar, Abdulpur bazar market.



Fig 1: Map of Natore Sadar showing different fish market.

### 3.2 Target groups

Different types of stakeholders like fish traders, commission agent and wholesaler were selected as respondent in the study. In brief description of the stakeholders is given below:

#### 3.2.1 Retailer

Retailer are those who buy fishes from commission agents (middlemen) and sell to consumers eventually. The function of retailer is to produce supplies and display them in front of consumers at times convenient for them. Usually retailers buy fishes from commission agents through open auction. Very often retailer buy fishes of different types and categories depending on the species and size of the fish.

#### 3.2.2 Wholesaler

Wholesaler are those fish trader in the prevailing in marketing channel who purchase the fish from fish suppliers and paiker in bulk quantity. They spend a big amount of capital for purchase of fish for short period of time.

### 3.3 Sample Size

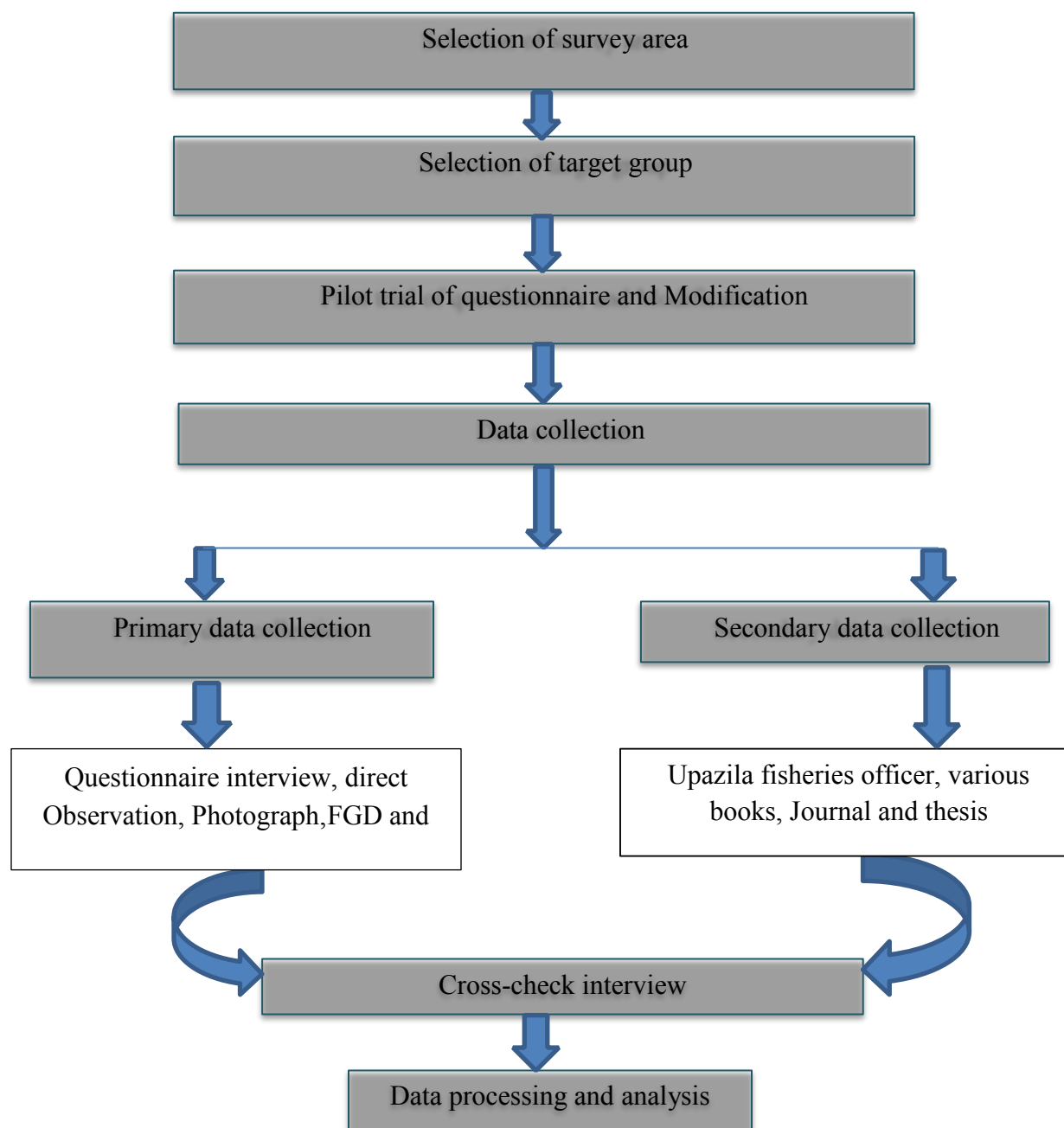
A total of 110 fish traders (Retailers or Wholesalers) were designated for interview schedule in 5 different markets (6 times in each market).

**Table 1:** Sample sizes in five different markets.

<b>Study area</b>	<b>No of the fish traders</b>
Nicha bazar	22
Tebaria bazar	22
Kadirabad market	22
Malonchi market	22
Abdulpur market	22
<b>Total</b>	<b>110</b>

### 3.4 Flow chart of the methodology

The present study has been undertaken and completed according to the following order of methodology:



**Fig 2:** Showing the research methodology executed.

### 3.5 Data collection method

By using interview schedules the researcher himself collected the applicable data from the selected intermediaries through questionnaire interview with traders, focus group discussion with traders and cross check interviews with key information were used for fish traders.



### 3.5.1 Preparation of interview schedule

It is very significant task of any research work to make an interview schedule. In this study to fulfill the research objectives, an interview schedule was prepared to collect data from traders. Before preparing the final interview schedule draft schedule were prepared in accordance with the objectives of the study. Then the schedule was pretested to verify.

### 3.5.2 Design and test of questionnaire

In investigation, a questionnaire is very essential tool for the collection of necessary information. In this study, questionnaires were ready in consistent with the objectives for collecting applicable information. The questionnaire was collected of both closed and open form of questions. Closed formed questions are easier to fill up. However, some descriptive types of answers and open from of questions are also essential to know facts. That is why both closed and open form of question was used in questionnaires.



**Plate 1:** Photographs showing fish marketing and respondents in different market of Natore sadar.

### 3.5.3 Questionnaire interviews with fish traders

For questionnaire interview, fish traders were selected through simple random sampling method. Interviews were taken at the market center during marketing time. Traders took part in interview together during fish selling activities as a result there was a scope to perceive the marketing activities. The questionnaire was simple and focused on only marketing information.



**Plate 2:** Questionnaire interviews with fish traders at Nicha bazar.

### 3.5.4 Focus group discussion (FGD)

Data from intermediaries was collected through focus group discussion (FGD). FGD was executed with intermediaries in Natore sadar upazila to get an overview of fish distribution and marketing system, restrictions of fish distribution and marketing etc. A total of 6 FGDs sessions were conducted where each group size of FGD was 4 to 6 intermediaries.



**Plate 3:** Focus group discussion with traders at Nicha bazar.

### 3.5.5 Cross-check interviews

Important informants are especially knowledgeable on particular topic and are likely to be able to answer questions in relatively important ways about the question were selected. Cross check interview were determined with key informants such as (UPO), Fish market management agency.

### 3.6 Data processing and analysis

After collection of data from the field were tested to eradicate errors and conflicts. Preliminary data sheets (in computer) were compared with the original questionnaire and result sheets to ensure the accuracy of the data entry. The data were processed and finally analyzed using Microsoft Excel software. Here the following formula used-

a.  $MC=C_1+ C_2+ C_3+ C_4+ C_5+ ..... C_n$

Where,

MC=Marketing Cost

$C_1$  = Transportation cost

$C_1$  = Icing cost

$C_2$ = Market Toll

$C_3$ = Labour Cost

$C_4$ =Electricity Cost

$C_5$ =Security Cost

$C_n$  = Others

b. Marketing Margin=  $SP-PP$

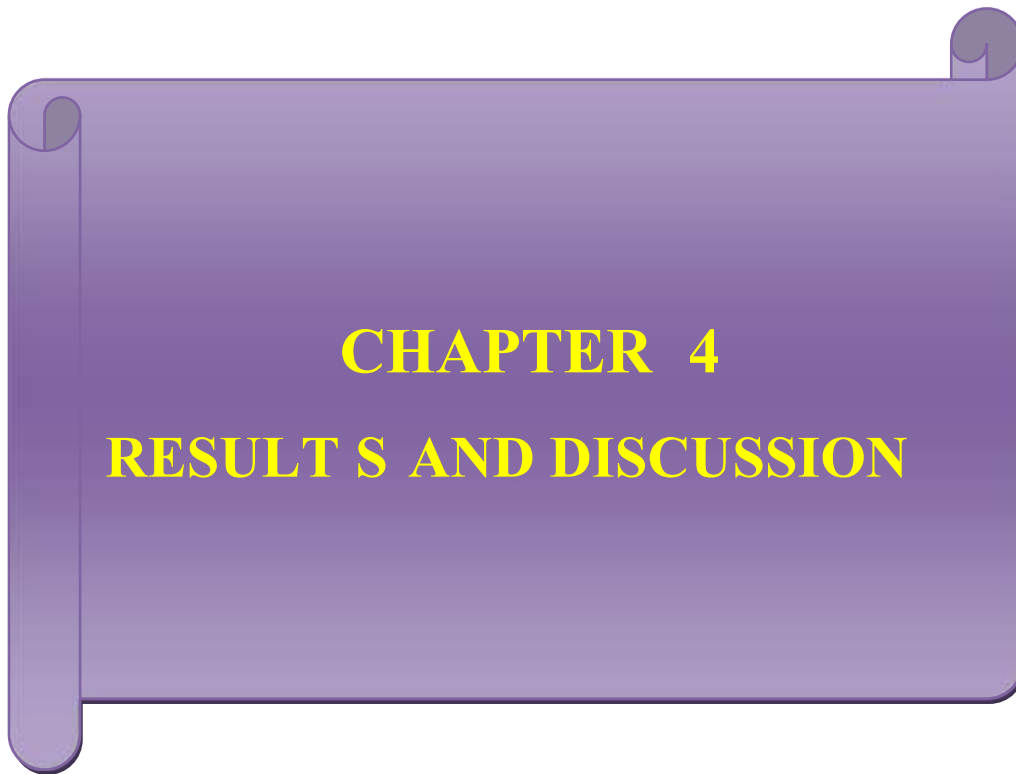
c.  $NN=SP-(MC+PP)$

Here, SP= Sale Price, PP= Purchase Price & NM= Net Margin/Profit

### **3.7 Problems faced during data collection**

During the period of data assemblage, the following problems were faced by the researcher:

- ❖ Most of the respondents in the study areas had no idea about a research work and it was therefore, difficult at the first hand to explain the purpose of this research and to convince them.
- ❖ Most of respondents were initially hesitated to answer questions asked since they thought that the investigator might use the information against their interest. They provide incorrect data related to size of land holdings and income received from different sources because they were afraid of land acquisition by the government and
- ❖ The price of fish is very much unstable.
- ❖ Traders were busy in trading and unwilling to talk.
- ❖ Some traders thought that the researchers to be the government official of tax or other department and feared to talk.
- ❖ In addition, language problems or use of local terminologies, data in local units and some traders want something in cash or kind for giving interviews.

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**CHAPTER 4**  
**RESULTS AND DISCUSSION**

## RESULTS AND DISCUSSION

The main findings of this chapter are the marketing system and marketing channel of fish. An effort has been made to find out the marketing channel of fish which are accomplished by a number of fish intermediaries in Natore sadar.

### 4.1 Socioeconomic Characteristic

#### 4.1.1 Age distribution of the respondent

In the present study, age of the respondents was classified into three categories, i.e., young, middle aged and old aged. It is clear from Table 2 that the respondents aged between 31 to 45 years accounted for 51.82 % of the total sampled respondents while respondent young constituted 21.82 %. There were only 26.36 % sample respondents who belonged to old aged. It can be concluded from Table 2 that middle aged group were maximum of the respondents.

Table 2: Age Distribution of the Respondents

Age group in the study area	Number of respondents	Percentage (%)
Young (up to 25 years)	24	21.82
Middle aged (25-45 years)	57	51.82
Old aged (up to 60 years)	29	26.36
Total	110	100.00

#### 4.1.2: Educational level of the respondents

Education plays a vital role on any sort of citizen of the country. To examine the education level of the respondents, it was classified into five categories, i.e., illiterate, can sign only, primary, secondary and above secondary. Table 3 reveals that 10.91 percent of the respondents had secondary level education. Respondents of different categories vis-à-vis can sign only, primary and above secondary levels constituted 15, 46.36 and 15.45 percent respectively. So the level of education was satisfactory though the respondents in the study area.

Table 3: Educational Level of the Respondents

Education level	Number of the respondents	Percentage (%)
Illiterate	28	25.45
Can sign only	51	46.36
Primary (1-5)	17	15.45
Secondary (6-10)	12	10.91
Above secondary (>10)	2	1.82
Total	110	100.00

#### 4.1.3 Family size of the respondents

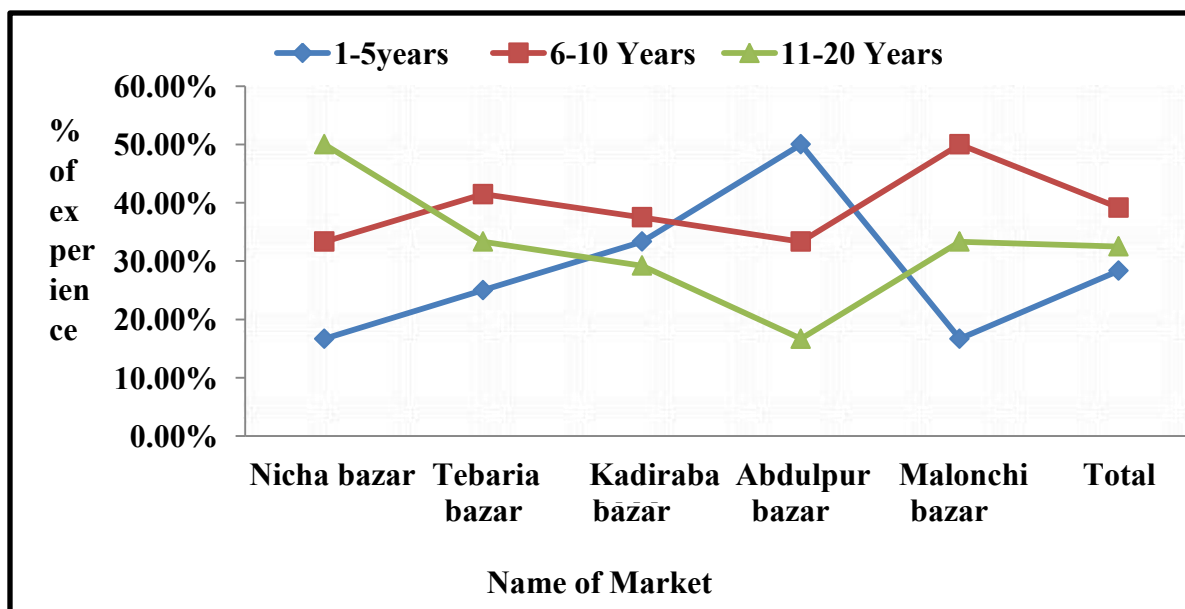
A family or a household was defined as a group of persons living together, taking meals from a single kitchen and living under the control of one head. To examine the family size of the respondents, family size was classified into three categories, i.e., small family medium family and large family. Table 4 shows that 55.45 percent of the respondents had small family (up to 4 members). Respondents of different group viz medium and large family constituted 37.27 and 7.27 percent respectively. The average family size was 4.29.

Table 4: Family Size of the Respondents

Number of Family Member	Number of respondent	Percentage (%)	Average family size
Small family (up to 4)	61	55.45	4.29
Medium family (5-6)	41	37.27	
Large family (>6)	8	7.27	
Total	110	100	

#### 4.1.4 Experience in fish trading

There was various experience persons involved in study area this types of persons done in different types of marketing activities. There was very little difference in average experience of the fish traders among the five markets.



**Fig 3:** Experience distribution of fish trader in fish trading.

In the study area 28.33% traders were up to 1-5 years, 39.17% between 6-10 years, and 32.29% between 11-20 years. The highest percentages of the fish traders experience in all the markets were up 39.17% between 6-10 years. 6-10 Years people can do better performance in their marketing activities and the lowest percentages of the fish traders experience in all the markets were up 28.33%. This result agree with the finding of Jamal (2013) who stated that 70% of the respondents had 2-10 years of experience and 26% fish traders more than 10 years and 4% of the traders less than one years' experience in degree in the study area of Gopalpur upazila of Tangail district.

#### 4.2 Fish Species Found in Study Area

Table 5: Scientific name, local name, order and family wise fish species.

Scientific name	Local name	Order	Family
<i>Xenentodoncancila</i>	Kankila	Beloniformes	Belonidae
<i>Hyporhamphuslimbatus</i>	EkThuita	Beloniformes	Hemirhamphidae
<i>Gudusiachapra</i>	Chapila	Cypriniformes	Clupeidae
<i>Coricasoborna</i>	Kachki	Cypriniformes	Clupeidae
<i>Puntius ticto</i>	Tit punti	Cypriniformes	Cyprinidae
<i>Puntius sarana</i>	Shorpunti	Cypriniformes	Cyprinidae
<i>Puntius sophore</i>	Jatpunti	Cypriniformes	Cyprinidae
<i>Amblypharyngodonmola</i>	Mola	Cypriniformes	Cyprinidae
<i>Labeorohita</i>	Rui	Cypriniformes	Cyprinidae



<i>Cirrhinus cirrhosis</i>	Mrigal	Cypriniformes	Cyprinidae
<i>Labeocalbasu</i>	Kalibaus	Cypriniformes	Cyprinidae
<i>Labeobata</i>	Bata	Cypriniformes	Cyprinidae
<i>Labeogonius</i>	Goinia	Cypriniformes	Cyprinidae
<i>Osteobramacotio</i>	Dhela	Cypriniformes	Cyprinidae
<i>Esomusdanricus</i>	Darkina	Cypriniformes	Cyprinidae
<i>Tenualosailisha</i>	Ilish	Clupefomes	Clupediae
<i>Puntius terio</i>	Teri punti	Cypriniformes	Cyprinidae
<i>Chela cachius</i>	Chep Chela	Cypriniformes	Cyprinidae
<i>Lepidocephalichthysguntea</i>	Gutum	Cypriniformes	Cobitidae
<i>Botia Dario</i>	Rani	Cypriniformes	Cobitidae
<i>Monopteruscuchia</i>	Kuchia	Synbranchiformes	Synbranchidae
<i>Tetraodon cutcutia</i>	Potoka	Tetraodontiformes	Tetraodontidae
<i>Channamarulius</i>	Gozar	Perciformes	Channidae
<i>Channastriatas</i>	Shol	Perciformes	Channidae
<i>Channa punctatus</i>	Taki	Perciformes	Channidae
<i>Channabarca</i>	TilaShol	Perciformes	Channidae
<i>Channaorientalis</i>	Cheng	Perciformes	Channidae
<i>Nandusnandus</i>	veda	Perciformes	Nandidae
<i>Anabas testudineus</i>	koi	Perciformes	Anabantidae
<i>Colisafasciatus</i>	kolisha	Perciformes	Anabantidae
<i>Glossogobiusgiuris</i>	Bele	Perciformes	Gobiidae
<i>Parambassislala</i>	Lalchanda	Perciformes	Ambassidae
<i>Pseudambassisbaculis</i>	Chanda	Perciformes	Ambassidae
<i>Chanda nama</i>	Lambachanda	Perciformes	Ambassidae
<i>Oreochromisniloticus</i>	Nilotica	Perciformes	Cichlidae
<i>Oreochromismossambicus</i>	Telapia	Perciformes	Cichlidae
<i>Wallago attu</i>	Boal	Siluriformes	Siluridae
<i>Ompokpabda</i>	Pabda	Siluriformes	Siluridae
<i>Heteropneustesfossilis</i>	Shing	Siluriformes	Heteropneustidae
<i>Clariasbatrachus</i>	Magur	Siluriformes	Clariidae
<i>Neotropiusatherinoides</i>	Batashi	Siluriformes	Schilbeidae
<i>Eutropiichthysvacha</i>	Bacha	Siluriformes	Schilbeidae
<i>Ailiacoila</i>	Kajuli	Siluriformes	Schilbeidae
<i>Clupisomagarua</i>	Garua	Siluriformes	Schilbeidae
<i>Rita rita</i>	Rita	Siluriformes	Bagridae
<i>Mystusbleekeri</i>	Tengra	Siluriformes	Bagridae
<i>Sperataseenghala</i>	Guizza Air	Siluriformes	Bagridae

<i>Sperataaor</i>	Air	Siluriformes	Bagridae
<i>Mystustengara</i>	Bajaritengra	Siluriformes	Bagridae
<i>Mystuscavasius</i>	Gulsha	Siluriformes	Bagridae
<i>Mystusvittatus</i>	Tengra	Siluriformes	Bagridae
<i>Mystusarmatus</i>	KataTengra	Siluriformes	Bagridae
<i>Bagariusbagarius</i>	Baga air	Siluriformes	Sisoridae
<i>Macrogathusaculeatus</i>	Tara baim	Synbranchiformes	Mastacembelidae
<i>Mastacembeluspancalus</i>	Guchibaim	Synbranchiformes	Mastacembelidae
<i>Mastacembelusarmatus</i>	Baim	Synbranchiformes	Mastacembelidae
<i>Notopterusnotopterus</i>	Foli	Osteoglossiformes	Notopteridae

### 4.3 Fish Distribution and Marketing System

A number of intermediaries were involved between farmers and consumers in fish marketing system in Natore sadar. The market sequence from farmers to consumer passed through a number of intermediaries, which can be divided into three channels.



**Fig: 4: Overall fish marketing channel showing five different markets from farmers to consumers in Natore district.**

Under the Channel-I it is seems that all fish traders were more befitted than channel-II and channel-III. It showed that, shortest the marketing chain highest the profit.

In case of channel-II it is seems that, this channel is comprised of more intermediaries than Channel-I but less than channel-III. In the marketing channel-II the highest profit gainers are retailers 18.10% followed by wholesalers 16.92%, distributors 15.90%, and primary fish traders 15.22%. This channel is less profitable than the Channel-I but more profitable than channel-III.

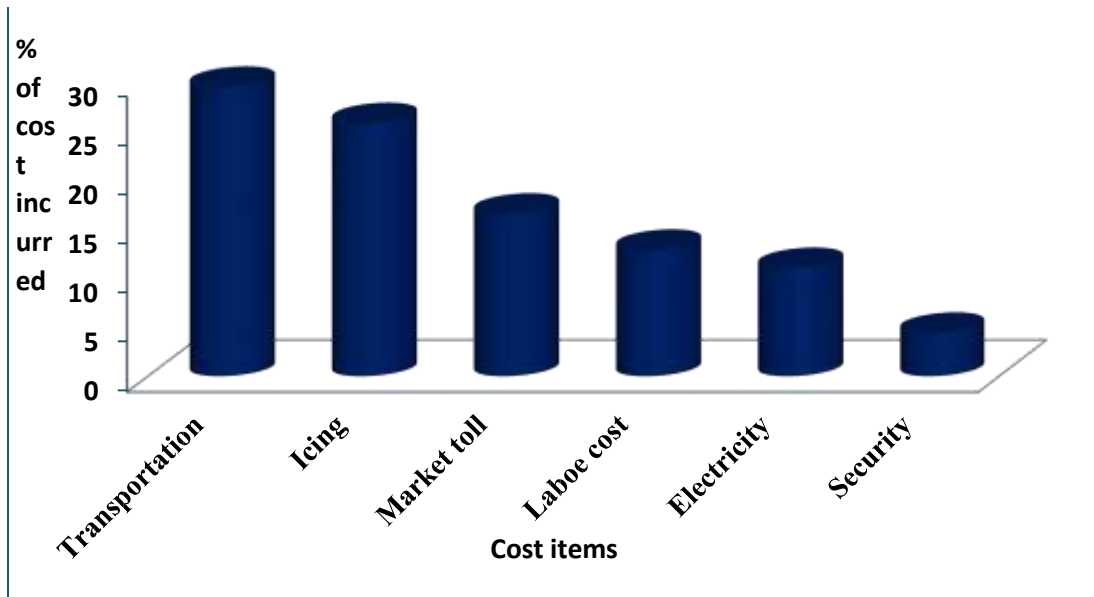
It was observed that channel-III made up of of highest number of intermediaries than other two marketing channels. In channel-III most befitted intermediaries are retailers 15.85% followed by wholesalers 15%, distributors 14.16%, local wholesalers 13.60% and primary fish traders 12.62%. The channel simply reveals that, the highest number of intermediaries involved in a marketing channel less the profit. Among the three channels, now it can be concluded that, the Channel-I is more profitable than channel-II and channel-III.

#### **4.4 Marketing Cost**

The cost that moved the product from producers to consumers was known as marketing cost. In other word, the cost of marketing symbolizes the cost of performing the various marketing functions Biswas (1990). In fish marketing, the cost of fish is not equal at different stages in the marketing process. This might vary from producer to consumer by the involvement of various intermediaries. On the basis of collected data, marketing cost are showed below.

##### **4.4.1 Marketing cost of Wholesaler**

Wholesaler performed the function of marketing arrangement for selling fish of producers and paikars. For performing these functions, they had to incur some costs. Marketing cost of wholesalers (Fig: 5).

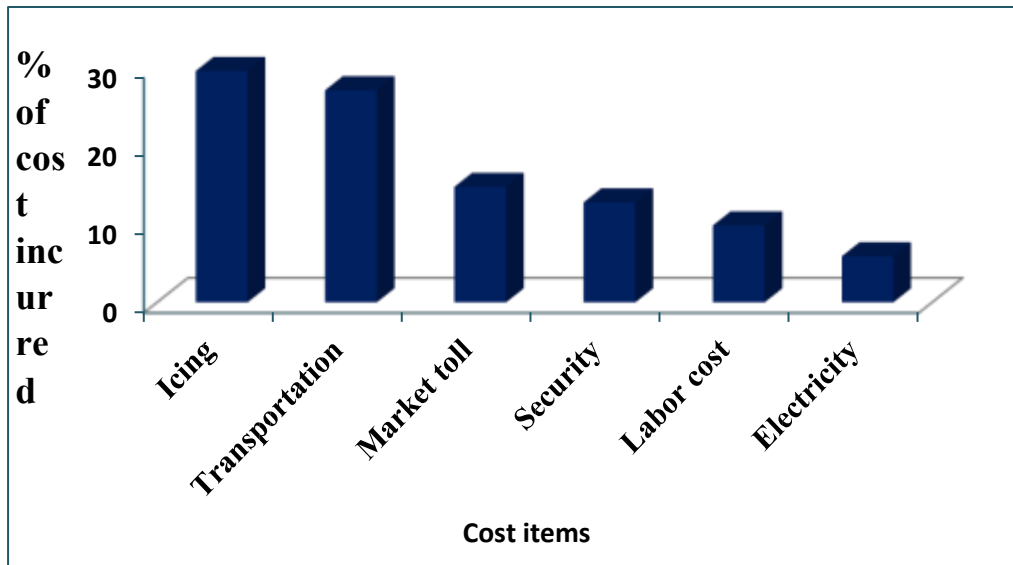


**Fig. 5:** Marketing cost of wholesaler in Nicha bazar.

The total marketing cost of wholesaler was estimated BDT 2.72 / kg of fish. Transportation was the highest cost item comprising 29.41 % of the total marketing cost. The second highest cost component was the icing, which was 25.73 % of total marketing cost and security was the lowest comprising 4.41 % of the total marketing cost. This result similar found to be the result of Jamal (2012) who reported that marketing cost of wholesaler was calculated BDT 6.167/ kg of fish. Trader's commission was the highest cost item comprising 48.01% of the total marketing cost. The second highest cost item was transportation cost, which was 12.99% of total marketing cost in the study area of Gopalpur upazila of Tangail district.

#### **4.4.2 Marketing cost of Retailer**

The retailers generally purchased fish from the producer and paikars through aratdars and sold to the consumers at different market. The cost components included security, electricity, icing, market toll, personal expense, transportation.



**Fig 6:** Marketing cost of retailers.

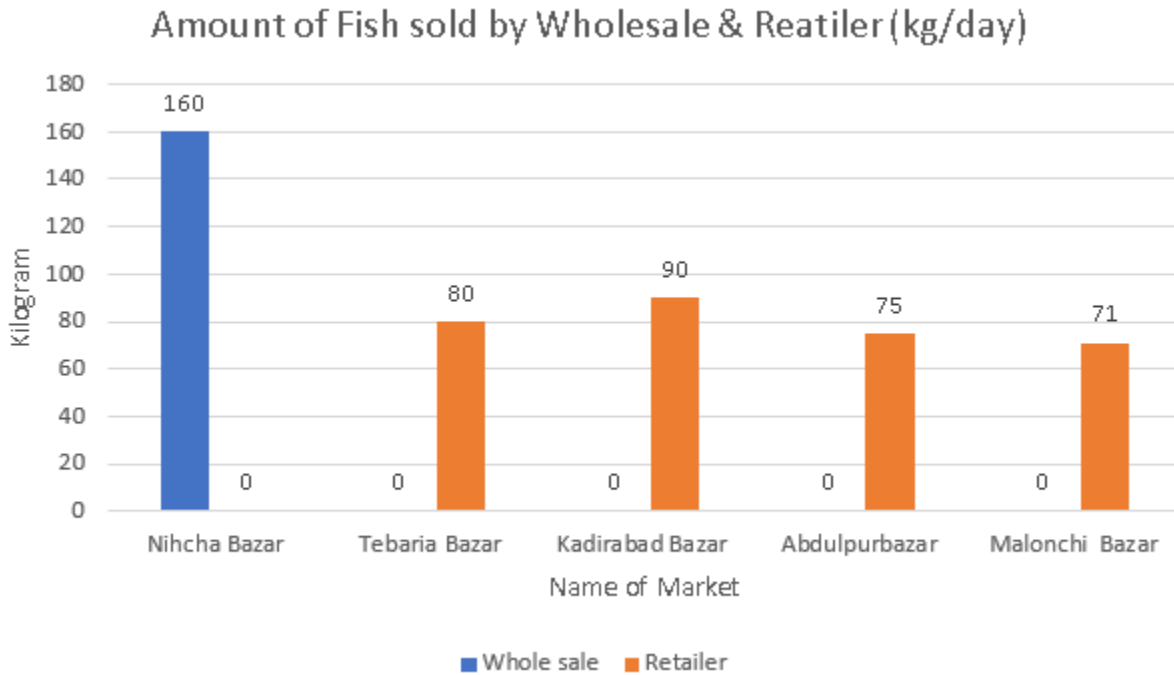
The total marketing cost of retailer was estimated BDT 2.03/kg of fish. Icing was the highest cost item comprising 29.55% of the total marketing cost. Transportation was the second highest cost 27.09% of total marketing cost and electricity was the lowest cost 5.91% of the total marketing cost. This finding similar to the result of Goon (2011) who stated that total marketing cost of retailer was estimated BDT 1.8285/kg of fish. Transportation was the comprising 22% of the total marketing cost. The second highest cost component was the personal expenses, which accounted for 20% of total marketing cost in the study area of Natore town.

#### **4.5 Time of Fish Trading**

The season of fish trading was year round. Kadirabad bazar traders were engaged in fish trading from 7.00 AM to 3.00 PM, while in Nicha bazar traders were engaged in fish trading from 4.00 AM to 10.00 PM and Abdulpur bazar traders were involved in fish trading from 7.00 AM to 11.00 AM and Malonchi bazar traders were involved in fish trading from 9 AM to 12 AM and Tebaria bazar market traders were affianced in fish trading from 4 PM to 11 PM. This result agree with the finding of Salma (2013) who descried that in Kadirabad bazar traders were engaged in fish trading from 4.00 AM to 10.00 PM, while in Nicha bazar traders were engaged in fish trading from 4.00 AM to 10.00 PM and Malonchi bazar traders were engaged in fish trading from 4.00 AM to 11.00 PM in the study area of Natore district.

#### 4.6 Amount of Fish Sold

There are different types of fish traders involve in the study area, they sold fish different amount every day.



**Fig 7:** Amount of fish sold in different market (kg/day)

From the study, it can be said that the highest average fish sold by traders were in Nicha bazar 160 fish kg/day, followed by 80 kg fish/day in Tebaria bazar bears and Kadirabad market 90 kg fish/day, Abdulpur market 75 kg fish/day and Malonchi market sold on an average 71 kg fish/day. This finding is similar to the result of Salma (2013) who reported that in Nicha bazar sold on an average 200 kg fish/daily, Tebaria bazar bears 120 kg fish/day and Kadirabad 80 kg fish/day in the study area of Natore district.

#### 4.7 Incomes of Wholesalers and Retailers

Average income (BDT/day) of the wholesalers and retailers in different market of the study area.

**Table 6:** Average incomes of wholesalers and retailers in the study area.

Parameters	Nicha bazar	Tebaria bazar	Kadirabad market	Abdulpur market	Malonchi market
Wholesalers average income BDT/day	16500	-----	-----	-----	.....
Retailers average income BDT/day	-----	4633.75	4712.29	5183.79	4100.25

The result of the present study showed that average daily incomes of wholesaler in Nicha bazar was BDT 16500 while in Tebaria bazar retailers incomes BDT 4633.75/day and kadirabad bazar retailers income BDT 4712.29/day and Abdulpur bazar retailers income BDT 5183.79/day, Malonchi bazar retailers incomes BDT 4100.25/day. This result is similar of Salma (2013) who described that average daily income of wholesaler in Nicha bazar was BDT 2000 while in Tebaria bazar at BDT 1000/day and Kadirabad BDT 850 /day in the study area of Natore district.

#### 4.8: Average Profit (BDT/day) of the Wholesalers and Retailers in Different Market of the Survey Area.

**Table 7:** Average profit of wholesalers and retailers in the study area.

Parameters	Nicha bazar	Tebaria bazar	Kadirabad bazar	Abdulpur bazar	Malonchi bazar
Wholesalers average profit BDT/day	2500	-----	-----	-----	.....
Retailers average profit BDT/day	-----	716.16	751.17	797.09	655.20

The result of the present study showed that average daily profit of wholesaler in Nicha bazar BDT 2500 while in Tebaria bazar retailers profit BDT 716.16/day and Kadirabad bazar market retailers profit BDT 751.17/day and Abdulpur bazar retailers profit BDT 797.09/day, Malonchi bazar retailers profit BDT 655.20/day.

**Table 8:** Average retail price (BDT/Kg) of fishes in different market.

Fish species	Nicha bazar	Tebaria bazar	Kadirabad bazar	Abdulpur bazar	Malonchi bazar	Average price	
<b>Indian major carps</b>	<b>Average price of fish (BDT/kg)</b>						
	Catla	186	237.86	205	313	245.50	237.76
	Rohu	157	221.43	225.5	225	225	210.79
	Mrigal	133.5	202.25	160.25	225.71	230	190.34
	Kalibaush	134.17	172.30	170	152.30	160.5	157.85
<b>Exotic carps</b>	Silver carp	82.5	142.5	120	147.50	142.24	126.95
	Grass carp	115.55	185	165.62	145.25	170.25	156.33
	Common carp	116.25	160	166.25	170.30	162.30	155.02
	Bighead carp	91.5	135.20	130.50	135.25	140.25	126.54
<b>Indigenous specie</b>	Pungus	89.5	106.87	131.75	140.75	142.20	122.21
	Tilapia	106	154.29	148.75	147	153.24	141.86
	Ilish	575.25	750	800	770	780	735.05
	Boal	252.5	456.25	450.25	712.5	600	494.30
	Koi	300	500	512.5	530.20	520.20	472.58
	Shing	251.15	500	526.25	620.75	550.5	489.73
	Pabda	370	700	800	900	750	704.00
	Magur	270.25	300.30	320.20	344.5	318.30	310.71

In the study area, it was observed that average retail price of rohu was highest BDT 225/kg in Malonchi bazar and lowest BDT 157/kg in Nicha bazar. Catla was highest BDT 313.58/kg in Abdulpur and lowest BDT 186.87/kg in Nicha bazar. Mrigal was highest BDT 230/kg in Abdulpur market and lowest BDT 133.5/kg in Nicha bazar. Silver carp was highest BDT 147.50/kg in Abdulpur and lowest BDT 82.5/kg in Nicha bazar. Grass carp was highest BDT 170.25/kg in Kadirabad bazar and lowest BDT 115.55/kg in Nicha bazar. This result is similar of result Jamal (2012) who reported that average retail price was rohu, catla, mrigal, silver carp, grass carp in Gopalpur bazar BDT 176.67/kg. Rohu, catla, mrigal, silver carp, grass carp BDT 172.5/kg was in Belua bazar. Rohu, catla, mrigal, silver carp, grass carp BDT 166.67/kg was in Alamnagar bazar. Rohu, catla, mrigal, silver carp, grass carp BDT 169.58/kg was in Suti bazar. Rohu, catla, mrigal,



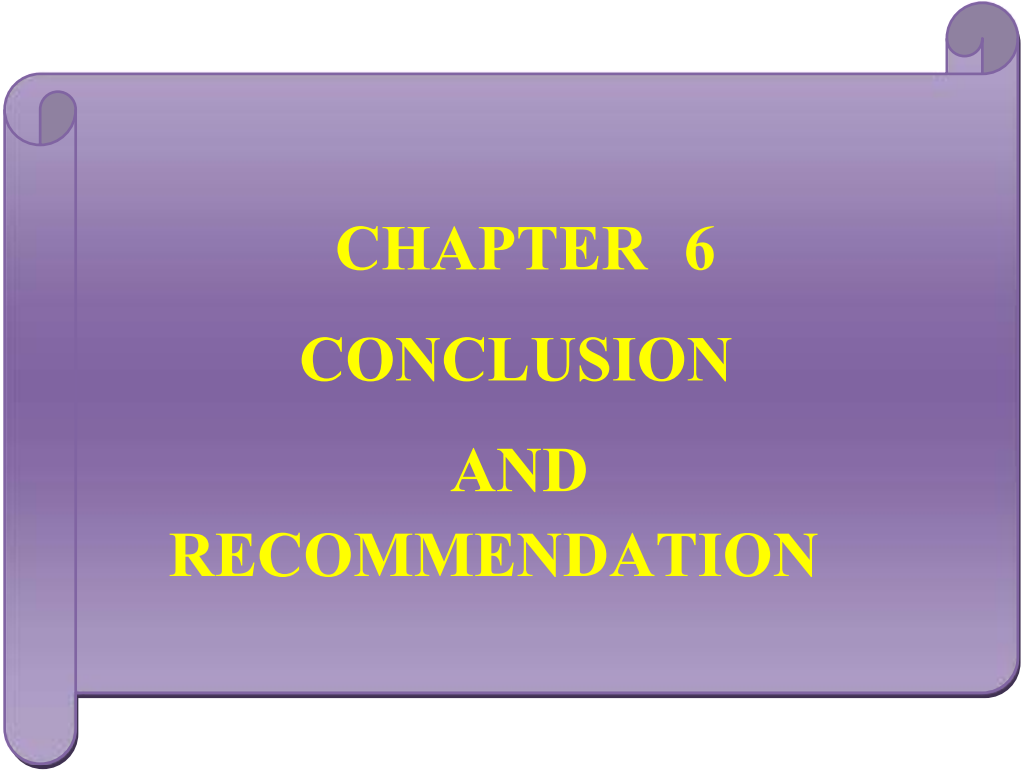


**CHAPTER 5**

**SUMMARY**

## SUMMARY

The survey was carried out for a period of six months from April to September. Data collection from wholesaler, retailer. Process of data collection Questionnaire, direct observation, photograph, interview, PRA, FGD, and cross check interview. The study area included Nicha bazar, Tebaria bazar, Kadirabad bazar, Abdulpur bazar, Malonchi bazar. A total of 110 fish traders (retailer or wholesaler) were designated for questionnaire interviews in 5 different markets (6 times in each market). The study area mainly conducted to identify the best fish marketing channel in Natore Sadar. To identify the marketing cost and incomes of wholesaler and retailers in the study area. The total marketing cost of wholesaler was estimated BDT 2.72/kg of fish. Transportation was the highest cost item comprising 29.41% of the total marketing cost. The second highest cost component was the icing, which was 25.73 % of total marketing cost and security was the lowest comprising 4.41 % of the total marketing cost. Average daily income of wholesaler was BDT. 16500 in Nicha bazar while in Tebaria bazar retailer income BDT. 4633.75/day and Kadirabad bazar retailer income BDT. 4712.29/day and Abdulpur bazar retailer income BDT 5183.79/day, Malonchi bazar retailer income BDT 4100.25/day. It was noted that indigenous species were sold at higher price than the Indian major carps while Indian major carps were sold at higher price than exotic carps. Indian major carps catla showed the highest price and kalibaus was the lowest price, among the exotic carps the highest price was found common carp and lowest price for silver carp. Among the indigenous specie the highest price was found for pabda and lowest price for tilapia. Different types of problem faced by traders such as icing, electricity, personal expense, labor cost and transportation. So improvement of existing marketing system and appropriate action should be taken.



**CHAPTER 6**  
**CONCLUSION**  
**AND**  
**RECOMMENDATION**

## CONCLUSION AND RECOMMENDATIONS

Bangladesh has great opportunity to become one of the prevalent fish's producers in all over the world. Because it has many rivers, long sea shore area, efficient fishermen, competent fish's producer and better weather. But we have found different problems in this area which is that very few studies has been carries out related to marketing channel. The study area was five markets; Nicha bazar, Tebaria bazar, Kadirabad bazar, Abdulpur bazar, Malonchi bazar in NatoreSadar. The survey was conducted during April to September 2020. A total of 110 fish retailers and wholesalers were selected for questionnaire interview in five different markets. In fish marketing systems, there were a number of middlemen involved in Natore sadar. Agent or suppliers carry fish from remote villages to the wholesalers in marker centers and naturally earned 3-5% commission for their services, sometimes suppliers take small amounts of *dadon* (Locally called) credit from wholesalers to ensure the supply of fish from farmers. A number of restrictions for fish marketing were reported by retailers and wholesalers, including higher transport cost, poor road and transport facilities, and poor supply of ice, exploitation by middleman, inadequate drainage system, poor water supply, poor sanitary facilities and unhygienic condition. Without appropriate and firm implementation of fisheries rules and regulations by the competent authority and logistics support like technical and marketing facilities, and significant changes in the total procedure, a little positive change can be expected. To improve the existing marketing system, the following recommendations should be undertaken:

- ❖ Training of fish market operators in areas of fish preservation, handling, icing and curing.
- ❖ Improvement of rural roads, transports, handling and shipment facilities.
- ❖ Sufficient water supply and drainage facilities should be ensured.
- ❖ Inappropriate system of weights and measures was followed by the intermediaries in the study area.

A purple scroll graphic with a gradient from light to dark purple. The scroll is unrolled, showing a central area with the word "REFERENCES" written in a bold, yellow, serif font. The scroll has rounded corners and a small tab at the top right.

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A purple scroll graphic with a dark purple outline and a lighter purple gradient fill. The scroll is unrolled, with the top and bottom edges curled up. The word "APPENDICES" is written in the center in a bold, yellow, serif font.

# APPENDICES

## Appendix 1: Questionnaire

Date:.....

**Market name:**

**Trader's name:**

**Trader type:**  Whole seller     Retailer

Union:

Upazila:

District:

**1. Information of fish trader**

- a. Age:..... years
- b. Gender:    Male /    Female
- c. Years of schooling:.....years
- d. Family size:..... Male:..... Female:.....
- e. Religion:.....
- f. Primary occupation:.....
- g. Secondary occupation:.....

2. Experience in fish trading: ..... years.

3. Information of fish market:

- a) Peak marketing season: ..... to..... month.
- b) Time of fish trading: .....am/pm to.....am/pm
- c) Amount of fish trading everyday:.....Kg

4. Marketing cost kg/tk for different market intermediaries

Transportation	Icing	Market toll	Laboure cost	Electricity	Security

**5. Average purchase and selling price of different fish species**

Fish species	Average purchase price (BDT/Kg)	Average selling price (BDT/Kg)	Net return
Catla			
Rohu			
Mrigal			
Kalibaush			
Silver carp			
Grass carp			
Common carp			

Bighead carp			
Pungus			
Tilapia			
Ilish			
Boal			
Koi			
Shing			
Pabda			
Magur			

**6. If you have any recommendation please specify here**

- a.
- b.
- c.
- d.

Thank you for your cooperation.

.....

Name and signature of the enumerator