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EDITORIAL

We feel honoured and privileged to present the Bi-Annual Peer Reviewed Refereed Journal, ISSN (Online): 2583-5203, Volume 4, No. 01, June, 2025 among our esteemed readers and academic fraternity.

This Journal is the outcome of the contributions of insightful research-oriented papers/articles by various eminent academicians, and research scholars in a highly organized and lucid manner with a clear and detailed analysis related to the emerging areas in the fields of Social Sciences and Allied Areas.

The views expressed in the research-oriented papers/articles solely belong to the paper contributor(s). Neither the Publisher nor the Editor(s) in any way can be held responsible for any comments, views and opinions expressed by **paper contributors**. While editing, we put in a reasonable effort to ensure that no infringement of any intellectual property right is tolerated.

We also express our sincere thanks and gratitude to all the contributors to research papers/articles who have taken pain in preparing manuscripts, incorporating reviewer(s) valuable suggestions and cooperating with us in every possible way.

We also express our heartfelt gratitude to all the esteemed members of the Editorial Board, Esteemed Reviewer(s) who despite their busy schedules have given their valuable time, suggestions and comments to enrich the quality of the contributory research paper(s) in bringing to light this June issue.

Last, but not least, we revere the patronage and moral support extended by our parents and family members whose constant encouragement and cooperation made it possible for us to complete on time.

We would highly appreciate and look forward to your valuable suggestions, comments and feedback at editorbr2022@gmail.com

June, 2025
West Bengal, India

PEMA LAMA
Editor-in-Chief

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RESEARCH ARTICLE

Factors Influencing Marine Fish Marketing Distribution Channels in Kakdwip Areas of West Bengal: A Study

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Index Terms: Marine Fish Marketing | Distribution Channels | Coastal Community | Livelihood

ABSTRACT

Marine fishing is the dominant occupation of the coastal community. Marine fishing is an important livelihood for the people who live in the coastal areas. Marine fishing provides job opportunities, food assurance and livelihood for the coastal communities. As the fish is a perishable item, the fish marketing distribution channel plays a crucial role in delivering the fish to consumers. Marine fish marketing distribution channels are important to determine the price of the fish and fish products. For profit generation, it is needed to focus on the distribution channels in marine fish marketing. As the marine fish marketing system is an unorganised sector, various factors influence the marine fish marketing distribution channels.

The study was conducted in the Kakdwip area of West Bengal. The study has been conducted to find out the factors that influence the marine fish marketing distribution channels in the various marine fish markets in the coastal Kakdwip areas. The study also tries to identify the intermediaries who are involved in the distribution channels in the marine fish marketing in the Kakdwip areas of West Bengal. To maximise the profit and minimise the cost, it is crucial to organise the marine fish marketing distribution channels. For customer satisfaction, it is needed to maintain proper distribution channels by identifying the factors influencing marine fish marketing distribution channels.

1 INTRODUCTION

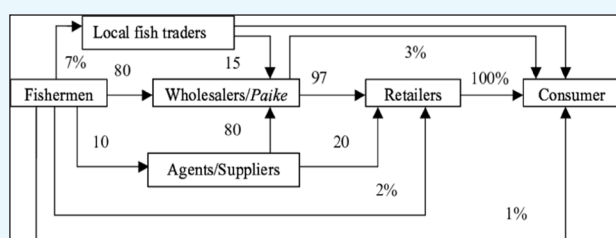
The fisheries sector plays a crucial role in the economy of India, and this sector also provides a livelihood to millions of people. Fishing is an important profession for the coastal community. Marine fishing is important for the social development of the people who are involved in it. According to the 2010 census report, 380138 people are involved in marine fishing directly or indirectly. There are 76981 fishermen families in West Bengal. For socio-economic development, marine fishing and marine fish marketing play a crucial role. As an important source of proteins, vitamins and minerals, the consumption of marine fish is increasing regularly.

The health-conscious people want to consume fresh fish in their diet. To deliver the fish to the customer, the marine fish marketing distribution channels is very important.

Stem & Ansari (1990) stated in their study that the distribution channel plays an important role in marketing activities. Marine fish marketing distribution channels is very important to deliver marine fish from the sources to the consumer. Marketing channels are divided into two main categories one is Centralised and another is Decentralised. The Centralised channels are assigned to the people who are working as the middlemen between the producers and the consumers in the distribution

channel, and the Decentralized channels is the kind of distribution channels in the marine fish marketing where the consumer and the agent directly purchase fishes from the producers (Olukosi & Isitor, 1990). The aquatic products marketing in India is not up to the mark due to availability, uncertainty, storage and logistics (Devi et al., 2023).

Figure 1
FISH DISTRIBUTION CHAIN FROM FISHERMEN TO CONSUMERS



Source: (Aktar et al., 2013)

2 LITERATURE REVIEW

Distribution channels are important to reach the product to the consumers. Distribution channels are the network of businesses, individuals, and intermediaries who are involved in delivering the product from the point of manufacture to the end point of consumption. Distribution channels are the inclusion of wholesalers, retailers, distributors and the network (Fernando, 2024). Distribution channels are the ways that a product or service takes the way from the manufacturers or the service providers to the customer. A distribution channel is the gathering of associated units which carry carrying stream of items or products from the producer to the consumer (Szopa, 2012).

The price of fish is dependent on the length of the distribution channels. In the case of large distribution channels, the price of the fish is increased, so that the profit of the fishermen is decreased. There are various types of agents involved in the distribution channel (Phukan and Barman, 2013). Distribution channels are divided into two types one is Centralised Distribution Channels and another is Decentralised Distribution Channels (Madugu & Edward, 2011). Three distribution patterns are there, firstly, fisherman to fish collector to wholesaler to retailer to the consumer, secondly, the fisherman to fish trader to the retailer to

the consumer and thirdly, fisherman to large trader to retailer to consumer (Nahumury & Manuhuttu, 2019). After catching the fish from water bodies, the fishermen do not sell fish in retail markets, but they sell their catches to the “Baparies” or the Retailers (Kellermen, 2023). The marketing system was organised through a useful commercial chain where many intermediaries are involved (Islam et al., 2001). The intermediaries are the local traders, local agents, suppliers, wholesalers and retailers (Rahman et al., 2009).

3 SCOPE FOR THE STUDY

The study has tried to identify the various factors that are influencing marine fish marketing distribution channels in the Kakdwip areas of West Bengal. The fish marketing is very much important for the local people as it provides food and job security to the local people. Marine fish marketing also contributes to the local economy. The price of the fish is set by the distribution channels. As the fish is a perishable product, it is needed to maintain a cold chain throughout the distribution channel to keep the quality of the fish.

The marine fish marketing is unorganised and fragmented, with a huge number of intermediaries involved. The study collected data from the intermediaries who are involved in the distribution channels to understand the factors influencing marine fish marketing distribution channels in the Kakdwip areas of West Bengal.

4 STATEMENT OF THE PROBLEM

The marketing is dynamic in nature. By the advent of cutting-edge technology and scientific advancements the marketing concept has been changing gradually. As the fish marketing is a notable sector that contributes to the socioeconomic development of the coastal community and the intermediaries who are involved in the fish marketing distribution channels. The communities that are involved in marine fishing face various problems like social, economic, technical, infrastructural and ethnic factors.

The proper grading system is not available for fresh fish, and there are no proper sheds for the preservation of

fresh fish in fish marketing (Sathiadhas et al., 2000). The marine fish marketing distribution channel is controlled by the local people who are providing financial support to the fishermen. The non-government organisations (NGO) are actively supporting the fishermen community and the fish traders throughout the country (Rabbani et al., 2017).

After executing the substantial literature review and based on the issues, the researchers have designed the following research questions for the present study:

- What are the factors affecting the distribution channels in marine fish marketing in the Kakdwip areas of West Bengal?
- How are the factors related to each other in the distribution channels in marine fish marketing in the Kakdwip areas of West Bengal?

5 RESEARCH GAP

After the extensive literature review, we have found that a less number of studies have been conducted on marine fish marketing distribution channel in marine fish marketing in West Bengal. The marine fish marketing distribution channel is very crucial to determining the profit margins of fish. The studies have been done on the fish marketing (marine) distribution channels, but there are no such studies on marine fish marketing distribution channels in the Kakdwip areas in the South 24 Parganas district in West Bengal. There are various types of marine fish available. The price of the different fish depends on the consumption and the organised distribution channels.

6 RESEARCH OBJECTIVES

The research objectives of the study are as follows –

- To understand the marine fish marketing distribution channels in the Kakdwip areas of West Bengal.
- To identify the factors influencing the marine fish marketing distribution channels in the Kakdwip areas of West Bengal.

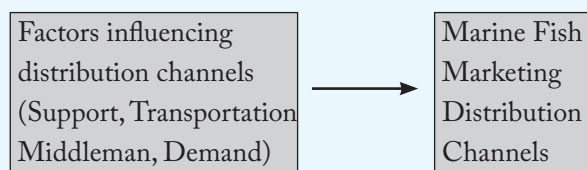
7 HYPOTHESIS

H₁: Various factors have a positive influence on the marine fish marketing distribution channels in the Kakdwip areas of West Bengal.

8 CONCEPTUAL FRAMEWORK

After performing a literature review, we have designed the following conceptual framework based on the topic:

Figure: 2
RESEARCH FRAMEWORKS



Source: The Author

9 RESEARCH METHODOLOGY

In the study we have tried to measure the factors influencing the marine fish marketing distribution channels in Kakdwip areas of West Bengal. The intermediaries like Mahajan, Aratdar, Baparies, Wholesaler, Retailers who are involved in the marine fish marketing distribution channels are the selected population of the study. In the present study we have selected the Purposive Sampling Method to reach at representative sample size for this study. 150 respondents have been taken from the different marine fish markets in Kakdwip areas of West Bengal.

The study has been done on the basis of primary data. The primary data has been collected by the use of structured questionnaire. The five-point (5) Likert Scale has been used in the study. The scale represented at either end by 'Strongly Disagree' to 'Strongly Agree'. We have designed the questionnaire with three (3) sections. The 1st section comprises on the demographic related information. The 2nd section is of 22 questions with the factor influencing the marine fish marketing distribution channels in Kakdwip areas of West Bengal. In the third section we have selected 5 questions on the effectiveness of the distribution channels in the marine fish marketing in Kakdwip areas of West Bengal. In this study both the descriptive and inferential statistic are used. The SPSS software has been used to analyze of the data.

10 DATA ANALYSIS AND FINDINGS**Table 1**
DISTRIBUTION OF THE RESPONDENTS

Characteristics	Number of Respondents	Percentage (%)
Age		
Below 30	27	18
31 - 40	42	28
41 - 50	48	32
Above 50	33	22
Marital Status		
Married status	111	74
Unmarried status	39	26
Gender		
Male	126	84
Female	24	16
Education Status		
Below Secondary	93	62
Secondary	36	24
Higher Secondary	12	8
Graduation	6	4
Above Graduation	3	2
Family Structure		
Joint Family	39	26
Nuclear Family	111	74
Monthly Income Level		
Below 20K	93	62
20K to 40K	42	28
Above 40K	15	10

Source: Author(s)

According to Table 1, 18 % of respondents represent the age group of below 30 and 28% of respondents are in the age group of 31 to 40. 32% of respondents belong to the age category of 41 to 50, and 22% of respondents are in the age category of above 50. As per the above statement, most of the respondents involved in marine fish marketing distribution channels in the Kakdwip areas of West Bengal are in the age class of 31 - 40 years. The respondents in the age section below 30 are very rare in the fish marketing (marine) distribution channels in the Kakdwip areas of West Bengal.

Table 1 also indicates that 74 % of respondents are married and 26% of respondents are unmarried. Most of the people who are associated with marine fish marketing distribution channels are married, and the unmarried people are rarely involved in the marine fish marketing distribution channels in the Kakdwip areas of West Bengal. Table 1 shows that 84 % of respondents are male and 16% of respondents are female. As per the above statements, it has been observed that most of the intermediaries are male in the marine fish marketing distribution channels in the Kakdwip areas of West Bengal, and females are rarely involved in the marine fish marketing distribution channels. Table 1 highlights that 62 % of total respondents are in the category below secondary level, and 24 % of respondents are in the category of Secondary level. Apart from that, 8% of total respondents belong to the group of Higher Secondary Level, 4% of respondents belong to the group of Graduation level, and 2 % of interviewees are in the group of above Graduation level. According to the above statement, it has been noticed that most of the people belong to the group of below secondary level and the respondents in the group of both graduation and the above graduation are rarely involved in the marine fish marketing distribution channels in the Kakdwip areas of West Bengal.

The above Table indicates that 26% of respondents who are involved in marine fish marketing distribution channels live in a joint family, and 74% of respondents live in a nuclear family. In the above statements, it has been known that most of the people who are involved in marine fish marketing distribution channels live with a nuclear family. The table indicates that 62 % of respondents are in the income group of below 20K, 28 % of total respondents are in the income group 20 K to 40 K and 10% of respondents belong to the income category of above 40 K. Depending on the statement it may be concluded that most of the people who are associated in marine fish marketing distribution channels are belonging to the income group of below 20K.

Table 2
RELIABILITY STATISTICS FOR ALPHA
VALUE OF FACTORS INFLUENCING
DISTRIBUTION CHANNELS

Reliability Statistics	
Cronbach's Alpha	N of Items
.804	19

In the study, we have identified 27 variables through a literature review. We have deliberately removed 8 variables after observing the correlation coefficient matrix, where the variables have low correlation. We have finalised 19 variables for further analysis. The normal value of Cronbach's Alpha Reliability Coefficient is between 0 and 1. Generally, a Cronbach's alpha of 0.70 and above is good, 0.80 and above is better, and 0.90 and above is best (Statistics Solution, 2024). Table 2 shows that Cronbach's Alpha value is .804, which highlights that the reliability of the selected questionnaire is better for further data analysis.

Table 3
VALIDITY ANALYSIS OF THE DATA OF
FACTORS INFLUENCING DISTRIBUTION
CHANNELS (FACTOR ANALYSIS)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.811
Bartlett's Test of Sphericity	Approx. Chi-Square	946.928
	df	91
	Sig.	.000

The test of validity of the data for identifying the factors that influence marine fish marketing distribution channels in the Kakdwip areas of West Bengal has been incorporated by the use of the KMO test and Bartlett's test of Sphericity. KMO values between 0.8 and 1 indicate the sample size is optimum. Table No. 3 indicates that the value of the KMO test is .811. It may be concluded that the data can be used for further analysis.

Table 4
TOTAL VARIANCE EXPLAINED BY THE FACTOR ANALYSIS (DETERMINING FACTORS
INFLUENCING DISTRIBUTION CHANNELS)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.632	33.083	33.083	4.632	33.083	33.083	3.113	22.234	22.234
2	2.160	15.426	48.509	2.160	15.426	48.509	3.098	22.130	44.364
3	1.671	11.934	60.443	1.671	11.934	60.443	2.163	15.450	59.814
4	1.195	8.536	68.979	1.195	8.536	68.979	1.283	9.165	68.979
5	.839	5.990	74.969						
6	.678	4.843	79.812						
7	.607	4.333	84.146						
8	.489	3.493	87.639						
9	.434	3.102	90.741						
10	.369	2.638	93.379						
11	.331	2.364	95.743						
12	.239	1.705	97.448						
13	.182	1.303	98.751						
14	.175	1.249	100.000						
Extraction Method: Principal Component Analysis.									

The Total Variance is the sum of all variances of separate principal components. The fractions of the variances are explained by the principal component (Table 4) is a ratio between the variance of the principal component (Table 4) and the sum total of variance. For several principal components (table 4, added all of their variances and divided by the total variance (Cheplyaka, 2017). Table 4 indicates that the Total Variance Explained (TVE) is 68.979 by the stated factors in Factor Analysis.

Table 5
ROTATED COMPONENT MATRIX (FACTOR
NUMBER DECIDING) FOR DETERMINING
THE FACTORS INFLUENCING
DISTRIBUTION CHANNELS
(FACTOR ANALYSIS)

	Component			
	1	2	3	4
Cold Storage advantage		0.838		
Middlemen controlling the market			0.831	
Government support in the Transportation system	0.797			
Transportation quality		0.771		
Road facility for transportation		0.85		

Demand for a particular species of fish				0.793
Demand of purchasing quantity of fish				0.663
Credit facility for the business	0.639			
Middlemen's responsibility for exploiting the market			0.857	
Government Support for the development	0.851			
Fish prices increase due to more middlemen			0.773	
Support of the local people for the distribution channels	0.755			
Financial support from the government	0.773			
Location of the marine fish market		0.894		
Extraction Method: Principal Component Analysis.				
Rotation Method: Varimax with Kaiser Normalisation				
a. Rotation converged in 5 iterations				

Hypothesis H₁: Various factors have a positive influence on the marine fish marketing distribution channels in the Kakdwip areas of West Bengal.

Interpretation (Rotated Component Matrix^a)

As per the result of Table 5 of the Rotated Component Matrix, we may categorise 4 (Four) Factors:

Factor 1	Factor 2	Factor 3	Factor 4
<ul style="list-style-type: none"> Government support in the Transportation system Credit facility for the business Government Support for the development Support of the local people for the distribution channels Financial support from the government 	<ul style="list-style-type: none"> Cold Storage advantage Transportation quality Road facility for transportation Location of the marine fish market 	<ul style="list-style-type: none"> Middlemen controlling the market Middlemen responsibility for exploiting the market Fish price increases due to more middlemen 	<ul style="list-style-type: none"> Demand of particular species of fishes Demand of purchasing quantity of fishes

From the Rotated Component Matrix, we have restated the factors as stated below:

- Factor 1 as Supporting Factor
- Factor 2 as the Transportation Factor
- Factor 3 as Middleman or Intermediaries Factor
- Factor 4 Demand Factor

From the result of the Factor Analysis, we may conclude that the Support Factor, Transportation Factor, Middleman or Intermediaries Factor, and the Demand Factor are very significant in influencing the Distribution Channels of Marine Fish Marketing in the Kakdwip areas of West Bengal. We may accept the hypothesis (H_1) that many factors influence the marine fish marketing distribution channels in the Kakdwip areas of West Bengal.

11 MULTIPLE REGRESSION ANALYSIS

Table 6
MODEL SUMMARY^B

Model	R	R ²	Adj. R ²	SEE	Change Statistics				
					R ² Change	F Change	df1	df2	Sig. F Change
1	.762 ^a	.581	.569	.275	.581	50.265	4	145	.000
a. Predictors: (Constant), DF, TF, MF, SF									
b. Dependent Variable: DC									

DF- Demand Factor, TF- Transportation Factor, MF- Middlemen Factor, SF- Support Factor

DC- Distribution Channel (Marine Fish Marketing)

In Table 6, the value of Adjusted R Square is .569, and it indicates that about 56% variation in the Distribution Channel is explained by the particular independent variables, which are Demand Factor, Transportation Factor, Middlemen Factor, and Support Factor

Table 7
COEFFICIENTS^A

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	SE	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.704	.228		3.090	.002	.254	1.154					
	SF	.375	.040	.553	9.419	.000	.296	.453	.689	.616	.506	.838	1.193
	TF	.163	.044	.220	3.735	.000	.077	.249	.465	.296	.201	.836	1.196
	MF	.122	.036	.190	3.383	.001	.051	.193	.343	.270	.182	.912	1.096
	DF	.078	.032	.133	2.419	.017	.014	.142	.245	.197	.130	.953	1.050
a. Dependent Variable: DC													

DF- Demand Factor, TF- Transportation Factor, MF- Middlemen Factor, SF- Support Factor

DC- Distribution Channel (Marine Fish Marketing)

It is the rule of thumb that Multiple Regression Models (Coefficients^a) input the result of the equation, which contains coefficients (b) for every predictor in the model. The Table 7 indicates that the estimation of these b values and these b values are the individual contribution of each and every predictor to the model. The table (Coefficients^a) shows that the Unstandardized Coefficients of SF (Support Factor) is .375 with the P

value of .000, ensuring that the P value is statistically significant. So it may conclude that on unit change in Support Factor leads to .375 unit changes in Distribution Channel (DC).

The Unstandardized Coefficients of TF (Transport Factor) is .163 with the P value of .000 ensuring that the value is statistically significant. So it may conclude

that on unit change in TF (Transport Factor) leads to .163 unit changes in Distribution Channel (DC). The Unstandardized Coefficients of MF (Middlemen Factor) is .122, with a P value of .001, making certain that the value is statistically significant. So it may be explained that on unit change in MF (Middlemen Factor) leads to .122 unit changes in Distribution Channel (DC). Unstandardized Coefficients of DF (Demand Factor) is .078 with the P value of .017, indicating that the P value is statistically significant. So it may express that on unit change in DF (Demand Factor) leads to .078 unit changes in Distribution Channel (DC). Depending on the result of the Multiple Regression Model, we may accept the H₁₂: Various factors have a positive influence on the marine fish marketing distribution channels in the Kakdwip areas of West Bengal.

12 IMPLICATIONS AND RECOMMENDATIONS OF THE STUDY

In this study, the researchers have tried to understand the many factors that are influencing the marine fish marketing distribution channels in the Kakdwip areas of West Bengal. Marine fish marketing is very important for the coastal areas as the marine fish marketing provides food, jobs and livelihood to the coastal communities. Like other marketing distribution channels, marine fish marketing distribution channels is important as the determinant of the profit margins. To gain more profit and to maintain the quality of the fish, the distribution channels play a crucial role.

This study will be helpful to the intermediaries who are involved in the marine fish marketing distribution channels. The study will also be helpful to the researchers for the implementation and improvement of the fish marketing (marine) distribution channels in the Kakdwip areas of West Bengal. It is recommended to carry out further research. A similar study can be done on the other marine fish marketing distribution channels in other coastal areas. A study may be conducted to examine the distribution channels of inland fisheries.

13 CONCLUSION

We have conducted the study in the Kakdwip areas of West Bengal to understand the marine fish marketing

distribution Channels and to know the factors that influence marine fish marketing distribution channels. We have found four main factors, like Support Factor, Transportation Factors, Middlemen or Intermediaries Factors and Demand Factors, which are influencing marine fish marketing distribution channels in the Kakdwip areas of West Bengal.

All the intermediaries, local people and the Government need to follow up the marine fish marketing distribution channels in the Kakdwip areas of West Bengal. As the marine fish marketing is unorganised in nature, it is very important to provide special care for the improvement of the marine fish marketing system. Marine fish marketing is crucial for the socioeconomic development of the coastal people who are involved in marine fish marketing.

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