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FINANCIAL PERFORMANCE OF THE FISHERIES AND SOCIO-ECONOMIC CONDITIONS OF FISHERMEN IN RAMANATHAPURAM COASTAL REGION.

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Abstract

A fishery is an important sector in India. It provides employment to millions of people and contributes to food security of the country. With a coastline of over 8,000 km, an Exclusive Economic Zone (EEZ) of over 2 million sq km, and with extensive freshwater resources, fisheries play a vital role. The total fish production during 2017-18 is estimated to be 12.60 million metric tonnes, of which nearly 65% is from inland sector and about 50% of the total production is from culture fisheries, and constitutes about 6.3% of the global fish production. This study examines the financial performance of the Fisheries to different aspects of fisheries like cost and earnings, production and marketing, besides, examining the socio-economic conditions of fishermen in Ramanathapuram coastal region. It elaborates the significance of various statistical tests which are applied in the study. This study briefly describes the primary points of Performance of fisheries. The performance of fishing in India and at the international level has an increasing trend. The government of India may take various necessary steps to improve the fishing activities.

INTRODUCTION

Indian fisheries and aquaculture is an important sector of food production providing nutritional security, besides livelihood support and gainful employment to more than 14 million people, and contributing to agricultural exports. With diverse resources ranging from deep seas to lakes in the mountains and more than 10% of the global biodiversity in terms of fish and shellfish species, the country has shown continuous and sustained increments in fish production since independence. The fisheries sector plays an important role in Indian economy contributing about 1% to the Gross Domestic Product (GDP). The marine fish production in the country gradually increased from mere 5.8 lakh t in 1950 to 3.32 million t in 2010, registering a six-fold increase. The development of fisheries sector in India can be classified into three phases. During the first phase (1950 – 66), landings were mainly by non-mechanized indigenous crafts and gears and remained below one million t. The second phase spanning from 1967- 86 featured increased mechanization, improved gear materials, an introduction to motorized country crafts, expansion in export trade, etc. The last phase during 1987 – 2010 witnessed an intensification of mechanization as well as motorization of country crafts, modification of gears, multi-day voyage fishing and expansion of fishing grounds. Export earnings from marine sector

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increased from Rs 3.92 crores in 1961-62 to Rs 12,901.47 crores in 2010-11 registering 11.8% growth during 2009-10. The gross revenue from the marine fish landings during 2009-10 regarding landing centre price was estimated as Rs 19,753 crores. The total fisherfolk population of the country is 3.52 million having 0.72 million active fishermen. There are about 2,39,000 fishing crafts engaged in marine capture fisheries, of which 59,000 are mechanized crafts, 76,000 motorized and the rest non-mechanized. In the mechanized sector, there are about 29,000 trawlers. Though fishing is concentrated mainly in the depth zone up to 100 m, deep sea trawlers operate up to 400 m depth zone. The total fish production during 2017-18 is estimated to be 12.60 million metric tonnes, of which nearly 65% is from inland sector and about 50% of the total production is from culture fisheries, and constitutes about 6.3% of the global fish production.

Paradigm shifts in terms of increasing contributions from inland sector and further from aquaculture have been significant over the years. With high growth rates, the different facets, viz., marine fisheries, coastal aquaculture, inland fisheries, freshwater aquaculture, and coldwater fisheries are contributing to the food basket, health, economy, exports, employment and tourism of the country. More than 50 different types of fish and shellfish products are being exported to 75 countries around the world. Fish and fish products have presently emerged as the largest group in agricultural exports from India, with 13.77 lakh tonnes in terms of quantity and Rs. 45,106.89 crore in value. This accounts for around 10% of the total exports and nearly 20% of the agricultural exports, and contribute to about 0.91% of the GDP and 5.23% to the Ag - GVA of the country. With over 2.4 lakh fishing crafts operating along the coast, 7 major fishing harbours, 75 minor fishing harbours and 1,537 landing centres are functioning to cater to the needs of over 4.0 million fisher folk. For promoting aquaculture, 429 Fish Farmers Development Agencies (FFDAs) and 39 Brackish water Fish Farms Development Agencies (BFDAs) were established in the country. The annual carp seed production is to the tune of 40 billion fry and that of shrimp is about 54 billion PLs, with increasing species diversification in the recent past. Besides large-scale freshwater food fish culture, ornamental fish culture and high value marine fish farming are gaining importance in the recent past[1].

STATEMENT OF THE PROBLEM

Ramanathapuram is a leading fish producing district in Tamil Nadu. The marine fish production was 81,943 tonnes in 1995-96 (24.01 per cent of the total marine production in Tamil Nadu) as against the production of 1, 31,385 tonnes in 2004-05 (36.88 per cent of the total marine production in Tamil Nadu). Though the fish production is increasing year by year, the returns from the fish are not stable. The instability in production tends to change in the pattern of technologies and consequently in the introduction of new catching strategies by fishermen in different locations. It is therefore, desirable to examine the growth and trends of marine fish production.

The catch and the income of marine fishing may vary due to differences in technology, input combinations abundance fishing resources and technical efficiency. The production of fish depends on the employment of different proportions of inputs. Hence, this necessitates the study of yield determinants of fishing for mechanized, motorized, non-mechanised and shore-seine units in Ramanathapuram District.

[1] https://incois.gov.in/portal/index.js

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OBJECTIVES OF THE STUDY

1. To portray the socio-economic status of the fishermen among the Ramanathapuram.
2. To examine the performance of fish production in the study area.
3. To offer suggestion to improve the financial performance of marine fisheries

HYPOTHESIS OF THE STUDY

1. There is no relationship between the Gender and operational cost.
2. There is no relationship between the Gender and Consumption Expenditure
3. There is no relationship between the Gender and post office savings

RESEARCH METHODOLOGY

The research has adopted Convenience sampling method in this study. These studies collected by Fisheries man of Ramanathapuram District were visited in order to contact the prospective respondents based on their willingness to respond. The respondents were approached, based on their convenience. This study is carried out by using both the primary and secondary data. The **Primary data** were collected by conducting interview schedule based on survey among the population of fisherman in Ramanathapuram District. The **Secondary data** is collected from various publications, Annual reports, books, Journals, Magazines, Seminar materials, Published and Unpublished reports, websites. The data were collected from the year 2009-10 to 2018 -19. This data collected through annual reports, journal/articles, Marine Census report and Commissioner of Fisheries, Chennai. The researcher has chosen a sample of 200 respondents under the purpose of collecting data with the help of structured questionnaire method. The following statistical tools like, Mean, Standard Deviation, Coefficient of Variation (CV), Multiple Regression Analysis, Analysis of Variance (ANOVA), used in performance of marine fisheries.

ANALYSIS AND INTERPRETATION

The following table fish production of Ramanathapuram district and followed marine fish landings in different size of boats in Ramanathapuram district.

TABLE -1
FISH PRODUCTION OF RAMANATHAPURAM DISTRICT

S.No	Year	Marine	Inland	Total
1	2009-10	92973	5016	97989
2	2010-11	112496	4155	116651
3	2011-12	113433	6221	119654
4	2012-13	114624	7361	121985
5	2013-14	115624	7896	123520
6	2014-15	117562	7965	125527
7	2015-16	118524	8569	127093
8	2016-17	152485	8965	161450
9	2017-18	165243	8978	174221
10	**2018-19**	175426	9856	185282

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Mean	127839.00	7498.20	-
S.D	26761.94	1838.23	-
C.V	20.93	24.52	-

Source: Office of the Assistant Director fisheries, Ramanathapuram.

From the above table shows that the fish production of Ramanathapuram District. The marine average value of 127839 and inland 7498.20 followed by standard deviation 26761.94 and 1838 .23 from marine and inland fisheries. The following table marine fish landings in different zone of boats in Ramanathapuram district.

TABLE -2

MARINE FISH LANDINGS IN DIFFERENT SIZE OF BOATS IN RAMANATHAPURAM DISTRICT

S.No	Year	Mechanized Boat	Non-Mechanized			Total
			Motori-sed Boat	Non-Motori-sed	Shore-seine crafts	
1	2009-10	50965	29994	12014	259	92973
2	2010-11	54378.409	18872.507	12864.081	337	86115
3	2011-12	77645	18352	15436	235	111433
4	2012-13	56241	38887	19496	325	114624
5	2013-14	58756	38564	18524	458	115844
6	2014-15	58564	28563	13526	359	100653
7	2015-16	59726.00	20728.46	14129.01	370	94583.47
8	2016-17	60245	22153	14112	353	96510
9	2017-18	61245	22456	13245	326	96946
10	2018-19	67523	23456	13756	313	104735
Mean		**60528.84**	**26202.60**	**14710.21**	**333.50**	**101441.65**
S.D		**7437.17**	**7578.87**	**2445.15**	**61.17**	**9948.13**
C.V		**12.29**	**28.92**	**16.62**	**18.34**	**9.81**

Source: Commissioner of fisheries, Chennai

From the above table shows that the Marine fish production of Ramanathapuram District. The highest mean value of mechanized (60528.84) followed by Motorized included Seer fish, Perches, Silver, bellies, pomfret, carfish,rays, prawns, crabs, sardines, Thread inbreams, Lethrinus, Serranus, Red-Snapper, Leather-Jacket and cuttle fish of varieties constitute the major share in the landing of fish in this district in terms of quantity (26202.60), non- Motorized (14710.21), shore seine crafts (333.50). The highest production is mechanized products of Ramanathapuram.

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Table- 3
Gender- wise respondents

Gender	Frequency	Percentage
Male	136	68.0
Female	65	32.0
Total	200	100.0

Source: Primary Data

From the Table -3 it can be understood that out of 200 respondents 136 of them (68%) are male; and 65 of them (32%) are female. From this we understand that the male respondents take part in the study more than the female respondents.

Table-4
Age- wise respondents

Age	**Frequency**	**Percent**
20-30 years	38	19.0
31-50 years	67	33.5
Above 51 years	95	57.5
Total	200	100.0

Source: Primary Data

The researcher has chosen respondents from a wide range of age category from 20 years and above. From the Table -4 it is understood that most of the respondents i.e 19 per cent are in the age cate and 20.0 percent and above 51years category of respondents constitute in the sample about 57.5 per cent.

Table - 5
Educational Qualification –wise respondents

Education Qualification	**Frequency**	**Percent**	**Cumulative Percent**
Up To 12	75	37.5	59.0
Degree	59	29.5	78.5
PG	23	11.5	11.5
Diploma	53	21.5	100.0
Total	**200**	**100.0**	

Source: Primary Data

In the present study out of 200 respondents, most of them (75) have completed their Up to 12 followed by 59 respondents who have completed their Graduate education, 23 respondents are post-graduates, 53 respondents have completed only their Diploma/ITI education. The most of the respondents completed to primary and secondary level only.

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Table -6
Occupation –wise respondents

Occupation	Frequency	Percentage	Cumulative Percent
Main	95	57.0	57.0
Subsidy	106	53.0	100.0
Total	200	100.0	

Source: Primary Data

In the present study out of 200 total respondents, most of them (95) are Main followed by 106 respondents who are subsidy. The most of the respondents are the follow the subsidy fisheries.

Table -7
Business Assets –Wise Respondents

Business Assets	Frequency	Percentage	Cumulative Percent
Vallam	19	9.5	9.5
Mechanized Boat	25	12.5	22.0
Cotton Net	21	10.5	32.5
Nylon Net	52	21.0	53.5
Gill Net	25	12.0	65.5
Trawl Net	19	9.5	75.0
Accessories	25	12.0	87.0
Others	26	13.0	100.0
Total	**200**	**100.0**	

Source: Primary Data

From the above Table it can be understood that most of the respondents i.e. 21% of the respondents use in nylon net follow by 13% of the respondents use in others material from business12 per cent have use the mechanized Boat, Gill net and Accessories and 9.5% of the respondents use in vallam and trawl net use the business. Nylon net is most of the respondents use in business.

ANALYSIS OF VARIANCE- RELATIONSHIP BETWEEN THE GENDER AND OPERATIONAL COST

Hypothesis:

There is no relationship between the Gender and operational cost.

Table -8
Relationship between the gender and Operational cost- ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
Salary & Wages	Between Groups	5.052	1	5.052	17.593	.000
	Within Groups	55.868	198	.232		
	Total	59.920	199			

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Repairs & Replacement	Between Groups	5.585	1	5.585	19.976	.000
	Within Groups	53.331	193	.225		
	Total	57.815	195			
Depreciation Charges	Between Groups	.056	1	.056	.269	.605
	Within Groups	51.125	198	.208		
	Total	51.180	199			
Others	Between Groups	2.801	1	2.801	12.383	.001
	Within Groups	55.779	198	.226		
	Total	57.580	199			

Source: Computed data

Since p value is more than 0.05 the null hypothesis is accepted at 5 % level of significance. Hence it is concluded that there is no mean difference between the operating cost and gender of the respondents' in the study area. Based on the Tukey HSD test, the respondents who have responded with respect to opinion also do not have any significant difference.

ANALYSIS OF VARIANCE- RELATIONSHIP BETWEEN THE GENDER AND CONSUMPTION EXPENDITURE

Hypothesis:

There is no relationship between the Gender and Consumption Expenditure

Table -9
Relationship between the Gender and Consumption Expenditure - ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
Food	Between Groups	2.316	1	2.316	10.132	.002
	Within Groups	55.265	198	.229		
	Total	57.580	199			
Clothing	Between Groups	.005	1	.005	.015	.905
	Within Groups	59.871	198	.252		
	Total	59.875	199			
Rent/Rental Value	Between Groups	.065	1	.065	.257	.613
	Within Groups	59.930	198	.252		
	Total	59.995	199			
Education	Between Groups	.151	1	.151	.616	.533
	Within Groups	58.505	198	.255		
	Total	58.555	199			

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Source: Primary Data

Since p value is more than 0.05 the null hypothesis is accepted at 5 % level of significance. Hence it is concluded that there is no mean difference between the consumption expenditure and gender of the respondents' in the study area. Based on the Tukey HSD test, the respondents who have responded with respect to opinion also do not have any significant difference.

RELATIONSHIP BETWEEN DEMOGRAPHIC FACTORS AND SALARY AND WAGES – REGRESSION ANALYSIS

Hypothesis

There is no relationship between demographic factors and salary and wages

Table -10

DEMOGRAPHIC FACTORS AND SALARY AND WAGES – REGRESSION ANALYSIS

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	2.015	.198		10.182	**.000***
	Gender	-.273	.075	-.255	-3.653	**.000***
	Age	.061	.055	.093	1.382	.168
	Education	-.115	.038	-.218	-3.001	**.003***
	occupation	.017	.075	.017	.233	.816
		R^2 : 0.137	**F value: 7.772**	**P. value : 0.000***		
a. Dependent Variable: Salary & Wages						

Source: Computed Data

The regression analysis Yields the following equation for determining the dependent variable gender:
$Y = 2.015^{**} + -0.273(x_1) +- 0.115\ (x_2)$.

The factors that proved to be Significant in relation to salary and wages are gender, education. The Rest of the tested independent variables were found to have no significant relationship with salary and wages. Thus, further research is recommended. The positive sign of the coefficients of the variables, age and education indicate that there is a positive correlation between these variables. The Regression equation proved to be significant at the 0.05 Significance level (95% Confidence) With an F-7.772 and a significance of 0.000.

Conclusion

The performance of fisheries man to Ramanathapurm district in determining the fisheries operational cost, expenditure, savings are analyzed through the framed set of hypothesis with the vision to analyze fisheries man behavior with the help of the respondents. It elaborates the significance of various

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statistical tests which are applied in the study and performance of fishing in India and at the international level has an increasing trend. The government of India may take various necessary steps to improve the fishing activities which are easy like affordable price for diesel, net, protection measures and technological advancement. Insurance facility and other banking services like small loans to their family and promoting women self-help groups in the coastal area. The fund may be increased during the vacation period of the fishermen.

References

1. **Krishnan, M., & Narayanakumar, R. (2010).** Structure, conduct and performance of value chain in seaweed farming in India. *Agricultural Economics Research Review*, *23*(347-2016-16955), 505-514.
2. **Radhakrishnan, K., Tesfom, M. A., Amali Infantina, J., Krishnan, M., & Velmurugan, R. (2016).** Marine fisheries growth, performance and institutional arrangements in Tamil Nadu. *Int J. Fish Aqua Studies*, *4*, 342-346.
3. **Kasim, H. M., Rao, G. S., Rajagopalan, M., Vivekanandan, E., Mohanraj, G., Kandasamy, D., ... & Mohan, S. (2013).** Economic performance of artificial reefs deployed along Tamil Nadu coast, South India. *Indian Journal of Fisheries*, *60*(1), 1-8.
4. **Narayanakumar, R., Suryaprakash, S., & Seenappa, D. (2000).** Economics of different Marine Fishing Crafts in Tamil Nadu.
5. **Narayanakumar, R., & Krishnan, M. (2013).** Socio-economic assessment of seaweed farmers in Tamil Nadu-A case study in Ramanathapuram District. *Indian Journal of Fisheries*, *60*(4), 51-57.