

SOCIO-ECONOMIC STRUCTURE OF FISHERMEN OF THE TURKISH BLACKSEA COAST: A RESEARCH ON SAMSUN SHELF AREA

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ABSTRACT

In this study, socio-economic structure of fishermen in Samsun Shelf Area (SSA) was investigated between January 2014 and May 2015. Questionnaires were applied to 42 fishermen by visiting the region three times. At the end of the study, the age distribution of the fishermen were mentioned between 28 and 69 years; 4.8% of the fishermen were single, 95.2% of them were married. 64.3% of them have elementary school graduate and 14.3% of them have high school graduate. Fishing boats length were between 9.00 m and 32.30 m. Average boat length was 15.79 m. All of the boats have engines and varies between 64-1293 HP. Average engine power was 343.86 HP. Income distribution of the fishermen were mentioned between 10 000TL and 1 368 025 TL, average income was 224 625 TL. Expenditure distribution of the fishermen were mentioned between 27 975 TL and 323 500 TL, average expenditure was 119 196 TL. Most number of the fishermen notified that they were happy to do that job. Almost %90 of the fishermen don't want to their children prefer to fishing.

INTRODUCTION

Samsun province, located in the middle of the Black Sea coastline, between Yeşilırmak and Kızılırmak river deltas which flow into the Black Sea, has an area of 9 364 km². As geographical position, it is between 40° 50' - 41° 51' arctic circles and 37° 08' and 34° 25' east longitudes. Black Sea is on the north, Ordu province is on the east, Sinop province is on the west, Tokat and Amasya provinces are on the south, and Çorum province is on the southwest of Samsun. The Kızılırmak and Yeşilırmak, two of the longest rivers in Turkey run through and empty into the Black Sea from Samsun. Bafra and Çarşamba plains that are the country's two plains which have the highest agricultural potential are located in the delta areas of Kızılırmak and Yeşilırmak rivers. In this province where these two plains occupy a big space, 48% of the land is the cultivated area and in these areas various agricultural products are cultivated; particularly wheat, tobacco, sugar corn, vegetables, sunflower, sugar beet, hazelnut and paddy. Researches about socio-economic structure of marine fishermen in Black Sea are insufficient. Studies about socio-economic structure of marine fishermen are listed as Çeliker et al., 2006, Uzmanoglu and Soylu, 2006, Yücel, 2006, Güngör et al., 2007, Gene, 2009 and Zengin, 2011. In this study, as an important fishery centre of Black Sea region, in Samsun province socio-economic analysis of the fishermen are investigated.

Table 1. Some demographic characteristics of fishermen		
Demographic Characteristics	Frequency	%
Age		
28-37	12	28.57
38-47	15	35.71
48-57	13	30.95
58-67	1	2.38
68-77	1	2.38
Marital Status		
Married	40	95.24
Bachelor	2	4.76
Fishermen' Educational Status		
Literate	1	2.38
Primary School	29	69.05
Secondary School	6	14.29
High School	6	14.29
Number of Children		
0	5	12.50
1	1	2.50
2	9	22.50
3	12	30.00
4	8	20.00
5	3	7.50
6	2	5.00
Household Number		
1-3	15	35.71
4-6	19	45.24
7-9	8	19.05
Social Security Status		
Don't have	23	54.76
Bağ-Kur	16	38.10
SSK	1	2.38
Retired	1	2.38
Green Card	1	2.38
Vessel Length (m)		
9.00-14.99	25	59.52
15.00-20.99	6	14.29
21.00-26.99	9	21.43
27.00-32.99	2	4.76
Vessel Horsepower (hp)		
60-199	15	35.71
200-339	6	14.29
340-479	14	33.33
480-619	3	7.14
620-759	3	7.14
760+	1	2.38
Vessel Age (years)		
3-9	11	26.19
10-16	18	42.86
17-23	7	16.67
24-30	3	7.14
31-37	3	7.14
Experience (years)		
10-19	9	21.43
20-29	12	28.57
30-39	11	26.19
40-49	6	14.29
50-59	4	9.52
Fishing Time (day)		
100-139	12	28.57
140-179	26	61.90
180-219	4	9.52
Satisfaction Status		
Satisfied	18	42.86
Neither satisfied nor unsatisfied	11	26.19
Unsatisfied	13	30.95

Table 2. Prices of aquatic products of fishing		
Species	Price (kg/TL)	
Sea Snail	1.11	
Whiting	3.17	
Red Mullet	7.07	
European anchovy	1.63	
European Sprat	0.35	
Turbot	51.41	
Atlantic Bonito	6.67	
Atlantic horse mackerel	2.15	
Shad	3.00	
Bluefish	6.00	

Table 3. Distribution of income and expenditure of fishermen				
Economical Parameters	SSA Fisherman	SSA Fisherman	SSA Fisherman	SSA Fisherman
		Min	Max	
Total Income (TL)	224 625	10 000	1 368 025	
Total Expenditure (TL)	119 196	27 975	323 500	
Gross Profit (TL)	105 429	-91 550	1 224 150	

*As the vessels with an extremely higher length and engine power would affect the average significantly, they were not included to this calculation.

Table 4. Distribution of income and expenditure of fishermen (Fishing Methods)						
Economical Parameters	Beam Trawl	Deep Trawl	Beam Trawl	Beam Trawl	Deep Trawl	Deep Trawl
			Min	Max	Min	Max
Total Income (TL)	60 994	414 092	10 000	250 200	69 375	1 368 025
Total Expenditure (TL)	383	184 979	27 975	117 125	100 250	323 500
Gross Profit (TL)	-1 389	229 113	-73 940	133 075	-91 550	1 224 150

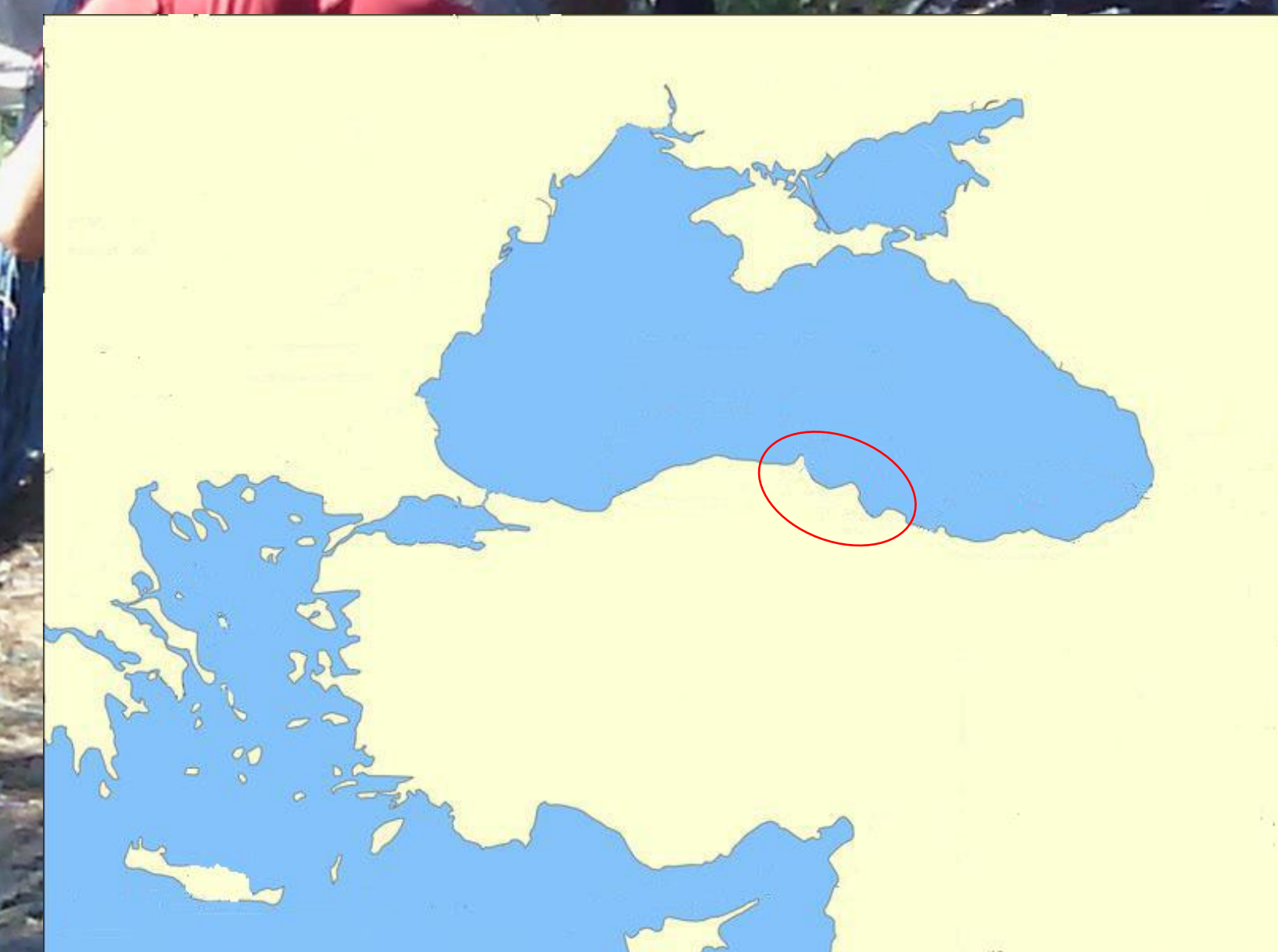


Figure 1. Study area

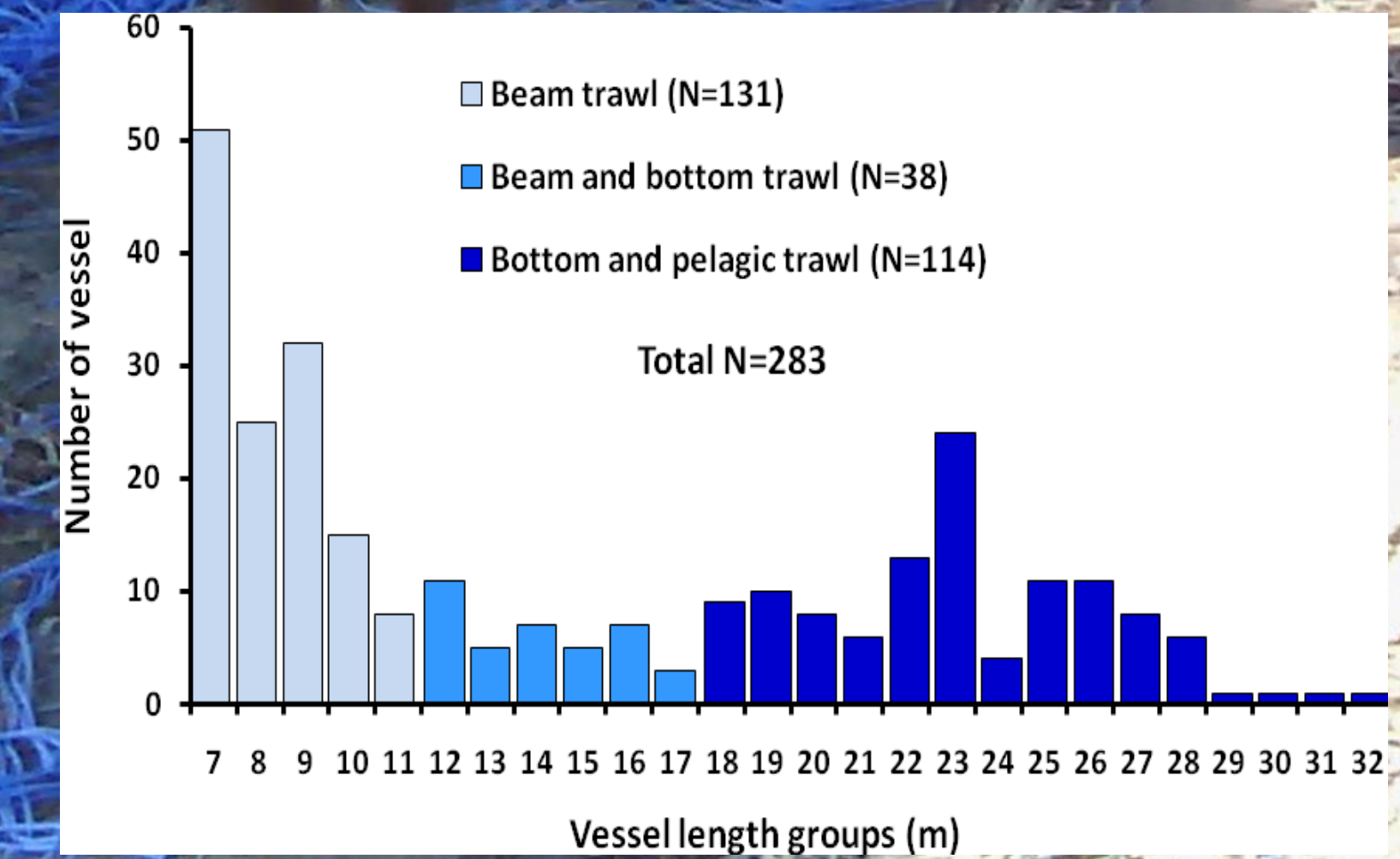


Figure 2. Number of vessels

MATERIAL VE METHODS

In this research, socio-economic structure of fishermen in Black Sea Samsun Shelf Area (SSA) (Figure 1) was investigated between January 2014 and May 2015. In this study, survey method was used as the data collection tool. In the survey, information regarding fishery circumstances such as demographic structures of the fishermen, vessels, fishing gears, fishing, their satisfaction of fishery was gathered. In the bottom line fishing, fleet was numerically split into three categories according to length of vessels. Number of total vessels in these three categories was 281 (Figure 2). In each category, there were respectively 131, 38 and 112 fishing vessels. In order to determine the number of the fishing vessels entered into the sample, Neyman method, one of the random sampling technique was used. In the research, the tolerance of the mass-average was 5% and sample amount drawn from population by projecting a 99% confidence limit was determined as 42, and at the rate of 25% substitute fishing vessel was identified. Also, for splitting the vessels entered into the sample into categories Neyman method was used and there were respectively 19, 6 and 17 fishing vessels for each category. The survey was conducted with 42 fishermen that accepted to give information.

FINDINGS

When age distribution of SSA fishermen was reviewed, it was found that the age range of the fishermen varied between 28 to 69, and that the fishermen of age 38-47 came first at the rate of 35.71%, the fishermen of age 48-57 ranked number two at the rate of 30.95% and the fishermen of age 58-67 and 68-77 ranked last at the rate of 2.38 %. 95.24% of the fishermen were married, and 4.76% of them were single. When number of children of the fishermen was reviewed, the ones that have 3 and 2 children came first at the rate of 30.00% and 22.50% respectively. 12.50% of them did not have children. When educational status of the fishermen was reviewed, it was determined that 69.05% of them were primary school graduate and 14.29% were high-school graduate. When number of household members was analyzed, the fishermen who belonged to a family size with 4-6 household members came first at the rate of 45.24%, a family size with 1-3 household members ranked number two at the rate of 35.74% and a family size with 7-9 household members ranked last at the rate of 19.05%. Fishermen's social security states were from Bağ-Kur at the rate of 38.10% and 54.76% of them had no social security. When the length of the vessels were examined, it was seen that the lengths varied between 9 to 32.3 m. Average vessel length was 15.79 m and it was determined that 59.52% of the fishermen were using 9.00-14.99 m, 21.43% were using 21.00-26.99 m vessels. When the age distribution of the fishing vessels was analyzed, the result was that they varied between 3-33 years old and average vessel age was 14.74, and 42.86% of the fishermen were using the 10-16 years old vessels. The engine power distribution of the fishing vessels was between 64-1293 HP, the average engine power was 343.86 HP, and 35.71% of the fishermen were using 60-199 HP vessels. When the fishing experience of the fishermen was examined, it was seen that their experience varied between 10-57 years and 26.19% of them had 30-39 years of experience. When number of fishing days of the fishermen was viewed, it was determined that number of the fishing days varied between 100-219 days and 61.90% of them went to fishing for 140-179 days. When the fishery satisfaction of the fishermen was analyzed, 42.86% of them were satisfied and 30.95% were unsatisfied. 90% of the fishermen indicated that they wouldn't prefer their child to be a fisherman (Table 1).

The species that fishermen fishing economically are sea snail, whiting, red mullet, european anchovy, european sprat, turbot, atlantic bonito, atlantic horse mackerel, shad and bluefish respectively (Table 2).

When SSA evaluated the income, expenditure and gross profit of fishermen (Table 3), it was seen that the average income was 224 625 TL, the expenditure was 119 196 TL and gross profit was 105 429 TL. A separate evaluation regarding the fishing methods that fishermen used, it was seen that the gross profit was negative in beam trawl and positive in deep trawl.

CONCLUSIONS

60% of the fishermen located in the region hunted with vessels smaller than 15 m and 31% of them hunted using vessels older than 17 years. 80% of the fishermen had an experience of 20 and more than 20 years. As all of the fishermen had more than 10 years of experience, this was an indicator showing that individuals who should keep hunting were not raised. The facts that 90% of the fishermen indicating that they wouldn't prefer their child to be a fisherman, and non-existence of fisherman who had an experience less than 10 years were significant situations which may affect sustainable fishery negatively in the region. Therefore, in order to maintain fishery which is an important source of income in the region, primarily policymakers should generate a solution for the problems of the fishermen. Cooperating with universities, education programs should be arranged and consciousness on fishery should be raised.

ACKNOWLEDGEMENTS

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