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AN ECONOMIC STUDY OF FISH PROCESSING WORKERS IN THOOTHUKUDIDISTRICT



J. Moses Gnanakkan

Assistant professor of Economics, Bishop Caldwell College, Thoothukudi
Tamilnadu.

ABSTRACT:

There is a tremendous growth in the resources and infrastructure of the Indian seafood industry today. This paper attempts to examine quality of work life of fish processing workers in Thoothukudi District. The present study is based on both primary and secondary data covered only six months period (2014). Percentage, averages, ranking method, standard deviation and multiple regressions were used for the analysis. It has been observed that the dominant fish processing workers relate to out of 75 workers majority (32 percent) of them belong to cleaning. It is followed by setting and canning (20 percent), grading (10 percent), peeling and cutting (12 percent), freezing (4 percent), Packing (8 percent), and loading and transporting (14 percent). Results on nature of work revealed that 75 percent of workers are skilled workers and the remaining 25 percent of workers are too unskilled workers in the fish processing units. The study revealed that 31% of the respondent's income up to Rs.3000, 17% of



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them is earning Rs.3000-6000 monthly, 40% are earning Rs.6000-12000 monthly, and the others 12% are earning above Rs.12000 monthly.

It is revealed that three of the variables were entered into the equation and the order of inclusion was as follows: Job satisfaction, quality of family life and income. As each of the additional was entered, the multiple R and R² increased. This indicates that job satisfaction quality of family life and income were the best set of predictors of quality of work life having a combined contribution of about 98 per cent. Allowing one of the independent variables to operate, while controlling the other variables in the equation, revealed that it was job satisfaction which had the highest contribution to the quality of work followed by the quality of family life and income respectively. Involvement of fish processing workers in all types of aquaculture practices should be encouraged. It is better to promote "men and women partnership firms" instead of exclusively women oriented enterprises. It is seen



that husband-wife enterprises with one or two helpers in fish processing marketing and other fishery related activity have better prospects.

KEY WORDS: fish processing, seafood industry, peeling and cutting, financial institutions, quality of work, marketing.

INTRODUCTION:

With the growing demand for Indian seafood products across the world, the dynamics of the seafood business in India is changing fast. There is a tremendous growth in the resources and infrastructure of the Indian seafood industry today. This implausible export growth of the seafood sector with very little assistance from the government is a tribute to the enterprise and resilience of the small Indian entrepreneur. The Indian Seafood Industry is comprised mainly of small and medium size family concerns and large corporate companies have almost no presence here. Even those that ventured withdrew due to an inability to manage the environment and dynamics of the industry. Very recently with the consolidation and systematization of the industry, large corporate companies have begun to invest in the Indian Seafood Industry.

Over 150 processing facilities have received European Union approval from the existing 350 processing facilities in India. The factories are located in 20 clusters along the East and West Coast of India and we need to develop these clusters into international seafood processing hubs. Globalisation has brought mixed socio-economic outcomes for men and women involved in the seafood industry. In Kerala there are 2703 fish markets comprising 185 wholesale and 2518 retail outlets which includes 1126 wayside markets (Anon., 2000).

If some people benefitted from new emerging work and business opportunities, for various reasons women tend to win less than men, and sometimes tend to even be left behind. On-going global changes are drastically altering the sharing of human, financial and natural resources on a worldwide scale, with a disproportionate effect on women. Research carried out on this topic indicates that women in coastal areas depending on seafood as a source of revenue or a source of food are particularly affected by these changes. Women's position in seafood processing in the developing world is remarkably similar to that of women in seafood processing in developed countries, albeit at a very different economic level (Macalister Elliot and Partners Ltd., 2002)

Income of processed fish was depending on the product size, specific demand for particular species and quality of processes product. The similar finding was also taken in a dry fish market of West Bengal, India (Ghorai et al., 2014). The cost of processed fish depends on size, quality of species, transportation, labour and season (Faruque et al, 2012). Lacks of scientific temperament, infrastructure and transport facility are the major factor behind reduced cost of processed fish. Apart from these, deficient knowledge of market information and instability of price of product also affected the economic status of processed fish (Ghorai et al., 2014 and Faruque et al, 2012). The active involvement of women's was recorded during the investigation and it was also recorded worldwide (Kolawole et al., and Ghaly et al.,). Skinner and Ivancevich (2008) argued that Quality of Work Life is associated with adequate and fair compensation, safe and healthy working conditions, opportunities to develop human capacities, opportunities for continuous growth and job security, more flexible work scheduling and job assignment, careful attention to job design and workflow, better union management cooperation, and less structural supervision and development of effective work teams.

Judge, et. al, (1993), mentions that employee satisfaction is positively correlated with motivation, job involvement, organizational citizenship behaviour, organizational commitment, life

satisfaction, mental health, and job performance, and negatively related to absenteeism, turnover, and perceived stress and identify it as the degree to which a person feels satisfied by his/her job. This paper attempts to examine quality of work life of fish processing workers in Thoothukudi District.

VARIETY OF MARINE PRODUCTS EXPORTS

Item	Quantity/Value	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Fr. Shrimp	Quantity in ton	1174	1209	1315	1268	1385	1480	1397	1323	1239	130553	151465	189125	228620	301435	357505
	Value in Crore	44.51	41.39	46.08	40.13	42.20	42.71	45.06	39.41	37.79	418.23	571.81	817.52	970.63	193.68	224.68
	US\$ Million	985	87.1	95.34	87.66	93.84	97.04	99.76	98.06	83.92	883.03	126.1	174.12	180.32	321.09	370.97
Fr.F inFish	Quantity in ton	2129	1749	1963	1380	1596	1823	2707	2202	2385	260979	312358	347118	343876	324359	309434
	Value in Crore	8.46	7.31	7.84	6.07	7.92	9.99	14.52	13.03	17.22	203.33	262.38	328.41	329.68	429.48	377.85
	US\$ Million	19.22	15.0	17.46	13.58	16.86	22.59	32.19	32.62	37.52	430.94	583.48	683.5	617.59	708.63	619.66
Fr.C uttlefish	Quantity in ton	3367	3056	4138	3961	4423	4965	5570	4595	5075	63504	59159	54671	63296	68577	82353
	Value in Crore	28.99	28.0	41.70	43.51	47.40	54.91	79.73	74.41	76.10	923.83	1104.5	1346.7	1354.2	1386.9	1833.2
	US\$ Million	63.52	58.93	86.37	94.91	4.89	4.48	5.75	5.66	8.27	195.69	244.62	282.72	251.54	228.13	300.69
Fr. Squid	Quantity in ton	3762	3979	3783	3783	4812	5235	4725	3417	5712	61445	87579	77373	75387	87437	69569
	Value in Crore	3.44	3.96	3.38	3.29	4.72	5.52	8.32	8.42	6.23	622.63	101.5	122.81	137.8	173.19	127.52
	US\$ Million	71.31	69.36	79.83	79.81	10.66	13.04	12.62	10.12	14.28	132.24	223.67	262.72	256.9	284.6	209.84
Dried items	Quantity in ton	7532	8307	8178	1257	9692	1416	2429	2241	3168	47053	79059	53721	72953	67901	70544
	Value in Crore	70.22	67.96	84.23	5.68	1.01	2.56	3.16	8.88	0.75	981.11	954.94	562.65	819.9	998	101.6
	US\$ Million	15.43	14.3	17.46	31.69	27.09	30.03	40.75	64.72	92.51	208.72	212.22	117.66	152.81	167.89	165.52

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Live items	Quantity in ton	1844	1628	2115	2341	2262	2568	2478	2498	3434	5492	5208	4199	4373	5080	5488
	Value in Crore	39.88	40.57	53.66	51.1	50.75	61.71	64.06	69.07	99	139.14	142.15	154.61	197.89	281.85	301.51
	US\$ Million	8.77	8.54	11.12	11.15	11.31	13.99	14.22	17.21	21.82	29.52	31.46	32.46	36.82	46.7	49.62
Chilled items	Quantity in ton	3820	3284	3350	3779	3988	5060	7200	6541	453	28817	21118	21278	26868	19755	31404
	Value in Crore	71.63	63.66	59.14	64.03	68.14	81.56	117.3	118.1	7.34	264.49	257.54	357.42	537.11	527.84	635.93
	US\$ Million	15.74	13.39	12.27	14	15.16	18.4	26.63	29.62	48.39	55.87	56.93	74.03	99.87	88.48	104.71
Others	Quantity in ton	31195	38209	43299	48090	55250	60841	67571	73698	73801	80592	97145	114538	112841	109212	124947
	Value in Crore	29.4	32.9	43.8	38.92	47.58	57.48	67.5	77.9	97.3	108.64	148.7	156.8	156.8	1623.5	2138.9
	US\$ Million	64.3	67.77	89.79	85.54	62.9	0.46	9.72	3.68	0.24	196.84	242.72	314.16	292.86	272.34	351.31
Total	Quantity in ton	440473	424470	467297	412017	461329	512164	612641	541701	602835	678436	813091	862021	928215	983756	1051243
	Value in Crore	64.4389	59.5705	68.8131	60.9195	66.4669	72.453	83.6353	7620.92	8607.94	100.4853	129.0147	165.9723	188.5626	302.1326	334.4161
	US\$ Million	14.1632	12.5335	14.249	13.3076	14.1448	16.4421	18.1893	18.1809	19.1963	213.284	285.285	350.350	351.351	500.77	551.112

Source: www.mpeda.gov.in, 2014

India plays a major role in the global seafood export among the Asian countries. The marine products exports from India reached 8 lakh tonnes worth 2.8 billion US \$ in 2014-15 and registered an impressive double digit growth rate since 2010-11. India exports frozen shrimp, squids and finfish in dried, live and chilled forms to different destinations. With the current demand pattern of major seafood markets and with modern machinery for freezing and processing, several exporting firms have started development and exports of processed value added products. Among the different items exported, frozen shrimp and frozen fin fish accounted for about 75 percent of the total volume of seafood exports from India. Even though frozen shrimp contributed only 19.24 percent of the total volume of seafood exports, its share in the total value was 41.62 percent in 2014-15. Frozen fish occupies prime position in terms of quantity, however its share in the total value is only 20.38 percent showing low unit value realization (Rs. 84.16 per kg) (MPEDA, 2014).

State wise Pre-Processing centres

State		Pre-Processing	
		No.	Capacity
1.	Kerala	288	1987.02
2.	Karnataka	22	286.68
3.	Goa	13	124.33
4.	Maharashtra	47	1262.24
5.	Gujarat	94	1108.84
6.	Tamil Nadu	41	367.03
7.	Andhra Pradesh	55	6046.48
8.	Odisha	22	189.87
9.	West Bengal	38	283.95
10.	Total	620	11656.44

Source: www.mpeda.gov.in, 2014

Currently, there are some 399 processing plants having a daily freezing capacity of 7,283.36 tonnes of fish products. Besides, there are 471 cold storages in the country, the total estimated capacity of which is 89,274 tonnes. The number of fishing vessels which mainly contribute to the export market is calculated as 12,660. From a subsistence-based livelihood activity pursued by a group of largely poor and rural artisans, marine fisheries sector has acquired the hues of an urban-based, capital-intensive commercial sector, earning sizeable sums of foreign exchange for the country.

OBJECTIVES OF THE PRESENT STUDY

The objectives of the present study are:

- 1.To collect data on the socio-economic structure of fish processing workers in Thoothukudi District.
- 2.To identify the motivational factors to join fish processing industries
- 3.To study quality of work life of fish processing workers in the study area.

METHODOLOGY

The present study is based on both primary and secondary data covered only six months period (2014). Primary data has been collected through interview schedule. The proportionate random sampling technique has been adopted to select 75 fish processing workers from 15 fish processing Industries in Thoothukudi district. Secondary data and information are collected from MSME- (Micro Small & Medium Enterprises) Development Institute, Thoothukudi, District Industries Centre Thoothukudi, books, journals and websites. A separate interview schedule was designed, pilot tested and used for data collection. This is purely a descriptive study. Percentage, averages, ranking method, standard deviation and multiple regressions were used for the analysis.

Socio-personal characteristics of respondents (n=75)

Variable	Categories	Percentage
Gender	Male	54
	Female	46
Age (years)	Young (20-30)	34
	Middle (30-45)	34
	Old (45-60)	28
	Above-60	4
Education	Illiterate	8
	Primary	26
	Secondary	18
	Hr. Sec	36
	Graduate	12
Family Size	Less than 3	10
	Low (3-6)	20
	Medium (6-9)	10
	Large (9-12)	20
	More than 12	40
Religion	Christians	22
	Hindus	78
Community	Most Backward	16
	SC/ST	12
	Backward Classes	72
Family Type	Nuclear Family	90
	Joint Family	10
Nature of work	Skilled	75
	Unskilled	25
Type of work	Cleaning	32
	Peeling and cutting	12
	Grading	10
	Setting and canning	20
	Freezing	4
	Packing	8
	Loading and Transporting	14
Monthly Income (Rs.)	Below 3000	31
	3000-6000	17
	6000-9000	14
	9000-12000	26
	Above 12000	12
Livestock	Goat	30
	sheep	12
	Cattle	20
	buffaloes	38

Source: Primary Data

RESULTS AND DISCUSSION

The socio-economic characteristics of in the fish processing respondents were analyzed and

presented in the above table. It is evident from the results that the percentage of male is more i.e., 54% in the sample families and the percentage of middle age respondents is more i.e., 34% in the fish processing units. As per the survey middle age group’s involvements is higher than that of old and young aged groups and mean size of the family worked out to be 32.31 years and standard deviation was 27.032 in the study area.

Further, results revealed that 26% of the respondents had primary education, about 18% had high school education, about 36% possessed higher secondary level education and only about 12% had pursued degrees. Further, 8% remained illiterate.

The study showed that majority of them, about 78%, was Hindus and about 22% were Christians. Generally, the study area is dominated by Hindus. Results on family size categories indicate that majority of the respondents i.e., 40 percentage of families are having more than 12 size ranging from members and mean size of the family worked out to be 9.32 years and standard deviation was 5.621.

Results on family type revealed that 90 percent of the respondents belonging to the nuclear family. This clearly indicates the declining of the joint family system. Results on nature of work revealed that 75 percent of workers are skilled workers and the remaining 25 percent of workers are too unskilled workers in the fish processing units.

It has been observed that the dominant fish processing workers relate to out of 75 workers majority (32 percent) of them belong to cleaning. It is followed by setting and canning (20 percent), grading (10 percent), peeling and cutting (12 percent), freezing (4 percent), Packing (8 percent), and loading and transporting (14 percent).

The study revealed that 31% of the respondent’s income up to Rs.3000, 17% of them is earning Rs.3000-6000 monthly, 40% are earning Rs.6000-12000 monthly, and the others 12% are earning above Rs.12000 monthly.

Further, results revealed that cattle, goat, sheep and buffaloes are the major livestock in the area. About 30% of the sample farmers had goat, about 38% of them maintained buffaloes and about 20% of them had cattle. Poultry is widely prevalent in the study area.

Motivational factors to join fish processing industries

Motivational factors	Average Score	Rank
For better standard of living	53.73	II
Economic necessity	56.29	I
Willingness	31.59	VI
Easily available	34.86	V
Uneducated	47.48	III
For dependents welfare	41.67	IV

Source: Computed from Primary Data

It is clearly evident from the table that the prioritized motivational factors for choosing the occupation by the sample respondents in fish processing units, it is inferred that by using Garrett’s score.

The first rank for choosing the occupation was assigned to economic necessity followed by

better standard of living. Third and fourth ranks were given to uneducated and for dependents welfare respectively. Easily available and willingness were ranked fifth and sixth respectively.

Step wise multiple regression dependent variable quality of work life

Variables	Multiple R	R ²	F	P	Beta
Job satisfaction	0.9352	0.93	327.38	0.001	0.97
Quality of family life	0.9627	0.94	209.52	0.001	0.36
Income	0.9498	0.98	368.24	0.001	0.04

Source: Computed from Primary Data

It is revealed from table that three of the variables were entered into the equation and the order of inclusion was as follows: Job satisfaction, quality of family life and income. As each of the additional was entered, the multiple R and R² increased. This indicates that job satisfaction quality of family life and income were the best set of predictors of quality of work life having a combined contribution of about 98 per cent. Allowing one of the independent variables to operate, while controlling the other variables in the equation, revealed that it was job satisfaction which had the highest contribution to the quality of work followed by the quality of family life and income respectively.

CONCLUSION

Location-specific and need based training programmes for fish processing workers should be organised to enhance the awareness and technical know-how enabling them to start self-generating gainful employment ventures in aquaculture and post-harvest sector of fisheries. Involvement of fish processing workers in all types of aquaculture practices should be encouraged. There is enormous scope to adopt and expand ornamental fish culture to earn a very high income both in rural and urban centres. Fish processing workers could take up pearl culture as a productive income-earning venture on account of the vast unutilised potential. Appropriate training programmes, including the possible linkages of necessary credit facilities in liaison with scientific institutes and formal financial institutions, respectively should be imparted to the primary stakeholders. It is better to promote "men and women partnership firms" instead of exclusively women oriented enterprises. It is seen that husband-wife enterprises with one or two helpers in fish processing marketing and other fishery related activity have better prospects.

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