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Formal sector financing on the marine fish production and socio-economics of fishers in Sri Lanka

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Abstract

The present study was carried out to determine whether the formal sector financing has a significant effect on the marine fisheries in the North Western, Western and Southern provinces of Sri Lanka and to determine whether granting of loans has resulted in any socioeconomic development among the fishers. Results indicate that granting of loans to fisheries sector has not resulted in a significant increase in the marine fish production in these areas during the period 1987-1997. Further, there was no significant relationship between the marine fish production and the rate of repayment of loans. It was also revealed that the recovery of loans by the financial institutions was unsatisfactory. Improvements in the recovery of credit could be made by reviewing the reasons for failures of previous financing schemes, close monitoring and supervision and becoming more familiar with the attitudes and problems of the fishers. Study also showed that the majority of fishers who have obtained loans $\geqslant$ Rs. 20,000/= live in tiled / asbestos roofed houses built up with bricks / cement blocks while the majority who have obtained < Rs. 20,000/= live in cadjan / tar / GI roofed houses built up with clay / wooden planks. It is necessary to train fishers to budget their income. Involvement of women of fisher households in bank lending and savings activities may be useful in this regard.

Key Words : Marine fish production. loans, recovery

1. Introduction

The fisheries sector plays an important role not only in providing protein for the nation but also in providing employment and income to the society. Despite the financial assistance provided in the past by the state to develop this industry, it has not yet progressed beyond the scope of a small

scale industry. Most of the minor scale entrepreneurs in this sector face financial problems. Due to various reasons, instead of using credit schemes offered by the banks most of them usually turn for informal financial assistance (Munasinghe, 1990).

The income of fishers is primarily based on the type and size of the catch, which are dependent on the type of craft and the gear used, technology adopted, weather conditions and availability of resources. Almost 94% of boat owners and 92% of crewmen depend on fishing for their entire household income while the rest depend on fishing for more than 50% of their household income (Munasinghe, 1990)

The present study was carried out to determine whether granting of loans to fisheries sector has resulted in a significant increase in marine fish production in the North Western, Western and Southern provinces and whether repayment of loans obtained by fishers from financial institutions has enhanced due to increased fish production and the granting of loans by financial institution has resuted in the improvement of socio-economic conditions of the fishers.

2. Materials and Methods

Data on the marine fish production in the Western, Southern and North Western provinces from 1987 to 1997 were collected from the reports available at the Ministry of Fisheries and Aquatic Resources Development. Data on the amounts of loans granted to the fishers in these provinces by the Bank of Ceylon, Peoples Bank, Regional Rural Banks, Hatton National Bank, Development Finance Corporation of Ceylon Ltd, National Development Bank and the Asian Development Bank and the amounts repayed during this period were also obtained from the respective banks.

The socio-economic study was carried out in Judewatta fishing village in Dickowita and Bandarawatta fishing village in Beruwela. The fishers in the Judewatta fishing village were engaged in theppam (non motorized log raft) fishery while those in the Bandarawatta were engaged in multi day boat fishery. A total of 22 craft owners and 28 crew members from Judewatta and 50 craft owners and 50 crew members from Bandarawatta were interviewed and information on the nature of the houses and the amounts of the loans they have obtained from financial institutions were collected.

As data were found to be non-normal, non-parametric statistical methods were used to analyze these using the MINITAB statistical package. Spearman's rank correlation coefficient was calculated between a) fish production & amounts of loans granted, and b) the fish production & % recovery in the three provinces studied (Siegel, 1956).

For the data colected from the two fishing villages chi-square tests of independence with Yate's correction were carried out between (a) amount of loans taken vs ownership of crafts, (b) nature of house vs ownership of crafts and c) nature of house vs amount of loans taken (siegel, 1956).

Kruskal-Wallis tests were conducted in order to test whether significant differences exist among the three provinces studied with respect to (a) marine fish production, (l) amounts of loans granted and (c) percentage of recovery (Siegel 1956).

3. Results

The highest mean marine fish production during 1987-1997 was recorded in North Western province whereas the highest mean amount of loans were granted annually to the marine fishing industry in the Southern province. The highest percentage of recovery per year was recorded from the North Western province (Table I)

Table I : The mean values for the marine fish production, amount of loans granted for marine fishing industry and the % recovery of loans for the period 1987-1997 in the three provinces studied.

Province	Marine fish production (MT)	Amount of loans granted (Rs. M)	%Recovery
Southern	39797.4	97.1	64.1
Western	33,262.5	71.1	53.9
N. Western	41,848.8	58.1	72.9

The Spearman's rank correlation coefficients between (a) the annual total marine fish production & the amounts of loans granted annually and (b) annual total marine fish production & % recovery in each year for the three provinces studied are given in Table II. All these values were found to be not significant at 5% level.

Table II : The Spearman's rank correlation coefficients between a) annual total marine fish production & the amount of loans granted and b) the annual total marine fish production & % recovery of loans in each year for the three provinces studied (P=Total marine fish production, L = Amount of loans granted, R = % recovery, n = 11).

Province	Variables used	Rank correlation coefficients
Western	P xL	0.54
	PxR	0.47
N. Western	PxL	0.40
	PxR	0.16
Southern	PxL	0.44
	PxR	0.42

Results of the Kruskal - Wallis tests indicate that there are significant differences among the 3 provinces with respect to total marine fish production, the amount of loans granted and recovery of loans for the period 1987-1997 ($P<0.5$) (Table III).

Results of the chi square tests indicate that in both fishing villages, the amount of loans obtained are not indepandant from the ownership of crafts (Table IV).

The fishers in the two fishing villages considered for this study live in two types of houses; viz., tiled / asbestos roofed houses built with bricks / cement blocks (type A houses) and cadjan / tar / G.I sheet roofed houses built up of clay / wodden planks (type B houses). Results of the chisquare tests indicate that when fishers of the two fishing villages were considered separately, there is a relationship between the amount of loans obtained and the type of house they live (Table V). Majority of those who live in type A houses have obtained loans $\geq$ Rs. 20,000/= while majority of those who live in type B houses have obtained loans < Rs. 20,000/=. However, when the crew members of both fishing villages were considered together, the amount of loans obtained were independent of the type of house they live. When the craft owners of both villages were considered together there is a relatioship between the amount of loans obtained and the type of house they live. Majority of the boat owners who have obtained loans $\geq$ Rs. 20,000/ = live in type A houses ($p<0.05$).

Table III: Results of the Kruskal - Wallis test (Values denoted by * are significant at 5% level).

Province	Parameters used	H
Western Southern N. Western	Marine fish production	17.8*
Western Southern N. Western	Amount of loans granted	25.2*
Western Southern N. Western	% of recovery	27.2*

4. Discussion

The highest mean annual fish production for the period 1987 to 1997 was recorded in the North Western province and the lowest was recorded for the Western Province. The mean annual fish production in the three provinces was found to be significantly different from each other. The mean amount of loans granted annually was highest in the Southern province and was lowest in the North Western province (Table I). These amounts were also significantly different from each other. Therefore, it is clear that the fish production in an area, is not related to the amount of loans granted. In all three provinces, no significant correlation was observed between the annual fish production and the amount of loans granted annually from 1987 to 1997 (Table II). Therefore, it is clear that even within a particular region, the marine fish production does not depend on the amount of loans granted. The fish production in an area, depends on many factors. Among these are biological characteristics of the fish population such as the abundance, growth rate, recruitment & mortality of fish (Bagenal, 1978), environmental characteristics such as primary productivity, physical, chemical & biological factors of the environment that affect the fish population, and anthropogenic factors such as the fishing effort which includes the time of fishing, skills of fishers, type of gear used, efficiency of the crew etc. Although granting of loans may help to increase the fishing effort by enabling the introduction of more fishing units, i.e. gear and craft, and introducing more efficient gear, it is clear that granting of loans has not resulted in a significant increase in the catch in the three provinces studied. As such, providing loan facilities to small scale fisher with the objective of increasing the fish production appears to be not prudent.

Of the three provinces studied, the highest amount of loans has been granted in the Southern province and the lowest amount has been granted in the North Western province. Amount of loans granted in different provinces appears to be correlated with the number of branches of the two main financial institutions, i.e. People's Bank & Bank of Ceylon in the coastal areas / towns in those provinces (Weerasooriya, 2000). There is no positive correlation between the number of marine fisher households and the amount of loans granted because in the district where the highest amount of loans are granted, the number of marine fisher households are the lowest and vice versa (NARA, 1998).

Table IV : Results of the chi / square tests of independence (with Yate's correction) between the amount of loans obtained and owenrship of crafts in the two fishing villages (Values denoted by * are significant at 5% level).

Category		**Amount of loans obtained (Rs)**		Chisquare value
		⩾20, 000/=	<20,000/=	
Beruwela	Crew members	17	33	11.56*
	Craft owners	35	15	
Dickowita	Crew members	8	20	9.82*
	Craft owners	17	5	

The 70% recovery rate is usually considered to be a satisfactory figure with state owned financial institutions (De Silva et al., 1994). Therefore, in this study, a satisfactory recovery rate was observed only in the North Western province. One of the reasons for this may be that due to the high fish prodction in this province, the fisherfolk may be able to repay more loans they have obtained from the financial institutions. The lowest mean repayment rate which was 53% was recordeed from the Western province. Therefore, the statements given in Anon (1995), i.e. in the rural areas, fishers may not be aware of the procedures of repayment and may not understand the risk of non-payment of loans, appears to be doubtful. It appears from the results of this study that if the fishers get a good catch, they repay the loans One of the reasons for the low rate of repayment in the Western

province may be the low fish production in this province. The fisher may not have had sufficient income to repay the loans. However, the results of the Spearman's rank correlation showed that within a given province, there is no statistically significant correlation between the annual rate of recovery and the annual marine fish production (Table II).

The results showed that more than 70% of the craft owners of both fishing villages have obtained loans ≥ Rs. 20,000/=. The reason for this high percentage may by that the financial institutions have confidence with the craft owners and they have kept acceptable collaterals to obtain loans. When the craft owners and crew member of the two fishing villages is considered separately, the numbers who have obtained loans ≥ Rs. 20,000/= are higher in Beruwela than in Dickowita (Table V). The reason for this may be that the fishers in Dickowita are engaged in Theppan (non motorized log raft) fishery and therefore, do not have high valued collaterals. Further, the financial institutions require the fisher to maintain a savings account for at least 3 months prior to release of the loan, with a minimum balance of at least 1/8 of the amount of the loan sought (Fernando & Attanayake, 1992). Therefore, most of the crew members may not have been able to maintain the minimum balance required to obtain a larger sum of money as loans.

Table V: Results of the chisquare tests of independence (with Yate's correction) between the amount of loans taken & the type of house of craft owners and crew members in the two fishing villages studied (Values denoted by * are significant at 5% level).

		Amount of loans obtained		
Category	**Type of house**	**≥Rs. 20,000/=**	**<Rs. 20,000/=**	**Chi square** value
Dickowita Boat owners & Crew members	A	20	10	6.75*
	B	5	15	
Beruwela Boat owners & Crew members	A	49	35	6.92*
	B	3	13	
Crew members of both fishing villages	A	19	30	1.96
	B	6	23	
Craft owners of both fishing villages	A	50	15	5.17*
	B	2	5	

About 90% of the boat owners of both fishing villages irrespectiive of the amount of loans obtained, live in tiled / asbestos roofed houses with brick walls (Type A houses). The majority of fishers who have obtained loans < Rs. 20,000/= live in cadjan/tar /GI sheet roofed houses built up of wooden planks / clay (Type B houses). Those who own Type A houses, may have a higher income and may also be capable of maintaining the minimum balance required by the bank to obtain a larger sum of money as loans. Further, they may have had collaterals readily acceptable to the bank.

Income of the fishers varies on daily basis but some stability could be seen on seasonal or annual basis (Fernando and Attanayake, 1992). There is a general belief that the fishers are bad in their financial management because they have no plans for the future. They enjoy life with their day's earnings gambling, consuming liquor and buying for day to day needs. They slightly realise that they have got to save a part of their income for tomorrow (Munasinghe, 1990). Having spent most of the income on consumption, semi-durable luxury goods, clothes, enjoyment, alcohol and gambling, the fishers often have to seek credit facilities when they have to undertake major repairs to the crafts and gear. As such, they are often in debt to fellow villagers, money lenders or traders. These debts are normally settled at the end of a profitable season (Panayotou, 1982). John (1951) has suggested that it is necessary to train the fisherfolk to budget their income. However, even now, nearly 50 years after this suggestion was made, it has not been successful. Financial institutions, although not properly practiced, have infra-structure facilities for the supervision, follow-up and close monitoring of the advances granted by them to the fisheries sector. The collaterals obtained should be tangible and wherever possible must be backed up by guarantors of sound financial standings. It may also be useful to provide financial assistance to establish training centers for fishers to provide adequate training in fishing methodologies.

Involvement of women of fisher households in bank lending and savings activities too can be introduced. Women are generally responsible for procuring food and other items for the household and caring for children. To supplement household income, women of fisher households undertake economic activities such as rope making, cadjan and mat weaving etc. In the fisheries sector, women have been traditionally engaged in fish curing and vending. Net mending is another traditional and important activity of women. More recently increasing number of women have been engaged in processing of fish for export, manufacturing of Maldive fish and curing of wet salted fish (Jaadi) (Munasinghe, 1990). A large number of non-fisheries activities that would help to supplement fisherfolk family incomes while supplying some of the basic consumer needs of the community have also

been identified as deserving credit support from banks (Munasinghe, 1990). This will result in increased employment and income opportunities for women in fishing communities . The women should also be provided with credit and training to commence fishery as well as nonfishery related income activities as suggested by Munasinghe (1990).

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