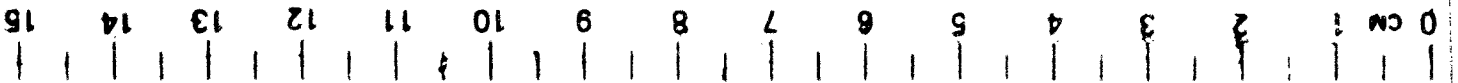


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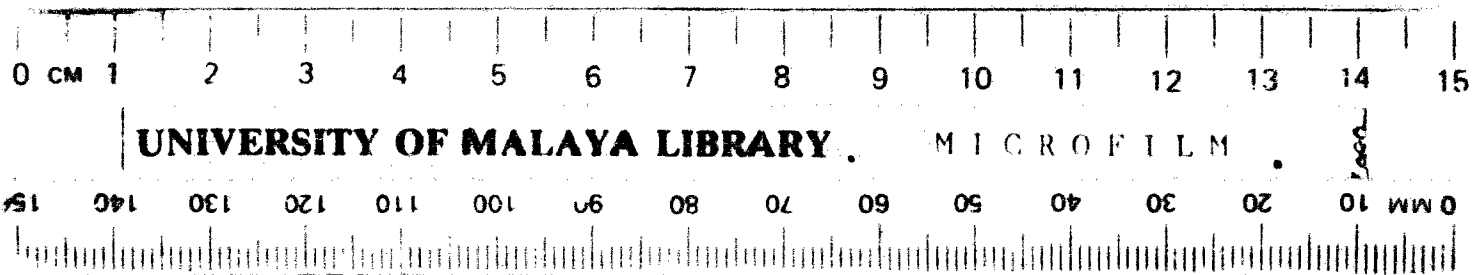
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**ECONOMICS OF CERTAIN
FISHING EQUIPMENT IN BESERAH**

An Academic Exercise

**Presented to the University of Malaya in Part Fulfillment
Towards the Degree of Bachelor of Arts with Honours in Economics**



By

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PREFACE

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INTRODUCTION.

A. PURPOSE

The importance of fishing industry as a means of livelihood in the Federation of Malaya may be realised by the fact that nearly 50,000 people are engaged in this occupation.¹ The main problem connected with this occupation is the low general levels of income of the fishermen as attested by the various efforts of the Government to improve their levels of living. Successful remedial measures, however, cannot be undertaken unless the various economic aspects of the fishing industry^{have} been well studied. In this academic exercise an attempt is made to study some economic problems connected with fishing equipment. It is hoped that this analysis will throw some light on the possible remedial measures for the financial reconstruction of the rural economy.

B. SCOPE

A sample survey of the fishing equipment was carried out in the fishing villages in Beserah, a Mukim in the District of Kuantan, Pahang, from June 4 to July 21, 1958. The villages covered were Kampong Di-Pantai and Kampong Seberang Che' Let. Although these two villages are located near each other, the characteristics of their fishing industries do differ. Firstly, there are certain types of nets found

1. Federation of Malaya Annual Report 1957.

in one which are not found in the other. Pakat Payang is only found in Kampong Di-Pantai while Pakat Tangkol and Pakat Sudu are found only in Kampong Seberang Che' Let. And secondly, as regards the hook and line fishing, individual fishing is predominant in Kampong Di-Pantai while in the other group fishing that constitutes almost all the fishing units engaged in hook and line fishing. Apart from these differences, they share the common features of the fishing industry in Beserah. The writer, therefore, feels that there is no necessity to discuss the two villages separately.

C. METHOD

The materials analysed in this academic exercise were obtained through personal interviews. Ninety fishermen and other people connected in one way or another with the fishing industry were interviewed. Apart from interviewing, the writer spent much time in observing the fishermen maintaining and repairing the nets and boats and on two occasions the writer had the opportunity to see how 'unjaag' (artificially made fish shelter) - an important form of intermediate capital - were constructed. The sources of the data shown in the Tables in this academic exercise were all from personal interviews unless stated otherwise.

D. DIFFICULTIES

The major difficulties confronted by the writer were in obtaining informations regarding the returns accrued to the various types of nets. This is because the fishermen concerned did not keep

records of their earnings, nor the volume of their catch. The people who really knew the annual returns to various types of nets were the Chinese fish dealers in Beserah because not only they had the monopoly of the fish market in Beserah but also they owned most of the major types of nets and boats there.² But to obtain these data from them was very difficult indeed, in fact impossible, because they were not willing at all to reveal the informations. This inavailability of adequate data on income ^{is} was indeed a handicap to the writer, particularly in trying to compare the income derived from the different types of net operations.

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CHAPTER II

CAPITAL EQUIPMENT

A. FISHING METHODS AND EQUIPMENT

There are only two methods of fishing practised in Beserah, and these are (a) fishing by hook and line, and (b) fishing by nets.¹

(a) Hook and line Fishing

These may be divided into two types: namely, 'Mengail Parang' and 'Mengail Unjang'. The former is a small fishing unit consisting of one fisherman only, and the craft used is correspondingly small, between 15 to 17 feet in length. The technique of fishing is by using wooden floats to which hooks and lines are attached. 'Mengail Unjang', on the other hand, is a handline fishing, operated at the 'unjang' or fish shelters which are constructed out of tree leaves. The unit consists of three fishermen and the size of boats used is between 18 to 20 feet in length. Both of these types of hook-and-line fishing entail the use of a small net ('Jaring Umpan') for the purpose of catching baits of small fish. The size of the net is about 12 fathoms long and 3 fathoms wide with 2 inches mesh.

¹ In some other fishing areas for example Kelantan, Trengganu, and Singapore can be found other types of fishing methods and a greater variety of nets.

(b) Net-Fishing

In this method of fishing various type of nets are used, and these can be classified as follows:

Seine Nets:	Pukat Tarek
	Pukat Payang
Gill/Drift Nets:	Pukat Dalam
	Pukat Hanyut
Gill/Lift Nets:	Pukat Sudu
	Pukat Tangkol

The above classification, as the names suggest, are based on the different methods of operations.² As Table 1 shows, a unit of net fishing consists of 5 to 25 fishermen depending on the types of nets used. The crafts used vary in size between 22 to 42 feet, also depending on the kinds of nets. In the case of Pukat Sudu and Pukat Tangkol, their operations require 3 and 5 boats, respectively. ^(32 feet)

Details on the operations of these nets can be found in 'The Fishing Methods of Kelantan and Trengganu' by M.L. Parry in the Journal of the Malayan Branch of the Royal Asiatic Society, Vol. 27, June 1954.

TABLE 1**A SUMMARY OF FISHING GEAR****BESERAH, 1958**

Types of nets	Size of mesh (in inches)	Size (in fathoms)	No. of men in crew
Pukat Tarek	0.3 0.5 0.75 1.25 2.0	180	10 - 14
Pukat Payang	22 2 0.75 0.5	200	15
Pukat Dalam	2	130	10 - 14
Pukat Manyut	1.5	100x3	3 - 5
Pukat Suda	1.25	32 x 22	15
Pukat Tangkol	1.25	32 x 32	25

TABLE 2

NUMBER OF FISHING UNITS IN BESERAH, JULY 1958

Types of unit	Number
Hook and line: 'Menggail Parang'	61
'Menggail Unjang'	48
Net fishing: Pukat Tarek	28
Pukat Dalam	24
Pukat Payang	2
Pukat Sudu	2
Pukat Hanyut	2
Pukat Tangkol	1
TOTAL	168

From Table 2 above it can be seen that out of 168 fishing units in Beserah 109 units are engaged in hook-and-line fishing, and only 59 units are engaged in net fishing. The reason for this distribution is that the capital investment needed for a net fishing is far too large for most of the fishermen to undertake³ and, as will be discussed presently, most of the boats and nets engaged in the net fishing are not owned by the operators themselves. Another notable feature shown by Table 2

³ See page 14 and page 20 on costs.

is the direction of investment among the nets: there is a heavy concentration of investment in the Pukat Tarek and Pukat Dalam. The main reason for this is that it is more profitable to operate Pukat Tarek and Pukat Dalam than other types of nets. Pukat Tarek and Pukat Dalam are in fact make up a unit.³⁴ This is made possible because while Pukat Tarek is operated during the day only; Pukat Dalam is operated during the night only. To operate Pukat Dalam alone is unprofitable because, unlike other nets, its catch is very much subject to seasonal variations: it can only be used for a period of four to five months in a year when mackerel, for which it specializes, are available. The writer has no statistical evidence to compare the returns to various units because adequate income data were not available (See Chapter 1). However, the concensus of opinion among the fishermen interviewed was that income is the main reason for this direction of investment.³⁵

³⁴ In the Table there are 28 Pukat Tarek and only 24 Pukat Dalam. This discrepancy can be accounted for by the fact that Pukat Tarek and Pukat Dalam do not invariably make up a unit. The other 4 units of Pukat Tarek have no Pukat Dalam.

³⁵ Of course, one may argue that income is the obvious reason in determining direction of investment. But in the case of fishing industry this may not be so. There are other reasons such as skill.

B. OWNERSHIP OF CAPITAL EQUIPMENT

A significant feature in the distribution of ownership of boats and nets is that only 30 percent of the boats and nets used in the net fishing operations are owned by the operators themselves. Those who operate their own fishing gear are mainly the wealthier group, who not only have extra fishing gear to loan but are also landlords. On the other hand about 72 percent of the boats used in handline fishing are owned by the operators themselves. This is because the boats used are comparatively small and are therefore within the means of the fishermen to buy. Those who have no boats of their own are those who are engaged in 'Mengail Ujang' because the boats used are bigger and more expensive than those used for 'Mengail Parang'.

C. LOANS OF CAPITAL EQUIPMENT

(a) Sources

Fishermen can borrow fishing equipment from two sources: the Malay lenders, and the Chinese Towkays. The Malay lenders, as pointed out earlier, are also mainly engaged in fishing. As for the Chinese Towkays, there are four of them in Beserah who collectively own 60 percent of the big boats and nets. At the same time they are engaged in dried fish industry and have largely the monopoly of the fish market. They have, in fact, established monopsonistic as well as monopolistic positions.

(b) System of loans of capital equipment

There is a difference between the loan of capital equipment used for hook-and-line fishing and net fishing. In the hook-and-line fishing only the boats are loaned while the remaining equipment ('Jaring Upan', hooks and lines) is provided by the borrowers themselves. In the net fishing, the boats and the nets together are lent out. These loans are made to the heads of the crews; the crew members themselves have no direct connection with the lenders.

The costs of maintaining and repairing the boats and nets are borne by the lenders themselves.

A very important economic problem concerning the loans of capital equipment is that, in the case of the Chinese lenders, a condition is attached in which the borrowers are obliged to sell their fish to them only. It can be seen, therefore, that by controlling the fishing equipment these Chinese Towkays strengthened their monopolistic position in the market.

(c) Rates of interest ⁵

The rate of interest charged on the loan of capital equipment is not on the basis of time-period but rather on the volume of production. The time of payment is normally at the end of gainful fishing days. From the point of view of the lenders this basis

⁵ Among the fishermen, this rate of interest is considered as 'Bahagian' or the share of the capital equipment.