

Transaction Cost of Small Scale Fisheries

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Introduction

Marine is one of the most important natural resources of Indonesia which covers 70 % of total area. Nevertheless, contribution of fisheries as a whole to GDP is very low which is 2.2 % and it is dominated by fish capture which its quantity of production in 2005 was about 4.7 million tones (BPS, 2005).

The big problem of marine and fisheries sector in Indonesia is the low welfare of big number fishermen. Many efforts are run by government to solve this problems that derived become many kinds of programs such as grant for boat and gear, grant or cash for work, etc. Most of those programs use productivity approach and it is rather difficult to prove that the programs work well. For example, grant for boat--especially large boat--will enable fishermen to catch fish in along distant from shoreline. The fact, most of them lack of capital for operational cost, therefore they cannot operate their boats continuously, and finally they will depend on informal lender to support their business. This relationship will cause snowball effect to fishermen and also will make transaction cost for them.

The problem is not only caused by low production factor or high production cost, but also non production costs faced by fishermen which is called transaction cost. Ronald Coase in his paper titled "The nature of the firm" in 1937 defined transaction cost as *the cost of using the price mechanism*. But then it develops that not only market structure causes transaction cost but also social structure and property right.

Transaction cost is ubiquitous, and fishermen face high transaction cost it makes economic pressure. High transaction cost reduces fishermen income. Aggregately it decreases economic efficiency of fisheries. Reducing transaction cost must get big attention from many parts as one of exit solutions from vicious cycle of poverty of big number fishermen. This paper studies about transaction cost of small scale fisheries and its impact to fishermen's community welfare.

Transaction Cost

There are some components faced by fishermen that create transaction cost, those are : 1) catch retribution and collection; 2) middleman cost; 3) security cost; 4) management cost; 5) local institutional cost. Catch retribution and collection is cost of existence for fishermen in fishing sector that paid to the manager and fishing association. Middleman cost is cost of information that paid by fishermen since the limited access of market information. Security cost is to secure the asset such as boat and paid to the informal leader of port area. Business management cost is honorarium or commission that paid to someone who is delegated tasks to organize the expense and administration affairs. While institution cost is paid by fishermen for the purpose of maintaining conducive condition for working. All of those costs have no influence to production, and called transaction cost.

Fishermen with different scale face different proportion of transaction costs. The most component of transaction cost that faced by small scale fishermen is middlemen cost, it is about 92.54 % of total transaction cost, while security cost and local institutional cost only take the rest those are 6.95 % and 0.51 %. Middle scale fishermen face different condition, where the most component of transaction cost are business management cost and catch retribution and collection which take 49.29 % and 45.69 % of total transaction cost, while security cost and institutional cost are only 0.89 % and 4.13 %.

Table 1. Components of Transaction Cost of Small Scale Fisheries (SSF) Compared with Middle Scale Fisheries (MSF) (per unit)

Components	SSF	MSF
1. Catch retribution and collection	-	45,69
2. Business management cost	-	49,29
3. Middleman cost	92.54	-
3. Security cost	6.95	0,89
4. Local institutional cost	0.51	4,13
Total	100,00	100,00

Anggraini (2005)

Factors Cause Transaction Costs for Small Scale Fisheries

By observing the daily activities of small scale fishermen and analyzing their problems, some factors that cause transaction cost are found. *First*, price information in local market is monopolized by middleman

called *bakul*, *tengkulak* or *toke*. They can access and keep the price information. As a consequence it creates asymmetric information for fishermen. In local market, small scale fishermen take position as the price taker from middleman, and they have no bargaining power. The fishermen take lower price than local market price and it leads to transaction cost for them.

Second, limited access of infrastructures and facilities become constrain for fishermen to distribute their catch. Most of small scale fishermen face this problem since many facilities in fishing port are monopolized by middle and large scale fishermen only.

Third, undefined property right causes resource allocation of a fisherman depends on other fishermen. When property rights are perfect, no unauthorized transfer in rights can take place (by definition), and as a result, no effort is made to steal or protect those rights. When property rights are incomplete, wealth maximizing individuals will try to further establish their property rights, and resources will be devoted toward their capture: some rights may be stolen when the opportunity arises, and some resources will be used for protection (Allen,1991).

In common property fisheries, rationally a fisherman will catch as much as possible, because if they do not take it, other fishermen will take it. This condition potentially creates interest conflict among fishermen, so it should be managed well. Function of local institution is very important to build and maintain the encouraging condition in fishing community. This is non technical solution. Some of areas even have local tradition based their belief where people hold a spiritual ceremony wishing for the wealth, and it builds good relationship among fishers. It makes cost to run this local institutional that paid by local fishermen.

Impact to Community's Welfare

This study resulted that the average revenue of a small scale fisherman is about Rp 57 million per year per unit of boat, while he expend total transaction cost about Rp 9.89 million per year per unit of boat. So, ratio of transaction cost and revenue is 0.17 which means that in every Rp 100.00 of revenue, a small scale fisherman expend Rp 17.00 for transaction cost. While a middle scale fisherman's revenue is about Rp 142 million and expend total transaction cost about Rp 15.53 million per year per unit of boat, so its ratio of transaction cost and revenue is 0.09 which is lower than small scale fishermen. This ratio shows that economic inefficiency of small scale fisheries is higher than middle scale fisheries, because there is 17 % revenue outflow from small scale fishermen to other parties which does not support their production capacity.

In 2006 there are 185983 unit of outboard vessel that categorized as small scale fisheries. By this number, we can estimate the total transaction cost of small scale fisheries is about Rp 1.84 trillion per year, excluded non motorized vessels. It shows how big money moves out of small scale fisheries. Even though transaction cost can not be eliminated, but it must be minimized, then could be allocated for public expenditures such as infrastructure buildings, education and health services, etc. It also could be allocated for production capacity of themselves, so over all it could increasing fisheries community welfare in long term.

Conclusion

Small scale fishermen expend higher transaction cost than middle scale fishermen which means that they get higher economic inefficiency. The most factor causes this higher transaction are middleman cost because of the asymmetric information condition faced by small scale fishermen. To minimize transaction cost of small scale fisheries is by liberating market information and strengthening bargaining power in market through Fishers Controlled Enterprise at local level.

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Acknowledgment

Thanks to Department of Environmental and Natural Resource Economics, Center of Coastal and Marine Resource Studies, Surfactant and Bio-energy Research Center of Bogor Agricultural University for the kindly support.