

**FOREIGN INVESTMENT AND SMALL-SCALE FISHERIES DEVELOPMENT
IN INDONESIA:
THE EXPERIENCE OF KATSUOBUSHI PROCESSING INDUSTRIES
IN NORTH SULAWESI**

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ABSTRACT

Foreign investment in the sub-sector of Fisheries in Indonesia was begun in the early 1970s. Most part of the money was invested for fish capture by providing fishing boat and its equipments. Few if any were invested for fish processing industries and marketing. The result was small-scale fishing unit which predominated fisheries management unit in Indonesia remains backwardness until the end of 1980s.

In the early of 1990s, some of the Japanese fish processing industries go international and invested their surplus capital overseas. Maruno Co.Ltd, Tokai Denpun and Marubeni Co.Ltd are among the corporations, which invested their capital for fish processing with particular of producing traditional Japanese seafood, called “katsuobushi”.

The management of Marumo Corporation seems to keep running well until the recent days, while the others suspended after one year of operation. The success to survive is mainly supported by the development of local small-scale fisheries in which Marumo Corporation plays the role as the core of economic development. This paper is written based on the case study with particular experiences of Marumo katsuobushi processing industry in North Sulawesi, Indonesia.

Keywords: small-scale fisheries, “katsuobushi”, investment.

INTRODUCTION

Historical Notes

Historical notes indicated that katsuobushi processing introduced for the first time in North Sulawesi by Mr.Hara Ko in 1927. He is a medical doctor who is a native of Bonotsu fishing village which located in southern part of Satsuma peninsula of Kagoshima prefecture. Despite he has medical doctor license but most of his time were spent for skipjack fishing business management. His skipjack fishing base located in Makurazaki from where he departed to the south sea to search the fishing grounds of skipjack. He called this adventure as the Nanpo Katsuo Gyojo Kaitaku Koukai (voyage to find skipjack fishing grounds in the south sea). This were droved by the need for sustainable supply of fresh skipjack as raw material of Katsuobushi processing plants that established in Makurazaki since that old time.

Mr. Hara Ko and his boat crews departure from Makurazaki in 1927 through Palau Island and arrived at Aertembaga, Bitung of North Sulawesi one month later in the same year. Since then

this place gradually developing to be the fishing base of state owner skipjack-Tuna fishery called *PT. Perikani*. After stop-off several days in Bitung he continued fishing trip to Ambon of Maluku Province then several weeks later he return to Makurazaki home port through the same route of voyage. Six years later in 1993 he made the second trip using the same route with Ambon as his final target of voyage. Unfortunately, he can not return home forever because of died in Ambon suffered from Malaria disease. His cemetery located just on the hill side of Pattimura Airport of Ambon Island.

Despite he made a short stop-off in Bitung, but he left behind to the local people two types of technologies in fisheries namely Japanese type pole and line fishing technique and Katsuobushi processing technique. These technologies then promoted rapidly during the Japanese soldier occupation between 1941 and 1945. This were done aimed at to supply durable foodstuff for Japanese soldier during the World War II. Information from the local aged residents told that during the war each Japanese soldier at least has a piece of Katsuobushi loaded inside their uniform and mostly inside their boot. They take out and put inside the cooking vegetable for flavoring its soup, then take back and put again inside their boot or uniform. In this way, Katsuobushi can be use several months even years by the soldier as the vegetable flavor. This implies that Katsuobushi is the most traditional sea foods for Japanese people since the old time and even today.

Time line of investment in Katsuobushi processing

Not ye found historical notes of investment on Katsuobushi business during the period between 1950 and 1970. As long as observed Katsuobushi factory began to develop gradually after 1970 up until the recent days. The time line of Katsuobushi factory established in North Sulawesi can be summarized in Table 1. While the cites of Katsuobushi factory is presented in Figure 1.

Table 1. Time-line of investment on Katsuobushi business in North Sulawesi, Indonesia

No	Name of enterprise	Year of investment	Location	Remark
1	PT. Sirsam	1972	Tandurusa	Suspended in 1974
2	PT. Sirsam Baru	1975	Tandurusa	Suspended in 1978
3	PT. Saruntawaya	1978	Amurang	Suspended in 1980
4	Watanabe Suisan	1981	Amurang	Suspended in 1982
5	Maruzen Suisan	1984	Amurang	Suspended in 1984
6	Nakahara Suisan	1986	Amurang	Suspended in 1987
7	Marumo Co. Ltd.	1995	Amurang	Still running
8	PT. Sari Cakalang	1985	Bitung	Non-active
9	PT. Sari Malalugis	1987	Bitung	Non-active
10	PT. Harmas	1988	Manado	Closed in 1990
11	PT Manado Mina	1989	Bitung	Running well
12	PT Perikani	1991	Bitung	Suspended in 2000
13	PT. Inobonto	1992	Inobonto	Suspended in 1993
14	PT. Tomini Sakana	1992	Moutang	Suspended in 1996
15	PT. Hamas Sejati	1993	Labuanuki	Never operating
16	PT. Mega Galaxy	1996	Bitung	Suspended in 1999
17	PT. Celebes Mina	2000	Bitung	Running well
18	PT. Nichindo Suisan	2001	Amurang	Running well

Source: Fisheries Office, 2003

PT. Sirsam is a joint investment between Japanese and local enterprise. This business bankruptcy two years later and re-established in 1975 under a new name PT. Sirsam Baru, but bankruptcy again in 1978. One of the Japanese employers Mr. Sakaguchi became the owner of PT. Manado Mina that established in 1989.

Originally, PT. Saruntawaya is a joint investment between the Japanese enterprise and the local entrepreneur, but running only two years and collapsed in 1980. Since then the pants were rent out to the Japanese enterprises such as Watanabe Suisan, Maruzen, and Nakahara Suisan and later to Marumo Inc. who managed since February 1995 up until the early of 2001 and continued its operation by PT. Nichindo Suisan.

PT. Sari Cakalang is also a private enterprise belong to the Chinese family who previously managing the skipjack pole-line fishing enterprise. Thus, this Katsuobushi factory is the capital expansion of their previous skipjack fishery which is mainly supporting the supply of raw material. Since 1999 however, the production activity of this enterprise began to slow-down and become non-active since 2002. PT. Sari Malalugis is another Katsuobushi factory which actually the same owner with PT. Sari Cakalang. Originally, PT. Sari Malalugis running for scad fish (*muroaji*) business to supply demand from Korean Tuna fishing fleets. As the price of scad fish became expensive, the demand from Tuna fishing fleets decreased which lead PT. Sari Malalugis hold overstock without buyer. Since then they began to produce Murobushi and then extended to Mejikabushi (*deho*) and later also Katsuobushi. This factory became non-active in 2002 following its mother enterprise PT. Sari Cakalang.

PT. Harmas is also a private enterprise belong to the Chinese merchant which located just about 5 km in the west part of Manado city. This factory was also employing Japanese expert for quality assurance. Actually, the cite of plants have long been the recreation and swimming area of the city's residents. In around 1990 some residents claimed that they were suffered from itchiness disease after swimming in the water near the factory. Based on this claim then the city government asked to close the factory and relocate to the other place. The owner try to relocate the factory site separated about 200 km to the south at Labuan Uki a new name as PT. Hamas Sejati but never operating until the factory building collapse in 2001. this is because (1) the new site lack with electric, water and communication facilities, (2) there are dispute among the share holder.

PT. Manado Mina is a private enterprise belongs to the Japanese entrepreneur Mr. Sakaguchi previously as an employee of PT. Sirsam in the early 1970s. PT. Perikani is a state owner skipjack fishing enterprise which later extent its business to Katsuobushi production. The management however is entrusted to the owner of PT. Sari Cakalang who appointed her younger brother as a manager of Katsuobushi production section within PT. Perikani. Thus, PT. Sari Cakalang, PT. Sari Malalugis, and PT. Perikani were hold by a family members. The director of PT. Sari Cakalang is the eldest sister, while PT. Sari Malalugis by her younger brother and PT. Perikani by her youngest brother.

PT. Inobonto is also a private Katsuobushi enterprise belong to the Chinese merchant which ius located at Inobonto village about 140 km to the south part of Manado but it was collapsed after on year operation. PT. Tomini Sakana is a private enterprise belongs to the former director of

PT. Perikani. Originally, it is a skipjack pole-line fishery but later extended to do Katsuobushi business. PT. Mega Galaxy is a joint investment between Tokkai Depun Co. Ltd, Marubeni and local Chinese merchant who also owner PT. Galaxy which focused on the skipjack-Tuna fishery and cold storage.

PT. Celebes Mina is a new investment for Katsuobushi factory which is constructed in 2000 and located near to PT. Manado Mina. The investor is the former director of PT. Manado Mina who also young brother of PT. Manado Mina owner. The marketing of its product however, is supported by the Marukei Co. Ltd., a Japanese Katsuobushi enterprise located in Shimazu, Japan.

PT. Nichindo Manado Suisan is the continuation of Marumo Co. Ltd. who previously work with rent factory belongs to PT. Saruntaway but now days work its own processing plants.

Causes of Suspending

As seen in Table 1, the most part of Katsuobushi management unit suspended in the relative short period of operation. Many reasons was found during the interview with the authorized persons but the most reasonable are (1) the limitation of products outlets that is only to the Japanese market, (2) uncertainly law assurance for investment activities, (3) the investors working with few information on the local culture and tradition, (4) bad work ethic of the local man power, (5) relative unsupported by the local small-scale fisheries. The later reason mainly related to the payment system of fish which is spent at least 3 weeks after fish processed.

THE EXPERIENCE OF MARUMO INCORPORATION

Marumo incorporation began to operate in February 1995 using the local katsuobushi factory on rental basis. However, capital investment still spent for the rehabilitation of old building and various out dated production instruments. The most part of spending is for management operating cost instead of capital investment. Although began with rental local plants but the existence of this enterprise in fact have helping the local economy particularly of rural economy do develop gradually. Since May 2001, the management of Marumo Inc. was offered and continuing by PT. Nichindo Suisan until the present days. Nichindo Suisan is the abbreviation of Nippon-Indonesia Suisan.

The result of observation along the period of 1995 up to the middle of 2004 indicated that the most significant impacts of foreign investment is on the fish price elevation, the increase number of investment on the fishing boat, number of cold storage as well as the increase number of labor absorbed.

The impact on the fish price

The impact of Katsuobushi factory on the price of skipjack as the raw material of production is presented in Table 2. in January 1995 prior to the operation of factory, the price of skipjack recorded as Rp 500 per kg. as the factory began to buy fish for raw material, the price elevated to be Rp 800/kg and continue up to Rp1000/kg in January 1997 and reached its peaked Rp 9600/kg in January 1999.

Table 2. The price per kg of skipjack during the period of 1995 – 2004 in Rupiah

Months	1995	1997	1998	1999	2001	2002	2004
January	500	1000	3000	9600	4500	4500	5500
February	800	1000	3500	9000	4500	5000	5500
March	800	1050	4000	8500	4500	5000	6000
April	800	1100	5000	8000	4500	5000	6000
May	800	1150	5500	7500	4500	5000	6000
June	850	1200	6000	6500	5000	6000	6500
July	850	1400	6500	6000	5000	6000	6500*
August	850	1700	7000	5000	5000	5500	-
September	850	1800	7500	4500	4500	5500	-
October	850	2000	8000	4000	4500	5500	-
November	850	2500	8500	4000	4500	5500	-
December	850	2750	9000	4000	4500	5500	-

Source: PT. Saruntawaya, 2000 and PT. Nichindo 2001-2004. *Up to July 20, 2004.

The price of skipjack during the period of 1996 did not presented in the table due to relatively stable i.e. between Rp 850/kg and Rp 950/kg. Similar pattern occurred in 2000 which relative un-changed with range from Rp 4000/kg up to Rp 4500/kg. The price of fish in 2003 also deleted from the Table 2 due to those price at the end of 2002 and the early of 2004. The price increase rapidly during the period of 1998 and reached the peak in January 1999 then gradually decreased and returned down to Rp 4000/kg in December 1999 even continue through the year of 2000.

The increasing of price in 1998 up to January 1999 was related also to the economic crisis that attacked several countries in south East Asia including Indonesia. But the most important things is the role of Katsuobushi factory which is continue to buy fish from the local fisherman so that endorsed them to continue their fishing activities.

Development of small-scale fisheries

The supply of skipjack for raw material of Katsuobushi during the period of 1995 was derived from the pole and line fishing vessel basing in Bitung which situated about 140 km in the Northeast part of the factory managed by Marumo Inc. Few if any derived from the fishermen living in the coastal village near the factory. As enter into 1996 a fish middlemen come into the office of Katsuobushi factory and asking whether the factory will continue to buy fish at least to 5 years a head. This question related to his plan to invest his own capital to build a small purse seine fishing boat which locally called *pajeko*. The answer is the factory will continue operating as long as raw material available. By this information, then he decided to realize hid plan within the same year in 1996. This action then followed by the other fish middlemen as well as by the local entrepreneurs. The development of investment in the small-scale fisheries is presented in Table 3.

Table 3. The increment of investment during the period of 1995-2004

Year	Types of small-scale fishing units				
	Purse-seine	Pole & line* Huhate	Pole& Line** Funae	Lift net bagan	Raft rakit
1995	0	1	0	22	0
1996	1	6	1	20	1
1997	3	9	3	21	7
1998	4	11	3	18	11
1999	6	12	3	18	16
2000	8	13	4	16	19
2001	14	13	4	19	24
2002	22	14	4	21	26
2003	26	14	5	22	31
2004	32	14	6	23	37

Source: Boat owners and Fish supplier, 2004

*Japanese type of skipjack pole-line fishing

**local type of skipjack pole-line fishing

The number of small purse-seine (*pajeko*), *huhate* and *funae* presented in Table 3 are those belong to the supplier who's asking the assurance of the factory to buy their catch prior to invest in fishing business. Particular of small purse-seine, the owner are living in the village around the factory, while the owners of pole-line separated about 80 km to the southward of the factory. The catch of lift net fishing which mainly small sardine is using by the pole-line fishing as the live bait for capturing skipjack and Tuna. However, this fishing unit existed in the area far before the local entrepreneurs invested their capital in pole-line fishing. Previously, the catch of lift net was mainly sell directed to the market and also to the pole-line fishing boat coming from out side fishing base. So, the existence of pole-line in the local fishing base become the additional market for the catch of lift net. Actually, raft (rakit) is not fishing gear but using as fish aggregating devise which is found helpful for capturing fish by the small purse-seine and skipjack pole and line fishing. The number of raft increased rapidly following the increment of small purse-seine and skipjack pole-line fishing unit. This is because not any time fish school attends to a raft. If fish absence from one raft, it is hope fish will aggregate to other rafts. In this way, fishing activities can be performed every day by rotating the available rafts. In brief, data presented in Table 3 are fishing units which is built after they got information that the Katsuobushi processing plant will continue its operation as long as raw material available enough economically. At present these fishing units became the major supplier for the continuity operation of Katsuobushi factory belong to PT. Nichindo Suisan.

Development of ice plants and cold storage

The increment number of fishing units seems followed by the increasing number of ice plants and cold storages as well as refrigerator container. For the reason of expensive price of ice plants and cold storage machinery then the development of investment in this business area

relative slow such as presented in Table 4. Number of ice plants increased not merely provided to be used by the Katsuobushi factory but the most part is to supply the increment of ice demand from small purse-seine and skipjack pole-line fishing boat for quality preservation during fishing time. Previously, local fishermen did not customary to bring ice during fishing operation which let to the decreased of fish quality after landed. They began to use ice for quality preservation due to Katsuobushi factory has the standard of fish quality eligible for processing. Fish qualities that lower than the standard will be rejected by the factory. Referring to this quality standard then the boat owner began to use ice during fishing time as well as during transportation from fishing port to the factory.

In fact, not all of catch can be received by factory due to the limitation of processing capacity. The remaining catch must be preserved for the next day. This situation endorsing boat owners and fish middlemen to construct cold storage to preserve their own catch as well as for rent out to the other fishermen.

The most interesting things occurred behind this development is the boat owners as well as ice plants and cold storage owners find capital by themselves through lending to the local bank or by their own saving without any grant or low interest loan from the government such as occurred during the period of 1970s up to 1980s. During this period, the government has a perception of hypothesis that fishermen can not improve their fishing effort as well as their living standard without government intervention. The implementation of this hypothesis was realized in the form of making national debt to foreign countries including ODA from Japan. The result was no significant progress in small-scale fisheries due to only a few of the loan reach the hand of fishermen and the remaining most part remain in the pocket of authorized persons.

Impact on labor absorption

Directly, Katsuobushi processing plants employing only 47 persons of local labor force in 1995 and increased to be 118 persons in 2000. Since May 2001 the number of workers decreased down to 96 persons and continued down to 65 workers in 2004 due to some part of labor intensive work in the plants was replaced by the machinery. Indirectly however, labor absorption increased in the supply of firewood (*maki*), fishing boat, ice plants, cold storage etc. The distribution of labor working in the Katsuobushi processing plant and its related activities is presented in Table 5.

Table 5. The distribution of labor absorption in Katsuobushi processing plants and its related economic activities during the period of 1995-2004

Year	Kinds of economic activities around the Katsuobushi factory							
	Katsuobushi factory	Maki supply	Purse-seine	Japanese type pole-line	Local type pole-line	Lift net	raft	Total
1995	47	4	0	18	0	44	0	113
1996	62	7	27	144	12	41	1	294
1997	73	12	84	216	36	43	7	471
1998	87	16	108	275	38	39	11	574
1999	94	17	162	288	37	40	16	654
2000	118	20	224	325	46	35	19	787
2001	96	23	378	339	47	38	24	943
2002	82	24	595	366	49	45	26	1187
2003	71	25	702	364	62	46	31	1301
2004	65	27	864	367	73	49	37	1482

Here seen that the small scale purse seine employing more crews compared to those of pole-line fishing boats and other types of fishing gears. Data in Table 5 imply that the existence of Katsuobushi processing plant as the core of economic activities created numbers of other work opportunities. The first ring of economic activities around the Katsuobushi processing plant is small-scale fishing business. While fish middlemen, fish transportation, ice plants, and cold storage are in the second ring of economic activities. Still there are economic activities in third ring such as small shop, fish and vegetables retailers etc. which providing supplies for economic activities in the second and first ring. Data presented in Table 6 illustrated labor working on the second and third ring of economic activities.

Table 6. Labor absorption in the second and third ring of economic activities 1995-2004

Year	Second ring of economic activities				Third ring of economic activities			
	Middlemen	Transportation	Ice plant	Cold storage	Small-shop	Food stall	Fish retailers	Vegetables retailers
1995	28	59	0	0	2	3	13	1
1996	32	72	0	0	6	4	16	2
1997	27	64	12	18	10	4	17	2
1998	20	53	26	18	12	5	19	3
1999	17	44	37	39	12	5	18	3
2000	13	36	68	56	12	5	12	3
2001	11	29	76	73	3	5	9	3
2002	9	24	98	94	3	5	6	3
2003	7	19	124	112	3	9	7	3
2004	6	15	124	112	3	9	7	3

Source: File of PT. Nichindo Suisan, 2004

Labor absorption for fish middlemen decreased by year due to gradually boat owners sell directly to the factory instead of using fish middlemen. This also affected number of people working in the sector of fish transportation because fish transportation was handled by the boat owner themselves using their own drivers. On the other hand, labor working in the ice plants and cold storages increased following the increment number of plants. People absorbed in the third ring of economic activities those who are working in the small shop and stall which is constructed outside the wall of factory. Fish and vegetables retailers are those people whose came to the factory to take by product of processing such as fish head, chest meat, innards etc., then sell out door to door in the nearest town. The same case of vegetables retailers are only those whose supplying vegetables for factory workers meals everyday.

CONCLUSION

Learning from the experiences of Marumo Incorporation as a foreign investor in fish processing plants in Indonesia, it can be said that the foreign investment have a great contribution for the development of local small-scale fisheries and its related economic activities. The processing plants plays the role as the core of local economic which created another business as its plasma in the second and third rings of economic activities. The continuity operation of core and plasma economic activities however much depend upon the stabilization of outlet or market of Katsuobushi products. The collapse of the other factories presented in Table 1 was mainly caused by the bad outlet of their products. The Katsuobushi processing plants collapse soon after the buyers in Japan suspended to buy their Katsuobushi products.

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