

Cooperation for Sustainable Business Development – The Case of the Skipjack Tuna Value Chain in Nha Trang, Vietnam

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ABSTRACT

The production and distribution of fish products in Vietnam have been faced with strict consumer requirements such as seafood quality, hygiene, safety standards, traceability, environmentally friendly manufacturing and fisheries resource conservation. These are compulsory requirements for sustainable business development in international markets. The research applies the Structure – Conduct – Performance (SCP) model for analyzing value chain of fishing products to develop sustainable business for these items. This paper uses the case of the skipjack tuna in the Nha Trang fishery in Vietnam, which the most important actors in the value chain are fishermen, middlemen and export seafood processing firms. The results show that the value chain develops on the lack of close cooperation and sustainability. The distributions of benefits and risk among the actors are unbalanced. The fishermen provide the biggest value-added, but they receive the lowest benefits, conversely, the middlemen and seafood processing companies contribute smaller ratios of value-added than that of the fishers while these two actors get the greatest benefit. The fishers are the actors facing the most disadvantages because of price fluctuation and high production risks, while the middlemen face with the least risks. The actors in the value chain face difficulties in accessing information of international markets and disadvantages due to high bargaining power from the importers. The research recommends establishing a modeling of vertical and horizontal cooperation to link closely the actors within the value chain for the sustainable business development of this item.

INTRODUCTION

The production and distribution of skipjack tuna have brought the main source of income for fishers and other actors in Nha Trang. However, the value chain of fish products in Vietnam in general have been creating low value added, and have been facing with many challenges for sustainable development, such as the decrease of fish resources, technical barriers to trade, fluctuation of fish price, etc. Therefore, questions raised are how to improve value for fishers and other actors in the skipjack tuna value chain? How to obtain sustainable business development for this value chain?

The main objective of this study is to analyze the value chain of the skipjack tuna product in Nha Trang, Vietnam (see Fig. 1). The specific objectives are: 1) to determine structure of skipjack tuna value chain, and actors involving in this value chain; 2) to find out how market is organized and operated (assess market organization and operation); and 3) to analyze the benefit distribution between the actors in the value chain.

information; quality control and traceability and the effect of rules and regulations.

- Market performance: Analysis of profit and the value-added of the actors for assessing the economic value-created of each actor in the value chain. Each actor will be analyzed on basis information of production costs, marketing costs or incremental cost and profits. Two indicators are identified as follows:

Ratio of profit margin to total costs = Profit margin/ Total cost

Ratio of profit margin to incremental cost = Profit margin/ Incremental cost

These two indicators show relationship between margin profit and cost of each actor. Therefore, we can identify which actors earn the most profit margins in the value chain as well as determine this as a basis to explain why profits are distributed differently.

Table I: Elements of the SCP model

Structure (S)	Conduct (C)	Performance (P)
-Intermediaries involved in the chain system	-Buying and selling	-Profit and value-added
-The trading scales of actors	-Negotiation, transaction and payment methods	-Ratio of profit margin to total costs
-Structure of marketing channels	-Price formation process	-Ratio of profit margin to incremental cost
	-Distribution of market information	
	-Quality control and traceability	
	-Effect of rules and regulations	

Data

The surveys for this study were designed and performed for the actors to collect data for three years 2009, 2010 and 2011. Fishers, middlemen, dealers, retailers, and export processing companies were interviewed face-to-face. Table II shows number of observations for each actor in the three surveyed years.

Table II: Number of observations

Actor/Year	2009	2010	2011
Fishers	41	40	40
Middlemen	4	4	4
Export processors	3	3	3
Dealers	4	4	4
Retailers	3	5	5

RESULTS

Market structure

Market structure of skipjack tuna in Nha Trang is presented in Fig. 3. The actors in the value chain of the skipjack tuna in Nha Trang include fishers, middlemen, dealers, retailers, and export processing companies. Skipjack tuna products were produced and distributed through two main channels: the first is from fishers to foreign importers via middlemen and export processors. Most of fish harvested is sold in this channel. The second channel is from fishers to domestic consumers via dealers and retailers, with a small amount of fish.

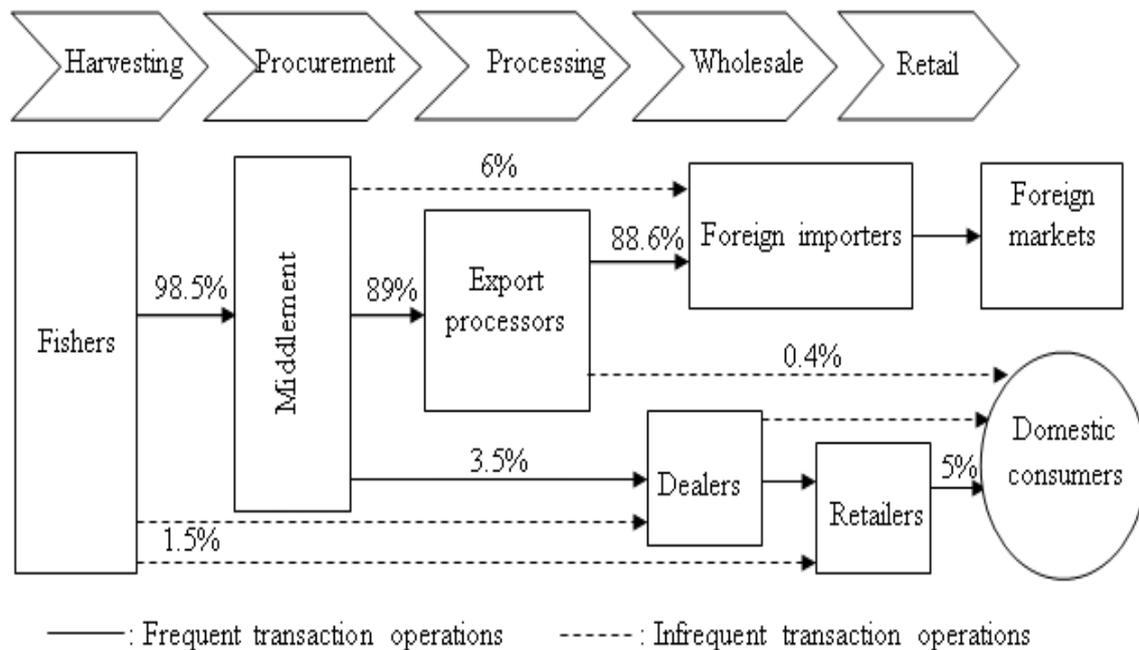


Fig. 3: Supply chain of skipjack tuna in Nha Trang

Fishers: The annual harvested skipjack tuna yield depends partly on fish stock, amount of vessels, fishing effort of the vessels and weather conditions at the fishing grounds. According to the survey, fishers' catch decreased in the recent years. Skipjack tuna is usually sold to familiar middlemen. Only a small amount of fish is sold to dealers or retailers who are their relations.

Middlemen: They are an actor that directly purchase skipjack tuna from fishers with huge buying quantity. The buying and selling operations are mainly taken place at the Hon Ro fishing port of Nha Trang city. The middlemen often purchase all fish yield harvested by fishers. They distribute directly to the export seafood-processing companies. The skipjack tuna caught are mostly distributed through this actor due to their advantage of big capital and direct relationship with processing companies.

Export processors: The processing companies purchase raw skipjack tuna from middlemen and play a vital role in affecting market price because of their large bought.

They also set standards for quality and size of fresh skipjack tuna. The skipjack tuna products of the processing companies provide mainly for importers in foreign markets.

Dealers: Most dealers buy skipjack tuna from middlemen. Although the sales carried out with low yields, the number of dealers is of a great amount. There are many different species of fish traded but the skipjack tuna are the most wanted from the second to twelfth of every lunar month when the gillnet fishing vessels come back.

Retailers: This actor buy skipjack tuna from dealers or middlemen. The survey shows that retailers are much diversified. They mostly operate in retail markets in the city of Nha Trang and some other markets in some districts of Khanh Hoa province. Gender of this group is mostly female with an average age of 30-45.

Market conduct

Regarding the market conduct, transaction method is mainly spot transactions, verbal agreement, and based on credibility and mutual trust. The payment method used in general is immediate payment in cash or immediately return a portion of the money and then pay the remaining amount after a few days.

The process of price formation is shown in Fig. 4. The price received by exporting processors depends almost on world prices. The price that the importing country sets determines the price that the processor pays the middlemen, and in-turn the price paid to the fisher. For domestic market, the middlemen has power in deciding price. Prices between dealers and retailers, and retailers and consumers depend on negotiations, supply and demand, purchasing power, quality, size, substitute products...

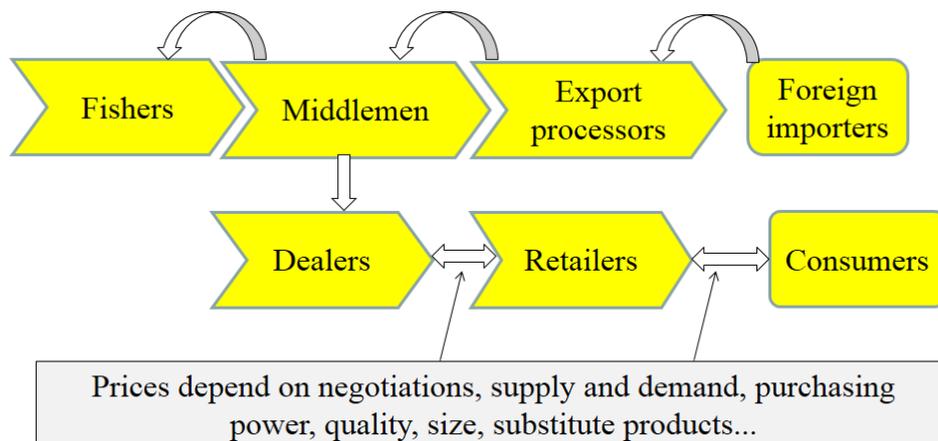


Fig. 4: The process of price formation

Regarding access to market information, fishers, middlemen, dealers and retailers responded that they can obtain easily market information, whereas 60% of export processors answered they sometimes had difficulty (Table III). However, source providing information for fishers and middlemen mainly came from their buyers (see Table IV). The export processing company mainly collected market information from the media.

Table III: Percentage of response to different levels for accessing market information

Actors	Percentage of response to different levels (%)		
	Easy to obtain	Sometimes difficult	Very difficult
Fishers (n=40)	60	37.5	2.5
Middlemen (n=4)	75	25	0
Export processors (n=5)	20	60	20
Dealers (n=4)	75	25	0
Retailers (n=5)	60	40	0

Source: Own data and calculations

Table IV: Percentage of response to different sources for accessing market information

Source of information	Percentage of response to different sources (%)				
	Fishers (n=40)	Middlemen (n=4)	Export processors (n=5)	Dealers (n=4)	Retailers (n=5)
The media	2.5	25	60	-	-
Buyer	55	50	20	-	-
Relatives/friends	40	25	-	25	60
Other intermediaries	2.5	-	-	75	40
Others	-	-	20	-	-

Source: Own data and calculations

Quality remains generally quite poor. For traceability, generally fishers fail to comply strictly with recording log-book for ensuring the traceability. In addition, cooperation from middlemen was limited.

Generally, the enforcement of regulations and rules is ineffective, especially quality control and traceability. In addition, the actors also need more supports from government on issues related to preservation, traceability, information seeking.

Market performance

Table V presents market performance in the export channel. The results show that the fishers contributed the largest added value in this value chain in three years. However, they received profit margin and ratio of profit margin to total costs lower than the middlemen and export processing companies. The middlemen contributed the smallest added value, but they got more benefits than the fishers (see Table V).

Table V: Market performance in the export channel

Export market channel		Fishers	Middlemen	Export processors
Unit: VND/kg				
2009	Purchase/Sale price	14,000	16,000	26,218
	Total costs	13,593	14,602	18,473
	- Incremental costs	-	602	2,473
	Profit margin	407	1,398	7,745
	Profit margin/Total costs	3%	10%	42%
	Profit margin/Incremental costs	-	232%	313%
	Share of value	53%	8%	39%
2010	Purchase/Sale price	18,375	21,500	32,000
	Total costs	16,217	19,051	24,220
	- Incremental costs	-	676	2,720
	Profit margin	2,158	2,449	7,780
	Profit margin/Total costs	13%	13%	32%
	Profit margin/Incremental costs	-	362%	286%
	Share of value	57%	10%	33%
2011	Purchase/Sale price	25,625	30,500	42,000
	Total costs	21,907	26,436	33,680
	- Incremental costs	-	811	3,180
	Profit margin	3,718	4,064	8,320
	Profit margin/Total costs	17%	15%	25%
	Profit margin/Incremental costs	-	501%	262%
	Share of value	61%	12%	27%

Source: Own data and calculations

For the domestic market channel, the fishers also provided the biggest added-value, but received the lowest benefits during three years (Table VI). The middlemen got the largest benefits in this channel while they contribute the lower value-added.

Table VI: Market performance in the domestic channel

Domestic market		Fishers	Middlemen	Dealers	Retailers
2009	Purchase/Sale price	14,000	18,000	24,000	32,000
	Total costs	13,593	14,000	19,000	24,500
	- Incremental costs	-	-	1,000	500
	Profit margin	407	4,000	5,000	7,500
	Profit margin/Total costs	3%	29%	26%	31%
	Profit margin/Incremental costs	-	-	500%	1500%
	Share of value	44%	13%	19%	25%
2010	Purchase/Sale price	18,375	25,000	30,000	37,000
	Total costs	16,217	18,375	26,100	30,700
	- Incremental costs	-	-	1,100	700
	Profit margin	2,158	6,625	3,900	6,300
	Profit margin/Total costs	13%	36%	15%	21%
	Profit margin/Incremental costs	-	-	355%	900%
	Share of value	50%	18%	14%	19%
2011	Purchase/Sale price	25,625	34,000	39,000	45,000
	Total costs	21,907	25,625	35,200	39,850
	- Incremental costs	-	-	1,200	850
	Profit margin	3,718	8,375	3,800	5,150
	Profit margin/Total costs	17%	33%	11%	13%
	Profit margin/Incremental costs	-	-	317%	606%
	Share of value	57%	19%	11%	13%

Source: Own data and calculations

DISCUSSION AND CONCLUSION

The study uses the SCP model to analyze value chain of the skipjack tuna product in Nha Trang, Vietnam. The results show that the value chain of the skipjack tuna product in Nha Trang is highly segmented, with numerous actors, in which the most important actors are fishers, middlemen and export seafood processors. Key market channel of this item is the export channel. The actors faced difficulties in meeting strict consumer requirements such as quality, hygiene, safety standards, traceability, and in accessing information of international markets. The price received by the actors depends almost entirely on foreign importers' price. For domestic market, the middlemen have the greatest power in deciding price of fish.

The value chain develops on the lack of close cooperation and sustainability. The distributions of benefits and risk among the actors are unbalanced. The fishermen provide the biggest value-added, but they receive the lowest benefits, conversely, the middlemen

and seafood processing companies contribute smaller ratios of value-added than that of the fishers while these two actors get the greatest benefit. The fishers are the actors facing the most disadvantages because of price fluctuation and high production risks, while the middlemen face with the least risks. The actors in the value chain face difficulties in accessing information of international markets and disadvantages due to high bargaining power from the importers. In addition, the influences of government and management agencies' policies on sustainable development of the chain are limited.

The results show that the development of this value chain lacks attachment and sustainability. Therefore, it is necessary for vertical and horizontal cooperation to link closely stakeholders, and to adjust distribution of benefits and risk among the actors in this value chain for sustainable business development.

Reference

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