

Mean Price of Major Tunas Fished by Taiwanese Longliners
in the Indian Ocean from 2003 to 2007

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ABSTRACTS

Six Indian Ocean operating Taiwanese tuna longliners were randomly sampled for tracing the price fluctuations of major Indian tunas (albacore, bigeye, yellowfin, and swordfish) sold in major markets of from 2003 to 2007.

Mean price of larger albacore (size greater than 10 kg per fish) fluctuated from the lowest US\$1650 per ton in 2003 increase to the highest level of about US\$2400 in 2006 and followed by a sharp decrease to US\$1700 in 2007, yet a gradual increase trend was observed to about US\$2000 in early 2008. The price of smaller albacore (less than 10 kg) generally showed a similar trend of larger albacore with a maximum price difference of about US\$200 per ton. Price of larger bigeye (greater than 25 kg) remained rather stable, ranged from US\$5500 to US\$7500 per ton with a mean about US\$6500 in this period, although the smaller bigeye (smaller than 25 kg) appeared an increase from US\$3500 before 2006 to US\$4500 recently. Price fluctuation trend of yellowfin is quite similar as smaller bigeye, the larger yellowfin (larger than 25 kg) ranged from US\$4000 in the first period increase to about US\$5000 in the 2nd period, while smaller sized (less than 25 kg) changed from US\$3000 to US\$4000. Price of larger swordfish (greater than 20 kg) remained about US\$4500 throughout the whole period, while smaller sized (less than 20 kg) fluctuated between US\$1500 to US\$3500 periodically

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INTRODUCTION

It is well recognized that commercial fishing is profit-pursuing economic activity. It is no exception, perhaps even more so, for ocean-going longliner because of its high risks of operating far away from inshore waters and undertaking heavy financial burden. Under such circumstance, the cost of oil expenditure inevitably became the most significant chunk of its total operational cost. On the other hand, the contents of catch in correspondence with its unloading market selling prices for categorized tunas species will become the only revenue applicable for that particular fishing trip. It is obvious that the market price fluctuation of tunas must be one of the major concerns for anyone in running the longline fishing business.

In order to manifest the fluctuation on selling price of major tunas (abacore, bigeye, yellowfin, and swordfish) fished by Taiwanese longliners operating in the Indian Ocean, six Taiwanese longliners were randomly sampled. The market (Japan, Singapore, and Mauritius) mean (half-year average) sold price of Indian tunas were thus compiled from reported selling records of these six sampled vessels as an indicative of recent price fluctuations of these major tuna species.

SOURCE OF DATA

Six Taiwanese longliners, fished in the Indian Ocean in the period from 2003 to 2007, were randomly sampled as the indicative of the whole Taiwanese fishing fleet of longliners in the same area-time stratum. Each vessel, generally, unloading twice a year for selling its catches. The unloading and selling markets for albacore were Mauritius and Singapore, whereas Japan markets were for bigeye, yellowfin, and swordfish. Some swordfish were also sold in Singapore market.

Selling records were officially required to report to Fisheries Agency in Kaohsiung for further managerial purposes. Due to time constrain, it is determined only randomly sampled six vessels selling records were extracted and compiled as an indicative of the whole fleet. Three of them were operating as traditional albacore targeting longliners, whereas the rest were generally operating as deeper casting longliners mainly targeting on bigeye. These selling records extracted will then be the major source of data for this analyses.

RESULTS

The fluctuation in half-year mean price of Indian albacore caught by six Taiwanese longliners were shown in Fig. 1. There are two size categories often applied to albacore: the larger albacore, size of fish greater than 10 kg; and the smaller ones, size of fish smaller than 10 kg. As shown in Fig. 1, mean price of larger albacore was lowest in 2003 and gradually increase to a top price of about US\$2400 per ton in early 2006, and dropped sharply in 2007 to about US\$1700 per ton, yet it showed a mild recovery of US\$2000 per ton in early 2008. The mean price trend of smaller albacore is quite similar as those of larger albacore, with a maximum price difference of about US\$200 per ton.

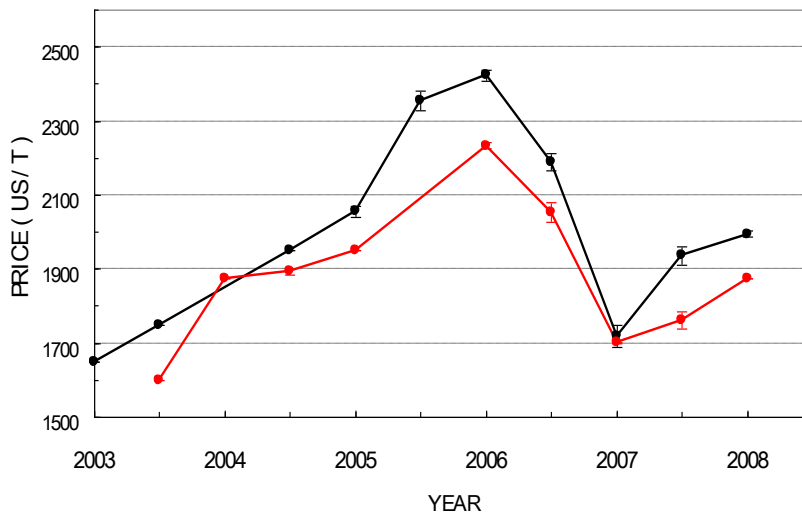


Fig.1 Mean (half year) price of the fished Indian albacore (sampled from six Taiwanese longliners) sold in major markets dating from early-2003 to mid-2008.

Where black-dot represents fish size greater than 10 kg;
 Red-dot represents fish size smaller than 10 kg; and
 Vertical bar represents its 2 s.e. confidence interval.

The fluctuation in half-year mean price of Indian bigeye caught and sold by six Taiwanese longliners were shown in Fig. 2. There are several size categories often applied for bigeye tuna sold in the Japan markets. For the sake of clearance, here we use two size categories: the larger bigeye, size of fish greater than 25 kg; and the smaller ones, size of fish smaller than 25 kg. As shown in Fig. 2, mean price of larger bigeye from 2003 to early 2008 is quite stable, fluctuated in the range of US\$6000 to US\$7000 per ton. While the mean price of smaller bigeye seemed an

increase trend from US\$3500 per ton before 2006 to a level of US\$4500 per ton after 2006.

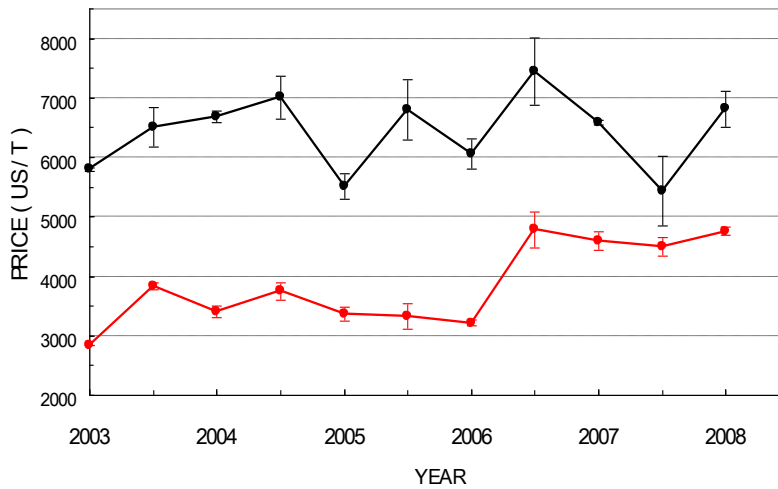


Fig.2 Mean (half year) price of the fished Indian bigeye (sampled from six Taiwanese longliners) sold in major markets dating from early-2003 to mid-2008.

Where black-dot represents fish size greater than 25 kg;
 Red-dot represents fish size smaller than 25 kg; and
 Vertical bar represents its 2 s.e. confidence interval.

The fluctuation in half-year mean price of Indian yellowfin caught by six Taiwanese longliners were shown in Fig. 3. There are also several size categories often applied for yellowfin tuna sold in the Japan markets. For the sake of clearance, here we use two size categories: the larger yellowfin, size of fish greater than 25 kg; and the smaller ones, size of fish smaller than 25 kg. As shown in Fig. 3, the mean price trend of larger yellowfin appeared very similar as of the smaller bigeye, except late-2005. The mean price of larger yellowfin stayed about US\$4000 per ton before 2006 and increase to about US\$5000 per ton after 2006. As similar trend was also observed for smaller yellowfin, from US\$3000 per ton before 2006 to US\$4000 per ton after 2006.

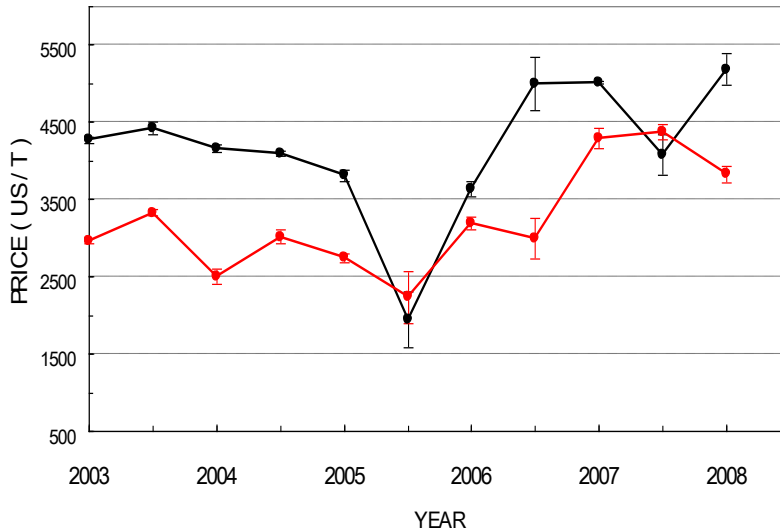


Fig.3 Mean (half year) price of the fished Indian yellowfin (sampled from six Taiwanese longliners) sold in major markets dating from early-2003 to mid-2008.

Where black-dot represents fish size greater than 25 kg;
 Red-dot represents fish size smaller than 25 kg; and
 Vertical bar represents its 2 s.e. confidence interval.

The fluctuation in half-year mean price of Indian swordfish caught by six Taiwanese longliners were shown in Fig. 4. There are several different categories applicable for swordfish products sold in the Japan markets. For the sake of clearance, here we use two size categories: the larger swordfish, size of fish greater than 20 kg; and the smaller ones, size of fish smaller than 20 kg. As shown in Fig. 4, the mean price trend of larger swordfish appeared rather stable from 2003 to early 2008, except a peak mean price appeared in early 2005. The mean price of larger swordfish stayed about US\$4500 per ton throughout the whole period. The mean price of smaller swordfish fluctuation between US\$1500 to US\$3500 per ton in the whole period without any obvious trend.

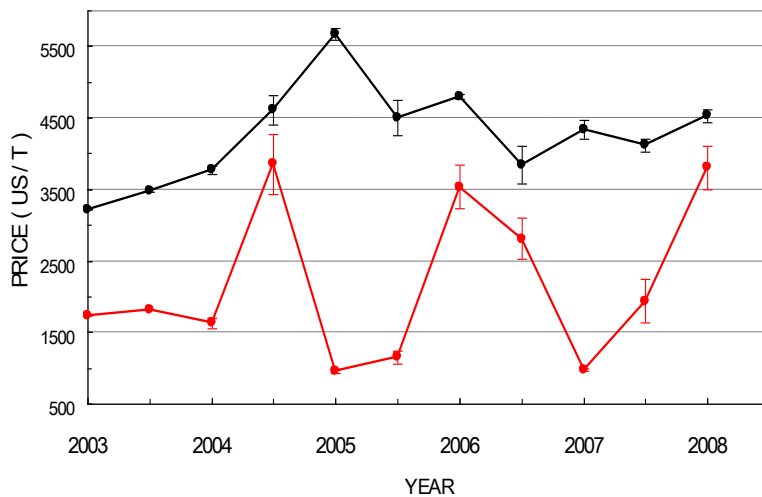


Fig.4 Mean (half year) price of the fished Indian swordfish (sampled from six Taiwanese longliners) sold in major markets dating from early-2003 to mid-2008.

Where black-dot represents fish size greater than 20 kg;
Red-dot represents fish size smaller than 20 kg; and
Vertical bar represents its 2 s.e. confidence interval.

DISCUSSIONS

As one of the major fishing nations utilizing Indian Ocean tunas, it is also our responsibility to provide available scientific information for the betterment of resources management. Since we have received a request from IOTC scientific sector to provide mean prices of Indian tunas caught by Taiwanese fleet sold in recent year, we felt so glad and privileged to have such an opportunity to prepare this document. Due to time constrain, it is very unfortunate that only six longliners were randomly extracted as an indicative. Hopefully, this document will be useful for IOTC scientific discussions.

Fish marketing is not only having complicated manipulations within its infra-structure setups but also having its acceptable form of product tradition. For example, albacore are often sold in round fish, bigeye and yellowfin more oftenly in the form of dressed or gilled and gutted, even only category flesh will be showed up in market records. For the sake of clearance, the authors already rumped various subtle classifications into two major categories as an indicative for mean price fluctuations in recent five years. Further detailed analyses among these categories and selling information of more vessels maybe needed if a better and decisive conclusion is required.

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