

# THE INFLUENCE OF MARKETING VOLUME AND MARKETING CHANNEL ON FRESH TIGER SHRIMP MARKETING MARGIN

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**Abstrak.** Penelitian ini bertujuan untuk menganalisis pengaruh volume pemasaran dan saluran pemasaran terhadap margin pemasaran udang windu. Penelitian ini menggunakan data berdasarkan dimensi waktu, yaitu cross-section yang berasal dari data primer, maka metode analisis yang digunakan regresi berganda dengan model fungsi eksponensial. Hasil penelitian ini menemukan bahwa volume pemasaran berpengaruh positif dan saluran pemasaran berpengaruh negatif terhadap margin pemasaran udang windu, sedangkan saluran pemasaran II tidak berpengaruh terhadap margin pemasaran udang windu.

**Kata Kunci:** Volumen Pemasaran, Margin Pemasaran, Saluran Pemasaran, Udang Windu.

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**Abstract.** This study aims to analyze the influence of marketing volume and marketing channel to marketing margin of tiger shrimp. This study uses data based on the time dimension, ie cross-section that comes from primary data, then the method of analysis used multiple regression with exponential function model. The result of this research found that marketing volume have positive effect and marketing channel I have negative effect to tiger shrimp marketing margin, while marketing channel II has no effect to marketing margin of tiger shrimp.

## INTRODUCTION

Shrimp is one of the fishery commodities that have great potential and very popular by the people in Indonesia. Shrimp meat has better eating quality advantages because it is not clay, homogeneous, and contains no muscle and blood vessels are large (Untsayain, 2017) and one of the food sources of high-quality animal protein is very popular with domestic consumers and outside the country because it has a very tasty taste and because of its lower cholesterol levels than mammals and as a prima donna of non-oil export commodities from the fishery sector (Maharani *et al.* 2009)

Shrimp production in Indonesia, especially Pinrang District South Sulawesi Province, from year to year has increased especially the type of tiger shrimp. In 2009-2013 the total production of tiger shrimp continues to increase but the marketing system experienced a long marketing chain so that marketing costs and marketing margins are getting bigger too

According to Ele and Nkang (2014); Rahim *et al.* (2017) the existence of a long marketing chain caused the marketing margin to be large so that marketing is not efficient or competitive market mechanism is not perfect, so the share (the price) obtained is small. The longer the abundant shrimp production must be balanced with efficient marketing given the marketing chain or the number of traders, the greater the marketing costs (Kohls and Uhl, 1990) so that the price received by the producers is smaller (Azzaino, 1983). nature of the damaged shrimp harvest of Guslan (2016) as the most important determinant of shrimp prices (Adam *et al.*, 2016).

The marketing margin represents the difference in the difference or difference in the purchase price of the consumer level with the selling price at the producer level (Tomek and Robinson, 1972; Dahl and Hammond, 1977). Price at the consumer level is formed from the intersection of the primary demand curve with the supply curve that occurs in the consumer market. While the price at the producer level is the intersection between the derivative demand curve and the primary supply curve occurs in the producer market (Tomek and Robinson, 1972). Marketing margins are influenced by price-related margins, processing and handling systems, increased attention from marketing agencies, and technological changes used in the marketing process (Dahl and Hammond, 1977).

Basically the objectives of fisheries development in Indonesia are to improve the welfare of fishermen, fish farmers, and other coastal communities (Keputusan Menteri Kelautan dan Perikanan No.18/Men/2002) through development of economic activities, quality improvement and quantity of human resources, and utilize marine and fishery resources in an optimal and sustainable (Keputusan Menteri Kelautan dan Perikanan No.18/Men/2004).

Research on shrimp marketing margin has been done in many countries, as dilansir by Islam et. Al., (2014) in Bangladesh, Agbekpornuet *al.*, (2016) in Ghana, Nguyen et *al.*, (2017) in Vietnam as well as in Indonesia itself (Guslan, 2016; Untsayainet *al.*, 2017). However, these findings have not discussed the estimated margin marketing of tiger shrimp using econometrics approach. Based on that, the purpose of this study is to estimate the effect of marketing volume and marketing channel on shrimp marketing margin in Pinrang District South Sulawesi Province Indonesia

## RESEARCH METHOD

This research was conducted during April-September 2016. We used an Explanatory method (Singarimbun and Effendi, 1989) for estimate of Influence of Marketing Volume and Marketing Channel on Tiger Shrimp Marketing Margin. Cross-Section data from a fishermen survey. Questionnaires were administered to 50 respondents in in Suppa Sub-district and Duampanua Sub-district Pinrang District Province South Sulawesi Indonesia. We used a multiple regression method with exponential functions model (Gujarati and Porter, 2009) for analyzed estimate of Influence of Marketing Volume and Marketing Channel on Tiger Shrimp Marketing Margin in Indonesia :

$$MPUW = \beta_0 \pi RTVPUW^{\beta_1} DSP1^{\delta_1} DSP2^{\delta_2} \quad (1)$$

Than to facilitate the calculation, we transformed it into double log or natural logarithm :(Gujarati and Porter, 2009)

$$\ln MPUW = \ln \beta_0 + \beta_1 \ln VPUW + d_1 DSP1 + d_2 DSP2 + e \quad (2)$$

Where,  $\beta_0$  is the intercept/ constant,  $\beta_1$  is the coefficient regression,  $d_1, d_2$  is theregression coefficients with dummy variables,  $MPUW$  is the marketing margin of tiger shrimp (IDR),  $VPUW$  is the marketing volume of tiger shrimp (kg),  $DSP1$  is the Dummy marketing channels (1, for marketing channel 1 and 0, for other channel),  $DSP2$  is the Dummy marketing channels (1, for marketing channel 1 0, for other channel), and  $e$  is the error terms

## RESULT AND DISCUSSION

The results of the research found that there are three distribution channels of tiger shrimp marketing in Pinrang District, which are marketing channel I (shrimp farmers, collecting merchants, and consumers), marketing channel II (tiger shrimp shrimp, retailer, and consumer), and marketing channel III (tiger shrimp farmers, collecting merchants, and exporters). These results are in line with Agbo and Usoroh (2015) findings that there are 3 shrimp marketing channels in Nigeria : producers, wholesalers and retailers but unlike findings different from Kaygisiz and Eken (2018) findings in Turkey, there are four markets for marketing (1) directly to

the fish market, (2) directly from ship to commissioner, (3) move to processing plant and (4) from ship to air depot.

Table 1. The Influence of Marketing Volume and Marketing Channel on Tiger Shrimp Marketing Margin

Independent Variable	E.S	$\beta$	t test	Sig	classic assumption test	
					VIF	Park Test
Marketing volume						
Dummy of marketing channel I	+	19,740 <sup>***</sup>	4,724	0,000	1,027	0,740 <sup>ns</sup>
Dummy of marketing channel II	+	4987,587 <sup>*</sup>	-1,711	0,094	1,602	0,940 <sup>ns</sup>
		-700,550 <sup>ns</sup>	-0,217	0,829	1,579	0,495 <sup>ns</sup>
Intersep						3031,140
Adjusted R <sup>2</sup>						0,351
F <sub>hitung</sub>						9,831
n						50

E.S is an expectation sign. \*\*\* is the level of significance and error of 0.01 (1 percent) or 99 percent confidence level. \*\* is the level of significance and error of 0.05 (5 percent) or 95 percent confidence level. ns: Not significant. VIF : If the VIF value is less than 10 then there is no multicollinearity, otherwise if the VIF value is greater than 10 then multicollinearity occurs. Park  $\beta$ : Not significant; if the value of  $\beta$  there is no heteroscedasticity, otherwise if the value of  $\beta$  significant, then there heteroscedasticity.

The intercept value of 3031.140 on the marketing function of the tiger shrimp marketing margin shows that without independent variables (marketing volume, dummy of marketing channel I and dummy of marketing channel II), the constant value decreases by 3031.140 (Table 1). Furthermore, to determine the significance of the regression coefficient then F test, while the F test referred to can be seen in Table 1 which shows that the value of F test equal to 9.831 or greater than F test that is equal to 2.807. Thus it can be concluded that the above hypothesis test reject H<sub>0</sub> or accept H<sub>1</sub> which means the independent variables to-i simultaneously significant effect on the dependent variable, while to know which variables have significant and significant effect on marketing margin of tiger shrimp in Sub-district Suppa and Sub-district Duampanua Pinrang District conducted t test (Table 1).

From result of analysis of research variable found that marketing volume have positive and significant influence at 1% mistake level to marketing margin of tiger shrimp in Indonesia, it mean every increase of shrimp marketing volume equal to 1 kg hence will increase marketing margin equal to 19,740 kg so it can be said its marketing not efficient. This is in line with the results of previous research conducted by Dewayanti (2004) in Cilacap District which shows that the volume of marketing gives a real and significant effect on marketing margins.

Furthermore, the dummy of marketing channel I has a negative and significant effect on the 5 percent error rate on the marketing margin of tiger shrimp, meaning that adding 1% marketing channel will decrease shrimp marketing margin by 4,987,587 so it can be said its marketing is efficient from marketing channel II. This can be seen from the amount of marketing margin obtained by collecting merchants on this channel pattern is quite high from the final selling price by collecting merchants directly to consumers, while for Marketing channel III is said to be efficient because by using the concept of marketing costs, the marketing system is done at a cost the lowest but the profit earned is not greater than the marketing channel I.

The shorter chain of marketing channels produces efficient shrimp marketing where shrimp producers earn a higher percentage of the selling price offered by retailers in the consumer market (Islam *et al.*, 2014) because of the larger marketing costs incurred in Bangladesh (Omar *et al.*, 2014). In contrast to the large number of middlemen in the marketing channel, the margin gets bigger so that marketing is inefficient (Agbepornu, *et al.*, 2016) because intermediaries are chain drivers and are involved in the transfer of risk to producers (Nguyen *et al.*, 2017).

In marketing channel II the marketing margin value of farmers to consumers is smaller than marketing channel I and marketing channel III resulting from fewer number of consumers and prices based on prevailing market but buyers can bargain prices, as well as large costs incurred, such as cooling costs and transportation costs to marketing.

High marketing margins of fishery products are often used indicators to detect marketing inefficiencies (Rahim, 2013; Rahim and Pernyata, 2017) when associated with bargaining, marketing margins will be effective against the first recipient of the producer's product (Moore, 1968). The marketing system is said to be efficient if it can provide maximum satisfaction for producers, consumers, and marketing actors with the use of low-income economic resources (Rhodes, 1983) because the fewer marketing channels are more efficient marketing (Rahim, 2010) marketing of lucrative fishery products (Madugu and Edward, 2011), besides that an efficient information network is very important for the socio-economic welfare of the community, and the socio-ecological sustainability of shrimp (Galappaththiet *al.*,

2016) as well as strong coordination among all members in the supply chain will benefit all parties and better serve customers (Pathumnakulet *al.*, 2009).

## CONCLUSION

The marketing channel of tiger shrimp in Pinrang District in Indonesia there are three marketing distribution channel that is marketing channel I (tiger shrimp farmer, collector, and consumer), marketing channel II (tiger shrimp farmers, retailers, and consumer), marketing channel III (tiger shrimp farmers, collector traders, and exporters). Marketing volume has positive effect and marketing channel I has significant negative effect to marketing margin of tiger shrimp in Pinrang District South Sulawesi Province, Indonesia, this means marketing channel I smaller marketing cost so that its marketing is efficient, while marketing channel II has no significant effect to marketing margin shrimp.

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