



## Marketing Mix Analysis on Increasing Income of Floating Net Cage Farmers (Case Study in Kedisan Village, Kintamani)

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### Abstract

*Batur's Lake is a crucial resource for both tourism and fisheries, notably for fish farming using floating net cages (FNC). FNC cultivation represents a rapidly growing industry, playing a pivotal role in the local economy. This study, conducted in Kedisan Traditional Village, Kintamani, Bangli Regency, employs analytical methods, including Partial Least Square (PLS) and descriptive analysis, to examine the impact of marketing mix elements on the income of FNC fish cultivators. With a sample size of 60 participants from the target population of floating net cage fish cultivators in 2023, key findings include: The marketing mix elements (product, price, promotion, and place) exhibit a positive and significant effect on the income level of FNC fish cultivators. Among these elements, the product emerges as the most influential indicator affecting the income levels of fish cultivators. Following enhancements in the quality of marketing mix elements, the average income level of FNC fish cultivators increases to Rp. 19,000,000 (Nineteen million rupiah) or 93.33% per harvest. These results underscore the importance of effective marketing mix strategies in elevating economic outcomes for fish cultivators engaged in FNC farming around Batur's Lake.*

**Keywords:** *Floating Net Cages, Marketing Mix, Income*

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### 1. Introduction

Lake Batur is the largest lake on the island of Bali, located in Kintamani District, Bangli Regency. Lake Batur has an area of around 1,607.50 Ha [1] with a maximum depth of around 60-70 m and is at an altitude of 1,050 m above sea level [2]. Lake Batur is widely used by the community in the tourism and fisheries sectors, one of which is fish farming in floating net cages [2].

The fish commodity cultivated in floating net cages (FNC) is tilapia (*Oreochromis niloticus*) which is an introduced fish [3]. The introduction of fish in Lake Batur is carried out because the existence of fish resources in Lake Batur is relatively limited because of its characteristics in the form of a volcanic lake so fish communities are poor and fish species enrichment generally occurs through fish introduction activities. Cultivating fish using the floating net cage system (FNC) is a form of lake utilization that is growing rapidly and can move the wheels of the community's economy. In principle, all types of marine and freshwater fish can be reared in floating net cages [4, 5, 6, 7]. The advantage of the FNC cultivation system is that it is easy to design, and very productive to increase the quality and quantity of cultivation results.

Every business must have a marketing strategy that must be implemented in carrying out its business activities. Strategy is defined as a means for a business that is used to achieve a goal, one form of business strategy is a marketing strategy [8]. Marketing is defined as one of the most important activities in the business world, in today's business conditions, marketing is a driving force to increase sales so that the goals of a business can be achieved. Knowledge of marketing is important for business actors when faced with several problems, including a decrease in the income of a business caused by a decrease in consumer purchasing power for a product resulting in a slowdown in the growth of a business, Increasingly widespread competition causes the need for a marketing strategy that can keep the business growing. Many strategies can be used to increase sales and attract

consumers to buy products offered by manufacturers. One strategy that is widely used by companies is the marketing mix [8].

Marketing mix (marketing mix) is a combination of variables or activities of the marketing system, which are variables that can be controlled by the company to influence the reactions of buyers or consumers. These variables consist of product, price, and promotion, and where the four variables are interrelated so that all are important as a strategic unit, namely the marketing mix strategy [9].

Marketing mix can also be interpreted as a strategy that follows marketing activities, by looking for the maximum combination so that you can get profits [10]. The importance of this marketing activity for the continuity of a business venture, entrepreneurs must have strategic planning, careful supervision, and concrete and programmed actions in influencing consumers [11]. In this case, floating net cage fish cultivators during the main harvest, their marketing is still not good so the income they get is less, therefore using a marketing mix can increase income. Firna's research [8] explains that the marketing mix strategy implemented by ALVERO has gone well, where the four marketing mix strategy variables support and complement each other, and have different roles in marketing their products. Ayu's research [12] proves that the marketing mix strategy can increase sales volume and position BigEvo as an advertising services company in Jakarta.

Meanwhile, [13] her research shows that marketing mix affects increasing sales volume. So the three previous researchers stated that the marketing mix was very influential in increasing income. Based on the problems of floating net cage cultivators, the authors are interested in conducting research with the title Marketing mix analysis on increasing income of floating net cage cultivators, a case study in Kedisan Village, Kintamani.

## 2. Materials and Methods

This research was conducted in Kedisan Traditional Village, Kintamani, Bangli Regency, spanning three months—specifically, in May, June, and July 2023. The research procedure involved the direct distribution of questionnaires to informants to acquire the necessary data. Subsequently, the obtained data from the questionnaires were then presented. Following the data presentation process, conclusions were drawn regarding the conducted research.

In this study, researchers employed a quantitative descriptive approach to assess the significance of the influence among the variables under investigation, namely the marketing mix elements (Product, Place, Price, Promotion) on the marketing of aquaculture products utilizing the floating net cage method. Sampling was determined using the purposive sampling method. Data collection techniques included various methods such as observation, questionnaires, literature review, and documentation.

Data analysis is a crucial process aimed at simplifying data into an easily understandable and readable format. The analysis was performed to enhance the clarity of the collected information. The data analysis techniques employed in this study encompassed the Partial Least Square (PLS) method and descriptive analysis.

## 3. Results and Discussion

### 3.1 Outer Model Analysis

Convergent validity is the value of the loading factor on the latent variable with its indicators. The expected value is  $> 0.7$ . From Table 1 below it can be seen that the loading factor value is more than 0.7 so it can be said that the data is valid, which means that the marketing mix affects Income.

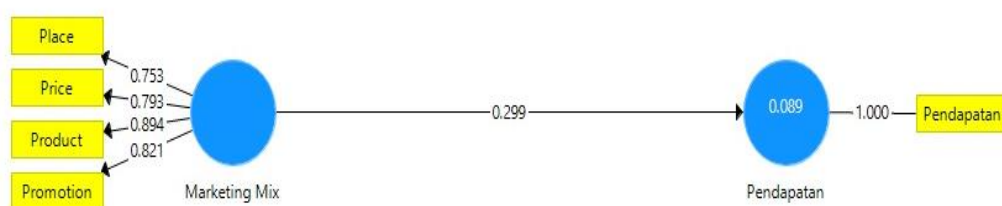
**Table 1.** Convergent validity

	Marketing Mix	Income
Income		<b>1,000</b>
Place	<b>0.753</b>	
Price	<b>0.793</b>	
Product	<b>0.894</b>	
Promotions	<b>0821</b>	

Discriminant validity is a useful factor cross-loading value. How to use it by comparing the value of the intended construct must be greater than the value of another construct. Another way to test the discriminant validity with a reflective indicator is to look at the cross-loading value. This value for each variable must be greater than 0.70 so that the influential value is obtained from the comparison of the constructs, namely the Product construct with a value of 0.894 (Table 2 and Figure 1).

**Table 2.** Discriminant validity

	Marketing Mix	Income
Income	0.299	1,000
Place	0.753	0.132
Price	0.793	0.179
Product	0.894	0.291
Promotions	0.821	0.299



**Figure 1.** Discriminant validity analysis results

### 3.2 Hypothesis

Hypothesis testing according to [14] testing this hypothesis can be seen from the t-statistical value and probability value. The hypothesis testing stage is by using statistical values, the 5% alpha value of the t-statistic used is 1.96. So the criteria for accepting or rejecting the hypothesis are that  $H_a$  is accepted and  $H_0$  is rejected when the t-statistic is  $> 1.96$ . To reject or accept the hypothesis using probability,  $H_a$  is accepted if the p-value  $< 0.05$ . This hypothesis test refers to Table 3 below.

**Table 3.** Hypothesis Test

Test Total	Original Sample (O)	Sample Means (M)	Standard Deviation (SD)	T Statistics ((O/SD))	P Values
Marketing Mix -> Revenue	0.299	0.324	0.124	2.420	0.016
Revenue <- Revenue	1.000	1.000	0.000		
Place <- Marketing Mix	0.753	0.694	0.181	4.149	0.000
Price <- Marketing Mix	0.793	0.739	0.184	4.304	0.000
Product <- Marketing Mix	0.894	0.867	0.120	7.420	0.000
Promotion <- Marketing Mix	0.821	0.795	0.136	6.045	0.000

The results of the analysis show that the marketing mix has a positive and significant effect on income, meaning that the marketing mix (Product, Place, Price, and Promotion) is very influential in increasing the income of fish cultivators in Kedisan Village for floating net cage cultivators in Kedisan Village. Thus the first hypothesis can be accepted.

The results of the analysis for the second hypothesis show that there is one marketing mix indicator that has a dominant effect on increasing the income of fish cultivators in Kedisan Village, namely Product Based on (Table 3), for the magnitude of the direct effect coefficient value, which is equal to 0.894.

The results of the analysis for the third hypothesis show that the t-statistics value is 2.420 which is greater than 1.96 and the p-value is 0.016 which is greater than 0.05. With this, it is stated that the marketing mix has a positive and significant effect.

### 3.3. Discussion

The discussion in this study can be conveyed based on the research results obtained by Marketing Analysis with Marketing Mix on Increasing Income of Floating Net Cage Farmers (Case Study in Kedisan Village, Kintamani). It can be tested through PLS analysis with the results obtained that the marketing mix has a positive and significant effect.

Based on Table 3, Hypothesis Testing that the product has a t-statistics value of 7.420 which is greater than 1.96, and a p-value of 0.000 which is smaller than 0.05. With this, it can be stated that the product has a positive and significant effect on income. The promotion variable has a t-statistics value of 6.045 which is greater than 1.96 and a p-value of 0.000 which is smaller than 0.05. With this, it can be stated that promotion has a positive and significant effect on income. The price variable has a t-statistics value of 4.304 which is greater than 1.96 and p-value 0.000 which is smaller than 0.05. With this, it can be stated that price has a positive and significant effect on income. The place variable has a t-statistics value of 4.149 which is greater than 1.96 and a p-value of 0.000 which is smaller than 0.05. With this, it can be stated that the place has a positive and significant effect on the panda.

### 4. Conclusion

Based on the research conducted in Kedisan Village, Kintamani, the following conclusions can be drawn: The elements of the marketing mix (product, price, promotion, and place) have been found to exert a positive and significant influence on the income levels of floating net cage fish cultivators in Kedisan Village. Among these elements, the product stands out as the most dominant indicator affecting the income of fish cultivators in Kedisan Village. Following the enhancement of the quality of the marketing mix elements, the average income level of fish cultivators in Kedisan Village has increased to Rp. 19,000,000 (Nineteen million rupiah) or 93.33% per harvest.

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