Fresh frozen fish consumer behavior: effect of the mix and trust marketing on buying interest, purchase decision and customer satisfaction in E-commerce, silly fish Indonesia

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Abstract: Increased fishery production and technological developments, triggers online marketing competition in the fisheries sector. The most effective factors that influence buying interest, purchasing decisions, and customer satisfaction in e-commerce Silly Fish Indonesia are essential to increase sales volume. The research purpose was to analyze the effect of some marketing mix, which consists of promotion, product quality, price, and trust in buying interest, purchasing decisions, and customer satisfaction. The method of data analysis uses analysis of Structural Equation Modeling. The distribution of online questionnaires obtained 120 respondents. The results of the study show that promotion, product quality, price, and trust have a positive influence on buying interest, purchasing decisions, and customer satisfaction both directly and indirectly through mediation.

1. Introduction
The production in Indonesia in 2011-2016 has increased \cite{1}. In 2011, the production was 13.64 million tons. The production increase to 23.51 million tons in 2016. The increase encourages entrepreneurs in the fishery sector to open new businesses in the fishery sector, such as fish processing and fresh products. Moreover, accompanied by rapid technological developments, competition in the business world has entered the online marketing. E-commerce is a marketing platform where product purchasing uses internet services \cite{2}.

“Silly Fish Indonesia (SFI)” is an e-commerce that sells fishery products. SFI consists of two forms, a website and an application. In selling through e-commerce, SFI also conducts marketing to attract consumers to buy a product through social media. The social media usually used Instagram and Facebook \cite{3}. SFI applied for promotion by giving a discount if the purchasing used SFI application.

Product quality, price, and trust are essential factors for e-commerce \cite{4,5}. Promotional activities include advertising, personal selling, sales promotion, and publicity \cite{6}. Promotion can be done through the internet as a marketing tool \cite{7}. Product quality is the character and nature of a product, and also reflects the ability of a product to perform its function \cite{8,9}.

The purchase decision is a stage before the end of consumer behavior, where consumers already have a choice and are ready to make a purchase or to pay a sum of money with ownership rights or use of an item or service \cite{10}. Four factors determine online purchasing decisions, namely, product quality, convenience,
quality of information, and consumer trust. The most dominant factor influencing purchasing decisions at online shops is product quality [11]. There are five stages of the buying process, according to [8], namely the introduction of needs, information seeking, alternative evaluation, purchasing decisions, and post-purchase behavior.

Satisfaction is the level of feeling expressed by someone by comparing the performance of the product or service received and expected [12]. According to Mulyadi and Sutanto [13], the factors that influence consumer satisfaction at Zalora online stores in Indonesia consist of technological factors, shopping factors, product factors, and logistical factors. According to Tjiptono [14], what is measured in customer satisfaction is the satisfaction of all customers, the component of customer satisfaction.

In this study, we investigate consumer behavior toward the SFI E-commerce system, which sells a frozen fish.

2. Method

The research method used is descriptive quantitative research. Data collection techniques are carried out by distributing questionnaires online through a link distributed on SFI social media Instagram. The population of this research is followers of SFI Instagram, who purchased on SFI e-commerce and non-SFI Instagram followers. The respondents have a minimum age of 17 years old. The total correspondents are 120. Respondent was divided by age, residence, sex, marital status, number of family members, employment status, last education, income (per month), expenses (per month), and information sources.

The proposed hypotheses were as follows:

\( H_1: \) Promotion has a positive effect on buying interest
\( H_2: \) Promotion has a positive effect on purchasing decisions
\( H_3: \) Promotion has a positive effect on customer satisfaction
\( H_4: \) Product quality has a positive effect on buying interest
\( H_5: \) Product quality has a positive effect on purchasing decisions
\( H_6: \) Product quality has a positive effect on customer satisfaction
\( H_7: \) Price has a positive effect on buying interest
\( H_8: \) Price has a positive effect on purchasing decisions
\( H_9: \) Price has a positive effect on customer satisfaction
\( H_{10}: \) Trust positively influences buying interest
\( H_{11}: \) Trust has a positive effect on purchasing decisions
\( H_{12}: \) Trust positively influences customer satisfaction
\( H_{13}: \) Buying interest has a positive effect on purchasing decisions
\( H_{14}: \) Buying interest has a positive effect on customer satisfaction
\( H_{15}: \) Purchasing decisions have a positive effect on customer satisfaction.

Structural Equation Modeling (SEM) method was applied to analyze the data.

3. Results and discussion

3.1. Characteristics of respondents, Validity, reliability, and multicollinearity test

The characters of the respondents were 31 to 40 years old (40.8%), from Jakarta Province (39.2%), female (93.3%), and married (60.8%). The respondents’ monthly income was about IDR 5,000,000 to IDR 10,000,000 (42.5%). They know the SFI mostly by Social Media (Instagram / Facebook) (59.2%).

The results of data processing show that the value of the entire loading factor constructs was > 0.6, and the total AVE value was > 0.5. While the composite reliability value was > 0.70, and Cronbach’s alpha was > 0.6. Hence, it is a reliable model. The results of data processing indicated no multicollinearity.

3.2. Model of research results and hypothesis testing

Based on the results of data processing, the \( R^2 \) value of \( Y_1 \) is 0.63 (Figure 1). It indicated that 63% of changes in consumer interest affected by promotional variables, product quality, price, and trust. The purchasing decision followed the formula with the \( R^2 \) of \( Y_2 \) has value was 0.64. Purchasing decisions affected much as 64% by promotional variables, product quality, price, trust, and buying interest. As many
as 71% of consumer satisfaction was affected by promotional variables, product quality, prices, trustworthiness, buying interest, and purchasing decisions.

Figure 1. Model of research result.

In the analysis results, if the coefficient is positive, then the hypothesis is accepted, and if it is negative, then the hypothesis is rejected. The results of hypothesis testing can be seen in Table 1.

Table 1. Hypothesis testing results.

| Predictor | Response | Mediation 1 | Mediation 2 | Direct Effect | Indirect Effect | Total Effect |
|-----------|----------|-------------|-------------|---------------|----------------|-------------|
| X₁        | Y₁       | -           | -           | 0.036(0.346)  | -              | 0.036(0.346) |
| X₂        | Y₁       | -           | -           | 0.164(0.032)  | -              | 0.164(0.032) |
| X₃        | Y₁       | -           | -           | 0.353(<0.001) | -              | 0.353(<0.001)* |
| X₄        | Y₁       | -           | -           | 0.339(<0.001) | -              | 0.339(<0.001) |
| X₁        | Y₂       | Y₁          | -           | 0.063(0.243)  | 0.010(0.437)   | 0.073(0.208) |
| X₂        | Y₂       | Y₁          | -           | 0.109(0.111)  | 0.047(0.232)   | 0.156(0.039) |
| X₃        | Y₂       | Y₁          | -           | 0.146(0.050)  | 0.101(0.056)   | 0.247(0.002) |
| X₄        | Y₂       | Y₁          | -           | 0.314(<0.001) | 0.097(0.064)   | 0.411(<0.001)* |
| Y₁        | Y₂       | -           | -           | 0.286(<0.001) | -              | 0.286(<0.001) |
| X₁        | Y₃       | Y₁          | Y₂          | 0.062(0.247)  | 0.014(0.439)   | 0.076(0.200) |
| X₂        | Y₃       | Y₁          | Y₂          | 0.115(0.098)  | 0.047(0.301)   | 0.163(0.033) |
| X₃        | Y₃       | Y₁          | Y₂          | 0.297(<0.001) | 0.093(0.149)   | 0.390(<0.001)* |
| X₄        | Y₃       | Y₁          | Y₂          | 0.214(0.007)  | 0.106(0.118)   | 0.320(<0.001) |
| Y₁        | Y₃       | Y₂          | -           | 0.198(0.012)  | 0.027(0.336)   | 0.225(0.005) |
| Y₂        | Y₃       | -           | -           | 0.095(0.144)  | -              | 0.095(0.144) |

Information: *: shows the priority of effect effectiveness.

Based on the test results and discussion obtained that the promotion, product quality, price, and trust can directly influence the purchasing interest. Besides promotion, product quality, price, and trust can directly influence purchasing decisions, and indirectly through buying interest. Then promotion, product quality, price, and trust can directly influence consumer satisfaction or indirectly through buying interest and...
purchasing decisions. Every business is trying to create sufficient demand. This can be achieved by creating consumer trust for encouraging consumer interest. The economically sustainable status of a business can be determined by several indicators, namely the level of consumer dependency, business profits, market availability, business potential development, and availability of human resources [15].

3.3 Testing of mediation types
Based on the result, all hypotheses were accepted. The results of determining the type of mediation can be seen in Table 2.

| Independent Variables | Dependent Variables | Mediation | Coefficient Value (a) | Coefficient Value (b) | Coefficient Value (c) | Coefficient Value (d) | Mediation Type |
|-----------------------|---------------------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|----------------|
| X1                    | Y3                  | Y1        | 0.24 (p<0.01)         | 0.55 (p<0.01)         | 0.52 (p<0.01)         | 0.61 (p<0.01)         | partial mediation    |
| X1                    | Y3                  | Y2        | 0.26 (p<0.01)         | 0.55 (p<0.01)         | 0.53 (p<0.01)         | 0.56 (p<0.01)         | partial mediation    |
| X2                    | Y3                  | Y1        | 0.39 (p<0.01)         | 0.70 (p<0.01)         | 0.67 (p<0.01)         | 0.48 (p<0.01)         | partial mediation    |
| X2                    | Y3                  | Y2        | 0.43 (p<0.01)         | 0.70 (p<0.01)         | 0.66 (p<0.01)         | 0.41 (p<0.01)         | partial mediation    |
| X3                    | Y3                  | Y1        | 0.48 (p<0.01)         | 0.76 (p<0.01)         | 0.72 (p<0.01)         | 0.40 (p<0.01)         | partial mediation    |
| X3                    | Y3                  | Y2        | 0.43 (p<0.01)         | 0.76 (p<0.01)         | 0.66 (p<0.01)         | 0.41 (p<0.01)         | partial mediation    |
| X4                    | Y3                  | Y1        | 0.44 (p<0.01)         | 0.74 (p<0.01)         | 0.72 (p<0.01)         | 0.42 (p<0.01)         | partial mediation    |
| X4                    | Y3                  | Y2        | 0.50 (p<0.01)         | 0.74 (p<0.01)         | 0.73 (p<0.01)         | 0.34 (p<0.01)         | partial mediation    |
| Y1                    | Y3                  | Y2        | 0.49 (p<0.01)         | 0.73 (p<0.01)         | 0.72 (p<0.01)         | 0.34 (p<0.01)         | partial mediation    |

Based on the results of determining the type of mediation in Table 2, it was found that the mediating variable of purchasing interest and purchasing decisions is a type of partial mediating variable. The success of E-commerce for frozen fish depends on how e-commerce technology was attractively developed [16].

4. Conclusion
Promotion, product quality, and price can directly influence purchasing interest, purchasing decisions, consumer trust, and consumer satisfaction. The owner of SFI needs to optimize the content of e-commerce, which focused on the information of promotion, price, discount, and quality of the product.

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