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CONSUMER HEALTH PERCEPTION OF SEAFOOD RELATED TO CUSTOMER ATTENTION TO SEAFOOD-ECO LABELS IN PURCHASE DECISION IN INDONESIA

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Abstract

Purpose - The purpose of this study was to examine the role of consumer health perceptions of seafood in relation to consumer attention to environmentally friendly seafood labels in Indonesia when making purchasing decisions. Based on the previous literature, three variables have been considered for this study, which are as follows: awareness and interest in eco-labels, altruistic values, and socio-demographic and cultural factors.

Design/Methodology/Approach - Data was collected using a questionnaire distributed randomly in Indonesia. A total of 301 valid respondents were obtained after passing through filter questions, where responses were recorded on a seven-point anchor Likert-type scale where 1 indicated strongly disagree and 7 indicated strongly agree. Then, the analysis was carried out using Exploratory Factor Analysis and Multiple Regression Analysis.

Findings - In contrast with findings from the primary journal reference, our study found that people with higher level education appear not to have interest in eco-labels. On the other hand, people with altruistic behavior who perceive seafood that is caught or farmed in a sustainable manner can contribute positively to the environment and workers are keen to understand about ecolabels. In Indonesia, awareness and consumers' health perception are the two factors that have the most impeccable influence on eco-label. This finding is quite the opposite of the results in Spain and Italy where level of education and altruism are the most significant factors.

Age of influence - Research Limitations: Most of respondents are not familiar with seafood eco-labels.

Practical Implication - Stakeholders in marketing may realign their strategies by creating certain information tools such as logos that can increase consumer's attention to ecolabels as well as using green attributes as part of their marine sustainable movement to cater the needs of consumers with altruistic values. In addition, the Government can also take a step to educate the importance of marine ecosystem and wellbeing, sustainable fisheries and responsible resourcing.

Originality/value - This study is one of the few studies that discusses research on purchase intentions of environmentally friendly seafood in developing countries.

Keywords - Environmentally Friendly Seafood, Seafood Eco-Label, Consumer Health Perception, Purchase Decision, Consumer Attention, Multiple Regression Analysis

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Introduction

Concerning environmental pollution, exploitation of natural resources and climate emergency press communities including consumers toward green consumption (Wang and Chao, 2019). In addition, growing consumers' interests for health and nutrition as part of ecological food consumption behavior has also become one of determining factors in the increasing demand for ecological products (Ham et al., 2015). On the other side of the note, businesses need to rearrange their strategies including their environmental initiatives to accommodate the needs and changing preferences of customers (Ghosal, 2015; Kammerer, 2009). One of the initiatives, information is a significant factor of environmental policy in catering consumers needs as well as aims to give them relevant information in relatively short time, therefore it could lessen the potential of information misunderstanding. On this point, eco-labels serve the best and effective tool to provide information regarding environmental policy (Taufique et al, 2016). It is also an important tool for improving the sustainability of consumption patterns (Sitarz, 1994).

Ecolabel ecoes sustainability without threatening consumers' ability to choose their product preference as well as it could eliminate customers' searching efforts that enhance the likelihood of information provided will actually be used (Grunert and Wills, 2007). Eco labeling offers plenty of benefits but the following are the significant ones:

1. The schemes of ecolabeling have the potential to bring advantages for conservation as they serve as a channel so that people can appreciate producers who develop their business by considering environmental aspects.
2. Ecolabel enhances efficiency gains by increasing the information available to consumers regarding options they may take for their consumption. The label is an effective way in providing consumers with valuable product information which can be influential in making purchase decision;
3. Given that consumer choice is the center of all market economies, ecolabel has the potential to empower consumers to influence the action undertaken by large number of industries (Oloruntuyi, 2010)

Fisheries and aquaculture is among numerous industries globally which adopt ecolabels. Ecolabels in the mentioned industry embodies policy instruments that are intended for regulating catching methods, putting fish stock exploitation under surveillance, and managing fisheries in accordance with eco friendly standards. (Bellchambers et al. , 2016; Carlson and Palmer, 2016; Gutierrez et al., 2016). Therefore, the main purpose of ecolabels in fisheries is to preserve the marine ecosystem by implementing sustainable fishery management (Uchida et al, 2014). It also serves the interests of both the environment and stakeholders in the fishery industry (Oloruntuyi, 2010). This paper will put seafood consumers at the center of discussion. A number of studies that examine the perception as well as response of consumers on eco-labels and the probability for them to purchase certified products have been done. Results have shown a positive tendency of consumers to purchase sustainable marine products and this pattern is followed after they receive information from the eco-labels regarding sustainable acts. Yet, purchase doesn't come after this process (Garcia-Herrero et al, 2019). Till date, less studies (Kumar et al., 2021; Liu et al., 2017; Loose and Remaud, 2013; Testa et al., 2015) that investigate the interest in seafood eco-labels and what aspects influence this action have been carried out. Taking this into consideration, this study examines the role of consumers' health perception and other socio-cultural aspects in forecasting the interest of consumers for seafood ecolabels in Indonesia.

As ecolabels are seen as a powerful marketing and advertising mean of communication that provide information consumers about sustainability, a more thorough understanding of the main factors in regards to consumer reactions on eco-labels has the potential to refine the information quality related with sustainable advertising as well as to integrate the visibility of label or logo into marketing strategies so that customers' awareness could be raised about the

part ecolabels have on protecting fish and aquaculture ecosystem (Kumar et al., 2021; Riskos et al., 2021; Schmuck et al., 2018). In addition to this, the purpose of this study is to analyze consumer behavior from Indonesia, taking into consideration that the implementation of ecolabels scheme in the country is narrated to encounter difficulties (Notohamijoyo et al., 2019)

In view of this framework, this paper tries to offer new understanding that can contribute to the importance of research as well as contributing to the main research gap. There is still a research gap in the research conducted by Antonio Galati (2021) related to the location of the survey where the location is only limited to consumers in the Spanish and Italian regions and there are other possible factors that influence attention to ecolabel seafood in purchase decisions. Previous research hypotheses still need to be proven by conducting surveys in other demographic areas with different social backgrounds and adding new variables which became the hypothesis that affects attention to eco-labelled seafood. The terms of eco-labelled seafood are somehow unfamiliar in south east asian countries, especially in Indonesia.

In order to fill these gaps, the purpose of this study is to focus on the health perceptions of seafood in relation to consumer attention to environmentally friendly seafood labels in Indonesia. This paper is structured as follows. Section 2 presents literature review. The methodology used to address the research aim is drafted in Section 3. In section 4, the results of research are presented and in section 5 the results are discussed. The last section, which is 6, presents the practical implications.

Review of literature and hypotheses development

The foundation of this study emphasizes the relevance theory between a person's belief, attitude and intention which is mentioned by Fishbein & Ajzen. Theory of the mind formed in a person's mind to have intention/attention depends on how positive a person's belief and attitude towards an object. Roles between these elements take part in the conjunction towards a person's decision. This attitude can be measured by assessing belief parameters from a person. Person belief can be structured by certain attributes shown by an object (for instance, this study showed eco-label in seafood products).

Belief binds stimulus, the stimulus will be formed from a person's belief or the belief created from past events. Beliefs will set forth as a result of the attitude shown by a person. Thus, a theory was given by Fishbein & Ajzen in which an attitude towards an object will automatically be generated when a person forms a belief towards an object. (Fishbein & Ajzen 1975), they measure the belief with 9-point scales like-dislike or believe/not believe

The Underlying theory given by Fishbein was the process of how the intention was created in a person's mind. The positive behavior/intentions shown will be created based on how strong the positive relation between a person's attitude to an object. Hence, if the attitude is positive, the parameter for the intention toward the object shall be positive aswell. The figure below shown the correlation between how intention will impact to the person's behaviour.

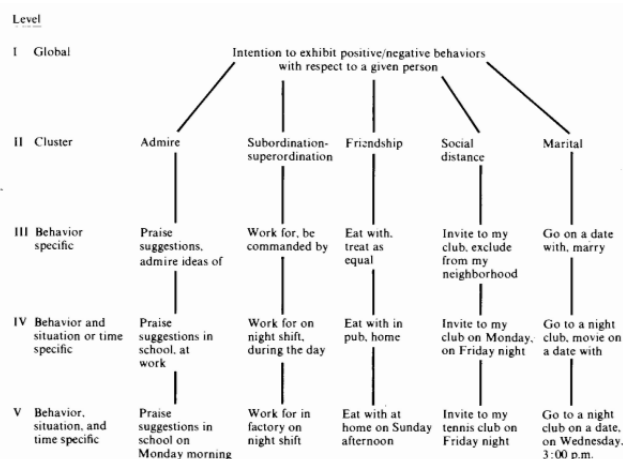


Figure 1. Formation Structure of Intention & Behaviour (Fishbein, M., & Ajzen, I. 1975)

The theory from Fishbein was concluded and proven in the previous research which has been carried out to find the relationship between the nature of consumer altruism and various socio-demographic factor on how much the attention given by the consumer to eco-labelled seafood. Previous study by Galati (2021) found a positive correlation between high individual altruism and increased attention to seafood eco-labels in purchasing decisions. Socio-demographics also affect the increasing consumer attention to eco-labeled seafood where the higher a person's income, education, and age, the higher their attention to eco-labeled seafood.

On the other hand, there is still a research gap in the research conducted by Galati (2021) related to the location of the survey where the location is only limited to consumers in the Spanish and Italian regions and there are other possible factors that influence attention to ecolabel seafood in purchase decisions. Previous research hypotheses still need to be proven by conducting surveys in other demographic areas with different social backgrounds and adding new variables in which became the hypothesis of that affect attention to eco-labeled seafood. Hence, this study had the expectation that the hypothesis result in Indonesia will have the same result with the same research conducted by Galati (2021) (positive relationship)

Research conducted by Galati (2021) hypothesis the fact that the Spanish and Italian regions will prefer sustainable fish products by how greater the customer's awareness on the part of their knowledge in sustainability. This hypothesis is supported by the theory mentioned by Fishbein & Ajzen (1975). The Theory of the mind formed in a person's mind to have intention/attention depends on how positive a person's belief and attitude towards an object. Roles between these elements take part in the conjunction towards a person's decision. Hence, if the attitude is positive, the parameter for the intention toward the object shall be positive as well. The formulated hypothesis as stated below:

H1. Consumer awareness and interest in seafood information label has a positive and significant effect on the attention and interest in seafood eco-labels in purchase decision.

Second hypothesis mentioned in Galati's research (2021) that the altruism is defined as a self-interest in consumer's individual mind. Means that this altruism give moral satisfaction in consumer's individual mind. Hence, from this formation of mind will eventually lead consumer interest in seafood eco-labels. The foundation of this hypothesis is from theory mentioned by Fishbein & Ajzen (1975), component that drives consumer's behaviour is cognitive component, affective component and conative component. But beyond the 3 factors mentioned, independent effects of other variable have direct effect role impacting consumer's decision. This independent effects consists of individual differences as a definition of altruism. Therefore, the hypothesis is formulated as below:

H2. Consumer's altruistic value has a positive and significant effect on the attention and interest in seafood eco-labels in purchase decision.

Third hypothesis formed in the research in Antonio Galati (2021) is taking reference from theory that is highlighted also in the theory by Fishbein & Ajzen (1975) that the other independent effect were also consisting of intellectual, social abilities. From this theory the hypothesis was formulated that purchasing decision shall be have direct effect to the attention and interest in seafood eco-labels. Means the level of intellectual and social abilities shall be inline by consumer age and education level. The hypothesis is formulated on below statement:

H3. Consumers socio-cultural background such as age, education level, and income has a positive and significant effect on the attention and interest in seafood eco-labels in purchase decision.

In this study, new variable will be tested to the consumer perception of health perception. Therefore, some study literature had to be done on this subject. A research on the relationship between health perceptions consumers have about seafood types of serving and their interest in seafood ecolabel is conducted by Filiep Vanhocker (2013). The object of this research is the people who live in big cities by considering the tendency for higher awareness of health and the environment compared to other regions in Indonesia. In addition to that, the formulation of the problem adopted in this research is to find out the relationship between health perceptions consumers have about seafood types of serving and their interest in seafood eco-label measured by awareness and interest in label information, altruistic values, socio-demographic-cultural factors, as well as consumer perception of seafood and their interest in seafood eco-labels.

However, This research is conducted in the mediterranean countries, A group of countries that had high levels of fish consumption frequency. Thus, the health perception in Indonesia should be dissimilar with the research conducted in mediterranean countries.

By taking reference from Fishbein & Ajzen theory (1975) and previous research. It was concluded that the purchase intentions were correlated by positive attributes on an object. This study intends to know whether the correlation of health perceptions and their interest in eco labels is applied in Indonesia. Although the terms of eco-labeled seafood is somehow unfamiliar in south east asian countries especially in Indonesia.

Research by Filiep Vanhocker concludingly that a person's attitude/behavior in Mediterranean countries depended on their belief and intention. Their belief in fish products being a healthy food to be consumed is directly proportional with the frequency of fish products consumed in Mediterranean countries. This shows their attitude of consuming fish in large numbers was as positive as their health perception towards the fish product especially the fresh fish products.

Hence, This study new variable framework explores the research hypotheses for Indonesian consumers:

H4. There is a positive and significant relationship between consumer health perception on Seafood serving types and the attention paid to seafood eco-labels.

Methodology

Data source and selection of variables

Primary data have been collected by convenience and referral sampling. A convenience sampling is a method where the sample is taken from a group of people easy to contact or to reach and A referral sampling is sampling technique where existing study subjects recruit future subjects from among their acquaintances. The sampling is conducted in Indonesia. A total of 4 variables consist of 24 statements were used for this study, which was gathered from previous literature related to consumer attention in various areas.

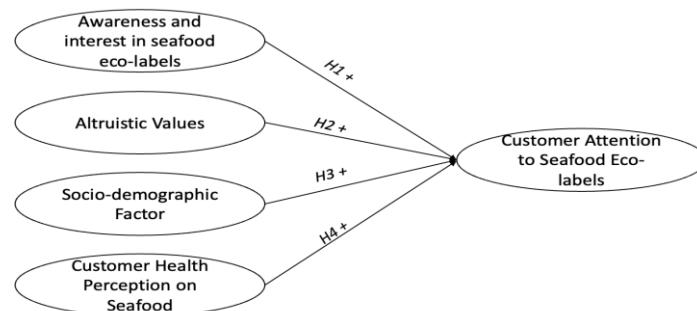


Figure 2. Conceptual model of determinants affecting customer attention to seafood eco-labels in purchase decision

Universe and sample selection

All the consumers, who are aware of eco-labels on Seafood are the universes for this study. People were contacted by blasting questionnaires on Social Media and Private Chats and asked to participate in the survey. Out of 653 respondents who filled out the questionnaire, only 326 respondents were aware of Eco-Labels and passed the given filter question, after eliminating some the incomplete data, only 301 data was used for this study. It reflects that only less than 50% percent of Indonesians are aware or had seen the seafood eco-labels.

Data analysis tools and techniques

Data of 301 respondents were analysed with SPSS 27. The demographic characteristics of the respondent were analyzed with descriptive statistics. Moreover, extracting factors and confirming the convergent and discriminant validites were analyzed using exploratory factor analysis. To examine the direct effect of independent variables on customer attention to seafood eco-labels, multiple regression analysis was used. Finally, based on the t-values at 0.05 significance level, the decision on hypotheses was made.

Results and Findings

Demographics and Characteristics of the Respondents

Among the total 301 respondents, 57,5 percent were female, 47,2 percent were undergraduates, 36,2 percent were in 27-35 year age group and 36,2 percent were in the below 4,500,000 income group. The detailed demographic characteristics of the respondents were presented in Table I.

	Frequency	%	Cumulative %
Gender			
Female	173	57,5%	57,5%
Male	128	42,5%	100%
Age Group			
0-17	3	1%	1%
18-26	93	30,9%	31,9%
27-35	109	36,2%	68,1%
36-44	70	23,3%	91,4%
45-56	23	7,6%	99%
57-65	3	1%	100%
66<	0	0%	
Education			

Elementary	11	3,6%	3,6%
Junior High School	12	4%	7,6%
Senior High School	88	29,2%	36,8%
Diploma	13	4,3%	41,1%
Undergraduates	142	47,2%	88,3%
Graduates	33	11%	99,3%
Post-Graduates	2	0,7%	100%
Income Group			
0-4.500.000	167	55,5%	55,5%
4.500.000-7.000.000	52	17,3%	72,8%
7.000.000-12.500.000	39	12,9%	85,7%
12.500.000-20.000.000	12	4%	89,7%
20.000.000-35.000.000	20	6,6%	96,3%
35.000.000-50.000.000	2	0,7%	100%
>50.000.000	9	3%	

Table I. Socio-demographic characteristic (% of respondents)

Factor Analysis Results

Data reduction technique was used to do the factor analysis test. There were originally 24 questions asked to respondents, but among them, two questions for Customer Health Perceptions on seafood variable as follows: "I agree that seafood in general is healthy" and "I agree that fresh seafood is healthy" and two questions for Customer attention to seafood eco-labels in purchase decision variable as follows: the questions are "I pay attention to price" and "I pay attention to visual aspect of seafood" were taken out because the factor loading did not show the intended construct. The Authors run a test for each construct; overall Kaiser-Meyer-Olkin (KMO) shows result > 0.5 for each construct, which means the data sampling is adequate enough to run factor analysis (Malhotra, 2010). Bartlett's test of sphericity is also conducted and gives *p*-values result < 0.001 which means correlation matrix is an identity matrix that indicates the variables are unrelated and the scale used is reliable and the data can be used for factor analysis.

Construct	Bartlett's Test of Sphericity		
	KMO	DF	<i>p</i> -values
Awa	0.811	10	0.001
Alt	0.876	21	0.001
HP	0.716	3	0.001

Eco 0.770 10 0.001

Table II. Kaiser-Meyer-Olkin value for each construct

Based upon the factor analysis test, there are 4 constructs, 3 for independent variables and 1 for dependent variable. Factor loading values for each statement in a construct has value > 0.5 which indicate the question asked to the respondent is valid (Hair et al., 2019). Each construct is found having Cronbach's α value > 0.7 that signify each construct is reliable (Kline, 2005).

Construct	Items	Loading
When buying seafood products, how often do you look for the following information on the packaging?		
Customer awareness and interest in seafood label information (Cronbach's α = 0,894)	Awa1: Health benefits (e.g. lowers cholesterol, good for bones)	0.863
	Awa2: Nutritional benefits (low fat, reduced salt)	0.828
	Awa3: Health logo/symbol (such as "Good for you" or the Sunflower "Eat Well" logo)	0.862
	Awa4: Environmental Impact (e.g. production, transport)	0.855
	Awa5: Ethical Impacts (e.g. working conditions, fair trade)	0.787
Customer altruism (Cronbach's α = 0,867)	Alt1: I care about environmental problems	0.794
	Alt2: I am willing to save energy and helps to lower electricity/water bills	0.768
	Alt3: I care about societal problems' results and behavior	0.810
	Alt4: I am willing to help others	0.698
	Alt5: Pollution is always a concern for me	0.657
	Alt6: I consume green products to save future generations	0.728
	Alt7: I consume green products and proud of it	0.782
Customer health perception on seafood (Cronbach's α = 0,835)	HP1: I agree frozen seafood is healthy	0.850
	HP2: I agree seafood that is salted, smoked or canned is healthy	0.897
	HP3: I agree that ready-to-eat seafood is healthy	0.868
Customer attention to seafood eco-	Eco1: I pay attention to the product form (frozen vs fresh)	0.550
	Eco2: I pay attention to the origin of fish	0.649

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labels in purchase decision (Cronbach's α = 0,781)	Eco3: I pay attention to the resource level	0.784
	Eco4: I pay attention to the wild or farmed origin of fish	0.852
	Eco5: When you are choosing a product, how often do you pay attention to any enviromental labelling before deciding to buy?	0.778

Table III. Measurement of scale and their factor loadings

Regression analysis

Model Fit. The model used was found significant, $F(6,294) = 79.207$, $p < 0.001$ and can be continue to analyse the R-value for the model. The adjusted R^2 value is 0.618 that indicates 61.8% of factors affecting customer attention to seafood eco-labels in purchase decisions can be explained by the variables as follows: awareness and interest in seafood label information, altruism, health perception on seafood, and socio-demographics. The difference between R^2 and Adjusted R^2 is 0.008 that indicates this model is a good model fit. R-value was found 0.786 which indicates there are 78.6% correlation exists between the observed and predicted values of the dependent

variable, on the other hand, the Durbin-Watson value is 1.909 which is between 1.5-2.5 (Siegel, J.G & Shim, J.K., 2001) as accepted values, therefore it can be concluded there is no auto-correlation factor.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.786a	0.618	0.61	0.71468	1.909

a Predictors: (Constant), Education, Label Info Awareness, Age, Income, Seafood Health Perception, Altruism
b Dependent Variable: Attention to seafood eco-labels

Table IV. Regression model fit summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	242.737	6	40.456	79.207	.000b
	Residual	150.165	294	0.511		
	Total	392.902	300			

a Dependent Variable: Attention to seafood eco-labels
b Predictors: (Constant), Education, Label Info Awareness, Age, Income, Seafood Health Perception, Altruism

Table V. ANOVA results

	Unstandardized Coefficients	Standardized Coefficients		
	B	Std. Error	Beta	t-value
(Constant)	0.314	0.355		0.885
Awareness & Interest in seafood label information	0.354	0.035	0.474	10.103
Altruism	0.277	0.059	0.198	4.661
Health perception on seafood	0.216	0.036	0.253	5.996
Age	0.016	0.005	0.129	3.409
Income	-6.87E-09	0	-0.081	-2.023
Education	0.022	0.034	0.026	0.657

b Dependent Variable: Attention to seafood eco-labels

Table VI. Multiple regression coefficients and critical ratios (*t-values*) of hypothetical paths

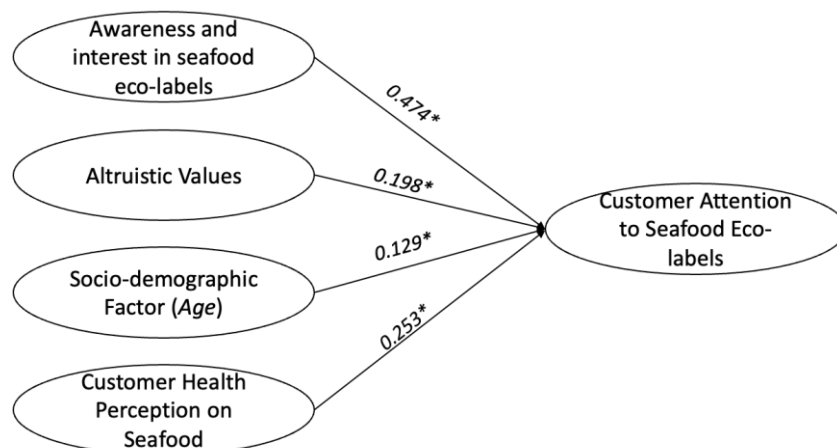
Multicollinearity statistics. A study of the data multicollinearity is necessary since the variance of the predicted regression coefficients depends on the intercorrelation of the predictors. When there is a high degree of intercorrelation across predictor variables, this situation is referred to as multicollinearity. For a researcher using multiple regression, this presents a significant challenge

because it makes it challenging to assess the significance of any particular predictor because the effects of the predictors are confused as a result of their correlation, which raises the variances of the regression coefficients. Collinearity statistics that depict the values of the tolerance and variance inflation factor (VIF) can be used to detect it.

The tolerance value is used to show whether any predictor in the model can be predicted by other predictors. A lower level of multicollinearity and a greater tolerance value make the predictor more relevant for the analysis. For this model, the VIF and tolerance values obtained are both within the acceptable range. Each variable's VIFs range from 1-3, and all tolerance values are higher than 0.5.

Model		Tolerance	VIF
1	Awareness & Interest in seafood label information	0.592	1.691
	Altruism	0.718	1.392
	Health perception on seafood	0.728	1.374
	Age	0.914	1.094
	Income	0.819	1.220
	Education	0.855	1.170

Table VII. Multicollinearity statistics



Notes : * $p < 0.001$

Figure 3. Path analysis results

Parameter Estimates. 5 out of 6 variables were found to have a p -value < 0.05 which means those variables are significant except for one variable which is education. Hence, in this study variable education can not be considered as a predictor of customer attention to seafood eco-labels in purchase decisions in Indonesia.

Hypotheses testing and results

H1. Consumer awareness and interest in seafood information label has a positive and significant effect on the attention and interest in seafood eco-labels in purchase decision.

For the first hypothesis the t -value was found significant ($p < 0.001$) which means the hypothesis was right. The higher customer's awareness and interest in seafood label information, the higher customer pays attention to seafood eco-labels in a purchase decision. Moreover, the beta value for

this variable is the highest among other variables (beta = 0.474) which indicates this variable is the most significant factor.

H2. Consumer's altruistic value has a positive and significant effect on the attention and interest in seafood eco-labels in purchase decision.

Customer's altruism value has beta = 0.198 and p -value <0.001. This indicates that altruism value has positive correlation to customer attention to seafood ecolabel in purchase decisions. Customer's belief of disinterested and selfless concern for the well-being of others found affecting their attention to eco-labels in a positive way.

H3. Consumers socio-cultural background such as age, education level, and income has a positive and significant effect on the attention and interest in seafood eco-labels in purchase decision.

There are 3 separate variable to construct this hypothesis which are *Age, Education* and *Income*, only one of these 3 variables show positive correlation and high significance to customer attention to seafood eco-label, the variable is *Age*. *Age* p -value < 0.001 and beta = 0.129, it signify that older customers pay more attention to seafood eco-label compared to younger customers. On the other hand, even though customer's education p -value<0.05 which is significant, the beta value is negative that indicating the hypothesis of customers with higher education has higher attention to seafood eco-label is invalid in this study. The hypothesis for customer with higher income will have positive relationships with customer attention to seafood eco-label also found invalid in this hypothesis because of p -value > 0.05 that indicates that customer's income is insignificant to customer's attention to seafood eco-label.

H4. There is a positive and significant relationship between consumer health perception on Seafood serving types and the attention paid to seafood eco-labels.

The fourth hypothesis is one the author came up with according to the Fishbein and Ajzen (1975) book regarding customer behavior. The higher customer belief in the healthiness of seafood will affect their behavior towards seafood products in a positive way. This study wants to test customer health perception towards seafood products will have a positive impact in their attention to seafood eco-label in purchase decisions and this hypothesis is valid with p -value <0.001 and beta = 0.253. This variable is the second highest in beta value compared to other variables.

Conclusions and Discussion

Recent studies have focused their research on examining consumers' recognition and perception of voluntary sustainable schemes (Taufique et al.,2016) as well as consumers' willingness to pay (WTP) premium prices for products with eco-labels (Mulazzani et al., 2021; Thøgersen et al., 2010). To complete previous research, another research has tried to find determinants affecting customer attention to eco-labels, especially seafood eco-labels in European country (Galati et al., 2021). Our study aims to further explore additional factors that can affect customer attention to seafood eco-labels, especially in developing countries, in this case Indonesia.

In Indonesia, among 653 respondents, only 326 respondents passed the filter question means only 50% of them knew seafood eco-labels and after eliminating some the incomplete data, only 301 data was used for this study. The first hypothesis use the same variable as previous study by Galati (2021) in Spain and Italy, that is customer attention to label information. Research by Galati found that although customer awareness and interest in label information was significant, it is not as robust as expected, moreover, the result from respondents in Spain did not show any correlation between interest and awareness in label information to attention to seafood eco-

labels. Surprisingly, our study in Indonesia found that H1 was the most prominent determinant in Indonesia, and has the highest beta amongst other variables. The difference between these two studies might be related to response style from countries with difference socio-cultural background (Harzing, 2006)

Customer's altruism (*H2*) was found significant and correlate with customer attention to seafood eco-labels, this also signify the result of previous study that awareness of eco-labels and willingness to pay premium price for ecolabelled products driven by customer's altruistic value (Brecard et al, 2012). This finding also confirmed that the difference between developed and developing countries does not really affect the correlation of altruistic value and attention to eco-labels in purchase decisions.

H3 regarding customer's socio-cultural factors such as age and education shows different results compared to study by Galati (2021). Our study found that only age as socio-cultural factor shows high significance with customer's attention to seafood eco-labels in Indonesia which are in line with others previous research. On the other hand, higher education does not show result of high significance and correlation as stated in the hypothesis. The results of a study in Norway, which found that Norwegian customers with bachelor's degrees are unlikely to choose seafood that has been certified (Johnston et al, 2001), support one of our findings even though it does not agree with some empirical evidence from previous studies that stated the positive effect of the eco-label on consumers is particularly evident among consumers with a higher level of education (Haghiri, 2014; Rihn et al., 2019). This suggests that sociocultural aspects of each country are highly diverse and cannot be generalized across all of them.

Last hypothesis *H4* indicating there are positive correlation between consumer perception of seafood healthiness and their attention to seafood-ecolabels. This new determinant which has not been found yet by previous study show high significance and correlation in our study. This strengthen the theory by Fishbein & Ajzen (1975) about customer behavior that stated a positive belief will result to positive behavior. This results is also align with study by Vannhonacker (2013) that positive health perception of fish products will lead to possible behavior of eating fish and motivation to consume fish, in our case the positive health perception of fish will lead to improve attention of fish eco-labels.

Practical Implications, limitations and future research

Results of the study state that consumers' attention to seafood eco-labels in Indonesia are influenced at least by four factors, customer's awareness and interest in seafood label information, customer altruism, customer's health perception on seafood and customer's age. Indonesian seafood producers haven't been aware yet of the importance of seafood eco-labels, yet some of the seafood producers already put eco-label on their products. From a marketing perspective, to encourage Indonesian seafood customers to increase their attention to seafood eco-label, seafood producers can educate their customers about the healthiness of their products, using health symbol/logo on their product for instance "eat well" or "good for your health" it will raise their perception on seafood and can improve their attention to seafood eco-label. This method using both of the most significant determinants in this study regarding customer's attention to fish eco-labels. In addition seafood producers can use green marketing strategy and sustainable fisheries to accommodate customer's altruistic values and increase their interest and attention to seafood with eco-labels.

This study implication can also be used in political perspective, only 50% of the respondents in Indonesia knew about fish-ecolabels whilst Indonesia Ministry of Marine Affairs is trying to increase the use of fish eco-labels in Indonesia fish related products. Government can start to educate the importance of marine eco-system and wellbeing, sustainable fisheries and responsible resourcing to all stakeholders in this matter so that the number of people aware of fish ecolabels increase.

There are some limitations regarding this study, the sampling procedure is not 100% probabilistic, instead we use the snowball technique to get respondents. This technique will affect the results of this study and it is vulnerable to selection bias and influences. Moreover, most of the

respondents (around 50% or more) does not really knowledgeable or aware of the presence of fish eco-labels. Hence this study can't be taken for the generalization of the result.

Further study can be held to identify more determinants for customer attention to seafood ecolabels. This study only able to find 61,8% factors affecting customer's attention to seafood ecolabels in purchase decision, there are still some of the determinants that haven't been studied yet. Furthermore, another study related to socio cultural can be enhanced, factors such as lifestyle, religion, or social class can be added to analyze and enrich the result of research .

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