Effect of lifestyle, egoistic values and biosphere values on Willingness to pay (WTP) organic rice

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ABSTRACT

This study aims to analyze the relationship of lifestyle to the value of sustainability and willingness to pay (WTP) organic rice. This study uses the Generalized Sructured Component Analysis (GeSCA) method, replacing the factor with a linear combination of indicators (Variable manifest) in structural equarion Modeling analysis. Research findings based on sustainability values obtained egoistic value significantly influence the biosphere value, biosphere value significantly influence willingness to Pay (WTP) and lifestyle significantly influence altruistic value, egoistic value and Willingness to Pay (WTP) organic rice . This study is original because it focuses on certain regional areas in East Java Province, Indonesia. It concentrates on the issue of the influence of lifestyle and general sustainable value on the willingness to pay organic rice by consumers, so that it can provide marketers with information on how much the level of willingness to pay more for organic rice. Therefore, this provides specific information that is important for people in journal.

Keyword: Lifestyle, Value of sustainability, Willingness to Pay, Consumers, Organic rice.

Intruduction

Nowadays there has been a shift in consumer tastes, from low quality products to high quality or premium products. Consumers have been aware of the importance of health that comes from food,one of them is food that does not contain chemical pesticides or other harmful substances namely by consuming organic rice. This food source is obtained from organic farming which in its cultivation practice does not use chemical pesticides and fertilizers. Changes in taste have not only occurred in Indonesia, but also in developed countries such as Europe, America and parts of Asia have switched to organic farming.

Many factors can affect the demand for organic rice by consumers, among others the healthy lifestyle he has lived so far. Lifestyle will of course also be in line with the high concern for the surrounding environment. Several studies reveal other factors the consumers move to consume organic rice besides based on health factors, also based on environmental factors. Many consumers are starting to realize that the use of chemicals is not only dangerous for health but also dangerous for the environment because it can pollute the environment. Therefore, consumers' attention to the environment and nature seems to be one of the main precursors of environmentally friendly consumption (Aertsens *et al.*, 2009; Biswas and Roy, 2015). Researchers have underlined that these pro-environmental interests of consumers are closely correlated with their lifestyle, egoistic values and biosphere values (Ojea and Schultz, 2001; Stern and Dietz, 1994; de Groot and

Steg, 2008, 2010). Kasalli (2005) states that "Lifestyle will influence a person's desire to behave and ultimately determine one's consumption choices". Previous research found that the value of the biosphere can influence consumer purchasing decisions directly or indirectly through attitude (Hansla *et al.*, 2008). Egoistic values are conceptualized by how individuals value themselves in relation to others and the nature of life, and concentrate on personal welfare, such as strength and achievement (Stern and Dietz, 1994). The value of the biosphere is displayed when a person behaves pro-environment based on the perception of costs and benefits for the whole ecosystem (Schultz, 2001; de Groot and Steg, 2008).

Willingness to pay for a product or service shows a price acceptable to consumers and they tend to pay to buy a product or service (Krishna, 1991). Willingness to pay for goods and services shows that the price is acceptable to consumers and they tend to pay to buy the product or service (Krishna, 1991). This idea can be a proxy for the intention of the perpetrators, the willingness of consumers to pay more for premium prices for a product or service. This connotation takes into account the level of sacrifice for what consumers have gained (Shin *et al.*, 2017). Thus, any costs that exceed a reasonable price may reflect a consumer's true intention to purchase a product or service (Tse, 2001). The influence of consumer behavior on the willingness to pay for organic rice with the presence of a phenomenon or the fact that the behavior of consumers of organic rice has shifted from merely consuming medium quality rice into high-quality rice is increasing (Syahrir *et al.*, 2015). Consumers tend to pay additional costs to consume organic rice which has a positive impact on the environment and consumer healthMany studies have been done on the willingness to pay, especially those that discuss factors that affect the willingness to pay from a variety of perspectives. However, this study focuses on the influence of lifestyle, egoistic values and the value of the biosphere on willingness to pay (WTP) for organic rice.

Research Methods

This study uses an explanatory research type through a quantitative analysis approach that aims to analyze the relationship of the value of the biosphere on the Willingness To Pay mediated by pro-environment. This re-search was conducted at three Depo. The sampling method intentionally (purposive) with a sample of 150 re-spondents. The data collection tech-nique used in this study is the survey method. The process carried out by re-searchers in primary data collection by distributing questionnaires. All varia-bles in this study were measured using a 1-5 Likert scale. Respondents were asked to determine their opinions from a statement submitted in writing. The Likert Scale generally uses 5 (five) points (Davis and Consenza, 1993). The assessment ranges from 1 to 5 are as follows: 1 = Very Disagree; 2 = Dis-agree; 3. Fairly Agree; 4 = Agree and; 5. Very Agree. The testing of empirical models and hypotheses in research uses Generalized Structured Component Analysis (GSCA) developed by Hwang *et al* (2004) with the aim of replacing factors with linear combinations of in-dicators (manifest variables) in Struc-tural Equation Modeling (SEM) which includes measurement models and structural models. According to Solimun (2013) This analytical approach uses the least square method in the parameter estimation process.

Results and Discussion

Results

a. Test of Validity and Reliability

The Unidemensionality Test of each construct is done by looking at the con-vergent validity of each construct indi-cator. Respondents Characteristic Variables do not need to conduct Validity and Reliability test because it is an ordinal scale. Testing is done by conducting Discriminant Validity and Composite Reliability. Discriminant validity, is a measurement of reflexive indicators based on cross loading with its latent variables. Another method is by comparing the square root of average variance extracted (AVE) value of each construct, with correlations between other constructs in the model. Whereas composite reliability testing aims to test the validity of the instrument in a research model. It is recommended that the square root of average variance extracted measurement value must be greater than 0.50 and the reliability composite value is ≥ 0.70. Furthermore, the test results of Discriminant validity and Composite Reliability in Table 1.

The discriminant validity test results where all the values of Average variance extracted (AVE) are

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Table 1. Discriminant validity Testing Results

Variable	Average variance extracted (AVE)	Composite Reliability
Egoistic Value	0.775	0.853
Biosphere Value	0.653	0.893
Lifestyle	0.677	0.876
Willingness to Pay (WTP)	0.741	0.883

Source: Primary data analysis results (2019)

greater than 0.50. Thus it can be concluded that this measurement has met the Convergent Validity requirement based on the value of Average Variance Extracted (AVE). The composite reliability test results show a satisfactory value, where all latent variables are reliable because all variable values have a composite reliability value of ≥ 0.70. In other words, the questionnaire used as an instrument in this study is reliable or consistent. Therefore, it can be concluded that, all indicators are indeed a measure of their respective constructs.

b. **Structural Equation Modeling**

This study uses the GSCA approach structural equation model. Before analyzing, first performed testing or evaluation of empirical research models. The results of testing the empirical model of this study can be seen in the visualization of Figure 6.3 as follows :
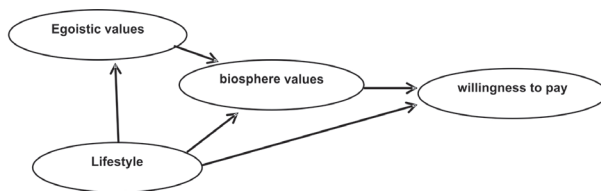

Fig. 1. Analysis Results with GeSCA

c. Goodness of Fit Model

The theoretical model on the conceptual framework of the study is said to be fit if supported by empirical data. There are two indications to see whether the model used is good, namely goodness of fit structural model and goodness of fit overall model. The testing results of the goodness of fit structural models and overall models in accordance with the results of the GSCA analysis are presented in the Appendix.

At the goodness of fit structural model is seen from the values of FIT and AFIT. In this modeling obtained the FIT value namely equal to 0.62 which

means that the research model formed can explain all existing variables equal to 0.62. The diversity of Altruistic Values, Egoistic Values, Biosphere Values, Lifestyle, Pro-Environmental Value and willingness to pay (WTP) which can be explained by the model is amounted to 62% and the rest (38%) can be explained by other variables which not included in the research. To find out that the hypothetical model namely the goodness of fit overall model supported by empirical data is presented in Table 2.

Table 2. Testing Result of *Goodness of Fit Overall Model*

Criteria	*Cut-of value*	Model Results	Information
SRMR	≤ 0.08	0.154	Marginal
GFI	≥ 0,90	0.992	Good Model

Source: Primary data analysis results (2019)

The test results of the Goodness of Fit Overall Model based on Table 6.15 show that GFI has fulfilled the cut off value, so the GSCA model in this study is suitable and feasible to be used, so interpretation can be made for further discussion.

Goodness of Fit Structural models is measured using FIT and AFIT. FIT formed from the structural model is 0,62. So, the model formed can explain all existing variables amounted to 0.62. The diversity of Altruistic Values, Egoistic Values, Biosphere Value, Lifestyle, Pro-Environmental Value and willingness to pay (WTP) which can be explained by the model amounted to 62% and the rest (38%) can be explained by other variables which not included in the study. That is, if viewed from the FIT value obtained, the model formed can be said good.

Adjusted from FIT is almost the same as FIT. However, because there is not only one variable that affects performance but there are five variables so that it would be better if the interpretation of the model's accuracy using AFIT. AFIT formed from the structural model is 0.614. So, the model formed can explain all variables equal to 0,614. The diversity of Altruistic Values, Egoistic Values, Biosphere Values, Lifestyle, Pro-Environmental Value and willingness to pay (WTP) that can be explained by the model is equal to 61.4% and the rest (38.6%) can be explained by other variables. Means that, if viewed from the AFIT value obtained, the model formed can be said still quite good.

d. **Variable Measurement Model**

Conversion of path diagram into measurement

model in each variable (Altruistic Value, Egoistic Value, Biosphere Value, Lifestyle, Pro Environmental Value and Willingness to Pay (WTP)) can be known through Table 3.

Table 3. Altruistic Value Variable Measurement Model

Indicator	Estimate	SE	CR
NE1	0.861	0.007	128.92*
NE2	0.929	0.003	315.1*
NE3	0.850	0.018	46.09*
NE1	0.861	0.007	128.92*
NE2	0.929	0.003	315.1*
NE3	0.850	0.018	46.09*
B1	0.657	0.106	6.17*
B2	0.832	0.032	25.83*
B3	0.864	0.011	77.81*
B4	0.859	0.014	62.34*
B5	0.847	0.018	46.34*
B6	0.769	0.017	44.68*
GH1	0.763	0.001	1213.08*
GH2	0.876	0.007	122.74*
GH3	0.902	0.013	70.34*
GH4	0.857	0.011	78.08*
GH5	0.699	0.020	35.6*
WTP1	0.810	0.017	47.83*
WTP2	0.879	0.015	60.17*
WTP3	0.858	0.067	12.79*
WTP4	0.894	0.023	39.63*

Source: Primary data analysis results (2019)

Table 3 based on the measurement model of the Altruistic Value Variable also informs that I want to participate in preserving the surrounding environment (NA2) has the highest loading value namely equal to 0.935. This means that I want to participate in preserving the surrounding environment (NA2) is the most dominant indicator in measuring the Altruistic Value Variable. The measurement model of the Egoistic Value Variable also informs that I value natural wealth (NE2) has the largest loading value namely equal to 0.929. This means that I value natural wealth (NE2) is the most dominant indicator in measuring the Egoistic Value Variable, the measurement model of the Biosphere Value Variable also informs that by consuming organic rice I also help preserve the environment (B3) has the highest loading value namely equal to 0.864. This means that by consuming organic rice, I also help preserve the environment (B3) is the most dominant indicator in measuring Biosphere Value Variables, The Lifestyle Variable measurement model also informs that Age affects on altruistic values, egoistic values

and WTP of organic rice (GH3) has the highest loading value namely equal to 0.902. This means that the age affects on the altruistic value, the egoistic value and the WTP of organic rice (GH3) is the most dominant indicator in measuring Lifestyle Variables, whereas the WTP variable measurement model also informs that I am consistent in consuming organic rice (WTP4) has the highest loading value namely equal to 0.894. This means that I am consistent in consuming organic rice (WTP4) is the most dominant indicator in measuring WTP Variables.

e. **Hypothesis Testing Results**

In the structural model, nine hypotheses of relationships among the variables (direct influence) were tested. The testing results of the relationship among the research variables in whole are presented in Table 4.

The results of the analysis show that all relationships among variables on the direct effect show significant. To give an overview of the model of the relationship among the latent variables of each path in this study clearly, then it is seen as visualization of Figure 1.

Hypothesis 1: Effect of Egoistic Value on Biosphere Value

The hypothesis testing with the GSCA approach produces path coefficients of the influence of Egoistic value on the Biosphere Value has a significant effect with the path coefficient equal to 0.472 and CR value of 3.66. Because CR> 1.96 then there is enough empirical evidence to accept H1: which states that Egoistic Value has a positive and significant effect on the Biosphere Value. The coefficient with positive sign indicates that the higher the Egoistic Value then the higher the Biosphere Value will be.

Hypothesis 2: Effect of Lifestyle on Egoistic Value

The hypothesis testing with the GSCA approach produces path coefficients of the influence of Lifestyle on Egoistic Value has a significant effect with path coefficients equal to 0.344 and CR value of 4.72. Because CR> 1.96 then there is enough empirical evidence to accept H1: which states that Lifestyle has a positive and significant effect on Egoistic Value. The coefficient with positive sign indicates that the higher the Lifestyle then the higher the Egoistic Valuewill be.

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Table 4. Testing Results of Direct Influence Hypothesis

Direct Influence	Path Coefficient	Standard Error	Critical Ratio	Informat-ion
Egoistic ->Biosphere	0.472	0.129	3.66*	Significant
Lifestyle -> Egoistic	0.344	0.073	4.72*	Significant
Lifestyle ->WTP	0.259	0.017	15.7*	Significant
Biosphere ->WTP	0.052	0.024	2.18*	Significant

CR* = significant at .05 level
Source: Primary data analysis results (2019)

Hypothesis 3: Effect of Lifestyle on WTP

The hypothesis testing with the GSCA approach produces path coefficients of the influence of Lifestyle on WTP has a significant effect with a path coefficient equal to 0.259 and a CR value of 15.7. Because CR >1.96 then there is enough empirical evidence to accept H1: which states that Lifestyle has a positive and significant effect on WTP. The coefficient with positive sign indicates that the higher the Lifestyle then the higher WTP will be.

Hypothesis 4: Effect of Biosphere Value on WTP

The hypothesis testing with the GSCA approach produces path coefficients of the influence of The Biosphere value on WTP has a significant effect with the path coefficient equal to 0.052 and CR value of 2.18. Because CR >1.96 then there is enough empirical evidence to accept H1: which states that the Biosphere Value has a positive and significant effect on WTP. The coefficient with positive sign indicates that the higher the Biosphere value then the higher WTPwill be.

Discussion

Related to the Effect of Egoistic Value on the Value of the Biosphere suggests that egoistic value has a positive effect on the value of the biosphere. Egoistic values are perceived high by respondents, it can be seen from the answer that the respondents have the right to preserve the environment, the highest perceived by respondents concerned with social problems related to the environment and its ecosystem. This is not in line with the research of Shin *et al*. (2017) which suggests that egoistic values do not have a positive effect on the value of the biosphere. Some studies also present a significant negative relationship between egoistic and biosphere values (Nordlund and Garvill, 2002). Egoistic value is a concept of how individuals assess themselves in relationships with other people and nature, and concentrate on self-welfare, such as power and achievement (Stern and Dietz, 1994).

The Effect of Lifestyle on Egoistic Values suggests that lifestyle has a positive relationship to egoistic values. Based on this research, valuing natural wealth is an important indicator in measuring egoistic values. Egoistic values are conceptualized by how individuals value themselves in relationships with others and nature, and concentrate on self-welfare, such as strength and achievement (Sauermann *et al.*, 2019; Stern, *et al.*, 1993). Lifestyle is a lifepattern that is expressed by interest, income, activities that all of it will not be separated from interaction with the environment (Obayelu, 2019). While lifestyle according to (Kotler and Keller, 2009) is "the pattern of one's life as reflected in his activities, interests and opinions". Consumers from sub-cultures, the same social class may have different lifestyles. Lifestyle describes the whole person who interacts with the environment, as well as the overall pattern of a person's behavior in everyday life.

Changes in the lifestyle of a society in relation to food are also related to cultural change. Natural foods derived from agriculture such as organic rice becomes more interesting when processed more modernly in accordance with the demands of the times (Meliono, 2010). Healthy lifestyles have encouraged people in various countries and encouraged healthy lifestyle movements with a global theme back to nature. This movement is based on that everything that comes from nature is good and useful and guarantees a balance. By consuming organic rice has become the main choice for fulfilling this healthy lifestyle (Follows and Jobber, 1999).

The influence of Lifestyle on WTP suggests that lifestyles have a positive effect on willingness to pay more for organic rice. In line with the research of (Febrita, 2007). Lifestyle is strongly influenced by the consumer environment either geographically and demographically (related to income, age, and

education level) in influencing consumer behavior to build an awareness attitude towards a healthy life pattern.

The lifestyle in this study was measured based on the level of education, income, age, number of families and reference groups. The average education of respondents in this study is S1/Bachelor degree, average income between IDR. 5.000.000, - to IDR.10.000.000, -, with an average age of 21 years to 65 years, and the number of families of 2-10 people. Respondents' description on lifestyle assesses that the level of education has an effect on the value of altruistic, egoistic and WTP for organic rice supported by the high and low of income, age and reference group indicators. The findings of this study are supported by the opinion of (Worsley, 2002), (Veenhoven, 2008), (Bandura, 2006) that people who have higher education certainly have a lot of knowledge about healthy lifepattern so that they meet their families by eating healthy and sufficient nutrition.

High and low income will affect the lifestyle of respondents in consuming organic rice. The proportion of consumption is proportional to the rate of increase in income received to a certain extent so that there is a tendency that the higher the income of a person the lower the percentage of income spent in buying organic rice. This is in accordance with the opinion of (Hall and Mishkin, 1982), (Flavin, 2002), that consumption is directly proportional to income, this can be seen from changes in income affecting consumption patterns.

(Ameriana, 2006) states that the level of consumer awareness of a healthy lifepattern can be used as an indicator to predict the chances of acceptance of products in the market. The presence of trend nowadays where the emergence of consumer awareness of the importance of healthy and environmentally friendly products is middle to upper consumers. The majority of respondents who are willing to pay for organic rice are middle to upper class respondents who claim that the consumption of organic rice is based on fulfilling lifestyle. Lifestyle variables significantly influence on the factors that influence the value of WTP given. This is in line with the research of (Martin and Simintiras, 1995), (Ling-Yee, 2005), (Yam-Tang and Chan, 1998) which states that efforts to create a healthy environment are the basis of the existence of quality improvement in the human life. The improvement of the life quality can be controlled by individual consumers by making changes for choosing and consuming certain items that are environmentally friendly.

The effect of Biosphere Value on WTP suggests that the value of the biosphere has a positive effect on the WTP of organic rice. This is not in line with the research of (Shin *et al.*, 2017) who stated that the value of the biosphere did not have a positive effect on the WTP of organic rice. Respondents 'perceptions of the biosphere's value on the environment perceived high by respondents, as seen from average value of the respondents' answer the majority of respondents answer agree on the concern for the sourrounding environment one of them by consuming organic rice and respondents thought that the natural balance was sensitive and easily disturbed (Ojea and Loureiro, 2007) found that environmental attitudes positively influence customers' willingness to pay for pro-environmental activities. Previous research also suggested that environmental problems such as the value of the biosphere can affect the willingness to pay consumers directly or indirectly through attitudes (Hansla *et al.*, 2008).

Conclusion

The results of the study can be concluded that according to the model of the relationship on willingness to pay shows that there is a relationship of lifestyle on egoistic values and there is also an indirect lifestyle relationship through the biosphere value on the WTP. This study recommends increasing interest in buying organic rice among the community is not easy. Therefore, commitment and cooperation is needed among the stakeholders. Emphasis on the benefits attributes that can be felt by consumers in the short term is more important to be socialized, such as attributes of flavor, durability, stickines, and for long-term health and environmentally friendly so that it will be better if the socialization is carried out by demonstrating a comparison between organic and non-organic rice that has been cooked become cooked rice.

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