



Consumers' Attitude and Intention towards Organic Food Purchase: An Extension of Theory of Planned Behavior in Gender Perspective

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The objective of this research was to study the variables affecting the consumer attitude to buy organic food that in turn affects the purchasing intention. Theory of Planned Behavior (TPB) was used to explain this. The study variables include health consciousness, environmental consciousness, organic food price, attitude, subjective norm, intentions to purchase organic food and gender. Survey method was used, with the sample containing 200 respondents intending to purchase organic food in Surakarta City, Indonesia. The analysis method employed was structural equation model (SEM). The results of research showed that health consciousness and environmental consciousness were the determinants of an individual's positive attitude to buy organic food. The effect of gender difference on attitude, intention, and behavior of purchasing organic food confirmed the previous studies descriptively stating that gender affects the organic food purchasing behavior. The implication of study is that in the future, the marketers should expose the usefulness of organic food for health and environmental maintenance to make the target consumer more motivated to buy organic food. In addition, market segmenting should be carried out based on gender.

Keywords: Health consciousness, Environmental consciousness, price, attitude, subjective norm, intention, gender, organic food

JEL: L66, I12

Increased demand for organic food products in various parts of the world from year 2000 was driven by the consumer perception on food quality and safety better than the one on non-organic food, in addition to the positive impact of organic farming (Vindigni, Janssen and Jager, 2002). Nevertheless, the fact in the field shows that the organic food consumption is aggregately still low in proportion, compared to non-organic one (Gupta and Ogden, 2009). Such situation indicates the importance of study on consumer behavior particularly the consumers' intention and attitude to buy organic food. It is also worthy to note that the results of researches on the

attitude and intention model in organic food consumption behavior has not shown the consistent result yet (See Kalafatis *et al.*, 1999; Magnusson, Arvola *et al.*, 2001; Vindigni, *et al.*, 2002; Tarkiainen and Sundqvist, 2005; Chen, 2009).

Considering the previous studies, this research aims to study the variables affecting the consumers' attitude to buy organic food, which in turn affects the purchasing intention. The theoretical framework used in this study is Theory of Planned Behavior (TPB). The extended model of TPB consists of Health Consciousness and Environmental Consciousness serving to motivate an individual to have positive attitude to organic food (see Tarkiainen and Sundqvist, 2005; Chen,

2009); the organic food product price variable affects negatively the consumer's positive attitude to organic food (Magnusson *et al.*, 2001; Fotopoulos and Krystallis, 2002; Zanolli and Naspetti, 2002; Pellegrini and Farinello, 2009). Nevertheless, some studies have showed that the consumers are also tolerant to the specified premium price of organic food (Davis, Titterington and Cochrane, 1995; Fotopoulos and Krystallis, 2002; Radman, 2005; Pellegrini and Farinello, 2009). This study also examines the effect of subjective norm on the consumers' attitude and intention to purchase organic food. This is studied because the effect of subjective norm on attitude and purchase intention has not been reported consistent in previous research (see Chang, 1998; Saba and Messina, 2003; Tarkiainen and Sundqvist, 2005; Chen, 2009). This study also examines the effect of gender on attitude and intention to purchase organic food. Previous studies indicate the inconsistent gender effects on attitude and purchase intention (see Magnusson *et al.*, 2001; Rimal *et al.*, 2005; Padel and Foster, 2005; Radman, 2005; Tsakiridou *et al.*, 2007).

This research is conducted in Indonesia recalling that Indonesia is one of agrarian states whose economy is growing and developing with the fifth ranked-population in the world, so that it potentially becomes the producer and the consumer of world organic food at once. Considering the background above, the research questions are as follows:

1. Does health consciousness positively affect organic food purchasing attitude?
2. Does environmental consciousness positively affect the organic food purchasing attitude?
3. Does product price negatively affect the organic food purchasing attitude?
4. Does attitude positively affect the organic food purchasing intention?
5. Does subjective norm positively affect the organic food purchasing attitude and intention?
6. Is there any difference of organic food purchasing attitude and intention between man and woman?

LITERATURE REVIEW

The theory of planned behavior (Ajzen, 1991) is the perfect version of theory of reasoned action (TRA) by adding perceived behavioral control variable, intended to make the consumers always referring to the presence of limited resource in behaving. Thus, a consumer's behavior will be performed under perceived behavioral control that in this case constitutes organic food product price variable. The price of a product is closely linked to purchasing power, and the purchasing power depends on income. In the TPB, one of which affecting the buying behavior is the income; the higher the income of consumers the higher the purchasing power. Thus, if the consumer's income is relatively constant while the price of the product is relatively expensive, the price is one of the barriers for consumers in deciding to buy these products. However, prior to examining further the effect of price-related attitudes and purchase intention, each of the variables examined in this study is described below.

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Health Consciousness

Generally, one of the major reasons of buying organic food is health consciousness and to support environmental preservation (Wandel and Bugge, 1997; Vindigni, *et al.*, 2002). The result of Tarkiainen and Sundqvist's (2005) study mentioned that health consciousness positively affects the attitude to buy organic food. Chen (2009) showed that there is a strong significant relationship between health consciousness and attitude to organic food purchasing. It indicates that consumer's health consciousness encourages the consumer to have positive attitude to buy organic food. It occurs because the organic food is perceived as healthier, safer and environmental friendly than the conventional one. Based on the facts discussed above, the first hypothesis is proposed as follows:

H₁: Consumer health consciousness has a positive effect on consumer attitudes towards organic food purchase.

Environment Consciousness

Environmental consciousness affects the consumer attitude to purchase organic food positively (see Vindigni, *et al.*, 2002; Tarkiainen and Sundqvist, 2005; Chen, 2009; Kim and Chung, 2011). It indicates that the consumer's environmental consciousness encourages the consumer to have positive attitude towards organic food purchase. It occurs because organic food cultivation is conducted by taking the environmental aspects into account involving the use of organic compost and manure fertilizer, and natural pest and disease control leading to minimizing the negative effects on the

environment. Considering the elaboration above, the second hypothesis is proposed below:

H₂: The environmental consciousness of consumers has a positive effect on consumer attitude towards organic food purchase.

Organic Food Price

The studies on organic food purchase behavior show that the consumers' regular purchase of organic food products are low as compared to non-organic one. The reason behind this is that the organic food is more expensive than non-organic one because the organic food price is frequently assigned premium price (Magnusson, *et al.*, 2001; Vindigni, *et al.*, 2002; Fotopoulos and Krystallis, 2002; Zanolli and Naspetti, 2002; Lea and Worsley, 2005; Pellegrini and Farinello, 2009). This indicates that the organic food price leads the consumers to have negative attitude to buy organic food. It occurs because the price of organic food is considered as more expensive than that of conventional food. Considering the facts highlighted above, the third hypothesis is proposed:

H₃: Organic food prices negatively affect the attitude of consumers to buy organic food.

Attitude to Buy Organic Food

The attitude refers to the extent to which an individual has good or bad evaluation or assessment on the concerned behavior. The more positive the consumer attitude to a product, the stronger is the intention to do such the behavior (Ajzen, 1991). Some studies on the relationship of attitude and intention to buy organic food consistently showed positive relations. For example Thøgersen (2007) and Chen (2009) indicate that positive attitude

encourages the consumer's intention to purchase organic food. It occurs because positive attitude tends to be followed up with the intention to make it happens. Considering the result of research and elaboration above, the fourth hypothesis is proposed below:

H₄: The attitude to buy organic food positively affects consumer intentions to buy organic food.

Subjective Norm, Attitude and Intention to Buy Organic Food

The subjective norm variable in some studies related to the organic food purchasing behavior showed the inconsistent result regarding its relation to attitude. The findings of some studies involving subjective norm variable showed that subjective norm does not affect the consumer's intention to buy organic food (see Sparks and Shepherd, 1992; Kalafatis *et al.*, 1999; Magnuson, *et al.*, 2001). However, the result of Chang's (1998) study indicated that subjective norm has significant relationship to the intention to buy organic food. On the contrary, Tarkiainen and Sundqvist (2005) concluded that subjective norm indirectly affects the intention to buy organic food via attitude. Such inconsistencies encourage researcher to test the consistency of the effect of subjective norms on attitude and intention to purchase organic food. Considering the result of research and elaboration above, the fifth hypotheses can be formulated as follows:

H_{5a}: Subjective norm has positive effect on consumer attitude to purchase organic food products.

H_{5b}: Subjective Norm has positive effect on consumer intention to purchase organic food products.

Difference of Gender in Consumption Attitude and Intention

The literature reflects inconsistent results of studies on gender differences in attitude and intention. The result of most studies showed that female has higher organic food consumption attitude and intention than male (Magnusson, *et al.*, 2001; Rimal, *et al.*, 2005; Padel and Foster, 2005; Radman, 2005); meanwhile, the result of Tsakiridou *et al.*'s (2007) study showed that there is no difference of gender in the attitude and intention to consume organic food. Overall research review indicates that attitude and intention to consume organic food tends to be different between male and female. Considering the result of research and elaboration above, the sixth hypothesis is proposed below:

H₆: There is a difference in attitude and purchase intention of organic food products among female and male consumers.

Based on the elaboration above, the research model on subjective norm, consumer attitude and intention to buy organic food can be put into the framework shown in Figure 1 (see Appendix-I).

METHODOLOGY

Sample and Data Collection

The Surakarta city was selected to draw sample for study because Surakarta area is the potential one for marketing because it is surrounded by the organic food producers. Survey research method was used and standard questionnaires were disseminated to collect primary data. Non-probabilistic sampling was used and data were

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collected from 200 consumers who intend to buy organic food. Structural equation modeling (SEM) was used to analyze and test hypotheses of study.

Operational Definitions

–*Health Consciousness (HC)* variable was defined as a broader construct reflecting an individual's alertness to doing something for his/her health (Oude Ophuis, 1989; Chen, 2009). Health consciousness was measured using 5 items adopted from Tarkiainen and Sundqvist (2005). Sample items are (1) I choose food carefully to ensure good health; (2) I think of myself as a health conscious consumer. ($\alpha = .94$).

–*Environmental Consciousness (EC)* variable was defined as the extent to which an individual takes the environmental consequences of his/her consumption into account (Webster, 1975). Environmental consciousness variable (EC) was measured using 5 items adopted from Maloney and Ward (1973). Sample items are (1) environmental awareness needs to be improved; (2) Environmental necessary guarded. ($\alpha = .90$).

–*Organic food product price (PR)* was defined as the tendency to react cognitively in responding to and evaluating the organic food product by price aspect. This price variable was measured using 4 items (Bruner, Hensel and James, 1992). Example items are (1) Affordability price; (2) Compliance with the price of benefits. ($\alpha = .85$).

–*Attitude (AT)* variable was defined as the degree of an individual's good or bad evaluation on an object or product (Ajzen, 1991). Attitude (AT) variable was measured using 4 items adopted from Chen (2009). Sample items include (1)

Liked the presence of organic food; (2) Think positively about organic food. ($\alpha = .94$).

–*Subjective norm (SN)* variable was a social factor referring to social stress felt to do or not to do some behavior (Ajzen, 1991). Subjective norm (SN) variable was measured using 4 items adopted from Tarkiainen and Sundqvist (2005), for example (1) support the family; (2) Support the local community. ($\alpha = .89$).

–*Intention (IT)* variable was defined as an individual's tendency to choose between doing or not doing (Ajzen, 1991). The variable of intention to buy organic food was measured using 5 items adopted from Tarkiainen and Sundqvist (2005). Example items are (1) The ability to buy; (2) The possibility of buying. ($\alpha = .92$).

Each variable which has been described was measured using a 5–point Likert scale (strongly disagree to strongly agree). The gender variable was measured as dichotomous one: male and female.

Instrument Testing

The instruments were tested by conducted validity, reliability and normality tests. The validity test was carried out using factor analysis with varimax rotation method, with accepted loading margin $> .5$ (Hair *et al.*, 2006), while the reliability test was conducted based on Cronbach's alpha coefficient, with the reliability margin if the Cronbach's alpha value obtained exceeds $.70$ (Malhotra, 2004). From the result of validity and reliability tests on the 200 samples, it could be found that all variables of study were valid and reliable.

The result of data normality test showed that there were 27 outlier observations, so that the

outliers were excluded from the analysis model. Data were analyzed by using SEM analysis.

RESULTS

Sample Characteristics

The characteristics of sample showed larger number for women (55.4%) as compared to men (44.6%). Viewed from the respondents' education, 78 percent respondents were

= .96; CFI = .96) and RMSEA equals to .03. This result indicated that the model's goodness of fit was relatively good and could be considered as meeting the model's suitability.

Hypotheses Testing

The result of estimated model parameter for hypotheses 1–5 was presented in Figure 2 (see Appendix-II) and summarized in Table 1.

Path	Estimation	S.E.	C.R.	p
AT <--- HC	0.426	0.133	3.189	0.001***
AT <--- EC	0.130	0.063	2.048	0.041*
AT <--- PR	0.011	0.101	0.106	0.915
AT <--- SN	0.104	0.048	2.189	0.029*
IT <--- SN	0.186	0.051	3.632	0.001***
IT <--- AT	0.173	0.084	2.058	0.04*

Source: Result of estimated primary data

Note: * significant at .05; ** significant at .01; *** significant at .001

Table 1: Result of Estimated Model Parameter with SEM

graduated from college/university, 2.3 percent were not graduated from Senior High School and 9.8 percent were graduated from Senior High School. This result indicated that the college graduates tended to have higher knowledge on the existence of organic food than the education level below. Based on the income, most respondents had income more than 3 million, in which 39.5 percent had about 3–5 million income per months, and 31.5 percent had 5 million per month, while 29.4 percent had less than 3 million per month.

Result of Testing

The result of SEM analysis with AMOS 18 program showed that chi-square value was 763.09 ($df=677$; $p = 0.026$); $CMIN/df = 1.12$; TLI

Figure 2 and Table 1 show that attitude was affected by health consciousness ($\beta = .42$; $c.r = 3.18$), environmental consciousness ($\beta = .13$; $c.r = 2.04$) and subjective norm ($\beta = .10$; $c.r = 2.18$), while the price of organic food product did not affect health consciousness ($\beta = .01$; $c.r = .10$). It could also be seen that intention was affected significantly by either subjective norm ($\beta = .18$; $c.r = 3.63$) or attitude ($\beta = .17$; $c.r = 2.05$).

The sixth hypothesis testing was carried out using multi-group SEM analysis in which 2 structural model tests were conducted with constrained parameters (see Table 2, Appendix-III) and unconstrained parameters (see Table 3, Appendix-IV). The constrained parameter model meant that the estimated regression weight of

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each age group was under controlled, thereby having the equal estimated relationship. Otherwise, the unconstrained parameter model meant that the estimated regression weight of each gender group was freed.

The result of estimated constrained parameter model was presented in detail in Table 3. The result of estimated constrained parameter model provided relatively good goodness of fit and could be considered as meeting the model suitability, with chi-square of 842.29 ($df = 741$; $p = .03$); CMIND/ $df = 1.13$; TLI = .96; CFI = .96 and RMSEA = .03.

Meanwhile the result of unconstrained parameter model was presented in detail in Table 3. The unconstrained model's goodness of fit was relatively good and could be said as meeting the model suitability, with chi-square value of 763.09 ($df = 677$; $p = .02$); CMIND/ $df = 1.12$; TLI = .96; CFI = .96 and RMSEA = .03.

The estimated result of the two models (constrained and unconstrained) showed different yields, indicating that there was a difference of attitude and intention to buy organic food product between male and female. The test on the variance of estimated result for both models was conducted by comparing the goodness of fit in the two models (see Table 4, Appendix-V). The goodness of fit ratio of the two models was in fact relatively the same, but chi-square value of constrained model was higher than that of unconstrained model at degree of freedom of 64 and significant at $p < .10$. This result showed that there was a difference of attitude and purchasing intention based on sex, in which the female had

higher attitude and intention to buy organic food product than the male.

DISCUSSION

The estimated result of prior/basic model shown in Table 1 (see also Figure 2) reveals that health consciousness and environmental consciousness affect an individual's positive attitude to buy organic food significantly ($\beta = .46$; $c.r = 3.18$; $\beta = .13$; $c.r = 2.04$). This result supports the hypotheses H_1 and H_2 , in which H_1 hypothesized that health consciousness affects the attitude to organic food purchasing positively, and H_2 hypothesized that environmental consciousness affects the attitude to organic food purchasing positively. This result is consistent with that of previous studies showing that the attentions to health and environment are two factors most generally stated as the determinant of positive attitude to buy organic food (Wandel and Bugge, 1997; Vindigni, *et al.*, 2002; Tarkiainen and Sundqvist, 2005; Chen, 2009; Kim and Chung, 2011). The estimated result of standardized regression coefficient for health consciousness higher than that for environmental consciousness also confirms the previous studies stating that personal consciousness receives more attention than environment (Vindigni, *et al.*, 2002; Magnusson *et al.*, 2003; Tarkiainen and Sundqvist, 2005; Chen, 2009; Kim and Chung, 2011).

Hypothesis H_3 predicts that the perception of product price negatively affects the attitude of organic food purchase. The result indicates that the price of organic food products does not affect the attitude to purchase ($\beta = .01$; $c.r = .10$), hence H_3 was not supported. This result is

not consistent with the previous studies stating that premium price is the main constraints in organic food purchasing (Vindigni, *et al.*, 2002; Fotopoulos and Krystallis, 2002). The reason revealed from this finding is that most organic food consumers in this survey up to certain limits accept the more expensive pricing of organic food than that of non-organic food. This result is consistent with the result of studies stating that a sufficiently large proportion of consumers are tolerant to premium price of organic food (Davis *et al.*, 1995; Fotopoulos and Krystallis, 2002; Radman, 2005; Pellegrini and Farinello, 2009).

Hypothesis H₄ predicts that attitude to organic food affects the intention to buy organic food positively. The estimated result shows that attitude affects the intention to buy organic food ($\beta = .17$; *c.r.* = 2.05), so that H₄ is supported. It is consistent with the result of previous studies suggesting that attitude and intention to buy organic food consistently show a positive relationship, like the finding of Saba and Messina (2003), Thøgersen (2007), and Chen (2009).

The estimated result reveals that there is a significant effect of subjective norm on the attitude and purchase intention ($\beta = .10$, *c.r.* = 2.18; $\beta = .18$, *c.r.* = 3.63). This result supports hypotheses H_{5a} and H_{5b}, in which H_{5a} predicts that the subjective norm positively affects the attitude to organic food product purchase, and H_{5b} predicts that the subjective norm positively affects the intention to buy organic food product. The result of H_{5a} hypothesis is consistent with the result of previous studies showing that subjective norm affects the intention to buy organic food indirectly through attitude (Tarkiainen and

Sundqvist, 2005), while the result of hypothesis H_{5b} is consistent with Chang's (1998) study showing that subjective norm has significant relationship to the intention to buy organic food. It means that the effect of subjective norm on the intention is the direct one, but it can also affect an individual's attitude to intention.

The goodness of fit ratios of constrained to unconstrained models in gender SEM multi-group analysis in Table 4 (see Appendix-IV) show that the chi-square value of constrained model is higher than that of unconstrained model with significant degree of freedom of 64 ($p < .01$). It indicates that the gender affects the attitude and intention to buy organic food significantly. This result supports hypothesis H₆ stating that there is a difference of attitude and intention to buy organic food between male and female. It means that there is a difference of attitude and intention to buy organic food between male and female. The female has positive attitude to organic food not only because she thought about her personal health, but also because she considered environment for the next generation life, including discouraging the excessive environmental exploitation, and supporting environmental preservation (Padel and Foster, 2005; Radman, 2005; Tsakiridou, *et al.*, 2007).

CONCLUSION

The result of research using structural equation model generally supports the result of previous studies, that health consciousness and environmental consciousness are the determinants of an individual's positive attitude to buy organic food (Wandel and Bugge, 1997;

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Vindigni, *et al.*, 2002; Tarkiainen and Sundqvist, 2005; Chen, 2009; Kim and Chung, 2011).

In addition, in this research the subjective norm variable consistently affects the attitude and intention to buy organic food positively, which is in line with the result of previous studies (Tarkiainen and Sundqvist, 2005; Chang, 1998). This study's finding shows that there is a difference of attitude and intention to buy organic food between male and female confirms the findings of previous studies descriptively stating that gender affects the organic food purchasing behavior. The different sex will provide different behavioral intention as well. The female tends to pay more attention to health and environment, thereby supporting the positive attitude and intention to buy organic food.

LIMITATIONS AND RECOMMENDATIONS

Although the findings of current research were related to the difference of attitude and intention to buy organic food between male and female, but this study has some limitations, particularly regarding the area of study (Surakarta city) tending to be considered as less dynamic in the term of the lifestyle trend "back to nature" because the pollution and environment exploitation here was not as high as those in metropolitan cities. Thus future research is expected to be done in some areas of metropolitan cities. The expansion of the region is expected to provide a more comprehensive picture of related behavioral intentions to buy organic food in Indonesia.

IMPLICATIONS

Considering the findings mentioned above, the implication of research is that in the future the marketers should convince the consumers that organic food product is safe for health and environmental friendly, because the two factors support the positive attitude and behavioral intention to purchase organic food. Moreover, the producers and marketers should prioritize the market segmentation based on gender to make the organic food product marketing appropriate to the target.

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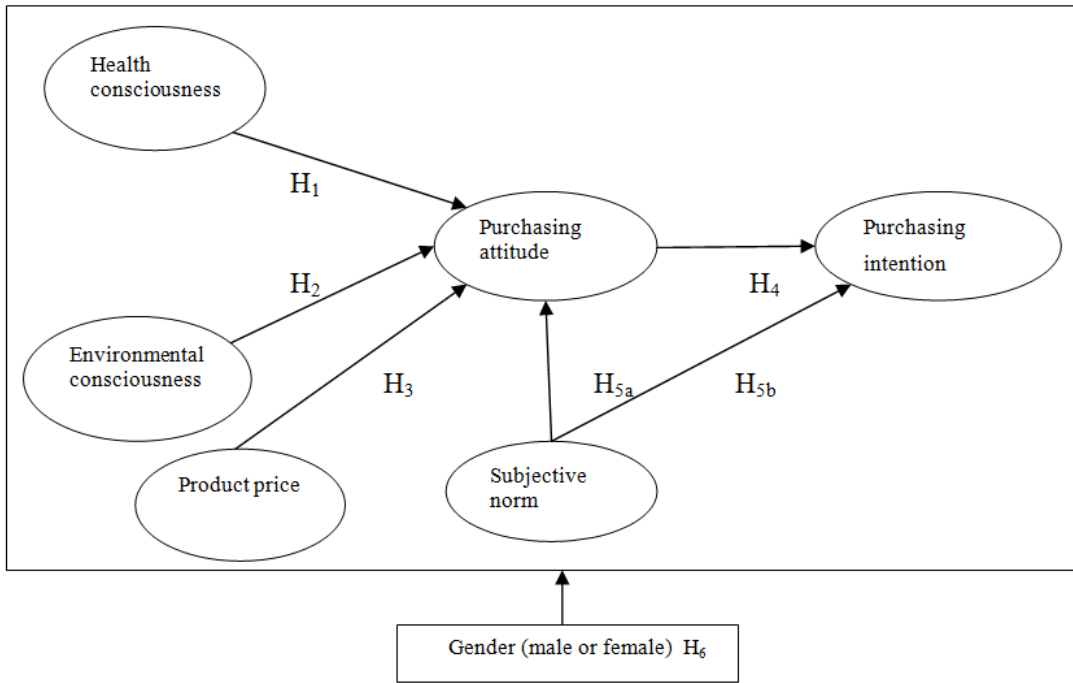


Figure 1: Research Model

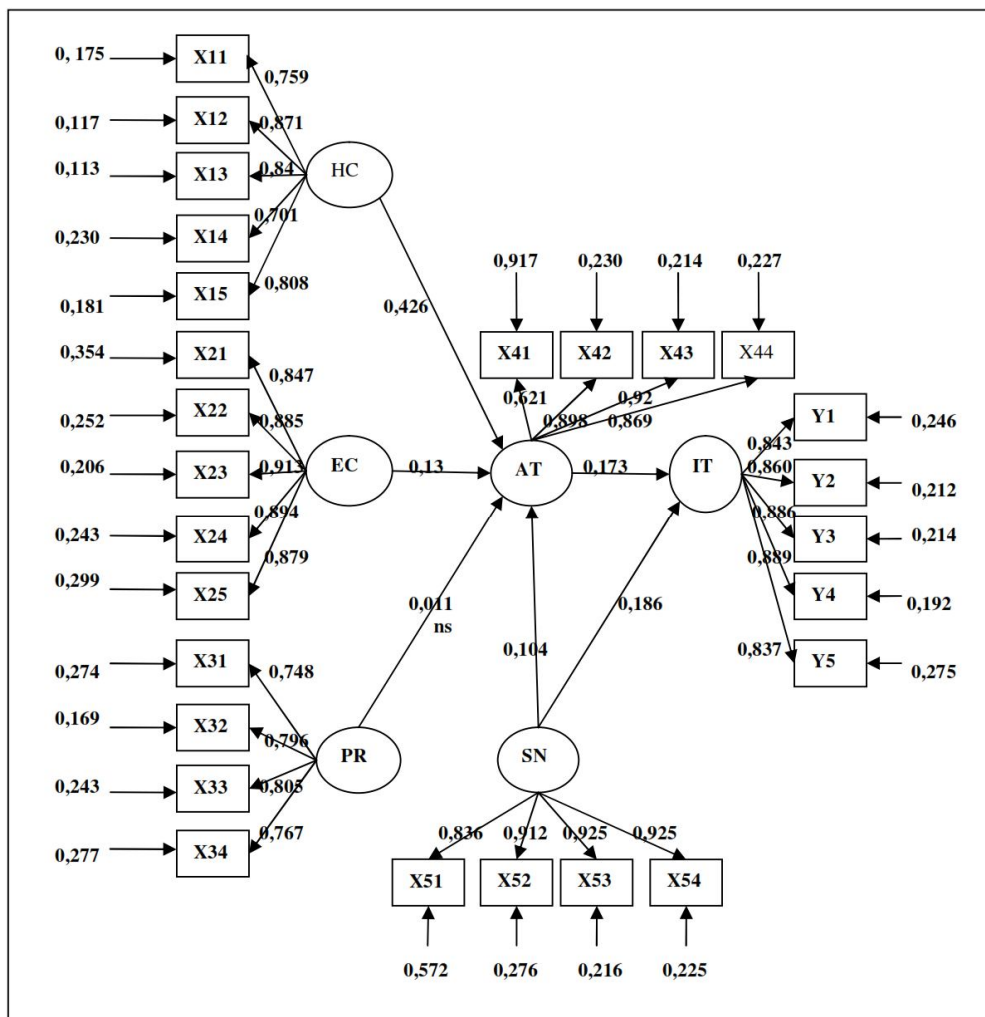


Figure 2: Organic Food Purchasing Intention Model

Structural Relationship	Male Sample		Female Sample	
	Un-standardized Regression Weight	Probability	Un-standardized Regression Weight	Probability
AT<---HC	0.568	0.001 ^{***}	0.568	0.001 ^{***}
AT<---EC	0.194	0.003 ^{**}	0.194	0.003 ^{**}
AT<---PR	-0.019	0.490	-0.019	0.490
AT<---SN	0.002	0.001 ^{***}	0.002	0.001 ^{***}
IT<---SN	0.245	0.000 ^{***}	0.245	0.000 ^{***}
IT<---AT	0.015	0.059 [*]	0.015	0.059 [*]
Goodness of Fit				
Chi Square	842.295			
Degree of Freedom	741			
Probability	0.039			
CMIN/Df	1.136			
RMR	0.129			
GFI	0.760			
AGFI	0.759			
PGFI	0.699			
TLI	0.963			
CFI	0.964			
RMSEA	0.034			

Source : Estimated Result

Note: ^{*}significant at .05; ^{**}significant at .01; ^{***}significant at .001

Table 2: Result of Gender SEM Multi-Group Analysis – Constrained Parameter

Structural Relationship	Male Sample		Female Sample	
	Un-standardized Regression Weight	Probability	Un-standardized Regression Weight	Probability
AT<---HC	0.553	0.033**	0.581	0.010**
AT<---EC	0.013	0.258	0.053	0.017**
AT<---PR	0.014	0.437	-0.009	0.462
AT<---SN	0.011	0.163	0.019	0.027**
IT<---SN	0.21	0.014**	0.218	0.003**
IT<---AT	0.083	0.440	0.219	0.049**
Goodness of Fit				
Chi Square	763.090			
Degree of Freedom	677			
Probability	0.026			
CMIN/ <i>df</i>	1.126			
RMR	0.098			
GFI	0.777			
AGFI	0.735			
PGFI	0.654			
TLI	0.960			
CFI	0.964			
RMSEA	0.034			

Source : Estimated Result

Note: * significant at .05; ** significant at .01; *** significant at .001

Table 3: Result of Gender SEM Multi-Group Analysis – Unconstrained Parameter

Goodness of Fit		
	Constrained Parameter Model	Unconstrained Parameter Model
Chi Square	842.295	763.090
Degree of Freedom	741	677
Probability	0.039	0.026
CMIN/Df	1.136	1.126
RMR	0.129	0.098
GFI	0.760	0.777
AGFI	0.759	0.735
PGFI	0.699	0.654
TLI	0.963	0.960
CFI	0.964	0.964
RMSEA	0.034	0.034
The Goodness of Fit increase from basic to alternative models		
Chi Square	$842.295 - 763.090 = 79.305$	
Degree of Freedom	$741 - 677 = 64$	
Critical value (64; 0.01)	78.849	
Probability	< 0.1	
	$74.503 > \text{Critical Value (60; 01)}$; meaning that there is a difference of attitude	
Conclusion	and intention to buy organic food between man and woman	

Table 4: The Goodness of Fit Ratio of Constrained and Unconstrained Parameter Models with Gender SEM Multi-Group Analysis