CHAPTER IV

DATA ANALYSIS AND DISCUSSION

This chapter explains the data analysis of "**FEMALE ONLINE SHOPPERS EXAMINING THE MEDIATING ROLES OF E-SATISFACTION AND E-TRUST ON E-LOYALTY DEVELOPMENT**". The result of this analysis is presented through descriptive analysis of respondents' characteristics, descriptive analysis of respondents' responses, and SEM analysis. The analysis of descriptive data was used to obtain the tendency of respondents regarding the conditions of each research variable. The results of these answers were used to obtain the tendency of respondents regarding the conditions of each research variable. The Structural Equation Modeling (SEM) used data analysis tool in this research. This research was using Lisrel 8.80 as the SEM program.

The analysis was conducted in accordance with the stages in the SEM analysis as described in the previous chapter. In this research, SEM was used to evaluate the proposed model. After obtaining all the results from data processing, this research obtained proof of the hypotheses that had been developed previously. This research also found additional findings as a result of research model modification which were summarized.

As explained in the previous chapter, the questionnaires had been spread out to 262 random sampling respondents to collect the data. In this research, the researcher focused on more specific people who ever had transaction on "Shoppe". Thus, the researcher deleted around 7 (seven)respondents because they never did transaction on Shoppe.

Therefore, the respondents became 255 people. The questionnaire in detail can be seen in appendix. The population in this research was people between the age of 19-36 who had experiences in purchasing goods in "Shoppe" e-tail by their own decisions. In addition, the population in this research was also young adults who frequently access the Internet. The method of sample selection in this research was non-probability random sampling with convenient technique.

4.1 Characteristics of Respondents

This section explains the descriptive data obtained from respondents. Descriptive data are presented in order to see the profile of research data and the relationships that existed between the variables used in the research.

4.1.1 Classification of Respondents Based on "Shopee" Buyer Experience

The percentage of respondents of Shopee buyer experience can be seen in Table 4.1 below:

Table 4.1 Respondents Classification Based on Buyer Experience

No	Experience	Number (person)	Percentage
1	People who ever buy	255	97.3
2	People who never buy	7	2.7
Total		262	100

Source: Primary Data Processed, 2018 (APPENDIX C)

Based on Table 4.1, it can be concluded that the respondents in this research mostly ever bought through "Shopee". There were 255 respondents or 97.3% of the total respondents. In addition, there were 7 respondents or 2.7% of the total

respondents. It shows that the majority of active online users had experience on Shopee.

4.1.2 Classification of Respondents Based on Age

Based on age, the respondents in this research were classified as follows:

Table 4.2 Respondents Classification Based on Age

No	Age (Year)	Number (person)	Percentage
1	15-19	54	21.2
2	20-24	168	65.9
3	25-29	20	7.8
4	>30	13	5.1
Total		255	100

Source: Primary Data Processed, 2018 (APPENDIX C)

Based on Table 4.2 above, it can be concluded that the respondents in this research were mostly between 20-24 years old with the total number of 168 respondents or 65.9% of the total respondents. Meanwhile, the smallest percentage was respondents above 30 years old which was 5.1% of the total respondents or 13 respondents.

4.1.3 Classification Based on EducationalBackground

Classification based on respondents' educational background, respondents were classified as follows:

Table 4.3 Respondents Classification Based on Educational Background

No	Education	Number (person)	Percentage
1	Elementary school	2	0.8
2	Junior High School / Equivalent	10	3.9
3	Senior High School / Equivalent	154	60.4
4	College / University	89	34.9
Total		255	100

Source: Primary Data Processed, 2018 (APPENDIX C)

Based on Table 4.3, it can be seen that majority of educational background of the respondents were high school/equivalent with the number 153 respondents or 74.5% of the total respondents. Meanwhile, the smallest percentage belongs to Diploma and Postgraduate which were 9 respondents or 2.9% of the total respondents.

4.1.4 Classification based on Time Spending on Web Surfing per Week

Based on respondents' frequency in accessing social media, respondents are classified as follow:

Table 4.4 Classification of Respondents' Frequency in Accessing Social Media

No	Frequency (Hours per week)	Number (person)	Percentage
1	<5 hours	59	23.1

2	6-15 hours	74	29
3	16-25 hours	59	23.1
4	26-35 hours	7	2.8
5	>36 hours	56	22
Total		255	100

Source: Primary Data Processed, 2018 (APPENDIX C)

Based on Table 4.4, it can be seen that the respondents in this research mostly spent their web surfing 6-15 hours per week. Mostly respondents visited their social media 6-15 hours per week. They consisted of 74 respondents or 29% of the total respondents. Then, followed by 59 users (23.1%) who spent <5 hours and 16-25 hours spending on web surfing in a week, and 56 users (22%) who accessed their web surfing for more than 36 hours in a week.

4.2 Measurement Model Analysis

According to Bollen (cited in Ghozali & Fuad, 2008), SEM can test the structural model and measurement model simultaneously. Structural model is a relationship between independent and dependent construct. Measeurement model is the relationship (loading score) between indicator and construct (laten variable). By combining the structural model testing and measurements, it enables researchers to test the measurement error (measurement error) as an inseparable part of SEM, and to conduct analysis of factors coincide with hypothesis testing.

In analyzing the SEM, the researchers first used a complete structural model with observed variables. Statistics LISREL fitness model output results obtained $\chi 2$ value of 1159.03, while the value of RMSEA, GFI, AGFI, NFI, CFI and ECVI is smaller than the ECVI value for saturated models by 0.096, 0.68, 0.73, 0.82, 0.87, and 6.62 compared to 4.98. From the statistical results, it indicates that the fitness of the model is not good and there are some interactions between the indicators. On the basis of the statistical results, in analyzing the structural equation, the researcher did not use the complete structural equation models with the observed variables. To overcome this problem, the researcher used *one-congeneric approach*. This approach is a means of reducing the amount of data to achieve a composite variable that can be managed. So, the composite variable can be used for the analysis of the next structural equation model. Therefore, the researcher used measures recommended by Holmes-Smith and Row in Maulida (2017) that provided three steps to perform a one-congeneric measurement models, namely:

1. Analyze the confirmatory factor for model or variable measurement and evaluate the reliability and validity of each variable.
2. Reduce the number of observed variables of each variable into a composite variable.
3. Conduct an analysis of structural equation model to test the research model and hypothesis by using a composite variable.

4.2.1 Offending Estimate Analysis

Table 4.5 The Results of Offending Estimate Analysis

Variables	Indicators	Description

Source : SEM Processing Result, 2018 (APPENDIX D)

	Name	*Standardized loading factor*	
E-LOYALTY	EL1	0.71	Used
	EL2	0.70	Used
	EL3	0.82	Used
	EL4	0.84	Not Used
E-SATISFACTION	ES1	0.97	Used
	ES2	0.72	Used
	ES3	1.00	Used
	ES4	1.07	Not Used
E-TRUST	ET1	0.35	Used
	ET2	0.71	Used
	ET3	0.71	Used
PERCEIVED DELIVERY TIME (PDT)	PDT1	0.65	Used
	PDT2	0.57	Used
	PDT3	0.40	Used
WEB SITE DESIGN (WSD)	WSD1	0.26	Not Used
	WSD2	0.53	Used
	WSD3	0.61	Used
	WSD4	0.61	Used
	WSD5	0.49	Used
PERCEIVED ONLINE SECURITY (POS)	POS1	0.50	Used
	POS2	0.57	Not Used
	POS3	0.49	Used
	POS4	0.62	Used
	POS5	0.42	Not Used
PERCEIVED ONLINE PRIVACY (POP)	POP1	0.49	Used
	POP2	0.68	Used
	POP3	0.50	Used
	POP4	0.75	Not Used
	POP5	0.50	Not Used

4.2.2 Validity Analysis

According to Ghozali & Fuad (2008), one of useful information as the parameter is t value. When t value is greater than t-table, it can be used to determine a significant relationship between the variables. In general, the significance level is

1.96. It means the t values must be greater than or equal to1.96. If the t value is less than or equal to1.96, the parameter is insignificant, and must be deleted from the model. In addition, Holmes-Smith (2001) (cited from Maulida, 2017) stated that the observed variables are valid when the value of $R^2 \geq 0.50$.

The result in Table 4.6 below shows that from 29 indicators that had been analyzed, there were 7 invalid indicators, which were EL3 with factor loading value and R^2 of 0.78 and 0.49, ES3 with factor loading value and R^2 of 0.93 and 0.39, ET1 with factor loading value and R^2 of 0.35 and 0.19, PDT3 with factor loading value and R^2 of 0.40 and 0.39, WSD5 with factor loading value and R^2 of 0.48 and 0.48, POS2 with factor loading value and R^2 of 0.42 and 0.36, and POP3 with factor loading value and R^2 of 0.41 and 0.32.

Table 4.6 The Results of Validity Test of Indicators

Item	Loading Factor (λi)	t-values	R^2	Description
		E-LOYALTY (EL)		
EL1	0.77	-	0.71	Valid
EL2	0.68	10.02	0.55	Valid
EL3	0.78	9.76	0.49	Invalid
		E-SATISFACTION (ES)		
ES1	0.94	-	0.65	Valid
ES2	0.76	11.85	0.86	Valid
ES3	0.93	10.20	0.39	Invalid
		E-TRUST (ET)		
ET1	0.35	-	0.19	Invalid
ET2	0.71	7.73	0.98	Valid

ET3	0.71	7.63	1.02	Valid
PERCEIVED DELIVERY TIME (PDT)				
PDT1	0.65	11.34	0.57	Valid
PDT2	0.57	11.57	0.59	Valid
PDT3	0.40	9.53	0.39	Invalid
WEB SITE DESIGN (WSD)				
WSD2	0.53	12.27	0.51	Valid
WSD3	0.63	15.69	0.74	Valid
WSD4	0.60	13.28	0.58	Valid
WSD5	0.48	11.79	0.48	Invalid
PERCEIVED ONLINE SECURITY (POS)				
POS1	0.54	11.40	0.55	Valid
POS3	0.42	9.34	0.36	Invalid
POS4	0.66	12.91	0.72	Valid
PERCEIVED ONLINE PRIVACY (POP)				
POP1	0.53	12.42	0.60	Valid
POP2	0.86	14.73	0.84	Valid
POP3	0.41	9.08	0.32	Invalid

Source: SEM Processing Result, 2018 (APPENDIX D)

Based on the data in Table 4.6, there were 15 used indicators which consisted of indicators from 7 variables which were E-Loyalty (EL) that consisted of EL1 and EL2. E-Satisfaction (ES) consisted of ES1 and ES2. E-Trust (ET) consisted of ET2 and ET3. Perceived Delivery Time (PDT) consisted of PDT1 and PDT2. Website Design (WSD) consisted of WSD2, WSD3, and WSD4. Perceived Online Security (POS) consisted of POS1 and POS4. The last was Perceived Online Privacy (POP) which consisted of POP1 and POP2.

4.2.3 Goodness of Fit Measurement

According to Hair et al. (1998), there are several kinds of approaches to estimate the fit of models in SEM. Absolute fit indices estimate the quality of the overall fit of the model, collectively considering the structural and measurement models, regardless of model complexity and the number of estimated parameters.

Referring to Ghozali & Fuad (2008) explanation, the researcher also analyzed the $x^2$and normed x^2, root mean square error of approximation (RMSEA), goodness of fit (GFI), and comparative fit index (CFI). Goodness of fit test is conducted on variables of which validity of their indicators that had been analyzed. These results are presented in Table 4.7 as follow:

Table 4.7 The Value of Goodness of Fit Index

Variables	X^2	RMSEA	NFI	GFI	CFI	Description
E-LOYALTY	0.00	0.000	1.00	1.00	1.00	Good
E-SATISFACTION	0.00	0.000	1.00	1.00	1.00	Good
E-TRUST	0.00	0.000	1.00	1.00	1.00	Good
PERCEIVED DELIVERY TIME (PDT)	0.00	0.000	1.00	1.00	1.00	Good
WEB SITE DESIGN (WSD)	2.85	0.041	0.99	0.99	0.99	Good
PERCEIVED ONLINE SECURITY (POS)	0.00	0.000	1.00	1.00	1.00	Good

PERCEIVED ONLINE PRIVACY (POP)	0.00	0.000	1.00	1.00	1.00	Good

Source: SEM data processing results, 2018 (Appendix E)

The results in Table 4.7 show that the entire variables had a good description goodness of fit. Thus, the model is appropriate. According to Hair et al., (1998) in SEM analysis, reliability test is a compulsory. Reliability test indicates the extent to which a measuring instrument can give results that are relatively similar if the researchers conduct re-measurement on the same object. Besides that, reliability test is used to measure whether a respondent answers consistently or stable over time. When respondents are consistently in answering the questions in the questionnaire, the data are reliable. The results of high reliability give confidence that the individual indicators are all consistent with the measurement.

To conduct the reliability test, there are several statistics test that can be used. In this research, the researcher used construct reliability and extracted variance. According to Holmes-Smith (cited in Koto, 2016), variable or construct is said to be reliable if it has composite reliability greater than 0.70 and Extracted Variance is greater than 0.50. Both extracted variance and construct reliability can be calculated using formulas from Fornell& Larker (cited in Koto, 2016), as follow:

$$\text{Construct Reliability} = \frac{(\Sigma\lambda_i)^2}{(\Sigma\lambda_i)^2 + \Sigma\varepsilon_i}$$

$$\text{Extracted Variance} = \frac{\Sigma\lambda_i^2}{}$$

$$\Sigma\lambda_i^2 + \Sigma\varepsilon_i$$

Where, λ_i = loading of each indicator (observed variables)

ε_i = error variance related to each indicator

Based on the above formula, the researchers obtained construct reliability and extracted variance of the variables used in this researchas described in Table 4.8:

Table 4.8 The Results of Reliability Test

Indicators	**λ_i**	**ε_i**	**Construct Reliability**	**Extracted Variance**
E-Loyalty (EL)			0.7991	0.5709
EL1	0.77	0.24		
EL2	0.68	0.38		
EL3	0.78	0.63		
E-Satisfaction (ES))			0.7818	0.5465
ES1	0.94	0.49		
ES2	0.76	0.09		
ES3	0.93	1.35		
E-Trust (ET)			0.8483	0.6954
ET1	0.35	0.54		
ET2	0.71	0.01		
ET3	0.71	0.01		
PERCEIVED DELIVERY TIME (PDT)			0.7663	0.5314
PDT1	0.65	0.33		
PDT2	0.57	0.22		
PDT3	0.4	0.35		
WEB SITE DESIGN (WSD)			0.8450	0.5795
WSD2	0.53	0.27		

WSD3	0.63	0.14		
WSD4	0.6	0.26		
WSD5	0.48	0.25		
PERCEIVED ONLINE SECURITY (POS)			0.7823	0.5531
POS1	0.54	0.24		
POS3	0.42	0.32		
POS4	0.66	0.17		
PERCEIVED ONLINE PRIVACY (POP)			0.8286	0.6395
POP1	0.53	0.19		
POP2	0.86	0.14		
POP3	0.41	0.34		

Source: SEM data processing results, 2018 (Appendix E)

Table 4.8 showed that the construct reliability from those seven variables used in this researchwere ranged from 0.7663 (Perceived Delivery Time variable) to 0.8483 (E-Trust variable). The values of extracted variance of the seven variables used in this research were ranged from 0.5314 (Price Consciousness variable) to 0.6954 (E-Trust variable). Those values indicated that the value of construct reliability and extracted variance of seven variables were accepted because the value of construct reliability was above 0.70 and the value of extracted variance was above 0.50. Thus, it can be concluded that the 23 indicators and seven variables used in this research were reliable.

4.3. Structural Model Analysis

Considering the approach used is *one-congeneric*, there were three steps prior to test structural equation based on Holmes-Smith and Row (1994). Firstly, making the new data; secondly, developing composite scale and thirdly, structural model development.

4.3.1. Making New Data

Making new data is done by reducing the number of variables observed by counting using the formula below:

$$\xi = \Sigma \omega_i \, x_i$$

where, ξ_j = the combined value which is estimated

ω_i = regression factor values; xi = observed variable

Based on the output in LISREL, there are *factor of score regression* values of E-Loyalty such as 0.57, 0.32, and 0.22. Based on these factors, researchers can calculate the composite value by using the equation of 0.57* EL1 + 0.32 * EL2 + 0.22 * EL3. From the series of procedure, the combined data is obtained from the variable of E-Loyalty. To obtain the combined value of other variables, a similar procedure is performed on observed variables and other variables. The calculation of the combined values of the six variables in this research is as follows:

Composite Value EL	0.57* EL1 + 0.32 * EL2 + 0.22 * EL3
Composite Value ES	0.20*ES1 + 0.85*ES2 + 0.07*ES3
Composite Value ET	-0.10*ET1 + -12.06*ET2 + 13.72*ET3
Composite Value PDT	0.46*PDT1 + 0.58*PDT2 + 0.36*PDT3
Composite Value WSD	0.28*WSD2+0.68*WSD3+0.32*WSD4+ 0.27*WSD5
Composite Value POS	0.42*POS1 + 0.25*POS3+0.72*POS4
Composite Value POP	0.34*POP1 + 0.74*POP2+ 0.14*POP3

4.3.2 Development of Composite Scale

The development of *Composite Variables* can be maximized if the weight vector is vector regression values (Werts, Rock, Linn, and Joreskoq, 1978). To calculate the composite scale, the following formula can be used:

$$r_m = \frac{(\Sigma \omega_i \lambda_i)^2}{(\Sigma \omega_i \lambda_i)^2 + \Sigma \theta_i \omega_i^2}$$

r_m = Reliability composite maximization scale;

λ_i= load factor

ω_i= regression factor values

θ_i= variant error

Based on the factor of loadings coefficients, error variance, and regression of existing factors, researchers calculated Reliability composite maximization scale, load factor (λ), and the error variance (θ). The coefficient of loading factors and error variance value is used as the parameter estimation that is bound in the measurement section of structural equation modeling. After the Development of Composite Scale, the next step is to test the relationship between these variables. Holmes-Smith and Row (1994) stated that if the matrix that willbe analyzed is the correlation matrix among the composite variables, the composite variable variance would be equivalent to one and λ and θ parameter will be simplified to:

$$\lambda = \sqrt{r_m} \text{and } \theta = 1 - r_m$$

Both parameters (λ and θ) can be used as a parameter that is bound in the measurement part of the structural model. The details of the above calculation results are presented in the following Table 4.9::

Table 4.9 Development of Composite Variables

Variable Name	Observed Variable			Composite Variable		
	Factor Loading (λi)	**Error Variance (θi)**	**Factor Score Regression**	**Maximized Reliability (rm)**	**Factor Loading (√rm)**	**Error Variance (θ=1-rm)**
E-LOYALTY (EL)						
EL1	0.77	0.24	0.57	0.823100754	0.907	0.176
EL2	0.68	0.38	0.32			
EL3	0.78	0.63	0.22			
E-SATISFACTION (ES)						
ES1	0.94	0.49	0.20	0.898579492	0.947	0.101
ES2	0.76	0.09	0.85			
ES3	0.93	1.35	0.07			
E-TRUST (ET)						
ET1	0.35	0.54	-0.10	0.281249342	0.530	0.718
ET2	0.71	0.01	-12.06			
ET3	0.71	0.01	13.72			
PERCEIVED DELIVERY TIME (PDT)						
PDT1	0.84	0.71	0.46	0.759797767	0.871	0.240
PDT2	0.56	0.21	0.58			
PDT3	0.83	0.12	0.36			
WEB SITE DESIGN (WSD)						
WSD2	0.53	0.27	0.28	0.860745397	0.927	0.139
WSD3	0.63	0.14	0.63			

WSD4	0.6	0.26	0.32			
WSD5	0.48	0.25	0.27			
PERCEIVED ONLINE SECURITY (POS)						
POS1	0.54	0.24	0.42	0.78791866	0.887	0.212
POS3	0.42	0.32	0.25			
POS4	0.66	0.17	0.72			
PERCEIVED ONLINE PRIVACY (POP)						
POP1	0.53	0.19	0.34	0.878858863	0.937	0.121
POP2	0.86	0.14	0.74			
POP3	0.41	0.34	0.14			

Source: SEM data processing results, 2018 (Appendix G)

4.4. Goodness of Fit of Structural Model

In this step, the initial structural equation model used theresearch model developed in Table 4.9. As an additional criterion for goodness of fit, the researcher used Expected Cross Validation Index (ECVI) since this research used a single sample. LISREL output results for structural equation model are shown in the appendix. The values of the statistics showed perfect/good. This means that the hypothesized model does not have the potential modification. The suitable statistics for the model can be seen in Table 4.10

Table 4.10 The Result of Goodness of Fit index I

Parameter	Value	Cut-off Value	Description
X^2	41.79	Expected small	Not Good
RMSEA	0.14	0.00 - 0.08	Not Good
ECVI	0.33	0.22	Good

GFI	0.92	>0.90	Good
NFI	0.94	>0.90	Good
CFI	0.95	>0.95	Good

.Source: SEM data processing results, 2018 (Appendix G)

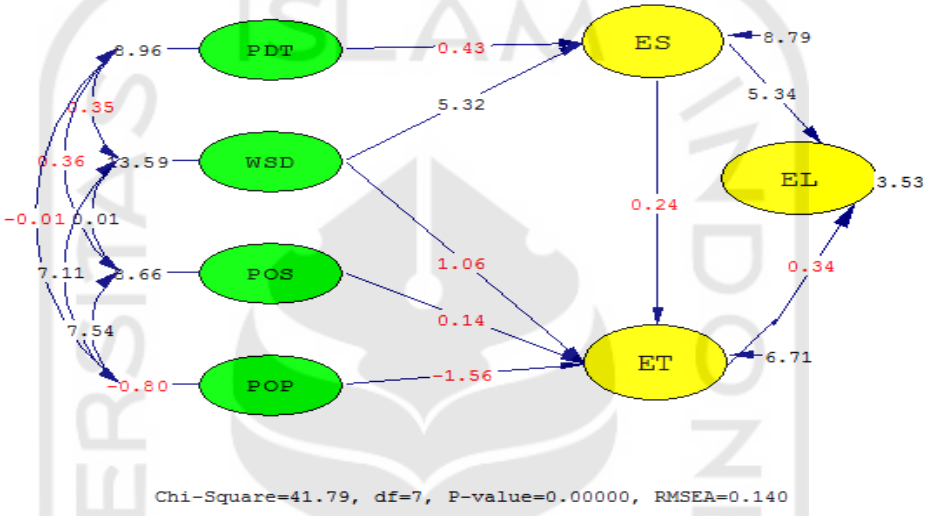

Figure 4.1 Structural Model I

Based on the analysis result, this model is not good. Moreover, there were 6 hypotheses which were insignificant and only 2 hypotheses were significant.

Table 4.11 Summary of Hypotheses Testing I

Regression Path	**Regression Coefficient**	**t-values**	**Prob.**
PDT →ES	0.09	0.43	0.6801
WSD →ES	0.74	5.32	0.0011
WSD →ET	0.26	1.06	0.3243
POS →ET	0.03	0.14	0.8926

POP →ET	-0.36	-1.56	0.1627
ES →ET	0.02	0.24	0.8172
ES →EL	4.65	5.34	0.0011
ET →EL	0.57	0.34	0.7438

Source: SEM data processing results, 2018 (Appendix G)

The value of the probability value between the effects of one variable to another variable must be less than *the level of significant* (0.05). Based on the results of Statistics test in Table 4.11, the structural model shows that from eight directions hypothesized in this research, there were six insignificant hypotheses, which were ES → ET, ET →EL, PDT →ES, WSD →ET, POS → ET, and POP → ET. Table 4.12 below shows the summary of the tests of hypotheses and significance level of each proposed hypotheses.Table 4.12 shows a summary of hypotheses testing and significance level of each path that were hypothesized.

Table 4.12 The Result of Hypotheses Testing I

Hypotheses	**Directions Influence**	**β or γ (*t*-value / α level)**	**Desc.**
PDT →ES	+	0.09 (0.44/> 0.50)	Rejected
WSD →ES	+	0.02 (0.24/>0.001)	Supported
WSD →ET	+	0.26 (1.06/< 0.50)	Rejected
POS →ET	+	0.03 (0.14/< 1.0)	Rejected
POP →ET	-	-0.36 (1.56/< 0.1)	Rejected
ES →ET	+	0.02 (0.24/> 0.70)	Rejected
ES →EL	+	4.65 (5.34/>0.001)	Supported

ET →EL	+	0.57 (0.34/> 0.70)	Rejected

Source: SEM data processing results, 2018 (Appendix G)

Based on the *Modification Indices* data on LISREL output, there were suggentions by adding GAMMA for element GA (2 1) which was WSD→EL. Therefore, new findings were added. Thus, the re-specification of the model based on the statement was done. After the addition of this path, the conformity statistics of this model would also change and this can be seen in Table 4.13.

Table 4.13 The Result of Goodness of Fit Index II

Parameter	Value	Cut-off Value	Description
X^2	21.41	Expected small	Not Good
RMSEA	0.10	0.00 - 0.08	Not Good
ECVI	0.26	0.22	Good
GFI	0.95	>0.90	Good
NFI	0.97	>0.90	Good
CFI	0.98	>0.95	Good

Source: SEM data processing results, 2018 (Appendix G)

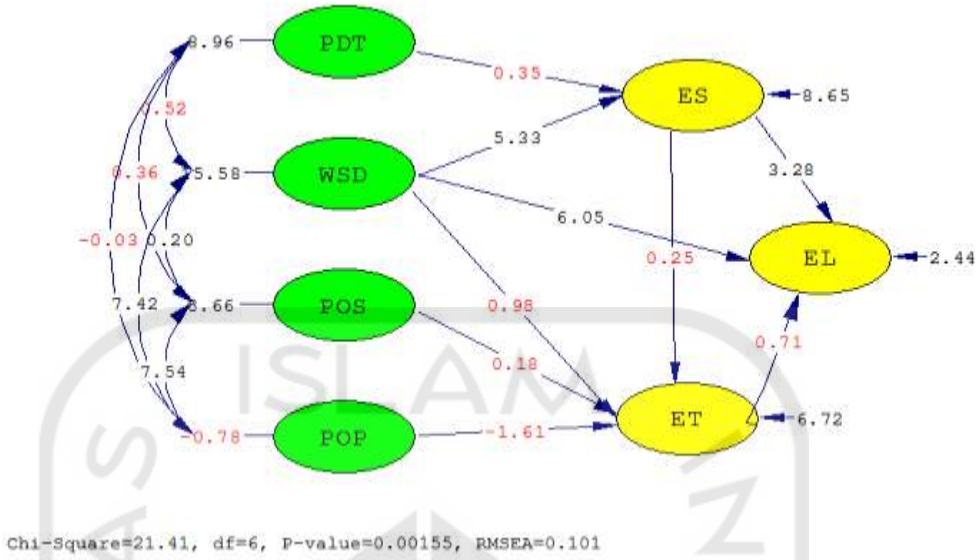

Figure 4.2 Structural Model II

Based on the model conformity assessment of re-specification model, the statistical value on the goodness of fit parameters was not all good, but it hadbetter result than the hypothesis testing I. Therefore, the LISREL output of the model could be used for hypothesis testing. Table 4.14 shows a summary of hypotheses testing and significance level of each path as follows:

Table 4.14 Summary of Hypotheses Testing II

Regression Path	**Regression Coefficient**	**t-values**	**Prob.**
PDT →ES	0.08	0.35	0.7383
WSD →ES	0.74	5.33	0.0018
WSD →ET	0.24	0.98	0.3649
POS →ET	0.04	0.18	0.8631

POP →ET	-0.36	-1.61	0.1585
ES →ET	0.02	0.25	0.8109
ES →EL	2.88	3.28	0.0168
ET →EL	1.05	0.71	0.5043
NEW FINDING			
WSD→EL	9.31	6.05	0.0009

Source: SEM data processing results, 2018 (Appendix G & H)

The value of the probability value between the effects of one variable to another variable must be less than *the level of significant* (0.05). Based on the results of statistics test in Table 4.14, the structural model showed that from nine directions that were hypothesized in this research, there were six insignificant hypotheses, which were ES → ET, ET →EL, PDT →ES, WSD →ET, POS → ET, and POP → ET. From re-modification model, one new finding was found. Thus, the new finding was WSD → EL hyphothesis. Table 4.15 below shows a summary of hypotheses test and significance level of each proposed hypotheses.

Table 4.15 The Result of Hypotheses Testing II

Hypotheses	**Directions Influence**	**β or γ (*t*-value / α level)**	**Desc.**
PDT →ES	+	0.08 (0.35/> 0.70)	Rejected
WSD →ES	+	0.74 (5.33/>0.001)	Supported
WSD →ET	+	0.24 (0.98/< 0.50)	Rejected
POS →ET	+	0.04 (0.18/> 0.70)	Rejected
POP →ET	-	-0.36 (-1.61/< 0.1)	Rejected

ES →ET	+	0.02 (0.25/> 0.70)	Rejected
ES →EL	+	2.88 (3.28/< 0.50)	Supported
ET →EL	+	1.05 (0.71/> 0.50)	Rejected
NEW FINDING			
WSD →EL	+	9.31 (6.05/>0.001)	Supported

Source: SEM data processing results, 2018 (Appendix G & H)

4.5. Hypothesis Testing and Discussion

Hypothesis testing results can be seen in Table 4.15. For further explanation, the results are described below.

H1: Perceived delivery efficiency positively influences e-satisfaction.

Based on Table 4.15, with the real level of (α) >70% = 0.7, the calculation of Structural Equation Modeling (SEM) result was t-statistic value = 0.35 with probability-statistic = 0.7383. Thus, hypothesis H1 which stated that perceived delivery efficiency positively influences e-satisfaction for female online shoppers, was insignificant and unacceptable.

The result of this hypothesis showed that perceived delivery efficiency had no effects on e-satisfaction. According to Sastry, (2017) satisfaction is defined as the comparison made by the consumer between the initial expectation on a product and what they get as a final result. Chou et al. (2015) stated that experience may come from two sources: service from the web site and the web site itself. Consumer experience with service from a web site is mainly concerned with item delivery time. Schaupp and Bélanger (2005) defined delivery time as the total time between order placement and delivery, which includes dispatch, shipping, and delivery.

H2. Web site design positively influences e-satisfaction.

Based on Table 4.15, with the real level of (α)) >0.1% = 0.001, the calculation of Structural Equation Modeling (SEM) result was t-statistic value = 5.33 with probability-statistic = 0.0018. Thus, hypothesis H2 which stated that web site design positively influences e-satisfaction, was significant and acceptable.

The result of this hypothesis indicated that web site design had positive effect on e-satisfaction. It means that the better web site design on Shopee, will increase satisfaction of the Shopee customers. Kalia et al. (2016) stated that web presence and low prices were believed to be key drivers of success but now online stores had realized the importance of customer satisfaction because higher customer satisfaction is believed to be best indicator of firms future profit, product or service performance, adaptation or disconfirmation and post-purchase behavior (e.g., repurchase, complaining). Wu & Lin (2006) suggested that websites that are better and easy to use make consumer transactions easier and that attracts consumers to revisit or make a repeat purchase, which results customer satisfaction (Chinomona et. al., 2014).

H3. Web site design positively influences e-trust.

Based on Table 4.15, with the real level of (α) <50% = 0.5, the calculation of Structural Equation Modeling (SEM) result wast-statistic value = 0.98 with the probability-statistic = 0.3649. Thus, hypothesis H3 which stated that web site design positively influences e-trust, was insignificant and unacceptable.

The result of this hypothesis indicated that web site design had no effect on e-trust. According to Chou et al. (2015), customers always have some concerns when

purchasing an item online because online shopping is full of uncertainty (e.g. Is it safe to provide my credit card information? Will the quality of the item I ordered be as good as expected?). In accordance with the research conducted by Van et al. (2007) that stated in order to gain consumer trust, e-commerce firms must find a way to convince consumers that the personal information obtained through their websites will remain secure. Web merchants had employed a wide variety of approaches to increase consumer trust. Given the importance of trust in the e-commerce environment, the factors that produced a perception of trustworthiness within consumers need to be identified. Their interactions need to be understood and their relative importance needs to be determined. Understanding the roles of these different factors would allow online retailers to ease consumers' concerns and could improve customer perceptions of web retailing.

H4. Perceived online security positively influences e-trust.

Based on Table 4.15, with the real level of (α) >70% = 0.7, the calculation of Structural Equation Modeling (SEM) results were t-statistic value = 0.18 with the probability-statistic = 0.8631.Thus, hypothesis H4 which stated that perceived online privacy positively influences e-trust, was insignificant and unacceptable.

The result of this hypothesis showed that perceived online security had no effects on e-trust. There was growing concern regarding security issues and the use of information given online in terms of the privacy of personal information and the unintended uses of it. Customers are reluctant to enter their personal information when the sites were asked for it because they were concerned about the interception and misuse of information sent over the internet and how their data was used. Thus, online consumers hesitated to disclose any personal or financial information to companies because they felt that these companies

could make unauthorized use of it or divulge it to other organizations (Roca et al., 2009). As stated by Chou et al., (2015), although online security techniques have continued to develop and improve, web security vulnerability still exists and security measures are violated frequently even among widely reputable companies.

H5. Perceived online privacy positively influences e-trust.

Based on Table 4.15, with the real level of (α) >70% = 0.7, the calculation of Structural Equation Modeling (SEM) results were t-statistic value = -1.61 with the probability-statistic = 0.1585. Thus, hypothesis H5 which stated that perceived online privacy positively influences e-trust, was insignificant and unacceptable.

The result of this hypothesis showed that perceived online privacy did not have effect on e-trust. It means that the better online privacy did not make trust of consumers higher. A number of researches had examined the importance of privacy on consumer perceptions on online shopping. According to Kim & Kim (2010), consumers hesitate to patronize a retail store when they feel insecure and perceive risk associated with purchase. With regard to risk perceptions, protection of personal information which facilitates consumer trust is a critical issue in the context of e-retailing. However, this is aligned with Chou et al., (2015) statement that stated this concern may negatively influence customers' perceptions about online firms' technical abilities to prevent their web sites from being intentionally invaded and damaged, resulting in reduced e-trust.

H6. E-Satisfaction positively influences e-trust.

Based on Table 4.15, with the real level of (α) >70% = 0.7, the calculation of Structural Equation Modeling (SEM) results were t-statistic value = 0.25 with probability-

statistic = 0.8109.Thus, hypothesis H5 which stated that e-satisfaction positively influences e-trust, was insignificant and unacceptable.

The result of this hypothesis indicated that e-satisfaction had positive effect on e-trust. It means that e-satisfaction had strong relationship with e-trust of the Shopee customers or buyers. Shihyu et al., (2015) stated that the emergence of e-commerce; researchers have extended the concept of loyalty into the context of the online environment, renaming it e-loyalty. Therefore, from Wong et al. (2014) found that satisfaction through website is achieved when its attributes exceed satisfaction levels. User satisfaction is obtained when information systems matched with the presented information.

H7. E-Satisfaction positively influences e-loyalty.

Based on Table 4.15, with the real level of (α) <50% = 0.5, the calculation of Structural Equation Modeling (SEM) results were t-statistic value = 3.28 with the probability-statistic = 0.0168, thus, hypothesis H7 which stated that e-satisfaction positively influences e-loyalty, was significant and acceptable.

The result of this hypothesis indicated that e-satisfaction had positive effect on e-loyalty. It means that while customers felt satisfied, it created loyalty on the Shopee customers. Bhaskar & Kumar (2016) stated that when determining the development of loyalty, satisfaction had traditionally identified as the main inputs for customer loyalty and satisfaction is believed to be a driver for e-loyalty (2016). The statement from Muhammad et al. (2014) stated that similarly online customers over all evaluations of satisfactory consumption experiences make a positive impact on the degree of commitment in the relationship. Dimyati (2015) stated that a loyal customer is very meaningful to the vendor,

since the cost to acquire the new customers is more expensive than maintaining the existing customers. Loyalty is developed by the following four stages, namely: cognitive loyalty, affective loyalty, conative loyalty, and action loyalty.

H8. E-Trust positively influences e-loyalty.

Based on Table 4.15, with the real level of (α) >50% = 0.5, the calculation of Structural Equation Modeling (SEM) results were t-statistic value = 0.71 with the probability-statistic = 0.5043. Thus, hypothesis H8 which stated that e-trust positively influences e-loyalty, was insignificant and unacceptable.

The result of this hypothesis showed that e-trust had no effects on e-loyalty. From Srinivasan et al. (2002) defined e-loyalty as ‘‘a customer’s favorable attitude towards the e-retailer that results in repeat buying behavior’’. According to Butt & Aftab (2013), exploring the causal linkage between trust and loyalty in an online business environment, considered it as the most critical factor in establishing, building and maintaining customer relationships.

H9. Web site design positively influences e-loyalty

Based on Table 4.15, with the real level of (α)) >0.1% = 0.001, the calculation of Structural Equation Modeling (SEM) results were t-statistic value = 6.05 with the probability-statistic = 0.0009.Thus, hypothesis H9 which stated that web site design positively influences e-satisfaction, was significant and acceptable.

The result of this hypothesis indicated that web site design had positive effect on e-loyalty. It means that the better web site design on Shopee, will increase loyalty of the Shopee customers. As stated from Kim and Kim (2010), well-organized web sites should

be simple to use, intuitive to navigate, easy to find information, and fast to complete transactions. Although e-retailers provide detailed information about products and services on the web site, consumers would not revisit the site if they had difficulty in finding information that they need. Providing a search engine, site map, and browsing/order instructions would be useful to improve the efficiency of navigation. Beside, express checkout makes it easy for consumers to complete their transaction process quickly. Providing live help available 24 hours a day would be an efficient tool to assist global customer needs. According to Valvi & West (2013), brand strength, functionality and website content influence customer loyalty differently for information-oriented, government and transaction-oriented websites, affecting post-purchase behaviors such as word-of-mouth.