CHAPTER 4

Empirical Results and Discussions

4.1 Data diagnosis

4.1.1 Survey Response Rate

A total 415 tourists were approached to participate in the study in pagoda, restaurants, and hotels. A total of 303 respondents agreed to participate, amongst, 297 responses were kept as successful interviews after cleaning the data. Therefore, a 73% response rate with the accuracy of 98% completed questionnaires were analysed further.

CFA requires to have the minimum sample size calculated by rule of thumb (N>245); the successful responses are more than the required sample size.

4.1.2 Profile and Characteristics of Survey Respondents

The demographic profiles of the respondents were asked in structured questions. The questions consist of the gender of the respondents, age groups, nationality, education, and annual income.

The split of gender is 142, 47.8% of respondents are males while 155, 52.2% of respondents are female for this study. Most of the respondents are at their younger age group of 18 – 24 years old, which is 41.1% (122 out of 297), and followed by 32.7% (97) are between 25 – 31 years old, 10.8% (32) are between 32 – 38 years old, 5.1% (15) are 39 – 45 years old, 5.1 (15) are 46 – 52 years old, and 5.4% (16) are 53 years old and above.

The majority of the respondents are American (16.8%, 50). 12.5% (37) and 12.1% (36) of the respondents are French and British people respectively. There are also German respondents (8.8%, 26), Australian (6.4%, 19), Dutch (6%, 18), and Japanese (5.7%, 17).Other nationalities that participated in the survey are Brazilians, Italians, Belgians, Finnish, Spanish, Korean, Vietnamese, Indonesians, Thai, Nepalese, Israelis, Swiss, New Zealanders, Filipinos, Indian, Chileans, and Chinese.

The respondents' education level are classified as secondary school which is 23.3% (69), vocational or bachelor's degree which is 36.4% (108), and master's degree which is 36% (107). 4.4% (13) respondents are doctoral degree holders.

Majority of the respondents (40.7%, 121) are earning less than 20,000 USD per annum. 14.1% (42) and 16.8% (50) are earning between 20,000 – 39,999 USD and between 40,000 to 59,999 USD per annum. 18.5% (55) of the respondents are earning more than 80,000 USD per annum.

Table 0.1: Demograhpic profiles of respondents

Question	Variables	Frequency	Percentage
Gender	Male	142	47.8
	Female	155	52.2
Age Group	18 – 24 years old	122	41.1
	25 – 31 years old	97	32.7
	32 – 38 years old	32	10.8
	39 – 45 years old	15	5.1
	46 – 52 years old	15	5.1
	53 – 59 years old	6	2.0
	60 years old and above	10	3.4
Nationality	American	50	16.8
	French	37	12.5
	British	36	12.1
	German	26	8.8
	Australian	19	6.4
	Japanese	17	5.7
	Dutch	18	6
	Brazilians	14	4.7

Table 0.2: Demograhpic profiles of respondents (continued)

Question	Variables	Frequency	Percentage
Nationality	Italian	11	3.7
	Belgium	8	2.7
	Finnish	7	2.4
	Sapnish	7	2.4
	Korean	7	2.4
	Vietnamese	7	2.4
	Indonesian	6	2.0
	Thai	6	2.0
	Nepalese	5	1.7
	Israelis	4	1.3
	Swiss	4	1.3
	New Zealanders	2	0.7
	Filipinos	2	0.7
	Indian	2	0.7
	Chileans	1	0.3
	Chinese	1	0.3
Education	Secondary school	69	23.3
	Vocational or Bachelors	108	36.4
	Master	107	36.0
	Doctoral	13	4.4
Annual Income	USD 19,999 or less	121	40.7
	Between 20,000 – 39,999 USD	42	14.1
	Between 40,000 – 59,999 USD	50	16.8
	Between 60,000 – 79,999 USD	29	9.7
	USD 80,000 or above	55	18.5

Source: own illustration

4.2 Descriptive Analysis of Measurement Scales

There are altogether 21 variables to contribute toward 5 constructs. Each of the variables are asked in 5 point scaled questions: 1 – strongly disagree to 5 – strongly agree. Table 4.1 illustrates the descriptive statistics for each variable from this study, such as mean, minimum, maximum, and standard deviation.

There are 3 variables contributing to construct Branding namely – “it is important for a subscribed bank to have a good reputation for being honest”, “it is important that a subscribed bank has a very good customer relation which is responsive for customer’s

concerns", and "it is important for a subscribed bank to do their tasks in time and no need to follow up". All 3 variables are strongly agreed by more than 62.3% of the respondents. About 4.7% to 6.7% of the respondents are neither agree nor disagree on all 3 variables.

There are 4 variables contributing to construct "Perceived ease of use". The first variable, "it is easy to learn e-banking" is agreed by 88.2% of the respondents; 72.7% of the respondents agree (29.6% strongly agree) on the second variable, "finding what I want via e-banking is easy"; 80.1% of the respondents agree (29.3% strongly agree) on the third variable, "to become a skilful user for e-banking is easy"; 89.9% of the respondents agree (44.4% strongly agree) on fourth variable, "it is easy to use e-banking".

There are 3 variables contributing to construct "Perceived convenience". The first variable, "e-banking helps to improve the online transaction performance" is agreed by 82.9% of respondents. The second variable, "e-banking helps to increase productivity of online transaction", is agreed by 89.3% (53.9% strongly agree). The third variable is similarly agreed by 82.8% of the respondents with 49.8% of strongly believed.

There are 4 variables relating to construct of "Trust". The first variable, "e-banking is trustworthy", is agreed by 68% of respondents; 7.4% of respondents are not agreed for somewhat while 1% of the respondents do not agree at all; 5.1% of the respondents do not agree to the second variable, "I do believe that e-banking has benefits", while 86.5% of the respondents agree on the same variable. More respondents, 12.8%, do not agree for third variable, "I have trust that e-banking transaction is secured", with less percentage of respondents, 67%, agree to same variable. Much more respondents, 18.9%, do not trust that their personal information will be safe with related bank, while 59.3% agree on it, which is the fourth variable for the construct "Trust".

There are 7 variables relating to construct "behavioural intention"; 91.6% of the respondents agree to the first variable, "it is a good idea to use e-banking". High agreement on the second variable, "I intend to use e-banking in near future", by 90.6%; 85.5% of the respondents agree that e-banking usage is appealing for them, which is the third variable. The fourth variable, "I will definitely recommend all my friends and colleagues to use e-banking", is agreed by 78.8% of the respondents; 21.8% of the

respondents do not agree on the fifth variable, which is "I will only recommend my current using bank to my friends and colleagues for e-banking", while 47.5% only agree on that. There are 77.1% of respondents who think they will use more services of e-banking in near future which is not agreed by 6.4%, for the sixth variable. The seventh variable, "I would like to use more online transactions functions than currently what available", is agreed by 63.9% of the respondents, but 11.8% do not agree on that.

The 5 points scale answers are analysed in a continuous variables and result in the following tables. Ratings on "Brand" variables are highest among mean comparison. Trustworthiness, security, and recommendations rating are lowest among the mean scores.

Table 0.3: Table showing the basic statistics of measurement scales

	Mean	Minimum	Maximum	Standard Deviation
Branding				
It is important for a subscribed bank to have a good reputation for being honest	4.51	1	5	0.76
It is important that a subscribed bank has a very good customer relation which is responsive for customer's concerns	4.62	2	5	0.61
It is important for a subscribed bank to do their tasks in time and no need to follow up	4.52	1	5	0.74
Perceived Ease of use				
It is easy to learn e-banking	4.20	2	5	0.65
Finding what I want via e-banking is easy	3.95	2	5	0.88
To become a skillful user for e-banking is easy	4.06	2	5	0.77
It is easy to use e-banking	4.30	2	5	0.76
Perceived Usefulness				
E-banking helps to improve the online transaction performance	4.38	2	5	0.80
E-banking helps to increase productivity of online transaction	4.41	1	5	0.74
Using e-banking helps to improve effectiveness of online transaction	4.31	2	5	0.79

Table 0.4: Table showing the basic statistics of measurement scales (continued)

Trust				
E-banking is trustworthy	3.87	1	5	0.95
I do believe that e-banking has benefits	4.31	1	5	0.89
I have trust that e-banking transaction is secured	3.73	1	5	0.99
I trust that my personal information will be safe with related bank	3.57	1	5	1.06
Behavioural Intention				
It is a good idea to use	4.36	1	5	0.71
I intend to use e-banking in near future	4.53	2	5	0.78
Using of e-banking is appealing for me	4.34	1	5	0.87
I will definitely recommend all my friends and colleagues to use e-banking	4.15	2	5	0.90
I will only recommend my current using bank to my friends and colleagues for ebanking	3.35	1	5	1.22
I think I will use more services of e-banking in near future	4.02	1	5	0.90
I would like to use more online transactions functions than currenlty what available	3.93	1	5	1.14

Source: own illustration

4.3 Result of Model Fit Assessment

A total of 5 measurement constructs – branding, perceived ease of use, perceived convenience, trust, and usage of e-banking – are tested with CFA using lavaan package in R progam. Firstly, CFA approach was used to validate the data whether it is consistent with the hypothesized model.

All of the measurement constructs were developed from the conceptual, theoretical basis and also adopted via literature review of theoretical aspects. Each construct and contributing variables or items were previously discussed in Chapter III. The overall measurement model will be shown below.

4.3.1 CFA for the measurement model

The measurement construct for Branding, Perceived usefulness, Perceived ease of use, Trust and Behavioural intention to use e-banking constructs have 3, 3, 4, 4, 7 observed items or variables accordingly. The initial result of CFA assessment of the proposed model does not show a well-fitting result. The fit index of CFI is 0.778 which is less than 0.95, TLI is 0.739 which is less than 0.95, and RMSEA is 0.098 which is

greater than 0.05, SRMR is 0.079 which is greater than 0.05 suggesting that a null hypothesis is true so it proved that the hypothesized model was not entirely acceptable. The result for the CFA analysis of the whole measurement model will be shown in the Appendix C1.

The *p*-value of all the items in the measurement model are significant at (P < 0.05), however the beta value of some of the items, which is the standard for all factor loading, is not greater than 06. These items should be cut off in order to fit this measurement model. So TRU1, TRU2, EAS2, EAS3, INT5, INT6, INT7 items would be cut off and run through the model again in R.

The result of CFA for the improved model also does not meet the criteria. The fit index of CFI is less than 0.95, TLI is also less than 0.95, and RMSEA and SRMR valuses are greater than 0.05. Although the p-values and the beta of the items are significant at this time, the improved model also suggests that the null hypothesis is true and is proved that the hypothesized model was not entirely acceptable.

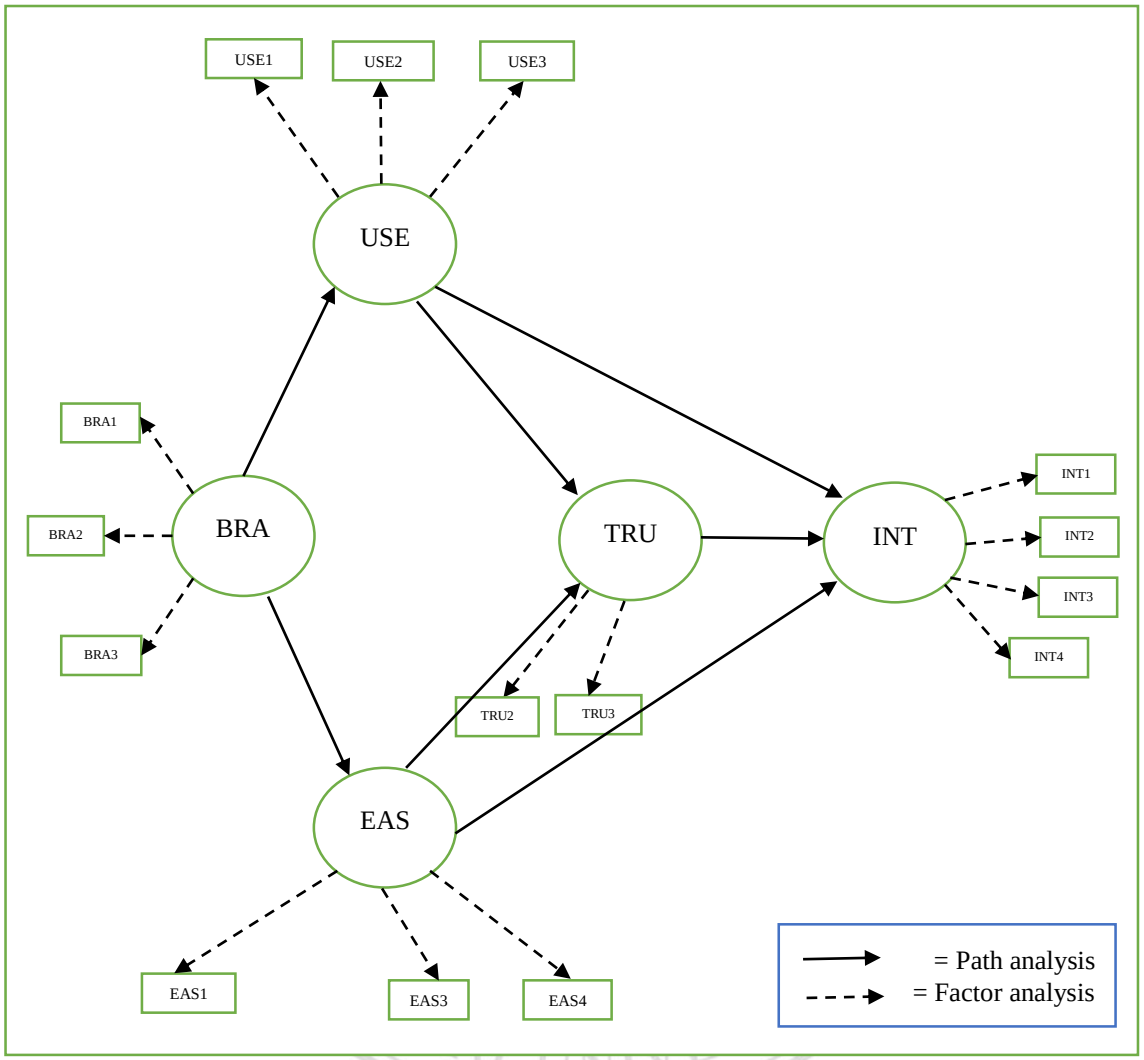
In order to fit with the criteria of the analysis, the modification indexes will be checked to the put covariance between the error terms. The R code to run the Modification Index (MI) will be shown in Appendix B1. After running the MI for many times in order to check the modification indices, 26 missspecified error variance was detected to fit the model with the criteria. Then, GFI values became acceptable although some of the indices do not meet the cut off value. The GFI values approximately approached the standard values as shown below in the table.

Table 0.5: GFI values for the CFA result with the improved model.

FIT INDICES	P – value	Cut off value
χ^2/df	1.78	< 2
Comparative Fit Index (CFI)	0.974	> 0.95
Turker-Lewis Index (TLI)	0.949	>0.95
Root Mean Sq Error of Approximation (RMSEA)	0.051	<0.05
Standard Root Mean Sq Residual (SRMR)	0.039	<0.05

Source: own illustration

After fitting the proposed model according to the CFA assessment, the modified research model has left with the measurement construct, perceived ease of use with only 3 items, the mediating construct, trust with only 2 items and the focus construct, the user intention to us with only 4 items. The new modified research model diagram will be shown in the figure 4.1.



Source: own illustration

Figure 0.1: The Modified Research Model Diagram

Table 0.6: Abreaction of items for the collected data

ITEMS	**CODES**
Branding	
It is important for a subscribed bank to have a good reputation for being honest	BRA1
It is important that a subscribed bank has a very good customer relation which is responsive for customer's concerns	BRA2
It is important for a subscribed bank to do their tasks in time and no need to follow up	BRA3

Table 0.6: Abreaction of items for the collected data (continued)

ITEMS	CODES
Perceived Ease of use	
It is easy to learn e-banking	EAS1
Finding what I want via e-banking is easy	EAS2
To become a skillful user for e-banking is easy	EAS3
It is easy to use e-banking	EAS4
Perceived Usefulness	
E-banking helps to improve the online transaction performance	USE1
E-banking helps to increase productivity of online transaction	USE2
Using e-banking helps to improve effectiveness of online transaction	USE3
Trust	
E-banking is trustworthy	TRU1
I do believe that e-banking has benefits	TRU2
I have trust that e-banking transaction is secured	TRU3
I trust that my personal information will be safe with related bank	TRU4
Behavioural Intention	
It is a good idea to use	INT1
I intend to use e-banking in near future	INT2
Using of e-banking is appealing for me	INT3
I will definitely recommend all my friends and colleagues to use e-banking	INT4
I will only recommend my current using bank to my friends and colleagues for ebanking	INT5
I think I will use more services of e-banking in near future	INT6
I would like to use more online transactions functions than currenlty what available	INT7

Source: Own illustration

4.4 Validity and Reliability of the Measure

4.4.1 Normality

In this research paper, in order to test the normality for the actual collected data, Shapiro-Wilk test will be used in the R software. The data violation from the multivariate normality could be tested by testing the result (Hair et al., 2006). The result value will be shown in the table below which is significant at its *p*-value.

Table 0.7: The result from the Shapiro-Wilk Normality Test

Shapiro-Wilk Normality Test (N = 297)	
W	0.81984
P	$2.2\ e^{-16}$

Source: own illustraion

4.4.2 Convergent Validity and Unidimensionality

All measurement models were analysed with the first-order CFA in order to test convergent validity and unidimensionality of construct and items. The results confirmed the convergent validity of each construct because each factor loading is greater than twice the value of standard error as shown in Table 4-3 (Anderson & Gerbing, 1998).

Table 0.8: Convergent Validity and Unidimensionality Test Result

Standard Error	Double Std Err	Factor loading
0	0	0.586
0.145	0.29	0.513
0.173	0.346	0.617
0	0	0.854
0.235	0.47	0.491
0.283	0.566	0.794
0	0	0.819
0.132	0.264	0.916
0.123	0.246	0.705

Source: own illustration

4.4.3 Discriminant validity test

Discriminant validity was calculated by finding the difference between Chi-square of the constrained (Free) model and unconstrained (Fixed) model. Discriminant validity is confirmed only when the Chi-squares values of two models are different. The results of each pair ranged from 4.646 to 283.084 as shown in table below.

Table 0.9: The summary result of discriminant validity test

Constructs	**Chi-square Difference**
BRA VS. USE	54.796
BRA VS. EAS	54.344
TRU VS. EAS	41.833
TRU VS USE	36.665
INT VS USE	285.084
INT VS EAS	127.824
INT VS TRU	4.646

Source: own illustration

4.4.4 Composite Reliability

The reliability of the data is tested for internal consistency across constructs and the items. The composite reliability (CR), also called Cronbach's alpha, was used to evaluate the reliability, and it can be accepted when CR is greater than 0.70 or more.

All cases of 297 observations from the dataset were calculated with semTools package in R program. The results range of reliability CR scores from 0.566 to 0.848. The constructs "Brand" and "Trust" are not within the acceptable range of reliability CR score. However, other constructs' CR scores are higher than 0.7 and the total values is 0.841, which is within the acceptable reliable range. So the data will be accepted to use in this proposed model.

Table 0.10: The result of Composite Reliability for Initial Dataset

	Branding	Perceived Ease of Use	Perceived Usefulness	Trust	Behavioural Intention
Cronbach's alpha	0.566	0.68	0.825	0.578	0.848

Source: own illustration (N=297)

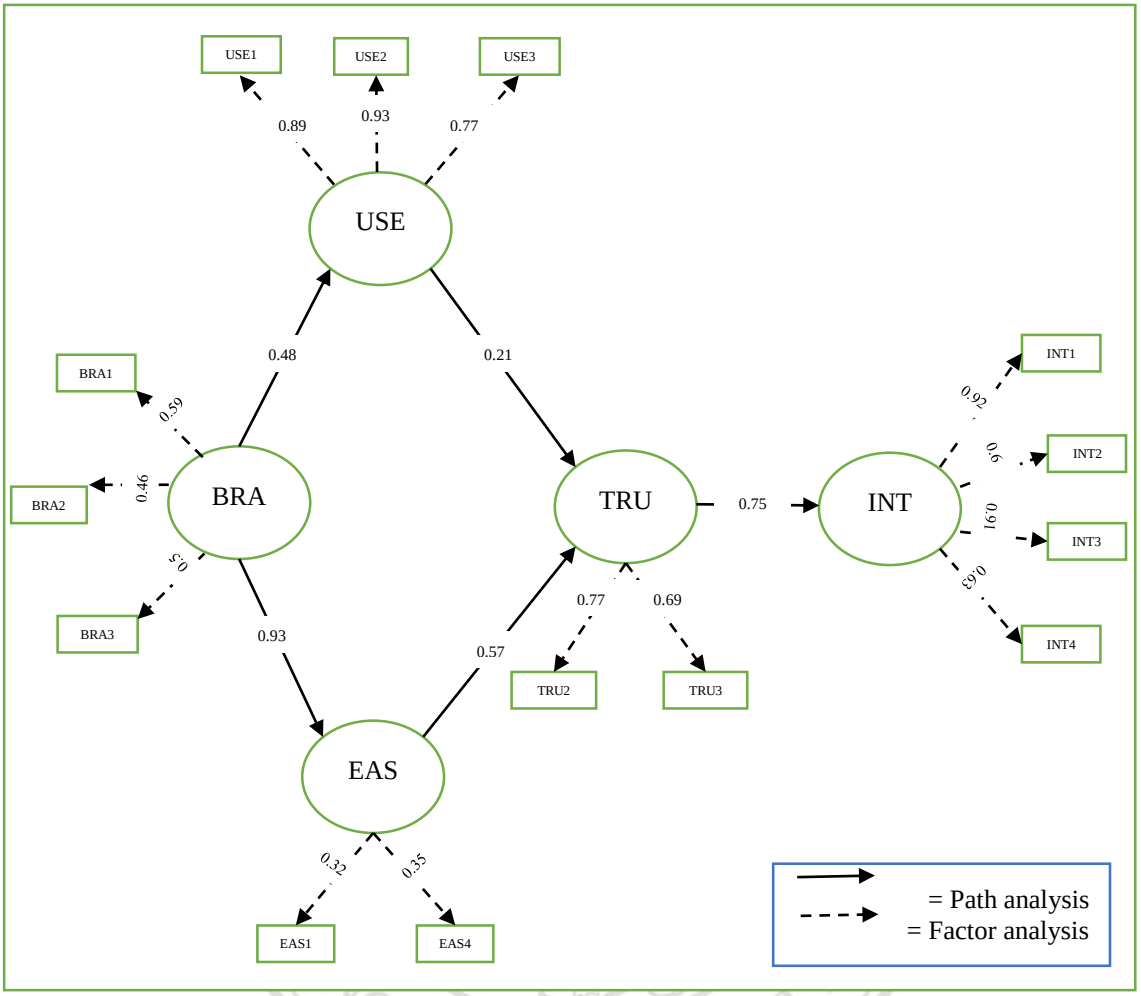
4.5 Structural Equation Model

This is the model testing stage for the Goodness of fit indices for the modified model from the CFA will be used. R program will be used to analyse path analysis of the structural equation model. The measurement construct for Branding, Perceived usefulness, Perceived ease of use, Trust and Behavioural intention to use e-banking constructs have 3, 3, 2, 2 and 4 observed items or variables according to the modified

model from the confirmatory factor analysis. The code for R program will be shown in the Appendix B2.

The initial result of SEM assessment of the proposed model does not show a well-fitting result. For the goodness of fit indices , CFI is 0.882 which is less than 0.95, TLI is 0.847 which is less than 0.95, and RMSEA is 0.092 which is greater than 0.05, and SRMR is 0.067 which is greater than 0.05 suggesting that a null hypothesis is true so it proved that the hypothesized model was not entirely acceptable. The result of this SEM will be shown in the Appendix C2. One of the observed variables from the "Perceived Ease of Use" latent will be cut off because of the insignificant *p*-value. However, the result still does not meet with the criteria. The result for the SEM analysis shows that the regression between "Behavioural Intention to Use E-banking", the dependent latent variable, and "Perceived Usefulness", the independent latent variable is not significant. Moreover, "Perceived Ease of Use", the independent latent variable also does not show significant relationship with the dependent variable. So, this two variables will be taken out from the regression with the dependent variable which is "Behavioural Intention to Use" and run the SEM again in R. However, the GFI indices from the improved new model does not meet with the criteria. The modified index has to be checked by R software.

By checking modification indices, 18 miss specified error covariance were detected to fit the model with the criteria. After re-estimating, the overall measurement model resulted in χ^2/df = 1.69, CFI = 0.975, TLI = 0.958, RMSEA = 0.048, and SRMR = 0.039 which shows the goodness-of-fit for the model. The result of the R software will be shown in Appendex C3. Finally, the modified SEM model of the factors affecting the internet banking for the tourism sector in Myanmar will be shown below in the diagram.



Source: Own illustration

Figure 0.2: The Finalized Model for E-banking in Myanmar

The factor loading weight of the covariance errors from the SEM result will be shown in the Appendix C4.

4.6 Conclusion

Figure 4-2 shows the both the measurement of factor analysis and path analysis of the final model. The first step is the relationship of one targeted latent variable, behavioural intention, one mediating latent variable, trust, and two independent measured variables. The second step is the relationship of each factor with its observed variables.

Primarily, branding domain has positive relation with the Perceived Ease of Use and Perceived Usefulness, which can be translated as the more the image of the bank and

the reputation of the bank is improved, the more impacts it can cause to perceived usefulness and perceived ease of use. This impact can be more effective for the perceived ease of use, nearly two times than the perceived usefulness. The outcome for TEM, Behavioural Intention domain has a significant impact of the Trust variable. If the tourists in Myanmar trust more e-banking services such as trustworthiness toward e-banking, belief on its benefits and its security, the more intention of usage behavioural will be developed toward e-banking.

Secondly, e-banking helpfulness to improve effectiveness of online transaction (USE3) , e-banking helpfulness to increase productivity of online transaction (USE2), and e-banking helpfulness to improve performance of the money transaction have significant relationship toward Perceived Usefulness. Similarly, security of e-banking transaction (TRU3) and the belief of the worth's from e-banking (TRU4) are having strong relationship with Trust factor. Moreover, having a good idea to use e-banking (BEH1), willing to use in the future (BEH2), attracting of using e-banking (BEH3) and recommending to friends and colleague (BEH4) decide for the Behavioural Intention domain with significant relationship.