CHAPTER 5
Data Analysis and Results

5.1 Introduction

Chapter 5 begins with discussions of data editing activities, including treatment of missing data and assessment of normality. The chapter continues with summaries of exploratory and confirmatory factor analyses to assess construct validity and construct reliability for the 12 core cultural value scales. The chapter concludes with data analyses pertaining to hypotheses based on propositions stated in Chapter 3 and to nomological validity of the core cultural value scales.

5.2 Data Editing

The total number of returned questionnaires was 420, with 178 classified as Ethnic Thai respondents, 151 as Chinese Thai respondents, and 91 as Mixed Ethnic Thai respondents. Data from these questionnaires were entered into a SPSS data file. Data then were checked for missing values and assessment of normality, with appropriate actions taken to address any problems. After the data editing and cleaning up processes, the final number of questionnaires with no missing values in all variables under analysis was 401.

5.2.1 Respondent Profiles

Table 5.1 provides demographic information about respondents. Respondents are better educated and have higher incomes than the average Thai adult because data were collected from an enterprise and an organization in Bangkok, rather than from individual households (a study limitation, discussed in Chapter 6). Median age, education, and monthly income values are 40-49 years old, bachelor's degree, and 32,000-35,999 baht, respectively.

Table 5.1 Respondent Profiles (*n* = 420)

Characteristic	Number of Cases	Percent
Gender		
	172	41.0
Male	238	56.7
Female	10	2.3
No response	420	100.0
Total		
Marital Status		
Single	170	40.5
Married	219	52.1
Divorced	11	2.6
Widowed	5	1.2
Separated	7	1.7
Others	8	1.9
Total	420	100.0
Age		
20-29 years old	69	16.4
30-39 years old	101	24.0
40-49 years old	148	35.2
50-59 years old	91	21.7
60-69 years old	8	1.9
> 70 years old	1	0.2
No response	2	0.5
Total	420	100.0
Highest Education		
Primary school	6	1.4
Middle school	5	1.2
High school	41	9.8
Vocational/Polytechnic	29	6.9
Bachelor's degree	244	58.1
Master's degree	89	21.2
Ph.D.	5	1.2
Missing	1	0.2
Total	420	100.0
Occupation		
Housewife	7	1.7
Students/Collegiate	16	3.8
Civil servants	35	8.3
Private employees	248	59.0
Business owners	53	12.6
Freelance	52	12.4
Others	9	2.1
Total	420	100.0
Personal Income		
≤ 3,999 - 7,999 Baht	28	6.7
8,000 - 15,999 Baht	50	11.9
16,000 - 23,999 Baht	51	12.1
24,000 - 31,999 Baht	52	12.4
32,000 - 39,999 Baht	40	9.5
40,000 - 47,999 Baht	46	10.9
48,000 - 53,999 Baht	33	7.9
54,000 - 62,000 Baht	40	9.5
> 62,000 Baht	79	18.9
Not applicable	1	0.2
Total	420	100.0

Table 5.1 (Continued) Respondent Profiles (*n* = 420)

Ethnicity		
Ethnic Thai	178	42.4
Chinese Thai	151	35.9
Mixed Ethnic Thai	91	21.7
Total	420	100.0
Religion		
Buddhist	414	98.6
Christian	3	0.7
Others	3	0.7
Total	420	100.0

5.2.2 Missing Data and Assessment of Normality

Missing data are unknown variable values because respondents did not provide answers to one or more research questions. The problem in this study was taken care of by mean substitution, a widely used replacement technique for missing data. Only 20 cases or about five percent of all respondents contained missing data in the Likert-scale measurements (Parts A and B in the questionnaire). With this small level of missing data, almost any replacement technique would yield similar results in any subsequent data analysis (Tabachnick, and Fidell 2001). Additional data editing was necessary in Part C of the questionnaire. Part C (consumption intention scenarios) contained 19 cases that did not respond to one or more questions. Because response choices in Part C are categorical, mean value substitutions would not be appropriate. As a result, these cases were dropped from further analysis.

An important assumption of many multivariate analyses is that data distributions for variables approximate the normal distribution. Thus, responses to the 96 Likert scale statements in Parts A and B measuring core cultural values and consumption attitudes were examined for departures from normality in terms of skewness and kurtosis, using histograms superimposed with a normal curve. Hoogland and Boomsma (1999) recommend that absolute values of skewness and kurtosis not exceed 0.75 and 1.50, respectively, for confirmatory factor analysis and structural equation modeling. Observed mean absolute skewness of the 101 variables was 0.87 with a maximum for kreng2 of 3.40. Mean absolute kurtosis was 1.41 with a maximum for kreng2 of 15.32. Values of skewness and kurtosis for scale items were generally quite sound.

However, 15 items as identified in Table 5.2 needed to be transformed before proceeding to exploratory factor analysis.

Table 5.2 Items Having Unusual Skewness and Kurtosis Values (*n* = 420)

Item	Mean	Standard Deviation	Before Transformation		After Transformation	
			Skewness	Kurtosis	Skewness	Kurtosis
Fam4	5.35	1.21	-2.32	5.01	-0.80	-0.31
Fam5	5.06	1.27	-1.86	3.07	-1.39	0.96
Fam6	5.16	1.04	-1.47	2.03	-0.76	-0.21
Kreng2	5.64	0.76	-3.40	15.32	-0.56	-0.74
Kreng3	5.11	1.02	-1.65	3.39	-1.74	2.58
Kreng5	5.06	1.10	-1.52	2.23	-0.46	-0.66
Future1	5.25	1.06	-1.90	3.90	-0.82	-0.70
Risk4	5.35	1.01	-1.98	4.37	-0.98	-0.28
Thrift1	5.26	1.08	-1.91	3.86	-0.87	-0.12
Collect1	5.36	0.82	-2.31	8.62	-0.63	-0.20
Collect2	5.02	0.95	-1.33	2.37	-0.12	-0.17
Collect3	5.01	1.01	-1.42	2.64	-0.20	-0.69
Collect4	4.68	1.21	-1.21	1.25	-0.07	-0.69
Collect6	5.06	0.94	-1.45	3.16	-0.19	-0.65
Priceco3	5.31	0.94	-1.85	4.45	-0.74	-0.60

The following procedure was used for data transformation (Tabachnick and Fidell 2001):

> Substantial negative skewness =LG $_{10}$ (K-X) where K= constant from which each score is subtracted so the smallest score is 1; K usually is chosen to be equal to the largest score plus 1.00.

After transformation, all variables again were plotted in histograms with normal curve to reassess skewness and kurtosis. As indicated by Table 5.2, skewness and kurtosis problems for all items disappeared except for fam5 and kreng3.

5.2.3 Initial Assessment of Construct Validity and Reliability

In addressing construct validity and reliability, exploratory factor analysis (EFA), item-to-total correlations, and coefficient alpha reliability coefficients were run on all 101 variables. EFA was carried out separately for the 70 core cultural values and 31 consumption attitudes measures. The procedure often is regarded as necessary prior to assessing reliability of multi-item constructs (Anderson and Gerbing 1988; Hulin 2001).

EFA in this study used principal component analysis with varimax rotation and Kaiser normalization, retaining components with eigenvalues exceeding 1.00. Next, reliabilities of constructs were investigated using Cronbach's alpha. Nunnally (1967) suggests that a minimum of 0.60 for coefficient alpha is acceptable for early empirical research of this nature.

EFA was run to assess magnitudes of factor loadings and to identify item candidates for possible elimination. Cases were submitted for EFA analysis in three groups: Thai Nationals (n = 401), Ethnic Thais (n =170) and Chinese Thais (n =144). In general, EFA results were promising in terms of scale validity for each construct in that only a few items showed low factor loadings or cross loadings greater than 0.40 (Bearden et al. 1989). For core cultural values shared by all Thai Nationals, factor loadings ranged from 0.41 to 0.74. Six somewhat weak measures: kreng6_1, mai1_1, mai6_1, confro1, confro5, and confro6 were identified. For core cultural values of Ethnic Thais, factor loadings ranged from 0.41 to 0.82. The four weakest measures were aut8_1, aut4_1, sanuk2_1, and presen_1 with factor loadings of 0.45, 0.47, 0.48, and 0.47, respectively. For core cultural values of Chinese Thais, factor loadings ranged from 0.40 to 0.75. Weak measures were thrift2, fam3_1, fam7_1, future_2, and all five risk aversion items. Tables 5.3, 5.4, and 5.5 summarize results of the three EFA analyses.

Except for risk aversion, core cultural value scales for all three groups (Thai Nationals, Ethnic Thais, and Chinese Thais) contained fair to good measurements. This statement is supported by moderate to high coefficient alpha values ranging from 0.53 to 0.86 and item-to-total correlations ranging from -0.03 to 0.74 (average of 0.40). However, several items had low item-to-total correlation values. Items mai1_1, confro_1, confro_5, confro_6, presen_5, fam3_1, fam7_1, future_2, risk3_1, risk4_1, risk5_1, risk6_1, and risk7_1 all had item-to-total correlation values below 0.30.

Table 5.3 Coefficient Alphas, Item-to-Total Correlations, EFA Results for Core Cultural Values of Thai Nationals* (*n* = 401)

	Coefficient Alpha	Item-to-Total Correlation	Rotated Factor Loadings					
			1	2	3	4	5	6
Face Saving	0.82							
Face1_1		0.63	0.69					
Face2_1		0.67	0.74					
Face3_1		0.58	0.62					
Face5_1		0.59	0.67					
Face6_1		0.58	0.68					
Kreng Jai	0.68							
Kreng1_1		0.45			0.50			
Kreng2_1		0.34			0.45			
Kreng3_1		0.49			0.61			
Kreng5_1		0.56			0.70			
Kreng6_1		0.33						
Mai Pen Rai	0.65							
Mai1_1		0.28						
Mai2_1		0.44				0.62		
Mai3_1		0.44				0.72		
Mai4_1		0.49				0.54		
Mai6_1		0.36						
Confrontation	0.53							
Avoidance								
Confro_1		0.25						
Confro_2		0.39					0.47	
Confro_3		0.41					0.53	
Confro_5		0.13						
Confro_6		0.24					0.44	
Collectivism	0.72							
Collec_1		0.44		0.56				
Collec_2		0.46		0.58				
Collec_3		0.47		0.71				
Collec_4		0.43		0.46				
Collec_5		0.39						0.62
Collec_6		0.49		0.41				0.45

*Kaiser-Meyer-Olkin measure of sampling adequacy is 0.80. Only loadings whose absolute values are more than 0.40 are shown. The six factors explained 57.7 percent of total variance.

Table 5.4 Coefficient Alphas, Item-to-Total Correlations, EFA Results for Core Cultural Values of Ethnic Thais* (*n* = 170)

	Coefficient Alpha	Item-to-Total Correlations	Rotated Factor Loadings				
			1	2	3	4	5
Non-Competitiveness	0.8**6**						
Noncom_1		0.67	0.77				
Noncom_3		0.62	0.66				
Noncom_5		0.74	0.82				
Noncom_6		0.67	0.73				
Noncom_7		0.63	0.67				
Autonomous	0.65						
Aut3_1		0.44		0.58			
Aut4_1		0.40		0.47			0.41
Aut6_1		0.30					
Aut7_1		0.49		0.66			
Aut8_1		0.39		0.45			
Sanuk	0.66						
Sanuk1_1		0.35					
Sanuk2_1		0.36			0.48		
Sanuk6_1		0.48			0.53		
Sanuk7_1		0.37			0.48		
Sanuk8_1		0.50			0.71		
Present Oriented	0.59						
Presen_1		0.42				0.47	
Presen_2		0.44				0.58	
Presen_3		0.37				0.65	

Table 5.4 (Continued) Coefficient Alphas, Item-to-Total Correlations, EFA Results for Core Cultural Values of Ethnic Thais* (*n* = 170)

			Rotated Factor Loadings				
	Coefficient Alpha	**Item-to-Total Correlations**	**1**	**2**	**3**	**4**	**5**
Presen_5		0.25					

*Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is 0.79. Only loadings whose absolute values are more than 0.40 are shown. The five factors explained 57.5 percent of total variance.

Table 5.5 Coefficient Alphas, Item-to-Total Correlations, EFA Results for Core Cultural Values of Chinese Thais* (*n* = 144)

			Rotated Factor Loadings					
	Coefficient Alpha	**Item-to-Total Correlations**	**1**	**2**	**3**	**4**	**5**	**6**
Thrift	0.73							
Thrift1		0.50	0.57					
Thrift2		0.34	0.40					
Thrift6		0.58	0.75					
Thrift7		0.53	0.62					
Thrift8		0.52	0.59					
Family Oriented	0.60							
Fam3_1		0.29		0.40				
Fam4_1		0.46		0.54				
Fam5_1		0.46		0.71				
Fam6_1		0.30		0.54				
Fam7_1		0.17						
Future Oriented	0.55							
Future_1		0.34			0.67			
Future_2		-0.03					0.43	
Future_4		0.38			0.71			
Future_5		0.42				0.61		
Future_6		0.41				0.53		
Risk Aversion	0.32							
Risk3_1		0.24	0.41					
Risk4_1		0.16						
Risk5_1		0.18						0.62
Risk6_1		0.07						
Risk7_1		0.04						

*Kaiser-Meyer-Olkin measure (KMO) of sampling adequacy is 0.76. Only loadings whose absolute values are more than 0.40 are shown. The six factors explained 54.2 percent of total variance.

Individual EFAs also were conducted for the seven published scales used as consumption attitude scales. Values of Cronbach's alpha for these scales are as follows: brand conscious: 0.69; fashion conscious, 0.83, impulse buying, 0.80; materialism, 0.77; money attitude, 0.82; price conscious, 0.33; and variety-seeking, 0.82. Because of the weak measurement properties for price conscious, this scale was dropped from further analysis. Item-to-total correlations of items measuring the six remaining consumption attitudes ranged from 0.21 to 0.68.

5.3 Convergent and Discriminant Validity Analyses

Confirmatory factor analysis (CFA) was used to improve construct measures and to investigate convergent and discriminant validities of scale items (Bagozzi and Yi 1991; Dembla et al. 2000; MacCallum and Austin 2000). Analyses used Amos 4.0 (Arbuckle and Worthke 1999) with maximum likelihood estimation, following a CFA procedure recommended by Joreskog (1993). The procedure involved estimation of single-factor measurement models for each core cultural value and each consumption attitude, estimation of measurement models for each pair of core cultural values, and estimation of measurement models for all factors within each ethnic group. Goodness-of-fit results and other cut-off criteria were used along with substantive theory as guidelines in decisions to trim weak measures.

5.3.1 Confirmatory Factor Analysis Process

CFAs were conducted separately on each latent construct and weak measurement items either eliminated or marked as candidates for elimination. CFAs then were conducted on each pair of constructs and items with bad fits again either eliminated or marked as candidates for elimination. To keep the number of analyses manageable, pairwise CFAs were run only within each cultural values group (Thai Nationals, Ethnic Thais, Chinese Thais). Pairwise CFAs did not prove useful because no single variable seemed to exhibit consistently bad fit across the several models. On the other hand, the process of analyzing individual constructs within respective cultural groups yielded more insight in identifying weak measurement items.

In each CFA, measurement items were examined and either eliminated or noted for future elimination based on overall model fit and bad item fit (large standardized residuals or small squared multiple correlations). Specific criteria for item elimination appear in Table 5.6.

Table 5.6 Criteria for Good Fit Measurement Model

Indices Used	Acceptable Level
Chi-Square Statistic (χ^2)	A non-significant value for chi-square supports the model $p > 0.05$.
Normed Chi-Square (χ^2/df)	Values less than 1.50 and more than 1.00 indicate a good fit (Arbuckle and Wothke 1999; Hair et al. 1998). Carmines and McIver (1981) suggest a ratio in the range of 2 to 1 or 3 to 1 indicates an acceptable fit between the proposed model and sample data.
Goodness of Fit Index *(GFI)*	$0 \leq GFI \leq 1.0$ A value of 1.0 indicates perfect fit. Values greater than 0.90 indicate an acceptable fit; values close to 0.95 represent a good fit (Hu and Bentler 1999).
Adjusted Goodness-of-fit Index (*AGFI*)	Values greater than 0.80 are acceptable $AGFI > 0.80$.
Standardized Root Mean Square Residual *(SRMR)*	$0 < SRMR < 0.08$ (Hu and Bentler 1999) Values closer to 0 indicate a better model fit. Values less than 0.08 indicate acceptable fit.
Root Mean Square Error of Approximation (*RMSEA*)	Values of 0.05 or less indicate a close fit of the model in relation to degrees of freedom (Browne and Cudeck 1993). $0 < RMSEA < 0.08$ are reasonable (Hair et al. 1998); values above 0.10 indicate a problem (Browne and Cudeck 1993).

5.4 Measurement Models of Core Cultural Values for Thai Nationals

Core cultural values for Thai nationals—confrontation avoidance, face saving, kreng jai, and mai pen rai—were examined using CFA on all ethnic groups combined (Ethnic Thai, Chinese Thai, and Mixed Ethnic Thai individuals).

5.4.1 Confrontation Avoidance Value

Confrontation avoidance began as a five-item measurement model. Confro_1 was the first item to be removed based on its high standardized residual value of 3.69. In the next CFA iteration, confro_5 was removed because of its negligible squared multiple correlation (SMC) value, 0.05, and because of its second highest standardized residual covariance, 1.08. The final confrontation avoidance model was thus a three-item model shown in Figure 5.1, with fit statistics shown in Table 5.7.

Figure 5.1 Final Confrontation Avoidance Measurement Model, Standardized Estimates (*n* = 401)

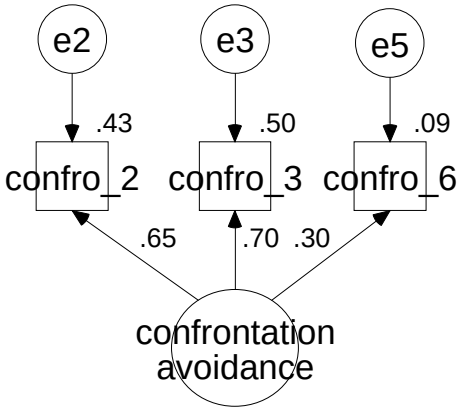

Table 5.7 Confrontation Avoidance Fit Statistics (*n* = 401)

Scale Content	χ^2	*df*	χ^2/df	*p*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full 5 items	8.77	5	1.77	0.12	0.99	0.97	0.03	0.04
Out Confro_1	0.91	2	0.46	0.63	1.00	0.99	0.01	0.00
Out Confro_5	0.00	0	-	-	1.00	-	0.00	0.00

Figure 5.1 shows confrontation avoidance to contain two acceptable measurement items and confro_6 whose SMC is quite low at 0.09. Thus, confro_6 is a candidate for elimination when the four-factor CFA model is estimated. With only three indicators, the final measurement model for confrontation avoidance is just identified and has a perfect fit of model to data. This condition holds for all following measurement models as well.

5.4.2 Face Saving Value

Face saving was initially measured by a five-item scale. Standardized residual covariances for this model ranged from 2.38 for face3_1 to 5.20 for face6_1. Based on standardized residuals and SMCs, face6_1 was dropped in the first CFA iteration and model parameters re-estimated. Face7_1 then was removed due to its large standardized residual covariance value of 1.95. Face3_1 was noted for having a somewhat low SMC value but retained for further analysis. The final measurement model for face saving appears in Figure 5.2, with fit statistics shown in Table 5.8.

Figure 5.2 Final Face Saving Measurement Model, Standardized Estimates (*n* = 401)

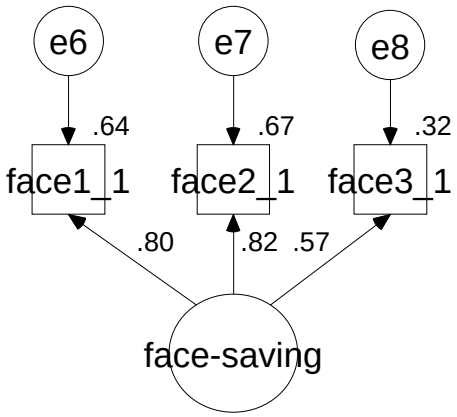

Table 5.8 Face Saving Fit Statistics (*n* = 401)

Scale Content	χ^2	*Df*	χ^2/df	*p*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full 5 items	40.94	5	8.19	0.00	0.96	0.88	0.04	0.13
Out Face6_1	7.16	2	3.58	0.03	0.99	0.96	0.02	0.08
Out Face7_1	0.00	0	-	-	1.00	-	0.00	0.00

5.4.3 Kreng Jai Value

Kreng jai was initially measured by a five-item scale. CFA measurement model results showed standardized residual covariances values ranging from 2.04 to 3.92 and SMCs ranging from 0.17 to 0.50. Kreng2t was the first item to be eliminated as it had the largest standardized residual covariance of 3.92. Kreng6_1 was next to be trimmed because it had the second largest standardized residual covariance of 1.33 and a low SMC of 0.17. Thus, kreng1_1, kreng3t, and kreng5 were retained for further analysis as indicated in Figure 5.3. The somewhat small SMC for Kreng1_1 indicates that it is a weaker measure than the other two items. Fit statistics appear in Table 5.9.

Figure 5.3: Final Kreng Jai Measurement Model, Standardized Estimates (*n* = 401)

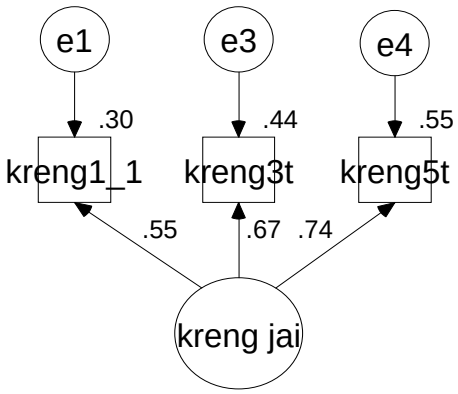

Table 5.9 Kreng Jai Fit Statistics (*n* = 401)

Scale Content	χ^2	*df*	χ^2/df	*p*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full 5 items	15.16	5	3.08	0.01	0.99	0.95	0.03	0.07
Out Kreng2t	1.98	2	0.99	0.37	0.99	0.98	0.01	0.00
Out Kreng6_1	0.00	0	-	-	1.00	-	0.00	0.00

5.4.4 Mai Pen Rai Value

Mai pen rai was initially a five-item measurement model with a range of standardized residual covariances from 3.62 to 7.78. Mai6_1 was dropped first because it had a large standardized residual covariance value of 7.78, along with a small SMC value of 0.16. Next mai1_1 was eliminated because it had the largest standardized residual of 1.02 among remaining variables, with a negligible SMC of 0.06. A three-item mai pen rai model was retained as shown in Figure 5.4, with fit statistics in Table 5.10.

Figure 5.4 Final Mai Pen Rai Measurement Model, Standardized Estimates (*n* = 401)

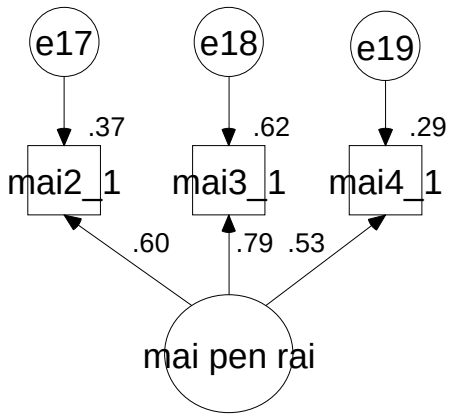

Table 5.10 Mai Pen Rai Fit Statistics (*n* = 401)

Scale Content	χ^2	*df*	χ^2/df	*p*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full 5 items	43.96	5	8.79	0.00	0.96	0.88	0.06	0.14
Out Mai6_1	5.22	2	2.61	0.07	0.99	0.97	0.02	0.06
Out Mai1_1	0.00	0	-	-	1.00	-	0.00	0.00

5.5 Measurement Models of Ethnic Thai Cultural Values

Autonomous, non-competitiveness, present oriented, and sanuk core cultural values prevalent among the Ethnic Thai group were examined next. Similar to preceding CFA analyses, the objective was to develop adequate measurement scales by either eliminating or identifying weak items.

5.5.1 Autonomous Value

Autonomous was initially a five-item measurement model. CFA results indicated that aut8_1 had the highest standardized residual covariance value of 3.54 and the variable was removed. In the next CFA iteration, aut6_1 was removed after it was found to have the smallest SMC of 0.19, slightly lower than that of aut8_1, at 0.21. The elimination of aut6_1 also was confirmed by an unusually high standardized residual covariance of 11.06. The final autonomous measurement model was a three-item model containing one

strong indicator, one moderate indicator, and one weak indicator, shown in Figure 5.5 with fit statistics in Table 5.11.

Figure 5.5 Final Autonomous Measurement Model, Standardized Estimates (*n* = 170)

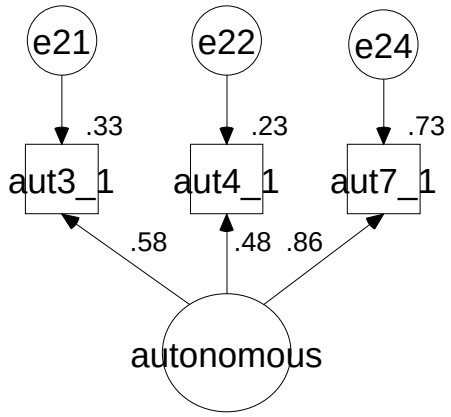

Table 5.11 Autonomous Fit Statistics (*n* = 170)

Scale Content	χ^2	*df*	χ^2/df	*p*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full 5 items	9.75	5	1.95	0.08	0.98	0.94	0.04	0.07
Out Aut8_1	0.33	2	0.16	0.85	1.00	1.00	0.01	0.00
Out Aut6_1	0.00	0	-	-	1.00	-	0.00	0.00

5.5.2 Non-Competitiveness Value

The initial five-item measurement model for non-competitiveness showed a range of standardized residual covariances from 1.38 to 3.77. The initial lack of fit came from noncom_6, which had a low SMC value of 0.39 and the largest standardized residual covariance, 3.77. After removal of noncom_6, standardized residual covariances improved greatly. Noncom_7 was next to be eliminated, having the largest standardized residual covariance of 0.37. Non-competitiveness now had a better fitting model with three items: noncom_1; noncom_3; and noncom_5, shown in Figure 5.6 with fit statistics in Table 5.12.

Figure 5.6 Final Non-Competitiveness Measurement Model, Standardized Estimates (*n* = 170)

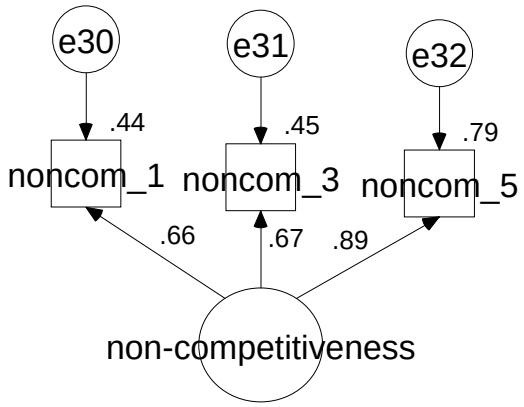

Table 5.12 Non-Competitiveness Fit Statistics (*n* = 170)

Scale Content	X^2	*Df*	χ^2/df	*P*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full 5 items	22.93	5	4.58	0.00	0.95	0.85	0.05	0.14
Out Noncom_6	0.42	2	0.21	0.80	0.99	0.99	0.00	0.00
Out Noncom_7	0.00	0	-	-	1.00	-	0.00	0.00

5.5.3 Present Oriented Value

The original present oriented value scale had four items. Initial CFA results showed standardized residual covariances ranging from 1.26 to 2.67. Presen_5 was the weakest indicator; with the largest standardized residual covariance and an SMC of 0.13, and was removed. The final present oriented model had low SMC values for two scale items: presen_1 and presen_2, as shown in Figure 5.7 with fit statistics in Table 5.13.

Figure 5.7 Final Present Oriented Measurement Model, Standardized Estimates (*n* = 170)

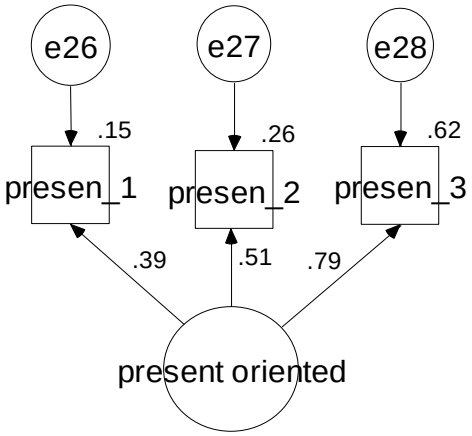

Table 5.13 Present Oriented Fit Statistics (*n* = 170)

Scale Content	X^2	*Df*	χ^2/df	*P*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full 4 items	7.03	2	3.52	0.03	0.98	0.90	0.04	0.11
Out Presen_5	0.00	0	-	-	1.00	-	0.00	0.00

5.5.4 Sanuk Value

The sanuk construct initially was measured by a five-item scale with standardized residual covariances ranging from 1.51 to 3.48. Despite sanuk6_1 having a relatively high SMC of 0.38, it had the largest standardized residual of 3.48 and was thus removed in the first CFA iteration. Sanuk1_1 was considered a weak item due to its low SMC of 0.14 and was removed in the next CFA iteration. Sanuk ended as a three-item measurement model, shown in Figure 5.8 with fit statistics in Table 5.14.

Figure 5.8 Final Sanuk Measurement Model, Standardized Estimates (*n* = 170)

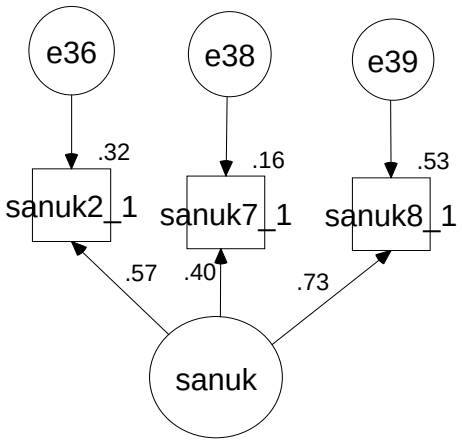

Table 5.14 Sanuk Fit Statistics (*n* = 170)

Scale Content	χ^2	*df*	χ^2/df	*p*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full 5 items	15.11	5	3.02	0.01	0.96	0.90	0.05	0.10
Out Sanuk6_1	0.26	2	0.13	0.87	0.99	0.99	0.00	0.00
Out Sanuk1_1	0.00	0	-	-	1.00	-	0.00	0.00

5.6 Measurement Models of Chinese Thai Cultural Values

The last ethnic group whose core cultural values are a focus of this study is the Chinese Thai group. Core cultural values for this group consist of family oriented, future oriented, risk aversion, and thrift.

5.6.1 Family Oriented Value

The family oriented value scale initially contained five items with a range of standardized residual covariances from 1.01 to 2.86. The two weakest items—fam3_1 and fam7_1—were eliminated over two CFA iterations given their very low SMC values of 0.09 and 0.05, respectively. These two items also had high standardized residual covariances. The final three-item measurement model shown in Figure 5.9 achieved better fit and was retained for further analysis. Fit statistics are shown in Table 5.15.

Figure 5.9 Final Family Oriented Measurement Model, Standardized Estimates (*n* = 144)

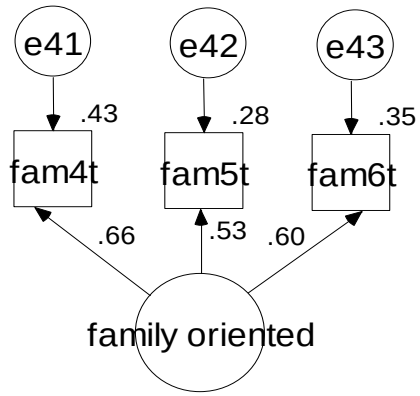

Table 5.15 Family Oriented Fit Statistics (*n* = 144)

Scale Content	χ^2	*df*	χ^2/df	*p*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full 5 items	5.08	5	1.01	0.40	0.98	0.96	0.33	0.01
Out fam3_1	0.92	2	0.46	0.63	0.99	0.98	0.01	0.00
Out fam7_1	0.00	0	-	-	1.00	-	-	0.00

5.6.2 Future Oriented Value

The future oriented scale initially contained five items. The range of standardized residual covariances was from 1.49 to 6.52. Future_2 was first to be removed owing to a negligible SMC value at 0.00, while the item also had a very large standardized residual covariance of 5.43. In the next CFA iteration, future1t was removed because of high standardized residual covariance value and a low SMC, 0.10. The resulting three-item future oriented scale shown in Figure 5.10 contained future_4, future_5, and future_6. Future_4 was noted as a candidate for future elimination based on its low SMC value. Fit statistics appear in Table 5.16.

Figure 5.10 Final Future Oriented Measurement Model, Standardized Estimates (*n* = 144)

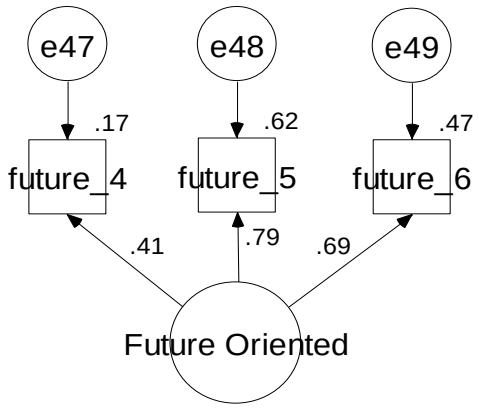

Table 5.16 Future Oriented Fit Statistics (*n* = 144)

Scale Content	χ^2	*df*	χ^2/df	*p*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full 5 items	27.10	5	5.42	0.00	0.93	0.78	0.10	0.17
Out future1t	4.910	2	2.45	0.09	0.98	0.92	0.05	0.10
Out future_2	0.00	0	-	-	1.00	1.00	0.00	0.00

5.6.3 Risk Aversion Value

Risk aversion was originally measured by a five-item scale. Risk6_1 was first to be trimmed, having a high residual value of 4.94. In the second CFA iteration, standardized residual covariance values ranged from 2.31 to 4.04. Risk7_1 was trimmed for having a high standardized residual 1.81 as well as a negligible SMC of 0.00. With three items, the final risk aversion model as shown in Figure 5.11 is just identified. The model reflects an inadmissible solution with an SMC for risk3_1 greater than 1.00. One or more indicators must be removed in the subsequent four-factor CFA analysis.

Figure 5.11 Final Risk Aversion Measurement Model, Standardized Estimates (*n* = 144)

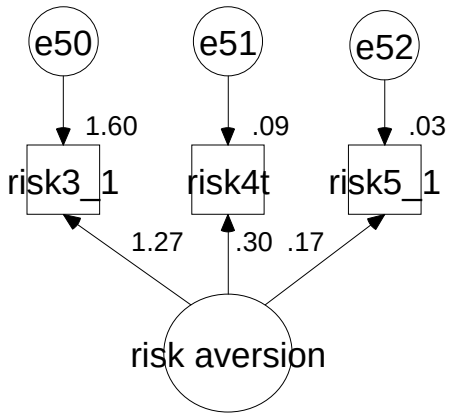

Table 5.17 Risk Aversion Fit Statistics (*n* = 144)

Scale Content	χ^2	*df*	χ^2/df	*p*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full five Items	12.20	5	2.44	0.03	0.97	0.91	0.06	0.10
Out Risk6_1	3.19	2	1.59	0.20	0.99	0.95	0.05	0.06
Out Risk7_1	0.00	0	-	-	1.00	-	0.00	0.00

5.6.4 Thrift Value

Thrift originally was a five-item measurement model. The range of standardized residual covariances in the first CFA iteration varied from 1.35 to 3.39. The largest standardized residual covariance came from thrift_1. In the second CFA iteration, the next lack of fit to be dealt with was thrift_2 with an SMC of 0.11. In addition, thrift_2 also had a high standardized residual covariance of 0.86 when remaining items had residual covariance values ranged from 0.25 to 0.63. The final three-item measurement for thrift is shown in Figure 5.12.

Figure 5.12 Final Thrift Measurement Model, Standardized Estimates (*n* = 144)

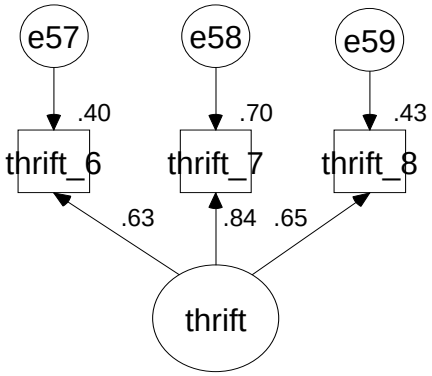

Table 5.18 Thrift Fit Statistics (*n* = 144)

Scale Content	χ^2	*df*	χ^2/df	*p*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full five items	3.91	5	2.78	0.02	0.97	0.90	0.05	0.11
Out Thrift_1	0.78	2	0.39	0.68	1.00	0.99	0.01	0.00
Out Thrift_2	0.00	0	-	-	1.00	-	0.00	0.00

5.7 Summary of Single-Factor Measurement Models of Core Cultural Values

Single-factor CFAs resulted in the deletion of 23 measurement items, leaving 36 items measuring 12 core cultural value constructs. Eight of these 36 items (confro_6, aut4_1, presen_1, sanuk7_1, future_4, and the three risk items) had SMC values less than 0.25 but were retained for the four-factor CFA measurement models.

Fit statistics for all 12 single-factor measurement models indicate perfect fit because all models are just identified. Thus, it is informative to examine fit statistics for the next to last or penultimate measurement models. Of the 12 penultimate models, nine show excellent fit with SRMR less than 0.02. Two penultimate models—present oriented and future oriented—show acceptable fit with *SRMR* less than 0.05. The measurement model for risk aversion shows an inadmissible solution. Of the 33 indicators (all indicators but those for risk aversion), 21 have SMC values greater than or equal to 0.35. Seven have SMC values between 0.25 and 0.34, and the remaining five indicators having SMC values less than 0.25.

5.8 Pairwise and Four-Factor Models of Core Cultural Values

With single-factor models finalized, all core cultural values constructs next were submitted to pairwise and four-factor CFAs using core cultural values identified as central to each ethnic group. Objectives again were to address issues of convergent and discriminant validity of constructs. Eighteen pairwise CFA models were estimated, six for each group, with the goal of identifying weak measurement items common to each group. The procedure proved ineffective in that identities of weak items changed from one pairwise CFA to another. In contrast, the four-factor CFA models were useful in identifying and removing weak measurement items.

5.8.1 Four-Factor Model of Core Cultural Values for Thai Nationals

Results of the four-factor model of Thai national core cultural values shown in Figure 5.13 indicate that mai3_1 was the source of lack of fit. Standardized residual values ranged from 6.31 to 11.01, with mai3_1 having the largest value, followed by mai4_1 with a value of 10.27. Hence, mai3_1 was removed and the four-factor CFA model rerun. Results indicated that next lack of fit was coming from confro_6 with a standardized residual value of 7.50, followed closely by kreng1_1 with 7.02. Confro_6 was removed and further analyses showed no improvement in fit. The resulting four-factor measurement model shown in Figure 5.13 fits observed data fairly well, as described by fit statistics in Table 5.19. Correlations among the four factors range from -0.08 between face saving and mai pen rai to 0.55 between confrontation avoidance and mai pen rai. Several other large correlations also can be seen in the Figure.

Figure 5.13 Four-Factor Measurement Model of Thai Nationals Core Cultural Values, Standardized Estimates (*n* = 401)

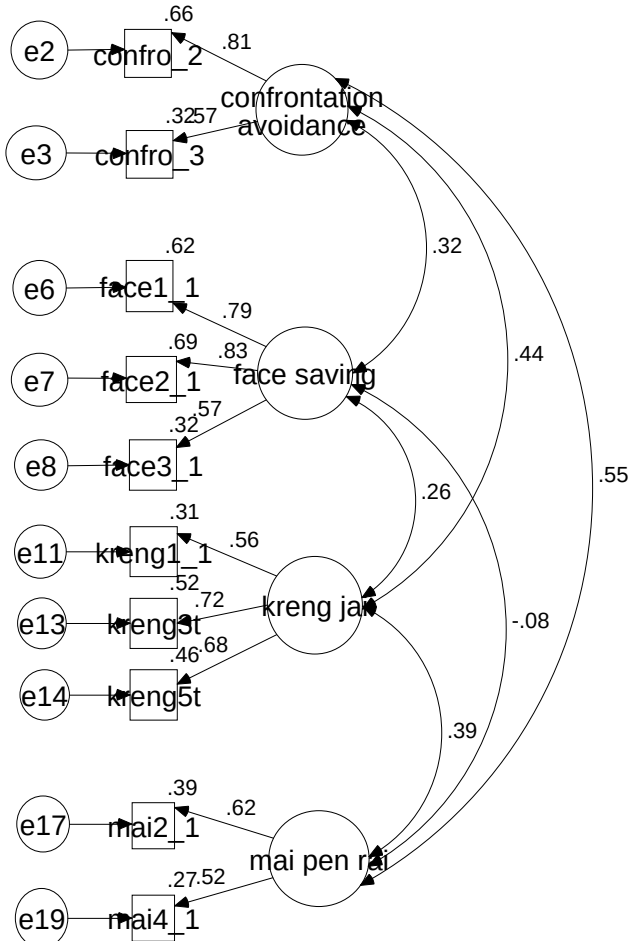

Table 5.19 Thai National Cultural Values Fit Statistics (*n* = 401)

Scale Content	χ^2	*df*	χ^2/df	*p*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full 12 items	81.16	48	1.69	0.22	0.97	0.95	0.05	0.04
Out Mai3_1	54.12	38	1.42	0.04	0.98	0.96	0.03	0.03
Out Confro_6	41.11	29	1.42	0.07	0.98	0.96	0.03	0.03

5.8.2 Four-Factor Model of Ethnic Thai Cultural Values

Results of the initial four-factor model for the Ethnic Thai group found standardized residuals ranging from 4.51 to 14.32. Examination indicated that aut4_1 should be removed based on its large standardized residual value of 14.32. Aut4_1 was the only item having a large standardized residual and a small value SMC of 0.24. Despite the

final measurement model showing a good fit, a problem is indicated with aut3_1 having an SMC value greater than 1.00. Correlations among the four factors are generally small and not significant.

Figure 5.14 Four-Factor Measurement Model of Ethnic Thai Core Cultural Values, Standardized Estimates (*n* = 170)

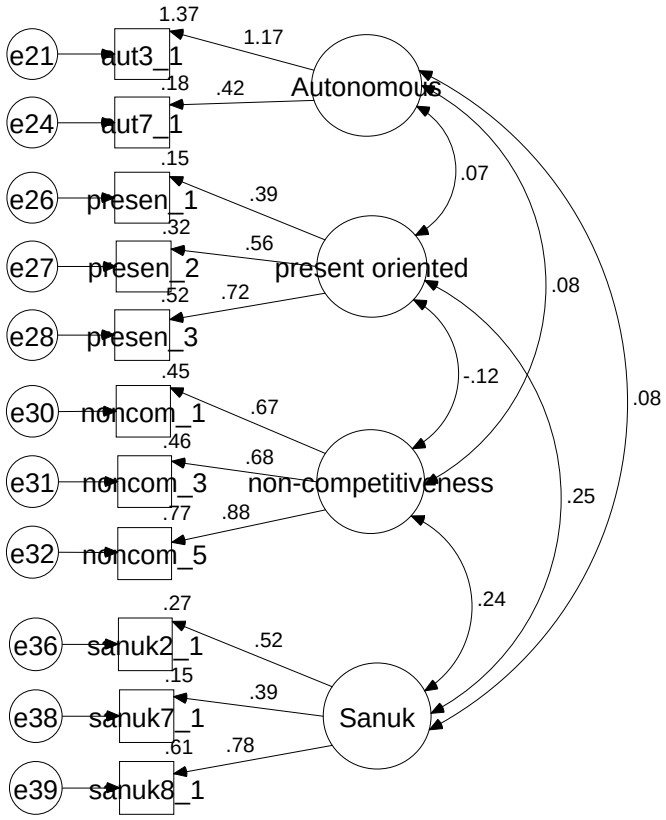

Table 5.20 Ethnic Thai Cultural Values Fit Statistics (*n* = 170)

Scale Content	χ^2	*df*	χ^2/df	*p*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full 12 items	95.80	48	2.00	0.00	0.92	0.87	0.80	0.07
Out Aut4_1	65.98	38	1.74	0.00	0.94	0.88	0.07	0.06

5.8.3 Four-Factor Model of Chinese Thai Cultural Values

Results of the initial four-factor model for the Chinese Thai group indicated that future_4 should be removed based on its large standardized residual value of 9.56. The final measurement model in Figure 5.15 now fits observed data quite well. Correlations between future oriented, risk aversion, and thrift are all large in contrast to correlations for family oriented.

Figure 5.15 Four-Factor Measurement Model of Chinese Thai Core Cultural Values, Standardized Estimates (*n* = 144)

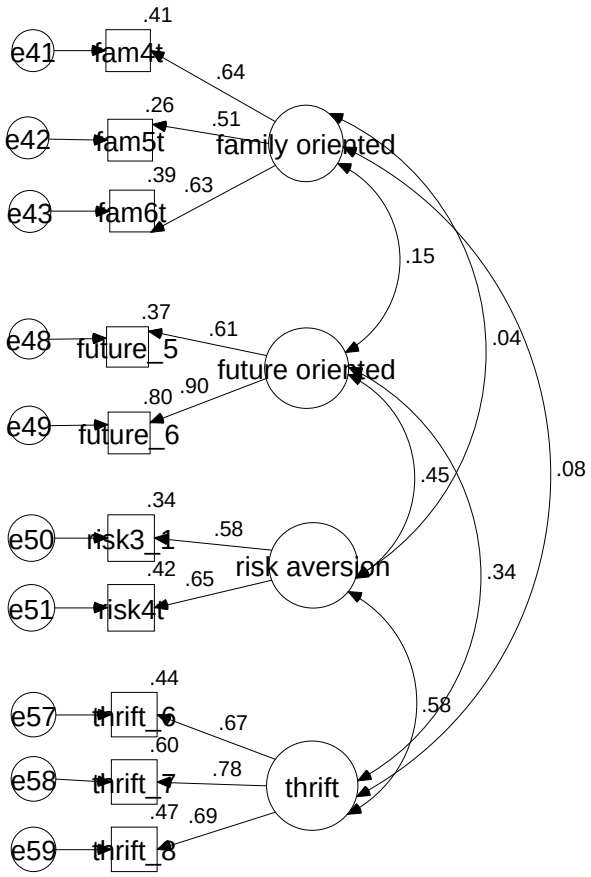

Table 5.21 Chinese Thai Cultural Values Fit Statistics (*n* = 144)

Scale content	χ^2	*df*	χ^2/df	*p*	*GFI*	*AGFI*	*SRMR*	*RMSEA*
Full 12 items	56.215	38	1.14	0.03	0.96	0.94	0.06	0.06
Out Future_4	32.264	29	1.11	0.31	0.96	0.92	0.05	0.03

5.8.4 Summary of Four-Factor Core Cultural Values Measurement Models of the Three Groups

Overall good measurement models were derived from CFA analyses, (but for autonomous construct) based on guidelines shown in Table 5.6. Weak measures were trimmed, leaving only items with relatively strong measurement properties. All four-factor measurement models had *GFI*, *AGFI,* and *SRMR* values approaching or exceeding required criteria, indicating adequate fit of models to their data. Correlations among factors often were large except for the Ethnic Thai group, indicating the possibility of a higher order factor as an ultimate expression of core cultural values for the Thai National and Chinese Thai groups.

5.9 Correlations of Core Cultural Scales and Consumption Attitude Constructs

This section presents observed correlations of the 13 core cultural value scales consisting of summed items (as identified in Figure 5.13, 5.14, and 5.13) for each scale. The section also includes details of measurement properties for the core cultural value scales—factor loadings, Cronbach's alpha, composite reliability, and average variance extracted. The section concludes with similar details for the collectivism scale and the six remaining consumption attitude measures (see Table 5.23).

Table 5.22 presents observed correlations of core cultural value scales for the entire sample. In general, observed correlations show that the 12 core cultural value scales are relatively independent; no scale has a large relationship with any other scale except for the correlation between risk aversion and thrift at 0.42. Average absolute value of observed correlations is 0.14 with many observed correlations close to zero.

Table 5.23 presents a summary of measurement properties of final measurement scales for core cultural values, collectivism, and consumption attitudes. For the sake of space, CFA results for collectivism and the six consumption attitude scales are not reported. In general, the summary of measurement properties shows acceptable values for most measurements, the exceptions being scales for mai pen rai and risk aversion. The

collectivism and six consumption attitude scales show generally more favorable measurement properties than the newly developed core cultural value scales, a not unexpected result.

In accordance with Proposition 2, correlations of the 13 core cultural value scales were examined to determine their associations with the consumption attitude scales. Table 5.24 provides correlations by ethnic group.

Results show that six of the 13 core cultural value scales exhibit fairly consistent patterns of significant associations with the consumption attitude scales. The sanuk scale has significant associations with all six consumption attitudes, followed by the face saving, autonomous, present oriented, non-competitiveness, and future oriented scales, each with five significant associations. When viewed from a consumption attitude perspective, five consumption attitude scales have six or more significant associations with core cultural values, namely brand conscious, fashion conscious, impulse buying, materialism, and money attitude. In total, results in Table 5.24 indicate that many broad, indigenous core cultural values are associated with several rather specific consumption attitudes. These significant relationships indicate potential for core cultural values to predict consumption intentions, the focus of the next section. Based on results in Table 5.24, Proposition 2 is strongly supported for the Ethnic Thai group and moderately supported for the Thai National and Chinese Thai groups.

Table 5.22 Observed Correlations of Core Cultural Value Scales, Scale Means, and Scale Standard Deviations* (*n* = 401)

	Number of Items	Mean	Standard Deviation	Correlation Matrix											
				1	2	3	4	5	6	7	8	9	10	11	12
1. Confrontation Avoidance	2	9.50	2.24												
2. Face Saving	3	13.48	3.40	0.25											
3. Kreng Jai	3	4.19	1.61	0.25	0.18										
4. Mai Pen Rai	2	9.20	2.06	0.30	-0.01	0.17									
5. Autonomous	2	5.61	2.66	0.11	0.03	0.13	0.16								
6. Present Oriented	3	10.46	3.83	0.03	0.00	0.00	0.13	0.11							
7. Non-Competitiveness	3	10.39	3.81	-0.11	0.18	0.01	-0.11	0.07	-0.06						
8. Sanuk	3	12.44	3.19	-0.07	0.11	-0.02	0.00	0.08	0.16	0.21					
9. Family Oriented	3	-0.58	0.51	0.04	0.25	0.12	0.15	-0.09	0.06	0.03	0.20				
10.Future Oriented	2	8.81	2.08	0.05	0.26	0.12	0.05	0.04	0.05	0.20	0.21	0.13			
11.Risk Aversion	2	4.60	1.27	0.19	0.14	0.23	0.14	-0.04	0.01	0.05	0.05	0.19	0.31		
12.Thrift	3	15.09	2.62	0.16	0.12	0.14	0.23	0.04	0.10	-0.04	0.02	0.19	0.22	0.42	

Correlations whose absolute values exceed 0.10 are significant at $p < 0.05$, two-tail.

Table 5.23 Summary of Final Measurement Properties

Measure	*Factor Loading*	*Coefficient Alpha*	*Composite Reliability*	*Average Variance Extracted*
Core Cultural Values of Thai Nationals (*n* = 401)				
Confrontation Avoidance		0.63	0.66	0.50
Confro_2	0.81			
Confro_3	0.57			
Face Saving		0.77	0.78	0.55
Face1_1	0.79			
Face2_1	0.83			
Face3_1	0.57			
Kreng Jai		0.69	0.69	0.43
Kreng1_1	0.56			
Kreng3t	0.72			
Kreng5t	0.68			
Mai Pen Rai		0.48	0.49	0.33
Mai2_1	0.62			
Mai4_1	0.52			
Collectivism		0.72	0.74	0.36
Collect1t	0.60			
Collect2t	0.66			
Collect3t	0.72			
Collect4t	0.54			
Collect6t	0.46			
Core Cultural Values of Ethnic Thais (*n* = 170)				
Autonomous		0.61	0.85	0.77
Aut3_1	1.17			
Aut7_1	0.42			
Present Oriented		0.60	0.68	0.34
Presen_1	0.39			
Presen_2	0.56			
Presen_3	0.72			
Non-Competitiveness		0.81	0.79	0.56
Noncom_1	0.67			
Noncom_3	0.68			
Noncom_5	0.88			
Sanuk		0.59	0.59	0.34
Sanuk2_1	0.52			
Sanuk7_1	0.39			
Sanuk8_1	0.78			
Core Cultural Values of Chinese Thais (*n* = 144)				
Family Oriented		0.62	0.62	0.37
Fam4t	0.64			
Fam5t	0.51			
Fam6t	0.63			
Future Oriented		0.61	0.73	0.59
Future_5	0.61			
Future_6	0.90			
Risk Aversion		0.56	0.55	0.38
Risk3_1	0.58			
Risk4t	0.65			
Thrift		0.72	0.76	0.51
Thrift_6	0.67			
Thrift_7	0.78			
Thrift_8	0.69			

Table 5.23 (Continued) Summary of Final Measurement Properties (*n* = 401)

Measure	*Factor Loading*	*Coefficient Alpha*	*Composite Reliability*	*Average Variance Extracted*
Materialism		0.74	0.74	0.58
Mat2_1	0.64			
Mat4_1	0.71			
Mat5_1	0.73			
Variety Seeking		0.81	0.81	0.52
Varsee_1	0.80			
Varsee_2	0.70			
Varsee_3	0.70			
Varsee_4	0.68			
Impulse Buying		0.75	0.79	0.43
Impul2_1	0.63			
Impul3_1	0.68			
Impul4_1	0.69			
Impul5_1	0.64			
Fashion Conscious		0.79	0.80	0.57
Fashco_2	0.63			
Fashco_3	0.82			
Fashco_4	0.80			
Money Attitude		0.77	0.78	0.54
Moneya_2	0.79			
Moneya_3	0.58			
Moneya_5	0.82			
Brand Conscious		0.70	0.71	0.54
Brand1_1	0.74			
Brand2_1	0.74			

Table 5.24 Correlations of Core Cultural Values with Consumption Attitudes* (*n* = 401)

	Brand Conscious	Fashion Conscious	Impulse Buying	Materialism	Money Attitude	Variety Seeking
Thai National Core Cultural Values (*n* = 401)						
Confrontation avoidance	-0.06	0.10	0.06	0.05	0.09	-0.11*
Face saving	0.16*	0.29*	0.12*	0.32*	0.17*	0.10
Kreng jai	-0.04	0.04	-0.04	0.10*	0.05	-0.08
Mai pen rai	0.05	0.13*	0.04	0.05	0.04	0.02
Collectivism	-0.00	0.10*	0.13*	0.02	0.01	0.08
Ethnic Thai Core Cultural Values (*n* = 170)						
Autonomous	0.19*	0.20*	0.17*	0.20*	0.21*	-0.04
Present oriented	0.16*	0.20*	0.13*	0.05	0.11*	0.24*
Non-competitiveness	0.18*	0.20*	0.16*	0.27*	0.31*	0.10
Sanuk	0.14*	0.20*	0.19*	0.25*	0.15*	0.26*
Chinese Thai Core Cultural Values (*n* = 144)						
Family oriented	-0.02	0.10	-0.04	0.02	-0.04	0.06
Future oriented	0.12*	0.19*	0.13*	0.17*	0.18*	0.07
Risk aversion	-0.04	0.06	-0.15*	0.06	0.00	-0.03
Thrift	-0.12*	-0.01	-0.17*	-0.01	-0.03	-0.00

*Significant at $p < 0.05$, two-tail.

5.10 Hypothesized Relationships

This section describes tests of hypotheses indicated by Proposition 1 and 3 as stated in Chapter 3. Expectations are that all Thais—Ethnic Thais, Chinese Thais, and Mixed Ethnic Thais—share core cultural values to varying degrees (Proposition 1) and exhibit hypothesized relationships between core cultural values and consumption intentions (Proposition 3). The first expectation is investigated in this section in terms of mean differences on the 13 core cultural values among the three groups. This analysis examines whether subsequent testing of association between Thai National core cultural values with consumption intentions should be based on the entire sample (n = 401) or be conducted on each ethnic group. The section then continues with formal investigation of the second expectation in the form of 13 hypothesis tests.

Tables 5.25 and 5.26 present one-way ANOVA results for core cultural values and consumption intention scenarios with respect to Ethnic Thai, Chinese Thai, and Mixed Ethnic Thai groups. Table 5.25 indicates few group differences on core cultural value scales, except for the confrontation avoidance and present oriented value scales. Table 5.26 shows only two of the 12 consumption intention scenarios have significant mean differences, indicating again similarity among the three groups. Both results fail to support Proposition 1 and justify using the entire sample for testing hypotheses between Thai National core cultural values and consumption intentions as stated and discussed in Chapter 3.

Table 5.25 One-Way ANOVA Results of Core Cultural Values Differences by Ethnic Groups

Core Cultural Values	Means for			*F*	*p*
Thai National Values	**Ethnic Thai (*n* = 170)**	**Chinese Thai (*n* = 144)**	**Mixed Ethnic Thai (*n* = 87)**		
Confrontation avoidance	9.84	9.11	9.50	4.21	0.02
Face saving	13.66	13.03	13.86	2.02	0.13
Kreng jai	4.31	4.00	4.28	1.63	0.20
Mai pen rai	9.43	8.99	9.10	1.98	0.14
Collectivism	3.45	3.03	3.26	2.29	0.10
Ethnic Thai Values					
Autonomous	5.71	5.48	5.62	0.30	0.74
Non-competitiveness	10.22	10.63	10.31	0.47	0.62
Present oriented	11.04	9.85	10.32	3.87	0.02
Sanuk	12.58	12.51	12.04	0.90	0.41
Chinese Thai Values					
Family oriented	-0.57	-0.55	-0.64	0.87	0.42
Future oriented	9.05	8.56	8.77	2.20	0.11
Risk aversion	4.55	4.59	4.72	0.55	0.57
Thrift	15.09	15.02	15.21	0.14	0.87

Table 5.26 One-Way ANOVA Results of Consumption Intention Scenarios Differences by Ethnic Group

	Means for			*F*	*p*
Consumption Scenarios	**Ethnic Thai (*n* = 170)**	**Chinese Thai (*n* = 144)**	**Mixed Ethnicity (*n* = 87)**		
Dissatisfying Jeans Purchase	0.36	0.36	0.38	0.02	0.98
Embarrassing Home Buying	0.85	0.83	0.80	0.14	0.87
Praising Handbag	0.69	0.65	0.69	0.46	0.63
Buying Chipped Vase	0.33	0.37	0.29	0.81	0.45
Buying New Mobile Phone	0.76	0.82	0.80	0.17	0.84
Ethnic Thai Values					
Paying Credit Card Balance	1.27	1.47	1.39	5.62	0.00
Envying Successful Friend	0.44	0.31	0.37	2.83	0.06
Buying New Car	0.12	0.16	0.18	1.15	0.32
Choosing Favorite TV Program	0.60	0.67	0.59	1.02	0.36
Opening New Bank Account	0.26	0.19	0.09	5.47	0.00
Chinese Thai Values					
Buying Greeting Card	0.77	0.71	0.80	1.54	0.22
Used Car buying	0.12	0.16	0.18	1.15	0.32
Watching Unplanned Movie	0.13	0.15	0.08	1.09	0.34
Replacing Old Mobile Phone	0.25	0.26	0.21	0.33	0.72

Hypothesis 1

The confrontation avoidance value refers to "a belief that a person should avoid getting into conflicts with others." A one-way ANOVA was used to test H1. Three possible consumption intention responses are possible in the scenario, a dissatisfying jeans purchase: "*Do nothing*;" "*Call manufacturer and ask for help*;" and "*Bring jeans back to retailer and demand refund*." Because the first two intentions are close in terms of signaling little confrontation avoidance they are combined and given a new name "*Take a soft approach*" for data analysis.

Hypothesis 1: The confrontation avoidance value is associated with confrontation avoidance consumption intentions.

Results in Table 5.27 did not reveal a significant relationship between the confrontation avoidance value and consumption intentions F (1, 399) = 0.57, $p < 0.45$, $\eta^2 =$ 0.00. Despite directions of mean values being as hypothesized in H1, the mean values for the confrontation avoidance value scale for the "*Take a soft approach"* group is not significantly different from the mean for intended confrontation seeking group, "*Bring jeans back to retailer and demand refund,*" The null hypothesis of equal means is not rejected and H1 is not accepted. No significant relationship between the confrontation avoidance value and consumption intentions is found in the dissatisfying jeans purchase situation.

Table 5.27 ANOVA Results for Confrontation Avoidance Value and Dissatisfying Jeans Purchase (*n* = 401)

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	2.85	1	2.85	0.57	0.45
Within Groups	2006.67	399	5.03		
Total	2009.52	400			

	Confrontation Avoidance				
Dissatisfying Jeans Purchase Behavior	***n***	**Scale Mean**	**Scale Std. Deviation**	***η***	***η*²**
Taking a soft approach	289	9.56	2.12	0.04	0.00
Bring jeans to retailer and demand refund	112	9.37	2.53		
Total	401				

Hypothesis 2

The face saving value refers to "a belief that a person should exhibit behaviors and actions known to others that will accrue esteem, regard, and good opinion." The consumer intention scenario for face saving is a situation where a person may attempt to hide the identity of a previous outlaw home owner. Three possible intention responses are possible: "*I would not tell my friends no matter what*;" "*I would reveal only when others asked about it*;" and "*I would beat around the bush before changing the topic of discussion*."

Hypothesis 2: The face saving value is associated with face saving consumption intentions.

Because the first consumption intention response and the third are close in terms of intention toward face saving intentions, the two responses are collapsed and given a new name "*Not intending to reveal the identity.*" According to H2, the face saving value should guide consumption intentions in such a way that respondents would try to hide the identity of a previous outlaw homeowner. ANOVA is used to test the association between the face saving value and consumption intentions. As shown in Table 5.28, results did not find a significant relationship between the face saving value scale and intentions toward covering up the identity of the previous home owner, F (1, 399) = 0.23, $p > 0.63$, $\eta^2 = 0.00$. The null hypothesis of equal means is not rejected and H2 is not supported. There appears to be no association between the face saving value and consumer intention in this scenario.

Table 5.28 ANOVA Results for Face Saving Value and Embarrassing Home Buying (n = 401)

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	2.64	1	2.64	0.23	0.63
Within Groups	4628.28	399			
Total	4630.92	400			

		Face Saving			
Embarrassing Home Buying Behavior	***n***	**Scale Mean**	**Scale Std. Deviation**	***η***	***η²***
Not intending to reveal the identity	217	13.55	3.35	0.02	0.00
Reveal only when others asked	184	13.39	3.47		
Total	401				

Hypothesis 3

The third Thai National value to be tested with consumption intentions was kreng jai. The value can be defined as "a belief that a person should be self-effacing, respectful, humble, and considerate so as to avoid intruding upon others." The consumption intention scenario for kreng jai analysis is a situation where respondents must decide whether or not to pay a compliment on a new bag carried by a friend. Two intention choices are possible—*"Doing nothing"* and *"Praising new handbag"*. The former implies not being kreng jai while the latter implies being kreng jai.

Hypothesis 3: The kreng jai value is associated with kreng jai consumption intentions.

Table 5.29 presents ANOVA results for the analysis. The mean value for "*Doing nothing*" and "*Praising new handbag*" are statistically different but in a reverse direction. Respondents who intended to give praise to a friend carrying a new handbag have a mean value of 4.08 on the kreng jai scale while respondents who intended to do nothing have a mean value of 4.43. A significant association is found between the kreng jai value and intention to pay a compliment about a friend's handbag, F (1,399) = 4.31, $p < 0.04$, $\eta^2 = 0.01$. The null hypothesis of equal means is rejected but H3 is not supported because results are in a direction opposite to that expected.

Table 5.29 ANOVA Results for Kreng Jai Value and Praising Handbag (n = 401)

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	11.11	1	11.11	4.31	0.04
Within Groups	1028.00	399	2.58		
Total	1039.11	400			

	Kreng Jai				
Praising Handbag Behavior	***n***	**Scale Mean**	**Scale Std. Deviation**	***η***	***η²***
Doing nothing	130	4.43	1.44	0.10	0.01
Praising new handbag	271	4.08	1.68		
Total	401	4.19			

Hypothesis 4

The mai pen rai value is defined as "a belief a person should discount a potentially difficult situation by a rationalization that the situation doesn't really matter or that nothing really matters." All Thai Nationals— Ethnic Thais, Chinese Thais, and Mixed Ethnic Thais—are influenced by mai pen rai and are expected to exhibit similar behavior when situations warrant. The consumption intention scenario for the mai pen rai value is a post-purchase situation where a person discovers a defect on a newly purchased vase and has to weigh a decision to return or keep it. Two consumption intentions are possible: *"Get the vase replaced"* and *"Keep the vase."*

Hypothesis 4: The mai pen rai value is associated with mai pen rai consumption intentions.

According to H4, the mai pen rai value should guide intentions in such a way that respondents would rather keep a defective vase than return it to the retailer. ANOVA as used to test the hypothesis, with results presented in Table 5.30. Results did not reveal a significant relationship between the mai pen rai value and the intended behavior, $F(1,399) = 0.32$, $p < 0.57$, $\eta^2 = 0.00$. Respondents reported to be very mai pen rai and less mai pen rai alike did not differ in the way they would handle the situation. The null hypothesis of equal means is not rejected and H4 is not supported.

Table 5.30 ANOVA Results for Mai Pen Rai Value and Buying Chipped Vase (n = 401)

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	1.34	1	1.34	0.32	0.57
Within Groups	1693.29	399	4.24		
Total	1694.63	400			

	Mai Pen Rai				
Buying Chipped Vase	***n***	**Scale Mean**	**Scale Std. Deviation**	***η***	***η²***
Get the vase replaced	267	9.16	2.11	0.28	0.00
Keep the vase	134	9.28	1.96		
Total	401				

Hypothesis 5

In the present study, the collectivism value is included to examine its effects in a Thai consumption intentions context. It is hypothesized that Thai Nationals are expected to exhibit behaviors consistent with collectivist values that emphasize group harmony. The consumption intention scenario involves an intention to buy a new mobile phone from three alternatives: "*Choosing a conventional model that everyone uses;*" "*Choosing a non-conventional model that is not widely used but has slightly better features*" and "*Choosing the least well-known brand but has the best features.*"

Hypothesis 5: The collectivism value is associated with collectivism consumption intentions.

Because the second and third alternatives are similar in terms of their being less popular brands, the two responses are collapsed and named "*Choosing a less popular brand*." The association between the collectivism value scale and consumption intentions is shown in Table 5.31 and is significant (one-tail $p < 0.05$, with mean values in the expected direction), F (1, 399) = 2.62, $p < 0.10$, $\eta^2 = 0.01$. Based on the analysis, there is a tendency for Thai Nationals to buy a conventional model mobile phone rather than a non-conventional model. H5 is hence supported.

Table 5.31 ANOVA Results for Collectivism Value and Choosing New Mobile Phone (n = 401)

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	7.69	1	7.69	2.62	0.10
Within Groups	1172.04	399	2.94		
Total	1179.73	400			

	Collectivism				
Choosing new mobile phone	***n***	**Scale Mean**	**Scale Std. Deviation**	***η***	***η²***
Choosing a conventional model that everyone uses	286	3.34	1.60	0.08	0.01
Choosing a less popular brand	114	3.04	1.97		
Total	400				

Hypothesis 6

The autonomous value is defined as a "belief that a person should take an action based on personal will and individual freedom and should consider reciprocal obligations and expectations to be flexible rather than regimented." The consumption intention scenario for the autonomous value involved making a personal financial decision on an outstanding credit card balance when it comes due. Three consumption intentions are possible: "*Pay off outstanding balance*;" "*Pay a minimum fee*," and "*Wait until enough money is available to settle entire balance*."

Hypothesis 6: The autonomous value held among Ethnic Thais is associated with autonomous consumption intentions.

Because "*Pay off outstanding balance on my credit card*," and "*Pay a minimum fee*" are close in terms of intentions to be responsible (which run contrary to autonomous value), the two are collapsed and renamed "*Be responsible and take initiative to address the obligation.*" According to H6, the autonomous value is expected to guide behavior of Ethnic Thai individuals such that they would wait until money is available to pay the entire balance. ANOVA is used to test H6, with results shown in Table 5.32. The mean autonomous scale value for respondents choosing "*Wait until enough money is available to settle entire balance*" is not statistically different from the mean for respondents

choosing "*Be responsible and take initiative to address the obligation.*" However, only six of the 170 respondents chose the "wait" response, making the result doubtful and leading to a conclusion that the scenario itself was flawed.

Table 5.32 ANOVA Results for Autonomous Value and Paying Credit Card Balance (*n* = 170)

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	13.15	1	13.15	1.68	0.20
Within Groups	1314.95	168	7.83		
Total	1328.10	169			

	Autonomous				
Paying credit card balance	***n***	**Scale Mean**	**Scale Std. Deviation**	***η***	***η*²**
Wait until money is available to pay balance	6	7.17	3.19	0.10	0.01
Be responsible and take initiative to address the obligation	164	5.66	2.78		
Total	400				

Hypothesis 7

The non-competitiveness value is defined as *"a belief that a person should avoid discerning the progress of others relative to one's own progress and should favor actions and behaviors that avoid personal rivalry.*" The consumption intention scenario for the non-competitiveness value involved a realization that close friends were now successful in their careers, allowing them to consume a lot of premium branded products. Two possible consumption intentions are possible: "*Be indifferent and continue to be who I am,*" and "*Recognize friends' success and use them as role models*."

Hypothesis 7: The non-competitiveness value held among Ethnic Thais is associated with non-competitiveness intentions.

ANOVA was used to test H7. As shown in Table 5.33, the mean for the "*Be indifferent and continue to be who I am*" group is lower than the mean for the "*Recognize friend's success and use then as role models*" group on the non-competitiveness value scale. Measurement of the value is such that people scoring higher on the scale indicate more competitiveness in nature than people scoring lower. ANOVA results show a significant

relationship between the non-competitiveness value and consumption intentions, F (1, 168) = 6.65, $p < 0.01$, $\eta^2 = 0.04$ and H7 is therefore supported.

Table 5.33 ANOVA Results for Non-Competitiveness Value and Emulating Successful Friends (n = 170)

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	90.68	1	90.68	6.65	0.01
Within Groups	2289.13	168	13.63		
Total	2379.81	169			

		Non-Competitiveness			
Emulating Successful Friends	***n***	**Scale Mean**	**Scale Std. Deviation**	***η***	***η²***
Be indifferent and continue to be who I am	96	9.58	3.63	0.19	0.04
Recognize friends' success and use them as role models	74	11.06	3.77		
Total	170				

Hypothesis 8

The present oriented value is defined as *"a belief that a person should show continual regard for conditions and events of today and exhibit little concern about conditions and events from yesterday or for tomorrow."* The consumption intention scenario for the present oriented value involves a new car purchase situation where respondents must decide between purchasing immediately (present oriented) or delaying until their choice of car color becomes available in six weeks (future oriented).

Hypothesis 8: The present oriented value held among Ethnic Thais is associated with present oriented consumption intentions.

ANOVA is used to test H8 and results appear in Table 5.34. Results show a non-significant relationship between the present oriented value and car buying behavior, F (1,168) = 3.04, $p < 0.08$ (two-tail), $\eta^2 = 0.02$. Respondents who intended to wait on a car purchase had a mean score on the present oriented scale of 11.22, compared to respondents who intended to buy immediately with a mean score of 9.65. H8 is not supported.

Table 5.34 ANOVA Results for Present Oriented Value and Buying a New Car (*n* = 170)

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	43.54	1	43.54	3.04	0.08
Within Groups	2407.83	168	14.33		
Total	2451.37	169			

	Present Oriented				
Buying a new car	***n***	**Scale Mean**	**Scale Std. Deviation**	***η***	η^2
Wait for six weeks for the color of choice	150	11.22	3.76	0.13	0.02
Buy the car today	20	9.65	3.96		
Total	170				

Hypothesis 9

The sanuk value is defined *"a belief that a person should engage in good fun in an activity or behavior that is not too complicated and enjoy the passing moment."* The sanuk value permeates the Ethnic Thai way of life from serious tasks that contain room for people to enjoy their time to celebrated holidays and popular festivals. The consumption intention stimulus for the sanuk value is a scenario where the respondent must choose between two appealing TV programs, the first being a comedy (sanuk in content) and the other a documentary (serious in content).

Hypothesis 9: The sanuk value held among Ethnic Thais is associated with sanuk consumption intentions.

ANOVA is used to test H9 with results presented in Table 5.35. Results did not reveal a significant relationship between the choice of a TV program and the sanuk value, although mean values are in the predicted direction, F (1, 168) = 0.04, $p < 0.83$, η^2 = 0.00. H9 is not supported. There is insufficient evidence to support an association between the sanuk oriented value and intentions in choosing sanuk content in a TV program.

Table 5.35 ANOVA Results for Sanuk Value and TV Program Choice (n = 170)

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	0.44	1	0.44	0.04	0.83
Within Groups	1644.61	168	0.98		
Total	1645.05	169			

	Sanuk				
Choosing a TV program	***n***	**Scale Mean**	**Scale Std. Deviation**	***η***	η^2
Watching a comedy	68	12.65	3.26	0.02	0.00
Watching a documentary	102	12.54	3.04		
Total	170				

Hypothesis 10

The family oriented value is defined as *"a belief and a devotion that a person should protect and care for everyone in one's immediate family to the best of one's ability*." In the current analysis, the consumption intention scenario involves a situation where the respondent must choose between remembering or not remembering the birthday of a family member by a card or a gift.

Hypothesis 10: The family oriented value held among Chinese Thais is associated with family consumption intentions.

ANOVA is used to test H10 with results presented in Table 5.36. Results did not reveal a significant relationship between the choice of giving a card or gift and the family oriented value, F (1, 142) = 0.27, $p < 0.27$, $\eta^2 = 0.01$. H10 is not supported. There is insufficient evidence to support an association between the family oriented value and intentions in choosing to via giving a card or gift.

Table 5.36 ANOVA Results for Family Oriented Value and Birthday Celebration (n = 144)

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	0.31	1	0.31	1.22	0.27
Within Groups	36.23	142	0.25		
Total	36.54	143			

	Present Oriented				
Birthday celebration	***n***	**Scale Mean**	**Scale Std. Deviation**	***η***	***η²***
Not remember	42	-0.62	0.54	0.09	0.01
Remember	102	-0.52	0.49		
Total	144				

Hypothesis 11

The future oriented value is defined as "*a belief that a person should show continual regard to unseen future conditions and events and exhibit little concern about conditions and events occurring yesterday or today*." The consumer intention scenario is the same as that used with Hypothesis 8, purchasing a new car. Respondents must decide whether to wait six weeks for a car having the preferred color (future oriented intention) or to buy a car of having a second favorite color immediately (present oriented intention).

Hypothesis 11: The future oriented value held among Chinese Thais is associated with consumption intentions.

Means for the two consumption intention responses shown in Table 5.37 are not significantly different from each other, F (1, 142) = 1.54, $p < 0.22$, $\eta^2 = 0.01$. There is insufficient evidence of support for the relationship between the future oriented value and consumption intentions in the car buying scenario. H11 is not supported, although results are in the predicted direction.

Table 5.37 ANOVA Results for Future Oriented Value and Car Buying (n = 144)

New car buying	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	7.25	1	7.25	1.54	0.22
Within Groups	667.47	142	4.70		
Total	674.72	143			

		Future Oriented			
New car buying	***n***	**Scale Mean**	**Scale Std. Deviation**	η	η^2
Wait for six weeks for the color of choice	121	8.66	2.16	0.10	0.01
Buy the car today	23	8.04	2.22		
Total	144				

Hypothesis 12

The risk aversion value is defined as "*a belief that a person should avoid ambiguous situations where results have serious consequences.*" This value is one of the most prominent and frequently studied values in Chinese culture. The consumption intention scenario for the risk aversion value involves a situation where respondents must decide whether or not to watch an unplanned movie at a theatre.

Hypothesis 12: The risk aversion value held among Chinese Thais is associated with consumption intentions.

Mean values for the two intentions groups—"*Change my mind and do something else*," and "*Watch unplanned movie as suggested by the attendant*,"—are significantly different as shown in Table 5.38. Respondents who intend to do something else rather than watch an unplanned movie have higher scores on the risk aversion scale than respondents who intend to watch the unplanned movie, F (1, 142) = 5.13, $p < 0.02$, $\eta^2 = 0.03$. H12 is therefore supported.

Table 5.38 ANOVA Results for Risk Aversion Value and Watching Unplanned Movie (n = 144)

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	7.98	1	7.98	5.13	0.02
Within Groups	220.99	142	1.56		
Total	228.97	143			

	Risk Aversion				
Watching unplanned movie title	***n***	**Scale Mean**	**Scale Std. Deviation**	***η***	η^2
Change my mind and do something else	123	4.69	1.22	0.19	0.03
Watch unplanned movie as suggested by the attendant	21	4.02	1.41		
Total	144				

Hypothesis 13

The thrift value is defined as "*a belief that a person should be restrained in acquiring and using economic resources to achieve goals.*" The consumption intention scenario for the thrift value describes a person seeing a new mobile phone model on a TV commercial and being impressed with its features. Respondents must decide whether or not to replace a two year old mobile phone and choose between three possible consumption intentions: "*Not yet the time to buy the new one, just take a look at it*;" "*Buy only if the vendor gives into my target price*;" and "*Buy regardless of price*."

Hypothesis 13: The thrift value held among Chinese Thais is associated with consumption intentions.

Because "*Buy only if the vendor gives into the price that I am willing to pay*," and "*Buy regardless of price*" are similar in terms of intended meaning, the two intention responses are collapsed and given a new name "*Willing to buy.*" The mean value for this group on the thrift value scale as shown in Table 5.39 is not significantly different from the mean for the "*Willing to buy*" group, F (1, 141) = 0.48, $p < 0.49$, $\eta^2 = 0.00$. The relationship between thrift value and thrift consumption intentions being examined through a new mobile replacement cannot be established and H13 is not supported.

Table 5.39 ANOVA Results for Thirft Value and Replacing Old Mobile Phone (n = 144)

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	3.40	1	3.40	0.48	0.49
Within Groups	998.55	141	7.08		
Total	1001.95	142			

	Thrift				
Replacing old mobile phone	***n***	**Scale Mean**	**Scale Std. Deviation**	***η***	η^2
Not yet the time to buy, just take a look at it	108	15.10	2.60	0.06	0.00
Willing to buy	35	14.74	2.84		
Total	143				

As summary of hypothesis testing associated with Proposition 3, results show only three of 13 hypotheses supported—H5, H7, and H12. The average effect size of (η^2) for these three hypotheses is 0.02. Thus support for Proposition 3 is weak. Still, results are not explained by chance (as operating in the sampling process) and reflect measurement error from unreliability that always attenuates effect sizes and raises *p*-values.

5.11 Nomological Validity of the Core Cultural Value Scales

This last major section of Chapter 5 investigates nomological validity of 12 core cultural value scales (collectivism excluded). Analysis of nomological validity is especially important because the 12 scales are the first attempt at measuring Thai core cultural values. The scales already show acceptable convergent and discriminant validity as described earlier. Analysis begins by examining reported ethnicity as an explanation of ritual practices to investigate Proposition 4 and establish nomological validity of the reported ethnicity measure. Analysis continues by showing the relative inability of reported ethnicity to explain consumption intentions as compared to results for the 12 core cultural value scales. Analysis concludes with an investigation into relationships between subjective ethnicity (Hirschman 1981) and the 12 scales.

5.11.1 Reported Ethnicity, Ritual Practices, and Consumption Intentions

Ethnicity refers to "a group bound together by ties of cultural homogeneity, one that is linked by similar values, customs, religion, and language" (Mowen and Minor 1997). Reported ethnicity in the present study is examined first in terms of its nomological validity in an investigation of its influence on ritual practices. Ritual practices are those associated with Chinese New Year and Thai New Year, two holidays that Ethnic Thais and Chinese Thais observe in accordance with their respective customs.

Ritual practices for the Chinese New Year celebration are common among Chinese Thai individuals as well as among Chinese people around the world. Practices are carried out on the first day of the Chinese calendar and continue to varying degrees on the 2nd, 3rd, 5th, 7th, 9th, and 15th days following. Table 5.40 presents an analysis of relationships between reported ethnicity and four ritual practices of the Chinese New Year celebration for the Chinese Thai and Ethnic Thai groups. Results show strong associations between reported ethnicity and ritual practices with significance levels close to zero.

Table 5.40 Cross-Tabulations of Chinese New Year Ritual Practices by Ethnicity

Ritual Practice	Response			Chi-Square	*df*	Sig. (2-tail)	Lambda
	Yes	No	Total				
Do you celebrate Chinese New Year?				197.17	2	0.00	0.59
Chinese Thai	121	21	142				
Ethnic Thai	11	158	170				
Mixed Ethnic Thai	37	50	87				
Do you celebrate Chinese New Year with relatives?				171.82	2	0.00	0.55
Chinese Thai	117	25	142				
Ethnic Thai	15	155	170				
Mixed Ethnic Thai	36	51	87				
Do you carry out required ritual scripts during Chinese New Year? (e.g., burning joss sticks to pay respect to deities)				206.82	2	0.00	0.66
Chinese Thai	132	11	143				
Ethnic Thai	19	151	170				
Mixed Ethnic Thai	50	37	87				
Do you observe the tradition of giving or receiving money during this day?				197.14	2	0.00	0.62
Chinese Thai	128	15	143				
Ethnic Thai	17	152	169				
Mixed Ethnic Thai	38	49	87				

The Thai New Year celebration—Songkran—is perhaps the most important day of the year for Ethnic Thais. Songkran ritual practices occur between April 13 and April 15 of each year. Table 5.41 presents cross-classification results of relationships between reported ethnicity and four Thai New Year ritual practices. All four relationships are significant with magnitudes somewhat smaller than those for the Chinese Thai group. It is interesting to note that a sizable number of Chinese Thai individuals also report participating in Thai New Year celebration

Table 5.41 Cross-Tabulations of Thai New Year Ritual Practices by Ethnicity

Ritual Practice	Response			Chi-Square	*df*	Sig. (2 tail)	Lambda
	Yes	**No**	**Total**				
Do you go back to meet your parents during Songkran and wish them well?				60.91	2	0.00	0.00
Chinese Thai	75	67	142				
Ethnic Thai	149	21	170				
Mixed Ethnic Thai	77	10	87				
Do you go back to visit the elderly over the Songkran holiday?				86.11	2	0.00	0.17
Chinese Thai	61	81	142				
Ethnic Thai	150	20	170				
Mixed Ethnic Thai	73	14	87				
Do you visit temple to carry out rituals (sprinkling water on Buddha image etc.) during Songkran?				67.72	2	0.00	0.12
Chinese Thai	64	78	142				
Ethnic Thai	149	21	170				
Mixed Ethnic Thai	65	22	87				
Do you let the elderly wish you well by sprinkling water on you during Songkran?				79.35	2	0.00	0.30
Chinese Thai	49	93	142				
Ethnic Thai	139	31	170				
Mixed Ethnic Thai	64	23	87				

Based on results reported in Tables 5.40 and 5.41, the reported ethnicity measure shows a high degree of nomological validity. All relationships between reported ethnicity and ritual practices are significant, moderate to strong in magnitude, and in expected directions. All relationships strongly support Proposition 4 as stated in Chapter 3.

Analysis now turns relationships between reported ethnicity and consumption intentions. As an indication of nomological validity of the 12 core cultural value scales, the expectation is that effect sizes in this analysis will be smaller than those reported for core cultural values and consumption intentions. Table 5.42 presents results, showing only one significant association and a small value for lambda, 0.02. The value of lambda can be compared to the square root of the average effect size for significant effects associated with Proposition 3 at $(0.02)^{1/2}$ or 0.14. This comparison shows the superiority of core cultural values over reported ethnicity in explaining consumption intentions.

Table 5.42 Reported Ethnicity and Consumption Intentions (*n* = 401)

Core Cultural Values	Chi-Square	*df*	Sig. 2-tail	Lambda
Confrontation avoidance	2.61	4	0.63	0.00
Face saving	4.21	4	0.38	0.00
Kreng jai	0.93	2	0.63	0.00
Mai pen rai	1.62	2	0.44	0.00
Collectivism	2.91	4	0.57	0.00
Autonomous	12.51	4	0.01	0.02
Non-competitiveness	5.62	2	0.06	0.00
Present oriented	2.30	2	0.32	0.00
Sanuk	2.04	2	0.36	0.00
Family oriented	3.08	2	0.21	0.01
Future oriented	2.30	2	0.32	0.00
Risk aversion	2.18	2	0.34	0.00
Thrift	1.41	4	0.84	0.00

5.11.2 Subjective Ethnicity, Core Cultural Values, and Consumption Attitudes

A second, related analysis into the nomological validity of the 12 core cultural value scales used Hirschman's (1981) measures of subjective ethnicity. Two questions in Part D of the questionnaire measured respondents' subjective identity strength and religious strength: *"How strong is your identification with the designated group?"* and *"How strong is the designated religion affiliation to you?"* Responses to both questions were measured using categories of "Very Strong," "Moderately Strong," Least Strong," "Least Weak," Moderately Weak," and "Very Weak." Table 5.43 presents distributions of responses to the two questions for the Ethnic Thai group.

Table 5.43 Ethnic Identity Strength and Religious Strength for the Ethnic Thai Group

	Ethnic Identity Strength		Religious Strength	
Response Category	Frequency	Cumulative Percent	Frequency	Cumulative Percent
Extremely strong	123	73.2	89	52.66
Moderately strong	37	95.2	73	95.85
Least strong	3	97.9	4	98.22
Least weak	2	98.2	3	98.22
Moderately weak	0	98.2	0	98.22
Extremely weak	3	100.0	0	100.00
Missing value	2	1.2	1	0.60
Total	170	100.0	170	100.00

A composite measure was created by summing responses to the two questions to identify the strongest and weakest respondents with regard to their ethnic identities and religious strengths. The composite measure was divided into strongest, middle and weakest categories containing 78, 63, and 27 respondents, respectively.

Relationships between the composite measure of subjective ethnicity and the 13 core cultural value scales for the Ethnic Thai group were examined via *t*-tests between the strongest and weakest groups. Results appear in Table 5.44 and provide additional support for the nomological validity of the 12 core cultural value scales. Results show mean values lie in predicted directions for all scales except for face saving and sanuk. The near identical scale means for the non-competitiveness and sanuk scales indicate that these two core cultural values can be considered pervasive among Ethnic Thais, regardless of an individual's subjective ethnicity strength. Of the 13 *t*-tests, five are significant at $p < 0.05$ and two at $p < 0.10$.

A last analysis for the Ethnic Thai group focused on relationships between the composite measure of subjective ethnicity and the six consumption attitudes. All six relationships were not significant, with the smallest *p* value that for materialism at $p < 0.38$, two-tail. These results can be compared to those in Table 5.24 where the sanuk, face saving, autonomous, present oriented, non-competitiveness, and future oriented scales had more than 30 significant relationships with consumption attitudes.

Table 5.44 *t*-test of Composite Measure of Ethnic Identity (Strongest vs. Weakest) by Core Cultural Values of the Ethnic Thai Group (*n* = 105)

				***t*-test for Equality of Means**		
Core Cultural Value and Ethnic Identity Group	***n***	**Mean**	**Std. Deviation**	***t***	***df***	**Sig. (one-tail)**
Confrontation Avoidance				2.47	103	0.01
Strongest	78	10.32	1.56			
Weakest	27	9.41	1.91			
Face Saving				-0.54	103	0.29
Strongest	78	13.61	3.42			
Weakest	27	14.00	2.62			
Kreng Jai				1.72	103	0.04
Strongest	78	4.42	1.44			
Weakest	27	3.85	1.67			
Mai Pen Rai				1.50	103	0.07
Strongest	78	9.59	1.84			
Weakest	27	8.96	2.00			
Collectivism				2.48	103	0.01
Strongest	78	3.81	1.41			
Weakest	27	3.03	1.40			
Autonomous				0.45	103	0.32
Strongest	78	5.82	2.63			
Weakest	27	5.55	2.83			
Non-Competitiveness				0.15	103	0.44
Strongest	78	9.95	3.67			
Weakest	27	10.07	4.11			
Present Oriented				0.98	103	0.16
Strongest	78	11.55	4.01			
Weakest	27	10.70	3.50			
Sanuk				-0.09	103	0.46
Strongest	78	12.38	3.28			
Weakest	27	12.44	3.11			
Family Oriented				1.88	103	0.03
Strongest	78	-0.50	0.48			
Weakest	27	-0.71	0.55			
Future Oriented				1.52	103	0.06
Strongest	78	9.39	2.03			
Weakest	27	8.70	2.00			
Risk aversion				1.03	103	0.15
Strongest	78	4.66	1.29			
Weakest	27	4.36	1.24			
Thrift				2.38	103	0.01
Strongest	78	15.51	2.06			
Weakest	27	13.85	3.42			

Analyses parallel to those reported above for the Ethnic Thai group were performed for the Chinese Thai group. Table 5.45 presents distributions of responses to the ethnic identity strength and religious strength questions for Chinese Thais. A composite measure was created by summing responses to the two questions to identify the strongest and

weakest respondents with regard to their ethnic identities and religious strengths. The composite measure was divided into strongest, middle, and weakest categories, containing 53, 64, and 26 respondents respectively.

Table 5.45 Ethnic Identity Strength and Religious Strength for the Chinese Thai Group

	Ethnic Identity Strength		Religious Strength	
Response Category	**Frequency**	**Cumulative Percent**	**Frequency**	**Cumulative Percent**
Extremely strong	45	31.4	38	26.8
Moderately strong	71	81.0	73	78.2
Least strong	13	90.0	14	88.1
Least weak	10	97.1	11	95.8
Moderately weak	0	2.9	3	97.9
Extremely weak	4	100.0	3	100.0
Total	143		142	

Relationships between the composite measure of subjective ethnicity and the 13 core cultural values for Chinese Thais were examined via *t*-tests between the strongest and weakest groups. Results appear in Table 5.46 and provide additional support for the nomological validity of the core cultural value scales. The strongest ethnic identity group of Chinese Thais shows higher mean values (the predicted direction) than the weakest group for all core cultural values except for the future oriented scale. However, results are significant at the 0.05 level only for the main pen rai and collectivism scales. If the significance level is raised to 0.10 level (appropriate because of the relatively small sample) results are significant for the mai pen rai, non-competitiveness, thrift, and collectivism scales.

Table 5.46 *t*-test of Composite Measure of Ethnic Identity (Strongest vs. Weakest) by Core Cultural Values of the Chinese Thai Group (*n* = 79)

				t-test for Equality of Means		
Core Cultural Value and Ethnic Identity Group	***n***	**Mean**	**Std. Deviation**	**t**	***df***	**Sig. (one-tail)**
Confrontation Avoidance				0.40	77	0.40
Strongest	53	9.51	2.30			
Weakest	26	9.38	2.40			
Face Saving				0.86	77	0.19
Strongest	53	13.77	3.60			
Weakest	26	13.03	3.64			
Kreng Jai				0.37	77	0.35
Strongest	53	3.86	1.73			
Weakest	26	3.70	2.02			
Mai Pen Rai				2.28	77	0.00
Strongest	53	9.66	1.85			
Weakest	26	8.31	2.74			
Collectivism				1.78	77	0.04
Strongest	53	3.40	1.75			
Weakest	26	2.67	1.63			
Autonomous				0.43	77	0.33
Strongest	53	5.21	2.40			
Weakest	26	4.96	2.41			
Non-Competitiveness				1.38	77	0.08
Strongest	53	11.08	3.86			
Weakest	26	9.77	4.18			
Present Oriented				1.13	77	0.13
Strongest	53	10.49	4.04			
Weakest	26	9.42	3.80			
Sanuk				0.51	77	0.61
Strongest	53	12.92	3.22			
Weakest	26	12.54	3.00			
Family Oriented				0.97	77	0.17
Strongest	53	-0.54	0.58			
Weakest	26	-0.67	0.53			
Future Oriented				-0.15	77	0.88
Strongest	53	8.65	2.15			
Weakest	26	8.73	2.28			
Risk Aversion						
Strongest	53	4.64	1.22	0.14	77	0.45
Weakest	26	4.60	1.06			
Thrift				1.52	77	0.06
Strongest	53	15.45	2.69			
Weakest	26	14.42	3.07			

A last analysis for the Chinese Thai group focused on relationships between the composite measure of subjective ethnicity and the six consumption attitudes. Similar to the Ethnic Thai group, five of the six relationships were not significant, the exception being fashion conscious with r = -0.24, $p < 0.00$, two-tail. As with the Ethnic Thai group,

these results can be compared to those in Table 5.24 where the superiority of the sanuk, face saving, autonomous, present oriented, non-competitiveness, and future oriented scales in terms of significant relationships with consumption attitudes is evident.

In sum, results in this section strongly support Proposition 4 in that ethnicity is associated with ritual practices under study. Results also support the nomological validity of the 12 core cultural value scales. Results of most analyses demonstrate that the scales produce expected relationships with consumption intentions and subjective ethnicity.

5.12 Chapter Summary

Data analysis and results in Chapter 5 address data editing, construct measurement, and tests of hypotheses associated with the study's four propositions. Results support the construct validity and measurement reliability of the study's core cultural value scales except for the autonomous scale.

Results do not support Proposition 1, that differences in core cultural values are present between Ethnic Thai, Chinese Thai, and Mixed Ethnic Thai groups, except for the confrontation avoidance and present oriented values. Results for face saving, kreng jai, mai pen rai, collectivism, and future oriented values approach significance. A larger sample or greater scale reliability almost certainly would find these differences significant. Still, present results are of great value to marketing academics and decision makers, indicating the relative homogeneity of Thai people living in Bangkok with respect to their core cultural values.

Results strongly support Proposition 2 for the Ethnic Thai group, with the core cultural values of sanuk, face saving, autonomous, present oriented, non-competitiveness, and future oriented significantly associated with almost all consumption attitudes. Results moderately support Proposition 2 for the Thai National and Chinese Thai groups, with significant relationships between respective core cultural values and about one-third of the consumption attitudes.

Results provide weak support for Proposition 3, that core cultural values are related to consumption intentions. Such results are not unexpected, given the psychological distance between values and intentions (see Figure 2.3).

Finally, results provide strong support for Proposition 4, that ethnicity is related to ritual practices associated with the New Year holiday. These results are the strongest, most vivid of all data analyses reported in Chapter 5. Results yield one somewhat unexpected finding, that many Ethnic Thai and Chinese Thai individuals celebrate both Thai and Chinese New Year holidays.