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A Replication Study of the Chen/Starosta-Model of Intercultural Sensitivity in Germany and the USA

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Summary

Regarding to the success of a company acting on foreign markets, an intercultural competent staff has become progressively important. Therefore, management studies have paid an increased empirical attention on Intercultural Competence.

The model of Intercultural Sensitivity by Chen and Starosta, which was developed in an US-American version is examined by empirical replication in this paper. An earlier attempt to reproduce this model in Germany has been essentially successful. However, the current replication attempt based on German and US-American data fails. Consequently, the intercultural validity of the Chen/Starosta-Model has become more doubtful, which might be examined closer in future studies.

1. Problem

Despite the enormous set-backs of the worldwide economy since 2002, international business will increase in the long term. Consequently, there is a growing need of personnel being interculturally competent especially in culturally sensitive departments, e.g. in Marketing.

Intercultural Competence has been recently discovered by business management. Attempts were made to empirically verify the US-American Model of Intercultural Sensitivity by Chen and Starosta using German data. (see Fritz/Möllenberg/ Chen 2002; 2003). Although this replication attempt was basically successful, single aspects of the replicated Model could not be validated with these German data.

Therefore, a new empirical replication of the Model by Chen and Starosta is attempted in this paper. The study uses data which were collected during a habilitation project in the US and Germany. First, the state of the art concerning the Model of Intercultural Sensitivity is discussed.

2. The Model of Intercultural Sensitivity by Chen and Starosta

The scientific state of knowledge concerning the Model of Intercultural Sensitivity is outlined in the following. Chen and Starosta introduced this Model as one dimension of Intercultural Competence in 1996.

Due to economy becoming more and more global the importance of Intercultural Competence has increased significantly (see Bradford/Allen/Beisser 1998). In spite of extensive research efforts neither a generally accepted definition nor an empirically validated Model of Intercultural Competence exists (see Fritz 2001; Fritz/Möllenberg/Werner 1999; Müller/Gelbrich 2001). Instead, numerous lists of capabilities, skills and characteristics have been introduced which are regarded as important for intercultural interactions (see Dinges/Baldwin 1996; Kealey/Ruben 1983).

In current research, Intercultural Competence is often divided into three dimensions: affective, cognitive and behavioral (see z.B. Bennett 2001;

Chen/Starosta 1996; Fritz 2001; Müller/Gelbrich 2001; Spitzberg 2000; Ting-Toomey 1999). It is assumed that the affective, cognitive as well as the behavioral component have to be developed in order to communicate efficiently and properly with individuals from other cultures. However, there is still a disagreement concerning the three partial constructs (Chen/Starosta 2000, p. 3). A theoretically sound concept of the single dimensions is required for a valid and reliable measurement of the overall Intercultural Competence (Fritz/Möllenberg/Werner, 1999).

Chen and Starosta (1996) have intended to elaborate concepts for the three dimensions of Intercultural Competence and to develop tools to assess the respective skills. The three partial constructs of Intercultural Competence (Intercultural Sensitivity, Intercultural Awareness and Intercultural Adroitness) are being introduced in the following.

The authors describe the affective component of Intercultural Competence with the concept of *Intercultural Sensitivity*. The Model of Intercultural Sensitivity, whose renewed analysis is subject of this paper, includes the ability of a person to receive and send positive emotional signals before, during and after intercultural interaction. These positive emotional responses will in turn lead to respect for acknowledgment and cultural differences (Chen/Starosta 1996, p. 362). Intercultural Sensitivity is based on self-concept, open-mindedness, nonjudgmental attitudes and social relaxation (Chen/Starosta 1996, pp. 362; Chen/Starosta 1997). In order to assess this dimension of Intercultural Competence, the *Intercultural Sensitivity Scale* was developed (Chen/Starosta 2000), which was also translated into German language and empirically validated (Fritz/Möllenberg 1999; Fritz/Möllenberg/Chen 2002 und 2003). Due to our knowledge, the Intercultural Sensitivity Scale is the only scientific survey so far, assessing the emotional dimension of Intercultural Competence.

The cognitive component of Intercultural Competence is defined by the *Intercultural Awareness*. This partial construct refers to the ability to comprehend and explain other cultures. The authors distinguish between two properties and partial abilities: Self-awareness and cultural awareness (Chen/Starosta 1996, pp. 364; Chen/Starosta 1999). Kim and Chen have developed the *Intercultural Awareness Scale* in 1995 to assess this dimension of Intercultural Competence.

Intercultural Adroitness represents the behavioral component of Intercultural Competence. It comprises the capability of an individual to get the job done and attain communication goals in intercultural interactions (Chen/Starosta 1996, p. 367). It has to be pointed out that the conceptional editing of this partial construct has not yet been made. As of now the authors assume the following properties and partial abilities for Intercultural Adroitness: message skills, appropriate self-disclosure, behavioral flexibility, interaction management and social skills.

3. A Replication of the Model of Intercultural Sensitivity

3.1. Research Design

In this study additionally to the overall sample two matched samples have been analyzed. In international studies non-random samples are accepted, because random samples cannot always be compared due to various influences (e.g. age of subjects, level of education, structure of settlement) (see e.g. Brislin/Baumgardner 1971; Holzmüller 1986, p. 62; Lonner/Berry 1986; Douglas/Craig 2000). Therefore, Holzmüller (1995, p. 242) recommends the use of matched samples in order to reduce the error variance.

The population are students at a medium-sized Midwestern university in the USA and a medium-sized university in Germany. Students were chosen as subjects, since they can be matched according to the following criteria: age, level of education, study subject and size of the university. (see Table 1). In two successive semesters at both universities all students being enrolled in the College of Master of Business Administration having lectures in "Management" were included in the study.The Intercultural Sensitivity Scale was filled out by the students after a lecture. 188 US and 179 German students were interviewed. The scope of the US samples was reduced by 9 subjects for the sake of matching. In the population, however, all US students are contained (n = 367).

The number of female subjects is lower in the German sample than it is in the American (see Table 1). An analysis with t-tests - whether or not a gender-specific influence exists, meaning if men and women filled out the Intercultural Sensitivity Scale differently - did not show a significant difference.

-- Tab. 1 --

The complex research hypothesis is represented by the Model of Intercultural Sensitivity by Chen and Starosta. (see Figure 1). It was presumed that the Model of Intercultural Sensitivity will also present the five validated factors that have been shown in preceding studies (see Fritz/Möllenberg/Chen 2002). Accordingly, the five factors „Interaction Engagement", „Respect for Cultural Differences", „Interaction Confidence", „Interaction Enjoyment" and „Interaction Attentiveness" should be reproduced by the new sample data. This replication attempt intends to confirm the „Configural Invariance", dealing with reproducing the original factor-indicator relationship into a new sample without having to match the numerical form of the decisive factors exactly (see Steenkamp/Baumgartner 1998, p. 80). Table 2 shows the significance of the indicator variables.

-- Fig. 1 --

-- Tab. 2 --

As already pointed out, in the preceding study by Fritz, Möllenberg and Chen (2002 and 2003), a confirmatory approach of data analysis was chosen.. The model structure was verified by the confirmatory factor analysis. The data analysis was carried out in LISREL 8. The evaluation was done based on the usual recommended procedures for LISREL analyses (see e.g. Fritz 1992, pp. 121; Jöreskog/Sörbom 1993, pp. 111; Homburg/Pflesser 1999, pp. 646).

3.2. Research Results

3.2.1 Results of the overall sample

The Chen/Starosta -Model analyzed by Fritz, Möllenberg and Chen largely confirmed by the data of a German sample, is designated **Model 1** containing 22 indicators.

Model 2, adjusted for the indicators with very low reliabilities, is also estimated. This model is based on the data of the overall sample and includes only 13 indicator variables. However, consistence and identification of the models have to be further examined before going into the findings shown in Tables 3 to 5.

With regard to the consistence to both of the models it has to be stated that neither nonsensical results are obtained nor the rule, that the sample size n should exceed the parameter t by five times, is violated (see Bentler/Chou 1987, p. 91). The result for Model 1 is 367/54 = 6.8 and for Model 2 367/36 = 10.2. The identification is obvious, since in both cases the number t* of empirical observations (variances and covariances) exceeds the number of the estimated parameter t (t* = q(q+1)/2, with q = number of indicators). For Model 1 t* = 253 > t = 54, and for Model 2: t* = 91 > t = 36 applies, while the necessary prerequisite for identification is satisfied (see ebd., pp. 93).

With regard to the global and local measures of fit both versions of the Chen/Starosta-Model are different. However, the test of these models does not yet lead to satisfying results.

Tables 3 to 5 show the criteria of fit for these two models. The global fit is presented in Table 5. In both models, just 6 out of 10 relevant criteria confirm the research hypothesis. Since a model must not be accepted if even one of the global fit criteria is not fulfilled, both versions of the Chen/Starosta-Model of Intercultural Sensitivity should be rejected based on the present data (see Fritz 1992, p. 141). However, both comparative criteria (AIC und ECVI) show that Model 2 is slightly more preferable with regard to the global fit (which could also depend on the smaller number of parameters).

The local model fit shows that only 7 out of 22 indicators are reliable for Model 1 and furthermore in the reduced Model 2 numerous indicators do not achieve an indicator reliability of 0.4. However, the factor reliabilities are, except the factor "Interaction Attentiveness", basically acceptable. Nevertheless, in the average variance extracted, major adjustment problems are obvious. Especially critical is the discriminant validity, which is evaluated according to the Fornell-Larcker criterion (see Table 4). The model fails in most of the cases in this regard. The partially high intercorrelations, e.g. between the factors „Interaction Engagement" and "Respect for Cultural Differences" (0.67 / 0.77) are responsible for the insufficient discriminant validity.

-- Tab. 3 --

-- Tab. 4 --

-- Tab. 5 --

Relating this finding to the insufficient global fit it has to be concluded that the data are not able to confirm the Chen/Starosta-Model. Neither the original model (Model 1) nor the alternative (Model 2) match the criteria of the causal analysis. Nevertheless, the alternative Model showed low better results according to AIC und ECVI and should therefore be preferred.

3.2.2. Results of the German and US Sample

In order to better comprehend this result the alternative Model has been analyzed separately within the German (**Model 3**) and the American sample (**Model 4**). However, it cannot be excluded that quite different coherences exist in both samples. These coherences could "overlap" due to the integration of both samples and thereby artificially produce the insufficient fit shown in the preceding chapter.

The consistence and identification of both models seem to be given. Nonsensical results do not exist and the n/t $\geq$5-rule is practically met, since in both cases n/t = 4.97. For both models t* > t is also given, because of t* = 91 and t = 36.

The results presented in Tables 6 to 8 show an enormous lack of fit of the two models in both the US-American and German sample. The global fit of the German model seems to be more favorable than the American one as AIC and ECVI demonstrate. Nevertheless, three of the other global criteria are not satisfactorily and thereby contradict the German Model – it is even 5 out of 10 criteria in the American Model (see Table 8). The American Model, however, seems to demonstrate a better local fit than the German with regard to the factor reliability and the average variance extracted (see Table 6). The discriminant validity does clearly not fulfill the Fornell/Larcker criterion in both cases (see Table 7).

-- Tab. 6 --

-- Tab. 7 --

-- Tab. 8 --

Summing up, the reduced model of Intercultural Sensitivity by Chen and Starosta can neither be sufficiently reproduced by the data of the American nor the German sample.

3.3. Discussion

Above all, our research results did not verify the five-factor Chen/Starosta-Model of Intercultural Sensitivity sufficiently on our empirical base. This also applies to the original model with 22 indicators (Model 1) and the reduced alternative Model with 13 indicators (Model 2) based on the data of the overall sample as well as to the reduced model that has been examined separately with American and German data (Model 3 respectively Model 4). Regarding the different analyses the basic requirements of global and local model fit of the LISREL models have been met only with 33% to 70%. Overviewing all of the used fit criteria, a share of not-met requirements respectively a falsification rate of 53% to 60% evolves for the four models. (see Table 9).

-- Tab. 9 --

These results obviously oppose the research approach hypothesis and make an acceptance of the five-factor structure of the Intercultural Sensitivity according to the Chen/Starosta-Model on the data analyzed impossible.

It has to be pointed out that the samples used in this study differ from those used by Chen/Starosta and Fritz/Möllenberg/Chen. While in preceding studies the sample size of German or American subjects is numbered by $n \geq 400$, the sample in this study is composed of German and American subjects taken together. In addition, the size of our separately analyzed partial samples with German respectively American subjects is less than half as large as the research by our predecessors. Although our sample size seems to be sufficient for the analysis made in this study, our results cannot be guaranteed to be obtained in German and American samples twice as large (or bigger) because of the fact that parameter estimates and model behavior are often directly influenced by the sample size. (see Bentler/Chou 1987, pp. 90). Additionally, it has to be reminded that 3 out of 4 model analyses are based on the five-factor model of Intercultural Sensitivity reduced by numerous indicators; this reduction of indicators can thereby influence some

factors of local fit in a negative sense (factor reliability, average variance extracted). In spite of these reservations, our research data create some serious doubts of the validity of the Chen/Starosta-Model.

4. Résumé and Preview

Because of the great significance of intercultural competent personnel especially for globally acting companies, management studies have more and more focused on this matter empirically.

One direction of research asks of whether or not a Model of Intercultural Sensitivity stemming from the US, the Chen/Starosta-Model, can claim to receive international validity. While a first empirical replication attempt in Germany has been mainly successful (see Fritz/Möllenberg/Chen 2002; 2003), the Model could not be reproduced empirically within this study based on German and American data.

This situation generates serious doubts of the intercultural validity and transferability of the Chen/Starosta-Model. However, this question cannot be resolved based on the present data. The reason is that our replication attempt was made upon samples differing in size and structure of the earlier research. An influence on the analysis result is basically possible, but its significance and extent cannot be estimated in this study exactly. Therefore, the Chen/Starosta-Model should be examined by more critical replications based on relevant international data. Especially with not only coming from the western culture.

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Figure 1: **The Structure of the Chen/Starosta-Model of Intercultural Sensitivity**

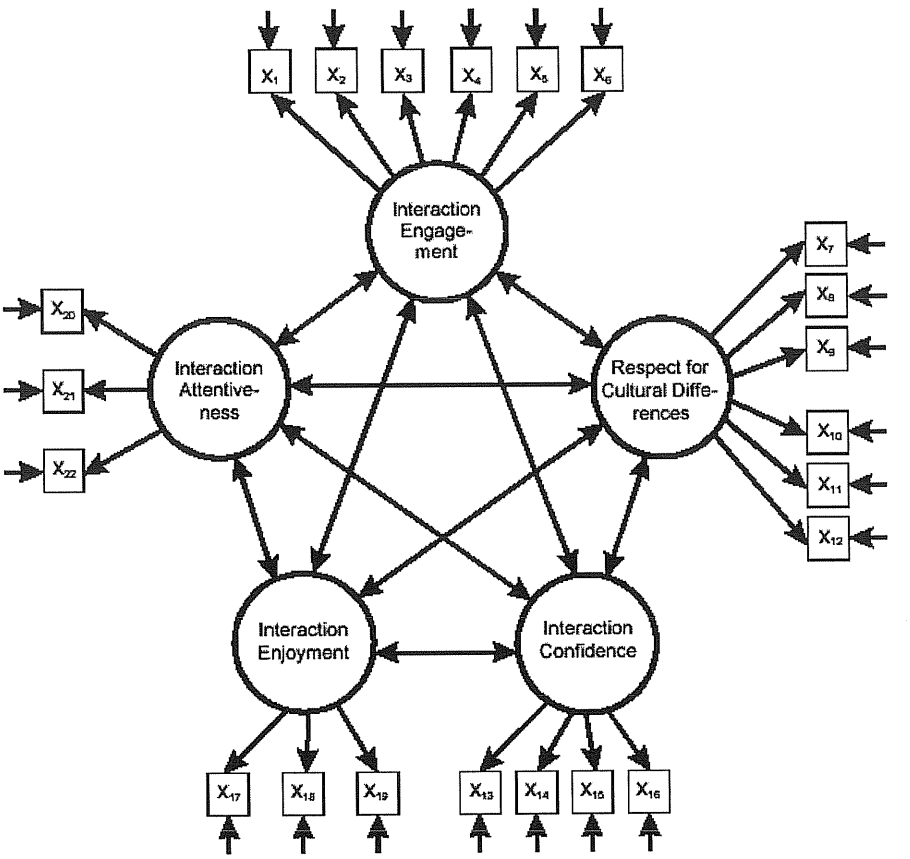

Table 1: Data of the two partial Samples and the Population

	Sample USA	Sample Germany	Overall Sample
Size of Sample	179	179	367
Age Average	28	26	27
Percentage of Women	66 (36.8 %)	56 (31.2 %)	131 (35.6 %)
Level of Education	final exam	Abitur (comparable to final exam)	final exam
Study Subject	MBA	MBA	MBA
Specialization	Management	Management	Management
Size of the visited University	14.300	14.500	14.400

***Table 2*: The Meaning of Indicators**

Factor	Indicator	Meaning of the Indicator
Interaction Engagement	x_1 = F 55	I am open-minded to people from different cultures
	x_2 = F 63	I often show my culturally-distinct counterpart my understanding through verbal or nonverbal cues.
	x_3 = F 69	I have a feeling of enjoyment towards differences between my culturally-distinct counterpart and me.
	x_4 = F 70	I enjoy interacting with people from different cultures.
	x_5 = F 71	I avoid those situations where I will have to deal with culturally-distinct persons.
	x_6 = F 73	I tend to wait before forming an impression of culturally-distinct counterparts.
Respect for Cultural Differences	x_7 = F 8	I don't like to be with people from different cultures.
	x_8 = F 18	I think my culture is better than other cultures.
	x_9 = F 25	I think people from other cultures are narrow-minded.
	x_{10} = F 26	I respect the values of people from different cultures.
	x_{11} = F 27	I respect the ways people from different cultures behave.
	x_{12} = F 28	I would not accept the opinions of people from different cultures.
Interaction Confidence	x_{13} = F 1	I am pretty sure of myself in interacting with people from different cultures.
	x_{14} = F 2	I find it very hard to talk in front of people from different cultures.
	x_{15} = F 3	I always know what to say when interacting with people from different cultures.
	x_{16} = F 5	I can be as sociable as I want to be when interacting with people from different cultures.
Interaction Enjoyment	x_{17} = F 12	I get upset easily when interacting with people from different cultures.
	x_{18} = F 14	I often get discouraged when I am with people from different cultures.
	x_{19} = F 16	I often feel useless when interacting with people from different cultures.
Interaction Attentiveness	x_{20} = F 44	I try to obtain as much information as I can when interacting with people from different cultures.
	x_{21} = F 46	I am sensitive to my culturally-distinct counterpart's subtle meanings during our interaction.
	x_{22} = F 47	I am very observant when interacting with people from different cultures.

Table 3: Measures of Reliability and Validity for Models 1 and 2

Factor	Indicator	Indicator Reliability		Factor Reliability		Average Variance Extracted	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Interaction Engagement	x_1	.52	.54	.77	.75	.30	.50
	x_2	.01	•				
	x_3	.49	.49				
	x_4	.46	.48				
	x_5	.10	•				
	x_6	.24	•				
Respect for Cultural Differences	x_7	.33	.30	.70	.59	.32	.32
	x_8	.28	.32				
	x_9	.20	•				
	x_{10}	.25	•				
	x_{11}	.40	.33				
	x_{12}	.48	•				
Interaction Confidence	x_{13}	.48	.37	.61	.50	.29	.33
	x_{14}	.16	•				
	x_{15}	.22	•				
	x_{16}	.29	.30				
Interaction Enjoyment	x_{17}	.30	.30	.64	.64	.37	.37
	x_{18}	.48	.46				
	x_{19}	.34	.35				
Interaction Attentiveness	x_{20}	.30	.32	.51	.51	.26	.35
	x_{21}	.28	.38				
	x_{22}	.21	•				
Requirement		≥ .40	≥ .40	≥ .60	≥ .60	≥ .40	≥ .40

(Note: The underlined values fail to meet the requirements)

Table 4: Analyses of the Discriminant Validity in Model 1 and Model 2

		Interaction Engagement	Respect for Cultural Differences	Interaction Confidence	Interaction Enjoyment	Interaction Attentiveness
Interaction Engagement	$\rho = .30/.50$	•	$\varphi^2 = \underline{.67}/\underline{.77}$	$\varphi^2 = \underline{.46}/\underline{.66}$	$\varphi^2 = \underline{.58}/\underline{.58}$	$\varphi^2 = \underline{.56}/.37$
Respect for Cultural Differences	$\rho = .32/.32$	$\varphi^2 = \underline{.67}/\underline{.77}$	•	$\varphi^2 = .12/.26$	$\varphi^2 = \underline{.49}/\underline{.56}$	$\varphi^2 = .22/.15$
Interaction Confidence	$\rho = .29/.33$	$\varphi^2 = \underline{.46}/\underline{.66}$	$\varphi^2 = .12/.26$	•	$\varphi^2 = \underline{.32}/\underline{.38}$	$\varphi^2 = .24/.21$
Interaction Enjoyment	$\rho = .37/.37$	$\varphi^2 = \underline{.58}/\underline{.58}$	$\varphi^2 = \underline{.49}/\underline{.56}$	$\varphi^2 = .32/\underline{.38}$	•	$\varphi^2 = .28/.20$
Interaction Attentiveness	$\rho = .26/.35$	$\varphi^2 = \underline{.56}/\underline{.37}$	$\varphi^2 = .22/.15$	$\varphi^2 = .24/.21$	$\varphi^2 = \underline{.28}/.20$	•

(Note: ρ = average variance extracted;
φ^2 = Square of the correlation between two factors;
the first value refers to model 1, the 2nd refers to model 2
Fornell-Larcker criterion: $\rho > \varphi^2$;
underlined values fail to meet the requirements.)

***Table 5*: Empirical Model Comparison**

Measures of Fit	Requirement	Model 1	Model 2
a) Global Fit			
χ^2/df	≤ 2.50	1.84	2.50
RMSEA	≤ .050	.04	.06
GFI	≥ .90	.92	.95
AGFI	≥ .90	.89	.91
RMR	< .10	.03	.03
NFI	≥ .90	.80	.88
NNFI	≥ .90	.88	.89
RFI	≥ .90	.77	.84
IFI	≥ .90	.90	.93
CFI	≥ .90	.90	.93
AIC	min	474.67	209.92
ECVI	min	1.30	.57
b) Local Fit		(Average)	
Indicator Reliability	≥ .40	.31	.38
Factor Reliability (ρ_c)	≥ .60	.65	.60
Average Variance Extracted ($\rho_{\bar{v}}$)	≥ .40	.31	.37
Convergent Validity Given			
if ρ_c	≥ .60	.65	.60
if $\rho_{\bar{v}}$	≥ .50	.31	.37
Discriminant Validity (Fornell/Larcker criterion)	$\rho_{\bar{v}_i} > \varphi_{ij}^2$	.31 < .39	.37 < .41

(Note: underlined values fail to meet the requirements)

***Table 6*: Measures of Reliability and Validity for Models 3 (German) and 4 (USA)**

Factor	Indicator	Indicator Reliability		Factor reliability		Average Variance Extracted	
		Model 3	Model 4	Model 3	Model 4	Model 3	Model 4
Interaction Engagement	x_1	.55	.50	.77	.73	.53	.48
	x_2	•	•				
	x_3	.50	.49				
	x_4	.53	.44				
	x_5	•	•				
	x_6	•	•				
Respect for Cultural Differences	x_7	.38	.23	.56	.64	.30	.38
	x_8	.24	.55				
	x_9	•	•				
	x_{10}	•	•				
	x_{11}	.28	.36				
	x_{12}	•	•				
Interaction Confidence	x_{13}	.23	.57	.38	.63	.24	.47
	x_{14}	•	•				
	x_{15}	•	•				
	x_{16}	.24	.36				
Interaction Enjoyment	x_{17}	.20	.35	.49	.71	.25	.45
	x_{18}	.33	.54				
	x_{19}	.21	.46				
Interaction Attentiveness	x_{20}	.27	.29	.55	.48	.38	.31
	x_{21}	.49	.34				
	x_{22}	•	•				
Requirement		≥ .40	≥ .40	≥ .60	≥ .60	≥ .40	≥ .40

(Note: underlined values fail to meet the requirements)

***Table 7*: Analysis of the Discriminant Validity in Model 3 (German) and Model 4 (US)**

		Interaction Engagement	Respect for Cultural Differences	Interaction Confidence	Interaction Enjoyment	Interaction Attentiveness
Interaction Engagement	$\rho = .53/.48$	•	$\varphi^2 = .66/.98$	$\varphi^2 = .61/.69$	$\varphi^2 = .56/.79$	$\varphi^2 = .14/.84$
Respect for Cultural Differences	$\rho = .30/.38$	$\varphi^2 = .66/.98$	•	$\varphi^2 = .24/.35$	$\varphi^2 = .45/.79$	$\varphi^2 = .00/.62$
Interaction Confidence	$\rho = .24/.47$	$\varphi^2 = .61/.69$	$\varphi^2 = .24/.35$	•	$\varphi^2 = .98/.26$	$\varphi^2 = .09/.30$
Interaction Enjoyment	$\rho = .25/.45$	$\varphi^2 = .56/.79$	$\varphi^2 = .45/.79$	$\varphi^2 = .98/.26$	•	$\varphi^2 = .02/.53$
Interaction Attentiveness	$\rho = .38/.31$	$\varphi^2 = .14/.84$	$\varphi^2 = .00/.62$	$\varphi^2 = .09/.30$	$\varphi^2 = .02/.53$	•

(Note: ρ = average variance extracted;
φ^2 = Square of the correlation between two factors;
the first value refers to model 1, the 2nd refers to model 2
Fornell-Larcker criterion: $\rho > \varphi^2$;
underlined values fail to meet the requirements.)

Table 8: **Empirical Model Comparison**

Measures of Fit	Requirement	Model 3 (Germany)	Model 4 (USA)
a) Global Fit			
χ^2/df	≤ 2.50	1.50	2.03
RMSEA	≤ .050	.05	.07
GFI	≥ .90	.93	.92
AGFI	≥ .90	.89	.86
RMR	< .10	.04	.03
NFI	≥ .90	.84	.86
NNFI	≥ .90	.91	.89
RFI	≥ .90	.77	.81
IFI	≥ .90	.94	.93
CFI	≥ .90	.93	.92
AIC	min	154.70	183.97
ECVI	min	.87	1.03
b) Local Fit		(Average)	
Indicator Reliability	≥ .40	.34	.42
Factor Reliability (ρ_c)	≥ .60	.55	.64
Average Variance Extracted ($\rho_{\bar{v}}$)	≥ .40	.34	.42
Convergent Validity Given			
if ρ_c	≥ .60	.55	.64
if $\rho_{\bar{v}}$	≥ .50	.34	.42
Discriminant Validity (Fornell/Larcker criterion)	$\rho_{\bar{v}_i} > \varphi_{ij}^2$	.34 < .37	.42 < .61

(Note: underlined values fail to meet the requirements)

***Table 9*:** **The Falsification Rate of the Models**

Model	Not-met requirements		
	Global Criteria	Local Criteria	All Criteria
Model 1	40 %	64 %	60 %
Model 2	40 %	63 %	58 %
Model 3	30 %	67 %	60 %
Model 4	50 %	54 %	53 %