Managing invariance of place identity across gender for wine cultural tourism[1]

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Abstract

This study was aimed at investigating the invariance of place identity across gender in the context of wine cultural region at Yibin, China. Questionnaire survey was employed to collect the data. Applying the quota sampling technique in Yibin region, China,a total number of 276 usable samples were obtained, resulting in a response rate of 92%. The findings showed that the property of measurement weights and structural residuals across the gender was equivalent but the measurement residuals were not. The scales developed by previous studies achieved partial measurement invariance for wine culture tourism. Some suggestions were offered to the marketers and future studies.

Keywords: *place identity, wine cultural, Yibin*

1. Introduction

Place identity has been a recurring theme of research for tourism academia. Within resident attitude research, place identity is one of the most prominent non-economic concepts adapted to explain residents' attitudes toward tourism destination. For example, Gu & Ryan (2008) has been examined the impacts of tourism on local communities. They found that attitudes toward tourism are based upon attitudes toward heritage, tourism as a source of potential employment, length of residency and perceived intrusiveness of tourism, all of which impact on a sense of place identity. While this construct and the relationship across gender has yet to be verified.

Studies have demonstrated thatgender plays a major role in the choice of a product (Yen, 2017; Gu& Ryan, 2017;Wang, Qu, & Hsu, 2016; Han, Meng, & Kim, 2017).For instance, Wang et al. (2016)'s study find that ravel motivation, advertising, and word-of-mouth (WOM) recommendations influence travelers' cognitive image and cognitive image interacts with affective image to form individuals' expectations toward travel destinations. The impacts of

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travel motivation and advertising on cognitive image, and of cognitive image on tourist expectations were significantly stronger for males than females, while the effects of WOM on cognitive image and of affective image on tourist expectations were stronger for females than males. This implies the advertising could be a better tool for enhancing males' tourist expectations but WOMwould be a better for females. The difference could be met when the consideration of launchingtourist expectations. Another study (Han et al., 2017) illustrated that the magnitude of the impact of amenities, satisfaction, and desire on value, desire, and loyalty, respectively, were significantly different across male and female groups. However, gender did not moderate the tourism attractions-value, accessibility-value, complementary services-value, value-satisfaction, and satisfaction-loyalty relationships. Therefore, verifying the effects of gender has become an important issue for the development of a destination.

Previous studies, however, which focused on place identity issue did not involve gender effects and those studies exploring gender effects have not studied place identity issue yet. Consequently, a gap between place identity and gender difference could be met and has not been addressed. Thus, this study would like to verify the gender difference on place identity. In term, the purpose and the significance for this study were: (a) to examine the measurement invariance for place identity across gender in culture tourism for wine region in Yibin, China; (b) to generate the recommendations for managerial application of culture tourism for wine region; and (c) to identify areas for future scholarly inquiry.

Reflecting on these objectives, Byrne (2010) suggested the tests for multi-group invariance are: (a) factor loadings, (b) factor covariances, and (c) structural regression paths. Following the concepts, the researcher proposed three hypotheses as follows.

Hypothesis 1: Assuming model measurement weights to be variant for gender groups.

Hypothesis 2: Assuming model structural covariances to be variant for gender groups.

Hypothesis 3: Assuming model measurement residuals to be variant for gender groups.

2. Material and method

Questionnaire survey was employed for collecting the data. To ensure validity, this study is constructed on the basis of scales adopted, in large part, from previous studies, using existing scales for measuring place identity (Strzelecka, Boley, &Woosnam, 2017; Yen, 2017). Six items,"I identify strongly with the wine culture region at Yibin", "I feel the wine culture region at Yibin is a part of me", "The wine culture region at Yibin is very special to me", "The wine culture region at Yibin means a lot to me", "I am very attached to the wine culture

region at Yibin", and "I have a lot of fond memories of the wine culture region at Yibin" were adopted. Likert scales (1-5) with anchors ranging from "strongly disagree" to "strongly agree" are used for all questions. All of these scales have been shown to be reliable and valid, based upon prior research. A questionnaire was prepared for collecting rating and other information. Items measuring the various constructs were distributed about in the questionnaire to reduce halo effects.

The empirical study was carried out atwine culture region at Yibin, an important and famous wine destination in southern Sichuan province, China. Residents over the age of 18 years and who were visiting the attractions within the wine cultureregion at Yibinwere considered to be the target population. Applying the quota sampling technique, a total number of 300 questionnaires were delivered and 276 usable samples were obtained, resulting in a response rate of 92%.

3. Results

3.1. Measurement quality testing

First of all, CFA with a maximum likelihood estimate approach was run to evaluate the measurement model. The results of the CFA revealed an acceptable fit to the data (χ^2 =48.91, df=16, p=.000,χ^2 /df = 3.05, GFI=.962, AGFI= .900, CFI= .980, RMSEA= .070). As displayed in Table 1 (Fig. 1), measures for place identity construct were internally consistent in that composite reliabilities for study variables were .923. These values exceeded the recommend threshold of .60 suggested by Bagozzi& Yi (1988).In addition, AVE values were .67 which was grater than the suggested cut-off of .50 (Hair et al., 1998). This finding indicated that the convergent validity is evident (Hair et al., 1998). The AVE values were also greater than the squared correlations of related variables. Thus, discriminant validity was also evident (Fornell&Larcker, 1981).

Table 1 Results of the confirmatory factor analysis.

Item	λ	t	SMC	M	SD	Q11	Q12	Q13	Q14	Q15	Q16
Q11	.782	-	.670	3.62	1.10	1					
Q12	.822	14.72	.699	3.01	1.17	.611**	1				
Q13	.846	15.25	.623	3.28	1.14	.692**	.693**	1			
Q14	.790	14.02	.716	3.19	1.12	.651**	.632**	.715**	1		
Q15	.836	13.14	.676	2.97	1.26	.538**	.724**	.676**	.607**	1	
Q16	.818	14.64	.611	2.92	1.17	.608**	.671**	.666**	.649**	.729**	1

**p<.05; λ: Standardized factor loading; SMC: Squared Multiple Correlations; M: mean; SD: standard deviation

Model measurement fit:χ^2 =48.91, df=16 (p=.000),χ^2 /df = 3.05, GFI=.962, AGFI= .900, CFI= .980, RMSEA= .070

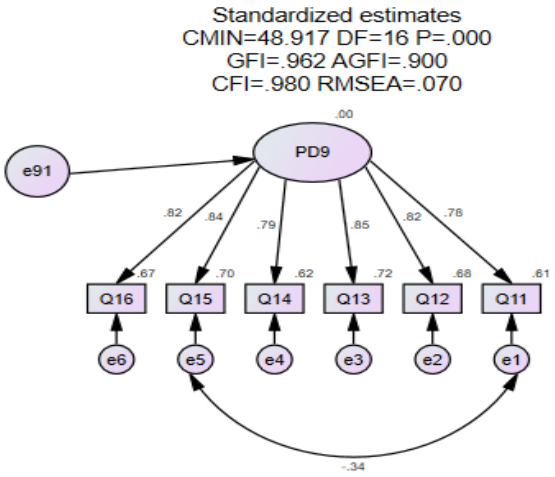


Fig. 1 Results of CFA

3.2. Hypotheses testing

As a next step, the initial data was sorted by gender group and multiple group analysis was run. Following the suggestions of Byrne (2010), multi- sample analysis for the unconstrained and the three constrained models were evaluated as Table 2 (Fig. 2).The results of the unconstrained model revealed that the model excellently fit to the data (χ^2 =23.9, df=14, p=.047,χ^2 /df = 1.707, GFI=.974, AGFI= .921, CFI= .991, RMSEA= .051). Furthermore, assuming model measurement weights to be corrected, the results of the constrained model revealed that the model excellently fit to the data (χ^2 =32.64, df=19, p=.026, χ^2 /df = 1.718, GFI=.964, AGFI= .921, CFI= .988, RMSEA= .051). Moreover, assuming model structural covariances to be corrected, the results showed that he model excellently fit to the data (χ^2 =34.48, df=20, p=.023, χ^2 /df = 1.724, GFI=.962, AGFI= .921, CFI= .987, RMSEA= .051). Finally, assuming model measurement residuals to be corrected, the results showed that he model excellently fit to the data (χ^2 =50.07, df=28, p=.006, χ^2 /df = 1.788, GFI=.945, AGFI= .917, CFI= .90, RMSEA= .054). In general, the measure weights of five items were larger in male than in female in unconstrained model; six items were larger in male than in female in constrained model of measurement weights; however, items were equal across gender in constrained model of structural covariances. The test results for nested model comparisons were showed in Table 3. The χ^2 difference test ($\chi^2(5)$=8.7, p>.05) between baseline model and constrained model for measurement weights was not significant, indicating the factor loadings across gender in this scale were equivalent.. The χ^2 difference

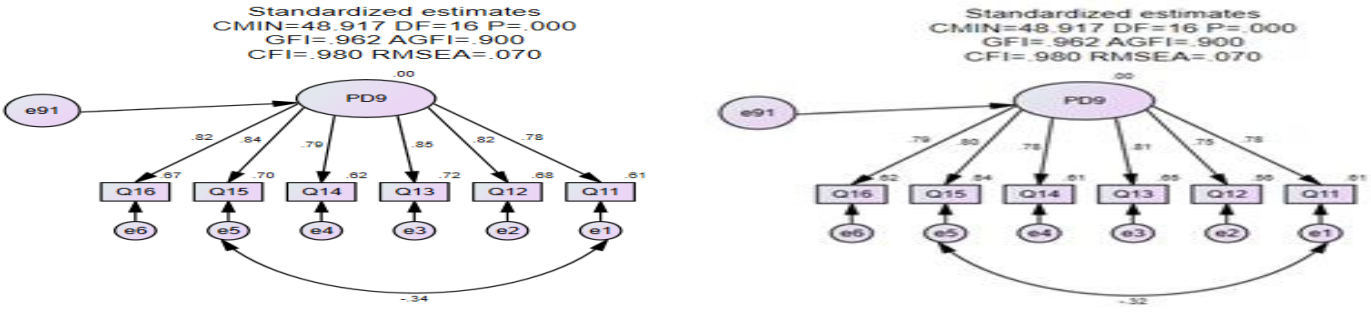
test between baseline model and constrained model for structural residuals ($\chi^2(1)=1.9$, $p>.05$) was not significant, indicating the structural residuals across gender were equivalent. However, theχ^2 difference test between baseline model and constrained model for measurement residuals ($\chi^2(8)=16$, $p<.05$) were significant, indicating the measurement residuals across gender were equivalent. The findings supported H3, while not support H1 and H2.

Table 2 Model Fit Indexes for Unconstrained and Constrained Model

Model	χ^2	DF	P	χ^2/DF	GFI	AGFI	CFI	RMSEA
Unconstrained	23.90	14	.047	1.707	.974	.921	.991	.051
Measurement weights	32.64	19	.026	1.718	.964	.921	.988	.051
Structural residuals	34.48	20	.023	1.724	.962	.921	.987	.051
Measurement residuals	50.07	28	.006	1.788	.945	.917	.980	.054

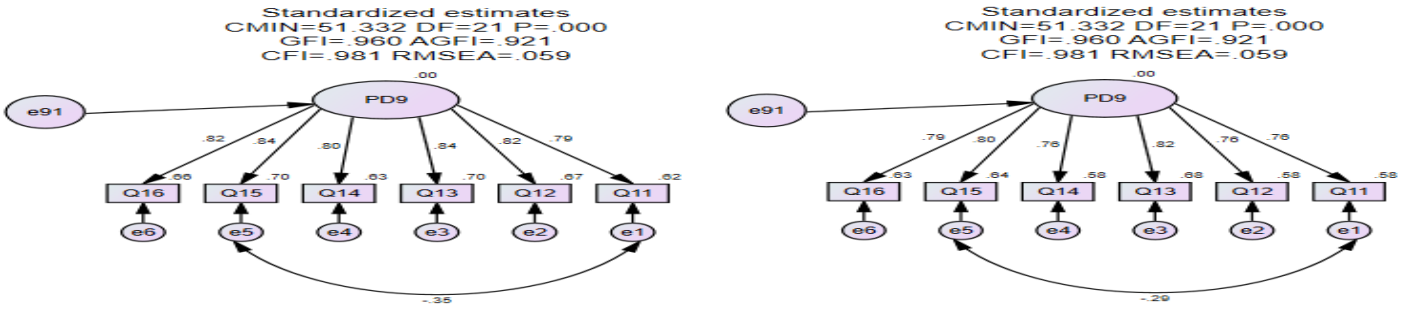
Table 3 Nested Model Comparisons

Model	$\triangle\chi^2$	$\triangle$DF	P
Measurement weights	8.7	5	.120
Structural residuals	1.9	1	.175
Measurement residuals	16	8	.049



M F

a. Assuming model Unconstrained to be corrected



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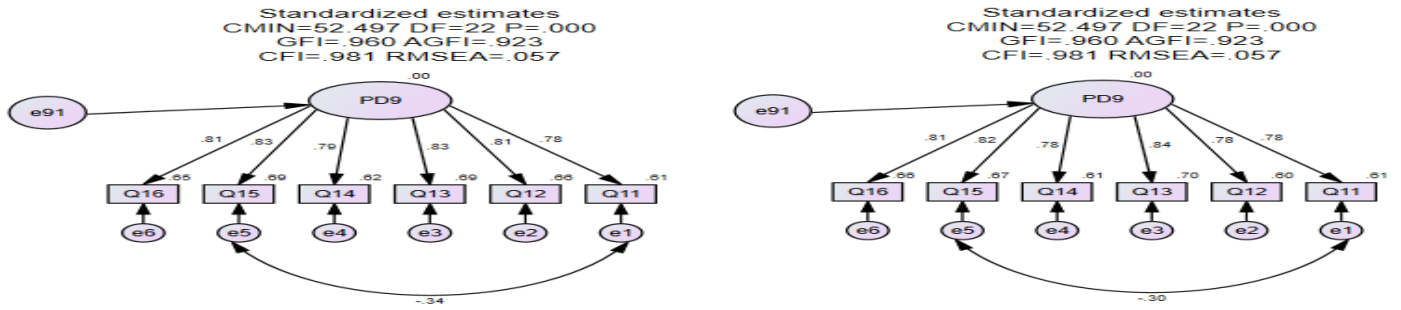
b. Assuming model Measurement weights to be corrected



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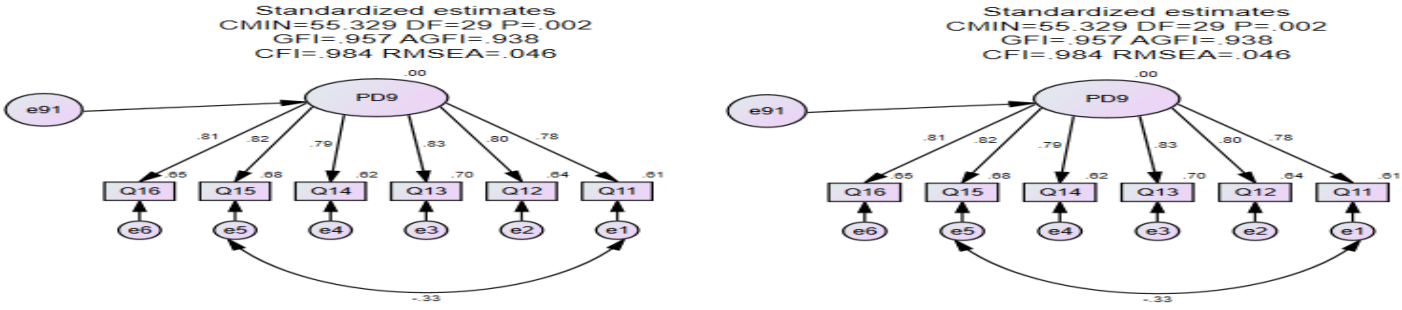
c. Assuming model Structural covariances to be corrected



M F

d. Assuming model Measurement residuals to be corrected

Fig. 2 Results of hypotheses testing

3.3 Discussion

Reflecting to research problems mentioned above, studies examined the construct of place identity did not concern gender difference. And studies addressed gender difference did not focus on place identity issue. The results indicated that the scale developed by previous studies (Strzelecka et al., 2017; Yen, 2017) achieved partial measurement invariance in the wine culture region at Yibin, China. The property of the measurement residuals across the gender was not equivalent, while the property of measurement weights and structural

residuals across the gender was equivalent in this scale. Milfont& Fischer (2010) claimed full measurement invariance is questionable to hold in reality. This finding partially filled up the gap of previous studies. The measurement of place identity could be applied to the wine culture region at Yibin, China while the measurement residuals should be concerned carefully.

Furthermore, gender difference is an important variable in the tourism literature. However, the studies on gender differences in the context of wine culture tourism, as well as its influence on place identity have rarely been presented. Therefore, the examination of the role of gender in place identity formation contributes to the existing wine culture tourism literature. The theoretical model was an empirical attempt to clearly explain such place identity formation in wine culture tourism. The proposed model had an acceptable level of explanatory ability in predicting place identity.Place identity was comprisedby six measure items is thus confirmed in the context of wine culture tourism.

4. Conclusion

Supporting the premise of the proposed framework, an important theorization can be offered that place identity was comprised by six measure items. Further, gender difference on place identity is not statistically significant meanwhile there is fundamentally no difference within the place identity formation in wine culture tourism. In conclusion, taking an important step by filling existing research gaps in tourism, the research findings can be meaningfully viewed in several aspects.

First, gender can be quickly judged by residents' appearance in most situations. Consequently it's believed that gender could be an easy-recognized variable for destination marketers. Rather than other demographic characteristics (e.g., family income, or level of education etc.), Therefore, accurate marketing strategies could be done to provide a better service, which may further increase the level of residents' revisit behaviors.

Moreover, some suggestions can be drawn to academia and practice. "The wine culture region at Yibin is very special to me" and "I am very attached to the wine culture region at Yibin" revealed the highest factor loadings for both male and female, indicating that the special and attached images were important to respondents. Marketers in Yibin region should concerned first when shaping images of a destination. Furthermore, the contribution of "I identify strongly with the wine culture region at Yibin" was relatively low for both male and female, so that marketers in Yibin region should improve the identification on the basis of the

wine culture region at Yibin. For future studies, they can verify the causal relations among the antecedents and outcomes of place identity based upon our study. They also can study the reason for why the measurement residuals are not equivalent.

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