

## Ecological Environment and Traditional Craft: Taking Huizhou Three Carvings as an Example

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**KEYWORDS** Cultural Environment. Influencing Factors. Inheritance of Skills. Traditional Culture

**ABSTRACT** Traditional craftsmanship is an important part of traditional culture. The Huizhou three carvings (stone, wood and brick carvings) refer to decorative sculptures of architectures of the Ming and Qing Dynasties in the ancient Huizhou area, which are excellent representatives of Huizhou traditional handicrafts. For effective protection and the inheritance of Huizhou regional culture, it is of critical importance to identify and improve the influencing factors of cultural-ecological environment. This paper deals with a factor analysis for 16 cultural-ecological environment attributes in nine cities and counties, including Huangshan City, Wuyuan County, and Jixi County by using the principal component analysis method. It discusses the effect of the influencing factors of cultural-ecological environment on handcraft inheritance inclination of the Huizhou three carvings, through logit regression analysis. The results show a significant positive correlation among the four influencing factors of cultural-ecological environment of natural, social and economic development, policy and system, transportation and income as well as interaction between tourism and aesthetics, and the inheritance inclination of traditional handicrafts. Accordingly, the guiding ideas and methods, which influence the inheritance of traditional craftsmanship are proposed.

### INTRODUCTION

Traditional craftsmanship, as an important part of Chinese traditional culture, is a manual labor-centered craft culture featuring unique artistic style, and symbolizing human civilization. It is a cultural representation of a region or a nation as well as an important manifestation of human cultural diversity with characteristics of territoriality, heterogeneity and diversity. Since the late twentieth century, protection and development of national traditional culture has become an important topic of the cultural development of many countries in the world. Most of the research focuses on the economic, cultural and environmental systems within a region, as well as the mutual cooperation between the internal elements of the systems, and fully enhance the core competitiveness of the traditional culture of a nation in order to realize the overall development of the regional culture and economy (Li and Yang 2013). As the traditional cultural forms have a strong dependence on the external environment (Yang 2014), cultural inheritance should not statically showcase the culture of a specific historical period or a certain social form, but should fully respect the time dimension of culture (Shan 2011). Despite the fact that the traditional craftsmanship, which is on the wane,

is unlikely to fundamentally change the trend of the social production, it is of great significance to explore how to avoid the impact of industrialization on traditional culture.

The ecological attributes of culture, the systematic features of cultural ecology, as well as the dynamic and regional characteristics of cultural ecosystem is the theoretical basis for construction of the national cultural-ecological protection zone (Song 2011). Huizhou culture is an outstanding regional culture in the middle and late periods of Chinese feudal society, and the Huizhou Cultural-Ecological Reserve Area was approved by the Ministry of Culture of the People's Republic of China on January 8, 2008. To effectively protect and transmit Huizhou regional culture, it is necessary to construct an ecological environment conducive to the development of Huizhou traditional culture industry, optimize the leverage with cultural ecology and rapidly enhance the soft power of the regional culture (Wang 2014). Therefore, identification and improvement of the influencing factors of cultural-ecological environment has become an important means for promoting the inheritance of traditional craftsmanship.

The ideological roots of research on the correlation between human activities and cultural-ecological environment from the perspective of

ecology can be traced back to environmentalism theory, geography and cultural ecology. The environment in which human beings live is diverse; due to the need for effective use of natural resources, people living in different environments build vastly dissimilar cultures in order to maintain their own stability, continuation and development (Netting 1996). In the 1930s, scholars represented by Franz Boas held that historical, social and biological factors can provide explanatory force for a given culture, and pointed out that environment can only influence the forms of culture, and the development trend of culture is dependent on cultural factors. Influenced by Franz Boas and Carl Sauer, Julian (1955) began to study the impact of the environment on human cultural activities and explored the interplay among environment, technology and human behavior. The environmental factors he studied mainly included, resource quality, resource quantity and distribution of resources, while the cultural factors he emphasized consisted of social organization and population as well as economic and technological factors. He also stressed that the environment can only have an influence on the “cultural core” and argued that similar cultural phenomenon can be reproduced in different historical periods, different regions and different customs (Chris and Keith 2011). The “cultural evolution”, “neoevolutionism” and “neofunctionalism” schools, which emerged around the 1950s emphasized that the factor determining the advancement of culture is its ability to utilize energy and the cultural evolution model is largely decided by a unitary or single factor. They held that cultural changes are jointly dominated by “general evolution” and “special evolution”. In addition, they also examined the interaction between the environment and population, and revealed the people’s cultural adaptiveness to environment. In the 1960s, new archaeologists argued that cultural evolution is constrained by natural environment and humanities environment. They viewed culture as a system and the ecological environment as another. The former consists of three subsystems of technology, society and awareness, while the latter includes geology, topography, flora and fauna, hydrology and so on. Among them, the technical system is key to understanding the interaction between culture and environment. Since the late 1970s, processual ecological anthropology has absorbed research results in social sciences

in terms of demographics, environmental issues and adaptation strategies, and analyzed the influence of the participants’ behavior and purpose, the allocation of resources and the practices of everyday life on the environment, by introducing the decision-making model into the social and cultural system. In the late 1980s, Thomas N. Headland studied different cultures in different times and analyzed various roles of human activities in environmental, and cultural changes from the perspective of historical periods. Tian Guang argued that Xiangji (Interphase) Operational Theoretical Model has a great influence on the economic development of the ethnic areas (Tian 2013, 2014).

In the early 1980s, Chinese scholars Wu Wenzao and Fei Xiaotong showed much concern for the development of ecological anthropology in China. Nevertheless, due to their one-sided emphasis on economic and social development, the connection between national culture and the environment in which it grows has been overlooked. Since the 1990s, a large number of Chinese scholars have begun to be more concerned for ecological anthropology, and have conducted in-depth studies on the connotation of cultural ecology. As Feng (1990) pointed out in the History of Chinese Culture, “Cultural ecology is a discipline studying the relationship between culture and environment for the purpose of clarifying the intrinsic relationship between the culture itself and the cultural environment”. Cultural ecology comprises of three environmental factors: “natural environment”, “economic environment” and “social and institutional environment”, which constitute a three-in-one composite structure of “nature-economy-society” (Fan 2013). There is an interactive balance between a culture, and its ecological environment and social environment, which forms a special living environment for a nation (Shi and Long 2011), to effectively adjust the internal environment, and external environment of the cultural ecosystem (Zuo 2015). According to Deng (2003), human beings and the surrounding in which they live are an inseparable network, and the creation and evolution of culture is significantly influenced by spiritual culture, which includes religion, literature and art, and institutional culture, which involves taboos and pacts. The awareness of cultural-ecological environment protection needs to be cultivated from the eco-ethical perspectives such as cultural concepts, con-

sciousness and beliefs (Hong and Li 2011). Fu (2010) argued that cultural ecology is a dynamic accumulation of historical progress shared by the members of the society (Miao 2011). It is the reflection of the humanities state of a region, and is very closely linked to the geographical environment and historical culture of a specific region. It contains two aspects: natural ecology and social ecology. The former includes geographical environment, climatic conditions, biological status and other factors, while the latter incorporates factors such as technological level, mode of production, lifestyles, political systems, social organizations and social thoughts (Hu 2015). The creation, transmission and development of culture is the result of co-action of historical, natural and social factors (He and Xu 2014), which is inseparable from the cultural-ecological environment of geographical environment, economic conditions, political systems and cultural integration (Lan 2009). The culture, the natural environment in which it develops, and the social environment in which it grows interact with each other, and constitute a dynamic cultural industry chain (Qing and Du 2013) and cultural ecosystem (Hu et al. 2013). Research on the social, natural and cultural factors (Li 2015) behind economic behavior can undoubtedly provide a more comprehensive, and objective perspective for people to understand the economic life (Li 2014).

Throughout the domestic and foreign research results, the emphases of research scholars are not identical, including theory of cultural ecology, cultural phenomena, cultural factors, cultural adaptation, cultural evolutionary patterns, cultural industry chain, cultural and ecological protection, ecological culture system research. The cultural and ecological environment research scholars believe that the geographical environment, climatic conditions, cultural idea, consciousness and belief, culture system, the level of science and technology, production and cultural ecological environment factors for traditional craftsmanship have an important influence. However, the research on the comprehensive effect of the cultural-ecological environment is not enough, and the phenomenon of the cultural heritage is the comprehensive function of many cultural factors. Based on this, this paper presents the research topics.

## Objectives

Combing through the relevant theoretical research of cultural ecology, which preliminarily establish the comprehensive influence factors of the cultural ecological environment, clear research ideas, as well as design thesis research framework. In Huizhou, three birds, for example, through the method of field survey, accessed key influencing factors affecting Huizhou Carving Crafts heritage and related data. Factor analysis and logit regression analysis method of combining were used to find out the effect of Huizhou carving handicraft heritage on key influencing factors. According to the key influencing factors, combined with Huizhou, three birds craftsmanship transmission, Huizhou three birds craftsmanship inheritance analysis explore the heritage of traditional handicraft of ideas, methods and means.

Through the study of this paper, clear interactions between different ecological factors and traditional craft, build a framework of the cultural ecological environment for traditional craft. The research results of this paper can offer constructive support for relevant authorities to have accurate knowledge, and control of the key links in cultural-ecological environment, so as to carry out cultural-ecological environment protection in an orderly way based on overall planning and rational distribution. This paper takes the ancient Huizhou area as the research object, analyzes the relationship between the ecological environment and the traditional craft, and has the limitation of the region. Based on the comparative study of the ecological environment of different regions and different types of culture, the study on the multi-culture of the large sample is needed to be further studied.

In the 1930s, influenced by the geographer Karl Sauer, Julian (1955) embarked on his enquiry on the influence of environment on culture and put forward the "cultural ecology methodology" to study the relationship between people with certain cultural characteristics and the environment in which they live. Subsequently, the view of "unitary evolution" stressed the extensive details of evolution instead of specific adaptations. In the 1960s, "pragmatism" anthropologists, by adopting the general system theory methods and the research methods of archaeologists and social anthropologists, viewed the culture of social organizations and specific groups

of people as a way for adaptation to a function, which creates the new field of quantitative study. Since the late 1970s, “processual ecological anthropology” has begun to study the interaction between people and the environment in which they live, taking a specific cultural region as the object of study from the perspective of historical periods. In the 1980s, historical ecologists conducted research on specific geographical locations within the framework combining nature and culture, by adopting historical ecology tools. Professor Yin (1988) applied the analysis method of “phylogenetic tree” to study the correlation among the constituent components of the cultural ecosystem. Liu (2014) emphasized that the relationship between instrumental rationality and value rationality should be properly handled in order to let value rationality return and instrumental rationality be constrained. Professor Mei (2004) laid a stress on employing multidisciplinary and cross-cultural approaches to study the relationship among the elements of cultural ecology. The theories and methods of anthropology, combined with the knowledge of economics, mathematics, geophysics and other disciplines, should be used to conduct cross-disciplinary analysis (Wang and Tian 2012). Zhang et al. (2014) adopted two approaches of data analysis and index analysis to conduct analysis of variance on the ecological environment of the three Tibetan and Han-villages in the Zhouqu County. On the basis of research methods conducted by experts both at home and abroad, this paper adopts the field investigation method and employs a combined method of factor analysis, and logit regression analysis to examine the influence of cultural and ecological environment on inheritance of traditional craftsmanship.

**Questionnaire Design**

By making references to the results of previous researches, and combining with the requirements of the research object and the purpose of

this paper, as well as the interviews with some of the inheritors of traditional handicrafts, the survey questionnaire was finalized after undergoing several content revisions, and form of the questionnaire by using the Delphi method. This study adopts a structured questionnaire form, which is divided into three parts: the first part details the demographic characteristics of the sample, the second part investigates the influence of the Huizhou three carvings industry, by using a 5-point Likert scale method, where points 1-5 indicate the strength of influence from no influence to significant influence respectively, and the third part explores the willingness to inherit the Huizhou three carvings craftsmanship through a 5-point Likert scale, where points 1-5 represent the strength of willingness from no willingness to strong willingness respectively. The enumeration of 16 attribute items of the cultural-ecological environment is shown in Table 1.

**Data Collection**

The target respondents of the survey are the management staff, technical staff and frontline production staff engaged in production and management of the Huizhou three carvings. Altogether, 400 questionnaires were sent out during the researchers’ visits to Wuyuan County, Jiangxi Province, Huangshang City (including She County, Yi County, Qimen County, Xiuning County, Huizhou District, Tunxi District and Huangshan District), Anhui Province and Jixi County, Xuancheng City, Anhui Province from 2010 to 2012, and a total of 361 valid questionnaires were received with a responding rate of 90.25 percent. The basic information of the respondents is shown in Table 2.

Table 2 shows the distribution of the effective sampling of the survey. The male to female ratio is close to 7:1; the members of staff are mainly young people aged between 19 and 45 with low education level, and a dumbbell-shaped distribution of average monthly income is shown.

**Table 1: Attribute items of cultural-ecological environment**

<i>No. Attribute</i>	<i>No. Attribute</i>
X1 Local vegetation, stone, soil, climate, etc.	X9 Travelers
X2 Traffic conditions	X10 Geographical location
X3 Science and technology	X11 Income of local residents
X4 Production mode and lifestyle	X12 Policies
X5 Tools of production	X13 Religious beliefs
X6 Livelihood technology	X14 Aesthetic taste
X7 Level of income (practitioners in the Huizhou three carvings)	X15 Political System
X8 Regional economic development	X16 Clan system

**Table 2: Basic information of respondents (n=361)**

<i>Basic information category</i>	<i>Percentage (%)</i>
<i>Sex</i>	
Male	86.3
Female	13.7
<i>Age</i>	
Under 18 years old	24.2
19-35 years old	56.3
36-45 years old	12.1
46-60 years old	5.1
Above 60 years old	2.3
<i>Education</i>	
Primary school	8.42
Junior high school	27.37
High school / technical secondary school	58.33
Junior college and above	5.88
<i>Job Type</i>	
Management staff	24.05
Technical staff (masters)	23.1
Producers (apprentices)	30.62
Sales staff (small private businesses included)	22.23
<i>Average Monthly Income</i>	
Less than 1000 yuan	18.75
1001-2000 yuan	16.67
2001-3000 yuan	25.78
3001-4000 yuan	8.91
Over 4000 yuan	29.89
<i>Location</i>	
Wuyuan County	9.32
Tunxi District	18.16
Huizhou District	14.21
Huangshan District	9.61
She County	16.14
Yi County	8.82
Qimen County	4.82
Xiuning County	10.27
Jixi County	8.65

These characteristics are consistent with the local conditions, indicating that the sample is a balanced and representative one.

Generally speaking, the higher the reliability coefficient, the more reliable the scale is. The results of the reliability analysis show that the

Cronbach's alpha coefficient of the second part of the questionnaire is 0.819, indicating that the survey items have a high correlation with good internal-consistency reliability.

## RESULTS

### Principal Component Analysis of Influencing Factors of Cultural-ecological Environment

According to the requirements of the factor analysis method, correlation test of the data of the influencing factors of cultural-ecological environment were firstly conducted, with the data test results as shown in Table 3. The total variance explained is shown in Table 4. The rotated component matrix is shown in Table 5.

**Table 3: KMO and Bartlett's test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.762
Bartlett's Test of Sphericity	
Approx. Chi-Square	3960.059
df	120
Sig.	.000

### The Influence of Cultural-ecological Environment on Inheritance of the Huizhou Three Carvings

A logit regression analysis was conducted with the five principal components influencing cultural-ecological environment as independent variables, and the willingness for inheritance of the Huizhou three carvings craftsmanship, as dependent variables. These variables are needed to explore the impact of the influencing factors of the cultural-ecological environment on the willingness to transmit the craftsmanship of the Huizhou three carvings. The significance test

**Table 4: Total variance explained**

<i>Component</i>	<i>Extraction sums of squared loadings</i>			<i>Rotation sums of squared loadings</i>		
	<i>Total</i>	<i>% of variance</i>	<i>Cumulative %</i>	<i>Total</i>	<i>% of variance</i>	<i>Cumulative %</i>
1	6.476	42.972	42.972	3.984	20.563	20.563
2	2.310	15.638	58.610	2.223	17.668	38.231
3	1.348	10.422	69.032	2.148	16.412	54.643
4	1.140	9.525	78.557	2.020	15.515	70.158
5	1.064	7.147	85.704	1.964	14.547	85.704

*Extraction Method:* Principal Component Analysis.



**Table 5: Rotated component matrix (a)**

	<i>Component</i>				
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Zscore(x1)	.865	-.214	-.145	.160	.007
Zscore(x2)	.104	.183	.946	-.084	-.359
Zscore(x3)	.045	.079	.108	.895	.257
Zscore(x4)	.913	-.161	.074	.177	-.162
Zscore(x5)	.881	-.399	-.273	.036	-.009
Zscore(x6)	.820	-.223	.178	.126	.011
Zscore(x7)	.140	-.309	.835	-.121	-.232
Zscore(x8)	.825	-.325	-.101	-.222	.199
Zscore(x9)	.145	.245	.239	-.373	.914
Zscore(x10)	.883	-.191	-.193	.031	-.261
Zscore(x11)	.885	-.120	-.265	-.244	-.052
Zscore(x12)	.140	.939	-.362	.011	-.221
Zscore(x13)	.147	.872	.120	.238	-.122
Zscore(x14)	.104	.185	-.175	-.150	.874
Zscore(x15)	.168	.910	-.242	-.140	-.154
Zscore(x16)	.104	.934	-.184	.130	-.099

*Extraction Method:* Principal Component Analysis.  
<sup>a</sup> 5 components extracted.

of regression coefficients is demonstrated in Table 6.

### DISCUSSION

As can be seen from Table 3, the approximate chi-square of Bartlett’s Test of Sphericity is 3960.059, with the corresponding probability being close to 0, and the KMO value is 0.762, indicating that the data is suitable for factor analysis.

Based on the correlation coefficient matrix of the original variables, the method of principal component analysis is adopted to conduct factor extraction. According to the SPSS 13.0 data processing results, all the communalities of variables are 1 under initial solution and are above 0.75 when extracting characteristic roots, which indicates that the variables can be well interpreted by the factors with a low level of missing data.

From Table 4, one can see that five principal components with eigenvalues higher than 1 are extracted. The eigenvalues of the five components are: 6.476, 2.310, 1.348, 1.140 and 1.064 respectively, which explained 42.972 percent, 15.638 percent, 10.422 percent, 9.525 percent and 7.147 percent of the variance respectively, with a cumulative variance contribution rate of 85.704 percent. The outcomes show that the five principal components are able to explain all the indicators of the attributes of cultural-ecological environment, and the effect of factor analysis is satisfactory.

Table 5 shows that variables x1, x4, x5, x6, x8, x10 and x11 have high factor loadings in component 1, which was interpreted as “natural, social and economic development”. Variables x12, x13, x15 and x16 were the ones with high factor loadings in component 2, which was named “policy and system”. Variables x2 and x7 have high factor loadings in the third component, which was called “transportation and income”. Variable x3 has high factor loading in component 4, which was named “science and technology development”. Variables x9 and x14 were the ones with high factor loadings in the fifth component, which was interpreted as “interaction between tourism and aesthetics”.

As can be seen from Table 6, at the ninety-five percent confidence level, the concomitant probabilities of four independent variables (natural, social and economic development, policy and system, transportation and income and interaction between tourism and aesthetics) are 0.01, 0.03, 0.02 and 0.011 respectively, all below 0.5. If the researchers rejects the null hypothesis, the results indicate that these four independent variables are significantly correlated with the dependent variable (willingness for inheritance of the Huizhou three carvings craftsmanship). Meanwhile, the coefficients of the four variables are all positive, which means that the

**Table 6: Significance test of regression coefficients<sup>a</sup>**

<i>Model</i>	<i>Unstandardized coefficients</i>		<i>t</i>	<i>Sig.</i>
	<i>B</i>	<i>Std. error</i>		
Natural, social and economic development	.399*	.062	6.435	.010
Policy and system	.289*	.058	4.983	.030
Transportation and income	.403*	.078	5.167	.020
Science and technology development	-.101	.076	-1.329	.221
Interaction between tourism and aesthetics	.309*	.049	6.306	.011

*Note:* \* indicates statistical significance at the 95% confidence level.

more favorable the conditions of the above four factors are, the stronger the willingness to inherit the craftsmanship of the Huizhou three carvings will be.

### CONCLUSION

The study revealed that the existing transportation infrastructure in the core areas for inheritance of craftsmanship is inadequate that is, the supporting measures for craftsmanship transmission are not adequate. On the main body of the inheritance tax relief, intellectual property protection, special funds, discount is not implemented and the industry chain has not yet been established for traditional handicraft, the product marketing channel is single. On the main body of the inheritance the income is not guaranteed, and most of the inheritors of the traditional craftsmanship possess relatively low incomes.

The study showed that with the local economic development, the natural and social environment for the local cultural ecology has had varying degrees of damage, traditional cultural ecological space by the strong impact from modern society, though with the social demand driven, with the esthetic idea change and with the reduce the cost of the pursuit, the production method of handicrafts has been transformed from pure handmade to semi-mechanized. Traditional handicraft production methods and forms have been experiencing varying degrees of damage. In the commercial space of the balance protection and the traditional development, the function of the local government has not been fully played out.

The study also discovered that located in the core areas of Huizhou culture, and world famous attractions, the Ancient Huizhou area is endowed with extensive cultural, and natural resources and has obvious resource and geographical advantages. With the help of the local tourism industry, the traditional manual techniques have been developed, but the low level of the tourist souvenirs sales cannot get rid of the low level of development. In the traditional culture as the soul tourism industry chain has not yet formed, closely integrated with the local residents of working life, folk activities such as diversification, scale, brand of the industry and development pattern has not been established.

The results show that the current relevant laws and regulations on the protection of cultur-

al ecological environment and traditional crafts heritage are basically still a piece of blank, and the relevant national and local traditional craftsmanship heritage policies, laws and regulations are very few. Rules and regulations are not perfect, the implementation of the supervision is not enough, and the policy is not in place. The patriarchal system and the local religion belief and the birthplace of the traditional handicraft technique, cannot be effectively respected and protected, and the continuation of the traditional manual techniques have faced some obstacles.

### RECOMMENDATIONS

Meanwhile, policy recommendations on rational development and effective protection of traditional cultural resources are also proposed in this paper. To be specific, the researchers recommend that the local government should raise funds through multiple channels and increase investment in construction of transportation infrastructure in towns and villages of traditional craftsmanship. The government should also create a favorable market environment for the development of traditional handicraft industry by providing policy support, building handicraft transmission platforms, granting financial support and enhancing promotional efforts. As the raw materials of traditional handicrafts are mainly obtained from the local natural resources, and the production mode has transformed from the original pure craftsmanship to semi-mechanized production, it is of great significance to ensure coordinated development of natural ecological environment, social production, and lifestyles as well as a regional economy without destruction of the natural environment, and the production method of traditional handicrafts.

Some of the recommendation include, attaching importance to national and local traditional crafts heritage of the relevant policies, laws and regulations construction, establishing and improving the rules and regulations of the supervision of the implementation of measures, following the laws and rules, attaching importance to mining, respecting and protecting the birthplace of traditional craftsmanship and patriarchal clan system and the local religious beliefs, and the continuation of the main context and cultural connotation of the inheritance of traditional craftsmanship. Efforts should also be made to speed up the establishment of relevant intellec-

tual property protection systems, as well as special development funds, to facilitate the industrial development of traditional handicrafts, and increase the incomes of the inheritors of craftsmanship. The guiding government and enterprises must attach importance to support and investment of traditional handicrafts, to get rid of the low level of tourism souvenirs development, to diversify and scale brand development. The local government should actively coordinate the development between cultural ecology protection, and economic development, as well as balance protection and exploitation of traditional commercial space, in order to enable the traditional handicrafts to meet the market demands, while retaining the production methods and manifestations of traditional craftsmanship.

Efforts should be made to actively develop cultural tourism, promote tourism products, gifts and art collections of traditional craftsmanship, build an ecological chain of cultural industry, boost travelers' demand for traditional handcraft products, and form the driving force behind the inheritance of traditional craftsmanship by taking advantage of local resources and geographic locations. Meanwhile, the government, through travelers-the carriers of culture and fashion-should timely detect and track changes in people's aesthetics, integrate aesthetic elements of the new era into traditional handicrafts to stimulate people's desire to purchase these products, showcase the exquisite artistry of traditional handicrafts in product forms which to satisfy people's needs in the new age, build a cultural industry chain integrating transmission, production, tourism, exhibition and shopping, and seek for social choice and social application through marketization to realize cultural self-support.

As this paper takes the regional culture of Huizhou as the research object, the research findings have certain limitations. It is recommended that the scope of research object should be expanded in the following studies, so as to seek common rules for influencing factors of cultural-ecological environment from a large sample. Comparisons of elements of ethnic and ecological environment in different areas and in different regions should be conducted to determine the relationship between ethnical and ecological environment, and the inheritance of traditional craftsmanship. In terms of analysis methods, attempts can be made to employ a comparative analysis of multiple research methods, to verify

the general regularity of the factors influencing the cultural and ecological environments.

#### ACKNOWLEDGEMENTS

Research on Ecological Protection of Traditional Craftsmanship of the Huizhou Three Carvings on the Basis of Cultural-Ecological Regions, a project supported by Humanities and Social Sciences Funds of Ministry of Education (No. 09YJAZH036); A Study on Optimization of Protection Mechanisms of Huizhou Ancient Villages and Houses from the Perspective of Social Capital, a project supported by Anhui Provincial Funds for Young Talents (No. 2012SQR W 144ZD); Research on Huangshan Cultural Tourism Industry Development and Innovation, the initiation program for talents introduction of Huangshan University (No. 2013xskq002).

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