



UNIVERSITÀ DEGLI STUDI DI CAMERINO

School of Advanced Studies

DOCTORAL COURSE IN

INNOVATION DESIGN

XXXV cycle

**REGIONAL CIRCULATION SYMBIOSIS:STUDY ON THE
SUSTAINABLE DEVELOPMENT OF REGIONAL TRADITIONAL
HANDICRAFT**

PhD Student

Supervisors

Yanan Fu

Carlo Vannicola

Regional Circulation Symbiosis: Study on the Sustainable Development of Regional Traditional Handicraft

Yanan Fu

University of Camerino

School of Advanced Studies

Architecture, Design, Planning

Innovation Design | XXXV

Tutor Prof. Carlo Vannicola

2023

Keywords

Cultural Heritage

Territorial Revitalization

Regional Symbiosis

Regional Traditional Handicrafts

Sustainable Development

Abstract

Sustainability is a key development issue in the world today, and as countries strive to accelerate the implementation of the 2030 Agenda for Sustainable Development, culture is becoming a valuable resource in many areas of our lives. Many countries choose to invest in culture because of its capacity for inclusion, conversation and innovation, and as a powerful force for connecting the past to the future, while cultural heritage not only preserves historical memory, but is also an important vehicle for continuing local cultural traditions and sustaining national spirits.

Among them, traditional handicrafts, as one of the important cultural heritages, have carried the economic and cultural aspirations of the people for thousands of years. However, in recent times, along with the historical process of machine production gradually replacing traditional handicraft production and commodity economy replacing natural economy, more and more traditional handicrafts are gradually weakening or even disappearing, which is a great loss to the demand of human cultural diversity.

Nowadays, culture and creative industries are one of the fastest growing economic sectors in the world, culture plays a significant role in building a more cohesive, resilient and inclusive society, and the preservation and development of indigenous cultural resources has become an important way to revitalize the territory. Regional traditional handicrafts are not only an important cultural carrier but also an industrial resource with unlimited potential. Low energy consumption, intensive, decentralized and other industrial characteristics give it real significance as a production method in increasing employment, income generation and other economic aspects. For alleviating employment difficulties, providing economic growth channels, reconstructing cultural ecosystems, and maintaining social stability, regional traditional handicrafts have natural attribute advantages as a supplementary form of industrialized production. Therefore, this paper addresses three research questions:

1. How to inherit, educate, and develop local traditional handicraft?
2. How to revitalize/sustainable/diversify the economic development structure of the "local" area based on regional traditional handicraft?
3. How to preserve and diffuse the culture of regional traditional handicraft?

By introducing the theory of "Regional Circular and Ecological Sphere", this study explores the ways in which different countries use regional resources for territorial revitalization. Taking China as an example, this study analyzes the internal ("professionalization/industrialization") and external ("scientific diffusion") changes of traditional handicrafts in different regions, and identifies the modern reconstruction strategies of their organizational types and operational systems. Taking "Ceramics" as the case of regional traditional handicraft, this study was conducted in Faenza, Italy and Yuzhou, China, to compare and contrast the traditional and innovative models of this industry in the framework of industrial reconstruction, so as to establish a universally applicable regional "Ceramics" symbiotic network with universal applicability to achieve circular, ecological, digital, sustainable territorial development and cultural revitalization.

This study discusses the protection and inheritance of regional traditional handicrafts and industrial development from the perspectives of economy, culture and society, and provides a concrete implementation plan for regional prosperity, livelihood economy and cultural construction by applying the scientific theory of "symbiosis", so as to provide a practical way for territorial revitalization.

Also, the purpose of this study is not only to protect cultural heritage, but also to intervene in the modern life through regional traditional handicraft, to provide new economic opportunities for the residents, to solve the social and economic problems, as well as to reconstruct the national culture in people's daily life, and to provide space and opportunities for modern design to intervene in the prosperity of the territory.

*"We are all shaped by the traditions of the common community in which we grow and exist, and we are shaped by our own past. We are the carriers of this **"HERITAGE"**, which also sets the course for our future. If the possibilities of our decisions inherit this heritage, then and only then are they most profoundly for ourselves."*

— Michael Landmann.
《 *Philosophical anthropology* 》

TABLE OF CONTENTS

PART I	Introduction	1
1	Background of Research Project	2
2	Problem Statement and Purpose of Study	4
2.1	Research proposition	5
2.2	Research questions	5
3	Research Objectives and Aims	6
4	Related Concept Definition	7
4.1	Definition of the concept of “ Regional Circular and Ecological Sphere ”	7
4.2	Definition of the concept of “ Region ”	7
4.3	Definition of the concept of “ Traditional Handicraft ”	7
4.4	Definition of the concept of “ Intangible Cultural Heritage ”	8
4.5	Definition of the concept of “ Sustainable Development ”	8
5	Research Approach	10
6	Thesis Structure	11
7	Literature Review	14
7.1	Overview	14
7.1.1	Discipline distribution	14
7.1.2	Research levels	15
7.2	Focus	16
7.2.1	Keyword cluster analysis and research themes	16
7.2.2	Keyword cluster timeline and Focused areas	23
PART II	Theory and Methodology	25
	<i>New Model of Territorial Revitalization and Value Transformation of Regional Traditional Handicraft</i>	
CHAPTER 1		
	Regional Circular and Ecological Sphere : "Symbiosis" Scientific Theory	26
1.1	Theoretical discussion based on “Regional Circular and Ecological Sphere”	27
1.1.1	Background	27
1.1.2	Theory connotation	28
1.1.3	Theory application	29

1.2	Value-added methods and approaches for regional resource integration	31
1.2.1	Practice based on regional resource integration	32
1.2.2	Practice of renewable resource transformation based on public-private partnership system	33
1.2.3	Innovative value-added practices based on green investment and financing	34
1.2.4	Inspiration	35
1.3	Practice in different countries	36
	<i>Summary</i>	54

CHAPTER 2

	The Value System and Contemporary Transformation of Traditional Handicraft	55
2.1	Handicraft: the matrix of art and technology	56
2.2	The integration of material and spiritual values	59
2.3	Contemporary transformation of traditional handicrafts	61
2.3.1	Crisis	61
2.3.2	Opportunity	63
2.3.3	Revolution	64
2.3.4	Development	65
	<i>Summary</i>	67

PART III Case Study 69

Study on the development model of regional traditional handicraft with the example of China

CHAPTER 3

	Changes and Reconstruction of Traditional Handicraft in Chinese Regions	70
3.1	Keyword extraction: Types and organizational changes of traditional handicraft in the course of history	71
3.1.1	Types of traditional handicraft	73
3.1.2	Craft changes in different regions	81
3.1.3	Summary	98
3.2	Reconstruction model of traditional handicrafts: concrete implementation and operation	98

3.2.1	Mode of inheritance of traditional handicrafts	98
3.2.2	Internal behavior: industrialization / professionalization	101
3.2.3	External behavior: science diffusion	123
	<i>Summary</i>	131

PART IV Theory Practice / Application 133

"Ceramics": Explore the symbiotic and sustainable approach to territorial revitalization

CHAPTER 4

Ceramics in FAENZA (Emilia-Romagna Region), Italy : Tradition & Innovation 134

4.1	Industry analysis	147
4.1.1	Data table structure and method description	150
4.1.2	Data tables	152
4.2	Initiatives between tradition and innovation	162
4.2.1	Fairs and Ceramic Festivals	163
4.2.2	Gallery and Museum	167
4.2.3	Collaboration with Design	167
4.2.4	Digital Platforms	170
4.2.5	Advanced Training	171
4.3	Industry innovation conceptual mind map	175
4.3.1	Map-1: Ceramist, Artisan, Designer, Artist	176
4.3.2	Map-2: Advanced Training	179
4.3.3	Map-3: Network, Cultural District, Craftsmanship 4.0 Models	182
4.3.4	Map-4: Innovation	183
4.4	Faenza system	185
	<i>Summary</i>	191

CHAPTER 5

Ceramics in YUZHOU (Henan Province), China : Tradition & Innovation 193

5.1	Ceramic Development	194
5.1.1	Humanities foundation	195
5.1.2	Geographic distribution	197
5.2	Industry Analysis	202

5.2.1	Interviewee structure	202
5.2.2	Interview data - First collation - Overview analysis	203
5.2.3	Interview data - Second Collation - In-depth analysis	205
5.3	Field Study	220
5.3.1	Academic activity	220
5.3.2	Tourism	221
5.3.3	Study visits	224
	<i>Summary</i>	237

CHAPTER 6

	Territory Revitalization and Symbiotic Sustainable Development	239
6.1	Comprehensive analysis of the innovative development of the ceramic industry in Italy (FAENZA) and China (YUZHOU)	240
6.1.1	Innovation in cultural industry clusters	242
6.1.2	Ceramic cultural tourism development model	253
6.2	Diversity model of " Symbiosis " development system	255
6.2.1	"Symbiosis" - Ontology layer	255
6.2.2	"Symbiosis" - Environmental layer	262
6.2.3	Summary	267
6.3	Innovative design of " Symbiosis " development system: Digitization as a turn	270
6.3.1	Deconstruction: Diversification of cultural forms and social functions	270
6.3.2	Reconstruction: Construction of cultural space with the participation of diverse subjects	275
6.3.3	Expression: Public service and cultural confidence	282
6.3.4	Regeneration: Cultural capital and industry drive	285
6.3.5	Summary	289

PART V Conclusion & Prospect 291

	ACKNOWLEDEGEMENTS	297
--	--------------------------	------------

	ACTIVITIES AND PUBLICATIONS	298
--	------------------------------------	------------

	CONSOLIDATED LIST OF REFERENCES	300
--	--	------------

PART

I

Introduction

1 Background of Research Project

The concept of " Sustainable Development" was introduced by the World Commission on Environment and Development in the report "Our Common Future" ^[1] in 1987, after which the economics of sustainable development emerged and gradually developed into an independent discipline. In 2015, the United Nations Sustainable Development Summit in New York adopted 17 sustainable development goals, which call for environmental revitalization, economic development and social problems to be solved simultaneously by 2030, also known as the "2030 Agenda" ^[2]. Therefore, in the planning of sustainable territorial development worldwide today, it is inseparable from the targeted restructuring of territorial industrial and energy structures. In the PNR 2021-2027 plan ^[3] it is mentioned that there is a need to stimulate the economy and release local resources in a sustainable process capable of restoring economic and social balance, thus activating the entrepreneurial energy of the territory.

Local resources, on the other hand, are specific business resources that exist in the region, such as special products, traditional manufacturing methods, technologies accumulated through local industries, and cultural assets like natural and historical heritage ^[4]. And, in recent years, the attempts of " Local Passion", "Town Revitalization" and "Regional Revitalization" represented by regional branding have spread the idea of defining distinctive things and materials as regional resources and utilizing them. Louise Wiener, Special Assistant to the Secretary of the U.S. Department of Commerce, was an early proponent of the term "cultural resources" in his book "Cultural Resources: An Old Asset - A New Market for Tourism", which refers to both for-profit and non-profit activities in the arts, humanities, and historic preservation ^[5]. His view reflects the profitability and public benefit of cultural resources. In fact, cultural resources are invisible assets closely related to cultural activities, which cannot enter the economic production field directly, but require the extraction of cultural elements or the tangible transformation of cultural resources to enter the economic field ^[6]. Since the fate of places increasingly depends on their ability to utilize

^[1] Our Common Future, also known as the Brundtland Report, was published by the United Nations through Oxford University Press in October 1987. The goal of the report is multilateralism and interdependence among nations in the quest for sustainable development. The report defines "sustainable development" as "a model of development that meets the needs of the present without compromising the ability of future generations to meet their needs".

^[2] The Sustainable Development Goals (English: SDGs) are a set of 17 goals of the United Nations. These goals will run from 2016 until 2030. The SDGs call on all countries, whether poor, rich or middle-income, to act to protect the planet while promoting economic prosperity. The goals state that poverty eradication must go hand in hand with a range of strategies, including promoting economic growth, addressing social needs for education, health, social protection and employment opportunities, curbing climate change and protecting the environment.

^[3] Text approved by the Interministerial Committee for Economic Planning with Resolution 15 December 2020, n. 74, published in the Official Gazette, General Series n. 18 of 23-1-2021: Approval of the «National Research Program 2021-2027». (Resolution n. 74/2020)

^[4] Japan Small and Medium Business Agency. Section 2: The trump card of regional revitalization - the use of "regional resources". https://www.chusho.meti.go.jp/pamflet/hakusyo/H26/h26/html/b2_2_2.html

^[5] Wiener, L.W. (1980). Cultural resources: An Old Asset - A New Market for Tourism. *J Cult Econ* 4, p 1-7.

^[6] Wang, Y.Y., & Duan, Y. (2022). From Heritage to Resources: A Study on the Rural Role of Intangible Cultural Heritage of Traditional Craftsmanship-Guizhou Province as an Example. *Southeast Culture*, No. 289.

highly specific local cultural resources (Anthony S et al., 2010), fully exploiting local characteristics and transforming them into creative cultural industries has become one of the important measures to promote sustainable regional economic development.

In the mid- to late-20th century, cultural participation was first seen as associated with the "arts" and was seen by most developed countries as including visits to museums, galleries, and performances. Gradually, the focus has shifted from democratizing "high culture" through state institutions to include many informal or traditional activities ^[7]. As the main production method of the pre-industrial era ^[8], traditional handicrafts carry the rich artistic symbolic information of the pre-industrial era and the unique connotation and value of traditional culture, and are an important part of historical intangible cultural heritage, as well as one of the valuable regional resources with a high capacity for exploitation. For example, in the planning book of the PNR ^[9], it is mentioned that "...encourage the recovery of old agricultural structures and traditional trades (such as handicrafts)..."; "Tourism and Culture 4.0...through creative and interaction between craft enterprises, specialized training and mentoring activities...".

As a kind of cultural resource, intangible cultural heritage has a high value in itself, as it is the carrier of cultural memory and cultural lineage of a country, region or nation, and its existence also proves the diversity of national cultures. However, the intangible cultural heritage - traditional handicraft industry worldwide is currently shrinking extremely due to various practical factors, which has led to the urgent inclusion of more and more traditional folk crafts into the intangible cultural heritage list in recent years (in the “ List of Intangible Cultural Heritage in Need of Urgent Safeguarding ” published by UNESCO : 4 of the 5 National ICH protection projects applied for in 2022 are related to traditional handicraft ; 3 of the 4 National ICH protection projects applied for in 2021 are related to traditional handicraft ; 2 of the 3 National ICH protection projects applied for in 2020 are related to traditional handicraft) ^[10]. Although this phenomenon shows the state's protection and attention to traditional culture on the one hand, on the other hand, it also reveals the fact that traditional handicrafts are insufficient in their own cultural regeneration power and need to be continued by means of government protection. At the same time, from the perspective of modern life, it is difficult for individualized ethnic culture to get enough space and resources for development in today's social environment, because ethnic culture with tradition and inheritance is in opposition to urbanization and modernization ^[11]. Under such circumstances, the sense of public identity with the country, nation and culture inevitably tends to decline. Therefore, it is especially necessary to design and reflect on the protection of intangible cultural heritage, the inheritance and innovation of traditional handicraft skills, the preservation and dissemination of traditional craft culture, and the revival and sustainable development of the economy of the region on which traditional craft depends.

^[7] UNESCO. (2021). The Tracker Culture & Public Policy | Issue 12. United Nations Educational, Scientific and Cultural Organization, p 12.

^[8] Daniel Bell. For the division of human history, "Pre-Industrial Society", "Industrial Society" and "Post-Industrial society". Daniel Bell (1919-) was one of the most important thinkers and scholars of the 20th century, a leader in American sociology and a famous cultural critic.

^[9] Italia Domani is part of Next Generation EU, a program dedicated to the economic recovery of member countries. The program is divided into 6 tasks. <https://www.italiadomani.gov.it/content/sogei-ng/it/it/home.html>

^[10] <https://ich.unesco.org/en/lists>

^[11] Qi,Z.X.(2021). Research on digital experience design of traditional handicraft in Wuling area from the perspective of rural revitalization. South-Central Minzu University.

2 Problem Statement and Purpose of Study

50th Anniversary of the World Heritage Convention (November 16, 2022): World Heritage is a source of resilience, humanity and innovation. UNESCO's Convention for the Safeguarding of the Intangible Cultural Heritage ^[12] (2003) established the first international treaty for the safeguarding of intangible cultural heritage (ICH), demonstrating that ICH is an essential component of sustainable cultural development. In this increasingly globalized world, living heritage is an important factor for maintaining cultural diversity ^[13]. As described in section 2.1 of the PNR 2021-2027 plan, investment in heritage not only falls within the logic of sustainable development, but also supports direct and indirect value production chains. The PNRR Plan mentions the improvement of the tourism and cultural system and the level of attractiveness of the country through the modernization of the tangible and intangible infrastructure of the historical and artistic heritage, the increase of the digital availability and the physical and cognitive accessibility of the culture. It is thus clear that cultural heritage, as an indigenous territorial resource, its identification, development, preservation and transmission to the future, valorization, education and and creation of new cultural contents, can provide new business opportunities synergistic sustainable economic growth for the territory in which it is located.

Cultural heritage is not limited to historical relics and collections of objects; it also includes the traditions or living expressions that we inherit from our ancestors and pass on to future generations, including traditional handicraft knowledge and skills ^[14]. Handicraft is a living fossil of traditional culture that can be traced back to the very beginning of human tool-making, preserving many "invisible" cultural achievements of human origins, traditions, and arts and crafts. Although the crises and dilemmas of traditional handicrafts were already evident in pre-industrial societies, they are still in their infancy as a stable and universal form of production. The full-scale dilemma is the encounter of handicrafts with industrial civilization, which is characterized by machine-based mass production methods, and it is not only a struggle between handicrafts and machines, but also a competition between the two civilizations ^[15].

As an example, China has 5,000 years of history and civilization, and has left behind a huge and complicated cultural heritage through the centuries. In 2015, the Chinese State Council promulgated a total of 1,557 national intangible cultural heritage representative projects, with a total of 3,610 sub-projects according to the declared regions or units for each count. Among them, 629 traditional skills and 417 traditional arts accounted for nearly 29% in total. The large number of traditional arts that have been "intangible heritage" is actually a symptom of their marginalization in the cultural sense, revealing the weakness of the industrial and cultural regeneration power of handicrafts, and the need for the government to strengthen them by means of policies.

^[12] The Convention for the Safeguarding of the Intangible Cultural Heritage is an international convention for the safeguarding of the world's intangible cultural heritage, which was adopted on October 17, 2003 at the 32nd session of the General Conference of UNESCO. As of 2018, 178 countries in the world have signed the treaty.

^[13] <https://www.unesco.org/zh/cultural-heritage-7-successes-unescos-preservation-work>

^[14] <https://www.unesco.org/zh/cultural-heritage-7-successes-unescos-preservation-work>

^[15] Gao,L. (2018). The research of crisis of traditional crafts and cultural transformation.

2.1 Research proposition

In an increasingly globalized world, living heritage is an important factor in maintaining cultural diversity. This study takes the common protection and sustainable development of intangible cultural heritage in the world as the background, draws on the theory of "Regional Circular and Ecological Sphere" ^[16], and takes regional traditional handicrafts as the starting point to explore how they, as a valuable regional cultural resource, can be transformed into "cultural commodities", and establish a new sustainable ecological consumption value system, while empowering the marginalized groups in the region economically. Through the innovative redevelopment of regional traditional handicrafts, besides the historical responsibility of saving fragile culture and bringing considerable economic benefits, this study also has the social responsibility of establishing wide-area spatial and industrial linkages, enhancing social cohesion, and encouraging national identity.

2.2 Research questions

The purpose of this study is to explore three research questions on "regional traditional handicraft":

1. *How to inherit, educate, and develop local traditional handicraft?*
2. *How to revitalize/sustainable/diversify the economic development structure of the "local" area based on regional traditional handicraft?*
3. *How to preserve and diffuse the culture of regional traditional handicraft?*

The first question is the fundamental research. The purpose of answering the first question is to study and organize the current forms of inheritance and operational development patterns prevalent in regional traditional handicraft, so as to establish scientific basic knowledge. Through the study of the current situation of traditional handicrafts in different regions, to find industry problems and design reflection. At the same time, after the case summarization, it serves as a more macro framework for the subsequent targeted design innovation.

The second question is the study of practice. Regional traditional handicrafts, as valuable intangible cultural heritage, are studied in the path of feeding society through design innovation. In the cultural, economic, social and ecological aspects, explore the sustainable development strategy of win-win cooperation and circular symbiosis.

The third question is the development study. In fact, the exploration of the third question has been integrated into the first and second questions all the time. The cultural value, cultural participation,

^[16] "Regional Circular and Ecological Sphere" is a sustainable development state in which the environment and human society interact and support each other. The formation of "Regional Circular and Ecological Sphere" requires the establishment of a virtuous cycle of local environment, economy and society. To promote the comprehensive enhancement of local environment and economy and society.

cultural identity, and cultural reflection of regional traditional handicraft are relied on in the whole research process. Cultural research on regional traditional handicraft is an enabler for social inclusion, one of the keys to promoting social welfare, creating a sense of belonging and a common identity, and also has a powerful capacity to promote the active participation of local generations in public living.

3 Research objectives and aims

The concept of "Regional Circular and Ecological Sphere" ^[17] is an innovative concept of creating more social value through the innovative use of regional resources, which is one of the expressions of the concept of sustainable development. And traditional handicraft work is not only a valuable regional resource, but also a cultural heritage full of history and humanistic spirit, which has a high economic transformation value. Through the design innovation and reproduction of traditional handicrafts, this study attempts to establish a "Symbiosis Circle" with traditional local handicrafts as the driving force, and promote the virtuous cycle of local environment, economy and society. Therefore, the main objects and aims of this study include:

- Methods and approaches to regional resource integration. (*Case study*)
- Analysis of historical changes and contemporary reconstruction of regional traditional handicraft. (*Case Study*)
- Analysis of the traditional and innovative models of the ceramics industry, using the regional traditional craft " Ceramics " as the case study.
(*Applied research - Italy / China*)
- A cross-regional symbiotic network: circular, ecological, digital and sustainable, based on the application of the regional traditional handicraft " Ceramics ".
- Creates more opportunities for the promotion of traditional handicraft and the realization of "Made in the Region", promoting the integration of national cultural tourism systems.

At the micro level, this study examines the production-supply-marketing system of traditional handicraft in different regions, which is a guide to the industry for design reflection and reinvention; at the macro level, this study provides a new way of thinking for future regional revitalization, which improves social inclusion and stability for marginalized groups, and at the same time is a sustainable protection for intangible cultural heritage, maximizing the benefits at multiple levels.

^[17] (JPN) Ministry of the Environment Environmental Basic Plan, April 17, 2018,p8-9. <http://www.env.go.jp/press/files/jp/108982.pdf> [2018-06-01]

4 Related Concept Definition

4.1 Definition of the concept of “ Regional Circular and Ecological Sphere ”

The "Regional Circular and Ecological Sphere" is a sustainable development concept proposed by the Ministry of the Environment of Japan in the Fifth Environmental Basic Plan, which emphasizes the "Circle" and "Symbiosis" system. The aim is to create a self-sustaining and decentralized society at the local level by utilizing the unique resources of the region, and to maximize the vitality of the local community by forming a wide cooperative network with other regions through the connection of natural and economic elements. This study draws on the concept of the " Circle" and "Symbiosis" system, and looks beyond the Japanese region to integrate the territorial revitalization strategies of different countries to explore the sustainable dynamics of the new endogenous territorial development using traditional handicrafts as a regional characteristic resource.

4.2 Definition of the concept of “ Region ”

Region usually refers to a certain geographical space, which is a complex formed by the action of natural elements and human factors. Its connotation includes:

1. A region has certain boundaries.
2. Within the region shows obvious similarity and continuity. Between regions, there are obvious differences.
3. Regions have certain advantages, characteristics and functions.
4. Regions are interconnected, and changes in one region affect the surrounding areas, and there are generally three characteristics: locality, humanity and comprehensiveness.

Different regions will form different mirrors, reflecting different local cultures and forming distinctive geographical landscapes. Region is a concept that reflects the spatial and temporal characteristics, economic and social cultural features. The traditional handicrafts in this study are not only the geographical factors of "occurrence and existence" of traditional handicrafts, but also the humanistic and comprehensive characteristics, not just the concept of geographical location.

4.3 Definition of the concept of “ Traditional Handicraft ”

In the light of the definition of intangible cultural heritage in the Convention for the Safeguarding of the Intangible Cultural Heritage, this study defines traditional crafts as a category of intangible cultural heritage that refers to a variety of manual labor practices and related conceptual representations, expressions, knowledge systems, manual skills, tools, objects, artifacts, and cultural spaces that communities, groups, and sometimes individuals, consider as part of their cultural heritage.

At the same time, this study considers that traditional handicrafts should contain the three factors:

The first is historical inheritance. Traditional handicraft generally has a history of more than one hundred years and is the continuation and development of spiritual and material cultural traditions through generations, and has profound historical and cultural values.

Secondly, national and regional traditions. Traditional crafts are the product of the combination of specific natural geography and national culture. As a national and local culture, traditional craft has many differences from global culture and values, etc. It is essentially a local knowledge, a civilizational achievement formed in a specific space and time, and a reflection of national richness and diversity.

The third is handmade. Traditional crafts are generally produced before industrial society, and unlike machine manufacturing and expanded reproduction in industrial society, they are mainly produced by hand, so they have emotional, artistic and unique characteristics.

Therefore, this study argues that traditional handicraft possesses six elements: raw materials, craftsmanship, knowledge, concepts, tools, and cultural ecology, and is characterized by inheritance, fluidity, aesthetics, interaction with nature, and the productive nature of the practice process, and has a significant role in bringing into play the creativity of manual labor, cultivating and promoting the artisan spirit, perpetuating national humanistic traditions, and realizing the sustainable development of human civilization.

4.4 Definition of the concept of “ Intangible Cultural Heritage ”

The term " Intangible Cultural Heritage" (ICH) in this study follows the definition of the Convention for the Safeguarding of the Intangible Cultural Heritage and refers to the social practices, conceptual representations, expressions, knowledge, skills, and associated tools, objects, artifacts, and cultural spaces that communities, groups, and sometimes individuals, consider as part of their cultural heritage. This intangible cultural heritage is transmitted from generation to generation and is continuously recreated as communities and groups adapt to their surroundings and interact with nature and history, providing these communities and groups with a sense of identity and continuity, thereby enhancing respect for cultural diversity and human creativity. This study will only consider intangible cultural heritage that is consistent with existing international human rights documents, the need for mutual respect among communities, groups and individuals, and responsive to sustainable development.

4.5 Definition of the concept of “ Sustainable Development ”

Sustainable development involves natural, environmental, social, economic, technological, political and other aspects, so the definition of sustainable development differs depending on the perspective of the researcher.

1. Definition focusing on Nature

The term "sustainability" was first coined by ecologists as "ecological sustainability". It is meant to describe the balance between natural resources and their exploitation processes. In November 1991, the International Union of Ecology (INTECOL) and the International Union of Biological Sciences (IUBS) jointly held a symposium on sustainable development. The results of this workshop developed and deepened the natural properties of the concept of sustainable development, defining sustainable development as "the protection and enhancement of the productive and regenerative capacity of environmental systems", with the implication that sustainable development is development that does not exceed the regenerative capacity of the system.

2. Definition focusing on Society.

In 1991, the World Conservation Union (IUCN), the United Nations Environment Programme (UN-EP) and the World Wildlife Fund (WWF) jointly published "Caring for the Earth: A Strategy for Sustainable Living", which defines sustainable development as "improving the quality of human life while living within the capacity to sustain ecosystems" and sets out nine basic principles for sustainable human existence.

3. Definition focused on the Economy.

Edivard B. Barbier, in his book "Economy Natural Resources: Deficiencies and Development" defines sustainable development as "the maximization of the net benefits of economic development while maintaining the quality of natural resources and the services they provide. According to D. Pearce, "Sustainable development is one in which today's use should not reduce future real income" and "when development is able to maintain an increase in the welfare of the present generation, it will not reduce the welfare of future generations".

4. Definition focused on Science and Technology.

According to Jamm Gustare Spath, "Sustainable development is the shift to cleaner and more efficient technologies, as close as possible to 'zero emissions' or 'hermetic', and processes that minimize the consumption of energy and other natural resources".

The "sustainable development" described in this study is a development based on the harmonization and co-development of society, economy, population, resources and environment. It is mainly reflected in the ecology of the production process, the ecology of the economic operation mode, and the ecology of the consumption mode.

At the same time, the definition of "sustainable development" in this study also follows that of the Convention for the Safeguarding of the Intangible Cultural Heritage, which refers to measures to sustain the viability of intangible cultural heritage, including the identification, documentation, research, preservation, protection, promotion, dissemination, transmission (especially through formal and non-formal education) and revitalization of all aspects of such heritage.

5 Research Approach

The main research methodology and instruments involved in this study include (Table 1) :

Stage	Approach	Study	Objective	RQ
Stage 1	Literature Research	Chapter 1	<ul style="list-style-type: none"> Defining the scientific theory of " Symbiosis " of regional resources 	1,2,3
	Case Study	Chapter 2	<ul style="list-style-type: none"> Design inspiration: practical results from different countries 	
	Interdisciplinary Research	Chapter 3	<ul style="list-style-type: none"> Definition and analysis of the value system of traditional handicrafts 	
	Content Analysis		<ul style="list-style-type: none"> Creation of a reconstruction framework of organizational /operational systems/marketing strategies for regional traditional handicraft (in the case of China) 	
Stage 2	Interview / Questionnaire	Chapter 4	<ul style="list-style-type: none"> Industry analysis model of "Ceramics" in Yuzhou, China Industry analysis model of "Ceramics" in Faenza, Italy 	1,2,3
	Field Research	Chapter 5		
	Content Analysis			
Stage 3	Interdisciplinary Research	Chapter 6	<ul style="list-style-type: none"> Design strategy framework for a regional "symbiotic" network based on traditional handicraft 	2,3

Table 1. Research approach overview

Literature Research

Through extensive collection of relevant literature, historical materials, institutions, laws and regulations, to understand the history of handicrafts and the current status of research on the development and management of regional resources, to form a more systematic and comprehensive understanding of the topic.

Case study

To summarize the development status and industry practice of traditional handicraft by means of independent cases and multiple cases for in-depth study, in order to prove the necessity and possibility of traditional handicraft intervention in contemporary regional revitalization.

Questionnaires / Interviews

By interviewing craftsmen, companies, artists and designers that practice traditional handicraft, to collect the opinions, feelings, reactions and perceptions of the industry from them, and organize the data into a more intuitive table, it is conducive to making more accurate judgments and path planning for the future development trend of traditional handicraft in the region.

Field Research

Field study of museums, workshops, craft laboratories, etc., to participate in the production process of regional traditional handicraft, in which to observe, understand and recognize a more in-depth cultural experience.

Content Analysis

It is a systematic and quantitative description of the results of the literature, interviews, questionnaires, etc. The large amount of material content was analyzed in a holistic manner, which facilitated the generation of a relatively objective and comprehensive view, and was a great source of insight and impetus to the final design conclusions of this study.

Interdisciplinary Research

The crisis of regional traditional handicrafts is not only caused by historical reasons, but also involves a series of complex issues such as cultural transformation, contemporary aesthetic orientation and contemporary economic trends, etc. Reconstructing traditional handicrafts must be considered in the context of contemporary culture, economy and technology as a whole. Therefore, the paper makes reference to contemporary research results in the fields of aesthetics, economics, psychology, and digital technology, and combines a series of practical experiences under the concept of "Regional Circular and Ecological Sphere" in order to propose reasonable and valuable strategies and development paths for the contemporary construction of regional traditional handicrafts.

6 Thesis Structure

The content of the thesis is divided into 5 main sections ([Table 2](#)).

Structure	Study	Content	Property
PART I	Introduction	1 Background of Research Project 2 Problem Statement and Purpose of Study 3 Research objectives and aims 4 Related Concept Definition 5 Research Approach 6 Linkage of Research Papers and Thesis Structure 7 Literature Review	Overview
PART II	Chapter 1 Chapter 2	Regional Circular and Ecological Sphere : "Symbiosis" Scientific Theory The Value System and Contemporary Transformation of Traditional Handicraft	Theory and Methodology
PART III	Chapter 3	Changes and Reconstruction of Traditional Handicraft in Chinese Regions	Case Study
PART IV	Chapter 4 Chapter 5 Chapter 6	Ceramics in FAENZA (Emilia-Romagna Region), Italy: Tradition & Innovation Ceramics in YUZHOU (Henan Province), China: Tradition & Innovation Territory Revitalization and Symbiotic Sustainable Development	Theory Practice / Application
PART V	Conclusion	Conclusion and Prospect	Prospect

Table 2. Thesis structure (Overview)

The **Part I** is the introduction.

It discusses the background of the project, the content and focus of the study, the object and aim of the study, which main research approaches were used in the process of the study, the conceptual definition of the relevant content, the research structure of the thesis, and the literature review of the current state of the relevant research. It is part of the overall introduction of the study.

The **Part II** is theoretical research.

Chapter 1 focuses on the emergence and development of the theory of "Regional Circulation and Symbiosis Circle". It discusses the scientific theory of how to use regional resources to realize regional symbiosis, and summarizes the methods and approaches of regional resource integration through case studies. The scientific practice of different countries in planning regional revitalization based on regional resources is also discussed.

Chapter 2 explores the value system of traditional handicrafts and their contemporary transformation, indicating that, as an original human practice, the handicraft process contains the integrated pursuit of satisfying the material and spiritual values of human beings. It also explores the value form and social significance of traditional handicrafts acting on regional revitalization by placing them in the context of historical development.

The **Part III** is case study.

Taking Chinese folk traditional handicrafts as the example, the Chapter 3 explores the process of social and cultural changes of handicrafts in different types and regions, and sorts out the social group activities of historical and local handicrafts through the sharing of representative cases of traditional handicraft development. Specifically, the discussion will be divided into two major directions: internal behavior and external behavior of the industry. Internal behavior will be analyzed in terms of inheritance approach, industrialized/specialized organization type, and operation system; external behavior will be explored in two major directions: scientific activities and tourism. Try to summarize the modern reconstruction and development path of regional traditional handicrafts, as well as carry out design reflections.

The **Part IV** is theoretical practice and application

Chapters 4 and 5 take the traditional regional handicraft " Ceramics " as the case in point. Through researching the current development of the ceramics industry in the Faenza (Italy) and Yuzhou (China) regions, this chapter interprets the traditional regional handicraft, establishes a communication bridge between tradition and innovation, and to explore the possibilities of territorial revitalization and sustainable development based on regional traditional crafts.

Chapter 6 presents a comparative analysis of the clustering innovation of the regional traditional handicraft " Ceramic " industry in Italy (FAENZA) and China (YUZHOU), and the comprehensive planning of ceramic handicraft tourism; It also discusses the diversified models of the " Symbiosis" development system of regional traditional handicraft from the " Ontology" and " Environment" layers, and the revitalization strategy of the " Symbiosis"

innovative design system with digitalization, with a view to providing an empirical reference and model for reference.

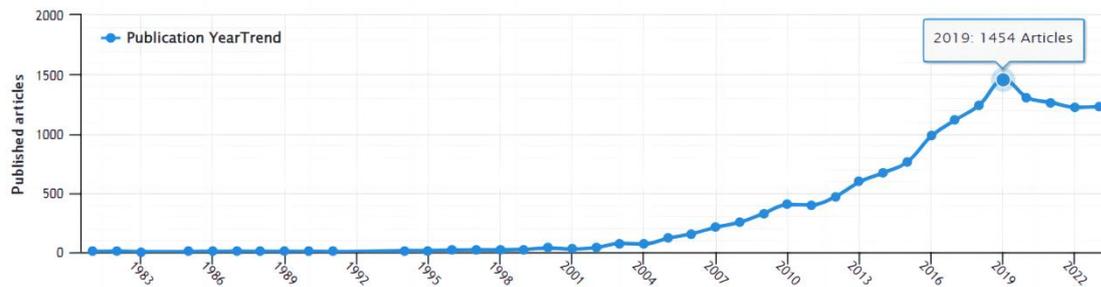
The **Part V** is the prospect.

The conclusion points out that in the background of the contemporary era, traditional handicraft, as a valuable regional resource of intangible cultural heritage, has the possibility to realize regional revitalization by cutting into modern life. Reviewing the previous paper, it is also pointed out that regional traditional handicraft is a comprehensive topic of theoretical research and practical exploration. Under the multidimensional reconstruction of social transformation, the multimodal inheritance, cross-cultural communication and intelligent innovation of traditional handicraft are explored through various design participation paths. In the process of " Symbiosis" of traditional handicraft conservation and innovation, it provides new ideas for the sustainable development of regional revitalization with an integrated, systematic and dynamic design perspective.

7 Literature Review

7.1 Overview

This study was conducted by searching CNKI databases (SCI source journals, EI source journals, Peking University core, CSSCI, CSCD) from its inception to March 2023. The search terms were divided into the following topics: "traditional handicraft/s" or "intangible cultural heritage traditional handicraft/s" and "handicraft/s", and a total of 14,259 relevant sources were retrieved. As shown in [Table 3](#), after the United Nations promulgated the Convention for the Safeguarding of Intangible Cultural Heritage in 2003, the number of published documents showed a steady increase from 2004 onward. After the adoption of the "2030 Agenda" of 17 Sustainable Development Goals at the United Nations Sustainable Development Summit in New York in 2015, the number of publications increased dramatically in the same year until it peaked in 2019, with a total of 1,454 entries in one year.



7.1.1 Discipline distribution

Under the subject search of "traditional handicraft/s" or "intangible cultural heritage traditional handicraft/s" and "handicraft/s", the main disciplinary distribution of 14,259 relevant sources of research in : ([Table 4](#))

- #0 Fine arts, Calligraphy, Sculpture and Photography (5738 Articles) ;
- #1 Light Industry , Handicraft Industry (3674 Articles) ;
- #2 Tourism (1206 Articles) ;
- #3 Culture (1171 Articles) ;
- #4 Art Theory (745 Articles) ;
- #5 Theory of Industrial Economy (696 Articles) ;
- #6 Industrial Current Technology and Equipment (627 Articles) ;
- #7 Architecture and Engineering (590 Articles) ;
- #8 Higher Education (451 Articles) ;
- #9 Culture Economy (411 Articles).

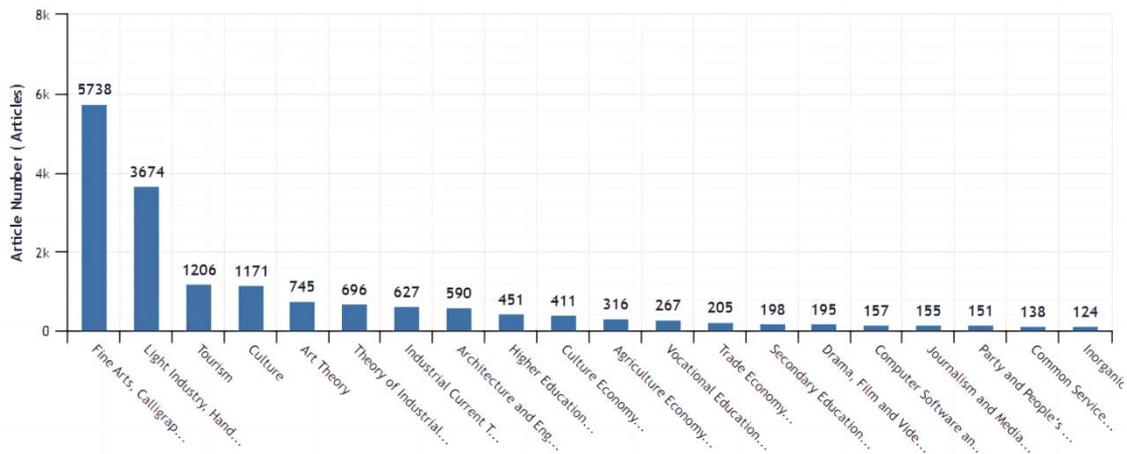


Table 4. Disciplines Distribution #1-#20 (CNKI, 1982-2023)

From the data, it is clear that the relevant discussions are focused on specialized types of Arts and Crafts, Light industry, Handicrafts, Tourism and Cultural Theory related disciplines.

A comparison of the trends in the volume of articles distributed by #0 - #4 disciplines shows: (Table 5)

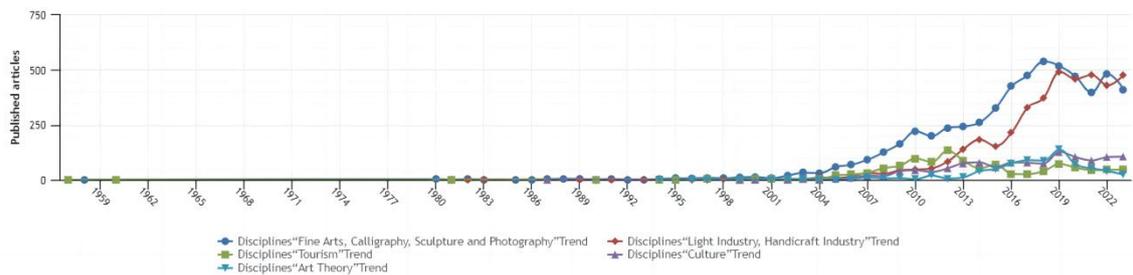


Table 5. #1 - #5 Discipline Article Volume Trends (CNKI, 1982-2023)

From 2014-2018, there was a sharp increase in the volume of research on Arts and Crafts and Handicrafts disciplines, while there was a decreasing trend in the disciplinary research on Tourism. From 2019 onwards the related popular disciplines all generally cooled down in research enthusiasm, which is inseparable from the global impact of the COVID-19 outbreak. From 2022, when the outbreak recedes and the global economy recovers, research on #2 Light Industry , Handicraft Industry and #Tourism will increase, indicating the economic opportunities offered by the combination of handicrafts, light industry, traditional crafts and tourism, helping to restore national production and alleviate social stress in the aftermath of the epidemic.

7.1.2 Research levels

Under the subject search of "traditional handicraft/s" or "intangible cultural heritage traditional handicraft/s" and "handicraft/s", the research level distribution of 14,259 relevant sources is: (Table 6)

- #0 Applied Research (1538 Articles) ;
- #1 Technical Research (843 Articles) ;
- #2 Applied Fundamental Research (196 Articles) ;
- #3 Applied Fundamental Research (117 Articles) ;
- #4 Engineering Research (136 Articles) ;
- #5 Study Development - Industry Research (111 Articles) ;
- #6 Discipline Education and Teaching (86 Articles) ;
- #7 Study Development - Policy Research (82 Articles) ;
- #8 Technology Development (54 Articles) ;
- #9 Society Development (50 Articles)

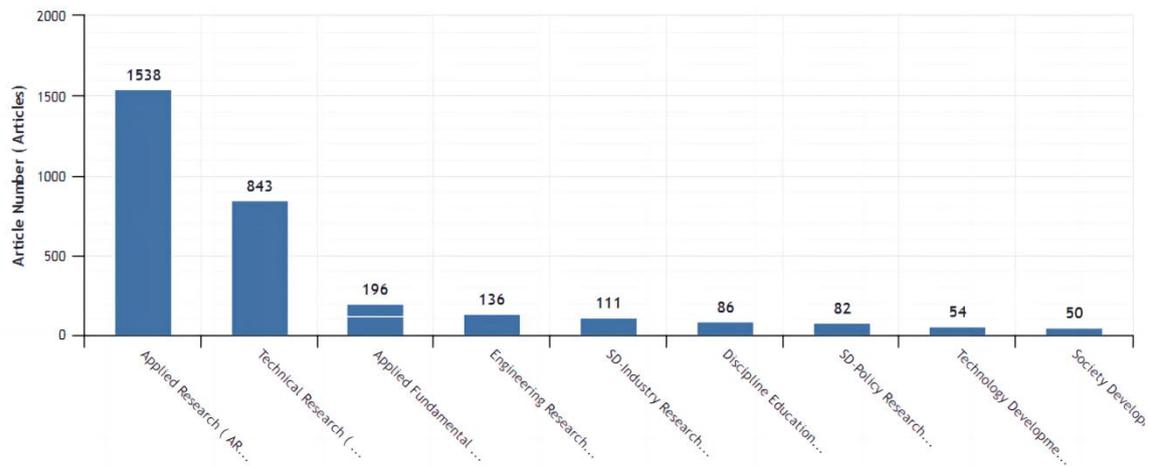


Table 6. Research Level Distribution #1-#20 (CNKI, 1982-2023)

From the data, it can be seen that the main research is applied and technical for handicrafts; industry, policy, and education and training areas are the second most important.

7.2 Focus

7.2.1 Keyword cluster analysis and research themes

To ensure the prospective and reference value of the study, only CNKI databases (SCI-source journals, EI source journals, Peking University core, CSSCI, CSCD) from 2018 to 2023, which is also the period with the largest number of publications, were searched and analyzed in this study with the same subject keywords, with a total of 7628 articles

The sample literature was analyzed by CITESPACE data. The parameters are as follows.

(Figure 1)

Timespan : 2018- 2023 (Slice Length=1)

Selection Criteria : g-Index (k=25), LRF=3.0, L/N =10, LBY=5, e=1.0

Network : N=279 , E=397 (Density=0.0102)

Largest CC : 197 (70%)

Nodes Labeled : 1.0 %
 Pruning : None
 Modularity Q=0.5702
 Weighted Mean Silhouette S=0.9079
 Harmonic Mean (Q, S)=0.7005

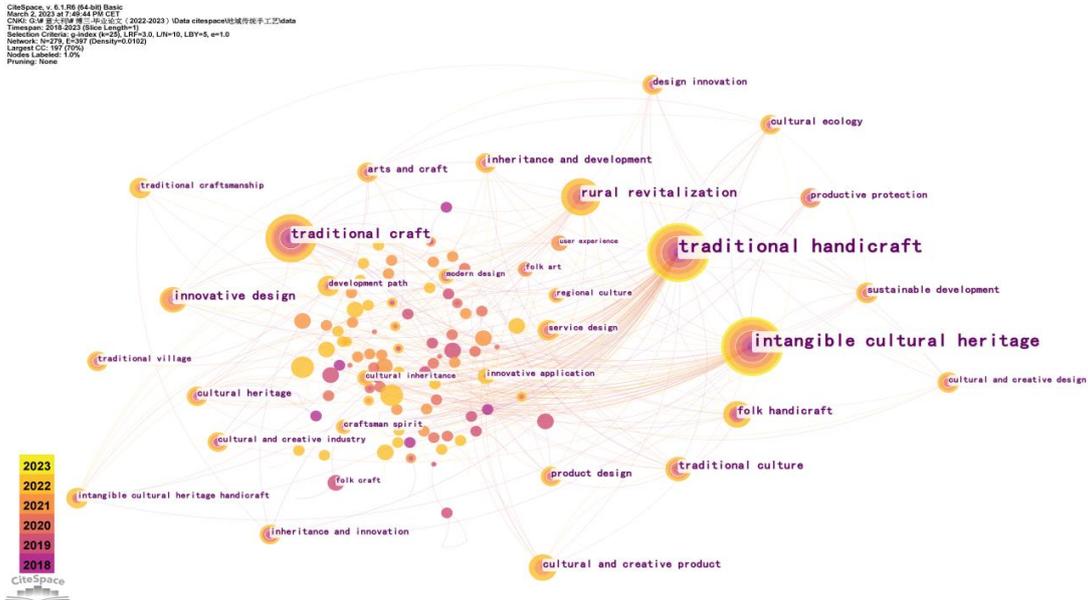


Figure 1. Keyword Node and Linkage

The parameters show that the time slice range is 2018-2022, and the slice unit is 1 year. There are 279 research keyword nodes with 397 network links between each other; the literature was cited 197 times in total with an intensity of 70%; the network module degree is 0.5702 and the homogeneity index is 0.9079, which indicates that the keyword clustering effect is average but the items within the clusters are more and more homogeneous.

The keywords co-occurred, as shown in Table 7. The top 20 hot keywords with the highest frequency are listed in the column order of occurrence.

Level	Frequency	Centrality	Year	Keyword
01	206	0.67	2018	traditional handicraft
02	130	0.23	2018	intangible cultural heritage
03	48	0.14	2018	traditional craft
04	36	0.1	2019	rural revitalization
05	28	0.07	2018	innovative design
06	21	0.04	2018	traditional culture
07	18	0.02	2019	folk handicraft
08	15	0.03	2020	cultural and creative product
09	15	0.02	2019	inheritance and development
10	14	0.03	2019	product design
11	14	0.02	2018	cultural ecology

12	14	0.01	2018	arts and craft
13	13	0.01	2020	sustainable development
14	12	0.08	2018	cultural heritage
15	12	0.01	2018	design innovation
16	12	0	2018	productive protection
17	10	0.01	2018	inheritance and innovation
18	9	0	2019	traditional village
19	9	0	2020	cultural and creative design
20	9	0.01	2020	traditional craftsmanship

Table 7. 2018-2023 Keyword Focus- Frequency, Centrality, Year, Content

There are two major keyword bursts in 2018-2023, one is "Folk Craft" and the other is "Productive Protection", indicating a shift in the direction of research hotspots. (Table 8) Such a development is related to policies, such as the promulgation of the "Outline of the National Cultural Development Plan for the 13th Five-Year Plan" in 2017, which pointed out the need to promote "productive protection of intangible cultural heritage". In 2018, the "National Strategic Plan for Rural Revitalization (2018-2022)" was proposed in the report of the 19th National Congress, stating that the countryside is a territorial complex with natural, social and economic characteristics, which has multiple functions such as production, living, ecology and culture, and promotes each other and coexists with cities and towns, and collectively constitutes the main space for human activities.

Top 2 Keywords with the Strongest Citation Bursts					
Keywords	Year	Strength	Begin	End	2018 - 2023
folk craft	2018	2.5	2018	2019	
productive protection	2018	2.22	2018	2019	

Table 8. Keywords with the Strongest Citation Bursts

By using Log Likelihood Ratio as the algorithm, 8 large clusters were obtained by keyword clustering analysis, which are: (Figure 2)

- #0 Traditional Handicraft ;
- #1 Intangible Culture Heritage ;
- #2 Folk Handicraft;
- #3 Innovative Design ;
- #4 Traditional Crafts;
- #5 Cultural Heritage;
- #6 Intangible Cultural Heritage Handicraft;
- #7 Craftsmanship

CiteSpace, v. 5.1.R6 (64-bit) Basic
 March 2, 2023 at 7:49:44 PM CET
 CNKI: 中国民间传统手工艺论文 (2022-2023) | Data: citespace\地域传统手工艺\data
 Timespan: 2018-2023 (Slice Length=1)
 Selection Criteria: g-index (k=25), LRF=3.0, L/N=10, LBY=1, e=1.0
 Network: N=279, E=597 (Density=0.0102)
 Largest CC: 197 (70%)
 Nodes Labeled: 1.0%
 Pruning: None
 Modularity Q=0.8702
 Weighted Mean Silhouette S=0.9079
 Harmonic Mean(Q, S)=0.7905

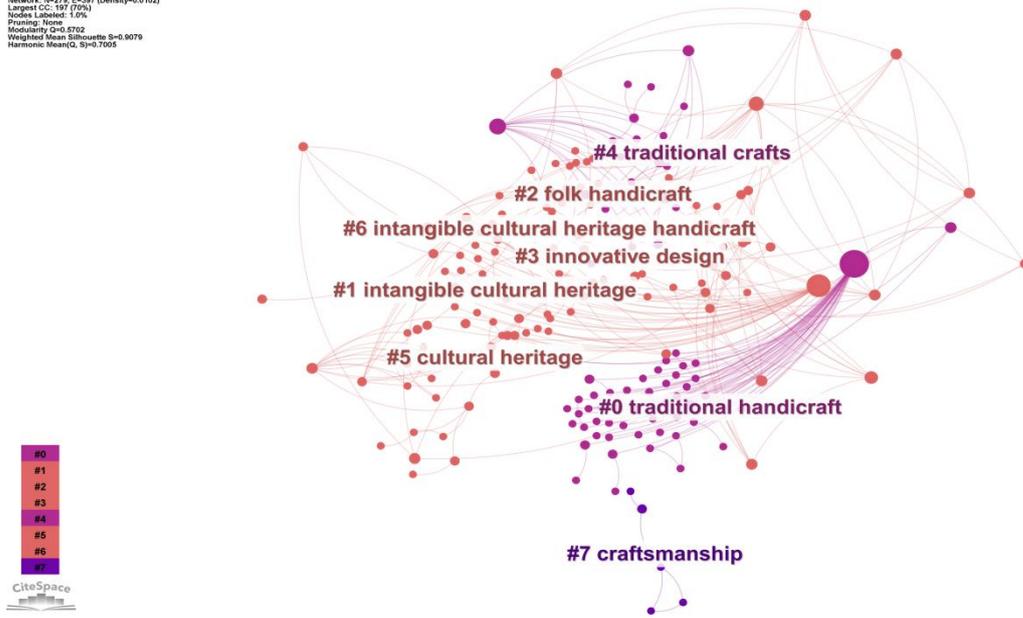


Figure 2. 8 keyword clusters

After data comparison and analysis, considering the number of keyword samples and similarity within the clusters, where the clustering capacity (size) of #0 - #5 is greater than 10 clustering effect is good, readjusted to show these 6 categories, the results are shown in [Figure 3](#).

CiteSpace, v. 5.1.R6 (64-bit) Basic
 March 2, 2023 at 8:10:17 PM CET
 CNKI: 中国民间传统手工艺论文 (2022-2023) | Data: citespace\地域传统手工艺\data
 Timespan: 2018-2023 (Slice Length=1)
 Selection Criteria: g-index (k=25), LRF=3.0, L/N=10, LBY=5, e=1.0
 Network: N=279, E=597 (Density=0.0102)
 Largest CC: 197 (70%)
 Nodes Labeled: 1.0%
 Pruning: None
 Modularity Q=0.8702
 Weighted Mean Silhouette S=0.9079
 Harmonic Mean(Q, S)=0.7905

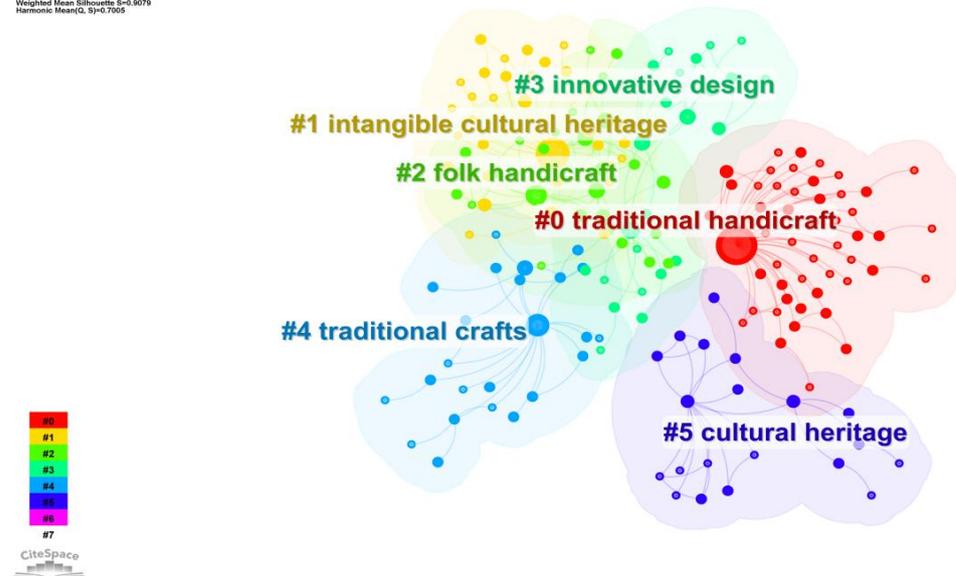


Figure 3. #0 - #5 keyword clusters

#0 Traditional Handicraft

The keywords represented in this cluster are: *Traditional handicraft, Productive protection, Craftsman spirit, Living heritage*, etc.

As a kind of living heritage, the industrialization and conservation of traditional handicraft is the main direction of research. Intangible cultural heritage is a "living" culture, which is introduced into production and living practices without violating or destroying its core values and core skills, so that it can develop continuously and integrate into real life (Xie, 2018). As intangible cultural heritage of traditional handicrafts, productive conservation means to pass on the core skills through the use of material production in order to achieve the purpose of "intangible heritage" conservation (Liu, 2018). Traditional handicrafts can be better inherited alive in productive conservation (Tan, 2022). Exploring what specific and feasible productive conservation measures should be carried out for different traditional handicrafts would make the contemporary conservation of intangible cultural heritage more targeted (Yang, 2018). The proposal and implementation of the productive conservation method will push the protection of intangible cultural heritage to a new stage of development, and become a conservation method that meets the needs of the current socio-economic development (Cai, 2018). Productive conservation is only a part of the intangible cultural heritage, and it still needs the government to give full play to its regulatory function (Wang & Yang, 2018).

#1 Intangible Culture Heritage

The keywords represented in this cluster are: *Inheritance and innovation, Traditional village, Traditional craftsmanship*, etc.

The development of handicraft villages and traditional rural culture could better inherit the national handicrafts, and in the case that the national culture could be capitalized, the development of traditional rural culture could drive the development of local economy. Wang (2022) argues that traditional villages are the treasures of the Chinese village system, and handicraft-type traditional villages are even more special among them. Pei (2020) showed that the development and change of handicrafts in traditional villages is a reflection of regional culture. Li and Guo (2020) showed that traditional handicrafts originated from the folk culture, which is the concrete material representation of village culture, and the two are connected by blood. Exploring the cultural value of handicrafts and finding out how to translate village culture in modern handicrafts can reshape the contemporary value of traditional handicrafts and at the same time seek ways to pass on village culture in a living state. Ethnic handicraft culture is the "local culture" that can be mastered, interpreted and utilized by the culture holders themselves, and it is an important cultural resource for traditional ethnic villages to realize "rural revitalization" (Yan & Yan, 2020). As the outcome of the wisdom of the working people in a particular region and environment, handicraft villages play an important role in the development and evolution of traditional rural culture (Wang & Liu, 2018).

#2 Folk Handicraft

The keywords represented in this cluster are: *Rural revitalization, Folk handicraft, Cultural ecology, Sustainable development, Design innovation, etc.*

Nowadays, the governance system of rural revitalization needs to activate the internal energy of rural development through the dimension of cultural ecological restoration, and explore the characteristic development path for villages according to local conditions. Handicrafts intervene in rural revitalization through the right steps and methods, which is a characteristic path to repair the cultural ecology and achieve comprehensive rural governance. The integrated development of culture and tourism makes culture further become an important resource for rural tourism. You (2022) proposes the transformation path of rural tourism spatial production, summarizes the strategy of tourism-based rural spatial construction, and enhances the depth of research on rural transformation and development. Pan (2022) argues that the commodity economy effectively breaks down the spatial and temporal segregation, and traditional handicrafts circulate to different regional societies, constructing new network social relations and influencing the local economy, culture, politics and society. Zhu (2023) discussed the development of rural handicraft industry driven by innovative services based on the concept of prioritizing the restoration of rural cultural ecology, with local branding to restore the diversity of cultural ecology, and with craft education experience to restore the roots of traditional folk culture in the rural areas. Chen & Li(2021) believe that rural handicrafts, as the result of rural life and folk wisdom, can provide spiritual incentives and cultural nourishment for rural development, and its unique cultural qualities are an important resource advantage for the revitalization of rural culture. According to Li (2018), characteristic towns are the hotspots of rural urbanization in recent years, and most of the folk handicrafts scattered in the countryside, as the carrier of folk culture, naturally condense the essence of traditional rural culture.

#3 Innovative Design

The keywords represented in this cluster are: *Innovative design, Traditional cultural, Cultural and creative product, Innovative application, etc.*

The cluster takes cultural and creative products as a carrier and discusses innovative traditional handicraft products from various aspects such as aesthetic ideas, modern design concepts, product design factors as well as market development and Internet modes. Zhang (2019) argues that contemporary cultural communication is closer to diversified and multidimensional cultural information experience and cognition, and designers must seek a new form for its embedded cultural factors that meets the contemporary state of life. Shen (2022) Integrating traditional handicrafts with cultural creative design gives new inspiration to cultural creative design. Zhang (2018) believes that cultural creative products as a new material carrier of traditional handicrafts, so that the products not only have the value of use but also the cultural value. Jiang (2022) focuses on the development of the new state of the service economy, the use of service design thinking, to enhance the competitive advantage of traditional handicrafts, so that traditional culture can be better inherited and protected in the process of continuous development, and reshape the vitality of its culture in the modern context. Zhang (2022) believes that only by strengthening innovative crafts, creating a special intangible cultural heritage brand, and developing sales routes can bring

good development opportunities for traditional crafts. Ying (2022) suggests that "consumer - focused" is the most important element of the experience economy, emphasizing on bringing unique and profound experiences to consumers. Zhu (2022) believes that it is necessary to utilize the technology brought by the mobile Internet era to transmit and disseminate traditional handicraft culture.

#4 Traditional Crafts

The keywords represented in this cluster are: *Traditional craft, Inheritance and development, Modern design, Digital Technology, etc.*

Through modern design, there are newer and more efficient ways to inherit and develop traditional handicrafts. The development of digital technology and the continuous innovation of big data technology have given intangible cultural heritage a broader space for development in the field of digitization. Advances in digital technology have opened up new ideas for the preservation of intangible cultural heritage (Jiang, 2022). With the development of mobile Internet and self-media, the dissemination of intangible cultural heritage is ushering in a promising period of opportunity (Yan, 2022). Zhu and Wang (2021) put forward countermeasures and suggestions on digital consumption transformation of intangible cultural heritage enterprises in terms of product innovation, marketing and service mode innovation, informationization construction, intellectual property protection and talent cultivation. Gong (2023) argues that strengthening the construction and application of digital protection and development platform for traditional handicrafts, realizing the integration of traditional crafts and modern aesthetics, and constructing industrial digital networked marketing channels for modern handicrafts. Guo (2022) suggests that the development of new technology represented by somatosensory interaction has a good carrying capacity for the popularization experience of handicrafts. Liang (2022) considers that the digital record preservation of handicrafts, the optimization of the museum's display mode according to the traditional craft process innovation, visualization and interactive innovation, is a way to break the unidirectional cultural knowledge popularization.

#5 Cultural Heritage

The keywords represented in this cluster are: *Cultural heritage, Cultural inheritance, Folk craft, Narrative strategy, etc.*

The inheritance, development and utilization of cultural heritage reflect the values, ideologies and interests of the participants. The folk crafts of different regions represent the spiritual personalities of different ethnic cultural communities, and strengthening their cognition and protection is of great practical significance in reinforcing the traditional cultural genes and identities as well as awakening the regional folk culture consciousness and cultural self-confidence. Through the perspective of scientific narrative, the direction of strengthening cultural leadership and conveying artisanal sentiments. Du (2018) believes that the protection of folk culture, the protection of folk crafts, is a powerful support for the promotion of national culture and the enhancement of national consciousness and cohesion. Lu (2019) discusses that folk crafts are the fruit of folk artists' wisdom and art, and also the epitome of national culture. However, the industry faces a series of problems, such as insufficient innovation, lack of skill heirs, and imperfect protection mechanism.

Liu (2018) pointed out that the development of traditional folk crafts faces an unprecedented survival test, especially the problem of dissemination. Hao and Yang (2020) indicated that the folk arts and crafts, whether inherited or endangered, have put forward more challenges and higher requirements for archive management work. Hu and Zhu (2021) argued that localities can improve their visibility by telling the stories of cultural heritage around their historical development and cultural genes, and by utilizing the symbolic value of "local heritage". Wu (2022) Analyzing intangible cultural heritage protection and inheritance from IP image language of visual design. Zhang (2021) analyzes the narrative characteristics and rules of traditional handicrafts documentaries, focusing on the three aspects of theme, language and emotion, and proposes to combine the traditional cultural origins with the context of the times. Wang and Chen (2018) adopts digital narrative to record and protect intangible cultural heritage, and uses computer animation and virtual reality technology to simulate intangible cultural heritage. Wang (2019) stated that documentary, as a form of artistic expression, can utilize sound and picture to record and express traditional handicrafts in a complete way, so that the audience can feel the creation process of traditional handicrafts in a more objective and three-dimensional way.

7.2.2 Keyword cluster timeline and Focused areas

Based on the results of keyword clustering #0 - #5, the timeline and frequency mapping of keyword clustering #0 - #5 were derived, as shown in [Figure 4](#). From the timeline mapping, it can be seen that the keywords “ Higher vocational collage ”, “ Digital protection ”, “ Collaborative design ”, first appeared in the year 2020. “ Experience design ”, “ Art education ”, “ Creative design ”, “ Talent training ”, “ Brand innovation ”, “ Integration and innovation ”, “ Aesthetic education ”, first appeared in the year 2021; “ Interaction design ”, “ Innovative development ”, “ Living inheritance ”, “ Experience economy ”, “ Personnel training ”, “ School-enterprise cooperation ”, first appeared in the year 2022. According to the analysis of [Fig. 2 and 3](#) and the interpretation of the content of high quality articles and highly cited articles, the research on “ traditional handicraft/s ”, “ intangible cultural heritage ” and “ handicraft/s ” is focused on the following summaries.

Focus 1. Education and training (“ living ” heritage).

Focus 2. Industry-Academia-Research cooperation.

Focus 3. Interdisciplinary cross-design (Digital Design, Service Design, Interaction Design, etc.)

Focus 4. Industry integration and innovation - Endogenous development (Cultural Tourism)

The future of ICH traditional handicraft needs to seek development opportunities in the overall social environment. Among them, productive protection is to build a "self-cycle" mechanism for the protection of ICH through production, circulation and sales in the premise of adhering to the core skills in ICH with production conditions, so as to complete the living inheritance and development of ICH. At the same time, it is not only through a series of measures such as museum collection and exhibition, declaration of intangible cultural heritage and establishment of laws and regulations to protect traditional handicrafts. More importantly, the rise of cultural and creative industries and cross-disciplines nowadays also brings hope for the inheritance of traditional handicrafts. The development of digital technology makes digital experience design inevitably become an effective help for the sustainable development of traditional handicraft. And, through

education and training to alleviate the crisis of handcraft inheritors and promote the cultivation of public cultural identity. To truly solve the problem of realizing the scientific and effective inheritance and sustainable development of traditional handcrafts.

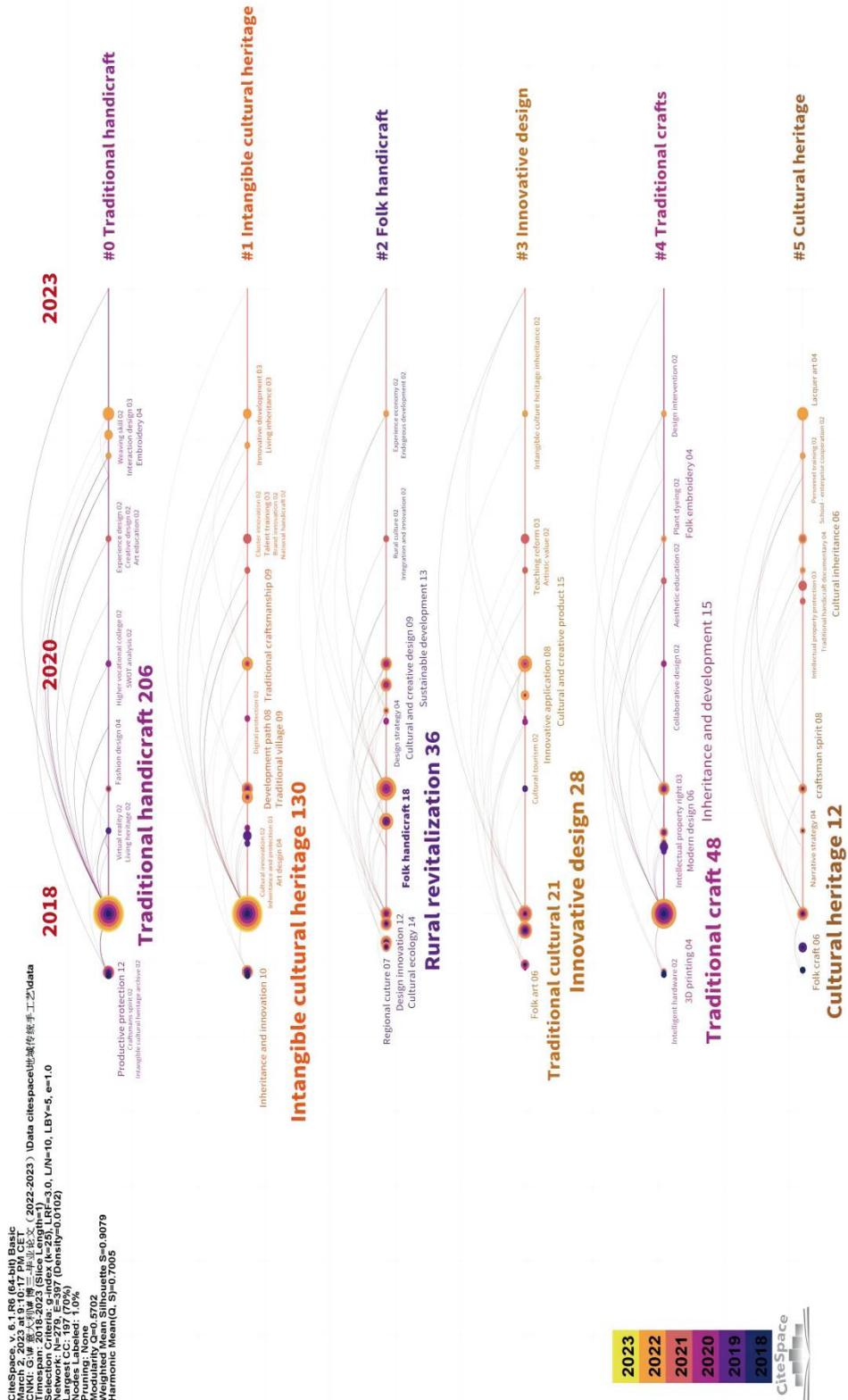


Figure 4. Timeline and frequency mapping of keyword clusters #0-#5

PART

II

Theory and Methodology

*New Model of Territorial Revitalization and Value Transformation of
Regional Traditional Handicraft*

CHAPTER 1

Regional Circular and Ecological Sphere :

"Symbiosis" Scientific Theory

The "Environment" studied in sociology mainly refers to the ecological environment, production environment and daily life environment that have been damaged and changed due to human production and living activities and bear traces of human activities ^[1]. Especially important is the interactive support relationship between ecological environment and production environment and living environment.

Following the introduction of the concept of "sustainable development" by the World Commission on Environment and Development in its report "Our Common Future" in 1987, the economics of sustainable development emerged and developed into an independent discipline. The theoretical understanding of the economics of sustainable development involves two directions: economic morphology and economic theory. The economic morphology theory believes that sustainable development economy is a sustainable economy, a description of the state and characteristics of the economy, with particular attention to climate change mitigation and adaptation, energy conservation and emission reduction, pollution control, environmental protection, and sustainable use of resources, and treats the environment as an independent governance object ^[2]. The economic theory is mainly based on sustainability economics and development economics, and advocates that the degree of development is mainly measured by economic growth, making the practical application of sustainable development economics theory growth-oriented and weakening the objectives of environmental sustainability and intergenerational equity in the theory construction ^[3].

With the deepening of the understanding of environmental governance, people realize that environmental problems come from the interactive process between the economic system, social system and external natural environment, and that environmental revitalization is closely related to economic transformation and social governance, and must be detached from the single environmental governance model. The United Nations Conference on Environment and

^[1] Teruyuki, T. (2009). Understanding Environmental Sociology (Yawaraka Academism, Understanding Series). Minerva Bookshop, p4.

^[2] See China Council for International Cooperation on Environment and Development (CECID) Secretariat, "Green Transition - Strategic Thinking on Scientific Development: CECID Policy Research Results 2007-2009". (2010). Beijing: China Environmental Science Press, p3-36.

^[3] Pan, J.H. (2015). Rethinking the Economics of Sustainable Development. People's Daily, 06.

Development held in Rio de Janeiro in 1992 established sustainable development as a common development strategy for mankind to move into the 21st century, and for the first time, social, economic and environmental aspects were considered as the "three pillars" of sustainable development, positioning environmental protection as an important issue in the development process. The 2002 "Johannesburg Declaration on Sustainable Development" proposed to strengthen social development, economic development and environmental protection at all levels - local, national, regional and global - and sustainable development was transformed from "idea" to "action". The 17 Sustainable Development Goals (SDGs) adopted at the UN Sustainable Development Summit in New York in 2015 call for the simultaneous cracking of environmental revitalization, economic development, and social issues by 2030. Also known as the "2030 Agenda," the project's logic is to achieve high-quality green development by adjusting the industrial and energy structures to promote changes in lifestyles and work styles. Communities and rural areas around cities or far from cities are characterized by ecological diversity, cultural richness and beautiful environment, which are potential resources for local revitalization and have great potential to drive social development through industrial revitalization and then.

1.1 Theoretical discussion based on “Regional Circular and Ecological Sphere”

1.1.1 Background

For most industrialized countries, the decline in rural population and the lack of endogenous dynamics caused by the imbalance between urban and rural development are common, especially in Japan, which is known as the eastern model of "catch-up modernization". According to the "Long-term Perspective of the National Land" in 2011, less than 2% of the residential areas in Japan will have an increase in population by 2050, and the proportion of population in the three major metropolitan areas will increase to 56.7% of the total population; 66.4% of the residential areas will have their population reduced by more than half, and the reduction will be even greater in small-scale municipalities, and even uninhabited, and the proportion of idle and abandoned land will also increase. The proportion of unused and abandoned land will also increase [4].

In response to this demographic trend, Japan's land planning philosophy has gradually shifted from quantitative expansion to stock enhancement in recent years, aiming to shape a balanced, compact and networked national space [5]. For small and medium-sized towns and rural areas, which account for about 90% of the national territory and half of the total population, how to utilize local characteristics and resources to achieve economic self-sufficiency and sustainable development has become the medium- and long-term goal of rural revitalization in Japan .

In this context, the Fifth "Environmental Basic Plan" issued by the Ministry of the Environment of Japan in 2018 proposed the concept of "Regional Circular and Ecological Sphere", which aims to

[4] National Land Council, Policy Subcommittee, Long-Term Outlook Committee. Interim summary of "Long-term outlook for national land" [R/OL]. (2011-02-21) [2020-02-10]. <https://www.mlit.go.jp/common/000135853.pdf>.

[5] Li, G.P. (2019). Balanced, compact and networked national land spatial planning: Japan's practice and implications, 41(9), p1610-1618.

establish a self-sustaining decentralized society with coordinated environmental, economic and social development at the local level by promoting the sustainable use of rural resources and the two-way flow and integration of people, materials, capital and information between urban and rural areas [6].

1.1.2 Theory connotation

The "Regional Circular and Ecological Sphere" is one of the localized expressions of the concept of sustainable development in Japan, and follows the concept of the "Circle" in successive national land plans. It aims to build a self-sustaining and decentralized society at the local level by exploring and utilizing the unique resources of the countryside. It also intends to create new value chains in the symbiotic flow between urban and rural areas, and to maximize the vitality of local communities through the formation of a wide network of cooperation with other regions through the connection of natural and economic elements [7].

Japan entered a new phase of global environmental governance in 1993 with the enactment of the "Basic Law for the Environment" in the international context of the importance of the global environment. In 2006, Japan's Third "Environmental Basic Plan" proposed the strengthening of resource recycling and the construction of an environmentally friendly economic and social system. The plan also proposed, for the first time, a new environmental concept in which the development of environmental resources leads to the simultaneous solution of economic and social problems. In the Fifth "Environmental Basic Plan," the concept of "Regional Circular and Ecological Sphere" was introduced, focusing on local communities with outstanding environmental, economic and social problems, and the concept of "local recycling symbiosis" was proposed to give full play to the advantages of regional resources and build a self-sustaining decentralized society. The concept of "Regional Circular and Ecological Sphere" is proposed to make full use of the advantages of regional resources and to build a self-sustaining decentralized society in order to seek comprehensive regional governance and joint improvement of the environment and economic and social development [8].

The term "circulation" refers to the cycle of materials and life, i.e., the cycle between the atmosphere, water, soil and organisms through photosynthesis and food chain, thus minimizing the regional environmental load. "Symbiosis" refers to the coexistence of human and nature, as well as the coexistence between the region and the surrounding areas, which basically means that each region makes full use of its own advantages and resources to form a self-sustaining and decentralized society; On this basis, each of them, according to their own characteristics, form the connection and complementation of natural and economic elements with neighboring regions, construct a wider range of partnership network, and form a "symbiosis circle" with more complete regional resources. [Figure 1](#).

[6] Li,G.Q. (2018,05). Japan's Local Environmental Revitalization:The Theory and Practice of the Eco-system of Recycling Symbiosis, Japanese Studies, p142-158.

[7] Ministry of the Environment. Environmental Basic Plan [R/OL]. (2018-04-17) [2020-02-20]. https://www.env.go.jp/policy/kihon_keikaku/plan/plan_5/attach/ca_app.pdf.

[8] Ministry of the Environment. (2018, April 17). Environmental Basic Plan, p8-9. <http://www.env.go.jp/press/files/jp/108982.pdf> [2018 - 06 - 01].

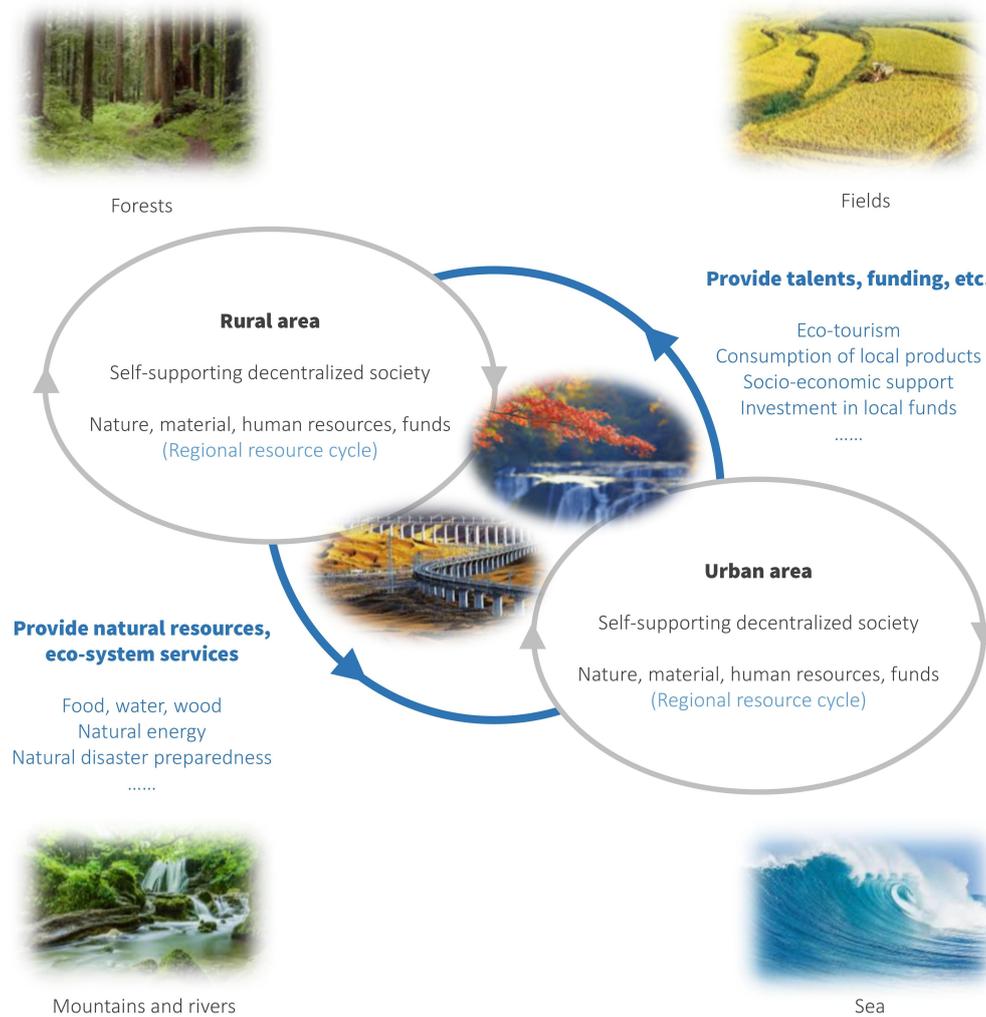


Figure 1. Regional cooperation model based on the concept of “ Regional Circular and Ecological Sphere”

The starting point for the establishment of the "Regional Circular and Ecological Sphere" is that local economic and social activities are built on the basis of diverse local resources. Local resources mainly include natural resources, infrastructure, industrial agglomeration and culture, terroir, community organization, etc. The aim is to explore and utilize local resources to create a self-sustaining decentralized society and to form cooperative networks with other regions. Through the connection between nature and economy, a new value-based industry system is created to achieve "symbiosis" and thus maximize the productive vitality of the local area.

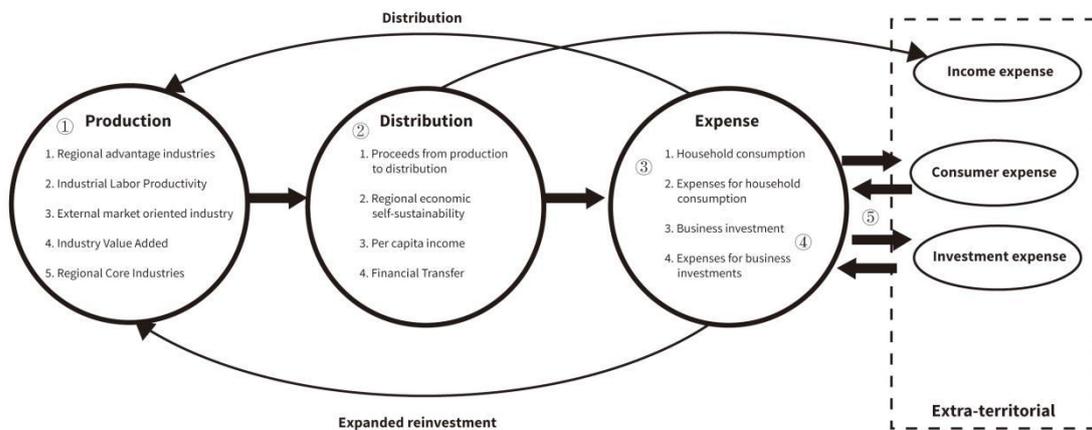
1.1.3 Theory Application

(1) Promoting the virtuous cycle of rural economy by optimizing industrial structure

The "Regional Circular and Ecological Sphere" aims to change the "blood transfusion" rural revitalization model, which was mainly based on external development and government subsidies, and emphasizes the full utilization of regional resources to establish a new economic model that can promote rural self-sufficiency and sustainable development.

For example, local green tourism resources should be explored and utilized. The rich natural environment is a valuable resource for rural development, and information technology can be utilized to enhance the convenience and safety of tourism, transforming a good environment into tourism resources and promoting the development of ecotourism and other types of tourism. Developing the combination of agriculture, industry and tourism: that is, combining the primary industry of agricultural product production with the secondary and tertiary industries of agricultural product processing, distribution, catering, health care, sightseeing and cultural experience, and continuously enriching the contemporary connotation of green tourism and blue tourism.

In order to help local governments comprehensively grasp the structure and financial status of their regional economies, the Ministry of the Environment created a regional economic cycle analysis database in 2015, which includes approximately 1,700 municipalities nationwide, and launched an automated measurement tool on its official website in 2017 ^[9]. The information on the actual state of regional industries and financial flows is visualized from 3 aspects: production, distribution, and expenditure. **Figure 2.** However, regional economic circulation does not mean self-sufficiency within a certain region or inter-regional gaming, but rather to achieve a virtuous economic circulation within the region through the complementary advantages of internal and external resources, and to continuously enhance the endogenous power of rural development.



Issues of concern for each segment.

- ① **(Production):** What are the dominant industries that can profit from external markets?
- ② **(Distribution):** Can the proceeds from local businesses generate income for local residents?
- ③ **(Consumption):** Is the income earned by local residents consumed locally?
- ④ **(Investment):** Are the proceeds from local businesses reinvested locally?
- ⑤ **(Inter-regional income and expenditure):** Does the purchase of external resources cause capital outflow? Can the balance of income and expenditure be improved by using renewable resources?

Figure 2. Regional economic cycle analysis framework

^[9] The regional economic cycle analysis is a composite analysis based on the "industry linkage table" and "regional economic calculation" for municipalities and villages, and currently includes data for 2010, 2013, and 2015 as benchmarks. <http://www.env.go.jp/policy/circulation>

(2) Promoting endogenous regional development through urban-rural symbiosis and convection

The "Regional Circular and Ecological Sphere" advocates an open, convection-based endogenous development, focusing on promoting the circulation, complementarity and integration of factors between urban and rural areas.

The connection between urban and rural areas can be divided into two types: natural connection, which is established through natural resources such as food, materials and energy; and economic connection, which is established through the flow of capital and talents. Urban and rural areas can not only enhance the understanding of urban residents of the value of the countryside through eco-tourism and other exchanges, but also through the introduction of talents and other long-term mechanisms to energize the revitalization of the countryside ^[10]. For example, in order to cultivate human resources who can devote themselves to the cause of rural revitalization, the Ministry of Internal Affairs and Communications and the Ministry of Agriculture, Forestry and Fisheries of Japan have launched systems such as the "Settlement Support Worker," the "Regional Revitalization Cooperation Team," and the "Revitalization Support Worker". These programs support young people in developing regional brands, selling agricultural products, and providing medical care to the elderly in sparsely populated areas. A significant number of these young people choose to move to the countryside at the end of their term of office.

(3) Sustainable use of rural resources to enhance environmental, economic and social benefits

The "Regional Circular and Ecological Sphere" aims at comprehensively enhancing environmental, economic and social benefits, effectively integrating regional resources and promoting a virtuous cycle of ecological and economic development.

For example, the utilization of renewable energy not only improves local energy revenues and expenditures and controls the outflow of funds from rural areas, but also increases employment opportunities and improves the ability to cope with disasters. The development and utilization of wood-based renewable resources, like sawdust, rice straw, rice husks and other raw materials, creates sustainable new energy and promotes green energy generation. Resource recycling not only reduces the final disposal of waste, but also helps promote the development of recycling industries and revitalize the rural economy. While biodiversity conservation plays an important role in maintaining local culture and enhancing the added value of agricultural products.

1.2 Value-added methods and approaches for regional resource integration

In order to promote the establishment of "Regional Circular and Ecological Sphere", the Ministry of the Environment of Japan is conducting a pilot project in 2016-2018, and has set up a special fund (500 million JPY per year) from 2019 onwards to support the establishment of cooperation platforms for local public and private organizations to carry out locally adapted and practical

^[10] Odachi Tokumi.,&Hashiguchi Takuya. (2018). Endogenous Rural Development Theory: Theory and Practice. Tokyo: Agricultural and Forestry Statistics Publishing.

activities. Some of the cases have achieved some results in integrating and adding value to rural resources, and the methods and approaches adopted mainly include the following three categories.

1.2.1 Practice based on regional resource integration

(Nagara River Basin Cooperation Model)

Regional cooperation helps to comprehensively integrate advantageous resources and promote the two-way flow of factors between urban and rural areas. The key lies in breaking through the boundaries of administrative divisions, enhancing the ability to optimize the allocation of resources through the establishment of regional cooperation and sharing mechanisms, and developing and expanding industries with regional characteristics. For example, the Nagara River Basin Cooperation Model in Japan is based on natural watersheds.

The Nagara River originates in Gifu Prefecture in central Japan, a prefecture (equivalent to a province) with a predominantly mountainous terrain and 82% forest cover, and is home to many rivers. Among them, the Nagara River is known as one of the "Three Clear Rivers of Japan" because of its clear water, and is famous for its abundance of catfish, which has led to the development of traditional local cultures such as cormorant fishing and washi paper making since ancient times. [Figure 3](#), [Figure 4](#).



Figure 3. Nagara River - Cormorant Fishing Activity

In recent years, traditional fishing and handicraft industries have been suffering from a shortage of employees due to low fish prices and an aging population. In order to boost the local economy, Gifu Prefecture integrated the resources of the Nagara River basin and successfully nominated it for the FAO's Globally Important Agricultural Cultural Heritage (GIAHS) in 2015. The four municipalities where the heritage sites are located (Gifu City, Seki City, Mino City, and Korijo City) have formed a consultation committee with the Gifu Prefectural Government and related industrial organizations to promote the development of agricultural, forestry, and fishery products, traditional crafts, and tourism products in the watershed, and to promote them through a brand

recognition system . In addition, Gifu Prefecture levies a forest environmental tax on local taxpayers to protect water forests, clean up river debris, and provide environmental education in order to maintain a positive ecological cycle between the upper and lower reaches.



Figure 4. Nagara River - Cormorant Fishing Activity

1.2.2 Practice of Renewable Resource Transformation Based on Public-Private Partnership System

(Local Good Creation Support Organization)

"Regional Circular and Ecological Sphere" promotes the use of renewable energy in a locally adapted way, the development and utilization of which requires a certain amount of policy, financial and professional knowledge support. In this regard, a number of intermediary organizations in Japan have begun to play the role of platforms to promote government - industry-academia cooperation. For example, the "Local Good" Creation Support Organization, established in 2014, provides training and capacity building for SMEs in renewable energy business start-ups and management through the "Regional New Electricity Incubation Project," which has been awarded the 2019 Ministry of the Environment's "Good" award ^[11]. Unlike large-scale centralized power supply, which is based on fossil fuels and nuclear power, "regional new power" is a small-scale decentralized power supply model that emerged after the Great East Japan Earthquake in 2011, and is an important part of the Japanese government's strategy to diversify energy sources.

The development and utilization of renewable energy in rural areas is an important foundation for building a self-sustaining and decentralized society, but it faces technical and cost challenges that are difficult to be met by internal forces alone. Government-industry-academia cooperation can

^[11] The Japan Ministry of the Environment "Good Life Award" (GLA) was established in 2013 to recognize outstanding environmental projects undertaken by companies, organizations and individuals throughout Japan to lead a green lifestyle.

help to integrate resources from policy, finance and technology, and intermediary organizations can play a bridging role to facilitate the formation of a more effective public-private cooperation mechanism.

1.2.3 Innovative value-added practices based on green investment and financing

(Kusei Dream Workshop - Transcription Printing Craft)

In order to implement the 2030 Agenda for Sustainable Development and achieve the goals of the Paris Agreement, the Ministry of the Environment of Japan has in recent years promoted green finance, represented by environmental, social and corporate governance (ESG) investments, and encouraged social forces to participate in building "Regional Circular and Ecological Sphere". As a pilot area, Higashi-Omi City in Shiga Prefecture established the Higashi-Omi Tripartite Win-Win Fund (hereinafter referred to as the "Fund") in 2017 with the participation of the local government, corporations, financial institutions, non-profit organizations, and citizens. The fund promotes rural revitalization through financial innovations such as social interest bonds (SIBs).

To date, the "Fund" has financed several projects through social benefit bonds, covering such areas as the renovation of empty houses, culture and education, medical care and welfare, and six industrialization projects. For example, the Kusei Dream Workshop, a general association, has transformed an old house donated by the Okamura family into a place for training and exchange of transcription techniques, display and sale of works, and tourist experience in order to preserve the century-old transcription printing technique in the Kusei area. [Figure 5](#), [Figure 6](#).



Figure 5. Kusei Dream Workshop



Figure 6. Kusei Dream Workshop - Transcription Printing Craft

Innovative methods of investment and financing, such as social benefit bonds, have opened up new ways for social forces to participate in rural revitalization. Not only do they help to diversify government investment risks and improve the efficiency of capital use, but they also mobilize social organizations and the private sector, revitalize unused resources in the rural areas and create new value while solving social, economic and environmental problems.

1.2.4 Inspiration

Japan's rural revitalization has its roots in the post-World War II phase of "catch-up" development, with the initial goal of achieving balanced development of the country. Although industrial development and infrastructure construction narrowed the gap between urban and rural development to some extent, however, it exacerbated the alienation and aging of the countryside and triggered a series of agricultural and rural denial/extinction theories. As Japan became the world's second largest economy and entered a period of economic downturn since the 1990s, its concept of rural revitalization gradually shifted from exogenous to endogenous development. This was in response to the need for fiscal austerity and decentralization reforms, as well as the search for new paths for rural development in the context of trade liberalization and the internationalization of environmental issues: multi-functionality and sustainability became the guiding principles, and urban-rural symbiosis and convection became the underlying conditions. The "Regional Circular and Ecological Sphere" is the latest exploration of this path.

The conceptual change and practical exploration of rural revitalization in Japan show that : the development gap between urban and rural areas cannot be solved by simply relying on the industrialization or urbanization of villages (e.g., merging of towns and villages), but rather, it is necessary to be based on the characteristic resource endowment of villages, and to explore differentiated development paths in line with local realities, so as to avoid the formation of a homogeneous development pattern.

The "regional cyclic symbiosis circle" emphasizes that the urban and rural areas are symbiotic and co-prosperous organic wholes, and that it is necessary to establish a mechanism for the two-way flow of urban and rural factors, and to cultivate the endogenous dynamics of rural development through the complementarity of urban and rural resource advantages. At the same time, it is necessary to give full play to the regional resource advantages of the rural areas, drive the transformation and upgrading of rural industries with low-carbon, recycling and environment-friendly industries, enhance the added value of agricultural products through industrialization, and promote the diversified development of the rural economy. It is also necessary to pay attention to talent training, play the role of social intermediary organizations as bridges, actively guide small farmers to participate in regional characteristic industrial chains, innovate and improve the production and marketing docking and benefit linkage mechanisms, and keep more of the benefits generated by the integration and value-added of rural resources in the local area, so as to promote the coordinated development of the rural economy, society and the environment.

1.3 Practice in different countries

1.3.1 Italy - National Small Villages Program

In order to make the country more territorially cohesive and to create a more efficient and digitalized public administration, the Italian Government proposes the program of National Recovery and Resilience (PNRR) ^[12], with the first structure "Digitalizzazione, innovazione, competitività, cultura e turismo". The mission of the project is to promote the innovation of digital keys, to support the transformation of the country's infrastructures and the production processes of companies, and to encourage innovative projects in the Made in Italy supply chain. Among these, C3. "Turismo e Cultura 4.0", has a specific national guidance plan for territorial revitalization.

DIGITALIZATION, INNOVATION, COMPETITIVENESS, CULTURE AND TOURISM

C3. TURISMO E CULTURA 4.0

To increase the level of attractiveness of the country by improving the tourism and cultural system through the modernization of the tangible and intangible infrastructure of the historical and artistic heritage, the improvement of digital usability and the physical and cognitive accessibility of culture. Support the digital and green transition in the tourism and culture 4.0 sectors and the socio-economic regeneration of territories, and promote training and interaction between school, university, business and culture. The Tourism and Culture Plan is divided into three major areas of focus: "Cultural Heritage for the EU Next Generation," "Minor Sites, Rural Areas and Suburbs," and "Tourism and Culture 4.0."

.....

^[12] With "Italia Domani", the country will have a more efficient and digitized public administration. Italian citizens will benefit from more modern, sustainable and widespread transportation. Italia Domani's investments and reforms will make the country more territorially cohesive, with a more dynamic labor market without gender and generational discrimination. Public health care will be more modern and closer to people. Italia Domani is part of Next Generation EU, an economic revitalization project dedicated to member states.

Minor Sites, Rural Areas and Suburbs.

Under this route, action will be taken on small villages of historical importance and rural hamlets, with the development of a national plan for small villages. These places are often vulnerable from a demographic and social point of view and are characterized by a high environmental risk. Measures are envisaged to enhance the great heritage of history, art, landscape, culture and tradition present in small Italian towns, encouraging the recovery of ancient agricultural structures and traditional trades (such as handicrafts). Entrepreneurial and commercial initiatives will be supported, including new forms of accommodation such as decentralized hospitality and Albergo Diffuso, in order to revitalize the socio-economic fabric of the place, counteracting the territorial depopulation, favoring the preservation of the landscape and traditions and the renewal of rural and historical buildings.

In order to disseminate cultural and creative activities and strengthen the social fabric, investments will be made in the revitalization of characteristic places, suburbs, historic parks and gardens, supporting participatory projects of culturally based urban revitalization, centered on local communities, in which municipalities will play a leading role, with the aim of supporting the implementation and strengthening the provision of cultural and creative activities, in collaboration with public and private actors, organized social organizations, third sector cultural foundations and/or associations, universities, research centers, non-profit higher education institutions, businesses and professionals (co-design).

Tourism and Culture 4.0

Tourism and Culture 4.0 aims to promote interaction between schools, universities, enterprises and cultural sites, based on a local strategy of intelligent specialization, also through interaction between creative and craft enterprises, with specialized training and guidance activities. The action is related to the reform of vocational training and ITS, through the improvement of professional skills in the field of enhancement and maintenance of historical and cultural heritage. Quality vocational training in the tourism sector will be promoted through the creation of a national structure for higher education and training of personnel related to tourism activities.

Investments will also be made to support the green and digital transformation of cultural operators, with interventions aimed at: promoting cultural demand and participation, encouraging technological transformation of cultural operators and active citizen participation; and improving the ecosystem in which the cultural and creative sector operates, supporting the integration between creative centers and territories through technological innovation.

.....

UAI- Unione Artigiani Italiani is a national federation of trade unions, founded in 1990 with the aspiration of being a trade union for two millennia; today it is a national association representing small and medium-sized enterprises, in particular artisans and tradesmen. Among them, the Union

of Arts and Crafts (U.A.T.T) aspires to work for the enterprises concerned, to support their business and promote their development, to represent and protect them in their relations with public and private institutions, public administration, political, social, and economic organizations at the regional and national levels, but also to provide trade union, legal, work area, access credit, administrative tax advice, security, and prevention. Training and courses aimed at promoting the qualification of the production of arts and traditional handicrafts. It also promotes or enhances the concept of Made in Italy values through local, national and international trade in the global market.

Founded in 1946, the CNA, the National Confederation of Crafts, Small and Medium-sized Enterprises, has about 623,000 members and employs more than 1.2 million people. In fact, the great spread of crafts, small businesses, both in big cities and in small towns, corresponds to a wide presence: CNA is present in all the Italian provinces, with 19 regional CNAs and 95 territorial CNAs, with about 7,500 collaborators, active in more than 1,100 offices. Through its own economic, developmental, social vision, CNA represents and protects the interests of micro, small and medium-sized enterprises operating in manufacturing, construction, services, transportation, commerce and tourism, small and medium-sized industries, as well as in the world of business in general and in related forms. In particular, the craft sector; artisans, self-employed, professionals in all its manifestations, entrepreneurs and retirees.

CNA is committed to giving value to artisans and small and medium-sized enterprises (SMEs), proposing itself as a partner in their development and contributing to economic and social progress. This objective is achieved through a structured and extensive organization, a system of companies offering integrated services and personalized advice to businesses, and a modern structure offering help, information and innovative solutions to its members. The CNA was the first craft organization to sign an agreement with a trade union (1946).

At the same time, the Italian government also organizes various handicraft exhibitions in cooperation with museums, industry associations and other institutions throughout the year. For example, the annual Florence National Exhibition of Creative Crafts (MIDA) and the Milan International Craft Fair. These exhibitions promote the country's handicraft enterprises to explore domestic and international markets and gain more space for development.

Depending on the local context, the Italian Government has set up economic assistance policies with different criteria for cultural and creative enterprises. For example, the Fund for Creative Enterprises is a subsidy promoted by the Ministry of Economic Development together with the Ministry of Culture to finance projects in the cultural and creative fields. The incentive is aimed at small and medium-sized creative enterprises that have been set up or are in the process of being set up. A total of €40 million has been allocated to this fund. The economic policy has been effective in encouraging young people to start up businesses in the cultural and creative fields, and the flourishing of handicrafts has to some extent contributed to the development of local tourism.

"From family heritage to school education, the artisan heritage system has held a large number of craft talents for Italy. This is the key to maintaining our competitive edge in craftsmanship."

Daniele Vaccarino, Presidente Nazionale di CNA

(Confederazione Nazionale dell'Artigianato e della Piccola e Media Impresa)

More than half of Italians live in small towns with a population of less than 200,000, and these small towns have the same vitality as large cities. Local governments in Italy are promoting the model of small towns according to local conditions. Sandigliano, known as the "wool weaving machine", Vicenza, the "city of jewelry", and Castello, the heritage of leather goods and ancient saddlery. There are thousands of small towns of handicrafts in Italy.

While helping to preserve various types of handicrafts, the special handicraft town combines tourism and local special handicrafts. In Cremona, the " Fiddle Town ", several luthiers representing several families have been making violins by hand for hundreds of years, strictly according to ancient methods. There are several museums in town, which introduce visitors to the history, culture and traditional craftsmanship of the town's violin making by displaying collections of violins from different eras. Some museums have opened virtual concert halls, using electronic simulation equipment to provide visitors and luthiers with audition experiences of different ages and types of fiddle sounds. The special handicraft towns promote the formation of clusters of the same type of handicraft towns. At present, there are various craft clusters in Italy, including textiles, furniture, shoes and leather products, jewelry and metalwork.

As the times change, Italy, a country with a strong handicraft industry, is also facing the dilemma of "shrinking" the number of artisans year by year. According to statistics, in the garment industry alone, the number of senior tailors in the country has decreased from 4 million in the 1950s to less than 700,000 today ^[13]. In order to "save" crafts, some vocational schools cooperate with enterprises or experienced craftsmen and adopt a dual education system of apprenticeship. To attract more young people, some vocational schools have also introduced higher education degrees into the apprenticeship system. The Cremona School of Violin Making, for example, has adopted a curriculum designed to combine theoretical knowledge with luthier craftsmanship, awarding bachelor's to doctoral degrees to graduating students. The school takes advantage of its unique features and employs local national treasures to teach the art of luthiery, and more than half of its students stay in the town to work in the industry after graduation.

1.3.2 China - "Rural Revitalization Strategy" ^[14]

In China, the protection and development of intangible cultural heritage forms has become a national strategy. In the "Outline of the National Cultural Development Plan for the Thirteenth Five-Year Plan", the need to promote the "productive protection of intangible cultural heritage" ^[15] was pointed out. On October 18, 2017, at the 19th National Congress of the Communist Party

^[13] Han,S.(2021). Italy keeps traditional crafts alive.China Small & Medium Enterprises, (01), p65-66.

^[14] Rural revitalization" is different from "beautiful countryside construction" which focuses on the beautification of village appearance in the past. It emphasizes the systematic nature of industrial revitalization, organizational revitalization, talent revitalization and ecological revitalization.

^[15] Xing,X.,&Xu,C.G.(2022,03). Consumption of traditional handicraft fashion: Motivations, intentions and

of China, the strategy of rural revitalization was proposed for the first time, and the "implementation of regional coordinated development strategy" was emphasized. The Central Committee of the Communist Party of China (CPC) and the State Council's Opinions on Establishing a Sound Institutional Mechanism and Policy System for Integrated Urban-Rural Development proposed to coordinate the rural revitalization strategy and the new urbanization strategy, improve the institutional mechanism for integrated urban-rural development, accelerate the formation of a new type of industrial-rural-urban relationship, and accelerate the modernization of agriculture and rural areas. The Outline of the National Fourteenth Five-Year Plan makes it clear that it is necessary to promote new urbanization and rural revitalization in a coordinated manner, to deepen agricultural and rural reforms, and to strengthen the guarantee of factors for agricultural and rural development ^[16]. On September 26, 2018, the Central Committee of the Communist Party of China and the State Council issued the Strategic Plan for Rural Revitalization (2018-2022), which proposes in the column of Prosperous Development of Rural Culture to "implement China's traditional craft revitalization plan, starting from poverty-stricken areas on an experimental basis, and take intangible cultural heritage and traditional craft skills training as the key to help the rural public to master a handicraft or technology. Supporting regions with the conditions to build platforms, integrate resources, improve the design and production of traditional craft products, and form major construction projects with certain influential local brands.

According to statistics, more than 73% of China's ICH programs are preserved in traditional villages ^[17]. The production and making of traditional handicrafts and related products have the dual value of economic promotion and cultural construction. The revitalization of traditional handicrafts as an industry is one of the important ways to fully realize rural revitalization.

Traditional handicrafts are rooted in the countryside and serve the villagers in their daily lives. Handicraft culture is an important part of rural culture, and the creation of craft brands is closely related to the rural economy and cultural heritage. For example, Xiangxi has rich and colorful ethnic traditional handicrafts, and is the place where folk culture flourishes in the west of Hunan, with a large number of artists and distinctive cultural characteristics of villages and towns, among which printing and dyeing is the most popular. In recent years, Xiangxi people around the national printing and dyeing characteristics of cultural resources, poverty alleviation and rural revitalization as the goal, through the rational use of different categories of printing and dyeing cultural resources and development, inheritance and innovation and development of local printing and dyeing crafts, the initial formation of a number of very local craft characteristics of the cultural brand. By refining the traditional culture of the countryside, highlighting the local cultural characteristics, and shaping the image of traditional handicrafts in the way of "craft + design", the cultural beliefs of the countryside brand have been created. Moreover, the development of distinctive rural towns in accordance with local conditions will promote the diversified ecological development of rural culture, such as the development of local farming industry characterized by the cultivation and manufacture of craft raw materials.

behaviour of Chinese consumer. Cleaner and Responsible Consumption, Volume 4.

^[16] Ye, J.Z. (2018). Rural revitalization strategy: history along, general layout and path introspection. Journal of South China Normal University (Social Science Edition), (2), p64.

^[17] Song, J.X. (2021, 03). Living Heritage, Empowering the Villages. China Culture Daily, p8.

In addition, villagers have been guided to actively participate in the construction of rural culture as masters, revitalizing villagers' cultural self-awareness and their sense of innovation in rural industries. For example, the poor counties in Xiangxi have cultivated a new generation of successors in the form of master workshops through the government's special cultivation of national-level ICH inheritors to innovate product expressions and improve product production standards. For example, the poor counties in Xiangxi have cultivated a new generation of successors in the form of master workshops through the government's special cultivation of national-level ICH inheritors to innovate product expressions and improve product production standards.

At the same time, by improving the comprehensive service function of traditional handicrafts in the central county, radiating the surrounding rural industries, integrating the characteristic resources of crafts in neighboring counties and relying on each other to form a network pattern of traditional handicrafts with a regional public brand as the core. Moreover, through the Internet and digital technology creative transformation, development, providing agriculture, industry and service-oriented high-quality carriers, presenting the digital agriculture and industry based on multiple mobile terminals in the form of characteristics of the industry. Rural "Internet + Digital Farm + Specialty Crafts", as a new cultural industry, is an important new achievement of rural cultural system reform and development. Through the rational layout of cultural industries with special characteristics in disadvantaged areas, and open cooperation with nearby developed areas, the rural digital agriculture infrastructure construction, traditional crafts and cultural services, urban and rural cultural industry collaboration and other industrial chains work together to make up for the imbalance in the ecology of the urban cultural industry, and promote the win-win development of urban and rural economy.

1.3.3 Japan - "Local" town and village integration - Cultural experiences for a new life Symbiotic development

In the reality of regional development, the rural area is no longer a concept opposed to the urban area, but has gradually been replaced by the neutral concept of "local area". In August 1953, Japan enacted and pushed forward the Law for the Promotion of the Integration of Towns and Villages, and the number of municipalities was reduced from 9,868 to 3,975 in 1956, which was an epoch-making change in Japan's local administrative system since the establishment of the municipal system in 1889, and established the framework of the post-war local administrative system ^[18]. In the 1960s, the Japanese government enacted the National Comprehensive Development Plan and the Law for the Promotion of the Construction of New Industrial Cities to ensure the implementation of the plan, with the goal of transcending the municipal administrative units to form a wide-area economic sphere. Under the general trend of merging towns and villages, local governments in Japan have continued to break through the limitations of administrative districts by taking the lead in institutional linkages, unified planning of transportation network infrastructure and rational layout of industrial space, and realizing spatial and industrial linkages over a wide area. Rural areas are no longer isolated territorial societies, but have developed into urban-rural complexes that are systematically, industrially and spatially linked with neighboring

^[18] Li, G.Q. (1999). Social Change in Rural Japan: A Survey of Fujimi Town. China Social Science Publishing House, Beijing, p193.

cities.

In contrast to the previous approach of financial subsidies, which focused on the development of rural facilities, the focus of Japan's rural revitalization efforts around 2010 has gradually shifted to the enhancement of the "soft power" of the countryside, including the promotion of support for rural communities, collaboration with civil society organizations, and the introduction of external talents. These include support for rural communities, collaboration with civil society organizations, and the introduction of outside talent, in order to compensate for the weakening or lack of local government functions caused by the merger of municipalities and administrative reforms ^[19]. This approach to rural development, which emphasizes the integration of internal and external, local and extra-local resources, has also been called "new endogenous development" to distinguish it from earlier theories of endogenous development that placed too much emphasis on local power ^[20].

Policy Protection

In Japan, since the enactment of Law No. 57 "Act on the Promotion of Traditional Crafts" in 1949, it has been used as a national policy promotion law. This was followed by the enactment of the "Enforcement Regulations of the Law for the Promotion of Traditional Handicrafts" (1949), the "Law Concerning the Promotion of Traditional Handicrafts" (1959), and the "Law for the Protection of Cultural Properties" (1950), which brought traditional craft techniques under protection as intangible cultural properties and set a precedent for the protection of intangible cultural heritage in the world.

A system for recognizing important intangible cultural properties and their inheritors has been implemented, and craft technologies necessary for the preservation of cultural properties have been included in the scope of protection as "selected preservation technologies". In 1974, five political parties in the Diet unanimously passed the "Traditional Arts and Crafts Industry Promotion Law," signifying the Japanese government's firm determination to revitalize traditional arts and crafts. Based on the Act, Japan's Ministry of Economy, Trade and Industry (METI), in cooperation with other central ministries and local governments, has taken a series of measures to promote the revitalization of the "traditional crafts" industry. The Association for the Promotion of the Traditional Crafts Industry is responsible for the promotion of the traditional crafts industry, as well as research, financial support, human resources training, product development, and demand generation, and provides a financing system that provides low-interest loans for equipment and implementation funds, as well as financial support such as a business tax for traditional crafts-related training institutions in each region. The more successful ones are those in which local cooperatives, research institutes, and local governments organically join together to develop traditional craft industries centered on the places of origin of traditional crafts such as ceramics, textiles, traditional clothing, and lacquer ware, and to promote education, publicity, production, and sales.

Japan's traditional crafts law is reflected in financial support, human resources training, product development, and demand development. In particular, financial support such as the provision of a

^[19] Tokumi Odagiri.(2013,12). New development of rural area policy in Japan. Journal of Agricultural and Forestry Issues, p463 - 472.

^[20] Zhang,W.M.,& Zhang,Z.M.(2018,11). Resource-Participation-Identification: the endogenous development logic and path choice of rural revitalization. Social Science,p75- 85.

financing system, the provision of loans at low interest rates for equipment and implementation funds, as well as the implementation of a business tax for traditional craft-related training organizations in various regions have activated the development of the traditional crafts industry in Japan. The amount of the budget for crafts in Japan between 2004 and 2008 shows that the Japanese government has attached great importance to the development of crafts-related industries, and the amount of the budget for support of traditional crafts has been increasing since 2004. In 2004, the amount of support was 400 million yen, and in 2008, it increased to 700 million yen, a growth rate of 175%.

Cultural Experience

Despite the various preservation and revitalization measures taken in Japan, the overall scale of the traditional craft industry continues to shrink. According to the Association for the Promotion of Traditional Craft Industries, in 2012, the total output value of Japan's traditional craft industry fell to 104 billion yen, less than 1/5 of the total value in 1983 (540 billion JPY). The total number of enterprises decreased from 34,043 in 1979 to 13,567 in 2012; the number of employees decreased from 288,000 in 1979 to 69,635 in 2012 ^[21].

In response to this situation, the Ministry of Economy, Trade and Industry of Japan's Traditional Craft Industry Review Committee has proposed new directions for the future development of traditional crafts in its report "The Direction of Measures for the Traditional Craft Industry in the 21st Century" ^[22]:

- (1) *It is to build an autonomous industry that combines tradition and innovation;*
- (2) *It is to actively promote a new lifestyle and culture of life using traditional crafts for the 21st century;*
- (3) *It is to focus on consumers and business operators;*
- (4) *It is to strengthen industrial cooperation with other fields and the application of new technologies and systems;*
- (5) *It is the combination of the manufacturer's own efforts and support from the state and other parties.*

The Morioka Handicraft Village in Iwate Prefecture in the Tohoku region of Japan exemplifies this direction of development of traditional handicrafts aimed at a new life, the creation of a culture of living, and a focus on the consumer.

The Morioka Handicraft Village was established in 1986 under the concept of "viewing, touching, and creating," and brings together a variety of Morioka's folk crafts, food products, and other traditional artifacts. The Morioka Handicraft Village represents a more self-conscious model of endogenous development, as it was created mainly by neighboring municipalities, trade associations, businesses, and others on their own initiative. This is in line with the "bottom-up" preservation model that the 2003 UNESCO Convention for the Preservation of Intangible Cultural

^[21] Website of the Japan Association for the Promotion of Traditional Craft Industries. <https://kyokai.kougeihin.jp/current-situation/>

^[22] Ministry of Economy, Trade and Industry of Japan website. <https://www.meti.go.jp/report/whitepaper/council19.html>

Heritage aspires to achieve. The original handicraft workshops scattered in the surrounding area could not attract tourists because of their small scale and the lack of effective solutions to environmental problems such as sewage, noise and exhaust gases; the operation of the workshops was very difficult, and the local traditional handicrafts faced the problem of inheritance. Because of these problems, the Morioka Handicraft Village was created by the private sector and with government assistance to centralize the scattered workshops in order to solve the related problems in a centralized manner. The Handicraft Village embodies the common wishes of craftsmen in the region, and as a result, the number of organizations participating in the Handicraft Village is extremely large, which is rare throughout Japan ^[23].

The planning of the Morioka Handicraft Village shows that it is no longer about preservation for its own sake, but rather about linking crafts to contemporary lifestyles such as leisure and tourism, focusing on integration with the overall surrounding environment, and also emphasizing the role of the market. The crafts village is integrated with cultural tourism and consists of three main functional areas: the product exhibition and sales area, the handmade workshop area and the ancient building protection area. In the product exhibition area, there are about 4,000 kinds of products produced by local small workshops, and visitors can listen to the artisans explaining their products and buy them directly. The Handicraft Workshop Area is the main body of Morioka Craft Village, and currently has 14 workshops in 10 trades, gathering top local craftsmen. The workshops not only have a production function, but also emphasize the experiential nature of craft activities. Visitors can not only see the craftsmen's handiwork directly, but can also participate in the fun of making crafts and creating their own creations under the guidance of them. Examples include handmade pottery, indigo dyeing, and making wooden artifacts. The Ancient Architecture Reserve, on the other hand, presents the characteristics of traditional local houses, which were "relocated" to the handicraft village from other places ^[24]. These settings not only centralize the protection of cultural heritage, but also create a richer and more three-dimensional experience for visitors.

1.3.4 Hungary - Sustainable Communities - Ecovillage

The ecovillage is a conscious, traditional or urban community that consciously designs its pathway through a locally owned, participatory process and aims to address ecological homes in the 4 domains of regeneration (social, cultural, ecological, economic to whole systems design). Ecovillage is the living laboratory that pioneers beautiful alternatives and innovative solutions. They are rural or urban settlements with vibrant social structures, varying widely, but working together to achieve low-impact, high-quality lifestyles. The first ecovillage emerged in Western Europe and the United States in the 1970s, and the concept of ecovillage spread in the 1990s ^[25]. In 1994, the Global Ecovillage Network was established as an international body. In addition to the common goal of connecting ecovillages around the world, they have an extraordinary diversity that creates a rich socio-cultural environment. In all shapes and sizes, from small villages to

^[23] Iwate Official Travel Guide: <https://visitiwate.com/zh-cn/article/4739>; "Japan builds handicraft park to gather all kinds of artisans to protect traditional handicrafts", People's Daily Online. <http://world.people.com.cn/n1/2016/0121/c1002-28074531.html>

^[24] "Japan builds handicraft workshop park to gather all kinds of craftsmen to protect traditional handicrafts", People's Daily Online, <http://world.people.com.cn/n/2016/0121/c1002-28074531.html>

^[25] <https://ecovillage.org/>

so-called inner-city ecovillages, from jungles to deserts, to ecovillages that now exist in many places and on every continent.

The concept of the ecovillage is critical of contemporary processes interpreted as negative (global economy, global power elite, consumer culture, ecological crisis, rural degradation, urbanization, urbanization, modern slavery, etc.) and their response to these issues is a radical lifestyle experiment. They argue that these unwelcome processes can be offset by the creation of small-scale, independent, community-based settlements that protect the natural environment and provide meaningful human existence and well-being in the long term.

Eco-villagers strive to establish settlements that are adapted to their natural environment as efficiently as possible and cause minimal disruption. These communities strive for autonomy and self-sufficiency, being as independent as possible from the networks that create various dependencies and vulnerabilities, whether social, infrastructural, or economic (Taylor, 2000). Most eco-villagers see the eco-village as a model of a more livable and humane way of life that can be sustained over time ^[26].

The ecovillage movement in Hungary started in the 1990s. The network includes ecovillages, ecological communities established within settlements (biovillages, long communities, ecological communities) and educational centers. Some settlements do not like or use the term "ecovillage", preferring to call themselves a living village. (Farkas, 2017)

Each Hungarian community has a population of between 10 and 150 people, with a total of about 500 people currently living in the settlements. They did not move to the countryside for economic reasons (economic poverty), but for a better life in the moral, cultural and ideological sense. The basic goals of the Hungarian ecovillages are the same as those of the international movement, but like the rest of the world, they must be adapted to the climatic, natural and socio-cultural environment of the region in which they were created.

The basic goal of an ecovillage is to create a sustainable lifestyle and community. Many residents of Hungarian ecovillages consider traditional peasant culture as an example of an ecological way of life; for them, traditional peasant ecological knowledge and practices are an important point of reference.

With the growing popularity of green/ecological, local products and lifestyles, it also places traditional handicrafts in a new context (Partsa et al. 2011:418). This is reflected in the definition of intangible cultural heritage: "Intangible cultural heritage thus includes 'social practices' 'knowledge and practices about nature and the universe', and 'traditional crafts'" (Partsa et al. 2011:402). Ecovillages certainly fit this phenomenon as well. The inhabitants of eco-zones hardly rethink the tools used in rural life and are bringing the primitive way of using tools into their daily life. Just as a willow basket is not - or not only - an ornament on a shelf, but a storage device,

^[26] The international ecovillage movement defines itself as follows: An ecovillage is an intentional, traditional or urban community that is consciously designed through locally owned, participatory processes in all four areas of regeneration (social, culture, ecology and economy) to regenerate their social and natural environments. <https://gen-europe.org/ecovillages/what-is-an-ecovillage/> (accessed January 27, 2021).

agricultural tools like the scythe are not only decorative on the walls of the dining room, but are also used in the garden and in the fields for labor. (Figure 7.) Craft heritage provides items that organically fit the lifestyle and ecological principles of the ecovillage inhabitants. They essentially use this heritage according to its original function and integrate it into the modern toolbox of their daily lives.



Figure 6. Handmade beehives

The adjustment and maintenance of traditional tools or crafts basically rely on the users' own life experience, but for more delicate repairs, they may seek the help of more skilled locals. For example, blacksmiths, carpenters, glass blowers, hearth builders, potters, weavers, etc. Often, these people live in or maintain close ties to a specific ecological community. These local experts offer not only their tools and services, but also their knowledge - by way of courses and lectures. This is a common feature of ecovillages and related movements: their knowledge is seen as a commodity that not only contributes to their livelihoods but also helps to facilitate the formation of trade. Sustainability is thus achieved through the provision of renewable local resources and craft techniques.

The main sources of knowledge about traditional folk culture are written sources: scientific literature, ethnographic works. Through this literature, the inhabitants of ecological communities study most of the tools that are no longer in use. But there is another important source related to the oral, such as the search for older people to learn. The practical knowledge of older people is considered a great asset, and their knowledge may have centuries-old experience behind it. Many eco-villagers try to discover local traditional knowledge by searching for and interviewing local older people to gain their knowledge. In this process, knowledge includes not only methods, but also tools: for example, recognizing a good grafting knife in addition to proper fruit tree grafting practices. (Not to mention varieties of fruit trees suitable for the landscape.) In their experience, these elders are happy to pass on their knowledge, and although they find it strange that young urbanites have moved to a rural "green" lifestyle, both parties benefit from the relationship if there is mutual goodwill: the young gain knowledge and the old gain respect. In addition to older people, they learn from professional practitioners of certain crafts (blacksmiths, weavers). The simpler (and more traditional) one's work is, the better - here too, they are looking for masters who use the least non-renewable energy and the least complex techniques.

Ecovillages and rural ecological communities in Hungary are so-called intentional communities whose inhabitants are foreign migrants of urban intellectuals to the countryside with a view to creating long-term sustainable lifestyles and communities. To this end, they strive for a way of life in accordance with ecological principles and try to realize it to the extent their environment, knowledge and abilities allow.

1.3.5 African - Cultural Villages

Cultural tourism has developed rapidly in recent decades (Smith & Richards, 2013; Timothy, 2021a). The cultural tourism (or heritage tourism) includes socio-cultural, economic and environmental aspects as well as social traditions (Moswete et al., 2015), and this form of tourism relies on local products, artifacts, and the way of life in local communities. It is a form of tourism that is based on the use of cultural resources by people (Okech, 2009), and cultural heritage-based tourism has the potential to encourage local communities to take pride in their culture and to help reinforce the identity of the community (Mitchell & Ashley, 2010; Timothy, 2020).

In contemporary society, heritage is often viewed as an economic commodity, particularly for tourism (Graham, Ashworth & Tunbridge, 2000). Intangible heritage represents some of the strongest manifestations of cultural authenticity and contributes to a deeper understanding of the culture of a destination, which in turn strengthens the competitiveness of intangible cultural heritage in the broader field of cultural heritage tourism (Gonzalez, 2008; Kim et al., 2019).

The government of Botswana has realized the benefits that tourism can bring, especially in remote rural areas. The advantages and benefits of this approach include, but are not limited to, increasing the concept of knowledge-based cultural tourism, encouraging the preservation and protection of cultural resources (including intangible heritage) of different ethnic groups, and fostering a sense of personal pride and unity among communities regarding their culture (Moswete, Saarinen & Monare, 2015). Other benefits include job creation, income generation, and a sense of connection to the resources they live in or near (Moswete et al., 2015).

Lepeyre (2016) reports that in the Erongo region of Namibia, the Damara tribe maintains its extant cultural heritage, including traditions and spirituality, which has become an important asset for tourism. When tourism was first considered, access to tribal areas was very limited. However, several donors and NGOs, including the European Union Namibia Tourism Development Program (EU-NTDP) and the Namibia Community Tourism Association (NACOBTA), have helped fund infrastructure improvements on-site and invested in technical assistance and institutional capacity building while preserving living cultures, paintings, sacred sites, and local hotels, ultimately promoting tourism in the region (Lepeyre 2016).

A cultural village is a special attraction that showcases the traditional way of life of the local people. In other parts of the world, these areas are often referred to as living museums, ethnographic museums, outdoor heritage museums, ethnic parks, ethnic theme parks or cultural parks. At these purpose-built sites, visitors learn about the culture of the locals and their way of life, past and present (Timothy, 2021a; Yang, 2011; Yang et al., 2008; Zeppel, 2002). In addition to displays and architectural structures, activities and attractions associated with cultural villages

often include guided tours, cultural exhibits, exhibitions, ethnic cuisine, and handicraft workshops where local people can act as guides and demonstrators (Saarinen, 2007).

In Namibia, there are four types of cultural villages (Lepeyre, 2016):

- (1) *Tourism operators organize visits to towns in urban areas based on the belief that tourists want "authenticity" and visit authentic local villages that have not been established for tourists;*
- (2) *The stage of the village ("stage of authenticity"), where tourists are exposed to performers, who are paid to demonstrate certain elements of their culture;*
- (3) *An interactive approach, where visitors engage in a dialogue with their hosts, which may include participation in certain activities and demonstrations.*
- (4) *Different traditional homelands of different Namibian peoples, where visitors can see everyday life and in some cases even light performances.*

In South Africa and Botswana, cultural villages have become quite popular tourist attractions (Monare, 2013; Moswete et al., 2015; Saarinen, 2007; van Veuren, 2001). Ideally, the sustainable use of intangible culture would create a competitive destination through ongoing participatory community planning that seeks to preserve it and make it a stable source of income without sacrificing the integrity of the asset base (McElroy & de Albuquerque, 2002).

In Malawi, for example, the Lake of Stars Festival promotes Malawi's arts and culture, fosters tourism and international interaction, and generates exposure and revenue for the country (Ezeuduji, 2015; Lake of Stars, 2012). In The Gambia, cultural performances are held along the Gambia River to generate income for local communities, entertain tourists, and showcase African arts and culture (Ezeuduji & Rid, 2011).

As a sustainable tourism resource, intangible cultural heritage should aim to meet the economic and social needs of the communities whose heritage is being used, while maintaining and transmitting the cultural and social values inherent in intangible heritage.

1.3.6 Vietnam - Government-led Handicraft Village

The traditional handicraft industry of Vietnam is more developed and is an important resource in the development of its tourism industry. Most foreign tourists traveling to Vietnam will buy local handicrafts such as wood, silk, embroidery and ceramics as souvenirs; at the same time, Vietnamese handicrafts are exported to more than 160 countries and regions in the world. The success of the Vietnamese handicraft industry is inseparable from the adoption of the distinctive model of handicraft villages to protect and develop traditional handicrafts.

A handicraft village is a village specializing in the production of one or more types of handicrafts. The Decree No. 66/2006 / ND - CP on the development of industrial villages, issued by the Government of Vietnam in July 2006, has guaranteed and facilitated the development of handicraft villages ^[27].

^[27] Decree No.66/2006/ND-CP of July 7,2006,on Development of Rural Trades,
<https://www.fao.org/faolex/results/details/en/c/LEX-FAOC065919>

In Vietnam, many handicraft villages have a history of hundreds or even thousands of years and have been important symbols of Vietnamese traditional culture. For example, Bát Tràng Village around the capital city of Hanoi, which produces porcelain, Van Phuoc Village, which produces silk, and Dong Huu Village, which produces traditional New Year's paintings, are all famous handicraft villages. The number and variety of handicraft villages have contributed greatly to the preservation and revitalization of Vietnam's traditional culture, the promotion of Vietnam's economic and social development, and the restructuring and optimization of the production structure in Vietnam's rural areas. Because they are directly related to the livelihood of villagers, the clustered production model of handicraft villages has enabled the production processes and methods of specific handicrafts to be properly preserved and passed on from generation to generation; at the same time, customs and practices related to the production of handicrafts have been preserved. At the same time, production-related customs and festivals have also been well passed on. With the comprehensive development of handicraft villages by the Vietnamese government, including the development of tourism, the temples, shrines, houses, etc. in handicraft villages have become valuable cultural heritages due to their long history. A large number of domestic and foreign tourists have entered the craft villages, which has brought considerable income to local villagers and contributed to the dissemination of Vietnamese traditional culture.

Vietnam currently has about 5,400 handicraft villages covering about 50 types of trades ^[28]. The impacts of this are: First, it creates a large number of jobs and absorbs the idle labor force of the society, especially the labor force of the poor and backward areas. Secondly, huge economic benefits have been created, which have improved and raised the living standards of the people. The average income of people working in handicraft villages is 2 to 3 times higher than that of farmers engaged in agricultural production only; and the income level of some high value-added production industries is even higher. Because of their high level of economic development, the handicraft villages have been urbanized more rapidly, and their poverty level is far lower than the national average. Besides, it also has a positive impact on promoting the adjustment of industrial structure and the optimization of production methods in rural areas. The rapid development of handicraft villages has broken the original single mode of agricultural production in rural areas, making it possible to integrate a variety of business forms. The use of advanced techniques, technology and modern equipment has further promoted the development of industry and services in rural areas, as well as the rise of logistics, commerce and tourism.

Despite the multifaceted benefits of handicraft villages, their development has not been easy and has faced many challenges. For instance, with the establishment of a market economy in Vietnam and its increasing integration into the international community, the handicraft industry is facing increasing competition. While most handicraft villages have been able to maintain their daily operations, some are facing operational difficulties or even bankruptcy. Since the protection and revitalization of handicraft villages and the promotion of the sustainable development of handicraft villages are not only of great economic significance for Vietnam, but also of great political significance in terms of maintaining social stability, Vietnam has put in place a number of measures to protect and revitalize handicraft villages and to promote their sustainable development.

^[28] Vietnamese craft villages to be promoted, <https://link.gov.vn/tiarlgJr>

(1) Formulate overall development strategic plan

The Vietnamese Government adjusts and optimizes the industrial structure of handicraft villages. It has sorted out the existing industrial layout and established archives of Vietnamese handicraft villages to keep abreast of the current situation of the development and operation of each handicraft village. Outdated and excess production capacity is eliminated resolutely, and production is organized and product lines are adjusted in strict accordance with the demands of the domestic and international markets. For handicraft villages with development prospects but facing operational difficulties, overall investment and policy guidance are provided to enable these villages to be maintained and better developed. And for some of the strength of the more prominent handicraft village is to focus on supporting, through comprehensive development to enhance its competitive advantages, the formation of brand effect.

(2) Provide policy support in terms of capital, land, and environmental management

Shortage of capital and land for production has been a common problem for Vietnamese handicraft villages to further expand their production and business scale. In this regard, the Vietnamese Government has introduced a series of preferential policies to support the development of handicraft villages. Preferential or financial support is provided for loans to banks for handicraft villages, renewal and upgrading of equipment for enterprises in handicraft villages, advertising and publicity for handicraft villages, export and participation in domestic and foreign exhibitions by enterprises in handicraft villages, and sewage treatment costs. For the rental of land in the handicraft villages, corresponding subsidies are also provided, and priority is given to the provision of land in accordance with the quantity and needs ^[29]. Since 90% of the daily production in Vietnamese handicraft villages pollutes the natural environment, this is contrary to the concept of sustainable development. Therefore, the government has also helped handicraft villages to re-plan their production sites and premises. Environmentally friendly industries are maintained; for heavily polluting industries, industrial processing zones were established to separate them from residential areas. In addition, the local government has allocated special funds for the comprehensive management of the pollution generated by the production process in the handicraft villages ^[30].

(3) Establish stable supply channels of production raw materials and diversified sales channels

Without a stable supply of raw materials, the normal production of handicraft villages will definitely be affected at source. Therefore, the establishment of a stable supply of raw materials for production is particularly important for the daily production of handicraft villages. In order to maintain the supply of raw materials, the main measures taken are: on the one hand, rationally utilizing locally available raw materials, boldly adopting new processes, increasing productivity and reducing waste; on the other hand, establishing long-term cooperation with reputable and strong raw material suppliers to ensure a stable supply of raw materials for production. In addition to raw material supply channels, Vietnamese governments and authorities at all levels have also actively established stable and diversified sales channels for handicraft villages. Vietnamese party

^[29] Decree No.57/1998/ND-CP;Decree No.66/2006/ND-CP; Nguyen Thi Thu Huong, State Policy on the Environment in Vietnamese Handicraft Villages, Chinese Business Review, Vol.15, 2016(6). pp290-295.

^[30] National State of Environment 2008: Vietnam Craft Village Environment, Ministry of Natural Resources and Environment, http://cem.gov.vn/Portals/0/DULIEU/bao%20cao/SoE_2008_Eng.pdf

and government leaders have personally marketed their country's handicrafts on many occasions, such as Bát Tràng porcelain, which has been presented to foreign guests as a state gift. The Vietnamese government has also actively pursued the policy of "prioritizing the use of Vietnamese goods by Vietnamese people" ^[31], opening the way for Vietnamese handicrafts sales. Organized by the Government, handicraft villages have established sales centers directly in big cities such as Hanoi and Ho Chi Minh City, in addition to a wide range of sales outlets in large supermarkets such as Metro and BIC, five-star hotels and airports and other crowded places. In addition, with the development of the Internet, it also focuses on extensive publicity through the Internet and other new media to create a marketing network with nationwide coverage and a certain number of overseas sales platforms.

(4) Establishing a stable talent team

Although handicraft villages have absorbed a large number of idle laborers, they still face a number of problems in building a talent team. First, there is a serious shortage of trained personnel with high professional skills. Secondly, the skill training of talents in handicraft villages is mostly traditional family-style, making it difficult to establish unified industry standards. Thirdly, the traditional mode of skill transfer is relatively lengthy, thus seriously restricting the further expansion of the production scale of handicraft villages. In response to the above situation, the government has set up training courses in handicraft villages and introduced modern teaching modes such as Internet teaching. At the same time, local governments have consciously introduced modern and advanced techniques and emphasized the establishment of standard industry norms, which have increased productivity and raised the added value of handicrafts, thus substantially increasing the income of practitioners. To a certain extent, this has attracted young people into the production of traditional handicrafts and promoted inheritance.

1.3.7 India - Localized clustering programs

The development strategy of traditional handicrafts in India is related to the national context. During the British colonial period, handicraft production suffered heavily due to industrialization, and a large number of traditional craftsmen lost the fundamentals on which their livelihood depended. After India's independence in 1947, the preservation and development of traditional handicrafts was included in the mandate of local state governments ^[32], the federal government plays a coordinating and supporting role at the national level. As the second largest industry in rural India besides agriculture, the advantages and disadvantages of traditional handicrafts in India are relatively obvious. The advantages are that India has a large pool of cheap labor, easy access to local materials, small inputs, and unique artistry in handicrafts. The disadvantages lie in geographical dispersion, poor organization, lack of capital, low education of practitioners, and weak market development ability. Most of the people engaged in traditional handicrafts are in remote and underdeveloped rural areas; and, according to the statistics of the Indian Handicrafts Development Council, more than half of the people engaged in handicrafts come from other

^[31] Vietnam launches "Vietnamese people give priority to Vietnamese goods" campaign, <https://en.vietnamplus.vn/vietnam-needs-strategy-to-promote-local-trade/143801.vnp>

^[32] The 1950 Constitution of India established a federal form of statehood. Foreign affairs, national security, and other matters are managed by the central government; culture, land, and other intra-state matters are autonomous by the local states.

backward classes such as scheduled castes and scheduled tribes ^[33], as well as disadvantaged groups such as the small number of religious groups.

In view of the important role played by the traditional handicrafts sector in India in promoting economic development and preserving Indian culture, and considering the vulnerability of the sector and the people who work in it, India has included the preservation and development of traditional handicrafts in its national development plans and has set up a specialized agency to take various measures to promote traditional handicrafts. Since 2007, the Government of India has invested hundreds of millions of rupees every year to support the development of the crafts industry; in addition to the continuous investment of financial resources, it has also formulated a variety of special programs. According to the regional distribution of handicrafts in India, financial subsidies are provided to encourage spontaneous clustering of craftsmen, introduction of advanced production equipment and technology, and enhancement of product design and development capabilities to strengthen the competitiveness of the handicrafts industry ^[34]. Two of the most influential special schemes are the Ambedkar Development Scheme and the Clusterization Scheme.

(1) Ambedkar Handicraft Development Scheme

The Ambedkar Hastashilp Vikas Yojana (AHVY) was launched in 2001 ^[35]. Ambedkar, the leader of India's untouchable class and the father of the Indian Constitution, advocated the prohibition of discrimination against the lower castes. Since most of India's craftspeople are disadvantaged, the program was named after Ambedkar to show the program's concern for the disadvantaged. The AHVY program is primarily geographically based, with the smallest scale being village-based. The program aims to provide social security, technical, marketing and financial support to the crafts community through the introduction of non-government professional organizations (private sector); to develop similar traditional crafts people into community enterprises with professional management and independent operation; to establish crafts institutions based on crafts projects, with clear needs and the ability to sustain the development of crafts; and to enhance the endogenous dynamics of the crafts industry.

(2) Handicraft clustering program

India launched the Mega Cluster scheme in 2008 - 2009, initially targeting the handloom industry and gradually expanding to other handicraft industries. The focus of the scheme is to equip the clusters with state-of-the-art production facilities, introduction of cutting-edge technology, technical training, product diversification and market development capabilities, based on the regional distribution of handicrafts industries in India, in an attempt to build brand names and expand the market for their products. The clustering scheme targets both specific regions as well as specific crafts industries across the country that have been identified to form clusters. Earlier ones were included in the program, such as the Basjohli shawl and embroidery craft in

^[33] Scheduled Castes and Scheduled Tribes are the Scheduled Castes and Tribes of India, which are the umbrella terms for the two categories of disadvantaged groups under the Indian Constitution.

^[34] Introduction to the Handicrafts Development Special Programme of the Handicrafts Development Board, Ministry of Textiles, India, <http://www.handicrafts.nic.in/pdf/Scheme.pdf>

^[35] Ministry of Textiles, India, Handicrafts Development Board, AHVY Program webpage, <http://www.handicrafts.nic.in/pdf/Scheme.pdf#page=7>

Indian-controlled Jammu-Kashmir. In 2014-2015, three more clusters have been created and Rs. 183 million have been allocated to support these three projects, including bamboo and rattan products, pottery, etc. in Bareilly, Uttar Pradesh; embroidery in Lucknow, Uttar Pradesh; and khazi leather, wood carving, etc. in Gujarat.

Although the focus of the AHVY and clustering schemes is different, with the former focusing on providing support and services to disadvantaged craft groups and the latter on introducing advanced technologies and developing markets, both encourage the development of traditional crafts through large-scale production. It is worth noting that India's special program for handicraft development has moved further from the government-led model, focusing more on activating the handicraft community from within. Non-governmental organizations (NGOs) have taken on the role of cultural brokers, acting as a bridge between the government and the crafts community. This has had a positive impact on strengthening the capacity building of craft communities. Over the years, the traditional crafts sector in India has grown to become an important part of the national economy, playing an important role in increasing employment and exports.

Summary

The "Regional Circular and Ecological Sphere" is a sustainable development state in which the environment and human society interact and support each other. The formation of "Regional Circular and Ecological Sphere" requires the establishment of a virtuous cycle between the local environment and the economy and society, in order to promote the comprehensive enhancement of the local area. These development strategies are based on the idea that villages/communities can break through the geographical limitations, highlight local characteristics, and centralize production, focusing on the inheritance of traditional culture as well as market benefits. This clustering development strategy has changed the problems of scattered production layout, inconvenient organization and environmental management of traditional handicrafts and other intangible cultural heritage.

Adopting a cluster production model has many advantages for development:

Firstly, it is beneficial to train personnel, update concepts, technologies and equipment, and make cultural heritage truly connected to the lives of people today.

Secondly, it helps to activate the local (rural) economy, providing more opportunities for employment and entrepreneurship and improving the living conditions of the population.

Third, when cultural heritage is closely related to the economic life of people, it is also conducive to attracting more young people to participate in it and promoting the transmission and development.

Fourth, for intangible cultural heritage like handicraft production inevitable environmental problems, can be centralized management, more friendly to the environment to ensure sustainable development.

CHAPTER 2

The Value System and Contemporary Transformation of Traditional Handicraft

The development of contemporary philosophy of behavior ^[1] has led to new advances in the study of human sensory, perceptual, and intentional activities. In the study of philosophy of behavior, the intentional judgment formed by a human being is an act of "intentional active recognition", and behind this act is the human initiative and a comprehensive judgment with a mixture of sensory, perceptual, and experiential factors, which is a complete and holistic comprehension, rather than a gradual or fractured process. It can be seen that contemporary research on the philosophy of behavior has fully affirmed the initiative of the subject's human intention and the holistic character of human grasp of things, and in this way has revealed the individual differences and creative qualities inherent in the creative intention based on different responses to things in the process of artistic creation.

It should be said that the development of the study of the philosophy of behavior is an affirmation of the inherent spiritual potential of man and his vitality. It also reveals, from another perspective, that the intrinsic value of manual labor performed by early human beings lies in the characteristics of initiative, individuality and creativity of human beings as subjects using tools and completing artifacts.

Human civilization originated from manual labor, which itself is not only the pursuit of material value to meet the needs of survival, but also always mixed with the reliance on spiritual value. The search for and expression of spiritual contents such as beauty, ethics, morality, faith and religion make a concrete, real object that carries the connotation of spiritual values. Through manual labor, human beings have built not only a material world, but also a colorful humanistic and spiritual world. It is in such an integrated and miscible handicraft practice that human beings create material wealth as well as spiritual wealth of humanity.

^[1] Behaviorism focuses on the idea that all behaviors are learned through interaction with the environment. This learning theory states that behaviors are learned from the environment, and says that innate or inherited factors have very little influence on behavior.

By exploring the value system and contemporary transformation of traditional handicrafts, this chapter shows the integrated pursuit of satisfying the material and spiritual values of human beings embedded in the creation process of handicrafts as an original human practice, and places them in the context of historical development to explore the value form and social significance of the role of traditional handicrafts in the revitalization of the region.

2.1 Handicraft: The Matrix of Art and Technology

As expressed by Edward Lucie-Smith^[2] in " The story of craft: the craftsman's role in society ", before the Renaissance, crafts and art were one and the same; after the Renaissance, art and crafts were separated, and since then, art was gradually regarded as more respectable than crafts because of its cultural orientation; after the Industrial Revolution, with the need for division of labor, crafts were further separated from design.

Handicraft requires the ability to master subconsciously, which includes both the development of the coordination of one's hands and brain, starting with the creativity and requirements of the brain, and the process of synergy and accurate expression of the hands, as well as a series of studies of subconsciously understanding the skills (mastering the characteristics of the materials, mastering the tools, mastering the process procedures, and mastering the generated results), until the process of forming one's own skilled completion. In this process, different results, ways and means are formed because of individual differences and pursuits; in this process, chance variations make the results more colorful and legendary.

Carl Mitcham^[3], an American philosopher of technology, divided the phenomenon of technology into four levels: technology as object, which can usually refer to the product of technology, i.e., the materialized carrier of technology, including tools, machines, various devices, and artifacts that become the result; Technology as knowledge, which should refer to the intellectual distillation and summary of technology, including the summary of experience and knowledge in the process of invention, design, manufacture and use, and rising to the part of universal or general theory; Technology as action emphasizes the process of technology implementation and application and the technology of volition that thinks as the concept and value of technology.

It is clear from Mitchum's classification that the system of technology is an integrated system that incorporates multiple factors such as the will of the human subject, social influences, and process generation. In this system, the needs and goals of the subject are present throughout, founded on the joint action of the natural and social properties of the subject. At the same time, the potential

^[2] Edward Lucie-Smith, is a Jamaican-born English writer, poet, art critic, curator and broadcaster. He has been highly prolific in these fields, writing or editing over a hundred books, his subjects gradually shifting around the late 1960s from mostly literature to mostly art.

^[3] Carl Mitcham is a philosopher of engineering and technology, Professor Emeritus of Humanities, Arts, and Social Sciences at the Colorado School of Mines and Visiting International Professor of Philosophy of Technology at Renmin University of China. While his disciplinary background was in philosophy, with an emphasis in philosophy and ethics of engineering, technology, and science, his scholarly publications have been as much interdisciplinary as disciplinary, especially insofar as he has worked to bring philosophy of technology into the interdisciplinary field of Science, Technology, and Society (STS) studies.

character of this influence becomes the fundamental reason that leads to the autonomic development of technology and its emergence as an independent, complex system.

The philosopher Michael Polanyi ^[4] has his own take on the "tacit knowledge" embedded in the craft. He argues that the informal, hard-to-grasp "know-how" is not just the habitual skills of an advanced craftsman accumulated over time, but also the deep-rooted individual ways of thinking, beliefs, and opinions, the ineffable "know-how" and the mental patterns attached to it. These unspeakable "know-how" and the mental patterns attached to them together constitute the connotation of "tacit knowledge". If this tacit knowledge is expected to be transformed into explicit knowledge and shared by the team to bring creativity and benefits to the organization, then the skillful knowledge among the tacit knowledge can be stripped out and become shared knowledge, but what is difficult to be stripped out is the individual worldview of the craftsmen hidden in it.

The process of displaying handicraft skills is full of generative factors. The mastery of techniques requires refinement, experience, perception, familiarity and grasp over the years, which is the result of experience accumulated and generated in practice. Individual differences play a huge role in this process: they include differences in individual understanding and application of skills, as well as differences in the process of implementing skills. These differences make up the individuality and diversity of handicrafts, so that even if the same materials and techniques are used, the resulting handicrafts have different qualities.

As a mediating link, some of the components of "skill" are neglected by the self-discipline development of technology, and this part is the meaning of human spiritual pursuit and self-actualization. It is a process of passive learning and active participation in the process of perception by the subject, from practicing skills to mastering certain skills through repeated practice and self-understanding; Then, the subject develops or expands his/her skills actively by combining his/her own experience, and in this process, he/she completes the realm of "mastery" that belongs to "individual".

The process of handicraft practice itself is not only a process of production of material values (expression of functions, processing of materials and comprehensive realization of utility, etc.), but also an important spiritual activity of human beings and a process of production of spiritual products.

In the long social production practice of human beings, handicraft undoubtedly has an important significance. Hand labor is the most original way of practice of human practical activities.

In the view of Marx, manual labor not only satisfies the material needs of human survival and development through the production of material materials, but also, more importantly, promotes the improvement of human intellect, which plays an irreplaceable role in the essential change of

^[4] Michael Polanyi was a Hungarian-British polymath, who made important theoretical contributions to physical chemistry, economics, and philosophy. Tacit knowledge, unlike explicit knowledge, is an influential term introduced by Polanyi in the tacit dimension to describe the concept of know-how, i.e. the ability to do something without having to express it clearly or even to be aware of all the things it has to do with the dimension.

man from animals. In the long period of manual labor, human beings acquired the ability to objectify the subject's will and achieved the evolution and perfection of creating the spiritual meaning and value content unique to human beings. From another perspective, the practical activity engaged in by human beings is itself a unity of the pursuit of material and spiritual values.

The homology of " Art " and " Technology "

The earliest origin of the word "art", according to the Encyclopaedia Britannica (1964), is from the ancient Greek Latin word "ars". It has a very broad connotation, which includes all production and production activities that satisfy various human needs, as well as all skills and techniques that people have acquired through long periods of training. For example, masons build walls, shoemakers repair shoes, shipbuilders build boats, farmers farm, vintners make wine, etc. These material production activities, like writing poetry, painting, playing music and dancing, are collectively classified as "art". This is evidenced by the writings of the ancient Greek philosophers.

In Plato's (427-347B.C.) dialogues, he always juxtaposes the artist with the maker or producer. In the famous metaphor of "bed" (see Plato's Dialogues on Literature and Art: The Ideal State), he calls the gods, carpenters, and painters "artists" side by side; and in Aristotle's Rhetoric (384-322B.C.), he refers to paintings, sculptures, poems, and other things that we call art today as "products".

It is clear from this that art itself has a technical content in its meaning. Some philosophers, including Plato, also considered the Greek root "tekhno"^[5] as containing not only materialized tools and techniques, but also rational and artistic elements. Today's "technological" characterizing or showing skill in or specialized knowledge of applied arts and sciences. Thus, from an etymological point of view, the ancient Greek word "Tekhnologia" gradually evolved into today's word "technology", which shows that art, skill and even technology are cognate.

In ancient Greek mythology, Hephaestus, the god of fire, who was highly skilled in making metal utensils, also built palaces for the gods of Olympus, and was a god of craftsmanship with practical ability and skill; Dionysus, the god of wine, on the other hand, did not do such manual work, and people expressed their worship to him with dance, music and poetry recitation. At that time, the plastic arts and architecture were excluded from the art of the "muses" and were called "useful" or "productive" arts.

Due to the customary way of research, which began in ancient Greece, of distinguishing between things in order to obtain an essential understanding of them, a long period has passed in defining what is art and what is technology. During this period, the artistic and technical characteristics of craftsmanship went from being integrated to being separated.

After the 18th century, the pursuit of the spiritual value of art was elevated to the perspective of "beauty" and given its supreme spiritual significance. In his Philosophy of Contemporary Western

^[5] Technical comes from the Greek "tekhno", which means "art or skill." Anything technical requires both art and skill.

Art, Jodie ^[6] suggests that from 1747 onward, art and technique were truly separated, and since then, "art of beauty" has become an independent concept, free from the system of technique.

2.2 The integration of material and spiritual values

Values present the understanding and interpretation of values on the basis of value orientation. Usually, values present not the general properties of the value object, but the interpretation of the meaning of the value object by the person of the value subject. Therefore, value has a richness that changes with the value subject and the environment in which the subject exists. Especially in the process of changing times, the diversity of the value subject changes with the complexity of the social environment, which leads to the characteristics of diversity of the concept of value.

In terms of values, the prerequisite for the formation of concepts lies in the consensus of values formed by different groups of individual people. In different times, there exist different regions and different cultural traditions that are inherited. The meaning of human groups exists not only in productive activities, but, more importantly, in the culture formed on the basis of production and interaction activities and its internalizing power.

The changes in the values of handicrafts do not only exist in the contemporary social context, but have been present since the beginning of human civilization. We can see from the historical phenomenon that handicrafts, as the original practice at the beginning of human civilization, have been separated into "art" and "technology" in its matrix, but in the process of historical change, they have been treated as backward production methods was replaced and cut off.

In the process of handicraft's transformation into an industrialized and information-based society, the one-sided understanding of handicraft as a backward mode of production has led to the devaluation of handicraft in modern and post-modern society, to the extent that it has obscured the values and requirements of human beings in handicraft for the pursuit of harmony and coexistence with nature. Handicrafts and the social institutions, ideology, production methods and lifestyles of the handicraft civilization on which they are based have become the target of criticism as "backward" and "decadent" "traditions". The narrowly defined concept of arts and crafts and the perverse development of the arts and crafts industry further severed the relationship between crafts and social life in the modernization process. The material value of handicrafts was devalued and the spiritual value was obscured.

During the long period of handicraft civilization, all manufacturing processes were done by hand with simple tools, and the handicraft industry assumed the dual mission of integrating practical and aesthetic aspects, and presented a wealth of different degrees of practical and aesthetic values:

^[6] A more systematic examination of some major issues in contemporary Western philosophy of art is undertaken in order to bring out more clearly the tendency of convergence between philosophy of art and aesthetics. In the history of Western aesthetics, the relationship between art and aesthetics was once seen as a subordinate one, i.e., aesthetics included philosophy of art, and philosophy of art was subordinate to and a constituent part of aesthetics. However, with the passage of time, this subordination relationship has died in name today. As a contemporary tendency, the status of philosophy of art is becoming more and more important, and the importance of philosophy of art and aesthetics is being reversed compared to the past.

From functional everyday objects that focused on practical requirements to furnishing crafts that gradually tended to have purely aesthetic functions; From simple, small batch hand processing to special crafts that contain exquisite skills and use expensive materials; From self-sufficient family hand-made production to custom-made for the court and town workshops; the form of handicraft existence has shown rich layers and diversified characteristics. However, with the advent of the industrial revolution, machine production gradually spread, and handicrafts were gradually improved or replaced as a production method that could not compete with machine production in the rich market of daily necessities, and relegated to a marginal position in the dominant industrial form of society.

However, there is no doubt that machine production was born from the mother of handicraft, and the human attachment to and expectation of handicraft has always accompanied the process of industrial development.

The "Arts and Crafts Movement", "Art Nouveau Movement" and "Art Deco Movement" that emerged one after another in Europe and America, as well as the early practices and ideals of Bauhaus in Germany at the beginning of the 20th century, they all reflect the need for crafts to develop in line with the progress of the times.

With the continuous development of economic integration, the conceptual systems and lifestyles of people are in a period of change, and handicrafts, as production practices that have been symbiotic with the development of human civilization for thousands of years, are facing opportunities and challenges that accompany the development of the times. On the one hand, the once glorious traditional handicrafts, whether court crafts or folk crafts, are facing profound metamorphosis and regeneration due to the drastic changes in the social background and conditions of their existence and development; on the other hand, the inherent human need for beauty has made handicrafts, as the best carrier, find their value again, and thus gradually integrate into contemporary life.

In the study of handicrafts, we seem to have overlooked the details and the spiritual power of human beings that are implicit in the process of achieving "artifacts" through the practical activity of "technology. In fact, this spiritual power is precisely valued and magnified in contemporary times, forming the characteristics of contemporary craftsmanship. Handicrafts are a process of production, and the spiritual power of human beings and the spiritual values they carry are more valuable than the pre-determined results of their output.

In his analysis of the hybrid nature of primitive art, Kagan ^[7] argues that art emerged from non-artistic labor and was gradually separated from it, and that early art had a "double qualitative regulation and double functionality. The "double" mentioned here expresses the hybrid nature of technology and art, the pursuit of spiritual values and the pursuit of material values.

^[7] Mo Kagan, a distinguished expert in the field of philosophy, aesthetics and culture of the former Soviet Union, has studied a wide range of fields, including philosophy, disciplinary art, and cultural history. He is the author of "Philosophy of Culture", "The City of Peter in the History of Russian Culture", "Music in the World of Art", etc.

From the original surviving handicrafts, we see different functions, forms, as well as totems, symbols and ornaments with different meanings depicted and carved on them, which carry not only the material value of the objects themselves, but more importantly, the record and communication of information and emotion as a spiritual carrier. From this point of view, it is difficult to divide the contemporary binary analysis of spirituality and materiality in order to sever their blending.

2.3 Contemporary transformation of traditional handicrafts

2.3.1 Crisis

Historically, most cultures have maintained a consistency with economic development. Modern design is a derivative of modern culture, following the logic of modern rational culture, which is generally functionalist. In modern design, the kind of empirical expression belonging to traditional design is rationalized and scientific, and drawing on modern science and psychological research, the perception of compositional forms, colors, and texture is applied to the designs required for modern industrial production. At the same time, the traditional reliance on the enlightenment of cultural inheritors is transformed into a universal modern design education that relies on the mass production of designed products by modern machines.

The crisis of traditional handicrafts occurred in an encounter with modern capitalist civilization, but if we look deeper into history, we find that many clues to the crisis of handicrafts were already hidden in the long pre-industrial ^[8] traditional society period before the Industrial Revolution. An important aspect of the complex dynamics is that, despite the breathtakingly numerous superb crafts, their cultural legitimacy has not been confirmed. Handicrafts are often viewed through the lens of "subordinationism" and "instrumentalism" in terms of their cultural identity. As a universal mode of production, handicraft is limited to the status of a tool to satisfy the "reality principle" and is not considered as a major force in the construction of the cultural mainstream, thus being marginalized from mainstream values.

Second, in traditional handicrafts, most of its practitioners are lower-middle class. For historical or institutional reasons, they are often poorly educated or uneducated, and their status as producers and practitioners has been devalued. At the same time, the cultural limitations of the practitioners due to the lack of education have led them to use handicrafts more as a way to earn a living, focusing more on the proficiency of their skills. As subjects of crafts in the pre-industrial era, they lack a general cultural height and self-awareness, and the creativity belonging to the subjects of craft creation is often ignored.

At the same time, in pre-industrial societies, handicrafts were subservient to traditional authority, as demonstrated not only by the fact that the most exquisite crafts served the powerful, but also by

^[8] Daniel Bell, one of the world's most important thinkers of the 20th century, predicted the advent of post-industrial society and its manifestations in his influential book "The Coming of the Post-Industrial Age". Daniel classified the development of human society into pre-industrial, industrial and post-industrial societies according to the change of production methods, and this classification essentially solved the problem of the non-coincidence of human development.

the rigid production and transmission methods of masters and apprentices and family hierarchies, with the typical characteristics of closure and fragility.

As a common mode of production in the pre-industrial era, "handicrafts" embody the specific and long-standing cultural traditions and values of a country, and they carry the cultural genes specific to the nation and its traditions. However, under the modern industrial civilization system, the traditional value system is dismantled in a radical and pioneering manner: "The modern environment and experience directly crosses all geographical, national, class, nationality, religious and ideological boundaries so-called modernity, that is, becoming part of a world." [9]

The liberation of human beings from the drudgery of labor has so far been an important motivation for continuous human creativity. Premised on enlightenment and respect for human beings, modern industrial civilization has greatly unleashed the unprecedented universal creativity of human beings, and the ensuing technological revolution has had a profound worldwide impact. Because of this, in modern industrial civilization, handicrafts still play with modern machine production with their manual production methods. However, the pre-industrial era production method of handicrafts is unable to resist the efficiency of industrial mass production, and traditional handicrafts are pushed into a more marginal position, which ultimately puts their overall survival in a precarious and endangered state.

Daniel Bell, one of the most influential thinkers in the 20th century, predicted in the 1970s after analyzing the developed capitalist countries in the West that mankind would enter a post-industrial society after the industrial society, and one of the primary characteristics of the post-industrial era is the "axis of knowledge", that is, the technology in the post-industrial era is different from the early industrial technology. One of the primary characteristics of the post-industrial era is the "knowledge axis theory", that is, the technology of the post-industrial era is different from the mechanical technology of the early industrial era, but the high-tech and high-intelligence technology supported by knowledge, which is characterized by informationization, knowledge-based and service industry instead of manufacturing. And Daniel also believes that with the progress of technology, "there can be a socialist post-industrial society as well as a capitalist post-industrial society" [10]. The Fourth Industrial Revolution: The Power of Transformation" by German economist Klaus Schwab describes the Fourth Industrial Revolution in terms of artificial intelligence, mobile networks and sensors, nanotechnology, brain research, 3D printing technology, materials science, computer information processing, etc. The Fourth Industrial Revolution is no longer an innovation of a particular product or service, it is an innovation of the whole system that will have a huge impact on the economy, business, government, including individuals. The production of technology represented by artificial intelligence and big data is the future trend of the world, which once again confirms Bell's assertion that the technology of post-industrial society is centered on the axis of knowledge.

[9] Marshall Berman.(2003). All that is solid melts into air - The experience of modernity. Translated by Xu D.J and Zhang S. Beijing: The Commercial Press, p15.

[10] Daniel Bell. The Coming of Post-Industrial Society. Translated by Gao,P,&Wang,H.Z.(1984). The Commercial Press, p131.

From the current global development, the network information technology and the emergence of service industry have accurately responded to Daniel's description of post-industrial. It must be said that, in terms of technology, in the face of the powerful and highly intelligent technology of the post-industrial era, if handicrafts still bring the strategy of treating the industrial machine civilization and confront the intelligent technology of the post-industrial era with technology, the consequences will be unimaginable.

2.3.2 Opportunity

Crisis often means opportunity, and the crisis of handicraft means the inevitability of its transformation. For traditional crafts, passing on skills is an important part of it. However, as the ancient Greek philosopher Heraclitus said, "One cannot step into the same river twice". The present and future of handicrafts is not a copy of past history, and it is not possible to import the usual understanding of handicrafts into the construction of the future and assume that the height of humanistic thought it lacks is a justification. The strategy adopted in the face of the crisis depends on objective self-perception and the setting of a transformation path.

The modern West has taken a reverse path of thinking, that is, it has rethought the irrationality of its pre-industrial separation from art in light of the modern crisis of traditional handicrafts, and thus, in the modern West's reflection and improvement of culture, traditional handicrafts merged with art and design again.

In the history of world design, the British Arts and Crafts movement at the end of the 19th century was the first awakening and revival of craftsmanship. A group of elite intellectuals led by Raskin, Morris and Ashby tried to re-bridge the separation of craftsmanship and art since the Renaissance and began the change and improvement of the merging of art and craftsmanship. The subsequent early Bauhaus, in particular, hoped to build an ideal edifice of human civilization through the joint union of art, craftsmanship, design and architecture. At the same time, handicraft was always completed as a compulsory course in the early Bauhaus education system. However, this practice did not last long, and with the prevalence of modern functionalism in the Bauhaus, craftsmanship faded back into obscurity. The revival of craftsmanship was the "Western Studio Craft Movement" in the 1940s and 1950s, which once again advanced the modern development of craftsmanship through the practice of craftsmanship and pioneering art.

Currently, due to continuous technological advances globally, material functionality has been universally resolved and society's needs are transforming to cultural, psychological and experiential consumption beyond functionalism. The visual turn has made aesthetics an important productive force, the post-modern pluralistic context and the reconnection of traditional cultural lines, all these transformations will point to a fundamental shift in the concept and strategy of traditional handicrafts, which will lead to changes in the structural form and production operation model of traditional handicrafts.

If we consider handicraft as a fluid and evolving culture, then its intervention in the dialogue of contemporary culture and art system and its status in the contemporary ongoing is an inevitable issue. In the context of contemporary social development, handicraft is no longer the main mode

of production and manufacturing, and its material value function is stripped and gradually replaced; however, the humanistic value of the culture it embodies is gradually revealed. When people gradually meet the basic material needs of life, the value of handicrafts gradually emerges and becomes a new pursuit in terms of spiritual and cultural needs.

2.3.3 Revolution

The crisis of traditional handicrafts in modern times is essentially a clash between agricultural and industrial civilizations. Therefore, the earliest countries to wake up and take countermeasures in the face of the crisis of handicrafts were the countries with the earliest industrialization and more mature development. The first response to the revival of traditional crafts was the "English Arts and Crafts Movement" in the 19th century, followed by the Bauhaus in Germany, which involved crafts in the modern education system, and the Western studio movement in the 1950s, mainly in the United States, which combined pioneering art and crafts and realized the transformation of "craftsmen" into "artists. In the 1950s, the Western studio movement, mainly in the United States, combined pioneering art and craftsmanship and realized the transformation of "craftsmen" into "artists. These countries have made profound humanistic reflections and transformations on the negative effects of modernity with their pioneering experiences. It has gradually become a trend in the development of contemporary handicrafts to pass on the traditional mastery of handicrafts and graft it onto contemporary art and design.

Technology is a tremendous transformative force, but when one looks deeper, the progress that appears to be driven by technology is essentially a by-product of the transformation of ideas, and technology is a manifestation of the transformative power inherent in ideas acting on reality. In the case of art history, almost without exception, the events or individuals that are recorded in art history, regardless of the medium in which he or she (it) is narrated, have an essential value as a catalyst for human intellectual creativity.

From the perspective of spiritual value, the embodiment of handicraft value is expressed in humanistic value, artistic value and other aspects. Facing the urbanized living environment, the fast-paced life style that pursues technical and efficient survival, and the existence of various modern chemical and composite materials everywhere, the distance from nature is getting farther and farther. Handicraft is the closest material to nature, changing the form and performance of the material by hand, and making the material in the hands attached with emotional support through craft skills, so that modern people have gained a spiritual home for emotional return.

The value world of handicraft is, from a metaphysical perspective, the creation and construction of a world of meaning, whose value goal points to human freedom; from a metaphysical perspective, it is a world of imbued perception and experience, whose value goal points to respect for living beings. Because of this, the transformation of craftsmanship does not only lie in its historical value, but also depends on its relationship to contemporary life and culture, and the possibility of integrating into the contemporary, thus providing its presence in the contemporary cultural field. For handicrafts, the preservation and revival of handicrafts means reconstructing the emotional and cultural identification with tradition.

In many cases, cultural heritage is an internalized genetic, underlying spiritual need, a basic need for cultural identity of self and community. Behind this need is not only a question of who I am, but also a question of who I belong to and who we are. Therefore, the identification with cultural traditions carried in the humanistic value of handicrafts is not simply a return to the traditional state of life, but rather an evocation of memory through the process of handicrafts and through objects that possess ethnic and traditional symbols, decorative patterns, and functional forms. This sense of memory is warm and welcoming, with a strong sense of spiritual belonging, and can bring people dependence and security. Therefore, the significance of handicrafts today has gone far beyond the objects themselves and become a representation of the pursuit of spiritual values.

2.3.4 Development

Faced with the increasingly globalized social context, human beings have become fully aware of the importance of the spiritual crisis. Because human beings can only obtain sustainable and comprehensive development if they change their own attitude and values of existence at the level of the subjects' spirit. The openness, equality and experience of contemporary cultural production are the prerequisites for the development of traditional handicrafts, which are traditionally derived from multifaceted experience, knowledge, technology and aesthetics, and thus have a natural genetic advantage in intervening in contemporary cultural contexts. That is, it can cut into the diverse development of contemporary society with its comprehensive language of perception and expression, and obtain a more open and rich imagination and cultural construction.

Looking back at the history of handicrafts, we find that the choice of traditional handicrafts, which are both practical and artistic, unfolded two distinct paths after facing the modern industrial crisis. One is the combination with design, where part of the technology becomes part of industrialization and serves the daily life of the public with both aesthetic and functional attributes. The other is the combination of craftsmanship with art, which activates the deep human genes of difference, chance and vividness in the character of craftsmanship, which are more ancient than rational. This approach opens up the limitations of handicrafts under the traditional framework and the repression under industrial civilization, thus giving rise to a handicraft culture with humanistic charm and contemporaneity.

Among the two characteristics of traditional handicrafts, artistic form and production form, artistic form focuses more on its cultural attributes and production form focuses more on economic attributes. In the two-way dimension of the handicraft field, handicrafts intervene in the economic construction in the production form, and the practical function of the heavy products is its traditional main development path. However, the encounter with modern industrial civilization hints at the reality that the role of handicrafts in a practical sense has lost its competitive advantage in large industrial production. Therefore, to maintain the superiority of handicrafts for survival, it is necessary to tap into the non-practical cultural dimension. Compared with industrial production, handicrafts are more time-consuming and labor-intensive, and are not suitable for quantitative competition in production, so we need to pay more attention to the enhancement of cultural height, and inherit the most essential and core values of handicrafts with the help of tangible cultural carriers.

The transformation of traditional handicrafts into an artistic approach is closely related to the core essential properties of handicrafts. One of the characteristics that distinguishes handicrafts from modern industrial machines or highly intelligent technologies is that they are essentially a production process in which the heart and hands come together. On the basis of the purity of their skills, exquisite craftsmen infuse their own unique imagination and creativity to derive their own distinctive styles, and thus complete the process of making things into objects to shape their personality, which is essentially related to the production of art. For example, after the birth of modern design, the function of universal production gave way to mechanization. The Western design field, especially industrial production associated with practical purposes such as industrial styling and furniture, relies heavily on mechanical processing to complete. For those middle and high class consumers between the high end and the masses, the production is done in small quantities, partly using a parallel approach between mechanical processing and handicraft. For those high-end customers, the single-piece customized products are designed according to the customer's tailor-made design and completely use handicraft. Such single-piece custom-made products are close in nature to the qualities of artworks through the irreproducibility of the analogy to artworks, in order to highlight their distinctive status and aesthetic taste. In addition, contemporary design is an extension and development of modern design, and at the same time, it has given rise to more diversified cultural and aesthetic needs. This individualized small-scale creative type of production of contemporary design is consistent with the essential production method of handicraft, and in this sense, the creative production method of handicraft will gain new possibilities.

The crisis and dilemma of contemporary traditional handicrafts make us need to start again from the origin and cradle of culture creation, from the relationship between culture and life and nature, and critically look at the contemporary core competitiveness of handicraft values in traditional culture. With the more spiritual pursuit in post-industrial society, the diverse consumer aesthetics in mass consumer culture, and the pluralistic needs of contemporary culture all provide opportunities for the revival of traditional handicrafts to re-emerge. The reinterpreted contemporary traditional crafts have become a special way to alleviate contemporary social problems by focusing on life, promoting individuality, respecting symbiosis with nature, and identifying with cultural differences.

Summary

Modern industrialized mass production has produced a profound crisis for handicrafts, and handicraft production methods have been marginalized under the point of industrialization's emphasis on efficiency and function. However, on the other hand, it is due to the emergence of industrial civilization that traditional handicrafts have begun to be self-reflective in a cultural sense.

In terms of the crisis transformation that crafts must face, the common Western strategy to this issue has been to weaken the mass reproduction approach of crafts and increase the added value of crafts. That is, consumers do not identify handicrafts as equivalent industrialized products, but rather as a form of art and culture that enhances the value of handicrafts by combining design with handicrafts in small batches, or by re-housing the core attributes of handicrafts in an artistic way.

Traditional culture is an important means of identifying a nation's history, cultural identity, and shaping the image of the country and the public spirit. The dilemma of modernization and development gives a rational justification for the re-emergence of tradition. However, the re-emergence of tradition does not mean that tradition recovers its absolute right to speak, but rather that it absorbs and integrates different qualities of culture in a way that is consistent with contemporary reality and cultural ontology, which is an important factor in maintaining vitality and constructing new cultural models in the midst of cultural change.

In contemporary times, to intervene in the construction of mainstream culture with the attributes of culture and art is the transformation strategy and future of the revival of traditional handicrafts. The value of handicrafts to the contemporary era is not only the value of the technical experience embedded in production, but also the cultural significance contained therein. It is precisely for this reason that traditional handicrafts themselves can be freed from the subordinate position of the historical and cultural "other" and thus establish a more powerful and clear image of themselves.

The return of traditional crafts in the contemporary context should be seen as the return of the original human pursuit of a state of spiritual and material communion. This recognition is based on the fundamental change of values formed in the process of social development and change. Contemporary traditional handicrafts do not only provide a temporary home to escape and settle the spirit of contemporary humans who rely on technology to survive, but also, in essence, indicate more profoundly the value direction of the possibility and inevitability of human beings to obtain comprehensive and free development. This means that it is not a return to the original state of existence of handicraft, but a rethinking of the inner relevance of man and man, man and society, and man and nature in the spirit of traditional handicraft, so as to obtain a higher level of value creation and construction. The advantage of traditional handicraft from technology also lies in its sensibility and cultural power. It is a warm path of humanistic experience and spirit that will

reconnect the whole society in the future. In the cross-cultural contemporary context, the "return" and "transformation" of traditional handicrafts means the review and reflection of historical experiences, and also means the renewed respect of human beings for each culture and historical tradition. It is undoubtedly a "good medicine" for the territorial revitalization of small circles, nations and countries.

PART

III

Case Study

*Study on the development model of regional traditional handicraft
with the example of China*

CHAPTER 3

Changes and Reconstruction of Traditional Handicraft in

Chinese Regions

Handicrafts are the applied art that are produced by hand labor with a unique artistic style. It is different from the industrial mechanized way of mass production of standardized handicrafts. China's traditional folk handicrafts have a long history and a wide variety of categories, with excellent artistic culture and unique artistic style. Under specific historical conditions, traditional handicrafts have promoted the development of social humanities and arts. At the same time, traditional handicrafts have been gradually perfected in the evolution and development of history, from production materials, tools and themes ^[1].

Traditional handicrafts (Folk Handicraft) are rooted in the grassroots of society, constructing a popular cultural heritage with a people's base and exerting a far-reaching influence on other arts and cultures. "Folk Handicraft in China is very rich and has a long historical tradition, as a cultural phenomenon was formed under the long-term agrarian system." ^[2] In its past history, China was an agriculturally oriented country, but the Chinese countryside has never lacked diverse industrial forms. Among them, many peasants were craftsmen themselves, and rural handicrafts constituted the main form of traditional cultural industry in the Chinese countryside, and became an important source and supplement to peasants' income. However, with the rapid development of modern machine-based industrial production and science and technology, manual labor is diminishing and handicrafts are constantly being replaced by machine-based production. At the same time, the outward movement of the population has also led to a sharp decline in the number of people engaged in traditional handicrafts. Under the impact of modernization, the development of traditional Chinese folk handicrafts is facing challenges, and the humanistic landscapes, traditional cultures and folk customs based on these handicrafts are also threatened by inheritance. Therefore, the question of how to keep traditional handicrafts alive in modern times and how to develop the intangible cultural heritage represented by handicrafts is a very practical concern.

As early as the 1930s, Fei Xiaotong clearly stated in his "Jiangcun Economy" that "it is necessary to emphasize the equal importance of the traditional forces and the new dynamics, because the real process of change in China's economic life is neither a direct transfer from the Western social

^[1] Yu, L. (2022,06). Practice and research of design intervention in rural revitalization. Journal of Taiyuan City Vocational and Technical College, p41-43.

^[2] Zhang, D.Y. (1997). The Present and Future of Chinese National Art. Art Watch, No. 2.

system, nor is it merely a disturbance of the traditional balance. The problems occurring in the present situation are the result of the interaction of these two forces." [3]. That is to say, there is no contradiction between tradition and the development of modernity, and tradition can be reconstructed in modernity. As Giddens puts it, "modernity, for most of its history of development, has been dissolving tradition on the one hand, and on the other hand it has been constantly reconstructing it." [4]

Although the development of traditional folk handicrafts has faced difficulties, modern production and marketing models have also brought opportunities for its development. Traditional culture was once between the political and economic extremes, and its living space was once suppressed and rejected. Now, after more than 40 years of reform and opening up, China is doing its best to make up for and save traditional culture, which was once marginalized, and to rebuild the cultural values of the society. As the Chinese economy develops and people's material living standards rise, and as they begin to reflect on industrial civilization, standardized machine-made products are no longer able to satisfy the public's desire for culture and art, and they are turning to traditional handicrafts to develop a new identity.

This chapter explores the process of social and cultural change of handicrafts of different types and territories, using traditional Chinese folk handicrafts as an example. Through the sharing of representative cases of traditional handicraft development, it sorts out the social group activities of historical and local handicrafts, and reflects the real social development and change within territories in the change and reconstruction of traditional handicrafts.

3.1 Keyword extraction: Types and organizational changes of traditional handicraft in the course of history

Development over the centuries, especially socio-economic transformation, the emergence of alternatives to machine production, population movements, as well as new artistic aesthetic standards and new market demands, have led to many changes and re-configurations of traditional handicrafts. Such changes include not only the organization of production, but also culture, art, customs and values. At the same time, since traditional handicrafts are also produced and operated in cities and exported overseas, this change is a kind of collision process between traditional and modern cultures, rural and urban cultures, local and world cultures.

After the founding of New China, handicraft industry still occupied a large proportion of the national economy. In 1952, the output value of handicraft industry accounted for 21% of the total industrial output value, and in 1954, there were more than 8.9 million people working in handicraft industry. In order to restore the handicraft industry destroyed by the war, more than 3,300 handicraft cooperatives appeared in the country at the end of 1952, and the number of handicraft workers participating in them reached 250,000. In 1953, the state began to carry out socialist transformation of handicrafts, the organizational form from handicraft production groups,

[3] Fei, X.T. (2001). *The Economy of Jiangcun*, translated by Dai, K.J. Beijing: The Commercial Press, p20.

[4] Beck, U., & Giddens, A., & Lash, S. (2001). *Reflexive Modernization Politics, Tradition and Aesthetics in the Modern Social Order*, p72.

handicraft supply and marketing production to handicraft production cooperatives, starting from supply and marketing to implement production transformation. At the end of 1954, more than 41,000 handicraft production cooperatives were established nationwide, with 1.21 million participants. By 1956, the number of handicraft cooperatives reached about 100,000, with 5.09 million participants, accounting for 92.2% ^[5] of the number of handicraft workers nationwide. However, in this short process, special handicrafts and some crafts were affected, resulting in the lack of successors and the near loss of these handicraft techniques.

The 1990s was a critical period in China's economic transformation; in the early 1990s, due to the turmoil in the international market and the reform of the domestic economic system in the transition to a market economy, a number of large-scale, collectively owned arts and crafts enterprises began to face difficulties and gradually disintegrated or closed down, with the majority of the workers leaving the enterprises to seek self-employment. At the same time, the market economy and market demand have developed, forming a new opportunity for the development of applied arts. A small number of master craftsmen with excellent skills have begun to set up individual studios, and technicians and laid-off workers have opened small workshops or individual production enterprises, beginning the road of production transformation in the face of market demand.

In fact, in the field of traditional handicraft R&D and creation, masters of arts and crafts at all levels are still the main body of creation. According to the statistics in 2006, there were 365 people with the title of Chinese Arts and Crafts Masters, among whom 267 were still engaged in creation, 219 were still teaching apprentices, 95 were receiving government allowances, and 73 had passed away; there were 1,479 people with the title of Provincial Arts and Crafts Masters and 41 Provincial Folk Arts and Crafts Masters. From the overall situation of the first five Chinese Arts and Crafts Masters, the age structure is generally above 55 years old, and those with college education or above account for about 40% ^[6].

In the process of transformation of Chinese traditional handicrafts, due to the lack of experience in the integration of research , production, marketing and consumption of all aspects of the transformation and development, many production enterprises have long relied on traditional styles and techniques for production, so that the research and development link is out of touch with the development of the times, resulting in the research and development of masters in the arts and crafts of creation is essentially expressed in the "skills" performance-oriented creative tendency. Especially in the special arts and crafts industry, the creation of the subject matter is relatively obsolete, to highlight the skills and materials of the pile as the characteristics of the creative concept, so that this part of the handicrafts did not better fulfill the "practical, economic, beautiful" integration of modern life.

However, on August 23, 2010, the first draft of the "Intangible Cultural Heritage Law" was submitted to the State to take measures to identify, record and build archives to preserve intangible

^[5] Gu, L.S., (1990,01). Theory and Practice of the Reform of China's Handicraft Industry. Research on the History of the Communist Party of China.

^[6] China Arts and Crafts Association, National Arts and Crafts Industry Census Work Office. China Gongmei Report - National Census of the Arts and Crafts Industry Special Collection.

cultural heritage, and to take measures to preserve intangible cultural heritage with historical, literary, artistic and scientific value, such as transmission and dissemination. Traditional handicrafts as a kind of intangible cultural heritage ushered in a new spring. With the inclusion of "revitalizing traditional crafts" into the 13th Five-Year Plan for the first time in 2015, the "Revitalization Plan for Chinese Traditional Crafts" promulgated in March 2017 points out that "traditional crafts are creative manual labor and personalized production according to the material, with characteristics that cannot be replaced by industrialized production." The determination and action to revitalize traditional handicrafts have been reconfirmed. Under the strong support of national policies, different types of traditional handicrafts, their organizational forms and marketing modes have also changed. By summarizing the types of traditional handicrafts and analyzing typical case studies of historical changes in different regions, this subsection has sorted out the main reconstruction modes of traditional handicrafts, which will be discussed in depth in subsection 3.2.

3.1.1 Types of traditional handicraft

Traditional Chinese handicraft production as a natural economy combining family agriculture and handicrafts, was the main economic activity of ancient Chinese society and the main source of social wealth. In the process of handicraft production, simple hand tools are the technical means of producing, and the organization of production based on the theme of family or clan makes bloodline and clanship the guarantee to solidify this form of organization. And a closed system of natural economy combining agriculture and handicrafts was formed, with the individual family as the basic unit.

Due to the wide range and variety of "traditional handicraft", Muneyoshi Yanagi ^[7] divides crafts into manual crafts and mechanical crafts, which are further divided into aristocratic crafts, personal crafts and popular crafts. (Table 1):

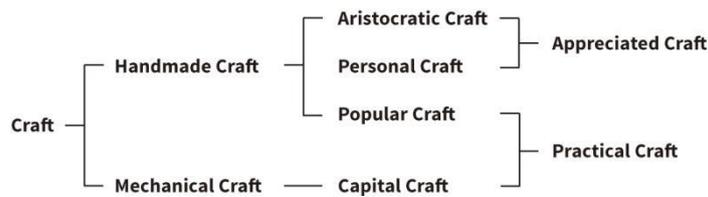


Table 1. Classification of craft

In China, in addition to the court craftsmanship representing the aristocracy, there is also a large class of literati and scholars, whose lifestyle and cultural concepts have also played a huge role in Chinese society. Therefore, in China, the influence of the literati and scholars has led to the formation of a unique literati craft. Due to the multi-ethnic character of China, each ethnic group has its own unique way of production and life, forming their own craft traditions, and minority crafts also form an important part of traditional Chinese crafts. If these factors are taken into

^[7] Yanagi Muneyoshi, was a Japanese art critic, philosopher, and founder of the mingei(folk craft) movement in Japan in the late 1920s and 1930s.

account, traditional Chinese crafts and craft culture are divided into four parts: folk craft culture, palace craft culture, literati craft culture, and minority craft culture

(1) Folk Crafts

Folk crafts are crafts created and handed down by the general public to adapt to and satisfy the needs of life and aesthetic requirements, reflecting the production life, thoughts and feelings, aesthetic concepts and artistic interests of the people. Folk crafts are basically handmade, using simple tools and small-scale production. Its creation and use of the main body is mainly the majority of the middle and lower classes of the people, mainly farmers, herders, and part of the artisans, of which farmers are the main body. Therefore, folk crafts are characterized by a strong popularity, popularity, popularity and vernacular nature.

There are many kinds of Chinese folk crafts, involving all aspects of people's life, including clothing, food, housing, transportation and use. According to function, they can be divided into two categories: practical and aesthetic. The practical category includes furniture, tableware, ceramics, metalware, etc., while the aesthetic category includes jewelry, New Year's paintings, jade carvings and kites; According to the technology, there are weaving, lacquer painting, carving, tie-dyeing, smelting and forging; According to materials, there are bamboo, wood, stone, leather, metal, clay, ceramics, paper and so on. According to the region, there are southern and northern, urban and rural. The richness and diversity of types are the most important characteristics of folk crafts.

The real needs of human beings are directly expressed in daily life, and folk crafts are created in daily life and serve daily life. The function and purpose of folk crafts are created to satisfy the real needs of ordinary people in their daily life, so the practicality becomes one of its main characteristics. Folk craft is a healthy craft with strong vitality, and due to the life and practicality, it also produces a rough and free aesthetic style. Muneyoshi Yanagi once said, "I see the great goal of beauty as nothing, commonplace, healthy, and simple, and there is no nature of beauty more exact than the above^[8]. Folk crafts aim to pursue a beautiful life, express people's expectations for a better life, and express their inner aspirations and prayers, which leads to a strong emotional embodiment of folk crafts.

The craftsmanship of folk crafts is mainly characterized by the naturalness of the material, production, artistic shape and function. The materials used in the production often have natural qualities, and in the process of creation, the texture, texture and luster of the materials themselves are reflected, showing the skills, wisdom, experience and emotions of the craftsmen. Therefore, folk arts and crafts are often closely related to people's lives and hearts.

Folk crafts are also characterized by strong creativity, producing numerous original skills and craft products that are closely linked to the lives of the people. Take bamboo handicraft as an example, China has abundant bamboo resources, and the working people living in the bamboo forest area naturally chose bamboo as the material for daily utensils. Through bamboo weaving, bamboo

^[8] Muneyoshi Yanagi. (2011). *Craft Culture*. Craft Culture (A classic work by Yanagi, the father of Japanese folk art. It traces the loss of craft traditions and explores the spiritual origin and future vision of craft aesthetics.

carving and other crafts, bamboo furniture, daily utensils, bamboo stationery and many other bamboo products are produced. [Figure 2](#). Also integrated into the specific expression of bamboo crafts are the flowers, birds, fish and insects of life, and mythological stories, producing a rich bamboo culture. Therefore, once the techniques lose their creativity in the sense of life, they are also far away from the cultural significance of traditional folk handicrafts.



Figure 2. Bamboo carving of a brush holder with eighteen Buddhist monks, Zhou Zhiyan , Qing dynasty (1685)

Based on labor and life, folk crafts as the source of crafts, have created numerous craft forms, whether court crafts or literati crafts, are improved and sublimated on the basis of folk crafts. For example, the creation and appreciation of porcelain also originated from folk craft, and then began to enter the vision of the literati. Especially after the Song Dynasty, the design and appreciation of dry porcelain became an important part of literati culture, which led to the emergence of China's unique porcelain art. Whether it is palace craft, literati craft or folk craft, it is all tradition, and as the foundation of the traditional folk craft is the main body, the mainstream and the fundamental in this tradition.

(2) Palace Craft

Ancient Chinese society under the feudal centralized system, centered on the emperor, practiced the political system of imperial autocracy. In order to show the imperial power and satisfy the enjoyment of the emperor and the nobles, the court crafts by virtue of superior political power and economic conditions, possession of a variety of valuable materials, in processing and decoration is extremely luxurious and exquisite. Whether its decorative modeling, quality, cultural symbolism are very vividly embodied the power of the court rulers and the majesty of the feudal rites.

Since it was for the palace royal family, the craft art had many unique features. First of all, the production institutions of palace crafts were huge. In order to ensure the supply of palace materials and to facilitate the direct control and management of the emperor, palace crafts were produced by specialized institutions, which were composed of three main parts. First of all, there were the royal

inner court production institutions, which were often directly set up within the palace or near the palace, undertaking the production of most of the royal crafts. In ancient China, the "imperial system" was the core, and every dynasty had an inner court production organization. The other part of the production was done by the emperor's local institutions, such as the Jiangnan Three Weavers in Jiangnan and the Imperial Kiln Factory in Jingdezhen, which provided silk and porcelain products for the emperor respectively. In addition to specialized institutions, there was also a large group of artisans dedicated to the imperial service, most of these artisans are the most outstanding artisans around the world, selected by local officials into the palace to serve the imperial family, only the Qing dynasty, for example, the size of the Interior Affairs Office, its artisans amounted to 595 ^[9]. The best artisans of all nationalities and regions brought the highest level of individual skills, and the convergence of these highest skills representing an era and a place made up the palace skills.

Palace crafts are designed to meet the daily needs of the imperial family and art appreciation, and are characterized by the need to match the identity and status of the royal family and to reflect the supreme power and majesty of the emperor everywhere. For example, in feudal society, the image of the dragon was majestic and grave, and was a symbol of imperial power, so the dragon became the main decorative symbol among the palace artifacts. In addition to reflecting imperial power in specific shapes and decorations, palace crafts had to cater to the aesthetic ideals of the palace nobility, which were the physical form of the ideology and value taste of the feudal ruling class, a combination of power, wealth and honor. Enamel, for example, was the most popular decoration for the Ming and Qing emperors, with its noble and flamboyant craftsmanship and colors, and the aura of kingship. During the Qing Dynasty, Kangxi introduced enamel painting technology from the West, and Yongzheng Emperor was so fond of it that he not only participated in the selection of colors and design of patterns, but even set up the imperial kiln for firing enamel on porcelain outside the "Imperial Palace". With the support of the emperor, a large number of traditional crafts were developed, and the techniques and products reached the highest level of excellence.

[Figure 3.](#)

^[9] Zhang, X.Y. (2016,12). Techniques and Imperial Power: a Study on the History of the Imperial Workshops. University of Science and Technology Beijing.



Figure 3. Empress Xiaojing "Three Dragons and Two Phoenixes" Crown (Ming Dynasty) 14th - 17th century

Palace crafts were built on the foundation of the support of the feudal dynasty. With the collapse of the Qing dynasty in 1911 and the disintegration of the imperial system. A part of the court crafts, which were extremely consumable and complicated to produce, went into extinction, while a part of them, such as embroidery, kesi ^[10], jade carving, ivory carving, cloisonné, and filigree inlay, went from the court to the folk, to be inherited and carried forward. Although the palace craft reflects the ruler's thoughts and feelings, on the other hand, they are the creation of malefactors, permeated with the aesthetic consciousness of laborers and the creative wisdom of the working people, and have left us valuable artistic wealth and models of superior skills.

(3) Literati Craft

The literati is a unique cultural group in Chinese society, from Qu Yuan, Sima Qian, Tao Yuanming, Su Shi to Cao Xueqin and Lu Xun, the literati, as a cultural elite group in Chinese society, have a unique view of life and values, and thus formed a unique way of life, and this culture of the literati has had a far-reaching impact on all levels of life in Chinese society. They pay attention to personal taste has a unique judgment on the function and aesthetics of artifacts, at the same time will be involved in the daily life of ink, paper, ink and ink, the production of daily furniture, around the artifacts are refined, artistic.

Literati aesthetics is related to the social and cultural background. After the Tang Dynasty,

^[10] Weaving done in fine silks and gold thread by the tapestry method.

Chinese culture underwent major changes, with the fusion of Confucianism, Buddhism and Taoism resulting in Song and Ming ethics. The literati pursued inner enlightenment, the tacit understanding of coexistence with nature, and moral and inner cultivation, and integrated these pursuits into their daily lives, which constituted the aesthetic style and interest of the literati. Especially in the Song Dynasty, this pursuit became more common. People in the Song Dynasty respected porcelain, especially "celadon", whose warmth and moistness were regarded as a symbol of noble quality.

Literati before the Ming Dynasty respected antiques, they actively innovate, the pursuit of unique skills, in the traditional craft on top of the innovation of a lot of things, such as Yongle period of tick red, Xuande period of copper, Chenghua period of porcelain. Among them, the Ming literati's participation in the study of furniture making was very enthusiastic, and the Ming furniture can be called the materialized representative of the Ming literati scholars. They put their own ideas, fused into the furniture design, and even personally made furniture. The Ming Dynasty furniture has the simplicity of containing a dignified and elegant, upright, soaked in the clear and refined literati quality. The material became an important carrier of the spirit, and the aesthetics also embodied the literati's pleasure, both personal and group, in the same cultural sentiment to get the aesthetic resonance. [Figure 4.](#) [Figure 5.](#)



Figure 4. Porcelain with ivory glaze "spring Vase" (Ding ware) 10th - 11th century



Figure 5. Yellow rosewood four-headed official chair (Ming Dynasty) 14th - 17th century

In today's society, the ancient literati's aesthetic pursuit and interest led a fashion, which is generated and developed on the basis of Chinese culture, connoisseurs, collectors and even ordinary people are under the influence of the literati's aesthetic interest, there is a corresponding standard of measurement, and this standard with the improvement of the quality of life has become a universal pursuit of life. Different from the complexity and splendor of palace crafts and the simplicity and naturalness of folk crafts, the literati integrated their feelings into the design of handicrafts, which is the most unique among the traditional Chinese crafts and the most representative of the embodiment of oriental culture, and this feeling has also deeply influenced

the design of crafts in Japan and South Korea. The concept of "artistic life" in the craft of literati is more accepted and respected by the contemporary people, and the influence of their craft idea is getting bigger and bigger, which has the tendency to become the mainstream of craft idea in the contemporary society.

(4) Minority Craft

"Ethnic minority crafts are handicrafts created independently by various ethnic minorities in the course of their long-term historical development to meet the needs of life, using locally available materials, combining with the aesthetic orientation of their own ethnicity, and utilizing production techniques with ethnic characteristics that can express the characteristic social culture of their own ethnicity and a strong ethnic flavor. They are both a craft technology and a cohesion and symbol of social and cultural values." ^[11] The sources and backgrounds of traditional cultures of China's ethnic minorities are very complex, with a diversity of economic and cultural types. Cultural diversity has accomplished the crafts of various ethnic groups at various stages of history, forming a rich cultural form of traditional crafts.

As ethnic groups are historically formed as a stable community with a common language, common defense, common economic life and common cultural and psychological qualities. Therefore, different ethnic groups have different ways of production and life, which leads to a lot of differences in materials, design and craftsmanship of their traditional crafts. "The traditional crafts hold the thoughts and feelings of the people of various nationalities and reflect their cultural and psychological structure." ^[12] It is a comprehensive reflection of national thoughts and feelings, aesthetic ways and religious beliefs.

Divided by several larger ethnic groups and their crafts, there are Tibetan traditional crafts, Mongolian traditional crafts, Uyghur traditional crafts, Zhuang traditional crafts, Tujia traditional crafts, Li traditional crafts, Miao traditional crafts and so on. The content of each traditional craft is also very different. For example, the Tujia family lives mainly in the mountainous areas and produces a lot of bamboo, so its bamboo weaving craft, bamboo shrivel, bamboo basket, baskets and other bamboo crafts have beautiful shapes, delicate patterns and practical beauty. Its weaving and embroidery have a long history and are unique, among which the brocade called "Sirankapu" ^[13] (Figure 6, Figure 7) is the most splendid artistic treasure of the Tujia folk craft. With hemp and cotton yarn as warp threads and colorful thick silk threads and velvet threads as weft threads, Sirankapu has contrasting colors and diverse and gorgeous compositions. According to the survey, there are more than 120 kinds of traditional patterns of the Tujia family in western Hunan alone. Sirankapu reflects the Tujia family's understanding of nature and mainly adopts symbolic techniques in spiritual connotation and picture expression. It is a necessity in the life of the Tujia family, and the girls of the Tujia family have to learn the skill of brocade weaving from their elders since they are young, as a dowry in the future, and as a backpack, skirt cover and bedding for their children. As a national craft handed down from generation to generation, Sirankapu is

^[11] Li,Y. (2014). Study on the Chinese Communist Party and the Protection and Development of Traditional Culture of Ethnic Minorities. Beijing: People's Publishing House, p693.

^[12] Li,X.C.,& Zhu,X. (2005). Yunnan Ethnic Folk Craft Technology. Beijing: China Book Press.

^[13] "Sirankapu" is a kind of Tujia brocade. In the Tujia language, "Siran" means "cover" and "Kapu" means "flower".

inseparable from the living customs of the Tujia family, preserving a very rich cultural activity and cultural information of the nation, and reflecting the cultural characteristics of the Tujia family such as their life style, religious beliefs and cultural customs.



Figure 6. "SiranKapu" - Brocade making

Under the specific natural environment and social culture, people of various ethnic groups take materials locally and make craft products according to local natural resources. The rich natural resources have created colorful crafts and cultures of various ethnic groups, and materials such as wood, stone and mud are given vitality and feelings by craftsmen. The black pottery and cow bone jewelry of the Tibetans, the fish skin clothes of the Herzhe, the Mongolian yurts and so on. The majority of ethnic minority crafts are used in daily life, or aesthetic skills are attached to daily necessities. Knives are a typical example. The Mongolian knives of the northern Mongols are both table knives for eating meat and weapons for carrying around, so the Mongolian people will use the best craftsmanship and decoration to make a knife.



Figure 7. "SiranKapu" - Brocade pattern

There is also a phenomenon of mutual influence and interpenetration of ethnic minority crafts, with different ethnic groups learning and borrowing from each other's traditional crafts. In terms of technology, Yunnan, Tibet, Xinjiang and other ethnic minority areas still retain the primitive papermaking process, and these techniques are mainly influenced by traditional Chinese papermaking techniques, which ethnic minorities have modified to a certain extent in accordance with the characteristics of the local natural environment and produce. In terms of design style and content, the Tibetans are influenced by Tibetan Buddhism, and the crafts they produce have Buddhist elements. And the Uyghurs of Xinjiang whose crafts are mainly Islamic in style. In addition to the influence of strong culture, there are also internal exchanges and influences between ethnic minorities, such as Zhuang, Yao and Yi, although they are different ethnic groups, but they all produce and use copper drums, and use copper drums in major festivals, thus forming a copper drum cultural circle, with mutual exchanges and influences.

(5) Summary

Whether it is the simplicity and practicality of folk crafts, the splendor and opulence of court crafts, the subtlety and elegance of literati crafts, or the richness and colorfulness of ethnic crafts, there is no difference between the high and low, and all of them are an important part of Chinese craft culture. From the perspective of cultural anthropology, each type of traditional craft satisfies the unique material and spiritual needs of a certain cultural group. In the face of the cultural and aesthetic differences shown by different cultural groups in the acceptance of traditional crafts, it is necessary to adopt a multicultural stance in order to seek common ground while reserving differences and to prosper the cultural situation of traditional crafts.

3.1.2 Craft changes in different regions

3.1.2.1 North-central region:

"Wicker weaving" as an example in Linshu

The formation of wicker weaving handicrafts is related to multiple factors such as the function of weaving handicrafts, the way of using them, the production skills, the aesthetic characteristics, folk customs, etc., and it is also determined by the social soil in which it is rooted, which is closely related to the social characteristics of the era in which it is located, the user's way of life, and the values of the production and consumption system. As the pattern is influenced by the social environment of a particular era, the pattern of wicker weaving handicrafts will be different with the change of the times. As an important representative of Chinese wicker weaving handicraft, the transformation of its pattern is an important turning point in the development of Chinese wicker weaving handicraft. (Figure 8)



Figure 8. Wicker weaving crafts in Linshu County, Shandong province, China

(1) Geomorphological Features

Linshu County has a continental climate in the warm temperate monsoon region. It is well-lit and has four distinct seasons. Winter is cold and rain and snow are rare; spring is warm and dry and windy; summer is hot and humid with abundant rainfall; autumn is cool with a large temperature difference between day and night. The average annual temperature is around 13°C and the average annual precipitation is around 850mm. There are four types of soils in Linshu County. One is brown loam, which is mainly distributed in the low hill areas and accounts for 78.9% of the available area. The second is the tidal soil, which is mainly distributed on the plains on both sides of the Shushi River, accounting for 8.64%. The third is sandy ginger black soil, accounting for 7.98%. The fourth is brown soil, accounting for 4.42% .

(2) Historical changes

The formation of the modern wicker weaving craft pattern has gone through several different stages, namely the preparation period, the initial stage, the forming period and the improvement period. (Figure 9)

The Development of Organizational Patterns and Styling Changes of "Wicker Weaving" in Linshu County	Period	Year	Organization model	Styling	Policy
	Preparation Period	1953	Willow Cooperative (Liuzhuang Village, Baishuang Town, Linshu County) ↓ Incorporation Wicker Weaving Farmers	Traditional styling model  wickerwork skips dustpans colanders	"Unified Purchase and Sale" unified management unified production unified sales
	Initial Period	1969 ↓ 1974	Linshu County Wicker Weaving Factory ↔ Cooperation China Import & Export Corporation Shandong Branch	Traditional styling model ↓ Transition Modern styling model (Wicker weaving export business)	"Unified Purchase and Sale" unified management unified production unified sales
	Forming Period	1978 ↓ 1980	Linshu County Wicker Weaving Factory + Linshu County Arts and Crafts Factory ↓ Name change Linshu County Arts and Crafts Company (arts and crafts export business) ↓ Cooperation with Nishida Corporation of Japan + Name change Lu Linxi Arts and Crafts Company	Modern styling model (Wicker weaving export business) For export product color example:  Japan Wicker primary colors Korea Pure white Europe and America Dark brown	"Unified Purchase and Sale" unified management unified production unified sales
	Improvement period	1999 2003 2009	Lu Linxi Arts and Crafts Company ↑ Separate Individual wicker weaving companies	Modern styling model Wicker weaving import and export busines	Opening up the right of self-supporting export (National policy change)
			Linshu was nationally named as the "Hometown of Willow" Linshu was awarded "Capital of Chinese Willow Weaving" by China Arts and Crafts Association Listed in the Intangible Cultural Heritage of Shandong Province Established China Willow Weaving Culture and Art Museum		

Figure 9. The Development of Organization and Shape Changes of "Wicker Weaving" in Linshu County

< **Preparation Period** >

In 1953, the Willow Cooperative was established in Liuzhuang Village, Baimao Town, Linshu County, and implemented the policy of unified purchase and sale. During the period of the cooperative, many wicker weaving farmers were absorbed into the willow cooperative, carrying out unified production and sales. The products produced at this stage were still the traditional willow skips, dustpans, colanders, etc. Farmers were organized into unified production to concentrate the labor force and form a certain scale of production.

< **Initial period** >

In 1969, the Willow Industry Cooperative built a factory building in Baimao Town, which was later moved to Baimao Commune and renamed Linshu County Wicker Factory. At the early stage of the factory, the production of traditional wicker weaving utensils was still continued. In 1974, Linshu factory cooperated with Shandong Province Branch of China Import and Export Corporation and started the export business of wicker weaving; the first wicker weaving product exported at that time was a paper basket, No. W101-1. This stage was the initial stage of the formation of the modern wicker craft pattern. As wicker weaving products were exported to overseas markets, the products had to meet the needs of foreign customers. At that time, the

lifestyles of the western countries were the models of modern lifestyles, and their demand for functionality and styling of wicker weaving products led to the transformation of Linshu's wickerwork handicraft pattern from traditional to modern. This stage is the exploratory stage of the formation of the modern style of Linshu wickerwork handicrafts.

< Forming Period >

In 1978, Linshu County Wicker Factory and Linmu County Arts and Crafts Factory merged to form Linmu County Arts and Crafts Company, specializing in arts and crafts export business. In 1980, due to the largest export volume with the Japanese client, Nishida Corporation, Linshu County Arts and Crafts Company was renamed as Lu Linxi Arts and Crafts Company, specializing in supplying Nishida Corporation. Due to the deepening cooperation with importing countries, Linshu County Arts and Crafts Company was able to grasp the market demand more accurately and its product style became clearer. Foreign customers were more specific in their product requirements and sometimes provided product designs to determine the style of their wickerwork products. These factors accelerated the formation of Linshu's modern wickerwork handicraft pattern. During this period of time, Linshu's modern wickerwork handicrafts matured. The wickerwork handicrafts were adapted to the functional and stylistic requirements of modern lifestyles in foreign markets, and showed more stable stylistic features and styles.

< Improvement period >

In 1999, many individual wickerwork enterprises registered for the right to self-management of exports, separate from foreign trade companies and arts and crafts companies, can directly and independently undertake foreign trade orders. These enterprises interacted more frequently with foreign customers, and the annual Canton Fair was an important channel for them to receive international orders. They had a deeper understanding of the needs of foreign customers, and played a more active and proactive role in product innovation. During this period, Linshu's modern wicker weaving crafts developed rapidly, and a large number of modern wickerwork products with new shapes, materials and craftsmanship characteristics appeared, which greatly enriched the content of Linshu's modern wicker weaving crafts. With the frequent export trade activities, the products produced by modern wickerwork enterprises have become quite mature in terms of market orientation. The investigation and research of malefactors on the usage habits and aesthetic styles of consumers in different countries and regions, as well as the targeted improvement of the production process, have resulted in the emergence of several fixed modelling styles in the modern wickerwork handicrafts. For example, the color treatment of the wickerwork utensils exported to Japan mostly with primary colors, exported to South Korea mostly with heavy white (pure white), exported to Europe and the United States are more dark brown and brown system.

At the same time, by the influence of foreign lifestyles, the domestic market demand for modern wickerwork handicraft products is gradually increasing, and its product style is influenced by Japan, Korea, Europe and the United States and other countries. The sales of wickerwork in the domestic market are mainly in the two ways of brick-and-mortar sales and network sales. The product shape is rich, product quality requirements are high, and gradually formed a more mature and constantly updated type system.

3.1.2.2 Central and eastern regions:

"Gu embroidery - embroidery painting" as an example in the Jiangnan

The pinnacle of embroidery painting of all times - "Gu embroidery" was born in Songjiang area in late Ming Dynasty, which profoundly influenced the development of Su embroidery in Ming and Qing Dynasty and even the whole Chinese traditional embroidery. The culmination of embroidery and painting and its theoretical research all came from the Jiangnan area, which is related to the close connection between "embroidery painting" ^[14], i.e. embroidery and painting, as well as the tradition of literati painting in the Jiangnan area. From the perspective of art history research, the study of embroidery painting is the most artistically valuable and culturally significant part of the study of traditional embroidery in Jiangnan, China. (Figure 10)

After the "Gu Embroidery", the development of the traditional embroidery of Jiangnan China, represented by the "Su Embroidery" ^[15], had a rough time. The impact of the commodity economy and the war were undoubtedly fatal to the quality of the Su Embroidery, and the tradition of the embroidery in the rural areas around Suzhou was once in a low ebb. The Suzhou Embroidery Research Institute played an important role in promoting the development of Suzhou embroidery in the 1950s and 1960s, but was acquired by a private company after its state-owned system failed to adapt to the progress of the times. As China's reform and opening up brought opportunities, the rural areas became more and more vibrant and dynamic, and the towns around Suzhou revived their embroidery traditions, with "Zhenhu Town" being a leader after more than 20 years of competition in the market.



Figure 10. Embroidery Painting, Institute of Su Embroidery

"Plum Blossom and Mountain Birds" from Emperor Huizong of Song Dynasty

^[14] The term "embroidery painting" refers to embroidery that is made to look like a painting with a literati flavor, pursuing the "realm of painting", emphasizing the meaning of painting, and refers to embroidery "painting" with silk thread instead of brush.

^[15] Su embroidery, a general term for hand-made silk embroideries centered in Suzhou, China, emphasizing local characteristics.

(1) Humanistic charm

Embroidery is a unique branch of traditional Chinese handicrafts that is exclusively for women. Its transmission does not only take place in the workshop, as in other traditional handicrafts, where masters teach their apprentices, but more commonly in the family, where it is passed on from the elder women to the younger girls, mostly from mothers and grandmothers to their daughters and granddaughters. While this line of transmission maintains a stable creative state of embroidery, it also limits innovation and development.

Traditional folk embroidery drafts are mostly patterns of flowers and birds, so they are also called "patterns", which mainly address the positioning of the pattern on the base material, the size and proportion, and the outline of the needle. In the old days, folk embroidery patterns originated from paper-cutting, such as mandarin ducks playing in the water and magpies in spring, which had auspicious meanings and were widely circulated. When embroidery became a profession, the process was gradually divided into two parts: the pattern was sketched out by a full-time painter, and the embroidery was done by a full-time embroiderer. The division of labor between embroiderers and draft painters in the workshop was very strict, and a single powder book could be used repeatedly by several embroiderers, who were only skilled workers who worked according to the draft. Therefore, the official embroidery institute and the "embroidery and painting section" of the Northern Song court, which supposedly gathered more than 300 embroiderers, had no freedom to paint at all, but was merely an "embroidery machine" for the painters to outline the powder books, and the content of the paintings was only in the hands of Emperor Huizong of Song and a few of the school's painters. The entire embroidery institute was essentially an "embroidery factory".

However, "Gu embroidery" led the embroidery painting out of this "painting, embroidery separation" dilemma, with "copy embroidery" into another level of art. Because if the precious ancient paintings for the manuscript, is never allowed to prick holes, powder or scratches, can only be "facsimile" for embroidery. The so-called facsimile, that is, with paper covered in the original painting, with the help of light and transparency of the paper, the same size in accordance with the same kind of sketches with the original draft. Mimicry is an important means for painters to study their predecessors and learn from the ancients, and the process of copying is the process of reading and analyzing the ancient paintings in silence, from the whole to the details, from the composition to the tone, and a chapped rubbing taste of the original interest. Because of the "Gu embroidery" masters of the family background and artistic training, not only be able to access to the famous paintings, but also has a solid foundation in drawing, so as to copy and embroider both can be mastered.

Since modern times, the development of Western modern and contemporary art has entered a new period. Among them, the modern fiber art movement represented by soft sculpture has transformed the material expression of silk, hemp and wool into a new artistic language, and the traditional methods of weaving, knitting, knotting, stitching and tying have also been developing more and more in the direction of large-scale and heavy-duty. The traditional handicraft of embroidery also tends to be large-scale, heavy-duty, embossed and conceptualized, and has already entered the ranks of experimental and avant-garde art.

At the same time, women's art in the West rose with the women's movement. The women's art movement started from women's spiritual liberation and put forward the revolutionary concepts of women's self-rescue, self-orientation and self-subversion. In this movement, artistic means with strong female characteristics such as knitting, weaving, and stitching were involved, and the traditional gesture of the technique was used to promote the conceptualization of contemporary change. In this way, embroidery serves as both a denunciation tool for women's resistance to male power and an emancipation platform for women's self-questioning, and becomes the most powerful weaponry to break through the traditional performance of techniques.

Therefore, no matter from the perspective of the change of modern fiber art or from the perspective of the rise of women's art, fiber art is getting more and more attention, and many modern and contemporary artists break out from the traditional posture, and from the perspective of material technique and women's self-awareness, they form the power of innovation, and push the embroidery and other "women's red skills" into a more diversified world. The traditional embroidery painting has also made a breakthrough here, moving from embroidery bandage to space, from plane to three-dimensional, and extending to embroidery sculpture, embroidery placement, and embroidery art. ^[16]

This time, embroidery was reborn because of women, and women were liberated by embroidery.

(2) Historical changes (Figure 11)

"Gu embroidery" appeared in the late Ming Dynasty, the commodity economy has become increasingly deep into the countryside, the traditional silk weaving economy and the emerging cotton textile economy of commercialization, led to the specialization of peasant cottage industry and market-oriented. Embroidery industry is also the case, embroidery workshop more issued orders to the family individual, home-based rural women became the main force of embroidery production. In the middle of the Qing Dynasty, "Gu embroidery" gradually began to be produced in workshops, and the embroiderers developed from women to the general public and gradually there were male embroiderers, and the forms changed from scrolls, booklets, and screens to costumes, and fully entered the mode of commercialization, in which the embroidered products with practical functions were increasing and occupying a predominant position.

As the family technique is the main form of folk embroidery, millions of embroiderers in rural areas who can neither read nor paint have become the main force. On the one hand, this situation has increased the popularity of "Gu Embroidery" and promoted the brand of "Gu Embroidery"; but on the other hand, it is this blind popularization that makes "Gu Embroidery" inevitably go from elegant to gaudy. At the same time, there are also different embroidery power in the rise, a group of inheritance of the embroidery masters in the turning point of the times appear one after another. The first was Shen Shou and her creation of "simulated embroidery", followed by the emergence of women's schools ^[17] in the south of the Jiangnan area, cultivating a new generation

^[16] Shi, H., & Shan, Z. (2007). Research on Modern Fiber Art. *New Art*, No. 4, p50-62.

^[17] At the invitation of Zhang Qian, Shen Shou presided over the "Women's Worker Training Center" in Nantong, Jiangsu, and after Shen Shou, there were Jiang Miaozen, Pan Zhiyu, Ding Weiqi, Zhang Yuanzhi, Guo Tongxian, etc. in Suzhou, who successively opened Suzhou schools. Song Jinling was hired as an instructor of embroidery at the "Sung Gyun Women's Vocational School" in Songjiang; Yang Shouyu taught at the painting and embroidery

of embroidery and painting masters, such as Yang Shouyu, the founder of "cross-stitch embroidery", and Shen Shou's disciples, such as Song Jinling and Jin Jingfen. At the same time, under the protection and attention of literati, artists and politicians who are good at appreciating cultural relics, paintings and antiques, the art of embroidery and painting was reborn with a new look and aesthetic interest.

The new era had new concepts. The new embroidery women represented by Shen Shou and Yang Shouyu regarded embroidery and painting as an elegant art, and at the same time focused on teaching, promoting embroidery as a tool for students to earn a living after graduation. From a certain point of view, Shen Shou, Yang Shouyu and other people for the development of Jiangnan embroidery and painting brought a new flavor and appearance, but on the other hand, their innovation and reform is highlighted in the technique, the era of the flood of Western learning and gradual development of the East, so they had to suffer from the impact of the Western concepts of fine art, resulting in the "Gu Embroidery" of the literati and the essence of the nature of painting has been ignored, so that their embroidery in the painting of the literati and the essence of the painting has been neglected. As a result, the essence of literati and pictorial nature of "Gu Embroidery" was neglected, which made it impossible for their embroideries to reach the height of "Gu Embroidery" in terms of painting style, which is a kind of regret.

With the drastic changes in the political situation, the change in the type of clothing undoubtedly dealt a fatal blow to the traditional weaving and embroidery industry. With the entry of Western clothing, new fashions replaced the old style, the art of embroidery breaks. Even with the establishment of a group of women's schools represented by the " Song Gyun Women's Vocational School " and the efforts of Shen Shou and others to reform the style of embroidery, as well as the Republic of China's several celebrities and dignitaries who are interested in the protection and continuation of the tradition of " Gu embroidery ", but also can not change the " Gu embroidery " was on the verge of extinction. After many changes, after the Third Plenary Session of the Eleventh Central Committee of the Communist Party of China (CPC) in 1978, Songjiang Crafts Factory rebuilt the "Gu Embroidery" group and officially resumed production. Liang Jinghui was appointed as the first leader of the group, and Shen Shou's disciple, Dai Mingjiao, was invited back to the factory to teach the art of making Song and Yuan masterpieces as pastels combined with embroidery and painting to produce fine and elegant embroidery, which once again caused a sensation in the society.

section of the Danyang Women's Vocational School in Jiangsu, and later became the director of the embroidery section; in addition, there were also the Changzhou Women's Normal School with a class of drawing and handicraft, the embroidery section of the Nantong Women's Normal School, and the Suzhou Women's Vocational School.

Period	Year	Organization model	Styling
Development Period	Mid-Qing Dynasty 1736-1850	Individual family Symbiosis ↔ Composition Workshop production (gradually "men's work" embroidery)	Arts and crafts items (Scrolls, Screen, etc.)  ↓ Costumes
	Late-Qing Dynasty 1851-1911 ↓ Civil War Period	Individual family + Workshop production + Women's Worker Training Center (Women's School)	Increase in practical goods  Birth of "imitation embroidery" representative: Shen Shou "random needle embroidery" representative: Yang Shouyu
	After 1949	Suzhou Embroidery Institute + Songjiang Craft Factory (Gu Embroidery Group)	Work style tends to be influenced by western art concepts
Artistic Discontinuity Period		Song Gyun Women's Vocational School (Embroidery Section)	Impact of Western costumes
Rebirth Period	After 1978	Songjiang Craft Factory (Gu Embroidery Group) Reorganization	 Masterpieces (Song and Yuan dynasty)
Inheritance Period	2006	Songjiang Gu Embroidery Studio	Copy embroidery of famous paintings of Song and Yuan dynasties
	2003 2009	"Gu embroidery" was included in the Chinese National Folk Culture Protection Project "Gu embroidery" was inscribed on the first national intangible cultural heritage list by the State Council with the heritage number VII -17	

Figure 11. The development of Gu's "Embroidery Painting" organization and stylistic changes

In 2006, the cultural department of Songjiang District Government established "Songjiang Gu Embroidery Studio", which is located in copying and embroidering famous paintings of Song and Yuan Dynasties, and Dai Mingjiao's students, the new generation of "Gu Embroidery" masters, represented by Zhu Qinghua, Gao Xiufang, Wu Shuxin, etc., have become the backbone of "Gu Embroidery" inheritance. Among them, Qian Yuefang took the lead in using the personal name seal of "Yuefang Nyuhong", following the model of Han Ximeng's "Han's Nyuhong", which means that today's creators are no longer satisfied with the old mode of production, and have begun to cherish their personal artistic behavior. As a niche art, "Gu embroidery" is transforming into a creative art with the concept of branding.

3.1.2.3 Southwestern region:

"Ancient Handmade Paper" as an example in Jiajiang

Papermaking is a major invention of ancient China, which has contributed greatly to the preservation and dissemination of world culture, as well as to the cultural evolution of human society. Until the 18th century, traditional Chinese papermaking was a world leader, forming a complete system of processes. Under the influence of the Industrial Revolution in Europe, papermaking production gradually moved towards mechanization, and significant changes occurred in terms of fiber raw materials, production methods, tools and equipment, and the characteristics and uses of paper. At the beginning of the 19th century, although China began to

introduce Western machine technology, but the original traditional handmade paper production method is still used in the handmade paper production areas. Despite the primitive tools and equipment of traditional handmade paper, the production efficiency is very low, but some of the quality performance of handmade paper, for mechanical paper can not be replaced and surpassed. (Figure 12)



Figure 12. Handmade bamboo paper

Handmade paper has continued for more than a thousand years, and is known as "the hometown of Shu paper". The origin of its handmade paper-making skills can be traced back to the Tang Dynasty (618 - 907) and even the two Jin Dynasties (220 - 589), and by the end of the Yuan Dynasty and early Qing Dynasty (1644) it was able to make coarse and fine paper. During the Kang and Qian Dynasties of the Qing Dynasty, the paper was designated as "Tribute Paper" by the Imperial Court, and was subsequently designated as "Paper for the Literary Examinations" and "Paper for the Palace", and was exported to the northwest and southwest as well as Hong Kong, Macau, Myanmar and Southeast Asia. In June 2006, "Bamboo Paper Making Technique" was included in the first batch of national intangible cultural heritage list announced by the State Council, and in 2008, the Ministry of Culture of China officially awarded the title of "Township of Chinese Calligraphy and Painting Paper" to the county. Today, there are still more than 1,000 old paper-making workshops in the county, with more than 10,000 papermakers and an annual output of about 3,000 tons of handmade paper, maintaining the most complete traditional papermaking process. (Figure 13)



Figure 13. Handmade bamboo paper manufacturing process

(1) Geographical features

In the area of Jiejiang County, the terrain slopes from northwest to southeast, forming three kinds of landforms of mountains, hills and dams in turn. Jiejiang is located in the subtropical humid climate, monsoon climate is remarkable, four warm seasons, the average annual temperature of 17 °C , abundant rainfall, soil drainage, suitable for the growth of bamboo. Jiejiang County territory, regardless of the mountain plains, ditches along the river, everywhere is a bamboo forest, one of the main symbols of Jiejiang.

The traditional bamboo forest area includes Zhongxing, Ma Village, Ke River, Yingjiang, Yongxing and other townships, the forest area is both the county's raw material base of bamboo and hemp for papermaking, but also the traditional paper production area. According to the 1989 data statistics, there is a piece of bamboo forest 22,000 acres, accounting for 49% of the total area of bamboo forest in the county. In addition, according to the literature provided by the Jiejiang Handmade Paper Museum, the local area used to use various local crops such as rice straw, wheat straw, sorghum stalks, etc. as papermaking fibers to produce different types of paper through the configuration of different ratios. (Figure 14)

The German scholar Jacob Eyferth also suggests that the transmission of the art of hand papermaking in the Jiajiang River relies on "tacit knowledge in practice" (tacit Knowledge). He argues that "many areas of expertise do not depend on writing, which is obvious but often overlooked, and that this knowledge can be acquired despite the near absence of written records. Their knowledge of the craft rarely comes from books or handwritten copies, because another method of accurate knowledge reproduction across time and space has developed in the

artisan community. accurate method of knowledge reproduction across time and space." [18] The "tacit Knowledge in practice" mentioned is a kind of "meaningfulness" and "ineffability". This "tacit" and "enlightenment" is closely related to the "sense of hand" of the subject of the technique, and it is only through long-term practice that one can achieve a state where the mind and body are united. This can be called "the feeling of the hand".



Figure 14. Ancient Paper Making Workshop -Shiyan Village, Macun Town, Jiajiang

(2) Historical changes (Figure 15)

At the beginning of the Qing Dynasty, hand-made paper was already on a considerable scale. In the middle of the Qing dynasty, in 1683, the "Fang Xi Tu Lian" [19] produced by the Jiajiang was designated by the court as "tribute paper", and in 1776, the "Chang Lian Wen Juan" [20] produced by the Jiajiang was designated as the " Chun Wei Juan Zhi" for the imperial examinations. These two types of paper were tributed to the imperial family and the imperial examinations by more than 100,000 pieces each year.

After the 1930s, the paper industry was in unprecedented difficulties due to political turmoil and the impact of mechanism paper. After the July 7 Incident, Anhui Trail County Xuan paper mills were completely shut down, and the war caused a traffic jam, and the source of foreign paper became less and less, making paper supply a major problem. At that time, few paper mills moved inward, only a small number of paper mills such as Longzhang Paper Mill and Jianguo Paper Mill. Because of the turbulent times and limited equipment to carry, production was very limited. In October 1937, the National Government narrow capital of Chongqing, where it became the

[18] Jacob Eyferth. (2010). Craft knowledge between writing and oral culture: An exploration of knowledge relations in paper making in Jiajiang . Translated by Hu,D.W. Journal of Southwest University for Nationalities, Humanities and Social Sciences, p35.

[19] During the Kang-Qian period of the Qing Dynasty, the "Fang Xi Tu Lian" and "Chang Lian Wen Juan" of the paper became "tribute paper" and "paper for examinations", and more than 100,000 pieces of paper were tributed every year for the imperial family and examinations.

political, economic and cultural center of the then anti-Japanese rear, the amount of paper used in Sichuan suddenly increased. More than 200 domestic newspapers, news agencies, the Commercial Press, China Bookstore and more than 40 cultural enterprises are large users of paper, huge demand for paper to make the market paper shortage, Chengdu, Sichuan and Chongqing is "paper as expensive as gold". At the end of 1949, only two or three hundred trough households in the county struggled to maintain papermaking, and the paper industry in the Jiajiang was on the verge of collapse. 1950 early, the people's government made three consecutive loans of 3 billion yuan (old currency, converted into 300,000 yuan of new currency) to support paper production. 1951, the Jiajiang county government set up a special Jiajiang paper committee (i.e., trough household committee) to support the development of handmade paper. 1951 late, the county had At the end of 1951, the county had 4250 households resuming production, 21,000 employees, and 4700 tons of paper production. 1952, the county had 5903 trough households, 27,600 employees, and about 4400 paper troughs. By 1956, the annual output of hand-made paper in Jiajiang had resumed to 5,000 tons.

From 1956 onwards, the paper industry in the Jiajiang fell into the trough, originally by a family production of handmade paper industry transferred to the cooperative operation. This form of production was not suitable for the production of handmade paper in handicraft workshops, and for policy reasons, by 1960, the annual output of hand-made paper in the Jiajiang fell to a historical low, with an annual output of only 400 tons. From 1966 onwards, the bamboo forest, on which the paper industry of Jiajiang, was destroyed on a large scale, fundamentally breaking the supply of raw materials for papermaking, and the output of Jiajiang handmade paper dropped to about 700 tons. 1977 produced only 350 tons of paper, of which only 20 tons of calligraphy and painting paper. For this situation, in 1978, Xinhua News Agency published a report entitled "The production of paper for Chinese painting in the Jiajiang is in a desperate situation" written by the correspondent of the agency in No. 437, which attracted the high attention of the central government. In August of the same year, with the investment and help of the government, the construction of the paper factory was organized. In 1984, the factory was put into production, promoting new technology and new material paper-making process, and engaged in the development and production of high-grade calligraphy and painting paper.

In 1985, in order to further strengthen the leadership of handmade paper production, the paper industry leadership group was set up by the government of Jiajiang County, and in March 1990, "The Constitution of Jiajiang County Paper Industry Federation" was formally established, and in 1991, the name was changed to "National Paper Administration", and in 1992, the name was changed to "Paper Industry General Corporation", and after 1994, the production and sales of Jiajiang paper industry were fully regulated by the market. In June 2006, "Bamboo Paper Making Technique" was included in the first batch of "National Intangible Cultural Heritage List" announced by the State Council, and the successful declaration of national intangible heritage has greatly promoted the development scale of the paper made by Jiajiang.

Development of the organizational model and stylistic changes of "Bamboo Paper" in Jiajiang County	Period	Year	Organization model	Styling		
	Development Period	1683 ~ 1776	Individual family + Workshop production	Tribute paper + Traditional paper		
		↓	1919	Individual family + Workshop production + Persuasion Association (Bureau) (The first government-run paper association) + Paper Promotion Association Paper Manufacturers' Association (Private-run paper association)	Traditional paper (More than 50 types)	
					Size	large paper + small paper
					Color	white paper + dyed paper
					Uses	Cultural paper
	Superstitious paper	 Burning				
	Blank paper	 Make blank paper				
		1937		Other paper	 Daily use	
	Stasis period	1951	Jiajiang paper production committee	Redefining paper specifications		
		1956	Paper-making cooperative (failed)	New specification bamboo paper		
		1966	Paper-making cooperative (failed) ↓ Separate Individual family + Workshop production	Double-layer Chinese painting paper	198 x 104 Cm	
				White Chinese painting paper	72 x 146 Cm	
				Natural color Chinese painting paper	97 x 60 Cm (Half square meter)	
				Pink Chinese painting paper	87 x 54 Cm (Half square meter)	
Water Resistant Chinese Painting Paper (Glue Sizing Paper)						
Rebirth period	1984	Individual family + Workshop production + Jiajiang Chinese Painting Paper Factory	Craft	 Hemp paper	 Long-fiber paper	
			Works	 Poetry Paper	 Blank scrolls	
	1990	Paper Joint Association	Traditional paper + New type paper			
	1991	National Paper Board				
	1992	Paper General Corporation (Name change)				
Inheritance Period	2006	Bamboo paper making technique was listed in the first batch of national intangible cultural heritage, heritage number VIII -71				

Figure 15. Development of the organization and stylistic changes of "Bamboo Paper" in Jiajiang County

3.1.2.4. Northwestern region:

"Antique Blanket" as an example from Alashan, Inner Mongolia Autonomous Region

As an ancient handmade art, the knotted carpet itself has practical value, collection value and aesthetic value. Its rich design and pattern combination is a visual language with functional, symbolic meaning and aesthetic value. Hand-knotted carpets (planted carpets) are called Oriental handmade carpets in the West, mainly including Persian carpets, Turkish carpets, Afghan carpets, Indian and Pakistani carpets, Turkmen carpets, Caucasian carpets and Chinese carpets.

Chinese carpets mainly include Xinjiang carpet, northwest carpet, Beijing palace carpet and Tibetan carpet. Antique carpet is also called Northwest carpet, which is hand-spun with wool as

the material and then dyed with natural minerals and plants, hand-knotted and woven with the traditional patterns handed down by the folk in Northwest China. "Antique carpets are lightweight hand-knotted carpets, generally 2/8 -3/8 inches thick, and can be folded for easy handling. Because of its long history, fine workmanship, strong Chinese cultural and artistic characteristics and cultural value, it has become a treasured item for carpet collectors" [21]. Alashan antique carpet inherits the tradition of Xinjiang and Northwest carpet, and has mutual influence with Beijing-style palace carpet, which is famous for its exquisite craftsmanship and simple and elegant patterns. (Figure 16)



Figure 16. Ningxia Handmade Carpet

(1) Geographical features

Alashan is located in the westernmost part of China's Inner Mongolia Autonomous Region, which is situated in the hinterland of the Asian continent and has a typical mid-temperate continental climate. Local growth in the semi-arid desert grasslands and thousands of dry grasslands of the beach sheep, its wool fiber is long, elastic, velvet, high gloss is the most ideal carpet wool.

(2) Historical changes (Figure 17)

Zhao Hairong (2008) suggests that Alashan antique carpets were produced after 1736 AD, i.e. during the Qianlong period, with a history of more than 250 years Alashan antique carpet is in the monastery mainly and the princes and nobles tribute, gifts need to produce under the carpet style style. These carpets were mainly produced in Alashan "Dingyuan Camp" and the surrounding areas, and were brought to Yinchuan, Ningxia through traders, and then distributed to all parts of the country. These Alashan "Dingyuan Camp" production of Buddhist carpet exquisite craftsmanship, exquisite patterns, not only in Inner Mongolia monasteries widely spread, in Tibetan monasteries are also favored.

[21] Wang, G.C. (1988). Handmade Carpets. Shanghai: Guangming Daily Publishing House, p15.

With the rapid growth of carpet export from the end of Qing Dynasty to 1919, the carpet industry of Tianjin and Beijing rapidly emerged, while the antique Alashan carpet, because of its relatively small scale and limited production, fell with the demise of the Qing Dynasty and the decline of the monasteries. However, the artistic charm of Alashan antique carpet and its influence on Beijing carpet became the main carpet goods exported by Jinjing carpet afterward, which is inextricably related to the artistic style of Alashan antique carpet formed in the Qing Dynasty period, and it is the redevelopment of this carpet style in the context of the new era.

"In 1926 there were two large-scale factories in Yulin, Shanxi, which could produce more than 1,000 square meters per year, and two carpet factories in Datong, Shanxi, in 1926; and there were more than 30 factories weaving carpets in Baotou, Inner Mongolia, in 1930."^[22] At this time, although there were more than 20 carpet workshops in Dingyuan Camp in Alashan but ultimately did not form the scale of a modern factory, its carpet production was still mainly self-produced and self-marketed for local needs, and a small number of export orders would also be made. Although 1937-1947 was a period of stagnation in the development of the carpet industry in China, Alashan was located in the northwestern border area, the political environment was relatively stable, coupled with the local demand for self-production and self-sale, and Alashan, which was in the nomadic area, was relatively convenient in the collection of raw materials for carpet weaving, wool and dyestuffs, which made the traditional crafts to be preserved.

After 1937, China's carpet exports began to decline, reaching zero in 1943-1945 and gradually recovering after 1946. Under this social environment carpet workers were forced to change their profession for the most part for their livelihood, and this was also the case in Northwest China. During the war, many carpet craftsmen from Ningxia, Yulin and Gansu came to Alashan to seek for their livelihood to avoid military service, and these carpet craftsmen and those from the previous Alashan handmade workshops inherited together and developed the antique carpet craft. This historical move also laid the foundation for the redevelopment of Alashan antique carpets after the establishment of New China.

On the eve of the liberation of New China, there were more than 20 carpet manufacturers such as Zhao family and Teng family carpet workshop in Dingyuan camp. The founding of New China was the new beginning of handmade carpet industry, but the development and decline of handmade knotted carpet can be said to be difficult and rugged. There are mainly the following time nodes: in 1950, the United States launched the Korean War, economic blockade and embargo policy against China, the development of carpet industry was slow; In 1956, after the national cooperativization, carpet handicrafts and family workshops jointly set up carpet production cooperatives and cooperative factories. In 1956, the cooperative period, by individual craftsmen set up Bayanhot (liberation after the "Dingyuan camp" renamed Bayanhot) city woolen production cooperative, there are 112 employees (by the carpet maker, felt maker, pocket maker, shoemaker, etc.). In 1962, it was changed to Alashan Left Banner Woolen Products Cooperative Factory.

From 1972 to 1982, China held the Fifth National Carpet Work Conference to study the development of the carpet industry, management of carpet enterprises, technological

^[22] Wang, G.C. (1988). *Handmade Carpets*. Shanghai: Guangming Daily Publishing House, p6.

transformation, patterns, quality, balance of production with marketing, and export coordination. Since 1985, the carpet-producing provinces, municipalities and autonomous regions have started their own export business (except Tibet Autonomous Region). Due to the fierce market competition, a large number of backlogs of losses in the carpet industry as a whole at the end of the 1990s, many carpet factories closed down at a loss. Alashan carpet factory in the continuous restructuring, new product development, Sino-foreign joint venture, improve management and other continuous efforts have not reversed the situation, and finally in August 2004 to close down the business.

The development of the organization mode and shape change of "Antique Carpet" in Alashan	Period	Year	Organization model	Styling			
	Initial period	Late-Qing Dynasty 1851-1911	Individual family + Workshop production	Type	Buddhist Blanket	Noble Blanket	Civilian Blanket
							
					Dragon holding pillar blanket	Gift blanket (Birthday Carpet)	Bed carpet Seat blanket
				Motifs	Religious patterns	Auspicious patterns	
	Color	Yellow, Apricot, Red		White, Blue, Brown			
	Development Period	1940	Individual family + Workshop production ↓ Composition Carpet Production Cooperative ↓ Name change Carpet Cooperative Factory	New carpet style (Seat carpet for different transportation) + The conflict between "mechanism carpet" and " hand-made carpet "			
		1950					
		1956	Bayan Haote Woolen Production Cooperative				
		1958	Bayan Haote TownPeople's Commun Woolen Weaving Factory				
1972		Alashan ZuoBanner Carpet Factory					
2004		Individual Workshop + Small- scale carpet factory					
2008	Carpet weaving techniques were included in the national intangible cultural heritage list						

Figure 17. Development of the organization and stylistic changes of "Antique Blanket" in Alashan

Although the young carpet craftsmen who entered the carpet factory in 2004 as a late stage also faced unemployment, but due to their fast acceptance of new things, coupled with the fact that some craftsmen's families have the advantage of carpet inheritance, it makes this part of the people from the carpet workers weaving as the main, transformed into the production, management, sales as one of the marketing model, and gradually developed into a major form of carpet industry in Alashan. At the same time, these carpet weaving in the form of "family workshop", in addition to their own fixed workshops, also lead the neighboring sporadic

workshops to weave carpets together, self-production and self-marketing, forming a network of industry relations. In 2008, the carpet weaving technique of Alashan was listed in the second batch of national intangible cultural heritage list, which also drove the revival and development of the carpet handcraft industry in Alashan area.

3.1.3 Summary

Traditional handicrafts are a national cultural mode of production with excellent traditional skills and culture as the core production factor. Throughout the social structure and cultural development of different regions in China, no matter whether they are folk crafts or craft services for the nobility, the birthplaces of primitive handicrafts are villages or small towns, with unique regional characteristics and humanistic flavors. Most of the neighbors living together are from the same village or the same clan, and are engaged in crafts passed down from family or master to apprentice. In addition to family and master-apprentice inheritance, this "cluster" as the main cultural space, also protects the inter-generational inheritance of handicrafts. Through long-term interactions, people have formed a community identity in a specific traditional cultural atmosphere that has lasted for thousands of years.

Through the case studies of "wicker weaving", "embroidery painting", "papermaking", "handmade carpet weaving" in different regions, we can find that: With the development of history, the progress of the country, and the evolution of policies, the ways of passing on and developing traditional handicrafts have been reconstructed. For instance, craft cooperatives, individual ateliers, industrial companies, family workshops, craft factories, and even specialized craft schools have arisen, etc. These failed or successful practices of restructuring handicraft organizations in history provide lessons for the transformation, upgrading and sustainable development of contemporary traditional handicrafts. They will be categorized and discussed in detail in Section 3.2: Implementation and Operation.

3.2 Reconstruction model of traditional handicrafts: Concrete implementation and Operation

In the current social background, the analysis of the restructuring, upgrading and sustainable development of traditional handicraft focuses on four aspects: the historical intergenerational and contemporary inheritance of traditional handicraft; the organizational structure that constitutes production; the production, supply and marketing system(PSMS) that determines the realization of production; and cultural ecological scientific diffusion.

3.2.1 Mode of inheritance of traditional handicrafts

Inheritance is an organic life chain, which is the necessary mechanism for the existence, continuation and development of a nation's culture as well as its heritage ^[23]. For traditional handicrafts, inheritance is one of its basic attributes, which is the basis for ensuring the continuation and development of handicraft traditions. At present, the inheritance of traditional handicrafts in China is diversified, with family inheritance, master-apprentice inheritance, workshop inheritance, social inheritance, educational inheritance and other methods.

^[23] Cui,J.M. (2013). How to Avoid the Destruction of Intangible Cultural Heritage. Technology and Enterprise,02.

(1) Family inheritance and master-apprentice inheritance

After more than 2,000 years of imperial centralization and the influence of mainstream Confucianism, China has maintained an agrarian civilization based on a natural economy, with social relations based on patriarchal ties, blood and in-laws, and peasants tightly bound to the land. In the self-sufficient small farm production, which mainly relies on the manual labor of the people, handicrafts are formed in such a social environment to develop inter-generationally by family inheritance or master-apprentice inheritance among in-laws or blood relatives. In the process, the inheritors would try their best to minimize the risk of "technical power" being passed on through marriage and personal attachment, so as to ensure the competitive advantage of the industry. Such a way of inheritance also makes the technical and cultural "invisible knowledge" implicit in the "private technology" ^[24] of handicrafts often characterized by "exclusivity" and "non-sharing". Therefore, from the excavated artifacts nowadays, many ancient crafts are far more skillful than contemporary ones, but we have no way to know the production techniques, partly because of the vulnerability of this kind of inherited private technology. But even so, family inheritance and apprenticeship have gradually become the most stable and important ways of developing traditional handicrafts in Chinese history.

Family inheritance is a way of passing on and continuing skills within the family with direct blood relations, usually characterized by the form of father-to-son transmission, male-to-female transmission, and daughter-in-law-to-daughter transmission. On the one hand, it is based on the traditional family concept, the relationship composition of social life, etc.; on the other hand, it is based on the attributes of skills, the nature of handmade production, and the requirements of emotional factors. At the same time, the inheritance of handicrafts within the family also gives the handicrafts a privatized and obsolete quality. Traditional handicrafts, as a closely protected skill, are usually a guarantee of livelihood. However, with the country's economic development, the era of relying on crafts for survival has long since ended. In the current context of intangible cultural heritage protection, the sharing and innovation of handicrafts has become a need of the times, and is gradually transcending the traditional family inheritance and giving rise to new ways of doing things.

Master-apprentice inheritance is also the most common form of inheritance in the context of an agrarian civilization, and is dictated by the "oral-to-moral" mode of production of handicrafts. Different from the emotional characteristics of family inheritance, master-apprentice inheritance places special emphasis on the selection of moral qualities while transferring skills and folk knowledge. The process of selecting apprentices is not only a simple consideration of bloodline, geography, and business, but usually pays special attention to the purity of the apprentice's quality in order to maintain the tradition and credibility of the master's family; On the other hand, due to the existence of the masterpieces and secret recipes, it is necessary for the apprentice to utilize his or her own understanding and endowment. Nowadays, the way of master-apprentice inheritance also has a new way of expression in the context of the new era.

^[24] The concept of "private technology" is referred to in Qiu, C.L. (2011). "The Cultural Transformation of Chinese Handicrafts". East West Books, p09.

(2) Workshop inheritance

Workshop inheritance is a mode of survival that integrates production, sales and inheritance based on the organization of guilds ^[25]. The workshop is a place for craftsmen to work and a space for the inheritance of skills.

Many masters of the Renaissance came from artisanal workshops. Giorgio Vasari's "Le vite de' più eccellenti architetti, pittori, et scultori italiani, da Cimabue insino a' tempi nostri" is a pioneering work of Western historical biography, describing in detail more than 300 pieces of Italian Renaissance art, artists' theories and anecdotes of important artists. Numerous artists we know, such as Gilberti, Botticelli, Verrocchio, and Brunelleschi were apprenticed in the early days of the handicraft workshops, undergoing rigorous apprenticeship training and tests, some for decades, in line with the Chinese master-apprentice workshops. They worked long hours for masters and handicrafts workshops without pay and were strictly supervised by the guild to ensure that they did not leave the workshops to take private orders because of their outstanding skills.

Since the 1950s, with the transformation of China's economic system and industrialization, many traditional handicrafts have shifted from family-based operations to collective and state-owned enterprise ownership. The rise of vocational and technical education, production cooperatives, production groups, and enterprise factories transformed the traditional apprenticeship system into a new type of labor mechanism. In this mechanism, the original master-apprentice inheritance and master-apprentice relationship has been transformed into a more practical superior-subordinate relationship, with no clear genealogy of the master's lineage, and has taken the form of a socialized inheritance.

(3) Social inheritance

Social transmission is an integrated form of approach. There is a self-taught approach and a broader form of master-apprentice transmission based on the form of labor in the craft industry. In the latter form, the apprentice is no longer a person who inherits the master's skills in the traditional sense, but a worker in the industrial arts industry who is employed after a short period of training. With the development of the social economy and the change of times, while the traditional family inheritance and master-apprentice inheritance have been constantly challenged, the emergence of social inheritance has well continued the handicrafts tradition, and it has gradually become the main mode of inheritance across the region, bloodline, and industry at present.

(4) Educational inheritance

In the 1950s, China began to focus on the positive role of schooling in the development of handicrafts at the national level, with the establishment of arts and crafts colleges, vocational schools, and other teaching institutions around the country. With the restructuring of academic disciplines, arts and crafts were replaced by the more inclusive discipline of art and design, and the corresponding curricula also changed. The specialized teaching of traditional arts and crafts has gradually shifted towards focusing on the training of talents specializing in non-traditional arts

^[25] Xu,Y.Y.,& Dong,J. (2009,05). Report on Analysis of the Succession and Development of Chinese Arts and Crafts,Journal of Nanjing Arts Institute(Fine Arts & Design), p38-40

and crafts, such as decorative design and modern art, thus contributing to a certain extent to the contemporary dilemma of traditional handicrafts.

Summary

As discussed above, in the context of agrarian culture, traditional handicrafts have mainly relied on master-apprentice inheritance and family inheritance for their continuation. However, in recent times, under the impact of modernization and market intervention brought about by industrial civilization on the production of traditional handicrafts, the traditional master-apprentice and family inheritance has gradually lost its influence. In the past decade, along with the promotion of the protection of intangible cultural heritage, the protection and inheritance development and utilization of traditional handicrafts has become a current hot topic of discussion from the state to the local level, as well as from the school to the individual. In this regard, the inheritance of traditional handicrafts has taken a new direction, and under the support of national policies, various forms such as school inheritance and community inheritance have begun to become the mainstream.

3.2.2 Internal behavior: industrialization / professionalization

3.2.2.1 Types of industrialized / professionalized organizations

The organizational form of production is a concept in the economic sense, which is essentially a socio-economic mode of production. In order to ensure the successful conduct of production, it is a way of rationally allocating the human and material resources, tools and equipment and other production materials involved in the production process, and of managing and administering the products produced. At different stages of history, due to the differences in production modes formed by the productive forces and production relations, their production organization patterns also varied. The production of traditional handicrafts has roughly gone through several stages, including individual private producers, family workshops, simple collaborative handicraft workshops, handicraft workshops based on division of labor, and the factory system based on machine industry. ^[26]

In terms of the current state of development of traditional handicraft production, it is composed of four main organizational forms. These are family workshop, professional cooperative, company and craft studio.

(1) Family Workshop

The family is the most basic unit of human society, not only as a form of social organization, but also as the earliest economic organization. Morgan explains the family as "a dynamic element: it never stands still, but moves from a lower to a higher form as society progresses from a lower to a higher stage." ^[27] In this evolution from lower to higher, the organization of the family is gradually refined. From food, clothing, housing and transportation to the level of material production and spiritual creation, the family serves as an unshakable economic entity and a base camp for the

^[26] Li, W.W. (2006). Introduction to Creative Industries. Shanghai Xuelin Publishing House, p57.

^[27] Friedrich Engels. Der Ursprung der Familie, des Privateigentums und des Staats. "Selected Works of Marx and Engels", 1972.

transmission of skills in the context of agrarian civilization, as well as a place for the transmission of moral norms, economic production activities and aesthetic education ^[28].

The division of labor in the family has led to the emergence of different inheritance methods in the process of teaching handicrafts in the family workshop, such as "art is never passed on to the public", "passing on the art to the male but not the female" and "mother-daughter inheritance", which has ensured the long-term stability of the production organization of the family workshop over the centuries and has also become one of the most basic and important forms of reproducing traditional handicrafts today. The collaboration and division of labor among family members, and the flexibility and freedom of the workshop organization have given traditional handicrafts an enduring industrial element in the process of family workshop production. In the context of contemporary industrialization, the form of production in family workshops, from the application of technology and the inheritance of skills to the business ideas and the sense of innovation, should break through the previous closed and old-fashioned state, so as to adapt to the needs of sustainable development.

Most of the family workshops are small in scale, so most of the families have been producing handicrafts in a rudimentary way since ancient times. In the modern market economy, the problems of production efficiency, labor cost and time-consuming nature of traditional handicrafts have gradually begun to become obstacles to the continuation of handicraft production. Therefore, the introduction of modern technology in family workshops, such as the use of electrification or mechanical tools in places that do not involve the core aspects of manual production, can not only increase production efficiency, but also save labor costs.

< Case > Yaozhou Porcelain - Li Family Porcelain Workshop

Tongchuan is known as the "coal city and porcelain capital". In ancient times, Huangbao, Yuhua, Shangdian, Lidipo, Chenlu and the area around Tapo in Yaozhou District were all important sources of "Yaozhou porcelain" ^[29]. (Figure 18) The only porcelain production that continues today after the vicissitudes of history is Chenlu. During the development of the porcelain industry in Chenlu, although around 1955 to 1958, due to the socialist transformation of industry and commerce and individual handicrafts and the public-private partnership movement, porcelain production cooperatives were established in Chenlu town according to the origin of raw materials and firing varieties.

After 1958, porcelain cooperatives were also merged into Chenlu refractory factory, later changed to Chenlu ceramics factory, became a large collective nature of independent business enterprises. But the establishment of the Chenlu ceramic factory did not change the individual Chenlu family production of porcelain, Li family porcelain workshop, Cui family porcelain workshop, Yuan family porcelain workshop, Guan family porcelain workshop and other family production of workshops scattered in all corners of Chenlu town.

^[28] Wang, H. (1998). Chinese Families and the Spread of Handicraft Culture. Shandong Social Science, No. 6.

^[29] Yaozhou kiln is one of the celadon kilns from the Tang Dynasty (618-907) to the Ming Dynasty (1368-1644), located in Huangbao Town, Tongchuan City, Shaanxi Province. It began in the Tang Dynasty and flourished in the Song Dynasty (960-1279). It is the largest of the six major kilns and is the representative of northern celadon.



Figure 18. Yaozhou Porcelain

The current family workshop-style individual production in Chenlu town is not the same as the traditional sense of family production, but the fusion of traditional individual production and modern industrial structure. Take the Li family porcelain workshop as an example: the predecessor of the Li family porcelain workshop is the famous "Li family on the bridge" in Chenlu town for a hundred years, and the father of the ceramic craftsman Li Shengke had founded the "Red Flower Fu porcelain company", which was very influential in the local area. In the 1970s, Li Shengke worked for many years in the Chenlu Ceramics Factory, and after retiring in 1992, he set up the Li Family Porcelain Workshop at the initiative of his daughter Li Zhuling, and began to explore the fusion of traditional porcelain making with modern aesthetics. After more than a decade of exploration, the products made by the Li Family Porcelain Workshop have become an outstanding representative of modernizing ancient porcelain in Yaozhou.

Based on the traditional family production method, the Li Family Porcelain Workshop, in order to improve the production and quality of porcelain, hired some nearby artists or trainees to take charge of different processes of porcelain production, forming a family production method with the characteristics of a company, integrating design, production, packaging, display, and sales in one, and being self-financing. This new type of home-based handicraft production is generally small in scale, with a small number of employees and low product costs, but due to the addition of individual innovation and unique style, thus showing great market competitiveness. (Figure 19)



Figure 19. Li Family Porcelain Workshop Production Organization System

With the rise of the creative industries, the decentralized, workshop-type mode of handmade production has been revived as a possibility, and provides a way for the reproduction of traditional handicrafts. On the basis of national policy guidance and support, the flexibility and freedom of family workshops will play an important role in the sustainable development of traditional handicrafts, and at the same time will achieve more and more stable economic benefits.

(2) Professional Cooperative

Under the traditional farming background, the production process of handicrafts is relatively simple, without too many complicated market factors intervening. But under the conditions of a market economy, the processes of raw material procurement, production & marketing, and publicity & promotion all have new requirements of the times. With the improvement and enhancement of handicrafts, the economic organization of professional cooperatives has emerged.

Cooperatives are an economic form of partnership organization in which different production entities join together to carry out production and business. Early forms of cooperative organizations had the particularities of the times and their economic role was less prominent. But with the development of the economy and the emergence of a large number of individual and private economic forms, the extension of the production of traditional handicrafts from family workshops to the organizational structure of professional cooperatives is not only an inevitable choice under the conditions of the market economy, but also a manifestation of the characteristics of the group nature of handicrafts.

Specialized handicraft cooperatives are a positive exploration of the sustainable development of handicrafts. With the farmer, or handicraft producer, as the constituent unit, and with the goal of increasing the economic returns of participating members, the cooperative is a contractual production relationship based on trust. Since the cooperative is an economic organization with collective participation, its production is carried out with the aim of safeguarding the interests of craft producers. Therefore, it is necessary not only to provide handicraft producers with skill training within the cooperative, formulate technical specifications, organize unified production, and take charge of product sales, but also to maximize the protection of the interests of participating members by actively participating in the marketplace, coordinating and cooperating with the government, companies, and other organizations to formulate pricing and branding mechanisms, and obtaining orders for their products. The form of specialized handicraft cooperatives not only promotes the improvement of handicraft production techniques, but also changes the traditional mode of production operation and enhances the cooperative consciousness and cohesion of handicraft producers. (Figure 20)

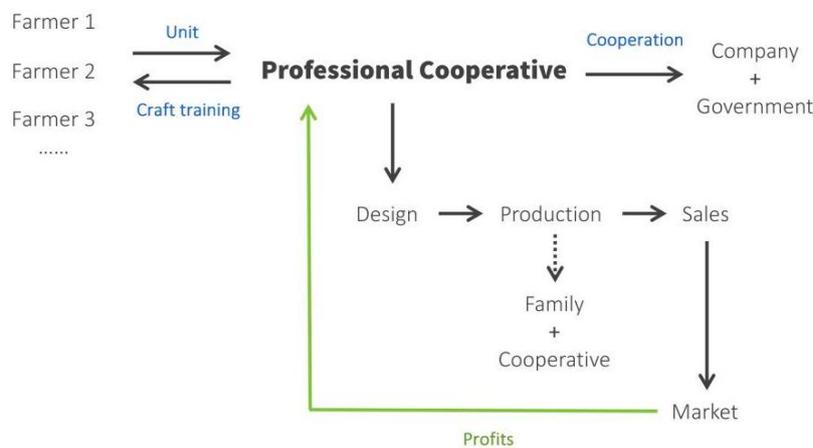


Figure 20. Handicraft Professional Cooperative Organization System

< Case > Professional Cooperative of Rural Women Homespun, Pucheng County, Jingyao Town, Shanxi Province, China)

It was established in 2000, formerly known as " Sanqin Women's Weaving and Embroidery Craft Cooperative", and then changed to Women's Cloth Professional Cooperative in 2004. In the production process, the cooperative sends looms, yarns and other production materials to farmers, sends technical personnel to provide guidance on color matching, pattern and color design, and then retrieves the cloth after it is inspected and qualified. The common products are bed sheets, quilt covers, sofa covers, tablecloths, clothes, etc. (Figure 21)

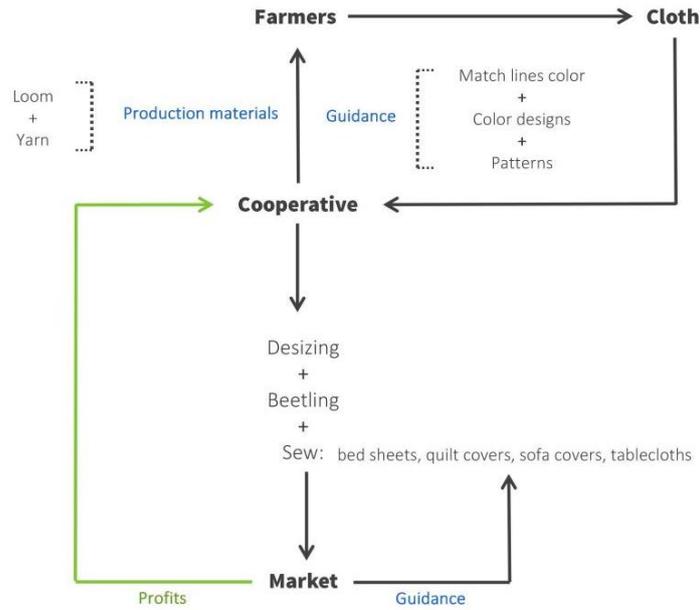


Figure 21. Production process of cooperative homespun

There are more than 300 farmers in Xujiashuang, and 287 of them are producing on a large scale (only a few of them are not producing cloth due to labor problems). Up to now, Xujiashuang has set up "Qinnv Cloth Professional Cooperative" and " Yunv Cloth Professional Cooperative". These cooperatives not only bring economic benefits to the farmers of this village, but also bring production effects to the farmers of surrounding villages. Many farmers in Dongxing, Zhongjia, Zhulei and Changjia villages around Xujiashuang have also joined the ranks of weaving and become cooperative members of Xujiashuang, and more and more rural women have realized that they can earn money without leaving home and can be employed in the local zero distance, which really improves the economic living standard of rural areas. (Figure 22)



Figure 22. Xujiashuang rural women weaving at home

Professional cooperatives have made it possible to have relatively stable customers and markets for the production of handicrafts. At the same time, with the help of relatively low raw material and labor costs, the output of handicrafts has been increased through the use of a combination of purely manual and mechanical production. As an effective mode of economic production, the transformation of production and labor relations is compatible with the transformation of people's living structure, which has a positive significance in improving the living standard of the people and enhancing the right to a free and equal life. At the same time, the industrial effect formed by the aggregation of professional cooperatives has led to the development of regional community advantages and branding.

(3) Company

The company is a form of profit-oriented economic organization, and compared with family workshops and handicraft cooperatives, company-type operations have production advantages that the previous two do not have in terms of scale of production, form of organization, departmental setup, division of labor and cooperation, etc. In the process of handicraft production, the company is both the organizer and the manager of production. From the selection of the type of handicraft production, the inclusion of design creativity, to the sale and promotion of handicrafts, the company has specialized management and organization in order to make the products enter into circulation as much as possible and achieve economic benefits.

In specific operations, the division of labor between management and production processes is an important feature of company operations. Companies generally have specialized management departments to undertake different production duties:

For example,

the business department is responsible for the signing of orders for the production of handicrafts;

the product research and development department is responsible for the creative research of handicrafts and the design of new products;

the production management department is responsible for ensuring the specific production process of handicrafts;

the quality control department is responsible for the quality supervision of handicrafts;

the training department is responsible for the skill training of the producers;

.....

Collaboration between different departments is the basis for the smooth running of handicraft production. In addition, under the mechanism of company production, handicrafts have a relatively standardized technical process, and each process has a special producer responsible for it, which makes handicrafts production also have the characteristics of industrialized assembly line production. This procedural operation, while improving the proficiency of the producers, also greatly improves the production efficiency, forming a large-scale, batch-oriented form of company production, and promoting a modern turn towards the sustainable development of traditional handicrafts.

In many areas of China, the establishment of some kind of handicraft inheritance and development company on the basis of family workshops or cooperatives is a trend of market development. Especially for some regions with good handicraft resources and industrial development bases, such as Shandong, Jiangsu and Shaanxi, company operation has become one of the main forms of organization for traditional handicraft production.

< *Case* >

Linyi, Shandong Province, is the hometown of wicker weaving in China. As an important local economic pillar, Linyi's wicker weaving industry has made remarkable achievements in the development of local cultural resources and industrialized business. Currently, Linyi's wickerwork craftsmanship has driven nearly 250,000 people to participate in production, covering 13 towns in Linyi and more than 100 professional villages, with nearly 800 companies specializing in wickerwork production and sales ^[30]. The intervention of company operations, the advantages in order acquisition, product development, new product design, product production and processing, and brand building have made wicker weaving craft as a self-sufficient economic form gradually become an important economic growth point in the course of 30 years of development. The annual output value of nearly 5 billion yuan of income to move the local economic development at the same time, but also to the craft producers to provide a stable livelihood security.

Linyi's wicker weaving craft is a modern innovation on the traditional weaving techniques. Under the company's business system, the traditional form of agricultural and daily use weaving has gradually evolved into a modern cultural consumer product, with nearly 300 different varieties ranging from household, decorative and literature items to gardening, furniture and leisure travel, making the traditional wicker weaving craft an important component of modern life. (Figure 23)



Figure 23. Changes in wicker products under the company management system - Linyi Oula Comprehensive Agricultural Development Co., Ltd. (Linyi City, Shandong Province, China)

(4) Studio

The combination of crafts and studios began as early as the 1950s, initially in the form of Studio Craft, such as Studio Pottery, Studio Glass, Studio Woodworking, and Studio Fiber. These studio-based crafts are not only an inheritance of traditional crafts, but also represent a different era of traditional crafts.

^[30] Pan L.S, Handicraft Rural Research Report,2011. p145.

Compared with the traditional production form of handicrafts, studio handicrafts emphasize more on the play of individual creativity and the expression of artistic imagination of the craftsmen. Unlike the batch and scale characteristics of company operations, studio craft is an artistic level of interpretation. In the studio craft production is no longer for the sole purpose of practical living, and the combination of artistic thinking and technical practice gives crafts a new aesthetic experience and artistic paradigm. In addition, in terms of the scale of production and application of technology, the studio and the family workshop have similar characteristics, and their scales are relatively small, but the difference is that the studio pays more attention to the production tools and application of technology than the family workshop, which is the basis for the craftsman to complete the conception and production independently, and at the same time, it is the embodiment of the personal characteristics of the studio handicrafts. (Figure 24)

	Similar	Different	Member
family Workshops	Small production scale	1. Focus on practicality 2. Focus on economic benefits 3. Product target group-general public	Farmers (generally less educated)
Craft Studio		1. Focus on design creativity 2. Focus on skills 3. Personal style	Artists, designers (generally well-educated)

Figure 24. The difference between studio and family workshop

At the level of the craft practitioner, the identity and subject matter of the craft practitioner varies from the "artisan" in the family workshop, or the farmer in the cooperative, or the industrial worker in the company. In the studio, the identity of the craftspeople is also that of an "artist" who produces art. At the same time, craftsmen in the studio generally receive formal education in school, actively participate in various art exhibitions, and learn extensively about art knowledge and theories.^[31] Whether or not they have had a professional art education process, whether or not they possess the concept of modern design and the sense of creative thinking, etc., these become an important kernel that distinguishes them from the traditional forms of handicraft production.

At the level of crafts practitioners, from "artisans" in family workshops, to farmers in cooperatives, to industrial workers in company operations, the identity and subject of crafts practitioners are also somewhat different, and in the workshop, the identity of crafts practitioners has also changed, taking a " In the studio, the identity of the craftworker has also changed, and he or she produces art as an "artist". Craftsmen in the studio are generally formally educated, actively participate in various art exhibitions, and extensively study art knowledge and theory. Through the process of professional art education, the concept of modern design and the sense of creative thinking become an important core that distinguishes them from traditional craft production forms.

^[31] Luan, K. (2010). Boosters of the Studio Crafts Movement. Nanjing Arts Institute.

< Case > Woodcarving - Tao Zhiyao Wood Carving Studio

"Tao Zhiyao Wood Carving Studio" is located in Zhongshan Street, Xianyang City, Shaanxi Province, established in 2001. During its 15 years of development, it has always adhered to the purpose of inheriting traditional Chinese wood carving techniques, actively exploring in the inheritance of traditional wood carving techniques and modern technological innovation, absorbing the essence of traditional wood carving art, using traditional Chinese wood carving techniques, and injecting modern flavor, producing a wide range of unique artistic and decorative peach wood crafts. (Figure 25)



Figure 25. Traditional Chinese Hairpin Style - Peach Wood

Zhang Fan, the founder of "Tao Zhiyao Wood Carving Studio", has a good college education and is the main designer and producer in the studio. Because most of the wood carving crafts are accessories, the studio first cooperated with "Girlfriend", "Love" and other magazines to publicize and promote. With the increase of wood carving craft categories, the studio opened a number of domestic chain sales sites and online stores, its business scope and business system gradually perfect, now has a design department, material department, carving department, polishing department, coloring department, knitting department, silver department, network sales department of eight departments, a clear division of labor, work in an orderly manner. At the same time, the studio also actively cooperates with the college, and has become the employment internship base of Xi'an Academy of Fine Arts, injecting new factors into the creative research and development of handicrafts. There is no secrecy among the carving staff in terms of carving techniques, and the person in charge of the workshop is always ready to give the carving staff the requirements of the works and provide technical guidance. (Figure 26)

(5) Comparative Analysis (Figure 27)

	Unit	Production	Production scale	Market	Inherited	Characteristic
Family Workshop	1. Family members 2. Master- apprentice	1. Handmade 2. Handmade + Simple machine	Small, Scattered	Passive follow	1. Family to family 2. Master to apprentice	Flexible
Professional cooperative	Farmers + Professional	1. Handmade 2. Handmade + Specialized machine	Concentration	Initiative creation	Professional training to innovation	Low labor cost
Company	Specialized departments	1. Handmade 2. Handmade + Specialized machine	Large, Concentration	Initiative creation	Professional training to innovation	1. Specialization 2. Industrialization 3. Mass production
Craft Studio	Artists + Designers	1. Handmade 2. Handmade + Ingenious machine	Small, Scattered	1. Initiative creation 2. Niche	1. Master to apprentice 2. Personal skills innovation	1. Focus on skills 2. Personal tagging 3. Branded works

Figure 27. Comparison of the characteristics of the four organizational models

3.2.2.2 Industrialized / professionalized operation system

A prerequisite for the modern reconstruction and sustainable development of traditional handicraft is a well-developed "production, supply and marketing system" (PSMS). It is only when handicrafts move from production to distribution to realize consumption that the sustainability of production can be further promoted.

At present, the production, supply and marketing system of traditional handicraft can be divided into the following types depending on the composition of the production organization:

(1) Relying on Workshop -PSMS

As mentioned above, family workshop production is one of the most basic and important forms of traditional artisanal production. Because it is family-based, and everything from making to production is done in a single environment, it has the characteristics of small-scale production, low capital investment, relatively low risk value and easy management.

Based on the family workshop, the production, supply and marketing systems (PSMS) of traditional handicraft are the following 3 types:

" Workshop + Consumer "

This is the most direct system of production, supply and marketing, in which handicrafts are directly oriented towards consumers. In this system, the family workshop is responsible for both production and sales, and since the supply chain from production to consumption is relatively short, the sales are completed and the economic benefits are instantaneous. At present, most of the individual craft producers in many areas of China, especially the family workshops in remote areas, still adopt this form. Through relatively flexible stall sales or sales of tourist souvenirs, the workshops' handicrafts are directly connected to consumers. (Figure 28)

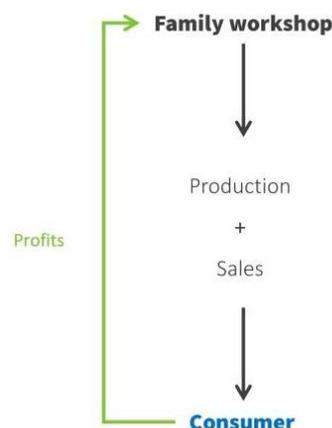


Figure 28. " Workshop + Consumer " Production, PSMS

"Front Shop and Back Workshop"

The second is the "front store and back shop" type of PSMS. As its name suggests, the " front store and back workshop" system refers to the PSMS in which the front part of the building is used as a sales area and the back part as a production place (Figure 29), or the lower floor is used as a sales space and the upper floor as a production place . (Figure 30).



Figure 29. Front space for sale - rear space for production



Figure 30. lower floor space for sale - upper floor space for production

This system has a long history of development in China, and is a highly representative form of family workshop production organization. The existence of the front store and the back workshop enables consumption and production to be realized in one space, while this kind of production and marketing system will play out its value more and more under the current prevalence of the experiential consumption concept, which stimulates consumption and promotes production.

In addition, in the system of front store and back workshop, the traditional closed nature of the family was broken, and in addition to the fact that the staffing was no longer dominated by family members who started hiring craftsmen, the form of production was no longer confined to the workshop, but gradually developed into a form of production in which the main process was completed within the individual family and the final process was completed within the workshop, and the original meaning of the family workshop gradually evolved into a department for product development and sales.

"Individual + Workshop + Distributors"

The third is the "individual + workshop + distributor" PSMS. This is a kind of derivative form based on the "front store and back workshop", in which the workshop becomes the intermediate link in the PSMS, and the individual, as the main body of handicraft production, completes the work independently and then hands it over to the workshop for display and sale. In this process, the addition of distributors further broadens the way for the sale of handicrafts. However, since there is no collaborative relationship between the workshop and the individual in this PSMS, it serves as a transitory role, providing the distributor with the product and paying the individual for the craft. This extraction of benefits at the level of the workshop and distributor in the middle of the circulation also results in a reduction of the benefits received by the individual producer, which, if not reasonably dealt with over a long period of time, will discourage the creation of individual handicrafts, thus hindering the possibility of the production of handicrafts by family workshops. (Figure 31)

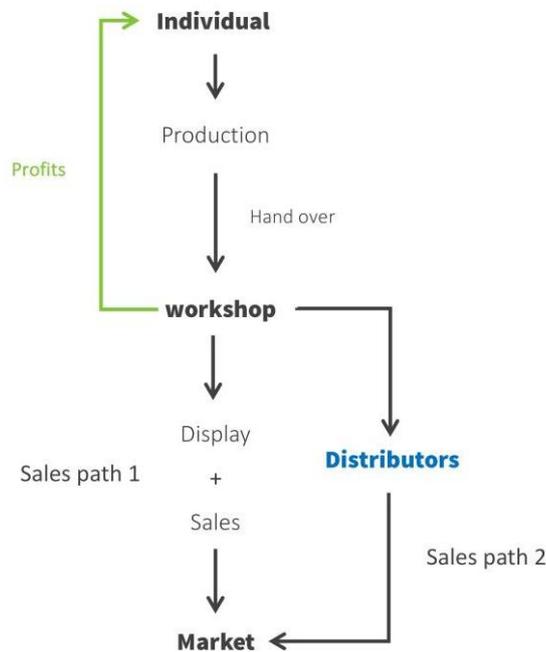


Figure 31. "Individual + Workshop + Distributors" Organization, PSMS

(2) Relying on Professional Cooperatives -PSMS

Professional cooperatives are a type of economic cooperation organization based on family workshops, which have a positive effect on promoting economic development and increasing the income of craft producers. Family-based production certainly has its flexibility and freedom, but it affects the realization of farmers' (craftsmen's) income due to the dispersion and instability of production and sales. Therefore, as a kind of economic organization, handicraft professional cooperatives play an important pivotal role in the sustainability of traditional handicraft production, and they provide a certain guarantee for farmers to intervene in the market at the level of organization and competitiveness.

In the specific PSMS, depending on the actual situation, professional cooperatives can be divided into the following 3 types:

“ *Farmers + Professional Cooperatives + Distributors* ”

The first is the form of "farmers + professional cooperatives + distributors". In this form of production, supply and marketing, the cooperative plays an important role as a hub, unlike the purely transit role of the workshop, there is a collaborative production relationship within the cooperative. On the one hand, the cooperatives provide farmers with technical training, market information, orders and other services; on the other hand, the cooperatives have to actively cooperate with distributors to expand sales paths and obtain orders for handicrafts. To a certain extent, cooperatives are more like a kind of joint-stock company in which farmers participate, with the characteristics of organizing production and collaborative management. (Figure 32)



Figure 32. “ *Farmers + Professional Cooperatives + Distributors* ” Organization, PSMS

“ *Farmers + Professional Cooperatives + Market* ”

The second is the "farmers + professional cooperatives + market" form. In this form, the functions of the professional cooperatives have been further expanded, not only as a kind of hub linking farmers and distributors, but also as a form of corporatization under the principle of synergistic cooperation as the system becomes more complete.

In terms of the economic composition of cooperatives, they are organized in the form of farmers' shares and have an economic system similar to that of a company, and as an economic

organization with a fixed legal person, they have all the possibilities of operating as a company. Therefore, the cooperative directly intervenes in the market by placing orders for handicraft production based on market demand, then entrusting the production to farmers, and lastly, the cooperative is responsible for direct market sales. This form not only strengthens and extends the organizational structure of the cooperative, but also reduces the profit sharing of the distributors and gives more profits to the farmers (craftsmen). (Figure 33)

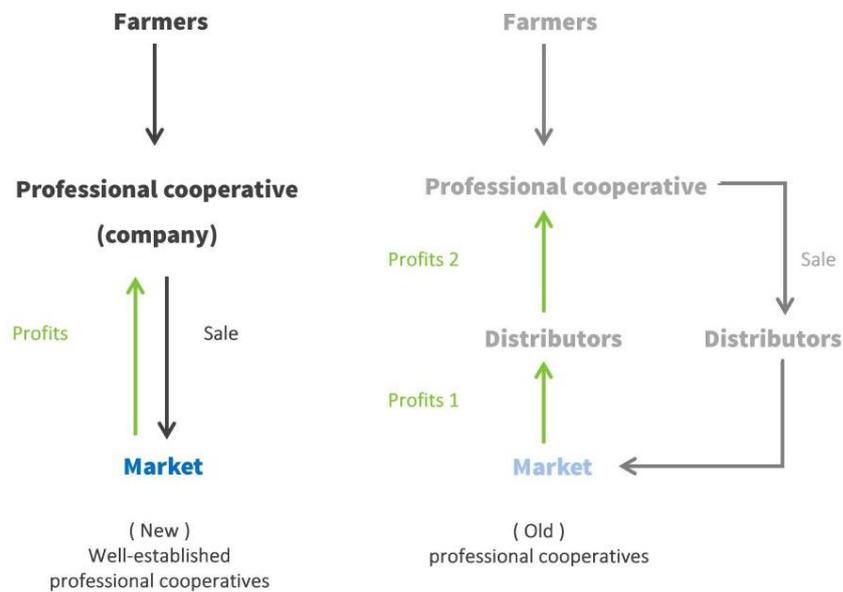


Figure 33. The PSMS of "Farmers + Professional Cooperatives + Market" and "Farmers + Professional Cooperatives + Distributors" have different economic returns

“Farmers + Professional Cooperatives + Academic Institutions + Market ”

The third is the form of "farmers + professional cooperatives + academic institutions + market". Compared to the previous PSMS, this form incorporates academic institutions. Since handicraft cooperatives are an economic organization with farmers as the main body, when cooperatives are directly connected to the market without distributors, their lack of awareness of market judgment, product research, and the ability to respond to market demand will all hinder handicraft production. Especially in the current creative economy, traditional handicrafts not only have to constantly adapt to the market demand, but also be endowed with a variety of demands to integrate into modern life, so the intervention of the academic structure is particularly necessary. Academic institutions have their own advantages in product research and development, and their long-term attention to the handicraft market can not only provide cooperatives with guidance on handicraft technology and market consultation, but also play an active role in new product innovation and development. (Figure 34)

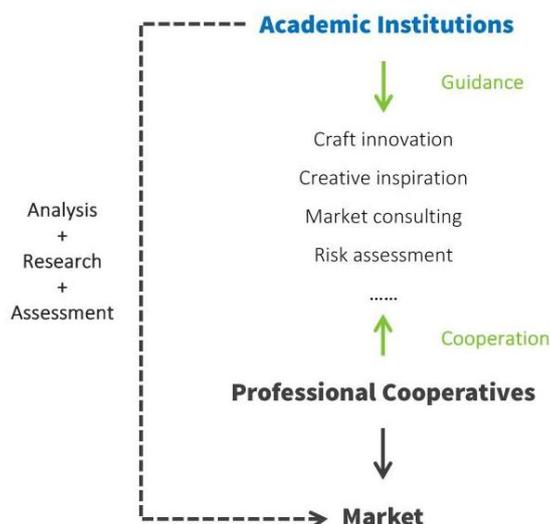


Figure 34. Cooperation between academic institutions and professional cooperatives

(3) Relying on the Company -PSMS

Company production is an advanced form of organization of traditional handicraft production, and is a more scalable form of production based on professional cooperatives. Company production often shows a "vertically integrated" form, including 3 components, i.e. production, wholesale and retail, and owns all the business of the whole industrial chain from production, transportation to sales ^[33]. Compared to companies that are only involved in a certain manufacturing or production process, companies with complete vertical integration have more initiative in production and sales.

In terms of the current state of craft production, apart from vertically integrated companies that integrate production, supply and marketing (PSMS), there are 3 other forms.

“Farmer + Intermediary + Company”

The first is the form of "farmer + intermediary + company", which is one of the more common forms of production organization at present. The company is responsible for taking orders and making handicraft samples according to customers' needs; The intermediary will organize the farmers to produce according to the company's orders and handicraft samples, and finally deliver the finished products to the company.

In this form of production, supply and marketing (PSMS), there are 2 forms of intermediaries:

One is the intermediary, which is not responsible for specific production, but which can act as a link between farmers and the company because it holds a relative number of farmers' resources; The other is a processing company, which, in addition to acting as a kind of hub, is also responsible for the processing of products, equivalent to the production department of the company, and finally delivers the processed products to the company. As a production link between the company and the farmers, the role of intermediaries is indispensable, and accordingly, in the process of organizing the production of farmers, intermediaries will also be involved in the distribution of product profits. (Figure 35)

^[33] Wan, K.T. (2014). Jinan Lu Embroidery Market Survey Report. Shandong Academy of Arts and Crafts.

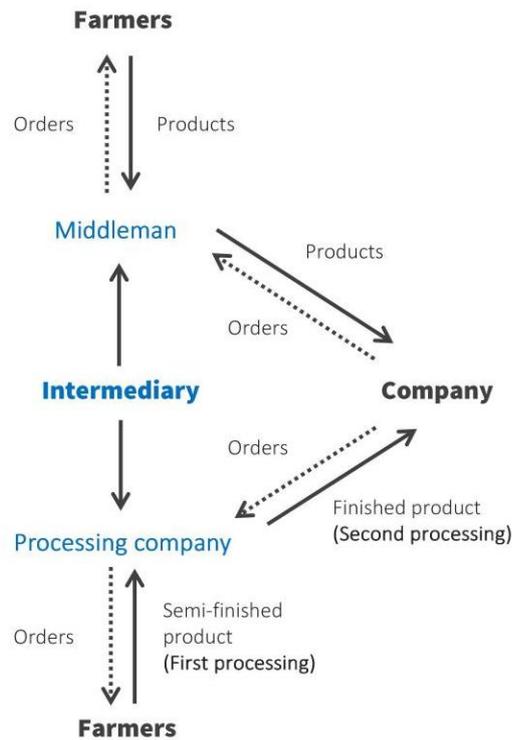


Figure 35. Two forms of intermediary Organization

“ Farmer + Intermediary + Company + Wholesaler + Distributor ”

The second is the "farmer + intermediary + company + wholesaler + distribution point". In this PSMS, the wholesaler is an important sales hub, and the wholesaler expands the number of handicrafts sold and increases their market share by decentralizing the handicrafts to local distribution points. Especially in the current social context, in which the number of craft producers is decreasing, the number of intermediaries is increasing, the operating costs of companies are becoming higher, and there is a surplus of craft products, it is important for the maintenance of traditional craft production to promote the realization of the value of craft products through the expansion of sales channels. (Figure 36)

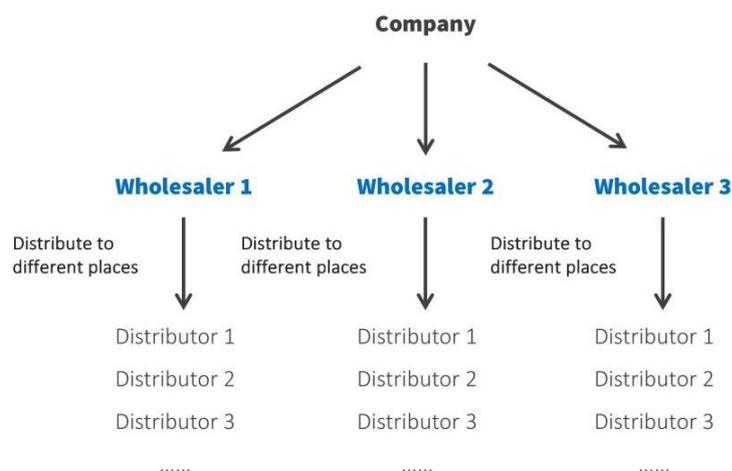


Figure 36. Distribution mode of wholesalers

“*Studio + Company*”

The third is the "studio + company" form. This form has emerged along with the development of traditional Chinese handicrafts and the trend towards diversification of company operations. In the process of combining with the company, the studio, which is rich in creativity and artistry, undertakes more of a creative organizational task, i.e., it is responsible for the design and conception of handicrafts, while the company is responsible for the production and sale of handicraft products. This form of PSMS has a certain mitigating effect on solving the problems of lack of creativity, lack of product innovation and lack of professional talents that exist in the current handicrafts. (Figure 37)

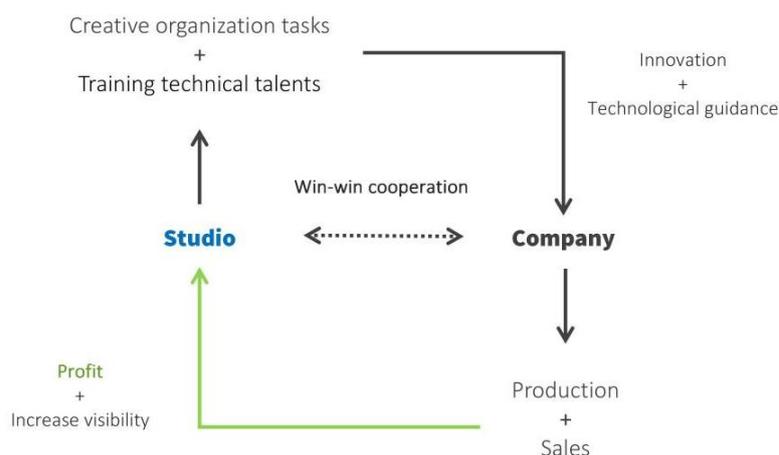


Figure 37. Win-win cooperation between studio and company

3.2.2.3 Problems and risks

The modern reconstruction and sustainable development of traditional handicrafts is not simply a matter of production and sales, nor is it a matter of expanding the scale of production and improving production efficiency, but rather a comprehensive emphasis from the levels of inheritance - organizational form - application of technology - operation and sales. In the process of traditional handicraft production, not only should the necessity of handmade production be strengthened, but also should modernized tools and technologies be introduced appropriately; In the selection of raw materials, in addition to traditional raw materials, the use of new materials should be considered from the environmental protection point of view; In the production of handicrafts, in addition to traditional styles, more attention is paid to the form of diversified customization; in terms of function, diversified transformation is realized according to the lifestyle of modern users. In the specific modern reconstruction production process, in order to ensure the realization of the modern transformation of traditional handicrafts, more attention should be paid to the following 4 issues:

(1) Crisis of inheritance

The transmission of traditional handicrafts is a holistic and comprehensive behavioral system, specifically influenced by the 5 aspects:

First, the drive for profit. Economic and social development has affected the monetary values of some groups, and in order to pursue a better material life, people are often more willing to choose high-paying careers. The traditional handicraft industry, due to the long learning cycle, slow results, poor efficiency and other factors handicraft industry to bring income, can not meet the pursuit of profit.

Second, the drive of career choice ^[34]. Occupational prestige view is the comprehensive evaluation of various occupations by members of the society. As the types of occupations continue to be subdivided, people's choice of occupations is further expanded, and factors such as income and social status form people's subjective evaluation of occupations. Although traditional handicrafts bring a certain sense of honor to the practitioners, in the value of pursuing profit, the work of traditional handicrafts is not the best choice for the public to respect.

Thirdly, market demand. Demand is the fundamental reason for people's power of action; without demand, there is no market, and the narrower market for traditional handicrafts leads to fewer and fewer people engaging in them.

Fourthly, the constraints of industry rules and regulations. There are many self-imposed rules and restrictions in the various industries, for example, "passing on the skills to men but not to women" and "only passing on the skills to families with their own surnames". There are also some inheritors who believe that handicrafts are handed down from their ancestors and belong to private property, so they are not willing to disclose them to the public. These limitations in the dissemination of traditional handicrafts hinder innovation and sustainable development. At the same time, traditional Chinese handicrafts also emphasize a strict master-apprentice system, in which a particular skill is passed on through a series of processes, such as selecting an apprentice, worshipping the master, passing on the skill, and leaving the master. The limitations of this master-apprentice transmission system are also obvious. More often than not, the apprentice follows the master and mechanically imitates and repeats. Over time, this has resulted in a generally weak sense of innovation, a fear of transcendence, and a lack of artistic creativity and rebellious spirit.

Fifthly, there is a shift in the education system. Modern education lacks the popularization of traditional handicrafts to bring in. As a school, it is a very good field to educate children and young people about the culture of traditional handicrafts. The lack of education and inculcation from childhood will also lead to their unfamiliarity and distance from traditional handicrafts.

(2) Relationship between machine production and manual production

From the beginning of the arts and crafts movement in Britain, the exploratory practices of Morris, Ashby and others on machine production and handmade production have given a relatively clear answer that the revitalization of traditional crafts must face up to the context of the era of industrialized production. And also it is necessary to place the exploration of traditional handicraft

^[34] Yang,J.,& Wang,Y. (2011,06). Analysis of the Dilemma of Intangible Cultural Heritage Inheritors' Disconnection - Based on the Perspective of Social Stratification and Social Mobility Theory. Journal of Zhejiang Ocean University (Humanities Edition).

production in the context of modernized production in order to show its modern value and social significance.

To correctly deal with the relationship between machine production and manual production, the positive significance of machine production should not be ignored on the one hand, and the core elements of manual production should be maintained on the other. For specific handicraft categories, manual production has a natural time-consuming characteristics, for those who have a considerable amount of market demand, in the process of ensuring the realization of production and sales, it is necessary to use machine production in some of the production process links, to improve efficiency, meet the needs of the market.

(3) Management of production scale

Traditional handicrafts are labor-intensive production methods, which have a positive effect on solving the current more prominent rural employment problems, but it must be clear that the process of modern reconstruction and production of traditional handicrafts must be adapted to the rules of development of the market economy and the reality of the needs can not be blindly mass production.

One of the aims of the modern reconstruction and production of traditional handicrafts is to obtain economic benefits. In a general sense, in order to obtain more economic benefits and realize more capital accumulation, it is inevitable to expand the scale of production. However, for the production characteristics of traditional handicrafts, many of them are not suitable for large-scale production, such as shadow puppets, paper-cutting, clay sculpture, etc.; there are also some that are suitable for batch production, such as ceramics, which is an inevitable choice because of its wide range of applications and large market share. However, examples of ignoring the laws of the market and blindly engaging in mass production in order to obtain high economic income can be seen in many handicraft production fields at present, which ultimately leads to low economic efficiency and an excessive accumulation of products that cannot be sold.

As a matter of fact, the production of traditional handicrafts can be based on the production mode of "small batch, multi-specification and multi-species". This can not only alleviate the problems of overcapacity and uneven quality brought about by large-scale, batch production, but also reduce the impact on the characteristics of handicrafts. Moreover, the problems of shoddy production that arise in the process of batch production will also have an impact on the brand image of handicrafts, constrain the realization of sales, affect the motivation of producers, and create problems for the sustainability of production.

(4) The problem of decentralized operation and intensive production

Traditional handicrafts are a product of the agrarian context, relying on traditional family-based production, which itself has the attribute of decentralized production. Although the traditional way of life and social structure have changed a lot under the impact of industrialization, the decentralized family production is still a major form of organization in the reproduction process of traditional handicrafts. At the same time, in the context of the development of cultural and creative industries, many places have begun to try to establish intensive production fields such as

handicraft industrial parks and handicraft characteristic neighborhoods in order to enhance the aggregation effect of the handicraft industry. This kind of intensive production has a systematic organization and management system, a perfect production and sales network, and creative and innovative development planning compared with decentralized operation, and is generally carried out with cooperatives or companies as the core, which is of positive significance for the production of traditional handicrafts. However, for those handicrafts that are more closely integrated with traditional rural life and folklore, intensive production may cause problems to the craftsmen because it is detached from the original ecological living space, affecting their freedom and motivation.

3.2.3 External behavior : Science Diffusion

Within the framework of the safeguarding of the intangible cultural heritage established by UNESCO, each State Party re-identifies its own cultural traditions and archives, researches and improves legislation and related systems.

This section discusses the relevant behaviors regarding the external reconstruction of traditional handicrafts, with the main focus on the means of scientific communication of the cultural ecology of traditional handicrafts, which is in fact a strategy for the preservation of traditional handicrafts with the help of mass media such as the government, educational institutes, and new media. There are 2 general directions: scientific activities and tourism.

3.2.3.1 Scientific activities

(1) Protection

At present, regarding the protection of traditional handicrafts, academics have put forward many targeted methods, such as informative protection, autonomous protection, supportive protection, holistic protection, policy protection, museum protection, productive protection, maintenance protection, etc., which have been repeatedly verified in practice for more than a decade and have played a positive role in the protection of handicraft traditions.

< Documentary protection >

Documentary conservation is the most basic way of digitization, based on investigation, recording, photography, audio-recording and video-recording. On the one hand, the purpose of documentary protection is to preserve the detailed information of traditional handicrafts, such as production tools, raw materials, process and craft objects; on the other hand, it is also to lay a foundation for later research and inheritance. Especially for some traditional handicrafts that are on the verge of disappearing in modern life, informative protection is particularly important. This kind of protection not only can objectively and truly understand the corresponding handicraft traditions, but also helps to promote the regeneration and development of handicrafts when the conditions are ripe.

< Policy protection >

Along with the development of urbanization, industrialization and technological innovation, the traditional way of production and life has changed, and a considerable portion of traditional handicrafts are facing the serious threat of damage and disappearance, which requires social and public authority as the main body of policy to formulate relevant policies to protect them.

Traditional handicrafts policy is the State's planning and decision-making on the development of traditional handicrafts in the light of international cultural relations, the overall situation of domestic cultural development and the actual cultural situation of the country, and taking into account the era in which the country's culture is situated, the basic cultural contradictions and the laws of cultural development. It is based on the analysis and judgment of the cultural environment and cultural status, and has a long-term and global nature. At the same time, the policy on traditional handicrafts takes into account the fairness of the distribution of cultural resources and the stability of the social and cultural order, and is committed to safeguarding and realizing the rights of craftsmen and audience groups to cultural creation, cultural consumption and cultural participation.

< Supportive protection >

In addition to economic support for the traditional handicraft industry, it is more important to protect and assist the inheritors. In the past, the main practitioners of traditional handicrafts were called "artisans, craftsmen, craftspeople and artists", and they were the core of the transmission of traditional handicrafts. The safeguarding of intangible cultural heritage has led to the emergence of a new name, "inheritor". The term "inheritor" recognizes the contribution of the main body of traditional handicraft practice to the continuation of civilization, implying that they are not only highly skilled, but also bear the responsibility of passing on the heritage.

The support of traditional handicrafts is through the cultivation, stratification, service and management of "inheritors", which in turn performs the functions of constraining, guiding and regulating. For example, the cultivation of inheritors is the key to the continuation of traditional handicrafts, and localities are actively carrying out ICH on campuses and in communities to cultivate potential inheritors. In addition, local universities and vocational colleges have been encouraged to offer related courses and tuition fee reductions, and subsidies have been given to veteran craftspeople for apprenticeships, as well as the opening of workshops for employment in the ICH sector.

< Holistic protection of cultural ecology >

Traditional handicrafts do not exist in isolation, but have a cultural ecology on which they depend, and the establishment of a cultural ecological reserve is very necessary. The cultural ecology of traditional handicrafts can be understood from the following two aspects:

First, traditional handicrafts are mostly made of raw materials from nature, and the production process and the final handicrafts are also characterized by their conformity to nature and the times. *Secondly*, traditional handicrafts often form an important part of the production and living practices of craftsmen and gradually shape a set of industry rules and etiquette taboos. On this

basis, craftsmen complete the construction of their identities and form a network of community organizations. The community creates a philosophy of creation around traditional handicrafts and gradually develops a more consistent aesthetic sense and pursuit of values.

The above constitutes the social and cultural context for the survival and development of traditional handicrafts. In order to protect the cultural ecology of traditional handicrafts, it is necessary to protect the materials and tools of traditional handicrafts, the craft techniques and the local knowledge contained in them under the guidance of the principle of holistic protection; Protect the natural and humanistic environment on which traditional handicrafts depend; Protect the craftsmen who are the creators and bearers of traditional crafts.

< *Museum protection* >

The museum conservation method is a conservation method proposed on the basis of informative conservation, combined with the characteristics of museum display. Museums have the advantageous resources of collection, research, display and dissemination, which, combined with diversified technical means and display methods, could create a space for the survival of traditional handicrafts that are on the verge of disappearing.

On the basis of informative protection, the museum will improve the public's knowledge of traditional handicrafts by systematically sorting out the era, region, development history and change of traditional handicrafts. At the same time, through the non-utilitarian qualities of museums, relevant researchers and industry experts are organized to carry out systematic technical analysis and cultural connotation discovery of extinct traditional handicrafts, and in the process of rescuing and protecting the traditional handicrafts, reconstructing the hidden cultural cognition behind them, which is of positive significance for objectively restoring the material and cultural forms that traditional handicrafts have. For example, the 20th General Conference of the International Council of Museums (ICOM) held in Seoul in October 2004, with the theme of "Museums and Intangible Heritage", kicked off the protection of museums and traditional handicrafts.

Productive protection

"Productive protection refers to the protection mode of transforming intangible cultural heritage and its resources into cultural products with the help of production, circulation and sale in the practical process of a productive nature, with the core of maintaining the authenticity, wholeness and inheritance of intangible cultural heritage, and with the premise of effectively transmitting intangible cultural heritage skills." [35] Specifically, productive safeguarding targets handicrafts that lack the necessary production conditions, motivation, and are difficult to inherit due to changes in the natural and social environment and other relevant factors. Through necessary laws, policies and financial support, the original production process can be restored and rebuilt. In this process, the means of identification, archiving, research, preservation, conservation, protection, publicity, inheritance and development required for the protection of intangible cultural heritage

[35] Kang, B.C. (2012). Chinese Intangible Cultural Heritage Protection Development Report. Social Science Literature Press, p256.

will be implemented with a view to effective protection. ^[36] Here, productive protection is not equivalent to production or industrialization, and its ultimate aim is to preserve and perpetuate crafts through the process of production.

(2) Communication

The strong regional character of traditional handicrafts makes their dissemination largely limited by geographical location. And since most traditional handicrafts ICH come from the countryside and generally have a low cultural level, it is difficult for them to summarize their long-term accumulated creative experience and skills into a complete knowledge system for external dissemination. Although the way of teaching by word and example can pass down the ICH in a more complete and detailed way, it is subject to a lot of limitations in terms of time, space and efficiency. At the same time, in today's industrial society, the lack of practical value makes some traditional handicrafts sales shrink, and only for the purpose of aesthetic interest can not fully persuade consumers to buy. The dissemination of traditional handicrafts and ICH needs to be innovative in terms of strategy and means.

According to the 44th "Statistical Report on the Development Status of China's Internet Network" released by the China Internet Network Information Center, as of August 30, 2019, the size of China's Internet users reached 854 million, the Internet penetration rate was 61.2%, and the proportion of those who use cell phones to access the Internet reached 99.1% ^[37]. New media, as a product spawned by Internet technology and digital mobile terminals, has large capacity, real-time and interactivity.

With the rapid development of mobile Internet and digital communication technology in recent years, traditional handicrafts inheritors have begun to try new communication methods, such as short-video live broadcasting and exhibition marketing, etc., and these activities have played a certain role in the expansion of visibility and influence. However, from the point of view of the existing communication effect, the vast majority of video works are filmed and produced by non-professionals, with simple recordings and single style in content, lacking in-depth excavation of the inherent cultural heritage of traditional handicrafts y, and it is difficult to cover the huge data base behind it.

Based on diversified new media communication channels, the current promotion of traditional crafts can be divided into the following three popular modes:

First, the brand communication in the form of self-media, pushing brand culture, releasing new product advertisements and brand activities and other information;

Second, the brand borrows social networks to create fan groups, to share commodity information and user communication and interaction in the form of cultivating potential customers, attaching importance to the creation of brand reputation;

^[36] Xu,Y.Y. (2012). The role of inheritors in the productive protection of intangible cultural heritage. Guizhou Social Science, No. 12.

^[37] China Internet Network Information Center: The 44th Statistical Report on the Development Status of the Internet in China. http://www.cac.gov.cn/2019-08/30/c_1124939590.htm.

Third, the independent development of terminal APP or stationed in large e-commerce platforms, combined with the release of new products and online consumption to enhance brand awareness.

3.2.3.2 Tourism

Cultural heritage is an important foundation for ethnic tourism, but more and more intangible heritage is now being incorporated into the tourism system. "Tourism" is recognized as a tool that can help ethnic tourism destinations to maintain the tangible and intangible elements of their cultural heritage, including language, stories, songs, art, dance, rituals and customs. At the same time, heritage as a tourist commodity raises expectations of the profits it can bring, and the two are mutually reinforcing, especially in the case of "World Heritage".^[38] Cultural heritage is an important carrier for retaining historical memory, continuing local culture and sustaining national spirit, and its protection and development is an important topic in international ethnic tourism research.^[39]

Tourism, by nature, belongs to the service industry, and from the industrial point of view, it is a comprehensive industry chain integrating catering, shopping, cultural entertainment, sightseeing and accommodation, and it is characterized by dependence, impetus and foreign involvement. At present, tourism has become the third largest industry in the world in addition to oil and automobile, and tourism income has become an important component of the national economy. Tourism realizes economic benefits in the process of people's mobility and also promotes cultural exchanges and interactions. In a survey, it is shown that almost all foreign tourists who come to China nowadays come with the purpose of learning about the life and culture of local people, followed by learning about history and culture and visiting natural scenery. Therefore, in this context, traditional handicrafts, as an important cultural resource with distinctive national cultural characteristics and regional stylistic features, have become an important object of tourist consumption.

"Culture + Tourism", is a new idea in tourism development in recent years. Based on the analysis of case study data, it is found that poverty-stricken areas are affected by a combination of factors such as geographic environment, resource conditions, and actors, and that economic development is dominated by agriculture and supplemented by tourism. Guiding the economic restructuring of remote areas, combining tourism with the natural environment, folk customs & traditions and cultural creative industries, and creating an all-area tourism is a new form of rural economic development.

The involvement of the tourism industry in the development of traditional handicrafts is based on the regional characteristics of handicrafts, which represent a local feature and carry unique cultural connotations, thus arousing the purchasing interest of tourists. the relevant government departments, by actively mobilizing the creative passion of folk cultural and artistic organizations, cultivate representative cultural and artistic programs, shape local brands, and form a new mode of traditional handicrafts and cultural performing arts programs to serve the local area-wide tourism.

^[38] Vargas,A. (2018). The tourism and local development in world heritage context. The case of the Mayan site of Palenque, Mexico. *International Journal of Heritage Studies*, 24(9), p984-997.

^[39] Li,H.,& Wu,X.Y. (2022). A review of international ethnic tourism research. *Journal of Chinese Ecotourism*,12(6), p993-1006.

< *Regular way* >

In order to promote tourism development of traditional handicrafts, localities generally adopt some promotional means, commonly holding large-scale festivals, such as temple fairs in various places, the incense bag festival in Qingyang, Gansu, and the kite festival in Weifang, Shandong (Figure 38); and building theme parks ^[40] In addition, there are also folklore ecovillages, such as the Folk Culture Grand View Garden in Xi'an's Big Wild Goose Pagoda Square, which showcase local special crafts culture.



Figure 38. "Kite Festival" in Weifang City, Shandong Province, China

There are also folklore eco-villages, such as the village of puffing ash New Year paintings in Gaomi, Shandong Province, and the village of clay sculpture in Fengxiang, Shaanxi Province; and cultural eco-museums, such as the Capital Hundred Workshops in Beijing and the Jinze Craft Museum in Shanghai, which to some extent promote the combination of tourism and traditional handicrafts.

^[40] Theme park mode of tourism development is a park built specifically for tourism development in one place, through imitating folklore environment, performing folklore programs or certain activities in production and living folklore, a folklore tourism development method that demonstrates and expresses many different folk cultures in scale. See He, G.M and Wang, D.G.(2004). "Research on Tourism Development of Cultural Resources in Shandong Province". Qilu Book Society, p200.

< *Emerging model* >

(1) Rural village cooperatives, poverty alleviation workshops and industrial parks in the form of "company + farmers", the implementation of the main form of "order purchase + dividends", "land transfer + priority employment + social security", "Farmer shares + guaranteed income + dividends by shares" and other forms of interest linkage, to cultivate farmers as the main body of the brand production and consumption, to create a zone of regional tourism.

Phoenix Cultural Tourism Industrial Park

As in Phoenix County, Xiangxi, with the Miao Tujia traditional farming culture as the characteristic resources, reasonable planning and construction of Phoenix Window Cultural Tourism Industrial Park. The park takes local villagers as the main body for employment, employs non-genetic inheritors and other village elites to provide traditional craft skills training for villagers, drives the production and sales of surrounding farmers, and shares cultural dividends. Territorial tourism as a new business mode of brand extension of traditional printing and dyeing crafts in Xiangxi and its villager-led business concept has typical operational characteristics in shaping local brands, playing villager autonomy and cultivating local talents in poor counties in Xiangxi. (Figure 39)



Figure 39. "April 8" Flower Jumping Festival, the Valentine's Day of the Miao people in Phoenix, Hunan

(2) Cross-border Integration

The cross-border operation of "craft + service" highlights service-oriented cultural experience. Combined with rural cultural tourism, folk performances and handicraft experience, the products are divided into three categories according to service demand: quick-sale, experiential and modular. The products are presented as fast-selling cultural tourism souvenirs, attracting tourists' handmade experiential consumption through scenario visits, and providing DIY modular toolkit services for customers.

ICH Cultural Experience Hall

Located in Wenxing Street of Phoenix Old Town, the Xuyunge Non-Foreign Heritage

Experience Hall is planned and built by Xiang Xiuping, a non-genetic inheritor of Miao embroidery in Xiangshi Prefecture, with the mission of practicing Miao embroidery. There are 14 embroidery stations in the museum and 2 embroiderers are fixed every day to provide technical guidance. In order to let visitors fully experience the Miao culture, all visitors who participate in the experience can change into the traditional Miao costumes in the museum and embroider. After mastering the basic techniques of Miao embroidery, the museum also provides visitors with a full set of DIY Miao embroidery kits, which include a square scarf made of traditional western Hunan dyeing techniques as fabric. Visitors can also purchase "Miao embroidery + Miao silver" jewelry, "Miao embroidery + tie-dye" silk scarves and other handicrafts from the display counter.

Science and Culture Base

Xiangxi Batik Cultural Science Base is located in Wangjiazhai, Tuojiang Town, Phoenix County, established in October 2015. It was founded by Ms. Yao Liuju, who worked in the Miao District of Phoenix County for 8 years and served as the vice president of the county women's federation for 3 years, and is a provincial batik cultural science base built by the joint efforts of government and enterprises with the original intention of "bringing crafts into the home and mothers back home". The base has brought nearly 200 left-behind women into employment, and the team has developed 11 types of products such as home furnishings, clothing, scarves and wall paintings, totaling 15,000 pieces. The base receives nearly 10,000 visitors each year, providing visitors and beginners with tie-dye and batik knowledge and hands-on experience, spreading the culture of printing and dyeing while bringing traditional aesthetics back to the public and stimulating cultural consumption. It influences and drives the surrounding villagers to start their own business and is committed to building its own brand of printing and dyeing "World of Wax".

(3) Summary

The tourist-oriented development of traditional handicrafts can promote the normal circulation from production to consumption and gain economic benefits. However, at the same time, some places may change the tradition of local handicrafts in order to attract tourists and cater to them, and wholesale handicrafts from abroad for sale and other phenomena, ignoring the actual connection between traditional handicrafts themselves and local culture and ecology. On the one hand, this situation has resulted in the over-commercialization of traditional handicrafts and the loss of traditions, and on the other hand, it has also brought about the tendency of homogenization. The intervention of tourism in the revitalization of traditional handicrafts is a practicable development path, and its rise is both an opportunity and a challenge for the development of traditional handicrafts.

How to give full play to the advantages of localization, explore new paths for the development of ethnic tourism with regional characteristics, realize the integration and coordination of production, life, ecology and cultural functions of ethnic tourism sites, and promote the high-quality development of ethnic tourism sites are the starting and ending points of future research ^[41]

^[41] Li,H.(2022). A review of international ethnic tourism research. Journal of Chinese Ecotourism,12(6),p993-1006.

Summary

The inheritance and development of the traditional handicraft industry is an important part of the sustainable and healthy development of the cultural industry, as it realizes the value creation of economic organizations while constantly practicing the "creative transformation and innovative development of traditional culture", which is in line with the current market of personalized and lean cultural needs.

This chapter fully affirms the comprehensive value and development potential of handicrafts as productive forces in the context of today's social development: "ecological", "cultural", "economic", "social", "historical", "aesthetic", etc. The modern reconstruction of traditional handicrafts must get out of the set of "experience" inheritance and production, and explore its scientific connotation with modern technology, in order to promote the goal of industrialization of traditional handicrafts.

Therefore, whether it is a family workshop, a professional craft cooperative, an arts and crafts production company, an enterprise or an individual craft studio, they do not exist in isolation in the production, supply and marketing process, but present themselves in a certain area as a regional "clustering effect" with multiple forms of coexistence, forming a regional co-operative industrial form.

The sustainable development of traditional crafts in contemporary society requires long-term and multi-faceted efforts, including the investigation of craft resources, the transmission of traditional crafts, the promotion of craft education, cross-craft cooperation, the innovative development of crafts, the establishment of community aesthetics, the integration of local characteristics, the mutual integration between craftsmen and businesses, the promotion of craft experience services, the integrated marketing of craft products, and the construction of regional brands. At the same time, it also requires the interaction of government, enterprises, scholars, education, new media and other aspects, and relies on one or more traditional handicrafts to activate an emotional consensus of the whole society about traditional handicrafts, thus forming a cultural identity of the region. Under the joint action of many aspects, traditional handicrafts become a representative of cultural industry development and a symbol of regional culture, and promote regional economic development and regional revitalization. At the same time, the survival of intangible cultural heritage will be enhanced, cultural diversity and human creativity will be more respected, and the sense of community and group identity and national cohesion will continue to rise.

PART

IV

Theory Practice / Application

"Ceramics"

Explore the symbiotic and sustainable approach to territorial revitalization

CHAPTER 4

Ceramics in FAENZA

(Emilia-Romagna Region), Italy : Tradition & Innovation

In some Italian cities, especially small and medium-sized ones, ceramics have been for centuries not only one of the main economic factors of production, but also represent a fundamental element of traditional cultural identity. Starting with the Law no. 188 of 1990 for the protection of art and traditional ceramics (Italian Law no. 188 of 9 July 1990.), the promotion of dialogue between art and craft, the stimulation of international openness of artisans, the fusion between styles and knowledge, the organization of cultural projects and celebrations, have become the meeting point for urban development studies.

"Earth, water, fire and wind. Nature made Italian ceramics. The alchemy that has remained unchanged for thousands of years. It thrives on innovation: it is efficient and sustainable".

— Ceramics of Italy for Sustainability

With the collaboration of the 2022 Muse Factory ^[1] agency and the Milan-based ceramic.info ^[2] agency, the The Italian Ceramics Sustainability Communication and Promotion Program has been fully launched. The communication is globalized through digital channels and a wide range of social media activities in Italy and in Italy. The campaign aims to communicate the commitment and results of the Italian ceramics industry in the field of sustainability, while promoting the sustainable development of ceramic culture and art.

For ceramists and workshops, as well as for ceramic institutions, there is a need for innovative "tools" to better support the environment in which they operate (from local to international) and to consciously design processes of change and innovation that will create a more rewarding future for them. With the growing awareness that ceramic artisans represent a unique element of Made in Italy, and that their work for the State and the Nation is a historical story "where past, present and future are intertwined", potters and ceramicists are an invaluable cultural resource of the region, and the key to the future sustainability of Italian ceramics.

^[1] <https://museweb.it/>

^[2] <https://www.ceramica.info/en/categoria-cer/sustainability/>

Today, ceramics is a new thing of general interest to the younger generation of Italian designers and manufacturers. In the last decade, new studios and laboratories have been opened and new synergies have been created between the different players. Starting from the expertise of ceramics, from the innovation and the renewal of traditions in the new necessary developments in ceramics (3D digital, advanced technologies, e-commerce and internet marketing, sharing of knowledge, etc.), in order to be able to develop a very important sector in the Italian territory, a source of pride for Italy.

This chapter focuses on the sustainable development and symbiotic networking of the "ceramics" sector in a regional and national framework, between tradition and innovation, introducing the "FAENZA system" (Emilia-Romagna) and examining the strengths and weaknesses of the ceramics sector through industrial analysis and questionnaires, with the aim of strengthening the industrial, artistic and artisanal culture related to ceramics production and increasing technological innovation in sectors closely related to tradition.

"Thinking and acting coexist, culture becomes production and production is culture. I believe we need ceramics, today more than yesterday, as an elemental production and culture, and we need to understand - what paths the potters, institutions and operators of the sector take to support the relaunch and plan the future together." [3]

Reference source for the survey data in this chapter:

Association of Italian Ceramic Cities and Towns (AiCC) [4], Mater Ceramica [5], Confindustria Ceramica, Faenza International Museum of Ceramics (MIC), - provides data and valuable information on the ceramic industry / artisans / ceramicists / artists / designers database, updated to 2020. Mater Ceramica ,La ceramica artistica in Italia. Imprese, luoghi, scenari e prospettive (AiCC-Artex, International University, Venezia 2019) and Ceramica e nuove imprese a Faenza. Artigiani contemporanei e ricambio generazionale nel sistema faentino della ceramica (Paola Casta , Homeless Book. Faenza 208) - Basic data reference tool for a better construction of the art and handcrafted ceramics industry in Italy, especially in the Emilia-Romagna region.

[3] Massimo Isola, Sindaco di Faenza.

[4] AiCC - Italian Association of Ceramic Cities. It is an association founded in 1999 with the objectives of protecting and enhancing Italian artistic and artisanal ceramics. Its members are the Italian municipalities of "established ceramic tradition," recognized by MISE - Ministry of Economic Development.

[5] The Mater Ceramica project aims to map and document the current state of Italian ceramics, and to strengthen the competitiveness and influence of industrial, artisanal and artistic ceramics on the international market. MATER Ceramica is the first Italian experiment that attempts to combine different perspectives and studies related to ceramics: industry, craft, scientific research, museology and art. MATER Ceramica is a project of Confindustria Ceramica, with MIC International Ceramic Museum in Faenza, AiCC Italian Ceramic Cities Association and CC - Centro Ceramico in Bologna as partners. Centro Ceramico in Bologna are partners. It is the first platform to develop knowledge of the ceramics industry at a national level. <https://materceramica.org/>

" Ceramics " in Italy

(1) The city of ceramics

The subject of artistic ceramics constitutes one of the most characteristic aspects of quality craftsmanship. In its many declinations (majolica, terracotta, porcelain, ...), the production of artistic ceramics involves many areas of Italy, each characterized by its own tradition. (Figure 1)

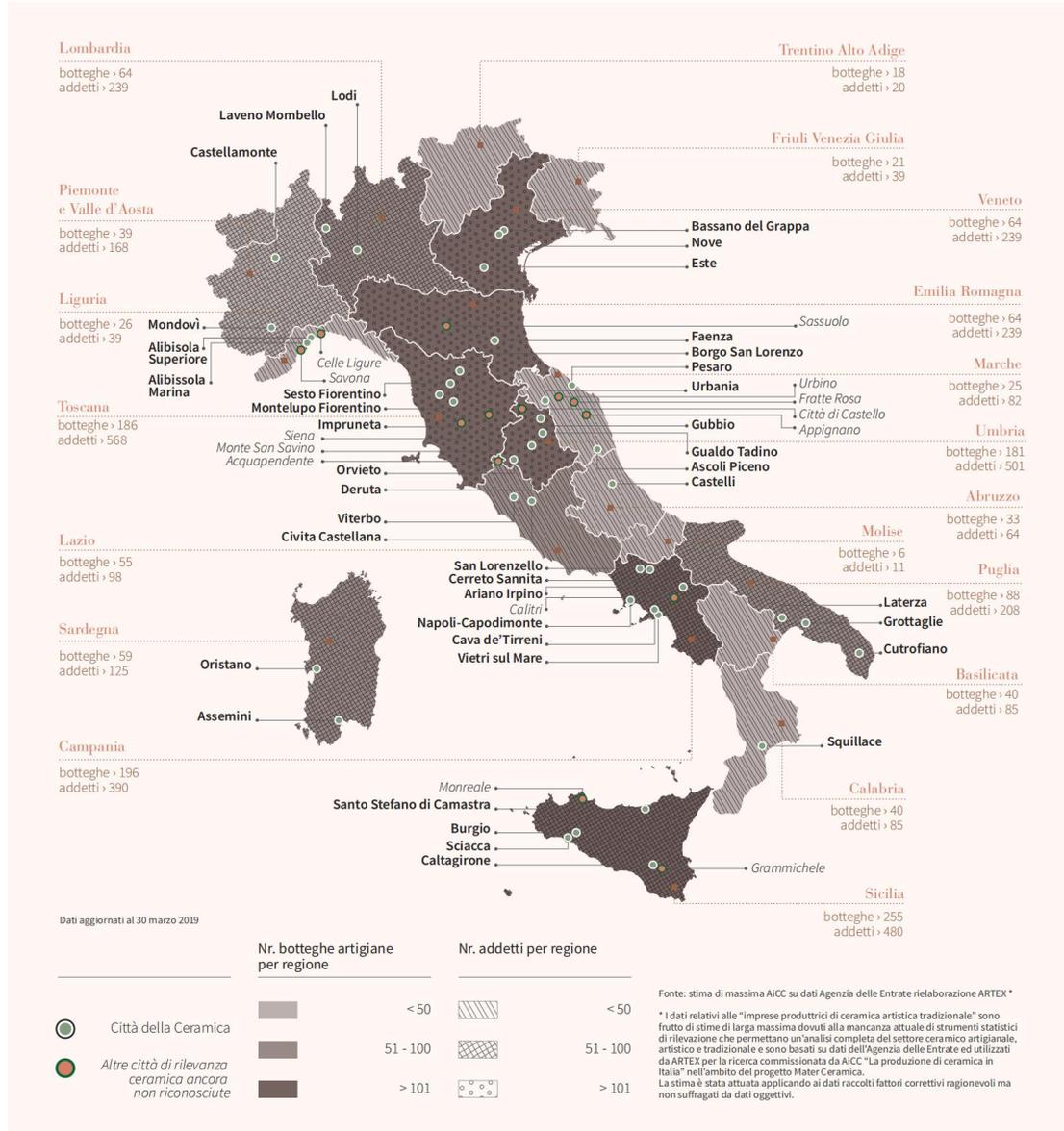


Figure 1. A contemporary image of ceramic craft production extracted from 40 ceramic traditional cities, recognized by the Ministry of Economic Development MISE.2017.

Southern regions such as Campania, Apulia, and Sicily picked up the valuable legacy of Greece and have been producing ceramic works of great artistic value ever since. So have the regions of the center, which instead owe their ancient knowledge to the Etruscans. Orvieto and Faenza have been important production centers since the Middle Ages, while Florence, particularly Montelupo

Fiorentino where ceramic production is attested from the 12th century, became a leader in this art as early as the Medici era with Grand Duke Francis I. In the mid-eighteenth century the Carlo Ginori Manufactory (1737) began to give life first to majolica and then to porcelain. Also important in the Marche region between the 15th and 17th centuries were the centers of Urbania (Casteldurante at the time), Urbino and Pesaro, where "ancient forms of inimitable grace" were produced and are still living production areas, to use D'Annunzio's words. A prestigious history to this day is that of Deruta pottery in Umbria, which finds its greatest inspiration in the long period from the second half of the 15th century through the 1600s. The north also boasts renowned centers of ceramics production, such as Savona and Albisola in Liguria, where this workmanship has very ancient origins by virtue of the numerous clay basins found in this area, or the ceramics of the Veneto with Nove and Bassano del Grappa, which experienced its golden moment in the 1700s, thanks to the discovery in Europe of the secret of porcelain.

The most important Cities for artistic ceramics maintain their own visibility and also demonstrate tourism potential. Despite the tradition, however, on the topic of Artistic Ceramics Cities over time there has been no interest in developing a reflection on the future of Ceramics Cities by institutions.

In Italy and Europe, it is the communication and distribution links with the market that are missing. In contrast to the lack of economic and cultural attention to the art ceramics industry in Italy and Europe, institutions that have been working for years on the conservation and promotion of art ceramics are resisting this situation. AiCC - Associazione Italiana Città della Ceramica (Italian Association of Ceramic Cities) is a nonprofit association, founded in 1999, whose members include 38 municipalities "of established ceramic tradition" (out of a total of 40 recognized in Italy by the Ministry of Economic Development), provided for by Law 188 of 1990, which protects and promotes national artisanal and artistic ceramics. AiCC's member municipalities are located in 15 out of 21 Italian regions, distributed from north to south and on the islands, demonstrating that ceramics is a concrete, historical and fundamental heritage of Italian art and culture.

The Association's goal is to develop a national network of Cities where significant ceramic activity has historically taken place and the implementation of actions for the enhancement of Italian ceramics, through the promotion of a pact of friendship among centers of ancient ceramic tradition.

AiCC has contributed to the establishment of Ceramic City Associations in other European nations such as France, Spain and Romania. Germany, Poland, the Czech Republic and Portugal are in the process of joining. These Associations are actively collaborating on joint development and promotion projects and in particular have since January 2014 given rise to a European Grouping of Territorial Cooperation (EGTC) "Cities of Ceramics" (Agrupacion Europea Ciudades de la Ceramica - AECT limitada, abbreviated as AEuCC), a European public legal body, in which a total of about one hundred Cities of ancient or established ceramic tradition are recognized.

During 2018, AEuCC successfully acquired two major European projects: Cerasmus+ (Erasmus+ program) and the CLAY project (within the Interreg Europe program). The Cerasmus+ project,

co-funded by the European Erasmus+ program, aims to safeguard European cultural heritage, modernize the ceramics sector and develop vocational training in the ceramics sector by developing training models based on work-based learning. The CLAY project, on the other hand, is articulated in the typical activities of Interreg projects and in this case in actions that will be imprinted for production innovation and business aspect, internationalization, design and other tools to support economic operators. AEuCC's mission is to develop territorial and transnational cooperation regarding the artistic ceramics sector, paying special attention in creating social and economic cohesion through the development of projects and services for stakeholders in the sector.

From the analysis of the goals of AiCC and AEuCC, the themes that emerge for the development of Ceramic Cities in the world are:

- Design as a tool for innovation that can open the doors of Ceramics Cities to bring in tourists and enthusiasts from all over the world;
- Digital understood as the acquisition of new skills that allow new experiments in production, but also the use of these skills to promote the products of the world of ceramics on international platforms;
- Enhancement of human capital so that the protagonists of the ceramic world actively participate in the creation of value by sharing their skills and acquiring new ones in order to be increasingly competitive internationally

(2) Industry overview

During the four-year period 2012-2015, the business types in the ceramics industry, according to the classification adopted by the Internal Revenue Service in sector studies VD18U and WD18U. On average, more than 80 % of the companies covered by this survey carry out an activity attributable to the manufacture of ceramic products for domestic and ornamental uses, a category that encompasses micro and small enterprises, mainly with an artisan vocation, producing artistic and traditional ceramics through non-serial or limited serial production processes.

These are joined, albeit in a smaller percentage, by firms devoted to the manufacture of tiles and building products, which account for less than 20% of the sample under analysis. (Figure 2)

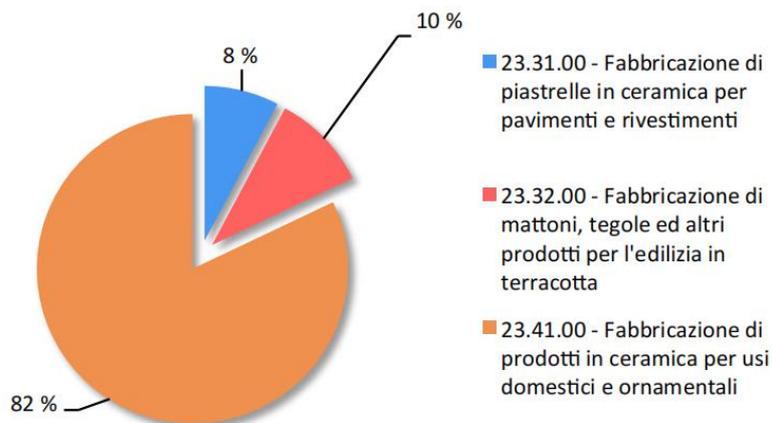


Figure 2. Breakdown of enterprises by Ateco code in the four-year period 2012-2015 (average % of individual years)

In recent years, the industry has experienced a profound crisis, which has led to a dramatic reduction in the number of companies operating in the sector. A comparison of regional and national data for 2015 with those published in the previous study for 2006 shows a significant shrinkage of the entrepreneurial base, with a 29% decrease over the decade, with above-average declines in some of the most representative regions of the sector, such as Emilia-Romagna (-39%), Campania (-35%) and Veneto (-32%). (Figure 3)

REGIONE	VALORI ASSOLUTI			VARIAZIONI %
	2006	2012	2015	06/15%
Abruzzo	62	56	37	-40,3%
Basilicata	28	23	22	-21,4%
Calabria	55	56	44	-20,0%
Campania	353	306	230	-34,8%
Emilia-Romagna	270	198	166	-38,5%
Friuli-Venezia Giulia	21	25	23	9,5%
Lazio	91	82	65	-28,6%
Liguria	47	40	29	-38,3%
Lombardia	111	93	80	-27,9%
Marche	48	37	28	-41,7%
Molise	15	9	7	-53,3%
Piemonte e Valle d'Aosta	44	58	46	4,5%
Puglia	112	119	103	-8,0%
Sardegna	106	78	66	-37,7%

Figure 3. Trends in the number of enterprises in the decade 2006-2015

But despite the industry crisis, the Emilia-Romagna and Veneto are the regions where the largest number of employees was concentrated in 2015, 20% and 15% of the total, respectively. These areas are distinguished not only by the presence of a high number of ceramic companies but also, as will be discussed in more detail in Section 1.4 - Size by number of employees, by higher average size levels of local companies compared to other Italian regions. This is followed by Tuscany (11.7 %), Sicily (9.9 %) and Umbria (9.7 %). (Figure 4)

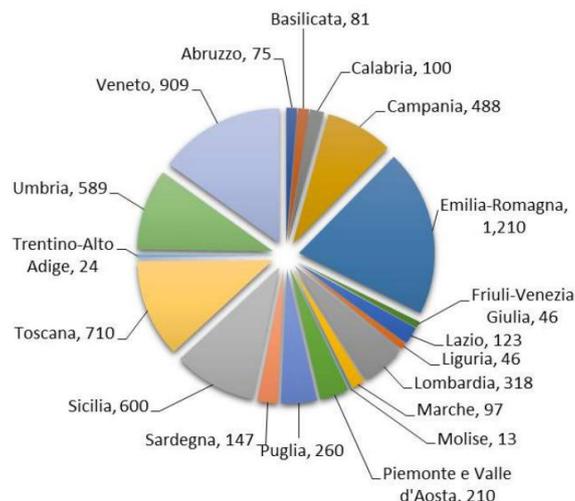


Figure 4. Employment in enterprises year 2015 (absolute values)

The number of people employed in ceramics also fell dramatically in the four-year period 2012-2015, attributable in part to the reduction in the number of active companies but also, to a lesser extent, to the simultaneous downsizing of the workforce of companies still operating in the sector. The negative trend involved all Italian regions, with the national total number of employees falling from 7,712 in 2012 to 6,044 in 2015. (Figure 5)

REGIONE	VALORI ASSOLUTI				VARIAZIONI %		
	2012	2013	2014	2015	12/13%	13/14%	14/15%
Abruzzo	151	103	123	75	-31,7%	18,9%	-38,8%
Basilicata	25	95	152	81	275,5%	60,0%	-46,4%
Calabria	126	140	119	100	11,4%	-15,2%	-15,7%
Campania	679	600	1.107	488	-11,7%	84,4%	-55,9%
Emilia-Romagna	1.592	1.429	1.326	1.210	-10,2%	-7,2%	-8,7%
Friuli-Venezia Giulia	48	61	60	46	25,8%	-0,4%	-24,7%
Lazio	158	150	135	123	-5,3%	-10,2%	-8,7%
Liguria	66	63	70	46	-4,2%	10,3%	-34,7%
Lombardia	342	423	418	318	23,6%	-1,3%	-23,9%
Marche	192	152	130	97	-20,9%	-14,1%	-25,9%
Molise	13	17	17	13	33,3%	-1,8%	-24,6%
Piemonte e Valle d'Aosta	286	271	299	210	-5,1%	10,2%	-29,7%
Puglia	292	295	281	260	1,3%	-4,9%	-7,5%
Sardegna	182	226	185	147	24,4%	-18,0%	-20,6%
Sicilia	812	697	724	600	-14,1%	3,9%	-17,2%
Toscana	900	780	861	710	-13,4%	10,4%	-17,6%
Trentino-Alto Adige	31	32	29	24	0,5%	-7,3%	-17,3%
Umbria	704	691	651	589	-1,9%	-5,7%	-9,6%
Veneto	1.111	1.085	1.030	909	-2,4%	-5,0%	-11,7%
TOTALE ITALIA	7.712	7.310	7.717	6.044	-5,2%	5,6%	-21,7%

Figure 5. Trends in the number of employees in Italy during the four-year period 2012 - 2015

Finally, looking at the composition of the labor force in the ceramic sector, (Figure 6) shows the significance of each occupational category. It was calculated by standardizing the different types of data obtained from Agenzia delle Entrate by converting them into full-time labor units, so that the different data available could be made comparable. The most significant occupational category is general laborers, who over the four-year period under consideration accounted for an average of 32 % of the total labor force. This was followed by skilled laborers and managing partners, who accounted for 17 % of the total while the contribution made by family workers did not exceed 1.50 %. As can also be seen from the graph, taking into consideration the low number of employees in the sector, no significant annual variations are observed within the different occupational categories.

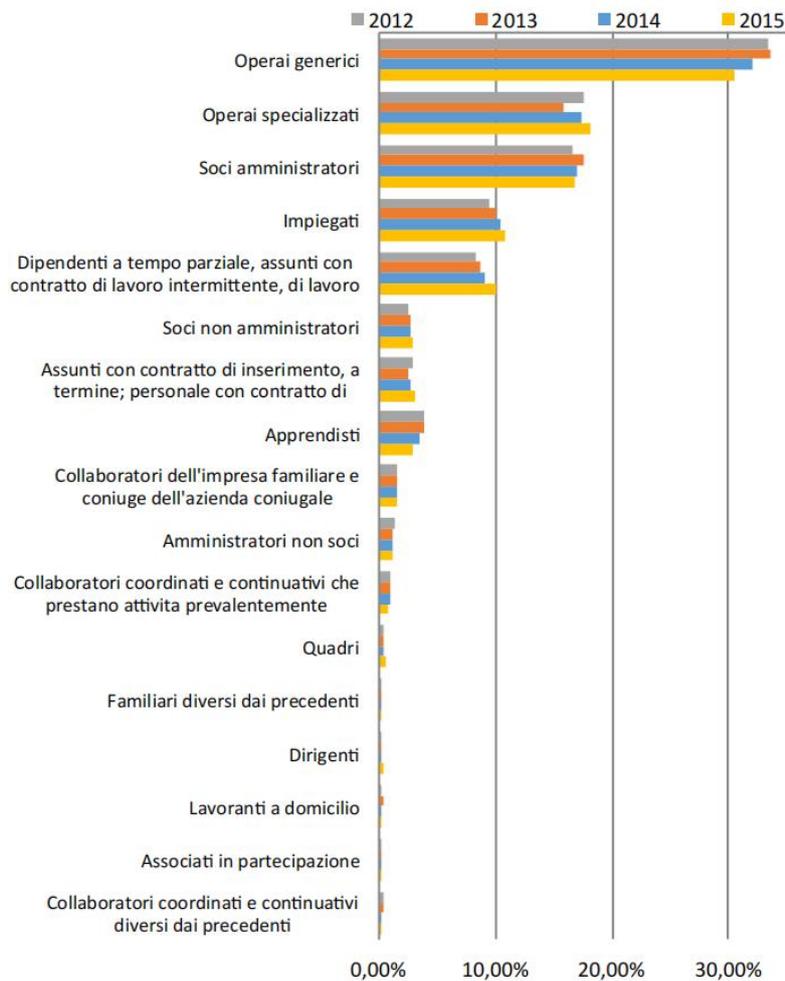


Figure 6. Trends in the average relevance of professional figures for an industry enterprise

The ceramics sector is a niche dominated predominantly by micro and small companies of an artisan nature. The average size, estimated as the ratio of the total number of employees to the total number of companies, was 3.2 employees per company in 2015, with some differences from region to region. In fact, some areas in the Northwest and Northeast, particularly Emilia-Romagna, Veneto, Piedmont and Lombardy, are distinguished by the presence of companies with a larger than average size. In these regions, the ceramics sector sees alongside artisanal production techniques, productions characterized by more mechanized processes and more standardized end

products, devoted mainly to the manufacture of ceramics for construction and furniture. Examples include the Sassuolo district in Emilia-Romagna for the production of ceramic tiles and the Vicentino district in Veneto, where the production of artistic ceramics is flanked by more typically industrial productions of terracotta and bricks for construction. (Figure 7)

REGIONE	VALORI ASSOLUTI				VARIAZIONI %		
	2012	2013	2014	2015	12/13%	13/14%	14/15%
Abruzzo	2,7	1,8	2,1	2,0	-34,1%	16,9%	-2,4%
Basilicata	1,1	3,8	6,1	3,7	245,5%	60,0%	-39,1%
Calabria	2,3	2,7	2,4	2,3	20,0%	-11,9%	-4,2%
Campania	2,2	2,0	3,9	2,1	-9,9%	95,5%	-45,8%
Emilia-Romagna	8,0	6,7	6,5	7,3	-16,2%	-3,6%	12,2%
Friuli-Venezia Giulia	1,9	2,5	2,2	2,0	31,1%	-11,5%	-11,6%
Lazio	1,9	1,9	2,0	1,9	-4,1%	5,4%	-3,1%
Liguria	1,7	1,5	1,7	1,6	-10,9%	12,9%	-5,4%
Lombardia	3,7	4,7	4,5	4,0	27,7%	-4,5%	-11,6%
Marche	5,2	3,5	3,2	3,5	-33,5%	-7,8%	8,5%
Molise	1,4	1,4	1,5	1,8	0,0%	7,1%	18,5%
Piemonte e Valle d'Aosta	4,9	4,7	5,4	4,6	-5,1%	16,2%	-16,0%
Puglia	2,5	2,4	2,3	2,5	-2,0%	-3,3%	8,6%
Sardegna	2,3	3,2	2,5	2,2	38,6%	-21,4%	-12,2%
Sicilia	2,1	1,9	2,0	2,0	-10,8%	5,3%	0,5%
Toscana	3,5	3,1	3,4	3,2	-10,6%	8,7%	-4,4%
Trentino-Alto Adige	1,3	1,2	1,2	1,2	-10,7%	4,3%	-0,8%
Umbria	3,1	3,0	2,9	2,9	-4,5%	-4,0%	2,1%
Veneto	4,7	4,5	4,5	4,2	-3,2%	-1,3%	-5,6%
Media Nazionale	3,3	3,2	3,4	3,2	-5,4%	8,5%	-7,3%

Figure 7. Trends in average enterprise size in Italian regions during the four-year period 2012 - 2015

The ceramics sector produced a total turnover of about 516 million euros in 2015, a steady decline over the four-year period 2012-2015, confirming an industry crisis related to the general crisis. The distribution of turnover trends at the regional level is highly diversified, marked by growth in Lombardy and Latium and in regions of small size and with small production (Basilicata, Friuli-Venezia Giulia) and a marked decline (between 20 % and 50 % over the four-year period) in Abruzzo, Liguria, Marche, Piedmont and Valle d'Aosta, Apulia and Trentino - Alto Adige and smaller (between 4 % and 16 %) in Campania, Emilia-Romagna, Molise, Sardinia, Sicily, Tuscany, Umbria and Veneto. (Figure 8)

REGIONE	VALORI ASSOLUTI (in euro)				VAR %
	2012	2013	2014	2015	12/15%
Abruzzo	10.094.034	6.371.804	10.037.898	5.396.116	-46,5%
Basilicata	516.427	8.774.632	9.116.985	4.511.692	773,6%
Calabria	11.499.916	11.332.221	11.467.961	11.666.541	1,4%
Campania	36.401.932	30.669.508	30.748.067	30.716.874	-15,6%
Emilia-Romagna	150.924.971	152.945.063	137.290.338	132.970.732	-11,9%
Friuli-Venezia Giulia	1.730.337	5.480.290	5.974.573	4.787.080	176,7%
Lazio	9.141.123	11.618.124	9.505.405	10.277.394	12,4%
Liguria	2.321.962	2.239.231	2.266.124	1.330.400	-42,7%
Lombardia	34.860.962	42.347.087	47.544.012	43.466.559	24,7%
Marche	12.523.710	6.704.314	4.908.919	7.841.230	-37,4%
Molise	282.265	325.949	337.352	271.658	-3,8%
Piemonte e Valle d'Aosta	29.946.467	25.230.982	26.743.144	21.964.324	-26,7%
Puglia	21.380.777	18.335.021	18.767.785	17.064.906	-20,2%
Sardegna	10.713.233	13.793.372	9.157.621	10.545.581	-1,6%
Sicilia	47.606.091	38.385.014	47.214.753	42.796.869	-10,1%
Toscana	62.454.585	55.763.071	62.244.630	57.455.848	-8,0%
Trentino-Alto Adige	1.356.715	1.099.735	1.074.006	1.029.617	-24,1%
Umbria	38.473.914	38.359.538	36.214.531	36.992.572	-3,9%
Veneto	89.243.828	83.424.922	77.280.467	74.725.446	-16,3%
TOTALE	571.473.248	553.199.878	547.894.570	515.811.439	-9,7%

Figure 8. Business volume trends by region in the four-year period 2012 - 2015

The total turnover figure for the sector, which is not too high compared to other manufacturing sectors, reflects the predominantly artisanal nature of ceramic production and the structure of the sector, which is mainly composed of micro-enterprises with medium to low profitability. In fact, in 2015, 54.7% of companies reported annual turnover of less than €50,000, 24% reported turnover between €50,000 and €200,000, and only 6.9% of companies reported turnover of more than €1 million. At the regional level, Emilia-Romagna companies have a turnover above the Italian average (€815,771 in 2015), characterized by a higher than average level of size, as already highlighted in the previous paragraphs.

From the production location profile of the ceramics industry in 1945 (Figure 9), 1974 (Figure 10), and 2017 (Figure 11), the Emilia-Romagna region has been the core area for ceramics production.

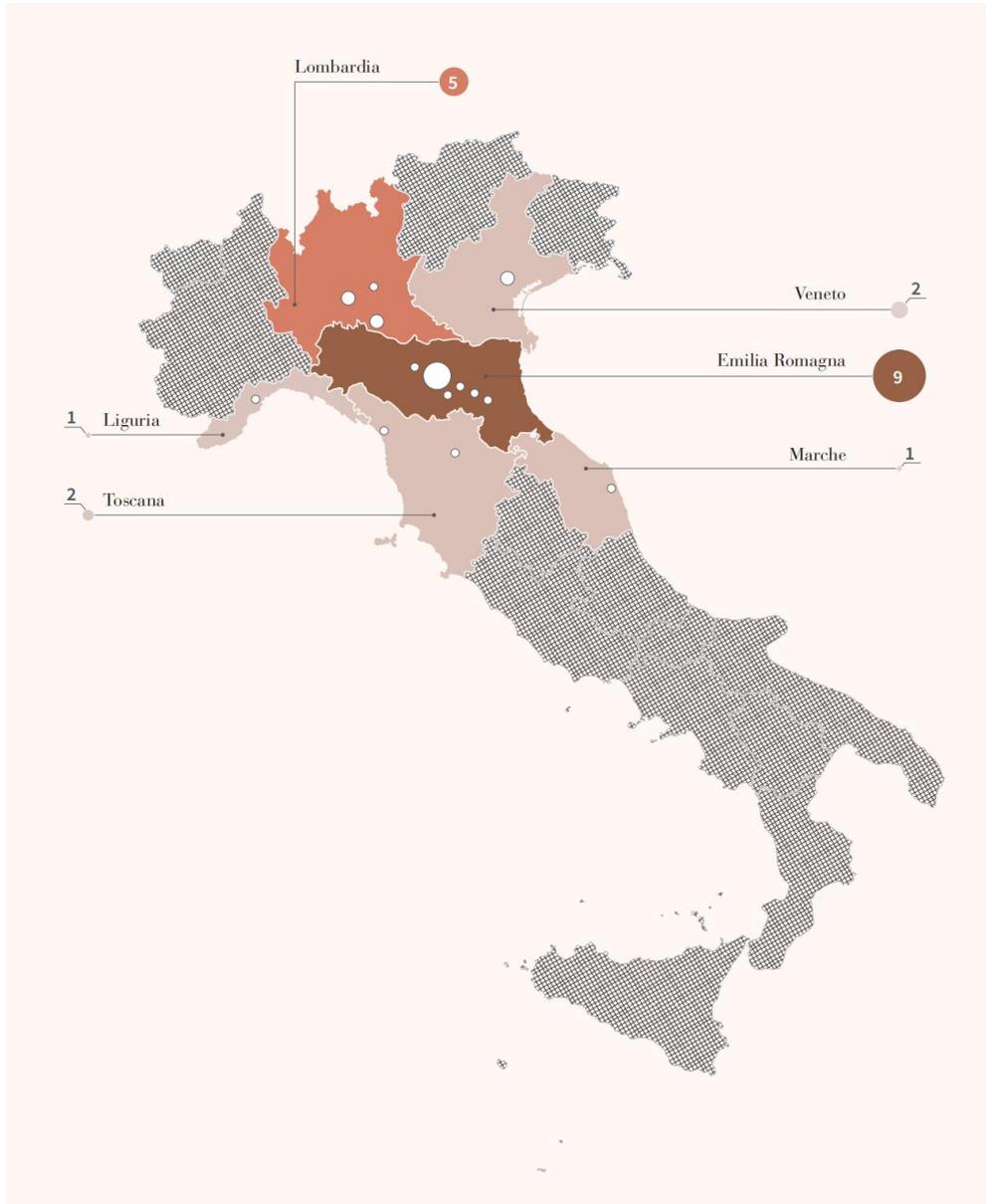


Figure 9. Map of the Italian ceramic industry in 1945

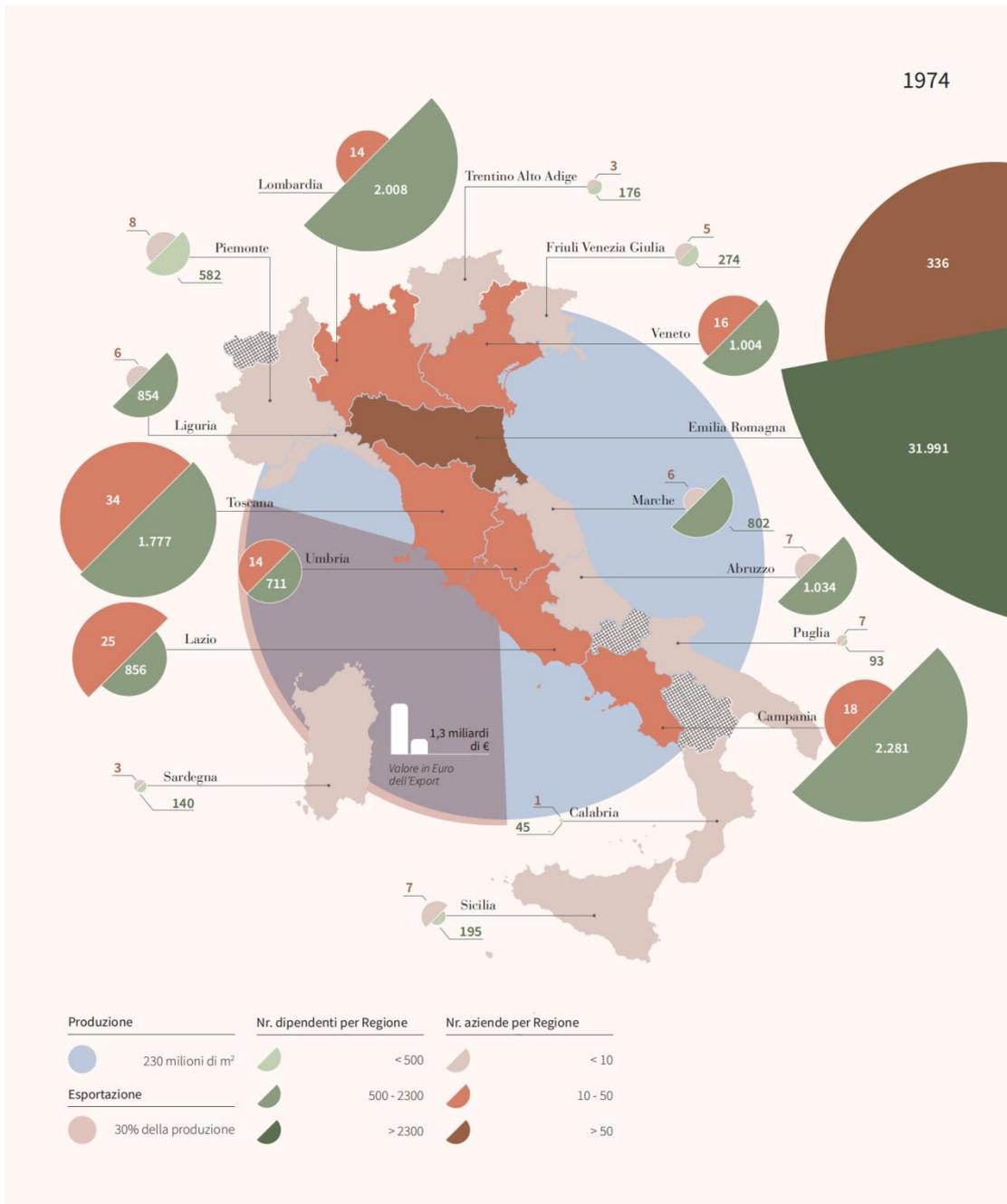


Figure 10. Map of the Italian ceramic industry in 1974

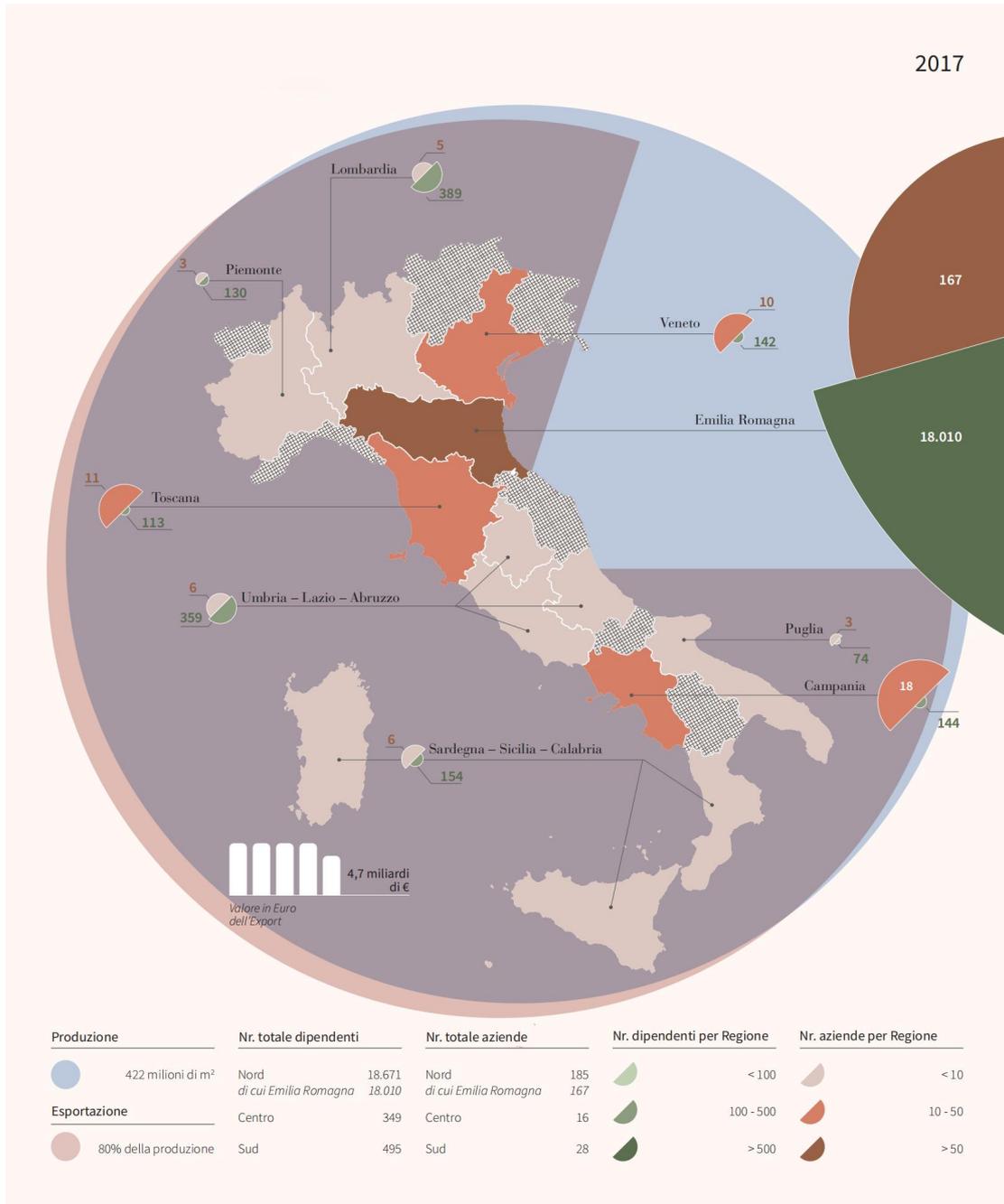


Figure 11. Map of the Italian ceramic industry in 2017

Taking into account the above ceramic industry development overview, the Emilia-Romagna region has a high level of ceramic business development and a relatively well-developed ceramic industry system, which is why the region was chosen as the research topic in this chapter.

Faenza

La città che ha dato il nome alla maiolica, faïence.

58,829 inhabitants

Year in which the city was recognized as having an ancient and established ceramic tradition by MISE: 1999

The municipality is a member of AiCC - Italian Association of Ceramic Cities

The Romagna city that gave majolica its name in Europe, faïence, and got wealth, beauty, culture, and fame in return.

A marvelous city of art, Faenza was famous as early as the Renaissance period for the production of exquisitely crafted ceramic objects, which were widely exported throughout Europe: the place name itself, in French faïence, in English faience, has established itself as a synonym for majolica in many languages.

Rising as a Roman settlement on the banks of the Lamone, at the junction with the Via Emilia, it prospered until the 2nd century for agriculture and the industry of pottery, brick and linen textiles. After a long period of decline, it recovered from the 8th century onward; around the year 1000 and then in the communal age it experienced a season of building expansion and wealth, culminating in the age of the Manfredi seignior (1313-1501). After a brief Venetian rule, from 1509 to 1797 Faenza was part of the Church State. The present appearance and atmosphere of the city, rich in valuable architecture, with a distinct Renaissance and neoclassical characterization, reflects this long historical arc.

Ceramics in Faenza (Ravenna) boasts a centuries-old tradition that continues to this day.

The city, due to the nature of the territory rich in clays suitable for molding and the strategic geographical position that made it a meeting point between the Po Valley and Tuscan cultures, was able to establish itself as a ceramic center of primary importance since the Middle Ages. Its potters knew how to develop and perfect during the first centuries after the year 1000, on simple forms generally related to domestic use, two important technical processes for the coating of artifacts: glazing and engobing.

During the medieval period the ornaments recall the decorative repertoires of the applied arts (miniature, cloth); stylized plant motifs, such as shoots with leaves or floral elements, or zoomorphic ones, such as fish and birds sometimes interpreted in a fantastic key, and also heraldic, often referring to exponents of the families that characterized the history of the city. During the Renaissance period, ornaments derived from the Byzantine world, Arab culture and also inspired by the Middle and Far East were developed. Among the various ornaments is the "peacock feather eye" ornament, which local nineteenth-century historiography believed was alluded to by ceramists as an allusion to the figure of Cassandra Pavoni, the woman loved by Galeotto Manfredi,

lord of Faenza from 1477 to 1488.

Between the end of the fifteenth and the beginning of the 16th centuries, majolica tiles, by then reaching the height of technical perfection, were adorned with motifs inspired by oriental porcelain and especially by the human figure, which gradually took on great prominence, such as the "beautiful women," until the narrative taste that came to be called "historiated," where a close link emerged between the majolica makers and the painters.

Around the middle of the 16th century the majolica makers to give a new impetus to their products and introduce a genre now called "Faenza whites," which will see the shape of objects as the protagonist. Alongside the usual forms came a varied, and sometimes extravagant, series of shapes inspired both by metal patterns. Decoration would be limited to small figures, putti, coats of arms, and light vegetable whorls, characterized by a quick, barely sketched or compendiary realization called "compendiario." The "whites" and the "compendiary" manner met with such good fortune that the Faenza masters expanded their markets by seeking new work spaces in other cities and countries; in fact, we have evidence of their activity in Turin, Verona Genoa and also in France, Holland and Eastern Europe. The fame of the "whites" was such that starting in the 17th century, and still today, majolica is called "faïence," a Frenchification of Faenza. (Figure 14)



Figure 14. Zuppiera, Fabbrica Ferniani Faenza, seconda metà sec. XVIII, maiolica

In 1693 the Fabbrica dei conti Ferniani was founded, which was to become the coterie of artistic life, a center of attraction for outsiders as well as a laboratory open to new technologies. Initially started as a continuation of the models of the "whites," the factory, towards the middle of the 18th century, would be inspired by the new fashions in vogue in European manufactures, and during the second half of the century it would also flank the traditional ways of working with the new technique of "small fire" and the adoption of the new ceramic product, of English invention, Terraglia. At the end of the 19th

century, with the Ferniani Factory closed, Faenza ceramics went through a major production crisis. The early twentieth century saw recovery with the Fabbriche Riunite di Ceramica, which reactivated the nineteenth-century factories under one management, and the Minardi Brothers' Factory.

The Faenza workshops at the turn of the century, repositories of the ancient art of ceramics, were the ground for new experiences and a training center for new generations so that not only the heritage of savoir-faire would be perpetuated but also the passion for the art of ceramics would be transmitted. Passion and skill that still characterize the city's workshops and ateliers today.

4.1.1 Data Table structure and method description

This subsection explores the qualitative and quantitative investigation of the ceramics industry in the Emilia-Romagna region. It is expected to obtain comparable data on the industry.

(1) Survey Method : Questionnaire

(2) **Subject:** The data collected through a questionnaire provided to FAENZA ceramists for in-depth analysis and extended to active ceramists in the Emilia-Romagna area. 86 Ceramists / Artisans / Artists / Designers in the Emilia-Romagna Region and FAENZA (nelle province di Bologna, Forlì, Cesena, Ferrara, Modena, Parma, Ravenna, Reggio Emilia, Rimini.) The total number of valid questionnaire responses was 61.

(3) Questionnaire structure : Structured questions

(Background Questions)

- Q1. Types of ceramic businesses
- Q2. Number of Employees
- Q3. Founding year / Age of holder
- Q4. The origin / heritage of the ceramic businesses

(Industry Questions)

- Q5. Ceramic projects developed
- Q6. Distribution methods

(Development Questions)

- Q7. Channels for learning skills
- Q8. Ceramics-related training activities
- Q9. Trainees

(Future Questions)

- Q10. Sense of territorial recognition and attractiveness
- Q11. Difficulties/problems suffered
- Q12. Positive activities to support ceramics development

(4) Questionnaire content (Figure 15)

Q1. Types of ceramic businesses

Name, Type of enterprise, Sole proprietorship, SNC, SRL, SAS, Cooperative. Other (Specify).

Q2. Number of Employees

How many employees does the business have?

Q3. Founding year / Age of holder

1> What is the year the business started? Indicate the year in which your business activity began, even if under another form and/or business name.

2> Age of the business owners?

Q4. The origin / heritage of the ceramic businesses

1> Does the business come from your own business idea or from a generational inheritance within the family?

2> Which type of statement best fits your future business situation?

- Future generations of my family are interested and able to run the business.

- Future generations of my family are not interested in the business.

- Future generations of my family are interested in the business but lack the skills to run it.

- I don't care whether the younger generations of my family will be interested in continuing my business or not.

- Other/I don't know.

Q5. Ceramic projects developed

What are your main ceramics-related business items?

Q6. Distribution methods

1> Turnover of internet sales?

2> Besides "in-store", will there be other channels of sales?

Q7. Channels for learning skills

Where did you learn the "craft"?

Q8. Ceramics-related training activities

Beside the production activity, do you carry out educational activities related to ceramics?

Q9. Trainees

Do you usually welcome trainees (high school and post graduate) to your laboratory?

Q10. Sense of territorial recognition and attractiveness

1> If you were NOT born and/or raised in the region (Emilia-Romagna), did you move to the region expressly to study/work in ceramics?

2> Do you consider it as strategic for your business to be located in the regional territory?

Q11. Difficulties/problems suffered

What are the critical challenges you encounter in your business?

Q12. Positive activities to support ceramics development

What positive activities in your opinion can help the development of the ceramic industry?

Figure 15. Industry questionnaire for the Emilia-Romagna region, also applicable to the FAENZA

4.1.2 Data Tables

Background Questions:

Q1. Types of ceramic businesses

Name, Type of enterprise, Sole proprietorship, SNC^[6], SRL^[7], SAS^[8], Cooperative, Other (Specify).

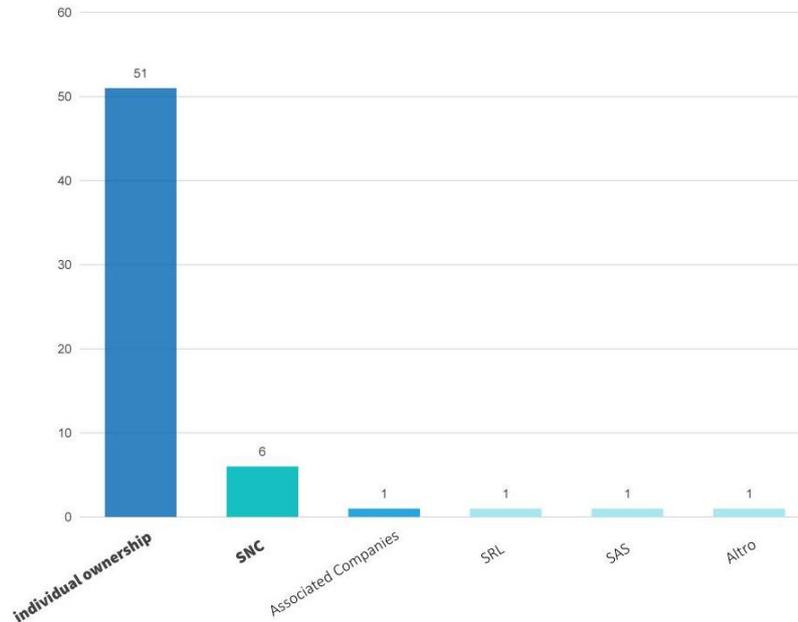


Figure 16. Q1. Types of ceramic businesses (E-R+Faenza)

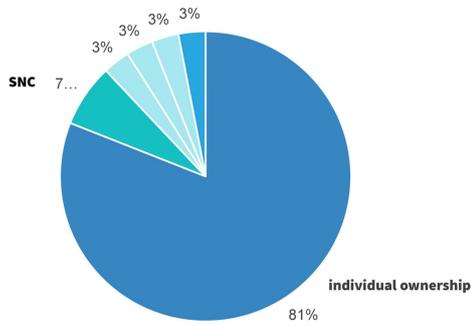


Figure 17. Q1. Types of ceramic businesses (E-R)

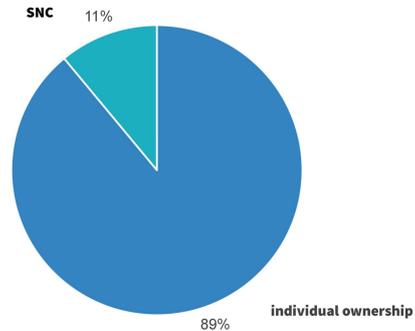


Figure 18. Q1. Types of ceramic businesses (Faenza)

^[6] SNC-Collective Name Company : An SNC is a corporation formed by two or more partners with unlimited joint and several liability who act as both directors and actual employees of the corporation. members of the SNC receive income and are taxed on that income, regardless of the true feelings of being a member of the corporation alone and the percentage of being a member. This corporate form is usually used by small and medium-sized commercial or family businesses where the initial capital contribution is minimal because, as mentioned earlier, there is no minimum capital requirement for all partnerships.

^[7] SRL-Limited Liability Company : are more structured types of companies that have corporate bodies, so they require more bureaucratic formalities and are slightly more expensive to maintain and manage. As a result, plain or simplified SRLs tend to better reflect the needs of medium and large companies.

^[8] SAS-Limited Partnership Simple: Limited partners are only responsible for their share of the capital invested in the company. Their liability is therefore limited and in this respect they are similar to members of the SRL. They are essentially equity partners with no signature rights, but can be hired within the firm.

It can be seen that the majority of ceramic companies in the Emilia-Romagna region are individual ownership (81%), the rest (18%) are classified as follows: SNC 6%; Studio Associato 3%; SRL 3%; Altro 3% ; SAS 3%. In the FAENZA region, the majority are individual ownership (89%) and SNC 11%. (Figure 16, Figure 17, Figure 18)

Q2. Number of Employees

How many employees does the business have?

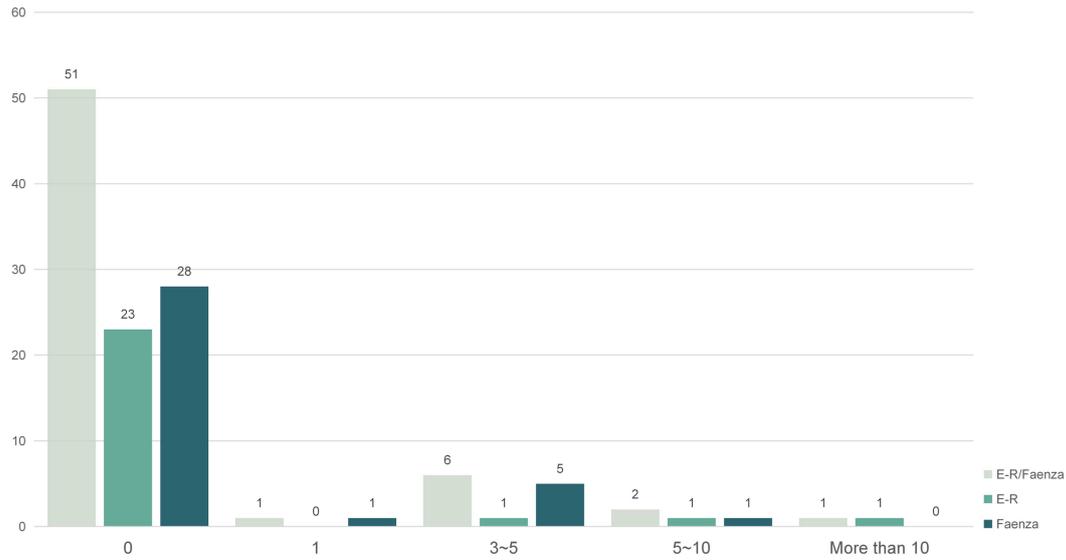
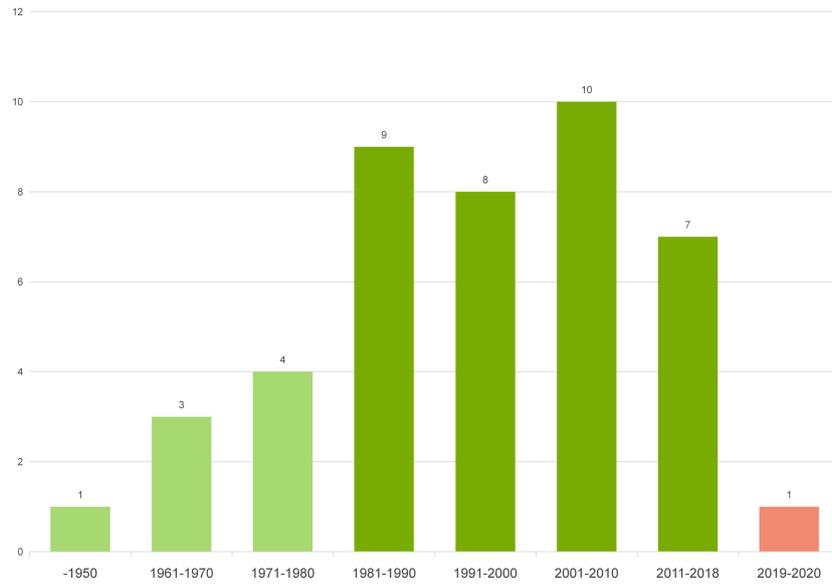


Figure 19. Q2. Number of Employees

The number of employees in Figure 19 also shows that ceramic businesses do not have dedicated employees and small-scale operations are the most common, and there are very few large ceramic businesses.

Q3. Founding year / Age of holder

- 1> What is the year the business started? Indicate the year in which your business activity began , even if under another form and/or business name.
- 2> Age of the business owners.



In Figure 20, from 1981 began was the peak of ceramic business development, but in 2019-2020 there is a sharp decrease in economic activity, likely due to the impact of covid19. Now at today it is a new challenge to recover the ceramics economy of the region.

Emilia Romagna + Faenza

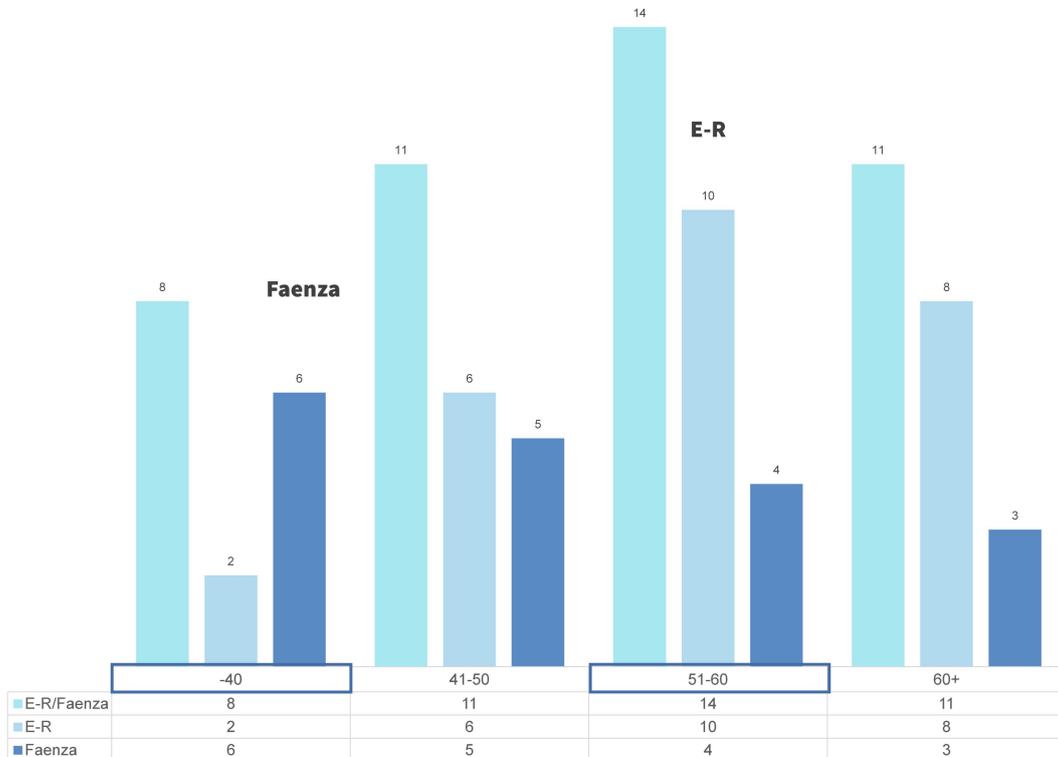


Figure 21. Q3. Age of holder

In [Figure 21](#), in terms of owner age, only 18% were under 40 and 23% were between 41-50; the highest percentages of 38% with 51-60 and 31% of ceramists were over 60, indicating a low vitality in the creation of new businesses. These data reflect one of the main problems inherent to contemporary world craftsmanship, namely the problem of generational turnover. It is difficult to pass on knowledge of the craft to younger people and staff turnover is very difficult, increasing the average age of employees. However, the FAENZA region has the highest number of ceramic artists under the age of 40, indicating a trend towards younger ceramic businesses in FAENZA.

Q4. The origin / heritage of the ceramic businesses

- 1> Does the business come from your own business idea or from a generational inheritance within the family?
- 2> Which type of statement best fits your future business situation?
 - Future generations of my family are interested and able to run the business.
 - Future generations of my family are not interested in the business.
 - Future generations of my family are interested in the business but lack the skills to run it.
 - I don't care whether the younger generations of my family will be interested in continuing my business or not.
 - Other/I don't know.

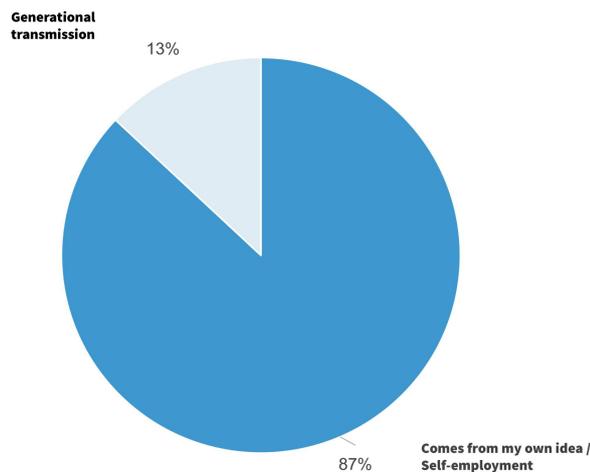


Figure 22. The origin of the ceramic businesses

In [Figure 22](#), Most of the ceramists interviewed (87%) started their business through personal motivation or with ceramic companies. Only 13% carry out their ceramic activities through generational transmission.

Generational transmission	Emilia-Romagna	Faenza
Interested and able to run the business	4	6
NOT interested in the business	0	1
Interested in the business but lack the skills to run it	4	7
I don't care	2	3
Other/I don't know	16	18

Figure 23. Q4. The heritage of the ceramic businesses Ceramic businesses and transmission to future generation

In Figure 23, 15% of the companies indicated that the descendants of the family were interested and capable of continuing the business, but most were interested but lacked certain professional skills. This reflects the need for training and education in ceramic skills, but is also an effective way to sustain the ceramic industry in the future.

Industry Questions :

Q5. Ceramic projects developed

What are your main ceramics -related business items?

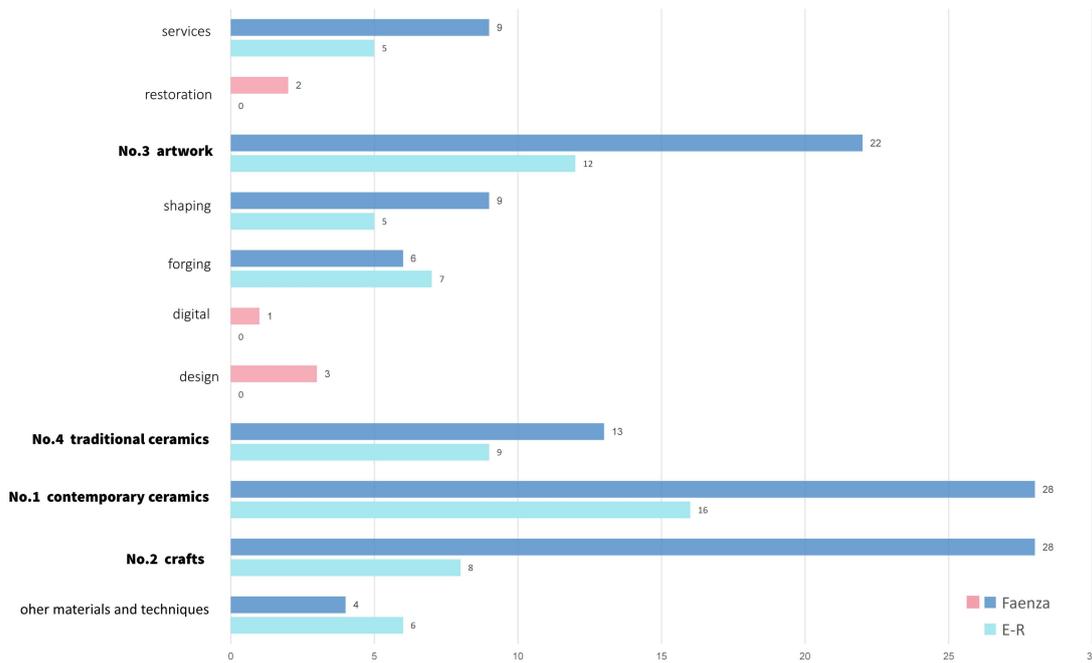


Figure 24. Q5. Ceramic projects developed

In Figure 24, the entire Emilia-Romagna area includes mostly all types of business activities in ceramics, especially in the Faenza area, the activity is more intensive and complete. The main business focus is on contemporary ceramics and ceramic crafts. But there are very few digital and design activities in ceramics, and this could be a potential breakthrough for the development in the future.

Q6. Distribution methods

- 1> Turnover of internet sales?
- 2> Besides "in-store", will there be other channels of sales?

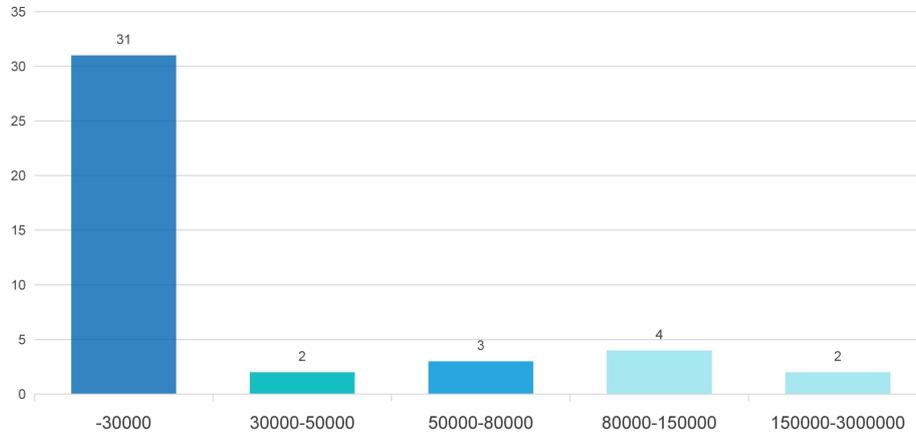


Figure 25. Q6. Distribution methods Turnover of internet sales

In Figure 25, internet sales are not strongly related to particularly high turnover. Perhaps in the future, the Internet can become one of the powerful sales channels.

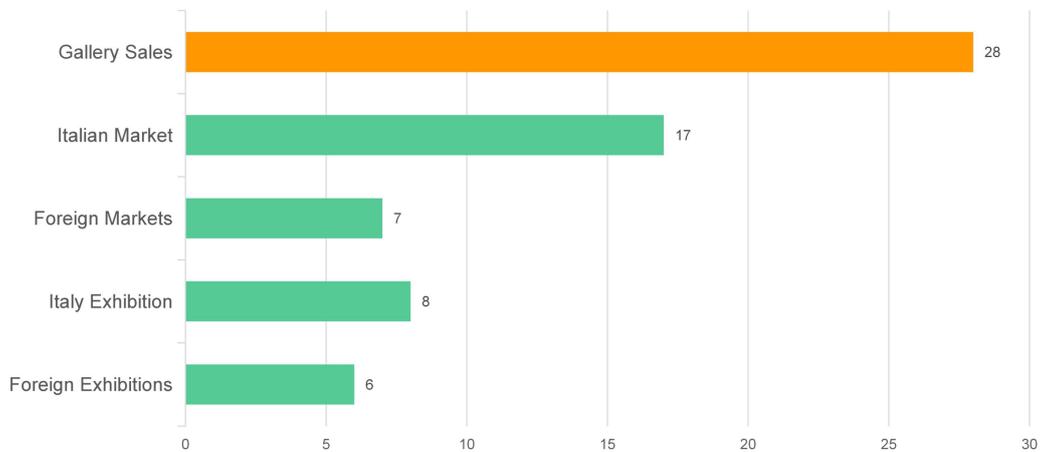


Figure 26. Q6. Distribution methods Besides "in-store", other channels of sales

In Figure 26, in addition to online sales and in-store sales, other sales channels for ceramics are dominated by distributors and galleries.

Development Questions :

Q7. Channels for learning skills

Where did you learn the "craft"?

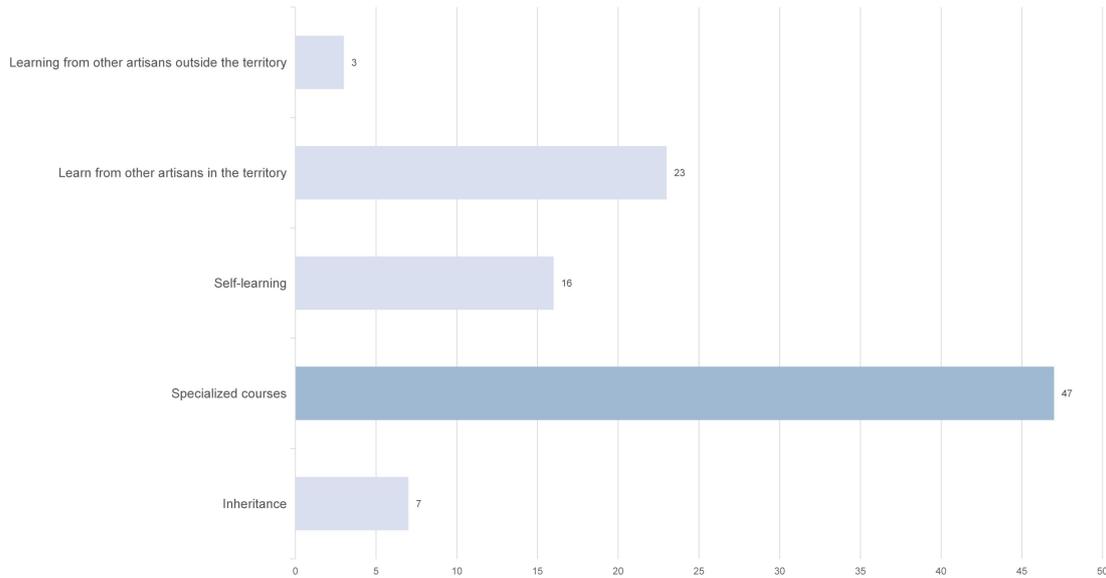


Figure 27. Q7. Channels for learning skills

In Figure 27, most of the ceramists in the region have attended specialized courses. These courses are very helpful for the sustainable development of ceramic skills in the future

Q8. Ceramics-related training activities

Beside the production activity, do you carry out educational activities related to ceramics?

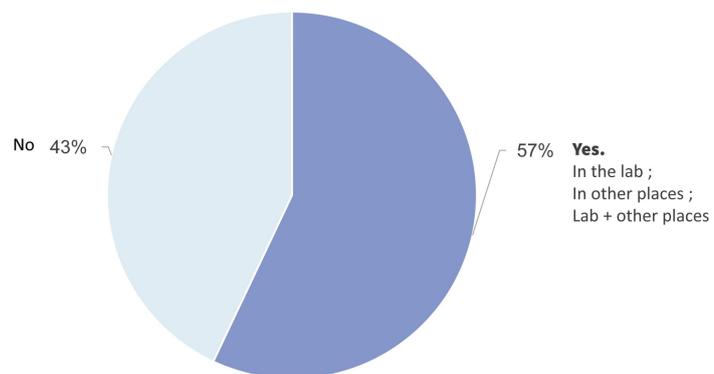


Figure 28. Q8. Ceramics-related training activities

In Figure 28, most of the ceramists active in the region are interested in taking further/in-depth courses outside of their production activities

Q9. Trainees

Do you usually welcome trainees (high school and post graduate) to your laboratory?



Figure 29. Q9. Trainees

In Figure 29, 69% of the responsible persons said they were not willing to accept trainees because generally these ceramic companies are very small, and usually consist of only 1-3 people, and do not have more energy and time to train trainees. It also indicates that this small-scale studio model limits more young people to work in ceramics.

Future Questions :

Q10. Sense of territorial recognition and attractiveness

- 1> If you were NOT born and/or raised in the region (Emilia-Romagna), did you move to the region expressly to study/work in ceramics?
- 2> Do you consider it as strategic for your business to be located in the regional territory?

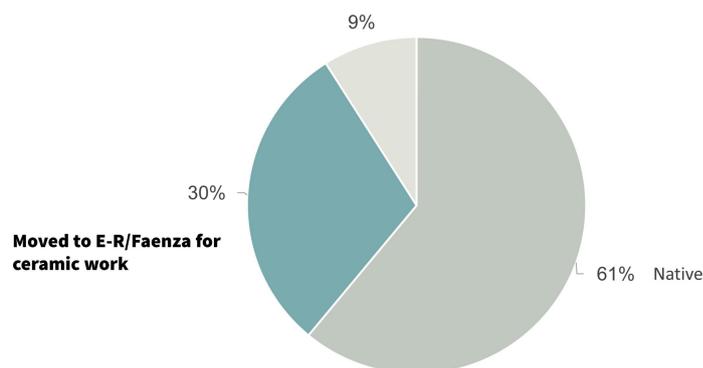


Figure 30. Q10. Sense of territorial attractiveness

In Figure 30, in addition to native-born ceramic artists, 30% of the artists moved to here, indicating that the ceramics system in this area would be a factor that could attract artisans from external and could contribute to the vitality of the ceramics industry in this place.

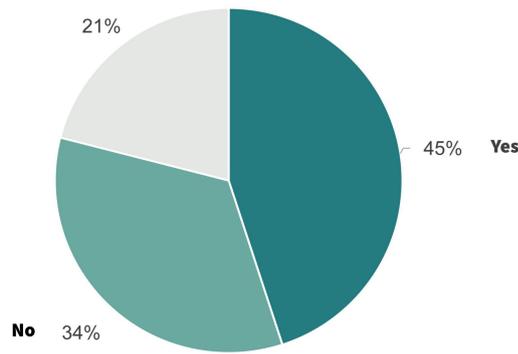


Figure 31. Q10. Sense of territorial recognition

In Figure 31, almost half of the ceramists are aware of the importance of the regional factor and believe that operating in this area can bring positive effects to their ceramic business.

Q11. Difficulties/problems suffered

What are the critical challenges you encounter in your business?

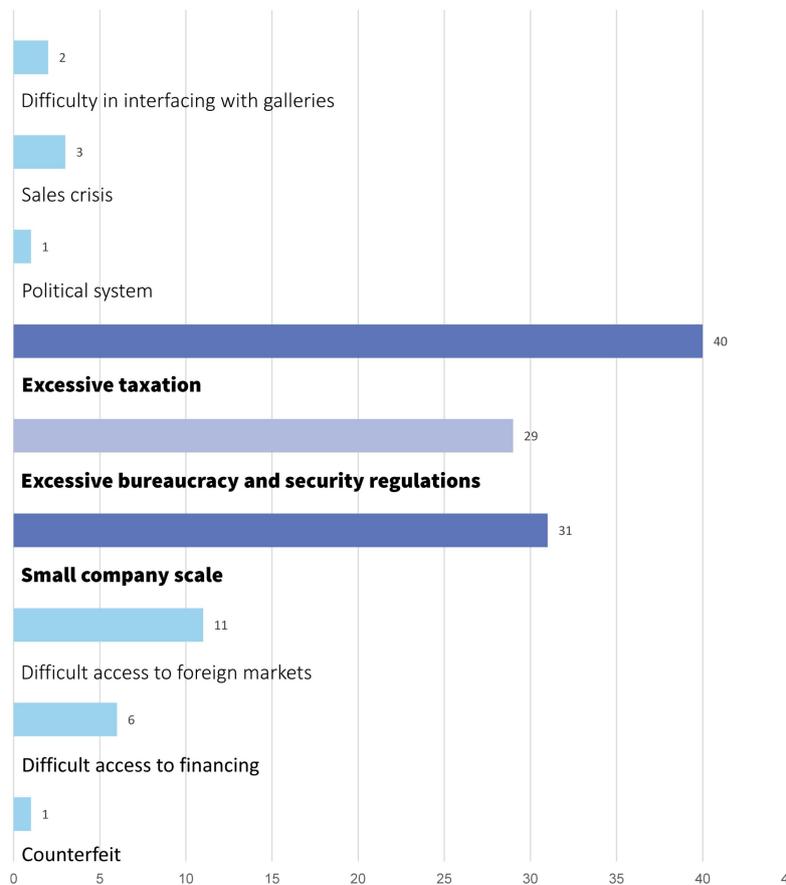


Figure 32. Q11. Difficulties/problems suffered

In Figure 32, the three most criticized elements are: excessive taxation (47), too much bureaucracy and security regulations (29), and too small size of companies (31). The flat rate system adopted by the current system, although it promotes the way to open new VAT numbers, on the other hand it hinders the degree of development of companies.

Q12. Positive activities to support ceramics development

What positive activities in your opinion can help the development of the ceramic industry?

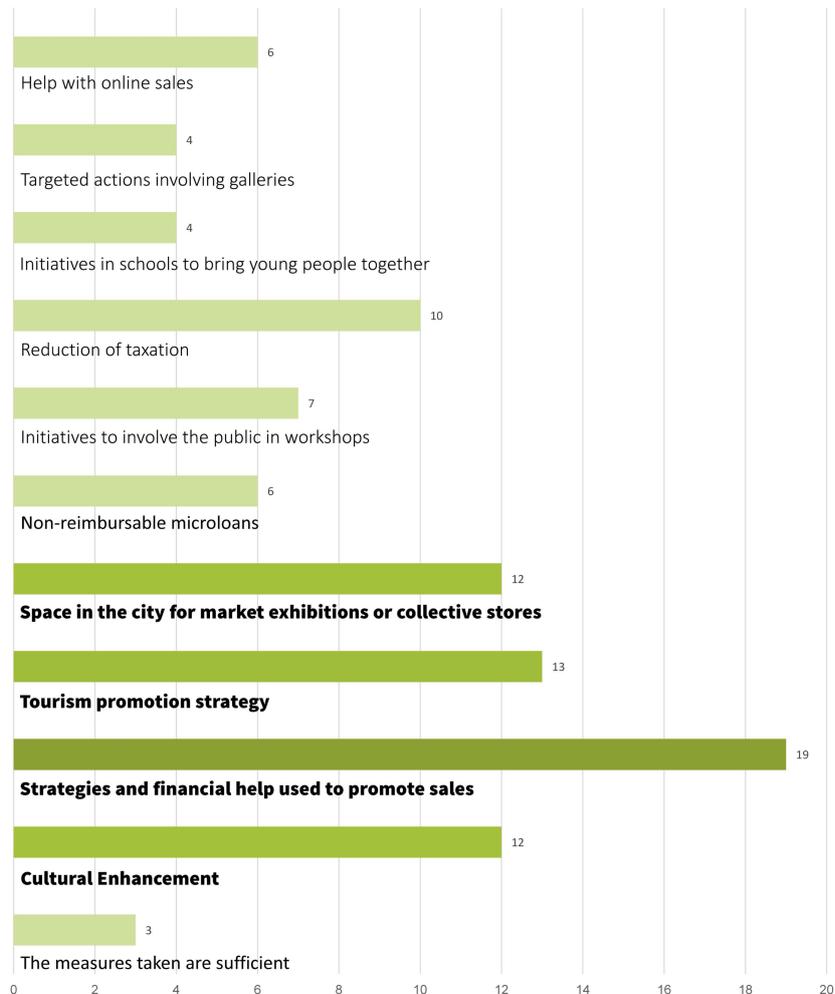


Figure 33. Q12. Positive activities to support ceramics development

In Figure 33, for the positive direction of the ceramic industry, the artisans asked to be able to have spaces in the city for marketing and sales to display and promote their products. At the same time, most artisans want financial help from the government to actively organize tourism and cultural city events, and a "sharing strategy" would be welcome to boost the economy.

4.2 Initiatives between tradition and innovation

This section discusses traditional and innovative approaches to the development and marketing of the ceramic industry, divided into five main directions: (Figure 34, Figure 35)

- *Fairs and Ceramic Festivals*
- *Gallery and Museum*
- *Collaboration with Design*
- *Digital Platforms*
- *Advanced Training*

Traditional Channels		
Modes	Events	Beneficial
Fairs and Ceramic Festivals 	<ul style="list-style-type: none"> - Argilla Italia (Faenza) https://www.argilla-italia.it/ - Buongiorno Ceramica! Festa diffusa della Ceramica (Italia) https://www.buongiornoceramica.it/home/buongiorno-ceramica/ - La Mostra Mercato Made in Italy (Italia) https://www.enteceramica.it/ - Festa Internazionale della Ceramica Montelupo (Italia) https://toscananelcuore.it/xxii-festa-internazionale-della-ceramica/ - Eunique Karlsruhe (Germania) https://www.nmessen.com/eunique/ 	<ul style="list-style-type: none"> - Improve handicraft skills - Promote cultural communication in ceramics - Promote tourism business - Improving economic income - Increase cultural attractiveness - Increase local popularity
Gallery and Museum 	<ul style="list-style-type: none"> - Officine Saffi (Milano) https://www.officinesaffi.com/ - Madeinbritaly Art Gallery (Londra) https://www.madeinbritaly.com/ 	<ul style="list-style-type: none"> - Promote ceramic academic communication - Good sales channel for ceramics - Exhibition to attract tourists

Figure 34. Traditional Initiatives

Innovation Channels		
Modes	Events	Beneficial
<p>Collaboration with Design</p> 	<ul style="list-style-type: none"> - Milano Makers (MiMa) (Milano) http://www.milanomakers.com/ - Premio Faenza (Italia) https://premiofaenza.micfaenza.org/ - Ceramics Now, 60° Premio Faenza Special Edition https://www.culturabologna.it/events/ceramics-now-60-premio-faenza-special-edition - FOS Ceramiche https://www.fosceramiche.it/ 	<ul style="list-style-type: none"> - Cross-border cooperation (Craftsmanship integrated with digital technology) - Design Criticism and Reflection - Innovative design of ceramics - Promotes complex research in academia - Aesthetic connotations are diversified - Incubating new ceramic projects
<p>Digital Platforms</p>	<ul style="list-style-type: none"> NO.1 Facebook NO2. Instagram NO3. You Tube NO4. Linked In (19%) NO5. Twitter (13%) NO6. Google Plus (13%) NO7. Pinterest (7%) NO8. Snapchat (3%) NO9. WeChat (2%) 	<ul style="list-style-type: none"> - Enrich ceramic marketing mode - New market for ceramics - Diversified promotion methods
<p>Advanced Training</p> 	<ul style="list-style-type: none"> - Corso ITS https://www.indire.it/progetto/its-istituti-tecnici-superiori/ - Corso IFTS (Istruzione e Formazione Tecnica) https://formazionelavoro.regione.emilia-romagna.it/rete-politecnica/approfondimenti/istruzione-e-formazione-tecnica-superiore-ifts/percorsi-2022-2023 - FACC (Faenza) https://www.facc-art.it/ - CERASMUS+ https://cerasmus.eu/ - L'Associazione Mondial Tornianti "Gino Geminiani" https://www.mtgg.it/chi-siamo/ 	<ul style="list-style-type: none"> - Promote employment and alleviate social conflicts - Increase the reserve of technical personnel in the ceramic industry - Improving the skills of professionals (shaping, decoration, ceramic art history, marketing skills) - Assist self-employment - Activate innovation in ceramic craftsmanship - Establishing laboratories, corporate cooperation - Promote sustainable development of the ceramic industry

Figure 35. Innovative Initiatives

4.2.1 Fairs and Ceramic Festivals

In the context of the 2020 health emergency, the National Artistic Craft Alliance, formed by the supporters of the "International Artistic Craft Charter", highlights how the art and traditional craft sector is in a situation of extreme vulnerability, endangering the survival of a very important cultural heritage, traditions and techniques handed down over centuries, which contribute to a large extent to define Made in Italy and the image of Italy in the world. Among the themes and possible courses of action highlighted in the call are, on the one hand, the development of marketing strategies and opportunities for Italian craftsmanship and, on the other hand, the greater integration of Made in Italy with national culture occupying an important space and tourism system.

The "Fairs", "Market Trade Fairs" and "Ceramic Festivals" held at local, national and international levels have helped to raise the level of craftsmanship, culture and tourism, and have contributed greatly to the country as a traditional channel, becoming a new opportunity and challenge in such a new period.

- *Improve handicraft skills*
- *Promote cultural communication in ceramics*
- *Promote tourism business*
- *Improving economic income*
- *Increase cultural attractiveness*
- *Increase local popularity*

Argilla Italia (Faenza)

Argilla Italia is an international ceramics festival and market fair that takes place every two years on the first weekend of September in Faenza (Ravenna, Italy). Since the first edition in 2008, the city of Faenza has welcomed potters, artists and professionals for a long weekend dedicated to ceramics. Argilla Italia gives visitors a pleasant stroll through Faenza's historic center, among the stands of international exhibitors (in 2016, more than 20 countries were represented) who showcase their best artistic and handcrafted ceramic products, from art, sculpture, design, furniture accessories, home furnishings and fashion accessories. There are also numerous cultural events alongside the market exhibition that make up the festival dimension, including the Mondial Tornianti (a historic international potter's wheel competition), exhibitions, spectacular night firings in open-air kilns, concerts, children's ceramic activities, workshops and conferences.

(Figure 36)



Figure 36. Argilla Italia - International art and craft ceramics market exhibition

Argilla Italia has established itself, over the past editions, as one of the main ceramic festivals at the European level: an appointment of great appeal for enthusiasts and the public, but also an important moment of meeting and confrontation between the operators of the ceramic system and a unique opportunity to network nationally and internationally. All of this in the setting of Faenza, one of the world capitals of majolica (from which the name Faïence originates), a city whose

cultural identity is strongly linked to ceramic production, which even today represents a point of reference in this field on a European and world level.

Argillà Italia was founded in 2008 as a spin-off from the French "mother" event Argilla, which has been held in Aubagne, near Marseille, since 1991, carrying forward the high quality of exhibitors, audience and cultural program, offering a truly international look at contemporary ceramic production. Argillà Italia is organized by Fondazione MIC - Museo Internazionale delle Ceramiche in Faenza, together with the Municipality of Faenza and in collaboration with AiCC - Associazione Italiana Città della Ceramica.



Buongiorno Ceramica! Festa diffusa della Ceramica (Italia)

Buongiorno Ceramica is an extensive celebration of Italian ceramics. The two-day event allows people to freely explore Italian art and handmade ceramics, between ancient traditions and new emotions. Buongiorno Ceramica is a project conceived and organized by AiCC - Associazione Italiana Città della Ceramica, held every year since 2018 on the third weekend of May. Buongiorno Ceramica makes the art of modelling, firing and glazing the most joyful and colorful spring weekend event, an ideal but not only creative journey through Italian handicrafts, art and artists' studios, renewing traditions, but also a comparison between traditional handicraft masters and young designers.

Small historical centers, places of artistic and landscape value, museums, studios and laboratories, workshops, kilns, artists and artisans, all sewn together from the story of Italian artisans, slowly enjoyed. buongiorno Ceramica is a travel experience for artisans, which is rediscovering a very special "out of town trip The pleasure of "getting out of town". Enter a workshop, meet the people who make the models, fire and glaze them, share stories of their experiences, buy and exchange, and work to give new life to the Italian ceramic industry.

La Mostra Mercato Made in Italy (Italia)

The "Made in Italy 2021: Italian ceramics look to the future" exhibition market is organized by the Municipality of Faenza in collaboration with Ente Ceramica Faenza and AiCC - Association of Italian Ceramic Cities Faenza C'entro. On September 4-5, 2021, more than 100 potters from all over Italy converge on Faenza's historic central square with ceramic pieces and objects to experience traditional culture in a journey of craftsmanship, art, design, home furnishings and fashion accessories.

In addition to the market exhibition, a series of events will be held in the city this weekend with the theme of ceramics. With "Made in Italy 2021", Italian ceramics look to the future to enhance the country's excellence. (Figure 37)



Figure 37. On September 2 and 3, 2023, MADE IN ITALY, the market exhibition dedicated to Italian ceramics, returns to Faenza.

Festa Internazionale della Ceramica Montelupo (Italia)

The International Ceramic Festival was born 27 years ago in Montelupo Fiorentino, a small town on the outskirts of Florence, with the aim of reinforcing a thousand years of history discovered in the late seventies and early eighties. This is thanks to the discovery of the so-called Pozzo dei lavatoi, an ancient place that, after ceasing its function, was used as a landfill by the local furnaces. The history of the Montlupine manufacture was restored and reconstructed by excavating layer after layer. Montlupine has always been the center of ceramic production in the city of Florence, and the objects made here decorate the tableware of the most important Florentine families. The festival was created to celebrate and promote this story. In 1993, the municipality of Montelupo Fiorentino planned a major event to raise the profile of an important local tradition: the International Ceramics Festival, showcasing all aspects of ceramics. In view of the great success achieved, it was decided to make it a regular festival of excellence during the third week of June. In the following years, this ceramics festival became one of the most important artistic and cultural events in the province of Florence.

There are art exhibitions with ceramics from all over the world, laboratories, special visits and competitions. The whole town comes to life with events and occasions which celebrate the important local history and above all to present its best contemporary productions. Visiting Montelupo Fiorentino in June means immersing oneself in a unique atmosphere of art, creativity and performance but also of taking the opportunity to wander through the city streets full of food and handicraft stalls or participating in the many activities on offer. Through the participation of the Academy of Ceramics, the most important local production centers and national and international artists, the festival is internationally renowned as an important cultural project centered on rediscovering tradition, strengthening the present and looking to the future.

4.2.2 Gallery and Museum

Art galleries and museums turn out to be the ideal places to sell design objects. Among the best results are those art galleries and museums located in tourist destinations or cities of ceramic culture, where popularity and visitor flow are important reference factors.

- *Promote ceramic academic communication*
- *Good sales channel for ceramics*
- *Exhibition to attract tourists*

Officine Saffi (Milano)

Since 2010, Officine Saffi has been promoting and enhancing art, design and high craftsmanship with a focus on the medium of ceramics, in a context of interaction between different sectors of the arts. This mission of his now happens through the Foundation of the same name, a nonprofit organization that is committed to supporting artists, accompanying them in the complex processes of production, promotion and enhancement of their work. Fondazione Officine Saffi aims to be a meeting center between art and the public, designing and implementing educational and training paths, with a view to spreading knowledge. Enhancing the culture and traditions of the Italian territory, promoting a vision of interculturality and the mobility of artistic projects, is at the heart of the activities of Fondazione Officine Saffi.

Madeinbritaly Art Gallery (Londra)

The gallery was born in 2016 out of a faentine's passion for the decorative arts. Marco Venturi, who grew up in a city where ceramics plays an important role, wished to transfer his passion to the British capital, where he currently lives. The project, which involves artists, designers and artisans of Italian and English origin, is ideally connected to that search for synthesis between aesthetic value and industrial production of artifacts, so typical of the history and culture of both geographical areas. Madeinbritaly Art Gallery showcases contemporary applied arts (ceramic, glass, wood and textile objects) and collectible design, with the aim of reviving the link between Italy and Britain, two nations that sought a synthesis between aesthetic value and industrial production of artifacts.

It pursues two main themes: one purely decorative, including unique pieces or very limited editions by contemporary artists and makers, the other in centered on exquisite utilitarian objects created by contemporary designers. In addition to exhibiting works by established artists and designers, the gallery is also an experimental platform for emerging artists and designers using from ceramics, glass, wood, and textiles.

4.2.3 Collaboration with Design

The relationship between the world of art ceramics and the world of traditional design can be contradictory due to the fixation of many craftsmen on tradition. The designer therefore plays the role of a fulcrum, as he is able to unravel traditional themes in a new aesthetic language and apply

them to the product. Cooperation between the ceramic industry and the design community is a new channel for cultural communication and product innovation.

- *Cross-border cooperation*
(*Craftsmanship integrated with digital technology*)
- *Design Criticism and Reflection*
- *Innovative design of ceramics*
- *Promotes complex research in academia*
- *Aesthetic connotations are diversified*
- *Incubating new ceramic projects*

Milano Makers (MiMa) (Milano)

Milano Makers (MiMa) was born in 2012. The concept is design, culture creator, design of everything (DoE), creative city. As the global crisis has forced many to revisit the concept of work, the culture of self-production is spreading more and more, thanks to the potential offered by the web. By its very nature, the process of change is multidisciplinary, multifunctional and transversal. This process of change in the production field is called Industry 4.0 and its goal is to improve working conditions by simplifying and increasing the productivity and quality of production in factories. The changing needs in terms of mobility, environment, communication and energy efficiency combined with flexible work and the consequent hybridization of the workplace find the perfect combination of these new demands in the smart city concept.

Milano Makers (MiMa), now in its seventh year of activity, has over the years created a community of creators in the field of independent design, especially in the area of Independent Makers. For MiMa Culture Makers, this means not only combining handcrafted skills with digital technologies that contribute to the production of prototypes, unique pieces and small collections, but also facilitating the exchange of knowledge between creators. In this spirit, last November, Mima launched the Milano Makers Factory, dedicated to artists, designers, graphic artists and independent creators registered with the association.

In 2015 the design collision with ceramics, with the theme "Ceramics, Food and Design Quando i designers incontrano i maestri ceramisti", the exhibition was curated by the Deputy Mayor of Faenza and Cultural Councillor Massimo Isola, Claudia Casali, Director of the International Ceramics Museum in Faenza, Cesare Castelli, President of the Milan Makers Factory, and Maria Cristina Hamel, Executive Committee of the same association. Hamel formed as curator of the exhibition, coordinating 20 renowned designers (10 men and 10 women) who collaborated with 20 of Faenza's most important ceramic workshops to create objects on the theme of glazed ceramic food containers.

Premio Faenza (Italia)

Established in 1932 with a regional dimension on the initiative of the Faenza Museum and the patronage of the E.N.A.P.I. (Ente Nazionale Artigianato e Piccole Industrie), the competition was part of a complex of initiatives of a fair-promotional nature, which Faenza had implemented under the name of Settimana Faentina. The Faenza Prize originated from the Faentina ceramic tradition and was part of the design of Gaetano Ballardini, who had already established in the station of the Museum (1908) to hold international, periodic exhibitions of ceramics. In 1938, the Faenza Prize became, with a national character, the first event in this field that was being inaugurated in Europe with a precise characterization, a periodic cadence, and no commercial purpose. The competition was interrupted due to the war from 1942 to 1946. (Figure 38)



Figure 38. The 62nd Premio Faenza

The Faenza Prize remained on an annual basis until 1987 and became biennial from 1989. In 1963 it became international in character. It has been from the beginning, an important moment in the valorization, renewal, and promotion of ceramics from both the artistic and decorative, functional, and furnishing aspects and has given impetus to complex research, not only aesthetic, but also concerning experiences in the field of clay technology, glazes, and firings borrowing them from industry and involving back to industry itself in the design of objects and tiles. It has also always allowed an interesting comparison between ceramics and contemporary art and sculpture.

Ceramics Now. 60° Premio Faenza Special Edition

The historic international competition for contemporary art ceramics, the Faenza Prize, has been running for 80 years - for 60 editions. The first national edition was produced in 1938 and has been an international edition since 1964. It is one of the most recognized competitions in the world and has been a fundamental catalyst for the transformation of the concept of ceramics as a purely artisanal material into a "superior" material for artistic sculpture, both for the public and the art world. Over the years, the competition has witnessed the participation of Lucio Fontana, Leoncillo Leonardi, Angelo Biancini, Guido Gambone, Pietro Melandri, Carlo Zauli, as well as foreigners Eduard Chapallaz, Sueharu Fukami and other The participation of outstanding personalities, who created not only the history of ceramics 20th century, but also the century of sculpture and painting.

To celebrate its 60th edition, MIC has developed a special program: in 2018, the competition will be transformed into an international biennial of contemporary ceramics, invited by invitation and curated by international art critics. Bringing together the most innovative contemporary art studies by internationally renowned masters and recognized young talents.

FOS Ceramiche

FOS Ceramiche was founded from an idea of Piero Mazzotti and Andri Ioannou as a manufacture of art and design in Faenza, a city that is synonymous with majolica all over the world, and whose reputation as a privileged place for this production dates back to the thirteenth century. In almost thirty years of activity FOS Ceramiche treasured an unparalleled technological heritage, specialized in the processing of porcelain, material whose peculiar construction gives objects matchless technical and aesthetic characteristics. The long and meticulous preparation of the models makes it possible to appreciate, once the product's been completed, the beauty of the composition, the perfection of the forms and the accuracy in the details of unglazed porcelain, also known as biscuit. The decoration, both at full pattern and brush, is always applied by hand, as well as the further addition of delicate and noble metals such as gold and platinum, which make precious the finishes of each artefact. The high firing temperature, the ceaseless experimentation and the eclectic search of glazes make every item a unique piece. The design of the collections defines, therefore, new quality standards even for a classic material such as ceramic, through the use and the exaltation of the biscuit.

On 28 October 2020, a webinar (entitled "Innovazione in campo ceramico artigianale e artistico: come condividere pratiche, valori e visioni, per la costruzione di una rete aperta") was organized by FOS and the Faenza City Council in collaboration with the Faenza Foundation's Pollution Lab. The workshop was aimed at ceramic creators, artisans, professionals, contractors and students. During the webinar, participants presented excellent examples and innovative tools useful for creating a comprehensive regional system to evaluate ceramic culture and incubate new "regional" projects.

4.2.4 Digital Platforms

Research by the British Crafts Council points out that the key to the success of crafts, design and small and medium-sized businesses is the Internet. Social networks and e-commerce portals make it possible to sell more: between posts and tweets, companies increase their turnover. Opportunities come not only from e-commerce as direct sales to customers, but also from Facebook, Instagram and Pinterest, which allow innovative networks.

- *Enrich ceramic marketing mode*
- *New market for ceramics*
- *Diversified promotion methods*

Digital technologies make it possible to talk to professionals from all over the world, to sell online, to create synergies and alliances, and to expand markets in a time and way that was unimaginable

in the analog era. In addition to digital manufacturing technologies, due consideration must be given to communication technologies, such as social media and e-commerce tools, which can effectively facilitate the international dissemination of local products.

The main digital channels are:

- Corporate sites,
- Social networks,
- E-commerce portals,
- Sectoral web portals,
- Digital manufacturing technologies.

According to the report "E-commerce in Italy 2018" by Casaleggio Associati ^[9]:

Facebook is the social media considered most effective by Italian companies. 71% of the surveyed sample rated it as effective or very effective (72% in 2016). Instagram maintains second place with 49 percent, up from 37 percent in the previous year, and is again the social media that grows the most in popularity. YouTube is effective at 35 percent, up from 32 percent in 2016. It is followed by LinkedIn (19%), stable from the previous year. Twitter is listed as effective by 13% of companies (-3%), as is Google Plus, which instead doubles the previous year's result, followed by Pinterest at 7% (-3%). Snapchat remains stable at 3%, while WeChat at 2%.

Instagram continues its growth and as of November 2017 has reached 800 million monthly active users, including 14 million in Italy, and continues to be one of the most widely used social networks for influencers and content marketing. Over the past year, business profiles have increased significantly, reaching 25 million. In fact, 80 percent of accounts follow at least one business profile, and about 200 million instagrammers visit a business account daily. In 2017, following a directive from the U.S. Federal Trade Commission, Instagram introduced mandatory reporting of posts resulting from business collaborations through the inclusion of the brand tag and hashtags such as #ad #advertising or #sponsored. Stories, which turned one year old in July 2017, are among the most used content by brands. In addition, in early 2018, Instagram Shopping was also introduced in Italy, which allows people to connect products from various posts to their e-commerce, linking them with the Facebook storefront. WeChat again emerges as the predominant social media in China, with 980 million monthly active users. The brands that over the past year have landed on this channel are numerous, including Coop, the first Italian large-scale retailer on the channel, which offers Coop-branded and Made in Italy products in its e-commerce.

4.2.5 Advanced Training

The widespread shortage of personnel with technical skills is a reality of the industry. In order for training offerings to be made more attractive to young people, it is certainly necessary to include new teachings aimed at developing digital skills that can complement traditional craft skills. For this reason, nontraditional training paths are making their way, capable of training "hybrid"

^[9] "E-commerce in Italy," Casaleggio Associati, 2018
https://www.casaleggio.it/wp-content/uploads/2018/05/Ecommerce_in_Italia_2018_Web.pdf

figures who can combine technical, cultural and design skills, with a strong orientation toward innovation.

All over the world, Faenza or painted ceramics is synonymous with "pottery." Today, Faenza has a vibrant and artistic environment thanks to its museums, old ceramic workshops and art schools. A good example of renewal in this regard was the Higher ITS Course for Sustainability, Development, Design of the Ceramic Product "Tonito Emiliani" of the FITSTIC foundation, founded in Faenza in the 2013/2014 school year. The ITS Ceramics Course "Tonito Emiliani," falls under the National System of ITS, Istituti Tecnici Superiori - Schools for Applied Technologies. Now transformed into IFTS, a one-year 28 course, the ITS "Tonito Emiliani" Course had a two-year duration. The curriculum again traces the model of the Institute for Ceramics, founded by Ballardini in Faenza, with the development of an artistic area, a technical area and a technological area, without neglecting applied IT components to the ceramics sector that represent the innovative part. It provided for 800 hours of apprenticeship (out of a total of 2,000) in a company, or in an artisan workshop, choosing specialization in art/craft/design or industrial.

There are qualified training centers in the ceramics industry that it is useful to include among the possible pathways, which organize refresher and/or in-depth courses for artisans / ceramists / artists / designers.

- *Promote employment and alleviate social conflicts*
- *Increase the reserve of technical personnel in the ceramic industry*
- *Improving the skills of professionals (shaping, decoration, ceramic art history, marketing skills)*
- *Assist self-employment*
- *Activate innovation in ceramic craftsmanship*
- *Establishing laboratories, corporate cooperation*
- *Promote sustainable development of the ceramic industry*

ISIA Faenza Design & Comunicazione

ISIA Faenza Design & Communication is a university institute of the Alta Formazione Artistico Musicale e Coreutica (AFAM) belonging to the Ministry of Education, University and Research, which grants Level I academic diplomas in Industrial Design and Design with Ceramic and Advanced Materials (equivalent to the L-3 university degree) and Level II academic diplomas in Product Design and Design in Advanced Materials and in Communication Design (equivalent to the LM 12 design degree).

The ISIA was founded in 1980 thanks to a didactic project by Bruno Munari, called in as an expert in design didactics, formulated by a didactic scientific committee chaired by sculptor and ceramist Carlo Zauli. Beginning with its foundation more oriented towards ceramics, over time the ISIA has broadened its sphere of action to the entire complex area of Design and Communication while maintaining a special reference to Ceramic Design, formal research and advanced technological

experimentation, in connection with the industrial production sphere and the very high tradition that characterizes the city of Faenza.

ISIA is housed inside the eighteenth-century Palazzo Mazzolani, recently enhanced by major restoration works, located in the city's historic center; the Institute represents a nodal and dynamic point of the territorial cultural fabric and of the enhancement of heritage in the field of education. In this direction, the university's educational offer is annually complemented by multiple activities, including exhibitions of student projects during Milan Design Week and in other Italian cities; the organization of the 2017 National Arts Award - Design section; conferences and workshops conducted by authoritative personalities from the world of design; the orientation summer school aimed at high school students; seminars and conferences held by influential figures in the field of design, art and business, invited for the purpose of spreading the culture of design, investigating the different areas of knowledge and contemporary creativity.

All activities are aimed at enhancing the best production of young designers in training, fully responding to the institutional mission of the ISIA and its recent cultural policy of openness and collaborations in the national and international sphere, developing an increasingly close dialogue between training, research, production and enhancement in the field of design culture in the most diverse fields: from product to communication, ceramics and fashion, environmental and eco-sustainable design, cultural heritage, up to digital fabrication and the phenomenon of makers. The ISIA of Faenza is distinguished by its community and international environment, fostered by a vital design exchange involving students and European partner institutions in the Erasmus program; by direct and assiduous collaborations with the world of industry and research; and by the physical experimentation of each specific design language implemented in the many model and prototype laboratories at the Institute, from the one dedicated to ceramic materials to the one for polymers, from audiovisual to fashion.

Corso IFTS (Istruzione e Formazione Technica)

Higher Technician course for sustainability ceramic product development and design. The Higher Technician for Sustainability Ceramic Product Development and Design works in managing the life cycle of a product so as to prevent or reduce its impact on the environment. Identifies innovative materials and techniques of their processing to ensure a product that has high levels of performance, symbolic-evocative charge and stylistic qualities. Collaborates and prepares the marketing and communication plan for the product. Researches and applies regulations regarding prevention, safety and environmental protection. The figure declined at the local level is therefore connoted as follows: the Higher Technician for sustainability, development, design of the ceramic product combines a strong core of technological knowledge, indispensable in the ceramic sector to participate in the definition of the overall technical project, with the fundamental elements of design culture and their historical-artistic bases, as well as elements of interpretation and management of market strategies.

Each two-year training course is aimed at young people and adults with a Higher Secondary Education Diploma. Twenty-five students are admitted to the course, following successful selection. Starting this year, two additional places will be reserved for apprentices. The training is

a two-year course. At the end of the course and upon passing a final exam, the "Diploma of Higher Technician" will be awarded with the certification of skills corresponding to level V of the European Qualification Framework EQF. The qualification will be accompanied by the EUROPASS diploma supplement to facilitate circulation nationally and in Europe.

FACC (Faenza)

In Faenza, the Faenza Art Ceramic Center (FACC) operates in this direction; it is an international center dedicated to the promotion and enhancement of art and ceramics in particular. In recent years, FAAC has become a reference center for educational activities, materials research. It organizes cultural events around the world of ceramics and carries out activities such as: residencies, workshops, ceramic competitions, design consultancy, new product development, open studios, exhibitions and other events.

Organizes courses in Raku, glazes, sculpture, porcelain, jewelry making, molding, and silk-screen printing for professionals and amateurs, with national and international lecturers, reknowned excellences in the field. FACC offers study residency; study residency for IAC (International Academy of Ceramics) associates; study residency for under 35s. It provides a fully equipped studio, accommodation, technical assistance and social media & press. Organizes the Ceramic&Colours Award competition, aimed at promoting and enhancing the research of ve-trous coatings in the finishing of ceramic artifacts. The Competition is held every two years and is sponsored by the City of Faenza, the International Museum of Ceramics in Faenza, and the Italian Ceramic Cities Association. The Prize is open to all, without limitation of age, gender, nationality or other qualification.

CERASMUS+

CERASMUS+, a Strategic Partnership good practice funded under Erasmus+ in 2017, aimed to protect the EU's traditional heritage and modernize the ceramic sector through three main objectives:

- 1.to create a European network of ceramic stakeholders (VET providers, craft enterprises, public bodies, cultural institutions, research centers) to analyze the sector's skills needs with reference to "value chain" improvement, urban environment enhancement, and business start-up;
- 2.unite the tradition of ceramics with innovative design and production techniques;
- 3.revise and innovate vocational training in the ceramics sector through work-based learning models in order to strengthen the sector's value at the cultural, social and economic levels.

The outputs of the project consist of:

- A field analysis to explore skills needs to ensure the development of the sector through networking, intangible heritage protection and innovation. The field analysis was conducted by conducting interviews and questionnaires with key players in ceramics;
- The design and implementation of an online virtual environment for key players and stakeholders in ceramics to discuss the main issues that emerged from the assessment phase and to open a permanent forum to ensure closer collaboration;

- The design and testing of specific curricula for initial and continuing vocational training, focused on work-based learning, aimed at the acquisition of transversal and professional skills for improvement

L'Associazione Mondial Tornianti "Gino Geminiani"

The Mondial Tornianti "Gino Geminiani" Association was born in 2020 in Faenza and presented at the Made in Italy ceramics market fair, September 2020. The goal of this association is to keep alive the memory of ceramist and a great potter-turner Gino Geminiani, who passed away on May 15, 2020, and to keep active his workshop where individual and group courses are organized at the potter's wheel and in other ceramic disciplines.

since 2017 The Mondial Tornianti in Tour is a traveling event in Italy among the Cities of Ancient Ceramic Tradition that are members of AiCC, which makes the idea of the Mondial Tornianti faentino "travel". The Mondial Tornianti, a historic Faenza event, will continue to be held in Faenza on a biennial basis during the Argillà Italia35 event. The Mondial Tornianti "Gino Geminiani" Association promotes the idea of Gino, who wanted pottery making and decoration skills to be passed down in his workshop. At the same time, there is a desire to offer hospitality to artists and ceramists from both Faenza and other countries in order to work in co-working.

The Association is made up of the Mondial Tornianti Committee, its lathe and potter friends from Faenza, and potters from the various cities of AiCC/Si organize advanced courses in lathe and clay working, decoration and painting on ceramics, use of glazes, molds and molding, engobe, sculpture, and applied ceramic technology.

4.3 Industry Innovation Conceptual Mind Map

This section explores the identification of the improvement factors that can contribute to the dissemination of the artistic and artisanal culture of Italian ceramic crafts and how the integration of artisanal crafts, products with a high cultural content and the tourist offer of the region can be made feasible; in this section the important aspects of the ceramics sector that can open up some constructive thinking are highlighted.

It is by proposing "innovative" methods of work and training that the necessary areas of improvement can be specifically identified, which will provide an important reference for today's sector operators and future makers. In the course of the research in the previous chapters, a number of key words emerged around which in-depth discussions and connection systems were built. The aim is to "innovate" the industry so that young artisans become the mainstay of the sector and help them find the ideal path for their ceramic skills.

The keywords:

#ceramic

#ceramist

#artisan

#artist

#designer
#formation
#upgrading
#network
#cultural district
#models
#coworking4.0
#innovation

4.3.1 Map-1: Ceramist, Artisan, Designer, Artist

#ceramic #formation #upgrading #ceramist #artisan #artist #designer #innovation

The criticality, updates and opportunities of ceramic innovation from the perspective of designers and makers. (Figure 39)

From the questionnaire were obtained general opinions, expectations from the ceramic industry of the Emilia-Romagna Region, as well as requests for updates and new opportunities for the sector. From the ideas and proposals expressed by the artisans emerged the desire to open their workshops to the public of visitors and enthusiasts, proposing training experiences at an amateur or simple cognitive level, which can take place in their own workshops or laboratories, in seminars or in conferences. In this way, the artisans once again become protagonists and witnesses of the story, visiting the workplace as a small living museum, thus restoring the cultural and social function of the craft workshops to the benefit of the communities in which they operate.

At the same time, the use of "digital" media opens up new avenues of communication and experimentation. The promotion of ceramic products through e-commerce platforms, sharing and international dissemination. Digital tools are essential for the "makers of the future". Cross-border design and hybrid talent are the future needs of the ceramics industry.

The map contains three aspects: exposed problems, comprehensive enhancement of artisan competence (analyzed in detail in Map 2), and opportunity for innovation (analyzed in detail in Map 3 and Map 4).

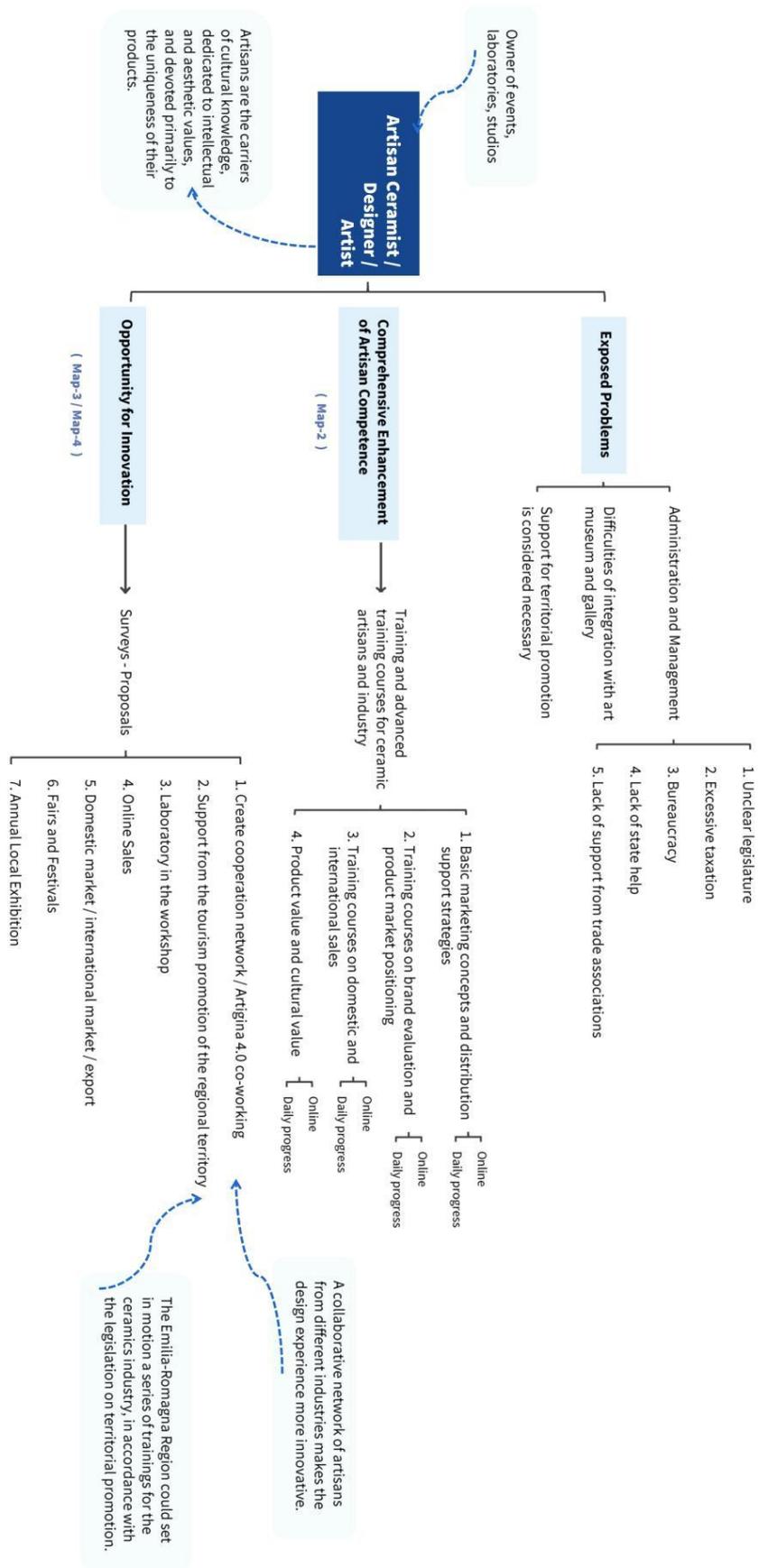


Figure 39. Artisan Ceramist / Designer / Artist Sustainable exploration in the ceramics industry

Exposed problems

Among the concerns of artisans collected in the interviews, issues related to management and administrative problems were of great concern, and this was more evident in small-scale ceramic operations. Laws are complex, not always clear, and the bureaucracy is extremely artificial, among other things. In these difficulties, manufacturers often feel unsupported by trade associations or local authorities, and it would be helpful to streamline the bureaucracy to make the ceramics craft sector work. At the same time, ceramic operators do not feel strongly supported by local, regional or national territorial promotional and cultural policies at the tourism/cultural level. There are some manufacturers who consider themselves artisans rather than entrepreneurs and often find it difficult to manage the many aspects involved in running an independent business.

Despite the good tourism policy implemented in the Emilia-Romagna region, none of the craftsmen interviewed mentioned the existence of a ceramics agency specialized in the promotion of tourism in the region. Strengthening more direct links between the region and the artisans in order to inform and train on new areas of tourism promotion and on regulatory details aimed at supporting the ceramic industry, both artisans and art, is a real demand of the ceramic artisans.

Comprehensive enhancement of artisan competence

Training and refresher courses for artisans are an indispensable part. Most of the craftsmen of the survey results showed a high interest in training activities. These activities are more popular if they are specific, such as specialized courses that emphasize new processes in the production phase. Changes in materials and machinery as well as technological innovations have accelerated the various processes of craftsmanship, and this new knowledge is inevitably needed for the development of the ceramic industry. At the same time, the organization of regular updates about the digital sector, the management of the digital network of products and social promotion are important elements. At the category level, attention to continuous and planned updates will keep the level of expertise in different regions consistent and uniform.

Topics promoted through digital channels involving basic marketing concepts and strategies to help sell ceramics; training courses on the importance of improving personal branding; professional courses on choosing and positioning one's products in the market; sales training courses; training moments to increase the value of ceramic products; social networks as a tool for communication, etc., are all updates and innovations in the sector.

Opportunity for innovation

The artisans of the sector want the Emilia Romagna Region to activate more facilities based on legislation that promotes the territory. Through the Green New Deal and investment in knowledge, quality jobs will be created and the gap of social inequality will be reduced.

Perhaps these entities could be responsible for the improvement aspects of the sector already indicated:

The International Museum of Ceramics in Faenza, for example, could itself take on the task of directing the training of artisans in the ceramics sector, as well as managing refresher courses and promoting cultural and other programs in the region. It would be a qualified institution capable of

taking charge of "networking" and organizing "joint work". Another organization that could play a role in this direction is Ente Ceramica Faenza, which could support the MIC, even autonomously.

Ceramic "markets", even small ones, are in demand. Financial assistance for participation in trade fairs and expositions, sectoral fairs, as well as the organization of annual local exhibitions promoted by and for the region, would also be important assistance for the promotion of art and craft work in the sector. Artisans want to feel accompanied by government and community support. They often need "facilitators" to make learning easier and to have qualified contacts. Likewise, they want help with regional tourism promotion and support with online sales and access to international markets.

Training is also an important moment for innovation in the ceramics industry. Artisans are willing to organize workshops in their workshops to provide space for apprentices, trainees, and to collaborate in new forms of work. This will allow the new generation to learn to work from experienced artisans, to learn about the activities of craft enterprises in anticipation of starting their own business; to network in the region; and to learn to trade according to the rules of traditional craftsmanship. The beneficial aspects of this intergenerational exchange are obvious, because "knowledge like work cannot be reconstructed after the loss of the field of cultural transmission and direct education.

The ceramics sector needs to "envision" new paths of production, supply and marketing, just as in all other areas of the Italian national economy.

4.3.2 Map-2: Advanced Training

#ceramic #ceramist #artisan #artist #designer #formation #upgrading

In this section is an overview of the different training possibilities on a regional and national level. Training and further training have different contents and also require specific learning paths for different users.

Training is the moment when basic knowledge about materials, technology and innovations is learned for professional purposes. In the ceramics industry, the skills to be acquired are indeed many and complex. In order to work with ceramics, one must have acquired all the aspects involved in the production cycle and all the necessary technological information. One must know and know how to wisely choose the raw materials (clays, stonewares, porcelains); one must know the shaping phase, the finishing operations to correct the imperfections of the shaping, possible sealing, drying, the first firing and the necessary instrumentation (kilns, heating elements and their results as the temperature changes), glazing then know about oxides, glazes and all the final results and effects due to the transformation in the kiln, then the difference between high and low temperature, decoration and painting and the application of crystalline. This is to be followed by the skills for second firing and waiting for the kiln to open. Even the use of new technologies, such as 3D printers, requires new skills: the use of 3D modeling programs, the use of 3D printers, the selection of clay and/or raw materials suitable for printing pistons, and the design of artifacts.

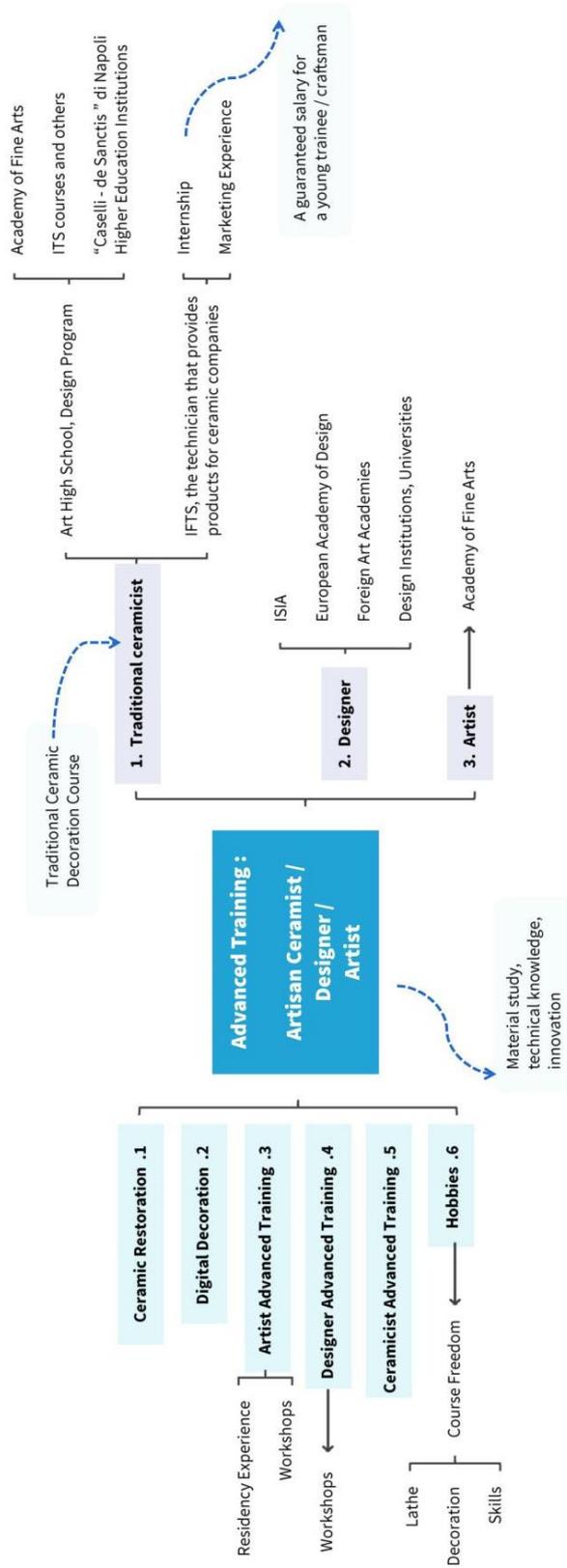


Figure 40. Comprehensive Enhancement of Artisan Competence : Characters and directions

Obviously, further skills training is meant to maintain the potential to inspire potters and create moments of cultural and creative exchange, which in themselves are truly innovative moments for craftspeople. They can be an important opportunity for potters to get out of the workshop, for designers to be exposed to new design experiences, for artists to discuss issues of creativity/artistry, etc. There are dedicated and structured paths to train designers and artists on regional and national territories. It is therefore clear that the acquisition of basic expertise cannot be neglected, and this certainly cannot be passed on today through workshop work alone. Some training paths in line with these premises are discussed here.

To become a potter/craftsman, one can attend IFTS courses in Faenza, which we have already discussed in detail in 4.2.5; the "Caselli - de Sanctis" ^[10] in Naples is also a higher education ceramic craft institute, founded in 1961 to continue the ancient tradition of artisans. The decision to place the Institute in the same old building in the park symbolically represents the intention to delimit this historic continuity, past the site of the first royal porcelain factory founded by Charles of Bourbon in 1743. The path to become an artist begins with artistic training, usually from the Liceo Artistico ^[11] ; to begin the path of ceramics, it is necessary to attend the Academy of Design Art, and applied art or sculpture is another path to approach ceramics. To become a designer, there are special courses of study: Isia ^[12]; Istituto Europeo di Design ^[13], etc.

At the same time, we can broaden our horizons by looking at amateurs. There are many qualified amateur courses which represent not only moments of encounter with ceramics, but also initiation and knowledge of the subject, which may subsequently lead to professional interest.

In the conceptual diagram drawn ([Figure 40](#)), one can see that the training follows possible professional directions. In the future there are still some paths for further training:

- Digital decoration. The industry is expanding due to the emergence of new technologies; further training courses on this topic will certainly be welcome.
- Advanced studies for artists and designers. Moments of free and independent learning creation and exchange for artists and designers, such as artist residencies (already launched at the International Museum of Ceramics in Faenza and the Carlo Zauli Museum) or participation in workshops; such as the Milan Creators Project 2015, a collaboration between artisans and designers, already proposed in 4.2.3, opening up moments of truly valuable training and exchange of skills.
- Courses on lathe or traditional decoration for amateurs are gaining popularity and are becoming an initial invitation to future professionals.

^[10] <https://istitutocaselli.edu.it/prova/>

^[11] <https://www.miur.gov.it/liceo-artistico>

^[12] <https://www.isiadesign.fi.it/>

^[13] <https://www.ied.it/scuola-di-design>

4.3.3 Map-3: Network, Cultural District, Craftsmanship 4.0 Models

#ceramic #network #cultural district #models #coworking4.0 #innovation

This concept map takes into account all those formulas that combine in some way the different competencies of the ceramics sector. (Figure 41) These are mainly #network #cultural district #coworking4.0, based on which a new business model is proposed that is likewise green and sustainable: cutting costs related to raw materials, materials, facilities, utilities, as well as management and promotion, and cutting costs of administrative holdings.

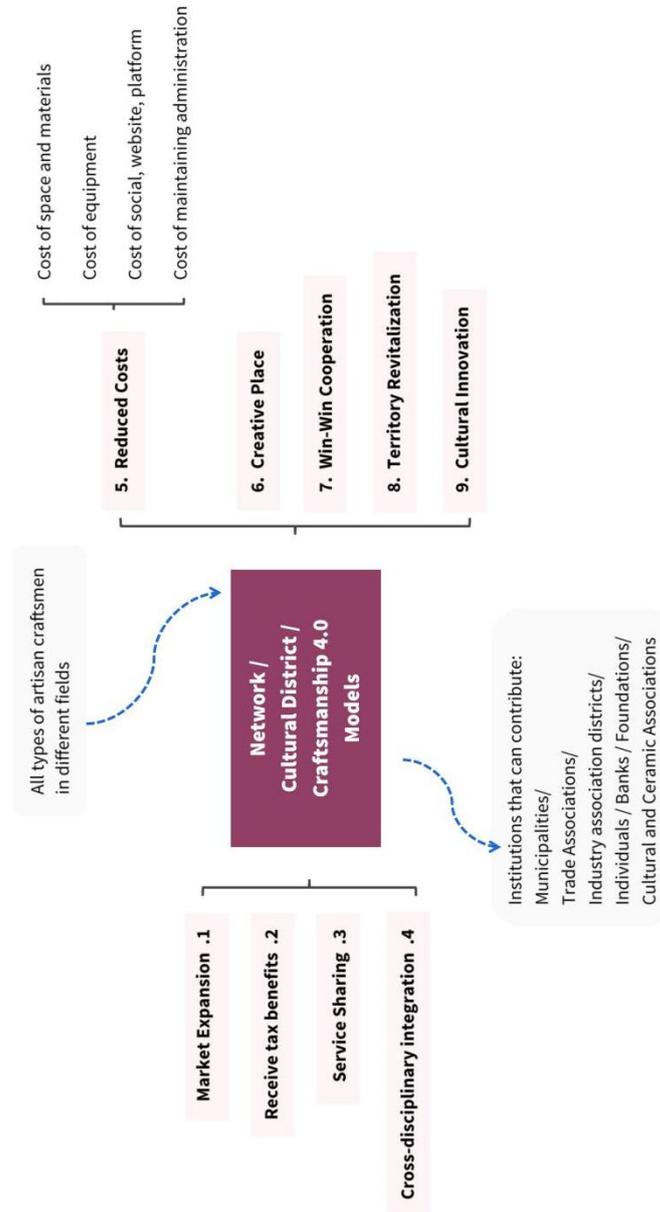


Figure 41. Industry Innovation and Sustainability - From the Social Perspective

As well, the expansion and enrichment of the whole professional potential of ceramicists / artisans / artists / designers and their activities could be considered. Some places in Italy are like "cultural microcosms" that can produce themselves independently.

Besides the cost reduction, there is an important advantage: co-working, the birth of creative places. In which there is not only the sharing of space and services, but also the possibility of being able to obtain other forms of tax breaks. It is also an easy way to access international markets and an opportunity for culture, art, design, fashion and music venues to emerge spontaneously as places of creative expression. For a project initiative of the type #coworking4.0, besides introducing artisans and ceramic operators, there are other different types of artisans, also involving all possible artistic and creative sectors, such as fashion, music, theater, film, etc. In this way, in addition to the centers envisaged to be managed independently by artisans, it would be desirable to have the support and intervention of a number of institutions (national, local authorities, industry associations) to contribute economically to the maintenance of these new multifunctional and cultural centers.

4.3.4 Map-4: Innovation

#ceramic #innovation

Innovation, is one of the central themes of sustainable development in the ceramics industry. This part of the discussion focuses on the potential of innovation and its fields of application.

(Figure 42)

From the analysis, it is clear that in all areas of the work of ceramicists / artisans / artists / designers it is possible to find paths and ways to innovate: in education and training; in the research and use of new ceramic materials; in experimenting with new production models and product research; in creating new management and marketing strategies; in promoting new social channels; in accessing national and international markets; in networked design ; in network collaboration; in exchange of experiences with other craftsmen of the industry; in realization and participation in workshops; in digital decoration, 3D modeling, etc.

Innovation also means the creation of new efficient ceramic businesses, able to reinforce the "Made in Italy" level of craftsmanship, so as to revalue the ceramics sector.

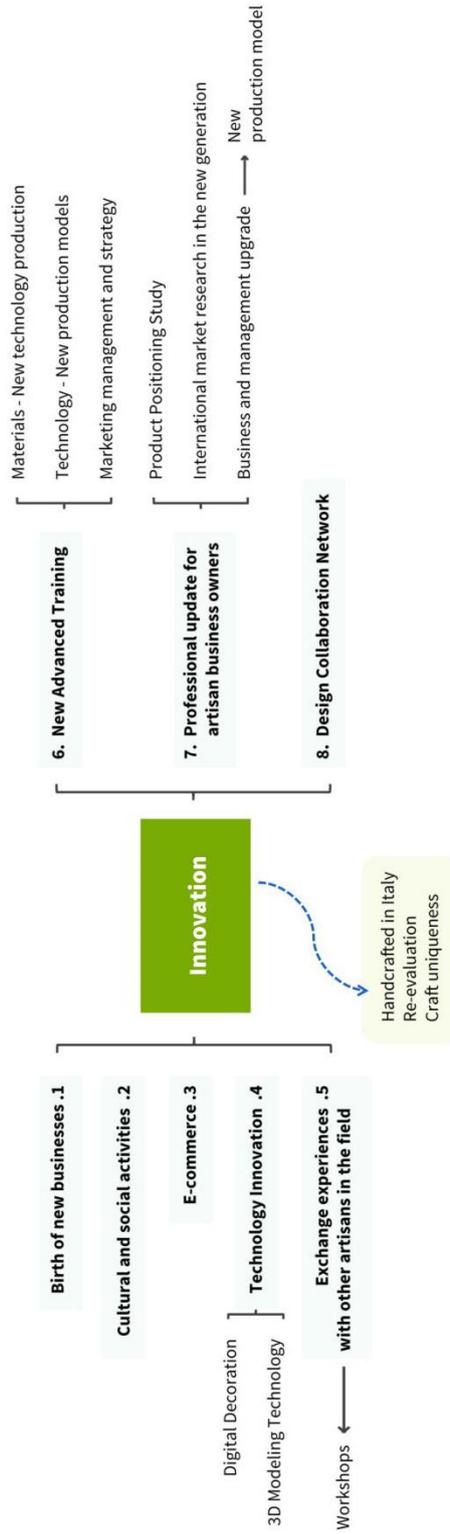


Figure 42. Industry Innovation and Sustainability

4.4 Field Study - Faenza system

“Incentive structure of the 2015 Faenza urban plan. ^[14]” Urban age- vations (functions and volumes) articulated in the various areas of the territory are exchanged to promote security, sustainability and identity, which are the three watchwords of the plan. (Figure 43)

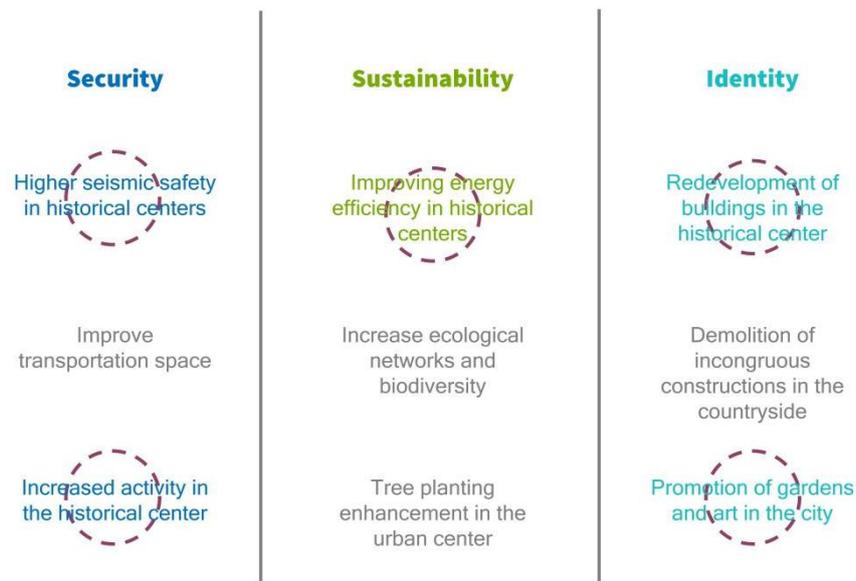


Figure 43. FAENZA 2015 incentive structure for Urban Plan

Of the 9 types of incentive structures in urban planning, 5 are measures related to the historical center:

< *Security* >

Higher seismic safety in historical centers

Increased activity in the historical center

< *Sustainability* >

Improving energy efficiency in historical centers

< *Identity* >

Redevelopment of buildings in the historical center

Promotion of gardens and art in the city

They are the aspects of architectural conservation, energy sustainability, natural environment and artistic development related to the historical center. This shows that FAENZA is very clear about its urban development position and development advantages.

The "Faenza system" is a positive example of a city with a specific industry and ancient traditions, demonstrating the competitive advantages of artisans and ceramic workshops and it is also a potential model that can be exported to cities with similar characteristics.

^[14] TIPOGRAFIA FAENTINA EDITRICE. FAENZA 10 anni di edilizia. 2010-2020 / L'inizio del nuovo secolo, 2022.

FAENZA has: (Figure 44)

- 55 ceramics studios/artists (registered).
- 26 Artists, designers and manufacturers (registered).
- 8 Public and private museums
- 4 Artist House / Studio
- 3 Ceramic Research Center
- 3 Advanced training institutions
- 2 Associations

Artisan Ceramist / Ceramics Studio			
Antonella Amaretti	Carla Lega	Luciano Sangiorgi	Paola Laghi
Andrea Kotliarsky	Carlo Zoli	Maria Elena Boschi	Padovani Maioliche d'Arte
Antonietta Mazzotti	Daniela Neri - Art in Work	Mabilab di Ivana Anconelli	PI.CO Faenza
Andrea Pippi Simoni	Ennio Ballabene	Maestri Maiolicari Faentini di Lea Emiliani	Romano Cortesi
Alberto Razzi	Elvira Keller	Manifatture Sottosasso di Marco Malavolti e Lorella Morgantini	Ilirio & Mirko Garavini
Ceramica Gatti 1928	Enea Mazzotti	Mii Studio d'Arte	Ifigenia Papadopulu
Ceramica Artistica Svilvagni Laura - La Vecchia Faenza	Fiorenza Pancino	Marta Monduzzi	Simona Serra
Ceramiche Artistiche Bacchini Marianna	Fosca Boggi	Morena Moretti	Studio d'Arte Goffredo Gaeta
Ceramica Bella di Spezia Francesca	Fos Ceramiche	Mirta Morigi Ceramica Contemporanea	Susanna Vassura
Ceramica Monti di Vittoria Monti	Lorena Cabal Lopez	Monica Ortelli	Valeria Castellari
Ceramiche d'Arte Vitali	Lidia Carlini	Matteo Piani	Yuri Ragazzini
Ceramiche Geminiani di Geminiani Silvana	Lying Ecodesign	Milena Scarpelli	
Ceramiche Vignoli	Lorenzo Papanelli	Maria Cristina Sintoni	
Ceramiche Pier Paolo Garavini	Liliana Ricciardelli	Noriko Yamaguchi	
Artists / Designers / Makers			
Antonella Cimatti	Guido Mariani	Nedo Merendi	
Ana Cecilia Hillar	Gianfranco Morini(detto Il Moro)	Tomokazu Hirai	
Antonella Ravagli	Giovanni Ruggiero	Panos Tsolakos	
Aldo Rontini	Mirco Denicolo	Oscar Ariel Dominguez	
Abdon Zani	Monika GryckoMaurizio Mengolini	Rolando Giovanni	
Bianco Ghini	Martha Pachon Rodriguez	Silvia Carnevali Miino	
Cristiano Marchetti(Kry)	Luce Raggi		
Gianfranco Budini	Luciano Laghi		
Giovanni Cimatti	Heriz Bhody Anam		
Public / Private Museums			
Mic Museo Internazionale delle Ceramiche : <i>Public Museum / Exhibition Ceramics Theme</i>			
MISA (Museo dell'Istituto Statale d'Arte) Museo del Liceo Ballardiini già Istituto d'Arte : <i>Public Museum / Exhibition Ceramics Theme</i>			
MUST collezione d'arte contemporanea nel Palazzo Comunale di via Zanelli : <i>Public Museum / Exhibition Ceramics Theme</i>			
MAP : Siti tematici a vocazione ceramica, esistono progetti di arte pubblica/musei all'aperto a vocazione ceramica : <i>Public Museum / Exhibition Ceramics Theme</i>			
Museo Diocesano di Faenza Modigliana : <i>Public Museum</i>			
Museo Carlo Zauli, MCZ : <i>Private Ceramic Museum</i>			
Museo Gatti : <i>Private Ceramic Museum</i>			
Museo Fondazione Guerrino Tramonti : <i>Private Ceramic Museum</i>			
Artist House / Studio			
Archivio Alfonso Leoni	http://alfonsoleoni.it/		
Studio Ivo Sassi	www.ivosassi.it		
Museo Leandro Lega	www.miurf.it/faenza/museo-leandro-lega/		
Franco Morini, detto il Moro	www.francomorini.it		
Ceramic Research Center			
ENEA			
Agenzia Polo Ceramico Faenza POLO TECNOLOGICO - Centro di Ricerche di Bologna, E IRTEC (Istituto di Ricerche Tecnologiche per la Ceramica del CNR)			
Centuria			
Advanced training institutions			
L'Istituto Superiore per le Industrie Artistiche (ISIA) Istituto dello Stato, appartenente al sistema dell'Alta Formazione Artistica e Musicale			
Corso IFTS - Tecnico per la realizzazione di manufatti per le imprese artigiane - ceramiche			
FACC - Faenza Art Ceramic Center. Centro internazionale per la promozione e la valorizzazione dell'arte e della ceramica			
Associations			
Associazione Ente Ceramica Faenza			
Associazione Mondial Tornianti Gino Geminiani			

Figure 44. List of ceramic artists, artists, designers, studios and public spaces for ceramics in FAENZA

This network of relationships from personal, social and even national levels fits into the framework of the reality of "FAENZA", a city with the history of ceramics. And these "Sparks" from different areas of interest create a ceramic industry system with potential for development.

At same time , craft businesses make a decisive contribution to the social and economic development of the area, especially those involved in the ceramics industry, creating the consumer dynamics associated with tourist flows

Faenza Square

"Piazza Faenza" was completed on October 19, 2016 in Jingdhezen ^[15], it is an urban space entirely designed by the technicians of the urban sector of the Municipality of Faenza in which some symbols of the city of Manfreda are widely recalled and recognizable. The ceremony, part of the opening program of the annual International Ceramics and Porcelain Fair, was held in the presence of the highest authorities of the Chinese city twinned with Faenza since 2013, and a Faenza delegation led by Mayor Giovanni Malpezzi and City Planning Councillor Domizio Piroddi.

The creation of a square dedicated to Faenza, an idea conceived by Chinese administrators as part of the twinning agreements between the two cities, is a great recognition for the ceramic tradition of Faenza, privileged in this choice compared to the many other important ceramic centers famous around the world. It picks up certain shapes and symbols of the Italian city, its historical and cultural identity being closely linked to ceramics and in particular linked to maiolica. Completed in less than three years by local labor, Faenza Square covers an area of more than 2,300 square meters and is located within a new district of Jingdhezen called Taoxichuan Ceramic District, home to ancient factories and kilns, affected by a major urban redevelopment. (Figure 45)



Figure 45. Faenza Square in China

Malpezzi: "Una piazza che ricrea la nostra identità"

« E' meraviglioso poter essere qui con voi in questa occasione – ha detto il sindaco Malpezzi nel suo saluto ufficiale – e un grande onore avere l'opportunità di inaugurare

^[15] Jingdhezen, is part of Jiangxi Province, west of Shanghai and southeast of Beijing, and has a population of about 1.5 million. It is unanimously considered the world home of porcelain, home since the mid-12th century to the Chinese imperial manufactory, famous throughout Asia. Porcelain was produced here for the emperor of China, and thousands of people still work here today in ceramic and porcelain production. From the ancient manufactures of this city comes more than 90 percent of the fine Chinese porcelain displayed in the best museums in China and the world. The twinning pact with Jingdhezen has paved the way in questi first years for important artistic and cultural opportunities, some already activated, others being perfected.

una piazza che porterà per sempre lo stesso nome della città in cui vivo, pensata per essere un grande spazio di incontro per tutti, in particolare per gli amanti della ceramica. Grazie a questo progetto – ha sottolineato il primo cittadino – abbiamo cercato di ricreare l'atmosfera del centro storico di Faenza, con riferimento, in particolare, alla nostra Piazza del Popolo, in un grande spazio che possa trasmettere un messaggio di tradizione e di identità, ma allo stesso tempo di innovazione in ambito culturale, economico e turistico. Faenza si trova a quasi 9mila chilometri di distanza da Jingdezhen – ha concluso il sindaco – ma credo fermamente che a partire da oggi, la città di Faenza sarà idealmente molto più vicina ». (Figure 46)



Figure 46. Faenza Square - Build opening ceremony

“ Un gemellaggio in nome della ceramica ”

The creation of Faenza Square, conceived by Chinese officials, represents a great recognition of Faenza's ceramic heritage, and a choice that is considered privileged in comparison to many other important ceramic centers known around the world. The completion of this square also represents the establishment of a deep international friendship between two countries across oceans through the medium of "ceramics". Culture is universal.

Faenza International Museum of Ceramics (MIC)

The MIC Foundation was born in 1908 in Faenza. The International Museum of Ceramics in Faenza has the largest collection of its kind in the world. Its halls document ceramic cultures from all five continents over the centuries. (Figure 47)

The "Close Encounter with Ceramics" experience

- For children: "Giocare con la Ceramica", an educational workshop founded by Bruno Munari, takes into account that play is the main method of learning. Children of all ages can learn about ceramics through guided tours and thematic workshops.
- For adults: the "Giocare con la Ceramica" workshop offers a series of workshops where even inexperienced people can develop creativity and learn ceramic techniques.

Special Care by Design:

- For the deaf: two deaf people introduced the MIC of Faenza. in collaboration with Fiadda (Association for the Rights of the Deaf and the Family) and with the contribution of the Emilia Romagna Region (ACCESS project).
- For the visually impaired: there is a Braille tour route and an audio guide, as well as a tactile enjoyment program.

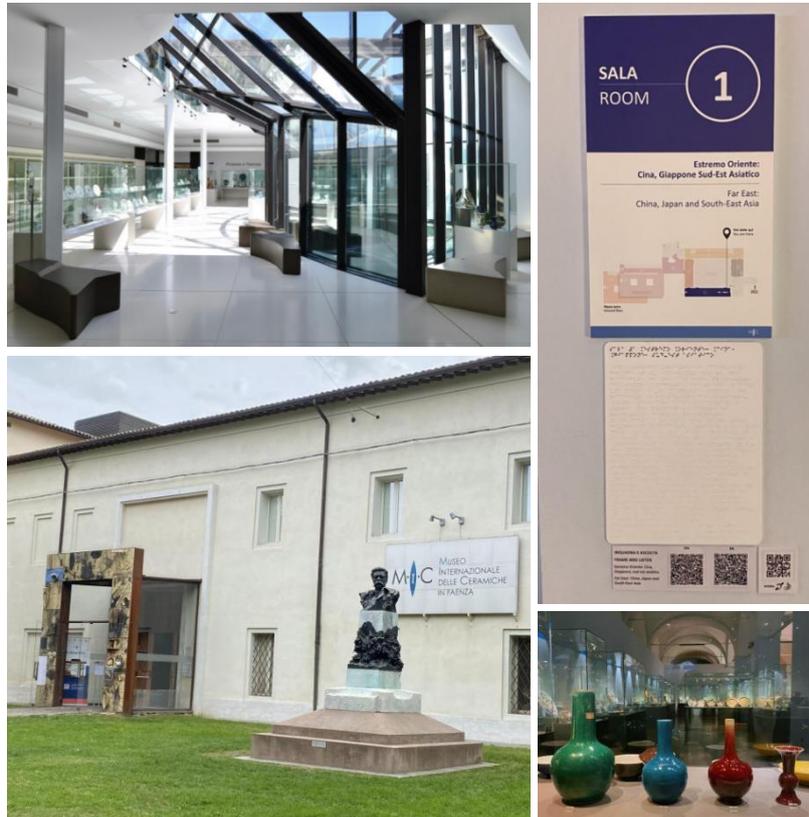


Figure 47. Museo Internazionale delle Ceramiche in Faenza (MIC)

International activities of MIC

- Premio Faenza / 62° Premio Faenza

Faenza Prize is one of the most important global competitions in the field of contemporary ceramics. It was first established as a national competition in 1938 and is held every two years.

- Faenza Magazine / The Faenza Magazine has been published since 1913.

it is a compilation of historical studies on the art of ceramics, it also contains educational papers and is an essential aid for academics and ceramic amateurs.

- Argillà Italia / International art and craft ceramics market exhibition

Argillà Italia is a long weekend of ceramic events in Faenza. (The first weekend of September) It is an invitation to discover the international world of art and handmade ceramics, with an exhibition market and many cultural events along the streets of the historical center in Faenza. There will also be various events and performances including Mondial Tornianti (World Lathe Championship), spectacular open-air kiln ceramic firings, demonstrations, seminars and children's activities.

Carlo Zauli Museum

Carlo Zauli was born in Faenza in 1926 and died there in 2002. He was one of the most important ceramic sculptors of the 20th century. The artistic language of his ceramic sculptures is full of informality, intertwined with a harmonious but destructive "nature". His work is now exhibited in 40 museum and public collections around the world.

The Carlo Zauli Museum is a transformation of his workplace and includes a studio, exhibition room, kiln site, painting site, storage room, and ceramics laboratory. It preserves the precious environment in which an artist worked on ceramics in the 20th century and gives visitors a sense of that historical era of ceramic creation. (Figure 48)



Figure 48. Carlo Zauli Museum

Summary

"This is the first time in Italy, and perhaps in Europe, that an entire industry has collaborated on a shared project involving all its components: industry, crafts and art."

Vittorio Borelli, President of Confindustria Ceramica

Today, technical knowledge of ceramics has gradually spread worldwide and ceramic production has developed significantly in some areas of "ceramic identity", creating regions and clusters of artists, craftsmen, associations, art schools and museums. Today, national and international networks have been established and consolidated through cultural, productive and institutional cooperation, the development of links and cooperation, the organization and promotion of festivals, markets, seminars, workshops, exhibitions and prices.

This chapter discusses the innovation model: from new production methods to national and international markets, to technological innovation, to control of the value chain (management and organizational improvement), to restructuring, to business development, application of new technologies and business models. Through actions that promote generational change, training and professional renewal, and the creation of networks for sharing parts of the production, planning or management chain. The objective is to promote artistic and traditional craftsmanship in the field of ceramics in order to preserve, strengthen and encourage the dissemination of artisanal cultures linked to tourism, to encourage new generations to learn about ceramics, and ultimately to promote the dissemination of knowledge between companies to the most modern and up-to-date innovations in the technological and digital fields, also with a view to Industry 4.0. Territorial policy areas aimed at improving the competitiveness of the traditional art ceramics sector.

Discussions on local policies to support the art ceramics sector have essentially focused on three complementary directions:

A. Technical training: the widespread and growing shortage of people with technical skills and a "passion" for the world of ceramics is one of the main issues on which local policies have been called upon to intervene through the involvement of the region's vocational schools and higher technical colleges (especially the High School of Arts).

B. Territorial marketing: promotion of cities and territories, by local, national level, in favor of the competitiveness of ceramic companies, both in terms of greater local presence (and therefore more customers in the shops/workshops) and greater international visibility of the city as a center of production of the ceramic industry (brand awareness). Increased tourist traffic, organization of specific events with significant cultural value or scientific impact, or international promotion.

C. (Re)activating the "local ceramic community" for the development of shared projects . There is a need to continuously organize moments and opportunities for dialogue between ceramic companies and local institutions (municipalities, museums, schools, etc.) in order to meet the need for "socialization" and the development of shared projects.

CHAPTER 5

Ceramics in YUZHOU

(Henan Province), China : Tradition & Innovation

Ceramics is an ancient art form that perfectly blends the two distinct elements of "Water" and "Fire". For thousands of years, the art of Chinese ceramics has been an important part of Chinese art and reflects the development history of the Chinese nation. The invention of pottery-making technology is an important symbol of the emergence of civilization in human history, and archaeological excavations and research have shown that ceramics constituted an important industry in the production of ancient society ^[1].

The Yellow River basin is the birthplace of Chinese civilization. The Yellow River culture nurtured by the Yellow River basin is the root and soul of Chinese culture ^[2]. The Yellow River basin is rich in ceramic resources, such as pottery from the Pei Ligang culture period (about 8,000 years ago), colored pottery from the Yangshao culture period, black pottery from the Longshan culture period, primitive celadon from the Shang and Zhou periods, celadon from the Han and Wei periods, and white porcelain from the Northern dynasty, especially in the Sui, Tang and Song periods, Henan Province (Abbreviated as "Henan") became an important center of ceramic production in China.

Henan ceramics occupies an important position in the history of Chinese ceramics. Since the reform and opening up of China, the investigation of cultural relics and archaeological excavations have been carried out continuously, and about 300 ancient porcelain kiln sites have been found in Henan, concentrated in Anyang, Linzhou, Hebi, Jiaozuo, Boai, Xiuwu, and Huixian in northern Henan; Xin'an and Yiyang in western Henan; Yuzhou, Dengfeng, Gongyi, Xinmi, Ruzhou, Baofeng, Lushan, and Jiaxian in central Henan; and in southern Henan a few finds were also found in Neixiang, Xiping, Nanzhao, Guangshan, and Xinxian ^[3]. Among the 7 batches of national important cultural relics protection units that have been announced by the State Council of China, there are 10 listed ancient ceramic kiln sites in Henan, which is the largest number of listed porcelain kiln sites among the provinces and municipalities in China.

The earliest ancient porcelain kiln sites found in Henan are Gongyi Baihe kiln and Anyang

^[1] Chen.M. (2021). Research on the dissemination of intangible cultural heritage in the Central Plains of the Yellow River Basin in the new media environment. Zhengzhou University.

^[2] Zhu,W.L. (2020,01). The connotation and dissemination of the Yellow River culture . News, p32-35.

^[3] Xu,G.Z. (2011,08). Ceramic Art in Henan. Henan Fine Arts Press, p2.

Xiangzhou kiln, both dating from the Northern Dynasty, with the rest mostly from the Tang, Song and Jin Yuan periods. While producing celadon, Gongyi Baihe kiln was the first to fire the earliest white porcelain in China. Lushan spotted porcelain waist drums were famous in the Tang Dynasty, and Gongyi Huangye kiln was the source of Luoyang Tang Sancai and Tang Qing Hua. During the Song Dynasty, the porcelain industry in Henan reached its heyday, with half of the five famous kilns "Ru, Guan, Jun, Ge, Ding" in China. Among them, Ru kiln, Jun kiln and Northern Guan kiln were all located in the territory of Henan today, producing national intangible cultural heritage such as Jun porcelain, Ru porcelain and Tang Sancai, creating numerous ceramic art treasures and making irreplaceable contributions and influences in the development of Chinese ceramics.

There are 14 items including Ru porcelain, Jun porcelain and Tang Sancai firing techniques included in the national ICH in Henan. According to the management methods for the recognition of representative inheritors of national ICH projects promulgated by the state, 11 people have been recognized as the inheritors of Henan ceramic firing techniques, 4 people as the inheritors of Ru porcelain firing techniques, and 1 person as the inheritor of Danyang Yu strand glaze porcelain firing techniques. The Standing Committee of the Henan Provincial People's Congress has adopted the ICH protection platform and recognized 17 inheritors of Jun porcelain firing techniques and 3 inheritors of Tang Sancai firing techniques among the inheritors of ICH ceramic firing techniques. Many people have joined the revival of ceramic firing techniques under the leadership of the national government policy^[4].

Henan Province is located in the Yellow River basin, the vast central plain is the birthplace of Chinese culture. The ancient ancestors on both sides of the Yellow River used the earth as gold, creating a brilliant ancient ceramic culture. If Zhejiang Province is the center of porcelain production from Eastern Han Dynasty to Tang Dynasty, Jiangxi Jingdezhen^[5] is the center of porcelain production from Yuan Dynasty to Qing Dynasty, then Henan Province is the center of porcelain production in Song Dynasty, which holds an important position in the history of Chinese ceramics. At the same time, Henan Province has convenient transportation conditions, a broad market in the midwest, lower investment costs, superior development environment, sufficient labor and a good industrial base, has a unique advantage to become the first choice of well-known domestic ceramic enterprises to settle.

5.1 Ceramic Development

The development of ceramic art is like a mirror reflecting the development of social civilization, reflecting the social style and human environment of different historical periods. Henan ceramics is the most characteristic traditional representative. The ceramic industry in Henan has a long history and unique ceramic techniques.

^[4] Li,Y.J. (2023). Research on the protection and inheritance of Henan ceramic firing techniques based on intangible cultural heritage. *Foshan Ceramics*,33(01), p144-146.

^[5] It is discussed in more detail in Chapter 4, Section 4.4 - FAENZA Square.

5.1.1 Humanities foundation

The development of ceramics, as part of the craft industry, was closely linked to the development of social and economic development, as well as to the development of culture and art. According to archaeological data since the founding of China, the development of Chinese ceramic art reached its peak during the Northern Song Dynasty. Among the more than 170 ancient ceramic cultural sites discovered in modern times, about 130 of them were established during the Song Dynasty, accounting for 75 % of the total.

The rise of ceramics in this period was inextricably linked to the stable and prosperous social environment of the Central Plains region during the Northern Song Dynasty. During the Northern Song Dynasty, the population of the Central Plains region increased dramatically, and urbanization gradually occurred due to the gathering of population. (Figure 1) This was a period of great development of Chinese folk culture. Due to the economic development, the prosperity of industry and commerce, and the growth of the citizen class, there was a trend of folklorization to meet the aesthetic needs of the citizen class. Cultural arts depicting folk customs gradually became popular [6].



Figure 1. Qingming River Painting (Song Dynasty 960—1279)

During the Northern Song Dynasty, the unprecedented prosperity of the market economy led to an increasing number of towns with concentrated populations and developed commerce, which gradually formed clusters of towns. According to historical records, the government implemented the policy of banning copper in order to protect the demand of copper for coin-making, which also made the people gradually use ceramic vessels instead of copper vessels. Therefore, the general public also became users of crude ceramics during this period, and the demand increased greatly. It can be said that the prosperity of towns and villages in the Song Dynasty promoted the prosperity of private ceramic kilns. On the other hand, as firing ceramic ware requires raw

[6] Ge,Z.M. (2010). An Analysis of the Art of Decorative Pillow Decoration with Black Flowers on a White Ground at Pacun Kiln in Xuchang. Central Plains Cultural Relics, no.5, p5.

material processing, firing production also requires a fixed source of natural resources and skilled artisans with relevant skills. Also because the ceramics are brittle and fragile, not suitable for long-distance transport, often local or near to trade [7].

The Song Dynasty was the peak of China's cultural and artistic development, and Kaifeng in Henan Province was once the capital of the Song Dynasty (Figure 2). Because of its geographic advantage, the economic and cultural development of Henan province during the Northern Song Dynasty was prosperous, with developed land and water transportation and abundant mineral resources, which laid the foundation for the flourishing of the ceramics industry in the region. Among the world-famous "Ru, Guan, Ge, Jun, Ding" five famous kilns, Ru, Jun, and Guan kilns were located in Henan, and during this period, the Central Plains region, with mandarin kilns and private kilns, had a thriving ceramic industry.

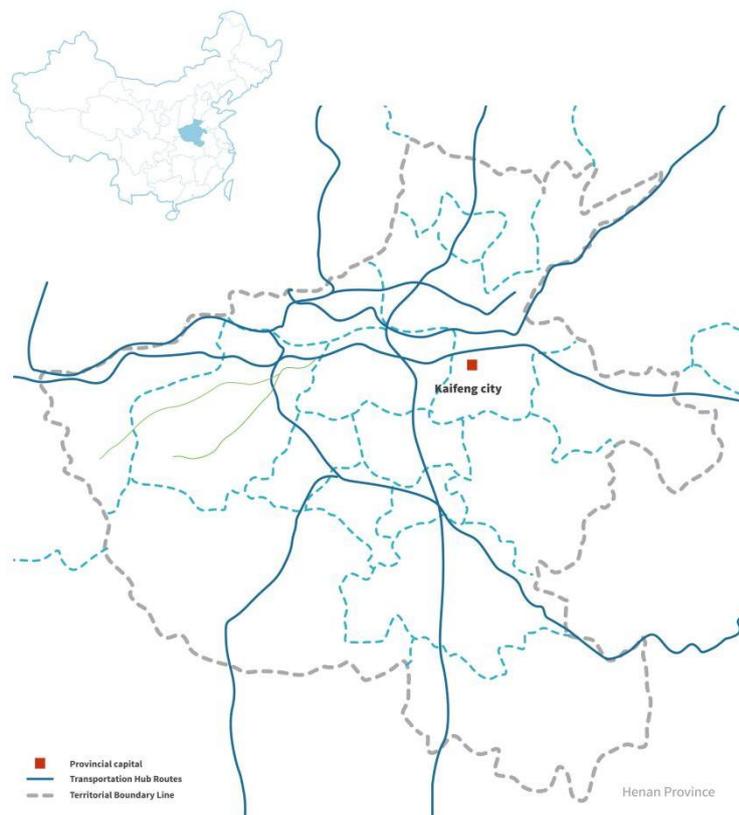


Figure 2. Song Dynasty Capital (960—1279) - Kaifeng City, Henan Province, China

There were many famous kilns all over the Song Dynasty, and most of them belonged to the private kilns, except for the mandarin kilns which were exclusively for the use of the nobility. Contemporary scholars usually divide Song ceramics into eight major kiln systems [8]: the Ding kiln system, the Jun kiln system, the Yaozhou kiln system, the Cizhou kiln system, the Yue kiln system, the Jian kiln system, the Longquan kiln system, and the Jingdezhen blue and white porcelain kiln system. Among them, the Ding, Jun, Yaozhou, and Cizhou kilns belong to the northern region, while the remaining two are kilns in the southern region. Colored art ceramics are

[7] Chinese Silicate Society. (1982). History of Chinese Ceramics. Beijing: Heritage Press, p294.

[8] Ye, H.G. (2011). The Historical Lineage of Chinese Ceramics. China Ceramic Industry, No. 5.

common in the Central Plains, and the Cizhou kilns, famous for their underglaze black flower and overglaze engraved flowers, have influenced many surrounding areas, including Henan. Among them, Yuzhou Jun porcelain has been praised as "a piece of Jun porcelain is better than a piece of gold and wealth" because of its "colorful glaze after firing".

However, according to the analysis of excavated objects and cultural layer sections, Henan ceramics gradually showed signs of decline by the Yuan Dynasty. Analysis of the reasons for this, the Yuan Dynasty ended the Song and Jin dynasties north and south of the divided situation, the influx of porcelain from southern kilns into the northern market, coupled with the war in the northern region making the decline of private kilns, the center of gravity of the ceramic industry gradually moved south.

5.1.2 Geographic distribution

From the available archaeological investigation and excavation data, it is known that during the Song and Jin dynasties, there were many kilns in Henan, mainly in the central and western regions of Henan. Including the central firing area centered on Ruzhou (Lushan kiln, Linru kiln, Yanhedian kiln, Qingliangsi kiln, Juntai kiln, Bacun kiln, Dengfeng kiln, Mixian kiln, etc.); the western firing area centered on Xin'an and Yiyang (Xin'an Beiye, Miao Hou and Chengguan kilns, Yiyang Chengguan, Jinping Mountain kilns, etc.); And the Dayaodian kilns in Neixiang, Nanyang City and the Danyang Yu kilns and Hebi kilns along the southern foothills of the Taihang Mountains on the north of the Yellow River are the more dispersed kilns in the south and north of Henan. The quality and output of their fired products are lower than those of kilns in the central and western regions of Henan. [Figure 3](#).

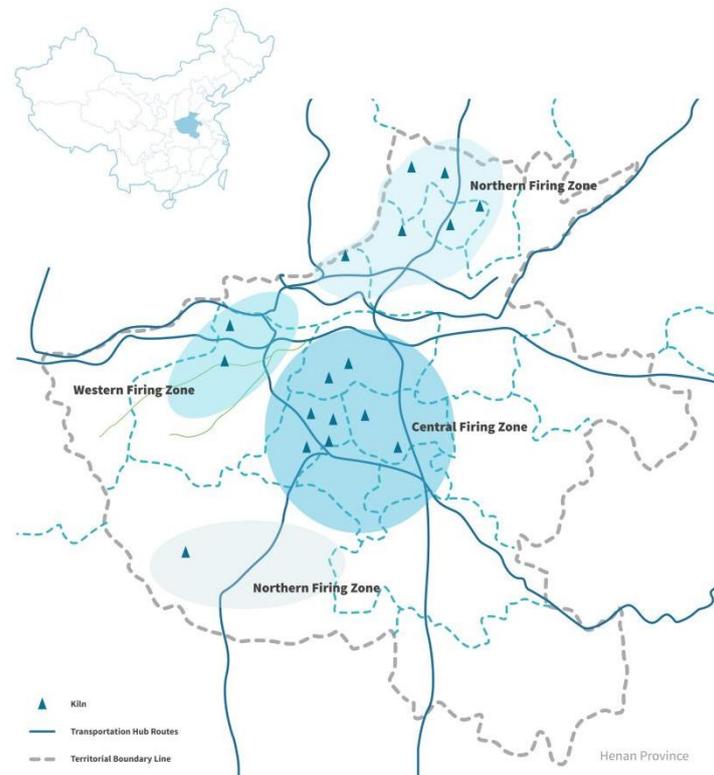


Figure 3. Distribution of kilns in Henan Province during the Song and Jin Dynasty (960—1368)

In the development of contemporary ceramics in Henan, the north-central firing area has the most active ceramic practice. Among them, the "Jun kiln" in Yuzhou City is the most famous. [Figure 4](#).

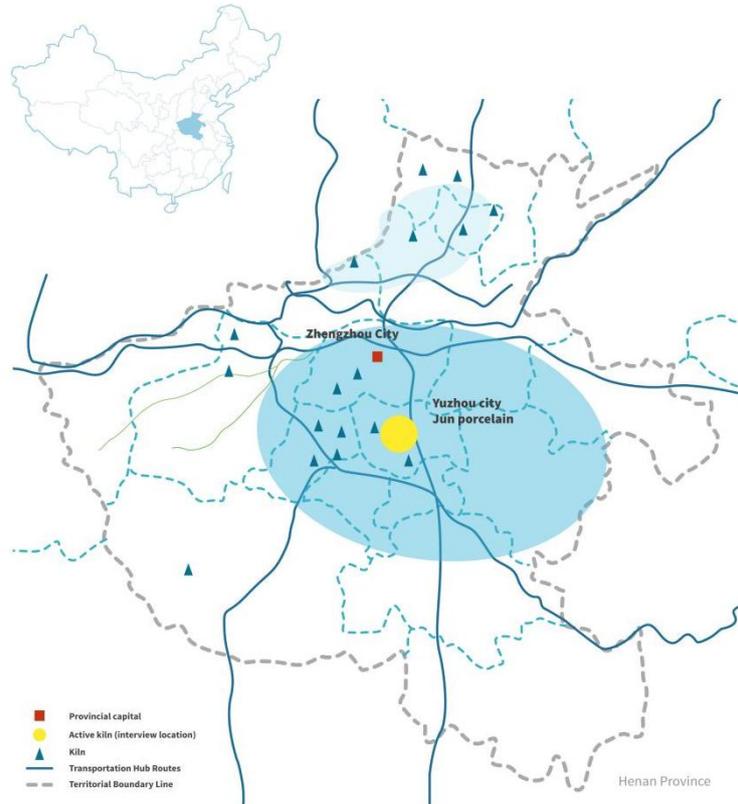


Figure 4. The central firing area represented by Yuzhou "Jun" porcelain, Henan, China.

The "Jun kiln" is an outstanding representative of ceramic handicraft production in the northern region during the Song, Yuan and Ming dynasties, featuring an elegant milky azure glaze and brilliant copper-red coloring, and has been acclaimed as one of the "Five Famous Kilns" of the Song Dynasty. Yuzhou is the famous hometown of Jun porcelain in China, with more than 140 ancient kiln sites spread throughout the city, which is the largest and most densely populated area in Henan Province. From August to December 2013, the Henan Provincial Institute of Cultural Relics and Archaeology carried out a rescue excavation of the "Jundu New World" project in Jianye, Shenhou Town, Yuzhou City, excavating an area of 2120 square meters and found 18 kilns, 3 ruins of workshops, 126 ash pits, 13 clarifying ponds, 18 stoves, 3 ash ditches and 1 tomb, unearthing More than 800 complete and recoverable artifacts were excavated ^[9].

Yuzhou City, formerly known as Yangzhai and Junzhou, is located in the hinterland of Henan, west of Xuchang, and has natural resources for producing ceramics and has a long history of porcelain making. As far back as 4,000 to 5,000 years ago, during the Neolithic Age, the ancestors were already engaged in the production of pottery, and in the Han and Jin dynasties, primitive celadon was fired. In the Tang Dynasty, the ceramic industry developed even more rapidly, and there was a kind of color glaze porcelain with different colors on black glaze and brown glaze, which was fired at a high temperature and showed large patches of gray-blue and creamy-white

^[9] Fang, Y.M. (2014,02). 2013 Top Five New Archaeological Discoveries in Henan Province. *Huaxia Archaeology*.

color, or blue, white, green and gray flowing patterns with different forms, breaking through the situation of single color glaze. This colored glaze ceramics is the predecessor of Jun porcelain, which is called "Tang Jun" by the ceramic historians, so it is determined that the production of Jun porcelain began in the Tang Dynasty. During the reign of Emperor Huizong of the Northern Song Dynasty, an mandarin kiln was set up on the south shore of the Guanying River in Juntai, and Jun porcelain became a precious product for the imperial court. The production of a piece of Jun porcelain goes through more than 70 processes, from quarrying and crushing to design, grouting, carving, spinning, docking, glazing, and calcining. The ancient town of Shenhou is famous for its beautiful colors and unique style of porcelain.

After the founding of the New China, Chen Wanli, an expert from the Palace Museum, came to Yuzhou in 1950 to investigate Jun porcelain; From 1952 to 1954, local state-run Yu Xing Porcelain Factory, Yuxian Shenhou First Porcelain Kiln Industrial Production Cooperative and Yuxian Shenhou Second Porcelain Kiln Industrial Production Cooperative were established; In the 1970s, Jun porcelain developed rapidly, both technically and artistically; in the 1980s, as many teachers and students from art colleges came to Yuzhou to create their works, it also brought modern cultural and artistic ideas to Yuzhou, which influenced the development of traditional Jun porcelain art; After the 1990s, traditional Jun porcelain art was highly valued, and the Yuzhou Institute of Jun porcelain was established, specializing in the study and creation of Jun porcelain works; by 1997, there were more than 1,500 types of Jun porcelain; After 2000, as a cultural artwork with national characteristics, Jun porcelain became part of the popular collection and investment boom, bringing unprecedented opportunities for the development of Jun porcelain.

< *Jun porcelain* >

Jun porcelain originally refers to the porcelain made at the "Jun kiln", one of the five famous kilns of the Song Dynasty, and is also known as Jun glazed porcelain from northern ceramic kilns. The main production area is in the area of ancient Juntai and Shenhou Town in Yuxian County, Henan Province, which was named because of the building of Juntai in Yuzhou, where the great ceremony of the Xia Dynasty was held. It was first fired in the Tang Dynasty, then flourished in the Northern Song Dynasty, and was designated as an mandarin kiln during the reign of Emperor Huizong of the Song Dynasty, where it was used to make imperial porcelain for the court. In [Figure 5](#), a piece of Jun porcelain is shown in "Listening to the Qin" by Emperor Huizong of the Song Dynasty ^[10]. The person playing the Chinese ancient zither in the painting is Zhao Ji ^[11], and the flower pot on the stacked stone flower table opposite is Junguan kiln porcelain; also: Jun kiln, made in Yuzhou in the early Song Dynasty, Yuzhou used to be called Juntai. Jun porcelain fine body, hard, its slightly heavy, glaze with five colors, thick and rich, with lines of rabbit hair. The red carmine, vermilion color is the most, green as emerald, purple as ink is the next ^[12] and other records.

^[10] Jin, Q.W. (2002,03). On a piece of Jun porcelain in Song Emperor Huizong's "Listening to the Qin" - and some controversies about the "Listening to the Qin". Journal of Zhangzhou Normal College (Philosophy and Social Science Edition), p56.

^[11] Zhao Ji, Emperor Huizong of the Song Dynasty (02.11.1082 - 04.06.1135), known as Master Xuanhe, the eighth emperor of the Song Dynasty (reigned February 23, 1100 - January 18, 1126), was a calligrapher and painter.

^[12] [R.O.C.] Xu Zhiheng writing, Du Bin proofreading. Yinliuzhai talk porcelain. Jinan: Shandong Pictorial Press, 2010. p29.



Figure 5. Listening to the Qin, Emperor Hui in northern song dynasty (960-1279)

The magic of Jun porcelain lies in its kiln-varied glaze, which is characterized by its unpredictable glaze color and its strong covering power, and its highly decorative nature in the firing of Jun porcelain works. Jun porcelain gained great momentum during the Song dynasty, and formed a large system of Jun porcelain kilns in northern and southern China ^[13].

According to the definition of the National Standard implemented on October 1, 2009: Jun porcelain is made of kaolin clay and ceramic clay (black wool clay) produced in the administrative area of Yuzhou City, and other raw materials through molding, plain firing, glaze with copper and iron as the main coloring agent, sintered by reducing atmosphere, glaze layer to produce liquid-liquid phase, showing natural kiln transformation of the furnishings and daily objects. [Figure 6.](#)



Figure 6. Jun porcelain

The artistic characteristics of Jun porcelain are not only reflected in its unique kiln-formed artistic effect, its shape is full of the solemn and rigorous nature of the imperial court, but also has the simplicity and mellowness of Song Dynasty artisans, with regular lines, concise decoration and fine craftsmanship. Jun porcelain is available in a wide variety of shapes, such as tripods, stoves, vases, jars and washings, as well as various bowls, tea sets, wine sets, stationery, etc. There are also more than a thousand varieties of figures and animals.

^[13] Chinese Silicate Society. (2009). History of Chinese ancient ceramics. Beijing: Cultural Relics Press.

5.2 Industry Analysis

5.2.1 Interviewee structure

This chapter interviewed 28 ceramic artists from the most concentrated firing area in the north-central part of the ceramic industry.

Distributed in 11 cities/counties in Henan Province: [Figure 7](#)

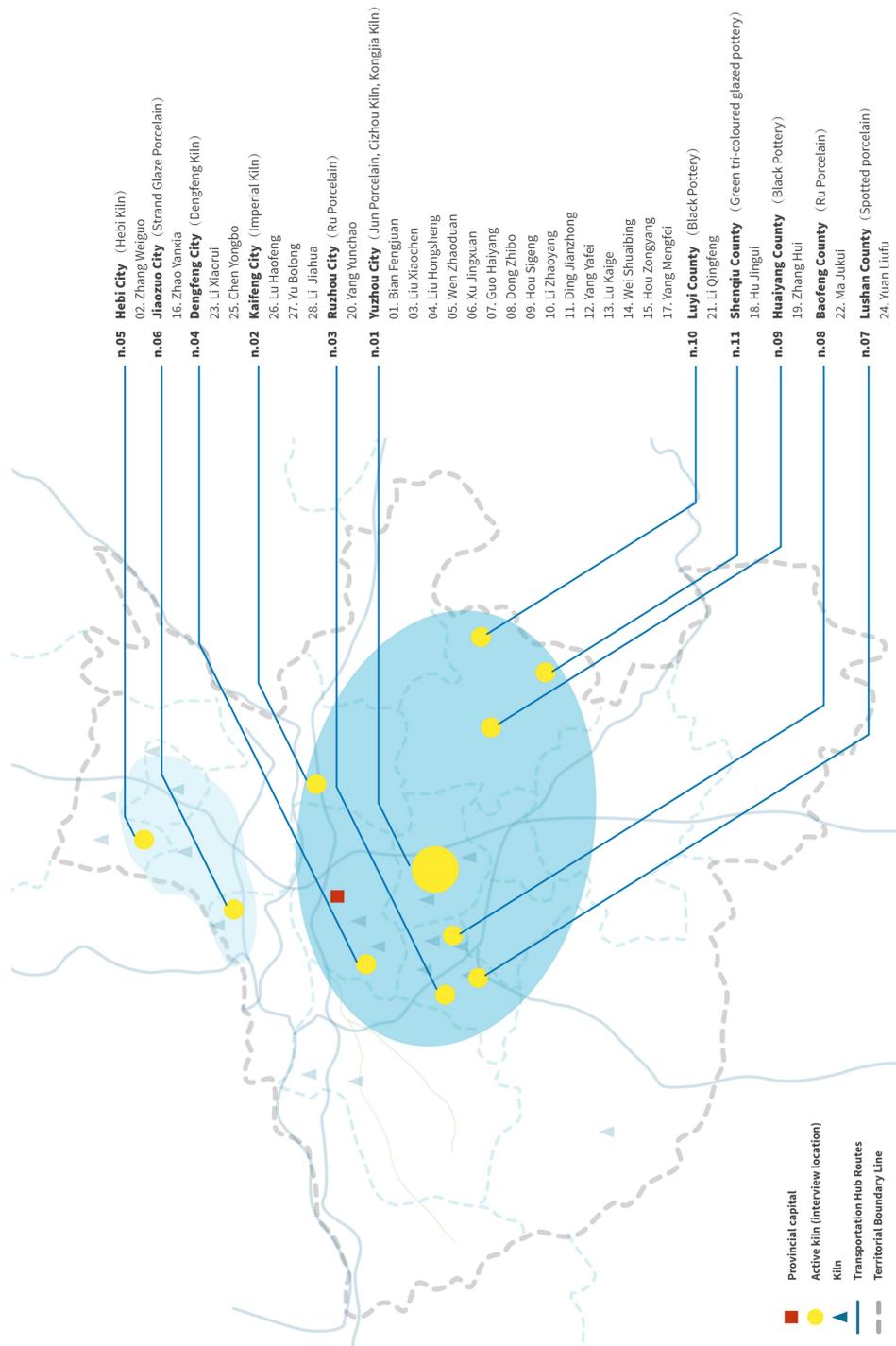


Figure 7. Distribution of interviewees by district

- n.01 Yuzhou City (Jun Porcelain, Cizhou Kiln, Kongjia Kiln)
- n.02 Kaifeng City (Imperial Kiln)
- n.03 Ruzhou City (Ru Porcelain)
- n.04 Dengfeng City (Dengfeng Kiln)
- n.05 Hebi City (Hebi Kiln)
- n.06 Jiaozuo City (Strand Glaze Porcelain)
- n.07 Lushan County (Spotted porcelain)
- n.08 Baofeng County (Ru Porcelain)
- n.09 Huaiyang County (Black Pottery)
- n.10 Luyi County (Black Pottery)
- n.11 Shenqiu County (Green tri-coloured glazed pottery)

5.2.2 Interview data - First collation - Overview analysis

No. City / County	No. Interviewee	Business Type	Organization	
01 Yuzhou City	01 Bian Fengjuan	K	Company	
	03 Liu Xiaochen	K	Family Workshop	
	04 Liu Hongsheng	C	Craft Studio	
	05 Wen Zhaoduan	K / C	Family Workshop / Company	
	06 Xu Jingxuan	C	Craft Studio	
	07 Guo Haiyang	K / C	Craft Studio	
	08 Dong Zhibo	C	Craft Studio	
	09 Hou Sigeng	C	Company	
	10 Li Zhaoyang	C	Family Workshop / Craft Studio	
	11 Ding Jianzhong	C	Craft Studio	
	12 Yang Yafei	C	Company	
	13 Lu Kaige	C	Family Workshop	
	14 Wei Shuaibing	C	Craft Studio	
	15 Hou Zongyang	C	Family Workshop / Craft Studio	
	17 Yang Mengfei	C	Family Workshop	
	02 Kaifeng City	26 Lu Haofeng	C / K	Craft Studio
		27 Yu Bolong	C / K	Company
28 Li Jiahua		C / K	Museum	
03 Ruzhou City	20 Yang Yunchao	C	Company / Industrial Zone	
04 Dengfeng City	23 Li Xiaorui	K	Company	
	25 Chen Yongbo	K	Company	
05 Hebi City	02 Zhang Weiguo	K	Company	
06 Jiaozuo City	16 Zhao Yanxia	C	Company	
07 Lushan County	24 Yuan Liufu	C	Company	
08 Baofeng County	22 Ma Jukui	C	Individual	
09 Huaiyang County	19 Zhang Hui	C	Craft Studio	
10 Luyi County	21 Li Qingfeng	C	Individual	
11 Shenqiu County	18 Hu Jingui	C	Family Workshop / Company	

K stands for " Kiln ". C stands for " Ceramic " .

Figure 8. Interviewee information preliminary collation

The 28 ceramic artists interviewed were categorized by different cities, name numbers, business types, and organization types as shown in [Figure 8](#).

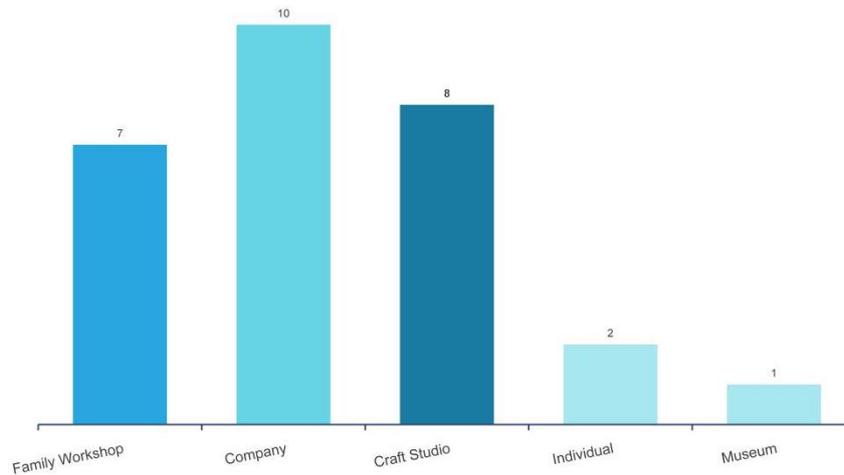


Figure 9. Percentage of types of organizational models

As shown in Figure 8, Figure 9, according to the type of ceramic business organization, company operations accounted for 35.7%; family workshops accounted for 25%, craft studios accounted for 28.5%, and other types accounted for only 10.8%. Although, as a whole, the ceramics industry in Henan region has a high industrialization pattern with ceramic companies as the leading production. But in fact, the business model driven by individual skills (family workshops and craft studios, accounting for a total of 53.5%) is also the main development pattern of the ceramic industry in Henan at present, which is inseparable from the special and personalized characteristics of ceramic crafts.

For example, take the Jun kiln industry in Yuzhou City as an example. In this area, there are mainly private enterprises, using the "company+individual" method, such as Da Song Jun porcelain, Kongjia Jun kiln, Lujia Jun kiln, Miaojia Jun kiln, etc., which were established by some craftsmen with their own techniques after the collapse of state-owned enterprises. Some of them are families of ceramic manufacturers, and have even been dedicated to the development and production of Jun porcelain since the Ming and Qing dynasties.

In some famous enterprises there are often one or two famous national or provincial masters of craftsmanship, leading a research and development team to design new ceramic shapes, develop glaze colors and form their own kiln effects on the basis of inheriting traditional Jun porcelain shapes. They focus on establishing their own brand, declare national research projects, and strive to obtain government, corporate, corporate gift porcelain production orders, compared to some of the financial and technical strength of the weak family workshops are producing common daily-use porcelain, furnishing porcelain, antique porcelain, take the civilian low-priced route, which is often more profitable.

5.2.3 Interview data - Second Collation - In-depth analysis

After the preliminary structured analysis of the interview information, the interviewees were categorized into " Kiln (K)" and " Ceramic (C)" according to the type of organization of the ceramic business model.

5.2.3.1 "Kiln" site business model

A total of 10 interviews were conducted with a sample of kiln sites as a commercial development business type (Feature/Brand). [Figure 10](#).

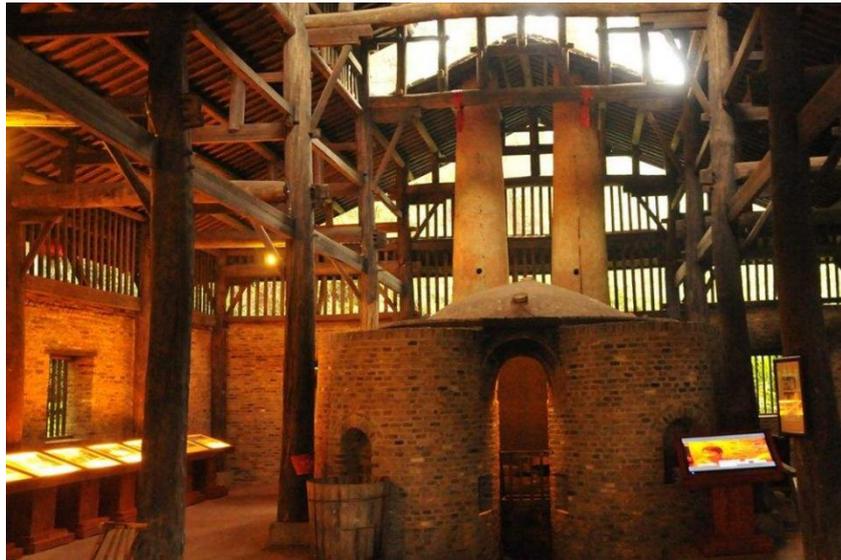


Figure 10. Jingdezhen Ancient Kiln Folklore Expo Area-Ancient Architecture and Kilns for Making Ceramics

The business type with "kiln (K)" as the development model highlights the characteristics of the site itself as a historical heritage, family legacy, and special firing process; its ceramic products are characterized by different glaze firing and different shapes.

The interview information was structured in the following elements: [Figure 11](#)

- No. City/County
- No. Interviewee name
- Kiln name
- Attribute
- History/Heritage
- Product
- Glaze type
- Decoration techniques
- Organization
- Operation
- Challenges
- Future

No. City / County	No. Interviewee	Kiln Name	Attribute	History / Heritage	Product	Glaze Type	Decoration Techniques	Organization	Operation	Challenges	Future
01 Yuzhou City	01 Bian Fengjuan	Bacun Kiln	Private kiln	Tang Dynasty- Yuan Dynasty 618-1368 Song Dynasty "Ink Porcelain" site	Functional utensils	Chinese Ink Painting; White glaze; Yellow glaze Green glaze; Black glaze	Over/Under glazed painted; Delineated decoration	Company	Self-produced; Self-distributed; Tourism DIY	a. b. c. d.	Ensure ceramic firing quality
03 Liu Xiaochen	03 Liu Xiaochen	Liu's Kiln	Private kiln; Liquefied Gas Kiln	/	Traditional Ware	Jun glaze(Confidential)	Hand-throwing; Natural glaze color	Family Workshop	Self-produced; Self-distributed; Online sales	c. d. g.	/
05 Wen Zhaoduan	05 Wen Zhaoduan	Wen's Kiln	Private kiln; Pinewood Kiln	Third generation family heritage	Traditional Ware	Jun glaze(Confidential)	Hand-throwing; Natural glaze color	Family Workshop; Factory	Self-produced; Self-distributed	b. d. g. h.	Ensure ceramic firing quality; Keep the characteristics of Pinewood kiln production
07 Guo Haiyang	07 Guo Haiyang	Guo's Kiln (Kongjia Kiln)	Private kiln	/	Functional utensils (Incense set, tea set); Ornamental utensils (Vase)	Jun glaze(Confidential)	Hand-throwing; Natural glaze color; Hand-kneaded decoration	Craft Studio	Self-produced; Self-distributed	c. d.	Keep artistic taste; Weak commercialization
02 Kaifeng City	26 Lu Haofeng	Lu's Kiln	Imperial kiln	Song Dynasty 1119-1125; Refired in 1981	Tea set	Pink cyan glaze; Moon white glaze	light glazed mouth-rim and foot-rim of purple or iron color; Lobed decoration	Craft Studio	Self-production; Agency distributed; Online sales	a.d.k.f.	Cross-Industry Communication; Integrate modern aesthetics
27 Yu Bolong	27 Yu Bolong	Bianjing Imperial Kiln Shop	Imperial kiln	Song Dynasty 1119-1125; Refired in 1981	Ornamental utensils; Functional utensils	Pink cyan glaze; Moon white glaze	light glazed mouth-rim and foot-rim of purple or iron color; Lobed decoration	Company	Self-produced; Self-distributed	a.d.f.	Government Role
28 Li Jiahua	28 Li Jiahua	Hongda Art Museum	Imperial kiln	Song Dynasty 1119-1125; Refired in 1981	Ornamental utensils; Functional utensils (Tea set, the four treasures of the literary house)	Pink cyan glaze; Moon white glaze	light glazed mouth-rim and foot-rim of purple or iron color; Lobed decoration	Museum	Self-produced; Self-distributed	a.d.e.	School Collaboration; Educational Experience
04 Dengfeng City	23 Li Xiaorui	Dengfeng Kiln	Private kiln	Tang Dynasty- Yuan Dynasty 618-1368; Refired in 2006	Functional utensils Teapot (wheatstone)	Pearl-pattern ground; Chinese Ink Painting	Delineated decoration	Company; Industrial base	Self-produced; Industrial base direct sales; Educational Travel	b.d.f.	Product Improvement
25 Chen Yongbo	25 Chen Yongbo	Dengfeng Kiln	Private kiln	Tang Dynasty- Yuan Dynasty 618-1368; Refired in 2006	Functional utensils Teacup; Ornamental utensils	Pearl-pattern ground; Chinese Ink Painting	"Yuhuchun" Vase (Pear-shaped vase with a flared lip); Curly grass pattern; Delineated decoration	Company	Self-produced; Self-distributed	b.c.d.	Better product targeting; Market control
05 Hebi City	02 Zhang Weiguo	Hebi Kiln	Private kiln	Tang Dynasty- Yuan Dynasty 829-1368	Functional utensils (Chinese Wine Set, lamps, Go pieces); Business/Gift utensils	White Glaze; Yellow glaze Black glaze; Hebi Jun glaze	Shaved decoration	Company	Self-produced; Agency distributed; Tourism DIY	a.b.d.f.	"Wine" culture integration; Heritage reproduction

a. No systematic protection of ancient heritage b. High technical difficulty c. Less professional talents; labor shortage d. Lack of innovation in product design e. Fragmented operation f. Lack of new sale and advertising
g. Incomplete factory allocation (Complex production processes, high labor needs and high input costs) h. Environmental issues i. Soil and raw materials

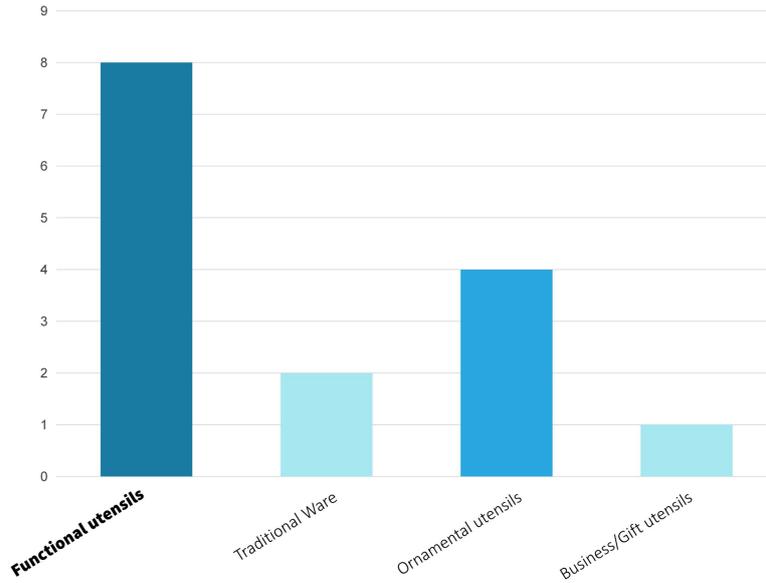


Figure 12. Product Types - "Kiln" as the business model

In Figure 12, Figure 13, the "kiln (K)" as the development mode of the business type mainly produces functional appliances 53%, ornamental appliances 26%, this type of business focus on the practicality of ceramics and favor the aesthetics of the public. Among these products, 45% of the ceramic types are customary to "tea" culture, indicating that ceramic production in Henan is still stuck in the traditional theme, with insufficient innovation in developing and applying new areas.

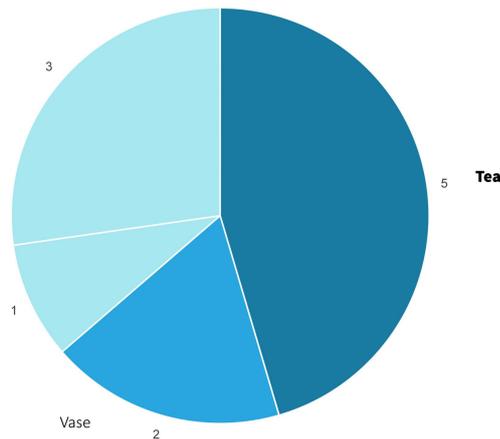


Figure 13. Product themes - "Kiln" as the business model

For example, in the field survey, the product development team prevailing in Yuzhou Jun porcelain is often led by a famous master leading a group of young technical backbone. On the one hand, they design gift porcelain for large enterprises or even the state, and these projects bring them lucrative economic profits and a great sense of pride; on the other hand, they also redesign

some traditional classic wares with slightly more individual decorative features to seek more sales channels. Because the normal operation and business of a kiln factory requires a lot of investment in capital, manpower and technology, if the sale of their own ceramic products is not good will be eliminated from the market. In this market of glaze color and shape competition, the imitation of traditional classic shapes of Jun porcelain is the most secure way of production.

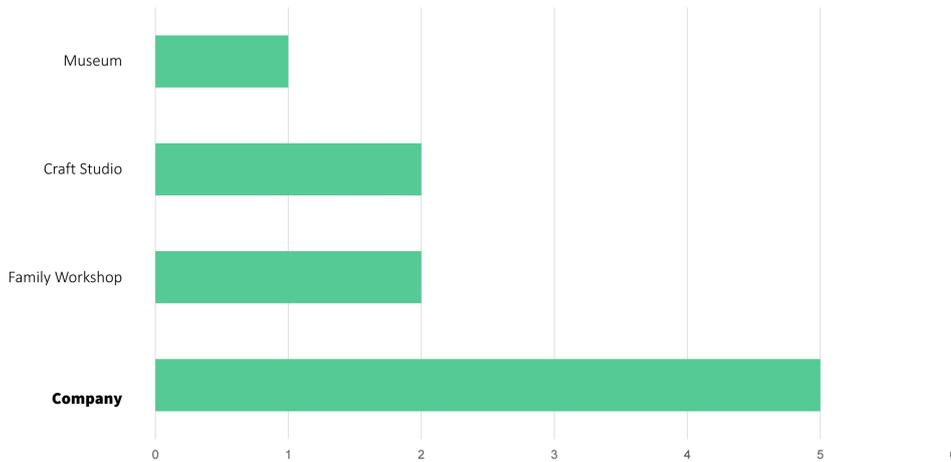


Figure 14. Organization - "Kiln" as the business model

In Figure 14, the business organization model of "kiln (K)" is dominated by individual companies, which have a complete production and operation model, influenced by the company system (described in detail in Chapter 3, Section 3.2.2.1). At the same time, there is a ceramic museum based on the "kiln" site as an organizational model to promote products and culture through tourism.

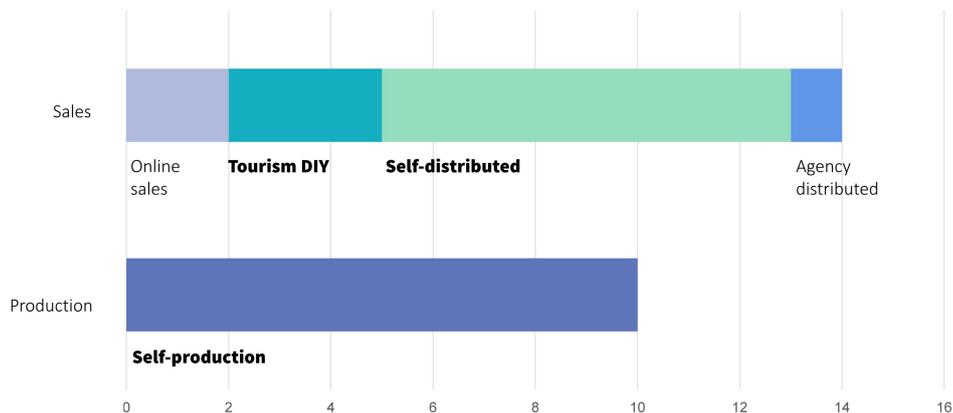


Figure 15. Operation strategy - "Kiln" as the business model

In Figure 15, the development model is "kiln (K)", which has complete and mature firing conditions, so the ceramics are produced and processed independently. In terms of sales, they are mainly offline marketing such as self-distribution and tourism DIY, and a small number of online stores with their own brands and agencies. This means that traditional marketing is currently the

mainstream, but innovative sales models such as the Internet and digital media may bring more advantages for the development of ceramics.

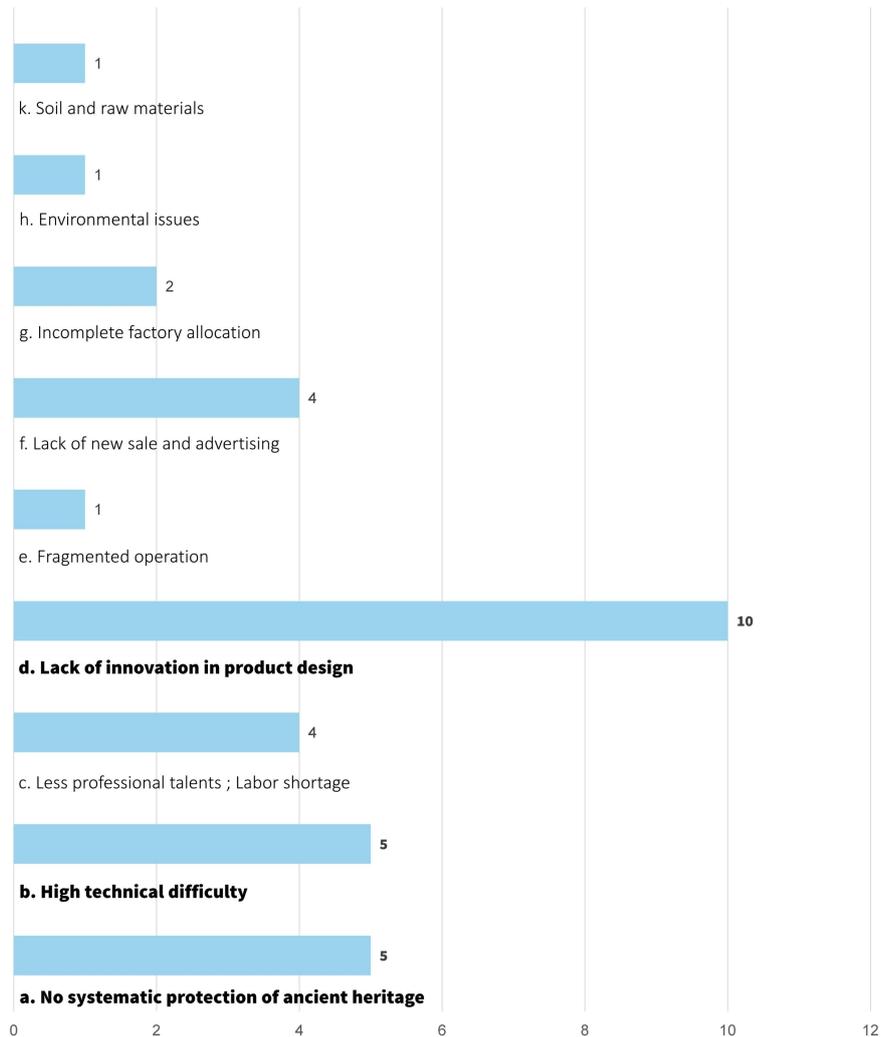


Figure 16. Challenges - "Kiln" as the business model

In Figure 16, the lack of innovation in the design of ceramic products is the most important concern of the craftsmen, with a total of 30.3%; because the "kiln (K)" site itself is a very precious historical and cultural heritage as a place where ceramics have been handed down for generations, and the lack of systematic protection of ancient heritage for this type of model is "kiln(K)" site inheritance people are very worried; at the same time, the high technical difficulty of firing ceramics, the lack of relevant specialized talents, the lack of new sales channels, increasing the visibility of ceramic products, etc., are also the major challenges faced by the current craftsmen.

5.2.3.2 "Ceramics" business model

There were 18 interview samples for "Ceramic (C)" as a business development business type (specialty/brand).

The business type with ceramic (C) as a development model highlights the characteristics of special glaze color, special decoration, special production process, and personal style; its products are characterized by making unique glaze colors, and different ceramic forms.

The interview information was structured with the following elements: [Figure 17](#), [Figure 18](#).

Glaze type

(No.C) No.Interviewee name

Organization type/name

Joining industry time

Personal skill

Product

Glaze/Decoration

Craft techniques

Design concept

Produce/kiln type

Operation

Challenges

Future

"Ceramics": Explore the symbiotic and sustainable approach to territorial revitalization

Porcelain Type	(No. C.) No. I	Organization Type/Name	Joining Industry	Personal Skills	Product	Glaze Decoration	Craft Techniques	Design Concept	Product / Kiln Type	Operation	Challenges	Future
Jun Porcelain	(01) 04	Craft Studio/ "King Hang Jun Living Room" "Jun Kiln Company" "Personal Studio	1993	Design; Hand-throwing; Glazing; Firing	Antique-style products	Jun glaze	/	Chinese aesthetics; Native innovation	Handmade + Mold	Self-produced; Self-distributed; Online crowdfunding; Solo art exhibition; Wholesaler purchase	c.g.	Personalized products; Living artwork; Interdisciplinary cooperation
	(01) 06	Craft Studio/ "Wu Jie Design"	/	Design	Functional utensils (tea set, cups) Sculptures	Jun glaze 80%-90%	/	Handcraft intangible cultural heritage	/	Self-produced; Online sales	b.f.g.	External trade
Dong Zhibo	(01) 08	Craft Studio/ "Sammi Porcelain House Studio"	2013	Design; Hand-throwing; Glazing; Firing	Functional utensils (tea set)	"Lu" Jun glaze (ind.-crystalline glaze)	Small ware firing	Aesthetic and practical	Handmade + Mold	/	b.d.	Functional innovation
	(01) 09	Company/ "Tai Hehang Porcelain Co."	2006	Glazing; Firing	Household porcelain (tea set, the four treasures of the literary house); Ornamental utensils (vase)	Jun glaze; Jade Glaze	/	/	Handmade + Mold	Self-produced; Store sales	b.	External trade; Artistic porcelain; Household porcelain
Li Zhaoyang	(01) 10	Craft Studio	2009	Hand-throwing; Glazing; Grouting; Firing	Tea ceremony utensils	"Song" Jun glaze; "Earthworm through mud" pattern; light glazed mouth-rim and foot-rim of purple or iron color	Puff color; Second-pass firing; "Atmosphere" (temperature control)	Glaze innovation	Handmade + Mold	/	b.k.d.	Interdisciplinary cooperation (Sculpture art)
	(01) 11	Craft Studio/ "Jun Ding Jun Kiln"	1979	Claying; Hand-throwing; Molding; Glaze ratio; Glazing; Firing	Ornamental utensils	Jun glaze (red-blue dominant)	Dripping beads with Tianmu glaze	Glaze innovation	Handmade + Mold	/	b.d.	Craft innovation
Yang Yifei	(01) 12	Company/ "Hong Yang Jun Porcelain"	1997	Hand-throwing; Molding; Glaze ratio; Firing	Functional utensils (tea set)	Jun glaze	/	Eco-friendly materials	Handmade + Mold	Self-produced; Self-distributed;	b.d.	Teaware porcelain innovation
	(01) 13	Family Workshop	/	Hand-throwing; Molding; Glaze ratio; Firing	Functional utensils (tea set, vase)	Jun glaze; Ru glaze; Floral pattern	Spike support Craft	/	Handmade + Mold	/	d.g.	Independent brand creation
Wei Shuangling	(01) 14	Craft Studio	2006	Molding; Glaze ratio; Firing	Functional utensils (tea set)	Jun glaze	/	At hand, with style, at will	Handmade	/	b.d.	Glaze innovation; Technique innovation
	(01) 15	Family Workshop	2010	Hand-throwing; Molding; Glaze ratio; Firing	Ornamental utensils; Functional utensils; Household porcelain	Jun glaze (red dominant)	/	Tradition as the basis for reinvention	Handmade + Mold; Liquefied gas kiln (eco-friendly)	Wholesale; Retail; Exhibition sales	b.f.h.	Online sales
Yang Mengfei	(01) 17	Company/ "Yuzhou Yuzhong Jun Kiln"	2013	Claying; Hand-throwing; Glaze ratio; Firing	Collectible Porcelain; Ornamental utensils; Artistic Porcelain	Jun glaze	/	Traditional antique ware	Coal kiln (filter installation)	Self-produced; Self-distributed; Festival marketing (rituals to kiln god)	d.e.h.	Product improvement

a. No systematic protection of ancient heritage b. High technical difficulty c. Less professional talents; Labor shortage d. Lack of innovation in product design e. Fragmented operation f. Lack of new sale and advertising
g. Incomplete factory allocation (Complex production processes, high labor needs and high input costs) h. Environmental issues k. Soil and raw materials



Porcelain Type	(No.) No.1	Organization Type/Name	Joining Industry	Personal Skills	Product	Glaze Decoration	Craft Techniques	Design Concept	Product / Kiln Type	Operation	Challenges	Future
Stranded Glaze Porcelain	(06) 16	Company/ "Jin Guan Stranded Porcelain Art Co."	2011	Overglazed painted: Carving	Ornamental utensils: Functional utensils (tea set)	Stranded glaze: Feather pattern	Stranded craft: Translucency craft: Relief carving	/	Pinewood kiln; Liquefied gas kiln	Self-product; Direct sale store; Experience center	d, f, k	Cultural heritage; Decoration innovation
	(03) 20	Company/ "Ru porcelain cultural Industrial zone"	1983	Design: Glazed ratio; Glazing; Firing	Functional utensils (tableware)	Turquoise glaze (bean green)	Cracked craft (heating curve)	Tea sets; Tableware; Catering market	Handmade + Mold	Industrial zone; Festival marketing (Ru porcelain cultural festival); Government support	b, d	Glaze innovation; Technique innovation (Ru porcelain without cracked); Market development
Spotted Porcelain	(07) 24	Company/ "Duanlian Spotted Porcelain Intangible Cultural Heritage Development Co."	2009	Design: Glaze ratio	Antique-style products: Household porcelain	Black glaze; milky white and blue speckled mixed glaze; glaze veins; glaze marks	Two-phase fractional glaze	/	Coal kiln; Pinewood kiln	Self-product; Agency distributed; Online sales	d, h	Packaging design innovation; Talent recruitment; National policy
	(09) 19	Craft Studio/ "Chenzhou Imperial Kiln Art Studio"	1993	Design; Carving	Ceremonial Ware; Ornamental utensils	/	"One-cut clay" (carving craft)	Market Trends	Vacuum mudding machine; Coal kiln	Self-product; Online sales; Festival marketing (company annual party); Business Gift	d, f, e	Market targeting (young people); Product transformation; Industry rectification
Black Pottery	(10) 21	Individual	1970	Clay; Hand-throwing; Carving; Painting; Firing	Antique-style products	Buckle decoration; Bronzeware pattern	Biscuit firing	/	Handmade	Self-product; Self-distributed; Festival marketing (Laotai culture festival)	a, d, f, g	Government support; Technique protection and heritage
	(11) 18	Company/ "Zhokou Qing Suncel Fine Ceramics Co."	1980	Clay; Hand-throwing; Carving; Painting; Firing	Ornamental utensils	/	Two-layer engobe; Secondary glaze	Literary works; Plants; Figures subjects	Handmade	Self-product; Agency distributed; Experience center	b, d, f, k	Establishment of industrial zone

a. No systematic protection of ancient heritage. b. High technical difficulty. c. Less professional talents. d. Lack of innovation in product design. e. Fragmented operation. f. Lack of new sale and advertising. g. Incomplete factory allocation (Complex production processes, high labor needs and high input costs). h. Environmental issues. k. Soil and raw materials.

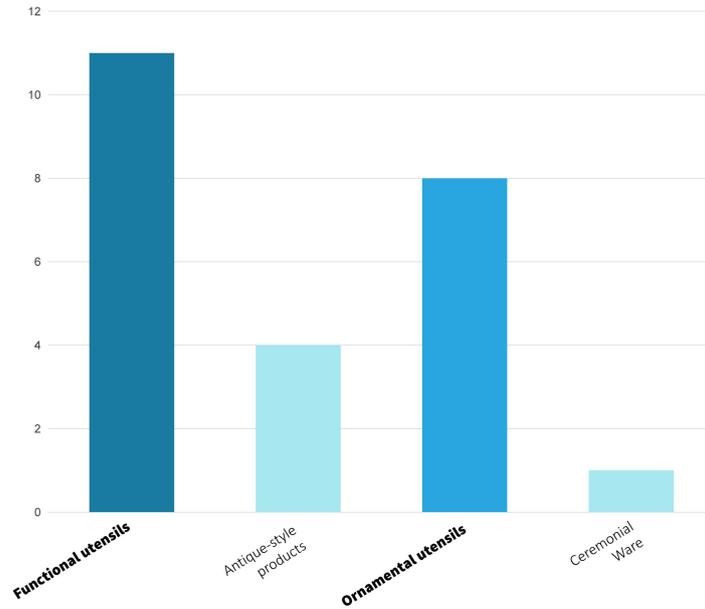


Figure 19. Product Types - "Ceramic" as the business model

In Figure 19, the business type "Ceramics (C)" as the development model mainly produces 45.8% of functional appliances and 33.4% of ornamental appliances. As compared to the "Kiln (K)" business type, the production of ornamental utensils increased by 7.4%, while the production of functional utensils decreased by 7.2% and the production of antique products increased by 16.7%. This indicates that in the "Ceramic (C)" business type, in addition to functionality, there is a greater emphasis on the artistic expression of individual products and a general pursuit of higher ceramic techniques.

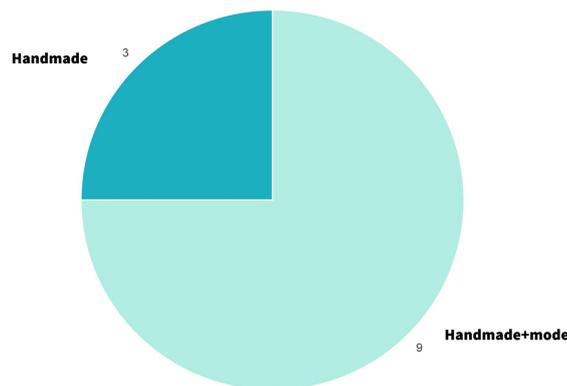


Figure 20. Manual production and mold production - "Ceramic" as the business model

In Figure 20, the production of "ceramics (C)" is dominated by "hand + mold" making in 75% of cases, while only 25% of craftsmen create ceramics by hand. In the modern ceramic production process, craftsmen have made molds to assist in producing ceramics in addition to their individual techniques. While improving production efficiency, this has also lowered the technical threshold of

ceramic production to a certain extent, allowing more labor to be put into the production of ceramics.

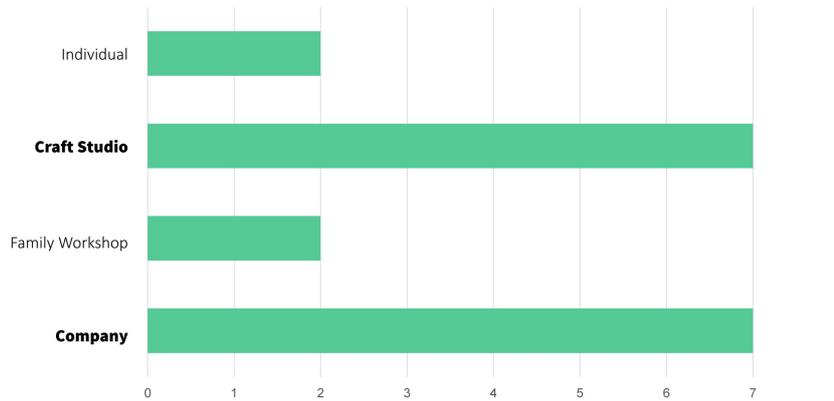


Figure 21. Organization - "Ceramic" as the business model

In Figure 21, the business organization model "ceramic (C)" includes 38.8% of companies, 38.8% of craft studios, 11.2% of family workshops and 11.2% of individuals. In fact, the production of ceramics by craft studios, family workshops and individuals is a small-scale individual production, accounting for 61.2% of the total. This indicates that in the "ceramic (C)" model, production is more decentralized and focuses on individual techniques and brand building.

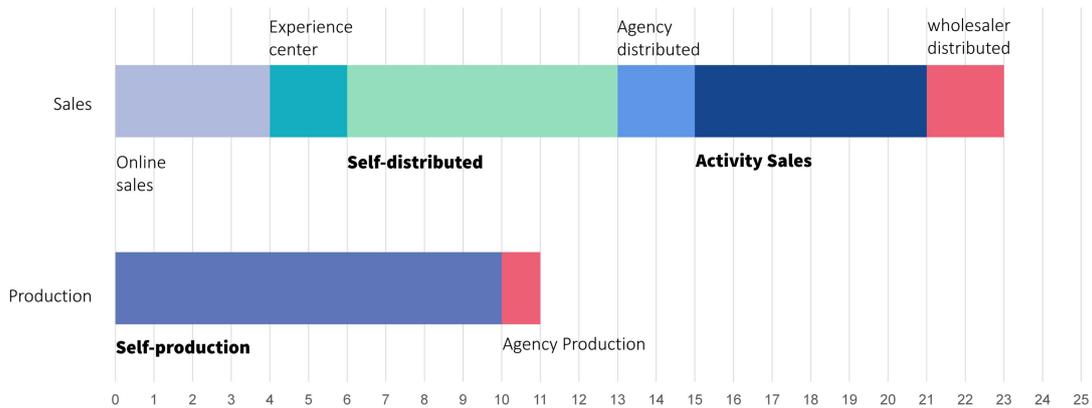


Figure 22. Operation strategy - "Ceramic" as the business model

In Figure 22, most of the production channels for "ceramic(C)" have the ability to independently produce on a small scale, and only a small percentage need to find an agent for production. In the marketing strategy, the proportion of online sales has increased considerably, and self-distribution and activity sales (ceramic festivals, fairs, etc.) are the main methods, while some have set up specialized ceramic experience centers. This means that in the "ceramic (C)" as the characteristics of the business model is more flexible, the ability to accept new technologies faster and more adaptable to the market.

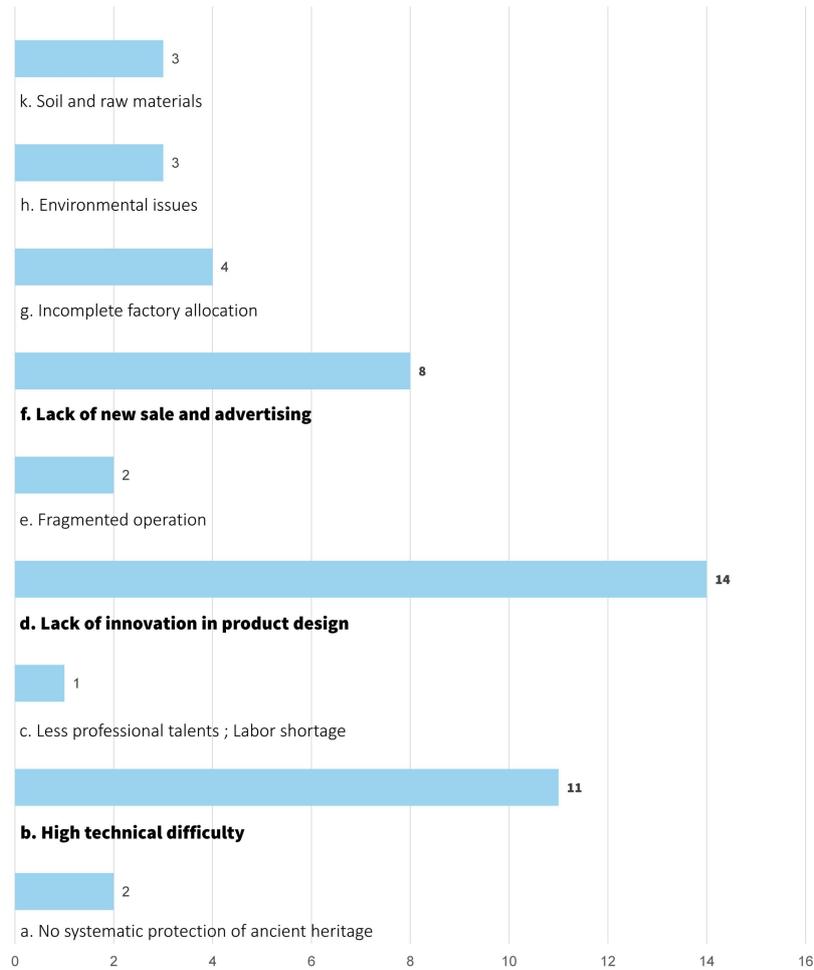


Figure 23. Challenges - "Ceramic" as the business model

In Figure 23, the main challenges faced by artisans using "Ceramics(C)" as their business model include a lack of innovation in product design (29.2%), a breakthrough in difficult ceramic techniques (22.9%), a lack of new marketing channels to increase awareness (16.7%), as well as the constraints of production conditions. Due to the nature of ceramic production, the sustainable development of its raw materials and the environmental pollution caused by the production process are also current challenges faced.

5.2.3.3 Comparative analysis

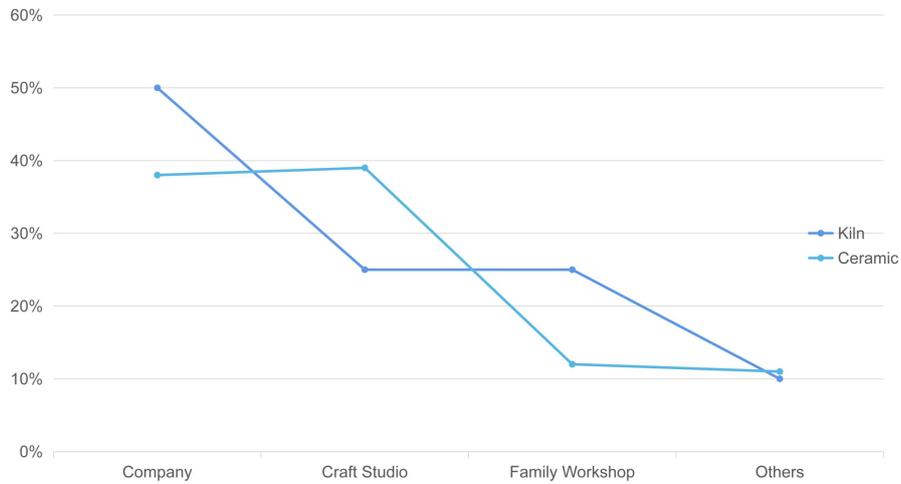


Figure 24. Comparison of kilns and ceramic organization types

In Figure 24, by comparing the types of organizations, the business model of "kiln (K)" has a higher historical heritage and scale, dominated by companies, and mass-produced functional porcelain utensils for daily use are more common; while the business model of "ceramic (C)" is based on the personalized creation of craftsmen, and is mostly craft studios. This difference also indirectly leads to a higher level of artistry and flexibility in "C" and a higher level of industrialization and production in "K".

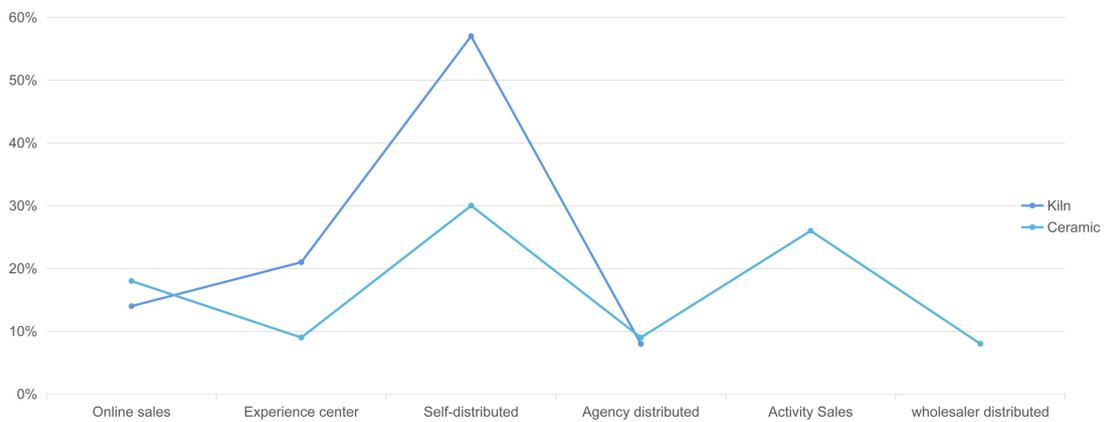


Figure 25. Comparison of kilns and ceramic Operation types

In Figure 25, by comparing the operation methods, "kiln (K)" has a relatively more complete industry chain with a single marketing method, while "ceramic (C)" has a diversified marketing strategy but is less risk-resistant to the industry and has a weaker inheritance.

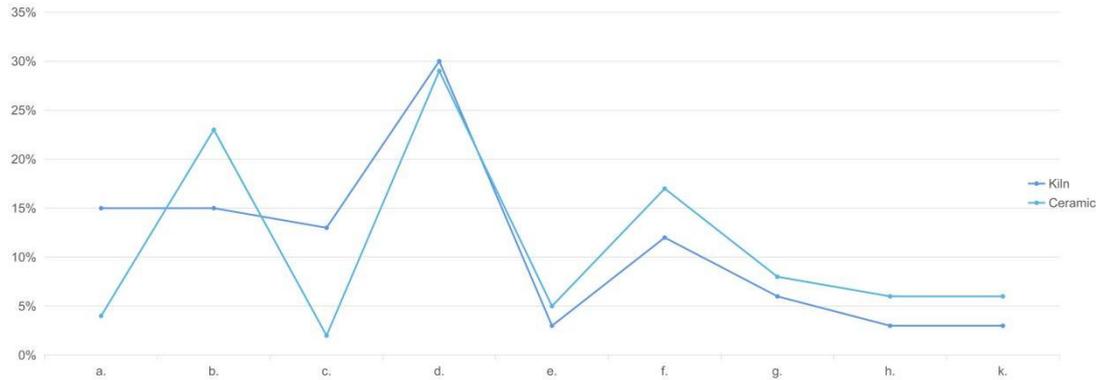


Figure 26. Comparison of kilns and ceramic challenges & Difficulties

In Figure 26, by comparing the different challenges and difficulties involved:

- a. No systematic protection of ancient heritage
- b. High technical difficulty
- c. Less professional talents ; Labor shortage
- d. Lack of innovation in product design
- e. Fragmented operation
- f. Lack of new sale and advertising
- g. Incomplete factory allocation
(Complex production processes, high labor needs and high input costs)
- h. Environmental issues
- k. Soil and raw materials

Both business models share a common desire to innovate the design of ceramic products, increase new sales channels, and raise product popularity. However, in contrast to the intangible cultural heritage of "C", "K" is a historical monument and is responsible for the rescue and preservation of cultural heritage. The shortage of specialized human resources and labor for ceramics is more critical in "K" than "C", due to the difference in production scale and designers. For environmental protection, "K" has more specialized equipment and is relatively better at dealing with ceramic waste and sewage, but "C" is small and has limited capital and equipment, so it is difficult to design and produce while taking care of environmental issues.

5.2.3.4 Design thinking

Based on the actual situation of the development of ceramic culture industry in Henan Province, the Henan Provincial Government proposed the strategy of vigorously developing the ceramic culture industry cluster construction, which will drive the development and transformation of Henan economy and society, and promote the construction and development of "Central Plains Economic Zone". " Industrial cluster is an efficient form of industrial organization, which is inherent in the high density of industrial concentration, through the expansion of industrial scale and the connection and strengthening between enterprises, to obtain the benefits of economies of

scale and division of labor, and improve the market competitiveness of enterprises and industries in the region." [14]

But at present, although Henan ceramic culture industry has a certain foundation, but the overall industry scale is small, lack of leading ceramic culture enterprises with brand advantages and influence, the development level needs to be improved. At the same time, has been built with the scale effect of the ceramic culture industry park is not much, and most of the park consists of small production entities, market-oriented operation capacity is weak, specialized division of labor and collaboration system has not yet formed, homogeneous competition is more prominent, the cluster effect is not obvious enough, from the establishment of a good industrial ecology there is a gap and so on. These problems are to a certain extent restricted the sustainable development of the ceramic industry.

The development of ceramic culture industry in the Yellow River basin should be centered on culture, through the integration with modern technology means, communication characteristics, business philosophy, etc., to transform and upgrade the traditional ceramic industry in Henan Province into modern ceramic culture industry.

(1) Enhance cultural creativity

The development of ceramic culture industry should seize the cultural attributes of the industry and find a breakthrough in cultural creativity. The guiding ideology of conventional ceramic industry development is resource and market dualism, while ceramic culture industry should be resource, market and culture triad.

Cultural creativity is a use of different carriers to build re-creation, innovation and cultural phenomenon, the correct and reasonable use of cultural creativity can give ceramic products a new connotation, to achieve the effect of giving ceramic products a new glory. For example, "ceramics + performance", "ceramics + VR experience", "ceramics + cultural and creative consumption", "ceramics + theme entertainment "Ceramics + microfilm", "ceramics + intelligent platform", etc. Through rich artistic expressions such as movies and TV dramas, it shapes the cultural image of Henan ceramics and expands the popularity and influence of Henan's ceramic culture industry. In April 2021, Beijing Byte Dance Company chose Yuzhou Shenhou as the only Tiktok ceramic base in northern China - "Tiktok live base in Henan northern ceramic area". This move has put a huge engine on the ceramic industry development in Shenhou ceramic area and even the whole Henan ceramic area, further enhancing the influence of Henan ceramics.

(2) Shape brand culture

Brand gives consumers higher spiritual enjoyment and consumer commitment, can make goods or services far more competitive than ordinary goods, the formation of value-added, premium effect, which is more prominent in the role of cultural goods. At present, most of the ceramic cultural branding in Henan is not enough, such as at the consumer level, with a profound cultural market impact of corporate brands less; brand building and design is not rich enough, product

[14] Song,W. (2010,10). Functional orientation and industrial selection of industrial cluster -- Reflections on the development of industrial cluster in Henan. *Journal of Pingdingshan Academy*, p97-101.

homogenization phenomenon and enterprise homogeneous competition prevails, the lack of innovation and personalization. Ceramic product development needs to be based on the characteristics of their own techniques, shaping innovative, commercial ceramic brand IP. Different types of ceramics with unique regional cultural characteristics in Henan, such as Yuzhou Jun porcelain, Kaifeng mandarin porcelain, Ruzhou Ru porcelain, Luoyang Tang Sancai, etc., all can be used as local tourism logos to create influential local cultural brands.

At the same time, among China's five famous "Jun, Ru, Guan, Ge, Ding" kilns, both Jun and Ru are located in Henan Province, and the "Northern Ceramic Area" is an intangible brand of Henan Province. In recent years, the popularity of the Jun porcelain brand of intangible cultural heritage has been increasing. Until now, Jun porcelain works have been selected as national gifts more than 110 times and presented to international dignitaries and guests at major foreign events such as the ASEAN Expo, the Boao Forum for Asia, the SCO Summit, as well as the Olympic Games and visits by national leaders. A large number of Jun porcelain treasures have been collected by the National Museum, the Palace Museum, the United Nations Headquarters and other institutions. For example, the "Jun Porcelain Goblet ^[15]" (Figure 27), the designated championship trophy for the 2019 FIVB World Tour Finals, was designed by Professor Wang Yu's design team at Xuchang College, bringing Jun porcelain to international events and the world stage.



Figure 27. 2019 FIVB World Tour Championship Trophy "Jun Porcelain Goblet"

(3) Increase education and training

Henan ceramic cultural and creative industry is an important way to realize the optimal allocation of resources, and important to the sustainable development of ceramic production. In October 2021, Zhengzhou University of Light Industry, Xuchang College, Pingdingshan College, and Eastern International Art College joined with the Xuchang Jun porcelain industry development

^[15] "The main shape of the Trophy is based on the outer contour of the 'Goblet', a bronze ceremonial vessel of the Erlitou Culture period in Henan Province, with a flared mouth, a thin waist, a long foot and a phoenix tail as the main formal features; In terms of color expression, it is decorated with two glaze colors, Jun red and Azure, typical of Jun porcelain. Red symbolizes fierceness and enthusiasm; blue symbolizes peace and cooperation. The two colors are intended to show the athletes competition and cooperation sportsmanship embodied."

service center to hold a joint exhibition of works from four colleges in Henan province. The exhibits include both practices that combine traditional Jun porcelain vessel types for re-creation and installations that utilize the qualities of Jun glaze for modern artistic conceptual expression, demonstrating the diversity, richness and inclusiveness of Jun porcelain art in the future possibilities.

The decisive factor in the development of ceramic culture industry is talent. The application of information technology in the new era has a profound impact on the cultural and creative industry. Technologies and communication methods such as AR, VR and short video allow the cultural energy of the whole process of ceramic production to be displayed to the public. How to train ceramic artisans to master new technologies and attract professional talents to participate in the ceramic cultural and creative industry is the current problem to focus on. On the one hand, to promote international ceramic cultural exchanges, the domestic and foreign ceramic art world masters, outstanding talent to attract to Henan; on the other hand, to start with long-term basic education work to improve the overall culture and skills of ceramic practitioners.

5.3 Field Study

In recent years, under the background of cultural industrialization, the ceramic industry in Henan Province has been developed to a great extent. For example, a ceramic production pattern of "one ceramic culture industry cluster, three ceramic industry parks and six varieties" ^[16] has been formed, scientific research and exhibition institutions such as the Chinese Ceramic Culture Research Institute and the Museum of Ancient Ceramics have been established, and positive interaction with local universities has been established in the training of ceramic talents.

5.3.1 Academic activity

In order to promote the in-depth study of the five famous kilns of the Song Dynasty, the Palace Museum in Beijing organized the "Colorful - Jun Kiln Porcelain Exhibition at the Palace Museum" in October 2013 and the "Light and Subtle - Ru Kiln Porcelain Exhibition at the Palace Museum" in September 2015, following the exhibitions of the mandarin kiln porcelain in 2010 and the Ding Kiln porcelain in 2012. The last two exhibitions are on loan to the Henan Provincial Institute of Cultural Relics and Archaeology excavations of "Jun porcelain" and "Ru porcelain". Such as Ru kiln porcelain exhibition in the Henan Provincial Institute of Cultural Relics and Archaeology collection of Baofeng County, Qingliang Temple Ru kiln site and Ruzhou City, Zhang Gongxiang kiln site archaeological excavations 72 pieces, a more comprehensive reflection of the excavated Ru kiln porcelain, as well as the overall appearance of the Ming and Qing dynasty imitation Ru glazed porcelain.

In addition to the exhibition, the Palace Museum also published by the Palace Press has "Jun porcelain elegant collection - the Palace Museum treasures and excavated Jun kiln porcelain

^[16] A ceramic culture industry cluster refers to Yuzhou Jun porcelain culture industry cluster, three major ceramic industry park refers to the Neihuang Ceramic Industry Park, Hebi Shilin Architectural Ceramics Park, Jia County Shenqian ceramic industry park three major ceramic production base. The six varieties refer to daily-use porcelain, art ceramics, sanitary ware, architectural ceramics, civil ceramics, industrial ceramics.

collection" and "Ru porcelain elegant collection - the Palace Museum treasures and excavated Ru kiln porcelain collection" two books. And respectively held an international symposium on Jun kiln and Ru kiln.

October 22-23, 2015, the Palace Museum also held an international symposium on science and technology of the five famous kilns of the Song dynasty. from the perspective of scientific and technological testing to reveal and crack some of the difficult questions in the study of the five famous kilns porcelain. After the meeting published by the Science Press, the "International Symposium on Science and Technology of the Five Great Kilns of the Song Dynasty", collected a total of 44 research papers, including 22 papers on the Ru and Jun kilns, accounting for half of all.

Since 2010, the Beijing Art Museum has held 8 consecutive exhibitions in the "Chinese Antique Ceramic Kiln Series", each accompanied by a beautiful book with illustrations and a high level of academic presentations, making it an annual event for the Chinese antique ceramic community. " Each exhibition of the "Chinese Antique Ceramic Kiln Series" vividly tells the story of the "craftsmanship" of each kiln in the production technology and decorative techniques, and constantly innovates to promote and carry forward the profound Chinese ceramic culture to the world. Published by China Overseas Chinese Publishing House, the series of ancient Chinese ceramic kilns has been published in 9 volumes so far. Among them, 3 volumes of ancient porcelain kilns in Henan have been published, namely "China Danyang Yu Kiln" (2011), "China Gongyi Kiln" (2012) and "China Dengfeng Kiln" (2014). Each of these volumes has both the display of various products, kiln tools and molds excavated from the kiln sites and the publication of the latest academic achievements of relevant scholars, which greatly promotes the in-depth study of ancient ceramic kilns in Henan Province.

5.3.2 Tourism

(1) Characteristic towns

Since the first introduction of "characteristic towns" in 2014, the cultivation and construction of characteristic towns have risen to the level of national strategy and have been developed rapidly. In August 2018, the National Development and Reform Commission issued the "Notice on the Establishment of High-Quality Development Mechanism of Characteristic Towns and Special Small Towns", marking the high-quality development stage of the construction of characteristic towns ^[17].

Ceramic town in Henan in the new era is an innovative form of local urbanization. At present, there are three national ceramic characteristic towns in Henan Province. There are 3 ceramic towns:

Ruzhou City "Ru Porcelain Town", Mangchuan Town
Luoyang City, Mengjin County, "Town of Tang Sancai" Chaoyang Town
Yuzhou City (Shenhou Town) " Capital of Chinese Jun Porcelain"

^[17] Xu, J.Y. (2018,06). Exploration on the Construction of Characteristic Towns in Henan under the Strategy of Rural Revitalization. Journal of Zhengzhou Municipal Party School of the Communist Party of China, p50-53.

Ruzhou City "Ru Porcelain Town", Mangchuan Town

Ruzhou City, based on the advantages of resources, scientific planning to build a "Chinese Ru porcelain town" [Figure 28](#).



Figure 28. Ru porcelain

The total planning area of 12km², the first phase of a total investment of 2.5 billion RMB, relying on the historical deposits of the Song dynasty kiln site group, the use of the beautiful natural scenery of the Mangchuan River, to create an art town with Ruzhou regional characteristics and historical and cultural heritage. Industry clustering of Ruzhou porcelain production, the formation of "culture + technology + industry + tourism + leisure + health" as one and ecological cultural tourism industry symbiotic development pattern.

Luoyang City, Mengjin County, "Town of Tang Sancai" Chaoyang Town

Chaoyang Town of Mengjin County, Luoyang City, relying on Luoyang downtown in the south and connected to Xiaolangdi Water Conservancy Hub of Yellow River in the north, is the birthplace of Tang Sancai, with rich humanistic and natural landscapes in its territory, [Figure 29](#).



Figure 29. Tang Sancai - Lady and Horse

The town takes Tang Sancai production industry as the leading industry, forming a structure of Tang Sancai production and related industry clustering, as well as auto parts, deep processing of agricultural products and other related industries in a coordinated development. In December 2019, Happy Valley Group, the pioneer and leader of theme parks in China, signed the "Sancai Town" cultural tourism project with Mengjin County. Based on the unique Tang Sancai IP resources of Sancai Town, Sancai Town will be developed into a new multi-functional tourism destination with "regional characteristics + special industries + cultural tourism + leisure vacation + rural revitalization". It will be a new type of tourism destination with multiple functions in one ^[18].

Yuzhou City (Shenhou Town) " Capital of Chinese Jun Porcelain"

In 2008, Jun Porcelain Culture Industrial Park and Ceramic Park were built, relying on the culture of Jun porcelain and the well-protected ancient buildings in the old street of Shenhou, to promote the cultural tourism industry. From the current state of development, Yuzhou Jun porcelain cultural tourism resources can be summarized as four main categories.

A. Recreation and Tourism.

These include the old street of Shenhou, the ancient buildings of Jun porcelain, the temple of Bo Ling Weng, and various Jun kiln sites. These places have a strong cultural heritage of Jun porcelain through the precipitation and baptism of history, and can be used by tourists for pleasure and leisure;

B. Porcelain production.

Mainly including the Jun porcelain cultural venture industrial park and ceramic industrial park, that is the "two parks" planned in Shenhou town, where tourists can experience the real original production process of Jun porcelain;

C. Cultural promotion.

These activities and buildings carry the promotion of Jun porcelain culture in their own way, so that tourists can not only enjoy the ancient flavor of Jun porcelain town, but also feel and understand the culture of Jun porcelain;

D. Commercial Exhibition and Sales.

These are mainly the Jun porcelain culture street, the antique market, and the Junguan kiln road, where there are abundant Jun porcelain crafts for tourists to visit and purchase.

(2) Demonstration enterprises of cultural tourism

According to the " Five Good + Ten Owned " standard:

Five Good-"Good social images, Good brand effect, Good heritage innovation, Good management, Good tourism reception"

Ten Owned-"with scale, tax payment, patents, awards, masters, innovation, characteristics, three certificates, explanation, supporting"

^[18] The Government of Mengjin County. Mengjin County Government and Huaqiao City Happy Valley Group Signed the Cooperation Framework Agreement of Sancai Town Project [EB/OL].

In 2012, the Yuzhou government named 9 (Kongjia Jun Kiln, Da Song Guan Kiln, Shenzhou Jun Kiln, Jintang Jun Kiln, Jinding Jun Kiln, Pingshan Jun Kiln, Xinghang Jun Kiln, Guocui Jun Kiln, Huashen Jun Kiln) tourism demonstration enterprises, and cultivated more than 10 new ones (Yangzhi Jun Kiln, Jun Soul Kiln, Tongli Jun Kiln, Jinjia Jun Kiln, Huayi Jun Kiln, Yujun Zhai Kiln, Hengsheng Jun Kiln, Yubao Jun kiln, Longtai Jun kiln, and Tianhefang kiln).

(3) Comprehensive Industrial Park

Since 2003, Yuzhou City has been hosting the China Jun Porcelain Cultural Festival, which has promoted and publicized Jun porcelain and its culture. This has led to the sustainable development of the Jun porcelain culture and the ceramic economy in Yuzhou, which are organically combined and mutually promoted ^[19].

Shencai Town is trying to build "Jun Porcelain Cultural and Creative Industrial Park", which is a 2 square kilometers area, integrating master creative park, Jun porcelain industrial park, cultural square and tourism service. The park will be built into a cultural and creative base of Chinese "Jun porcelain" and an important cultural tourism site in the Central Plains.

It is a comprehensive industrial park which mainly focuses on research and development, production, appreciation and sales of Jun porcelain, and integrates work display, production experience and cultural tourism, and it is also the first cultural ecological park and cultural tourism scenic spot which integrates production, antique, visiting, shopping and leisure in Shenhua Town. The construction connotation is mainly to highlight the industry and regional cultural characteristics with "Jun porcelain" as the theme, and to reflect the regional, heritage and ecological aspects of industrial clustering and cultural innovation demonstration in the park.

5.3.3 Study visits

According to the plan of the Henan Provincial Ceramics Bureau for the fourth quarter of 2016, the successful selection of "Yuzhou Jun porcelain" as the "Quality Light" brand of the year in 2015 is an opportunity to create a "National Geographical Indication Product Protection Demonstration Zone for Jun porcelain"

^[19] China Jun Porcelain Yearbook Compilation Committee, Yuzhou Local History Compilation Committee. (2009). Chinese Jun porcelain yearbook (Vol. 1). Zhengzhou: Henan Fine Arts Publishing House, p57.

According to statistics, as of September 2016, Yuzhou City has 536 ceramic enterprises, employing 63,000 people, with 100 enterprises of scale (Figure 30), and the ceramic industry has become a characteristic industry, a wealthy industry and a well-known industry in Yuzhou City. It is expected that from January to September, the ceramic enterprises in this city achieved an industrial added value of 2.9 billion RMB, an increase of 12.7% year-on-year, occupying a proportion of 12.8% of the scale of industry and contributing 16.6% to the scale of industry. In particular, Jun porcelain enterprises have reached 186, is the largest number of enterprises in Yuzhou porcelain.

"Jun" Ceramic Enterprise Production Type	Number	Annual production	Practitioners
"Jun"ceramic enterprises (General)	536	—	63,000
Jun porcelain enterprises	186	2.2 million (pieces)	28,000
Stoneware	28	9.6 billion (units)	9,500
Sanitary ware	14	9 million (pieces)	8,500
Daily use porcelain	35	2.8 billion (units)	7,500
Architectural Ceramics	13	16,000,000 m ²	2,600
Garden furnishing art porcelain	67	800 million (pieces)	1,600
Flower pot & flower arrangement	54	100 million (pieces)	2,300
High- and low-voltage electric porcelain	8	250 million (pieces)	700
Refractory Products	121	380 million (pieces)	300
Ceramic Machinery Packaging	10	25,000 (pieces)	500

Figure 30. Number of Ceramic Enterprises in Yuzhou City in 2016 - "Yuzhou City Ceramic Industry Development Plan (2016-2025)"

Jun porcelain has become one of the best developed porcelains among the five famous porcelains of "Jun, Ru, Guan, Ge, and Ding" (Figure 31). With 77 pieces identified as national gifts, it has become a cultural calling card for Yuzhou, Xuchang and even Henan to the world. Yuzhou currently has 3 national masters, 6 national ceramic masters, 4 national intangible cultural heritage heirs of Jun porcelain, and 150 provincial masters and ceramic artists.



Figure 31. The "Glaze" of the Five Famous Chinese Porcelains

Yuzhou ceramics are relatively complete, and currently there are more than ten types of porcelain, including Jun porcelain, stoneware, architectural sanitary porcelain, flower pots, high and low voltage electric porcelain, high white porcelain for daily use, and garden furnishing art porcelain. Among them, the ancient architectural ceramics of the antique glazed tile industry is the largest production and distribution center in China, and the production of flower pot accounts for 1/4 of the annual output of the national flower pot industry, accounting for 1/6 of the annual output value of the national flower pot industry, and is the largest flower pot production base in the region north of the Yangtze River, ranking second in the country after Chaozhou City in Guangdong Province. The export scale of Jun ceramics exceeds 100 million US dollars, and has developed into an important ceramic export base in China.

After years of development, as of the end of 2016, the internal division of labor and collaboration system of Jun ceramics industry in Yuzhou City has been basically completed, and the supporting service system of raw material supply, transportation and sales, ceramic clay processing, mold making, color printing and packaging, market network, technology research and development, etc. has become more perfect, forming a more reasonable layout of production, supply and marketing of the articulated industrial development system, and the Jun ceramics industry has become one of the five characteristic industries in Yuzhou City.

As a representative of the Jun porcelain industry, Shenhou Town is closely integrated with the Jun porcelain market, forming a relatively complete industrial chain and expanding overseas markets, which has led to the sale of Jun porcelain from Shenhou to all over China.

Therefore, Shenhou Town is one of the areas that this study visited in the field.

There are many reasons for the growth of the porcelain industry in Shenhou Town:

A. Local resources are abundant, and most of the raw materials for porcelain production come from local sources, so transportation costs are low. The majority of the porcelain businesses are self-employed, with family members as the main labor source, and factories are built in their own courtyards, so land, labor and management costs are low.

B. Jun porcelain has been developed by generations of ancestors during the Tang, Song, Ming, Yuan and Qing dynasties, forming a unique local civilization of Jun porcelain. The development of the Jun porcelain industry is rooted in the local ceramic cultural heritage, and the techniques of making Jun porcelain have become very mature.

C. Government promotion. In order to enhance the competitiveness of the Jun porcelain industry, promote the culture of Jun porcelain, and fully drive local economic development, government departments have increased publicity for the culture and art of Jun porcelain, increased financial expenditures for the development of Jun porcelain, held large-scale events such as the Jun porcelain symposium and the Jun porcelain cultural festival, and established a branding strategy for the town.

Shenhou Town

Shenhou Town is located in the shallow hills and mountains of the Funiu Mountains in the south central part of Henan Province, a region rich in ceramics, forest and coal resources, as well as water resources, making it particularly suitable for ceramic production. During the Tang, Song, Jin and Yuan dynasties, the ceramic industry in this area was well developed, with famous porcelains such as Ru and Jun porcelain, and Shenhou was the first place to produce Jun porcelain. [Figure 32](#).

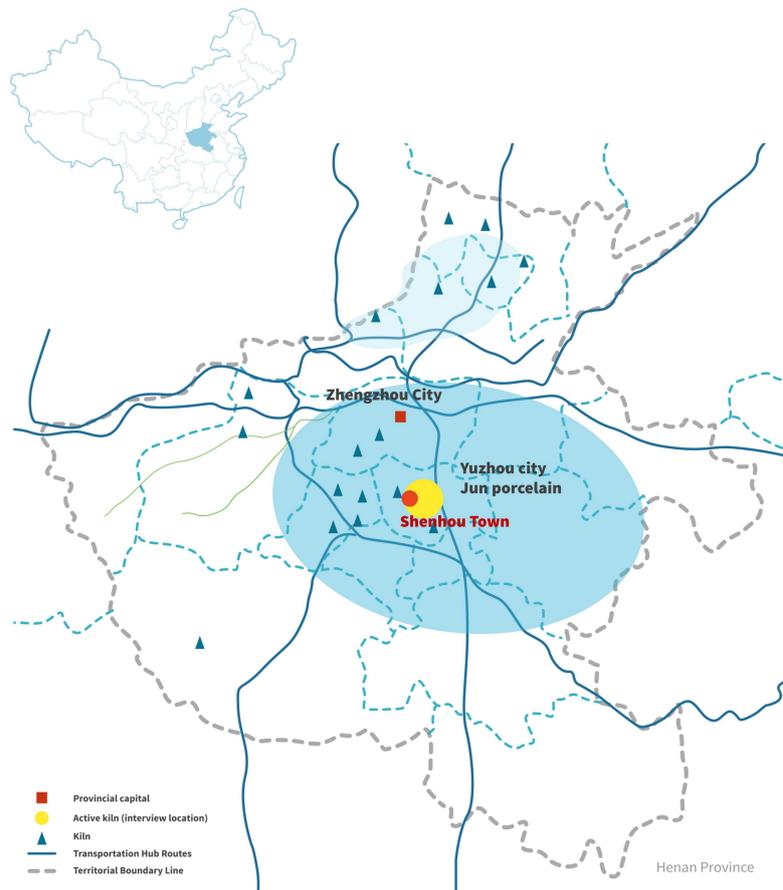


Figure 32. Shenhou Town, Yuzhou City, Henan Province

Shenhou Town is famous for its production of Jun porcelain, and has become a famous Jun porcelain production area and a famous historical and cultural town in the Central Plains.

In the 1950s, the production of Jun porcelain resumed, with the establishment of Jun porcelain factory I, Jun porcelain factory II and Dongfeng porcelain factory. Today, the town has a large industrial scale, with over 300 large and small porcelain enterprises in the area, which play an important role and influence in driving the regional economy and spreading the culture of Jun porcelain. Shenhou Town is about 49 square kilometers, with a population of about 50,000, and most of the people are engaged in the industry related to Jun porcelain, from collecting and transporting porcelain clay ore to producing and firing Jun porcelain products, from all kinds of porcelain making machinery to the kiln for firing Jun porcelain, to the promotion and marketing of

Jun porcelain, there are specialized workers in each industry ^[20]. It is said that at least one member of every family in Shenhou town is related to Jun porcelain, or is engaged in an industry related to Jun porcelain industry. The entire town is developed around the industry, which is the driving force behind the economic development of the town and not only feeds the local residents, but also drives the development of the surrounding economy, and many people in the surrounding towns are employed in the Jun porcelain enterprises in Shenhou Town.

5.3.3.1 Field research and ceramic crafting experience

As a famous historical and cultural town in the Central Plains, the porcelain culture industry in Shenhou Town, as well as the large area of ancient Ming and Qing dynasty architecture and many folk customs preserved in the town are the rich regional characteristics of Shenhou, which is a good resource for developing tourism. [Figure 33](#). The tourism industry can be used to integrate the Jun porcelain enterprises and the many historical and cultural heritages of the town into a complete tourism theme. This is a field study of the town and will focus on the "birthplace" of porcelain (workshops, enterprises, kilns), architectural and street features, museums, and individual ceramic making experiences.

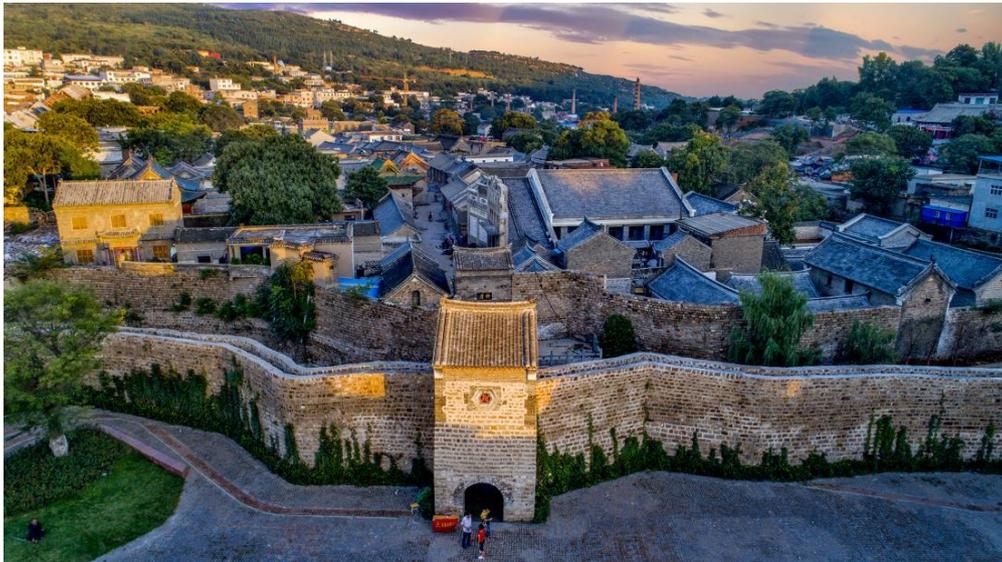


Figure 33. Shenhou Town

(1) "Birthplace" (Workshops, Enterprises, Kilns)

Many of the "birthplaces" (workshops, enterprises, kilns) in Shenzhou Town are good tourist destinations, and they play an active role in promoting the development of the porcelain industry and the inheritance of porcelain culture. For example, they build exhibition halls, traditional handicraft studios, and experience centers at their own production and design sites, where visitors can visit, tour, shop, and learn about the process of ceramic production, or even experience the process of making ceramics themselves, increasing the knowledge and interest of tourism.

[Figure 34](#), [Figure 35](#).

^[20] Li,S.T. (2005). Research on the Protection and Development Model of the Famous Historical and Cultural Towns of Henan. Zhengzhou University.



Figure 34. Jin Fengyuan Jun porcelain (craft studio)

- The walls are decorated with porcelain tiles of Jun
- In addition to producing functional porcelain, there are many artistic porcelains
- Direct sales shop



Figure 35. Jun porcelain production factory site

- Pinewood Kiln
- Hand throwing, repairing, drying, glazing

(2) Architectural and Street Features

Located in the southern basin, the "Shenhou Old Street" has a total length of about 4 km and is called a ten-mile long street, which consists of five old villages on both sides of the Xiaohu River.

Figure 36.



Figure 36. "Shenhou Old Street"

"Old Street" is formed with the development of the porcelain industry in Shenhou, which is characterized by narrow streets with stores of different heights, paved with green slabs, with ancient buildings and temples lined up on both sides of the road. There are also many alleyways on both sides of the old street, all of which are convenient transportation roads, such as "Huoja Hutong", "Egg Hutong", "Wenjia Corner" and so on. The old street is full of historical culture and is a testimony to the economic prosperity of Shenhou since ancient times. [Figure 37](#), [Figure 38](#), [Figure 39](#).

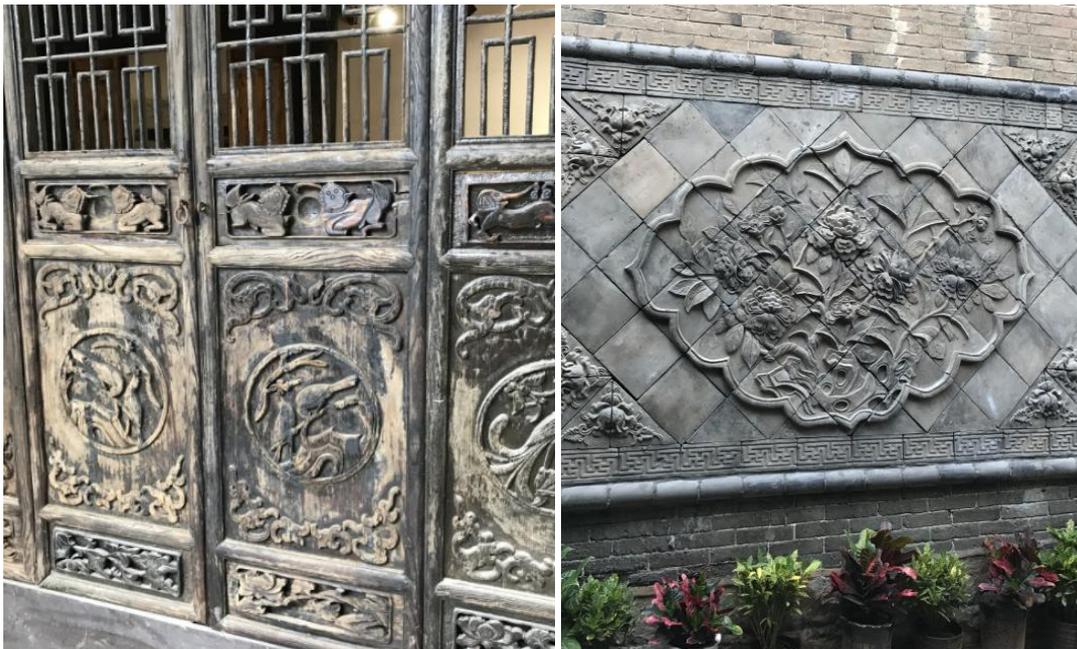


Figure 37. Traditional architectural forms-Chinese door, relief art



Figure 38. Ceramic Shops



Figure 39. Shenhou Town, Ceramic Family in Traditional Architectural Form

Many ancient architectures in the area of Old Street are related to Jun porcelain, such as the temple of "Bo Ling Xian Weng", also known as "Kiln God Temple", which was built by local people to pay tribute to "Bo Ling Weng, the god of kiln ". According to historical records, the temple was built in the Song Dynasty and rebuilt in the eighth year of Hongzhi in the Ming

Dynasty. In 1986, it was designated as the "Key Cultural Relics Protection Unit of Henan Province", which is a symbolic architecture and an important symbol of Jun porcelain culture in Shenhou Town. Today, the main hall of the temple has been destroyed, but the rest of the temple is still intact, with fine details and parts of the building, which attracts many tourists to visit. [Figure 40.](#)



Figure 40. "Temple of Bo Ling Xian Weng"

The old street is also preserved with the First Junzi Porcelain Factory and the old movie theater built in the 1950s and 1960s, which are also the old buildings preserved in the ancient town of Shenzhou, adding a lot of age and sense of time to the town.

In 1999, the First National Jun Porcelain Factory was developed by the government to be the antique market of Shenhou Town, which opened every Tuesday and attracted customers from different places in China, and was an important place for local ceramics workshops to sell their products, [Figure 41.](#)

The market has developed from a single antique porcelain to bronze, jade, stoneware, wood, jewelry, paintings and other items, forming a certain scale and becoming another important feature of the town today.



Figure 41. Public rest seats made of Jun porcelain & Antique Market

(3) *Museum*

The Jun mandarin Kiln Site Museum was expanded on the basis of the Jun mandarin Kiln Site, a national key cultural relic protection unit, and was established in June 1991. With a building area of 3,000 square meters, the building is built in the Song style, reproducing the architectural appearance of the royal Jun kiln of the Northern Song Dynasty. [Figure 42.](#)

The museum displays pictures, objects and written materials of Jun porcelain from various periods since the Tang Dynasty, the development history of Jun porcelain, the production process and the characteristics of Jun porcelain in successive generations. The museum also has a special workshop that provides visitors with space and tools to make pottery by hand, as well as demonstrations by professional technicians.

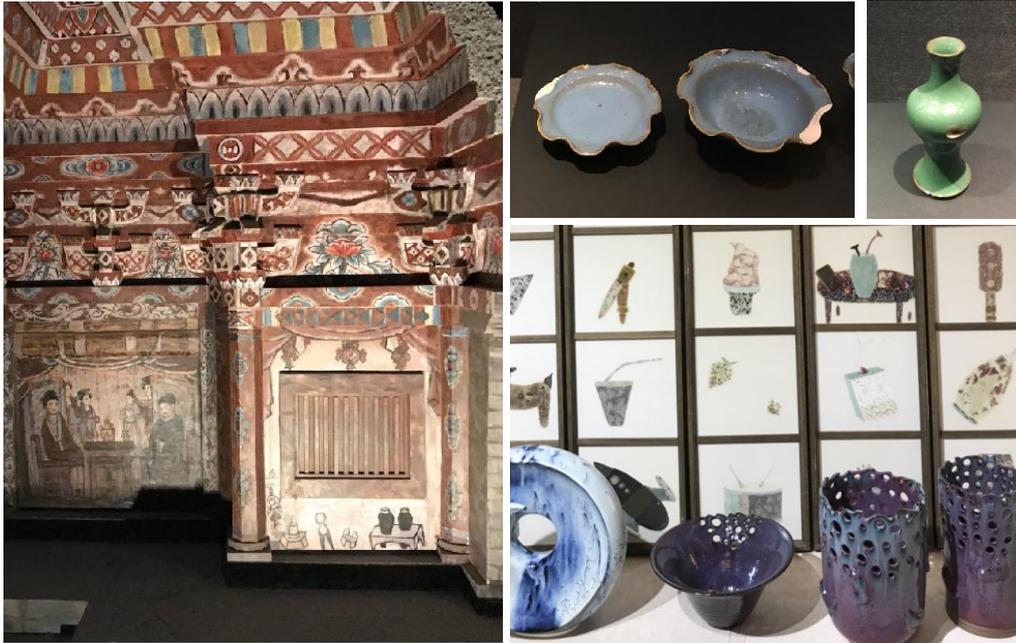


Figure 42. Jun Royal Kiln Site Museum Yuzhou China

(4) Ceramic Making Practice

During the study period in Shenhou Town, I also had a practical study of ceramic making in the factory. From making clay, learning hand-throwing, shaping, designing, repairing, drying, and firing in the kiln, the whole practice lasted for 3 weeks. [Figure 43](#). During this period, although it was a pity that I did not conduct the final experiment of glazing the ceramic billets, I have deeply appreciated the difficulty of ceramic making techniques and its cultural charm.



Figure 43. Ceramic Making Practice - From left to right

Kneading clay (3 days)

Hand-throwing (7-9 days)

Drying (3-5 days)

Kiln firing - electric kiln (2-3 days)

5.3.3.2 Environmental issues and challenges

The ceramics industry, led by Jun porcelain as the soul of Shenhou Town, is a strong support for the development of Shenhou Town, but "traditional ceramic manufacturing is a resource and energy-consuming industry, and energy consumption accounts for about 70% of the cost of

ceramic production ^[21] ". It is a high energy-consuming and high-polluting industry, and the development of porcelain industry must consider ecological problems and environmental issues.

Today, the biggest problem in the development of the ceramic industry is also the ecological, environmental and pollution problems.

The first problem is the ecological and environmental problems caused by the mining of raw materials. There is a lot of ceramic clay in the hills around the town, which is an important condition for the town to develop into a base for the production of ceramic. However, in recent years, due to the disorderly development, ceramic clay resources have become less and less available and more and more difficult to mine, and the natural ecology has suffered serious damage due to disorderly mining.

The second is the energy and environmental problems caused by the firing of ceramics. The firing of Jun porcelain requires a large amount of electricity, natural gas, coal and firewood, and the use of large amounts of coal and firewood can seriously damage the ecological environment. Wood-fired ceramic, for example, is a method of firing used to pursue the special artistic effect of the glaze, and is characterized by the use of firewood as fuel for firing. A wood-fired kiln of about 1 cubic meter requires about 10 tons of firewood for each kiln, and there are many companies in the town of Shenhou that burn firewood, which consumes a huge amount of firewood in a year and destroys a lot of forest trees, which is extremely damaging to the environment in the long run. In the process of firing Jun porcelain, if the kiln is not designed properly, it will produce a lot of harmful substances that will pollute the environment. In the past, all the enterprises in the town of Shenhou used coal to fire the kiln, and many of the kilns were not designed to deal with the environmental protection facilities, resulting in a lot of harmful gases directly into the atmosphere, causing serious air pollution. Around 2000, in order to reduce air pollution, the ceramic enterprises in Shenhou Town basically changed to natural gas kiln, which effectively reduced pollution, but some traditional wood and coal burning process is still retained by some enterprises as a feature, these retained wood and coal kilns need to strengthen supervision, reduce the number of wood and coal burning, and urge enterprises to install environmental protection facilities for these kilns to reduce air pollution.

The third is the problem of waste generated in the ceramic-making process. The production process of Jun porcelain will produce a large amount of waste, such as discarded plaster molds, plaster waste, burned Jun porcelain scraps and other waste products. Gypsum waste can be used to make cement, while those burnt Jun porcelain scraps and waste porcelain tiles are mostly piled up in an empty space in one corner of the enterprise or abandoned to the wasteland of the township. Although these discarded porcelain pieces do not cause much pollution to the environment, the disorganized pile-up is an eyesore and seriously damages the natural environment of Shenhou Town.

^[21] Zhang,C.,& Zhang,M. (2010,05). The path and realization of sustainable development of Chinese traditional ceramic industry. China Ceramic Industry, p75-77.

The above three problems are the major problems facing the Jun porcelain and ceramic enterprises in Shenhai Town. There are more than 300 ceramic enterprises in the ancient town of Shenhou, so many of them consume huge amount of ceramic resources and energy, and produce huge amount of waste and pollutants, if they are not treated, the whole ecological environment of Shenhou town will be destroyed, and the industry will also suffer from huge questions. Therefore, solving the ecological and environmental problems is the key issue to build a pleasant town.

Summary

Traditional culture is derived from the essence created and inherited by people in ordinary life. With the continuous advance of industrialization, which has brought about all-round changes in society, many traditional production processes and traditional daily necessities have been abandoned, and many traditional cultures with distinctive regional characteristics are disappearing rapidly, resulting in the artificial separation of region, nature and history. Some traditional crafts in the ceramic industry are also inevitably facing the danger of extinction.

In this chapter, through interviews and research with ceramic artisans and designers, study of ceramic industry policies and plans, field research in Shenhou Town, Yuzhou City, the "Capital of Chinese Jun Porcelain", and personal practice in making ceramics, this study is a sustainable design reflection on the development of ceramic industry in Henan Province.

There are path dependence and path creation in the development of ceramics. Technological dependence due to incremental returns to scale and institutional dependence due to specific government policies and local factors (such as customs, practices, regional identity, etc.) together constitute the path dependence of the development of Jun porcelain. The process of creating the development path of "Jun porcelain" in Yuzhou is actually a process of interaction and co-evolution among technological innovation, institutional innovation, and actors.

In order to avoid the industry falling into a state of inefficient locking, it is necessary for the actors to proactively unlock or shift their consciousness, to break this path lock through powerful government intervention and to strengthen communication and cooperation with the outside world, and to move into path creation or innovation so as to obtain new development. Currently, "Jun porcelain" as a cultural symbol has been transformed into a real economy. The "Jun porcelain" industry is also changing from "resource-based" to "culture-based" and "creative", becoming a content industry and creative industry.

At the same time, economic development should take full account of the resources and the ability of the environment to bear. Ceramic raw materials, especially high-grade raw materials, is a non-renewable resources, relying on increased resources to achieve a large number of inputs and expansion of crude production methods will accelerate the process of consumption of ceramic resources, resource consumption less intensive ceramic industry development model will become the future direction of ceramic industry development. The development of sustainable

development of the circular economy, to create good economic and social benefits, is the inevitable choice for the development of Henan ceramic culture industry.

Therefore, in the economic transformation, the development of Henan ceramic industry how to continuously mutate, innovation, break through the path lock, to achieve regional symbiosis and ecological win-win, will be the next in-depth study of the direction of:

- (1) Specialization, industrialization, scale direction - Cluster effect
- (2) Product design and market development capabilities
- (3) Establishment of ecological corporate culture and environmental protection concept
- (4) Systematic research on the art and craft of ceramic
- (5) Integration of digital technology
- (6) Tourism

CHAPTER 6

Territory Revitalization and Symbiotic Sustainable Development

The concept of "Culture Industry" was introduced by Adorno and Hockheimer of the Frankfurt School of Sociology in 1947 to replace the term "Mass Culture. In a general sense, cultural industry refers to the industrial production of cultural symbols in modern society to meet the needs of spiritual consumption,^[1] and is an economic activity that sells information, wisdom, and culture, believing that the basic economic value of goods derives from their own cultural value.

The cultural industry is generally referred to as the "new economy" by economists because it is different from the traditional manufacturing industry in that its raw material is people's wisdom and its means is innovation, so many scholars and experts interpret the "cultural industry" as the "creative industry" and believe that the "innovation" and "creativity" of the "cultural industry" are the main characteristics of the "new economy enterprises".

The development of cultural industries is of great importance to the economy of a country. After former British Prime Minister Tony Blair came to power in 1997, he set up the "Creative Industry Task Force" and served as its chairman. The Task Force analyzed the current situation of British creative industries, proposed development strategies and established London's core industries as creative industries. Although the development of Japanese economy in the past ten years is weak, the sales of cultural industry is equivalent to twice of the steel industry and half of the automobile industry, and the cultural industry accounts for 18.5% of its gross domestic product. The competition form of human society in the 21st century has been changed to "cultural competition", and the victory or defeat of the competition of each country depends on the cultural field, and its victory or defeat The focus is on the cultural industry.

Historically, traditional handicraft industries have been one of the important pillars of many national and local economies. Today, many traditional handicraft industries are struggling to survive and develop according to their own laws, and provide an enduring source of revenue for local governments. Therefore, traditional handicraft industry is still an indispensable part of modern industrial industry today and has its own economic benefits. Meanwhile, as a special cultural product, traditional handicraft is both a cultural achievement of national culture and a material achievement of combining culture and skill, so traditional handicraft industry should belong to the category of cultural industry. Traditional handicraft includes the sum of conception, design, craftsmanship and technology in handicraft manufacturing. The ancient handicrafts are the

^[1] Liu,J.F. (2005). Cultural Industry Studies. Beijing: Economic Management Press,p1.

treasures of a national culture ^[2]. Driven by the development of regional economy and tourism, handicrafts with the characteristics of regional products are also being inherited and developed.

Therefore, revitalizing the local traditional handicraft industry is to develop the national cultural industry, fully exploit the resources of the national traditional culture, and create a creative cultural industry that can adapt to the development of modern society, which has the strategic significance of spreading a nation's civilization and culture, and the practical significance of developing the national economy.

This chapter discusses the cluster innovation of the "ceramic" cultural industry in Italy (FAENZA) and China (YUZHOU), and the comprehensive planning of the ceramic handicraft tourism industry; as well as the diversified models of the "Symbiosis" development system of regional traditional handicrafts from the "ontology" and "environment" layers, and the regional revitalization strategy of the "Symbiosis" innovation design system with the digitalization as the turning point, based on all the previous chapters.

6.1 Comprehensive analysis of the innovative development of the ceramic industry in Italy (FAENZA) and China (YUZHOU)

Based on the study of the ceramics industry in the Emilia-Romagna-Faenza region in Chapter 4, Mater Ceramica ^[3] has identified the following three areas for the future development of the ceramics industry in the Italian region in 2019:

(1) Product innovation

To make ceramic products more modern while maintaining the traditions of the regional community is the path of artistic ceramic production to the world of design: International + domestic design joint creation; " famous brand " curator; cooperation with the design community, etc.

(2) Digital platform

Digital use in a more targeted, continuous and professional way: digital training courses; e-commerce sites; international consumer interaction and management of innovative tools, etc.

(3) Territorial marketing.

Revitalization of ceramic regions and cities: innovation in tourism; transformation of existing industrial spaces; "shared intervention models" that generate synergies and economies of scale; hierarchical management, etc.

^[2] Wu,Q. (2006). Revitalizing Changzhou traditional handicraft industry with modern industrial design concept. Nanjing Forestry University,p4.

^[3] Mater Ceramica ,La ceramica artistica in Italia. Imprese, luoghi, scenari e prospettive (AiCC-Artex, International University, Venezia 2019)

Based on the study of the ceramic industry in the Henan Province - YUZHOU (Shenhou) region in Chapter 5, there are 6 areas that have been planned:

- (1) *Specialization, industrialization, scale direction - Cluster effect*
- (2) *Product design and market development capabilities*
- (3) *Establishment of ecological corporate culture and environmental protection concept*
- (4) *Systematic research on the art and craft of ceramic*
- (5) *Integration of digital technology*
- (6) *Tourism*

Comparing the development plans of the "ceramics" industry in two countries (Figure 1), the plan for the "ceramics" industry is divided into two main parts:

Product design innovation (skills, expertise, new technologies, interdisciplinarity); and territorial development dynamics (cluster effect).

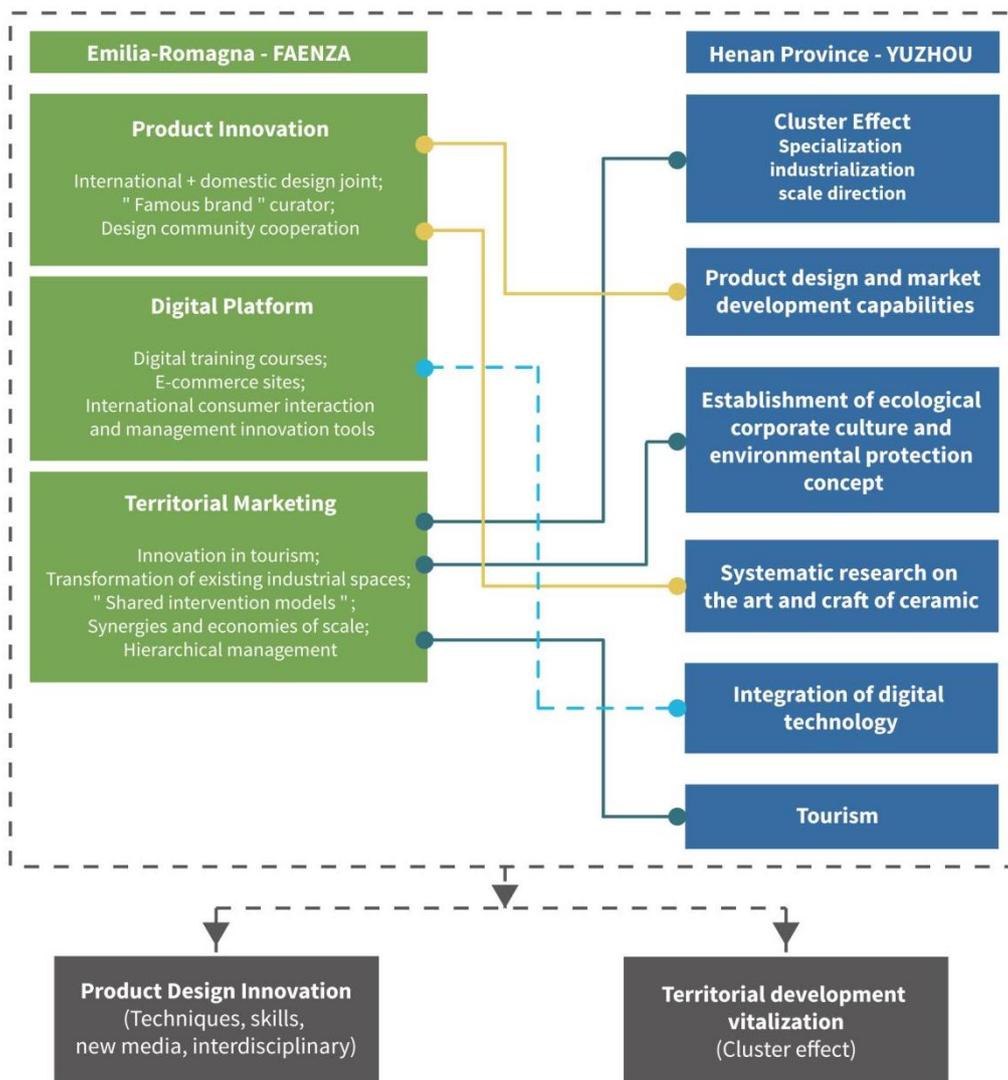


Figure 1. Industry Development Plan "Ceramics" - Italy and China

These two components interact and contribute to each other. For this study, the focus is more on the role of the "ceramic" industry itself in the vitality of the territorial development. Through the study of the harmonious "symbiosis" of the various elements of the "ceramics" industry, it is hoped that the traditional handicraft of the region will be the "seed" that will bring spring-like "vitality" to the territory in which it is rooted.

The ceramic culture industry in the FAENZA and YUZHOU regions also shows a trend of clustering, with the "territorial development dynamics" being dominated by the "agglomeration effect" that leads to efficient industrialization and tourism.

From the perspectives of "resource elements and creative environment," "social network relationship and knowledge flow," "agglomeration economy and externality," and "geographical proximity and creative atmosphere," this study investigates the phenomenon of ceramic industry clustering in different regions of two countries in "multiple fields - production field, relationship field, social field, and temporary field. At the same time, it discusses the comprehensive development model of ceramic cultural tourism.

6.1.1 Innovation in cultural industry clusters: Italy (FAENZA) and China (YUZHOU)

6.1.1.1 Agglomeration economy theory

While researching regional economy, the American economist Hoover viewed agglomeration economy, resource endowment and spatial transfer costs as the three cornerstones of regional economic development, and suggested three forms of agglomeration economy exist ^[4]:

Internal economy of scale, i.e., economy of scale at the firm level;

Localization economy, i.e., the economic effect of concentrating different firms of the same industry in one place;

Urbanization economy, i.e. the economic effect brought about by the concentration of various types of economic activities in one place.

Regarding "agglomeration economy", many scholars have focused on spatial knowledge spillover and explained the internalization of agglomeration economy through externalities or external scale economies. According to Marshall, external economy of scale refers to the summation of externalities in enterprises and internalities in industries, which is the effect of enterprises in the process of spatial proximity. And the externalities of industrial agglomeration come from three aspects: labor sharing, specialized services and knowledge spillover. The concentration of a certain number of firms in an industry in a particular location will promote the diffusion of new ideas and technologies ^[5].

When an industry appears in a place, it tends to develop in that place for a long time, and the near neighbors have a great advantage in engaging in the same economic activities, thus producing a

^[4] Hoover, M.E. (1990). Introduction to regional economics. Beijing: Commercial Printing House.

^[5] Marshall, A. (1991). Principles of economics. Beijing: The Commercial Press.

result similar to the lock-in effect ^[6]. This lock-in effect promotes the generation and clustering of new enterprises of the same kind, thus promoting the development of local agglomeration economy. Coupled with the fact that knowledge spillover is mainly local, and spatial agglomeration shortens the spatial distance of knowledge dissemination, it is more conducive to knowledge spillover and technology diffusion, and promotes the emergence of more innovations.

Therefore, the technological knowledge externality (technological knowledge spillover mechanism) emphasized in agglomeration economy theory can provide a good theoretical basis and support for this section on industrial clustering and integrated planning tourism.

6.1.1.2 Cultural industry zones

Since the 1970s, with the deepening of globalization, segment economies such as Silicon Valley in the United States, Bangalore in India, Baden-Württemberg in Germany, and the "Third Italy" in Italy have become models of innovation and economic dynamism in the global economy, and have formed a clear pattern of "economic mosaics" on a global scale. Since these economic mosaics are very similar to Marshall's concept of industrial districts ^[7] in the 19th century, they have attracted the attention of scholars and research on innovation activities, which are called industrial districts or industrial clusters. For example, Becattini, an Italian economist, used the geographical proximity of firms, sectoral specialization, local shared value systems, community identity and local institutional networks that facilitate the diffusion of technological knowledge to explain the dynamism and creativity of the Third Italy ^[8].

In response to this phenomenon, the American sociologists Sabel and Piore et al. introduced the concept of "resilient specialization", arguing that specialization, geographic clustering of SMEs, shared knowledge, "industrial atmosphere" of trust, and social rootedness are critical to cluster innovation ^[9]. Scott and others have developed the concept of "new industrial space", using mechanisms such as "non-trade interdependence", geographic agglomeration and transaction costs to study the dynamics of new industrial zones ^[10]. Other scholars have emphasized the importance of regional innovation environments and innovation networks, and Saxenian, based on the observation of Silicon Valley, has identified Stanford University and its concentration of top talent, decentralized industrial system, and innovation and entrepreneurial culture as the sources of its sustained competitiveness ^[11].

With the rise of cultural and creative industries, the development and innovation of cultural and

^[6] Liu, C.Q. (2009,03). Research on industrial agglomeration and agglomeration economy based on externality. Shanghai Economic Research, p99-105.

^[7] Marshallian District: Marshall's 1890 Principles of Economics defines an industrial district as "a region defined by a combination of history and nature in which small and medium-sized enterprises are active. A region defined by history and nature in which small and medium-sized enterprises actively interact with each other in a cluster of enterprises and society tends to integrate"; Marshall was the first economist to focus on the phenomenon of industrial agglomeration.

^[8] Becattini, G. (1990). The Marshallian industrial district as a socio-economic notion. Geneva: International Institute for Labour Studies, p31-57.

^[9] Piore, M., & Sable, C. (1984). The second industrial divide. New York: Basic Books.

^[10] Scott, A.J. (1988). New industrial space. London: Pion.

^[11] Saxenian, A. (1994). Regional advantage: culture and competition in silicon valley and Route 128. Harvard University Press.

creative industry agglomeration promotes the sustainable development of ceramic industry in FAENZA and YUZHOU regions. The discussion is mainly from the perspectives of factor resource conditions and (creative innovation) environment, social network relationship and knowledge flow, agglomeration economy and externality, and geographical proximity and creative field.

(1) Resource elements and creative environment perspective.

Cultural and creative industries are the combination of life and work of creative people and the combination of production and consumption of cultural products, which requires a diversified and relaxed creative environment and unique local human characteristics ^[12]. A more classic one is Florida's study on the distribution of creative industries and creative centers in the United States, which considers technology, talent and tolerance as the key to the agglomeration and development of cultural and creative industries, i.e. the 3T theory ^[13]. Hospers emphasizes the role of three elements, i.e., concentration, diversity and instability, on creative industries and creative spaces ^[14], while Gertler focuses on creativity, competitiveness and social cohesion in the development of creative industries ^[15]. From the perspective of the creative milieu, Landry believes that the development of creative industries is determined by seven factors, including the quality of people, the quality of will and leadership, the diversity of human resources and the development opportunities of various talents, organizational culture, local identity, urban space and facilities, and dynamic network connections ^[16]. Meanwhile, some scholars believe that local labor market and production network ^[17], art resources, etc. also determine the development of regional cultural and creative industries, such as South London is the hotspot where the cultural and creative industries in Britain are more active ^[18], while Paris, New York, London and Milan are the hotspot areas where the global fashion design industry is clustered, and New York, Los Angeles and Nashville are the main spaces where the pop music industry is clustered ^[19]. Therefore, some scholars believe that local representative landscapes are the "germ" of the growth of regional cultural and creative industries ^[20].

FAENZA and YUZHOU areas are the "hometowns" where the ceramic handicraft industry was historically produced, with a rich geographic resources, historical and humanistic elements, social markets, infrastructure, a large number of excellent craftsmen, etc., which have a strong attraction for the development of ceramic cultural and creative industries, and these factors also influence the development of industrial clusters

^[12] Li,W.F.,& Wang,R.Z. (2005). Creative Industries - A New Engine for Urban Development. Shanghai: Shanghai Academy of Social Sciences Press.

^[13] Florida,R. (2002). The Rise of the Creative Class. Washington Monthly, 35(5), p593-596.

^[14] Hospers,G.J. (2003). Creative Cities:Breeding Places in the Knowledge Economy. Knowledge,Technology and policy, 16(3), p143- 162.

^[15] Gertler M S. Creative cities: what are they for how do they available online:
http://www.cprn.com/documents/31348_en.pdf.

^[16] Landry,C. (2008). The Creative City:A Tool kit for Urban Innovators(2nd edition). London:Earth scan Publications Ltd.

^[17] Scott,A.J. (2000). The Cultural Economy of Cities. London:SAGE Publications, p30-39.

^[18] Holden,J. (2005). Valuing culture in the South East. London:Demos Report..

^[19] Wenting,R. (2008). The Evolution of a Creative Industry:The industrial dynamics and spatial evolution of the global fashion design industry. Utrecht City:Utrecht University.

^[20] Mizzau,L.,& Montanari,F. (2008). Cultural districts and the challenge of authenticity:The case of Piedmont,Italy. Journal of Economic Geography, 8(5), p651-673.

(2) Social network relationship and knowledge flow perspective.

Some researches follow the tradition of non-economic and non-trade correlation of economic geography, emphasize the relationship and interpersonal network among creative talents, and believe that cultural and creative industry itself is a "cognitive-cultural economy" based on symbols, texts, emotions, knowledge and learning [21]. The exploration of creative clusters needs to be combined with the trust relationship and emotional trust relationship of actors and the process of knowledge dissemination in the process of cultural economy development [22]. These form the paradigm of research on social relationship network of cultural and creative industries and cultural and creative spaces [23]. For example, it is believed that cultural and creative companies show the phenomenon of "co-location" in specific spaces within cities and form creative clusters, mainly not because of cheap rent, but to obtain informal knowledge, new ideas and intensive communication and interaction [24]. Some scholars have explored the role of factors and mechanisms such as trust and kinship [25], localized network construction, and social capital and non-trade ties based on business, family, and geography, respectively, from the perspectives of social characteristics, geographical rootedness, and exchange of information and sharing of knowledge of cultural and creative industries and spaces [26] [27].

The centuries-old transmission of ceramic handicrafts in the FENZA and YUZHOU regions cannot be separated from the construction of local social network ties. The organizational pattern of the local ceramic industry also indicates the synthesis of all these social relations, such as handicraft workshops, family workshops, individual companies, etc. It is the gathering of these different ceramic handicraft organizations composed of different social relations in FAENZA and YUZHOU that brings the clustering effect to the local ceramic cultural industry.

(3) Agglomeration economy and externality perspective.

Based on the perspective of information exchange and knowledge spillover, some researchers believe that the sticky knowledge characteristics of cultural and creative industries and their high geographical agglomeration can promote knowledge and information exchange, talent convergence and creative stimulation and spillover, which are conducive to the innovation of clusters [28][29]. Based on the learning, innovation, contracting and social entertainment characteristics of cultural creativity, Cunningham argues that new communication information and

[21] Etterlinger, N. (2003, 03). Cultural economic geography and a relational and microspace approach to trusts, rationality, networks, and change in collaborative workplaces. *Journal of economic geography*, p145-171.

[22] Li, L.L. (2010). The progress of cultural and economic geography and the proposal of "project network geography". *Human Geography*, 25(2), p1-7.

[23] Pratt, A.C. (2006, 10). Inside and across clusters: production and peer respect networks. Paper presented to cultural creative spaces conference. creative spaces conference, Beijing.

[24] Nachum, L., & Keeble, D. (2003). Neo-Marchallian clusters and global networks: the linkages of media firms in Central London. *Long Range Planning*, 36, p459-480.

[25] Wang, W.N. (2007). *Research on Location Factors and Regional Organization of Urban Cultural Industries*. Changchun: Northeast Normal University.

[26] Xin, X.R. (2017). *Network Research of Film Industry in the Perspective of Economic Geography*. Shanghai: East China Normal University.

[27] Li, X.X., & Miao, C.H. (2016). Research on informal learning mechanism of arts and crafts industry clusters in China's agricultural areas-Example of Shenhou Jun porcelain industry cluster. *Journal of Henan University (Natural Science Edition)*, 46(2), p158-166.

[28] Knudsen, B., & Florida, R. (2007, 05). Urban density, creativity, and innovation.

[29] Wang, F.M. (2009, 11). *Creative Industry Clusters: An Explanation Based on Knowledge Spillover*. *Science and Technology Management Research*, p272-274.

media technologies cannot replace face-to-face human-to-human communication, in which competing but complementary vendors exchange information with each other, which is conducive to generating externalities and promoting innovation ^[30]. Scott discusses the development of cultural clusters from the perspective of production and distribution ^[31]. Scott emphasized that from the production perspective, cultural and creative industries have a demand for a large number of skilled labor and different types of small and medium-sized companies due to the numerous industrial contents and project network characteristics, forming interdependent clusters; From the sales perspective, joining in the global sales network is an important strategy for the development of local cultural and creative networks, eventually forming influential regions with close local and global connections. It is also believed that due to the industry information of cultural industry, the market updates and changes very rapidly, producers and cultural consumers, peer competitors, and related intermediaries form a clustered creative environment, creating a convergence of production system and geographical environment, which brings about the effect of scale economy and agglomeration economy, thus facilitating the avoidance of uncertain risks, exchange of tacit knowledge information, and promoting the creation of creativity ^[32] ^[33].

According to the current ceramic development business in FAENZA and YUZHOU area, besides local producers, more local institutions have joined the development of the whole ceramic industry, such as museums, schools, research institutes, government, etc. The mutually beneficial symbiosis between these different functional institutions, the sharing of resources and facilities and the interactive exchange of technology and only information are more conducive to the cluster effect of ceramic cultural and creative industries.

(4) Geographical proximity and creative atmosphere perspective.

At the end of the 19th century, Marshall put forward the theory of "industrial zone", believing that industrial clusters formed by a large number of enterprises can obtain large-scale production and bring economies of scale, i.e. localized economy. The geographical proximity brought by industrial clusters can generate external economies and facilitate enterprises to obtain external benefits. Marshall believes that the essence of industrial zone development includes not only the interdependence between firms, but also the intertwining and support of the local economy and its social culture, values, and institutions, etc. He also emphasizes the inseparability of localized economic development and the local social environment, and the social norms, institutions, and integration exchanges formed by the local society, i.e., the "industrial atmosphere " plays a key role in innovation and economic coordination. It is believed that local societies have relatively unified values and perspectives that facilitate the clustering of employees and generate an "industrial air" through mutual training and learning by doing ^[34].

^[30] Cunningham,S.D. (2002). From cultural to creative industries:Theory, industry,and policy implications.Media International Australia. Incorporating Culture&Policy, 102(102), p54-65.

^[31] Scott,A.J. (1997). The cultural economy of cities. International Journal of Urban and Regional Research, 21(2), p323-340.

^[32] Scott,A.J. (2004). Cultural-products industries and urban economic development:Prospects for growth and market contestation in global context. Urban Affairs Review, 39(4), p461-490.

^[33] Scott,A.J. (2006). Entrepreneurship, innovation and industrial development:Geography and the creative field revisited. Small Business Economics, (26), p1-24.

^[34] Amin,A.,& Thrift,N. (1992). Neo-Marshallian nodes in global networks. International Journal of Urban and Regional Research, (16), p571-587.

In the FAENZA and YUZHOU regions, the extensive social participation in the ceramics industry has created an "industrial climate" with local characteristics. The formation of this ceramic "industrial atmosphere" helps reduce transaction costs in local production systems, facilitates the flow of information and knowledge, especially the formation and transfer of ceramic technology, creates shared knowledge and social trust between regions, thus promoting innovative cooperation and rapid diffusion of innovative knowledge.

6.1.1.3 Diverse fields

The mechanism of technological knowledge flow in the ceramic industry includes formal and informal mechanisms. Formal mechanisms refer to formal cooperation mechanisms based on contractual arrangements bound by legal systems, which include research cooperation among ceramic enterprises and their research institutions and intermediary service agencies, or ceramic enterprises owning their own R&D institutions. According to the research in Chapters 4 and 5, it is known that ceramic enterprises in FAENZA and YUZHOU regions are still mostly in the miniaturized organization mode, although there are also mature large companies. Therefore, the formal knowledge flow mechanism is therefore not the main mechanism for innovation to occur, while informal mechanisms such as face-to-face communication are the key mechanisms for ceramic technological knowledge flow.

According to the field theory of Bourdieu ^[35], the network of relations between subjects is the objective precondition for the existence of the field and is the basic property that constitutes the field. According to the different social relations of actors, they are divided into political, economic and academic fields, and each of them has its own logic of operation. The essence of innovation is a process of technical knowledge creation, communication and diffusion, which needs to be carried out in a certain situation and requires a certain "field" to cooperate with it. This "field" can be understood as a virtual space or a physical space; it can also be an economic space or a cultural and institutional space, a shared context and atmosphere among innovation subjects. Therefore, the creative generation of cultural industry also emphasizes the role of environment and creative field, and the important role of social network in the flow and communication of knowledge.

Based on the above understanding, according to the field theory and social field theory of Bourdieu, this section considers the various physical spaces, social network spaces and local social and cultural atmosphere in the innovation development of FAENZA and YUZHOU as fields of different scales and functions. These fields have different rules of operation due to different actors. For example, the "production field" consisting of the production site of different ceramic processes; the "relationship field" consisting of different social relationship networks (family community, professional circle, master community, etc.); the local "social field" formed based on the local social and cultural identity; and the local "social field" based on local social and cultural identity, and "temporary field" formed by temporary gatherings (Figure 2). These different fields are important spatial places where ceramic craftsmen, technical workers, designers, external organizations, kiln enterprises, and other subjects engage in the production, manufacture,

^[35] Pierre Bourdieu, a renowned French sociologist, anthropologist and philosopher. Bourdieu pioneered many investigative structures and terms such as cultural capital, social capital, and symbolic capital, as well as concepts such as habitus, field or location, and symbolic violence. This section refers to the "theory of social space"-the concept of field.

and exchange and sale of Jun porcelain, promoting the creation and dissemination of different technical knowledge, and together promoting the innovative and sustainable development of the ceramic culture industry.

Relationship Space	Corresponding Fields	Key Actors	Nature of the Field
Production site	Production field	Ceramic artisans and masters	Physical Space
- 1. Family/Clan 2. Colleagues 3. Master and apprentice	Relationship Field : 1. Family community 2. Occupational field (community) 3. Master apprentice community	- 1. A ceramic lineage 2. Ceramic factory employees 3. Master and apprentice in the same disciple	Virtual and social space
Local industrial atmosphere	Social field	Cultural atmosphere	Physical and social space
Temporary cluster	Temporary field	Ceramic craftsmen, designers, artists, ceramists	Physical Space

Figure 2. Different Fields and Logic in Ceramic Creative Industry Clusters

(1) *Production site - Process accumulation and enhancement*

Ceramic production essentially is a practice, a process of trial and error for ceramic workers, and a process of finding success in groping. This process of repeated experimentation and testing is the source of knowledge creation and innovation. In this process, the production field assumes the space carrier for ceramic craftsmen to experiment and practice. The frequent use of technical processes in ceramic production brings incremental, barely perceptible changes to innovation, thus continuously piling up technology and eventually producing endogenous change. This cumulative improvement plays a decisive role in the enhancement of ceramic skills.

The ceramic firing production site provides an important place for the practical operation and experience of ceramic craftsmen to accumulate and improve their skills, and it is also an important place for human-object interaction and human-human interaction.

People-Object Interaction: The dozens of fine processes of ceramic production are a constant process of dealing and contact between skilled workers and physical objects such as clay, fire, glaze, porcelain molds, and kilns.

People-People Interaction: This mainly includes the interaction between workers in ceramic enterprises and the interaction between ceramic inheritors, masters and craftspeople. The ceramic production line provides opportunities for hands-on communication and collaboration among skilled workers working together. They can identify real problems in production, discuss together to discuss solutions, and experience techniques. Secondly, the employees of the company also visit the billet-making workshop and the grouting workshop of neighboring companies after work, thus increasing the opportunities for on-site communication and learning. In addition, the production site is also the place where the design and creativity of ceramic art masters are realized. However, whether the master's design can be realized from the billet drawing, grouting, firing, etc. requires communication with the skilled workers, and whether the glaze color can be satisfied, the construction of the billet meets the firing temperature requirements, etc., also requires coordination with the specific on-site process. (Figure 3)

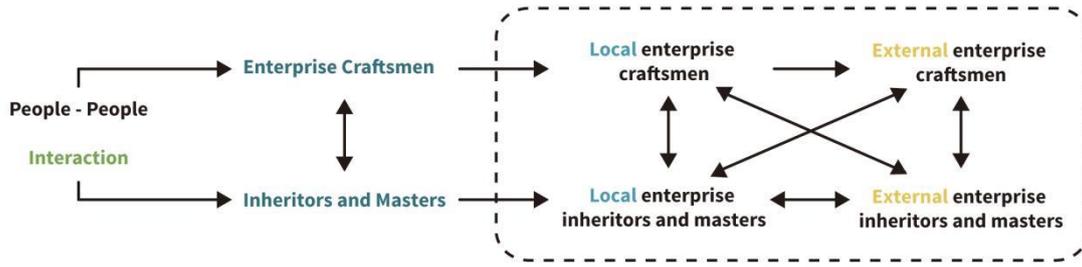


Figure 3. People-People Interactive Knowledge Transfer

(2) Relational Field - Technical Knowledge Flow and Skill Transmission

The tacit knowledge embodies local scientific practices and must be transmitted with the help of face-to-face communication, so social network relationships are particularly important [36]. Social network of relations refers to the network of relations between people or between organizations to exchange information for certain purposes. Innovative practices are not only rooted in the local cultural context and institutional framework, but also embedded in different social relationships, and such relationships become an important channel for creative knowledge transfer.

The different positions of the actors in the social network determine the effectiveness of their knowledge acquisition and dissemination. Focusing on the ceramic inheritors of YUZHOU, there are three main social relationships arising from different forms of enterprise derivation: the network of colleague relationships formed in the 1980s as a result of enterprise restructuring, the master-apprentice collegial relationships formed in the 1990s as a result of the apprentice master system, and the family relationships derived from blood kinship throughout the present. They constitute three different fields, namely, the professional circle (colleague relationship field), the master-apprentice community (master-apprentice relationship field), and the family community (family relationship field), Figure 4. These three relationship fields are important ways for the flow of technical knowledge transmission in YUZHOU ceramics.

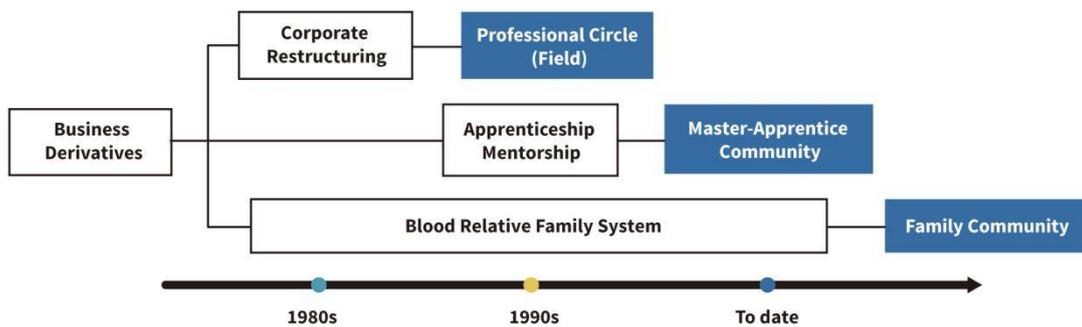


Figure 4. Different relationship fields arising from business derivation at different stages

For example, professional communities based on collegial relationships provide a fundamental place for the transmission of regionally shared technical techniques of ceramic firing, traditional

[36] Yu, J.G. (2013). Research on the Interactive Development of Cultural and Creative Industrial District and Urban Space. Tianjin University.

glaze recipes, and stylistic architecture, and are the basis for maintaining knowledge of regional ceramic techniques. The master community, formed by master relationships, provides an important space for the exchange and dissemination of technical techniques, experiences, and practices of ceramic firing; while the family community, based on family relationships, shares the so-called "core confidential knowledge" of unique internal technical techniques, glaze recipes, and stylistic designs. The three fields of relationship cooperate and support each other to promote the transmission of technical knowledge of local ceramics in YUZHOU. Moreover, the intertwining of these three fields through the relationships between teachers and apprentices, colleagues and families promotes the interactive integration of knowledge in different fields and increases the opportunities for innovation in ceramic technical knowledge.

(3) *Social Field - Knowledge Spillover and Interactive Imitation of Innovation*

The British economist Marshall explained the localized economy in geographical agglomeration in 1921, focusing on the traditional social culture and emphasizing the importance of "public goods", i.e., labor, technology, and local culture for local development needs, in reducing the transaction costs of the production system. Such "public goods" create a unique "industrial climate" that facilitates the spillover of technological knowledge, thus generating and expanding innovation and creating a benign local social field.

In FAENZA and YUZHOU, the "public goods" of the ceramic culture industry include not only the social development system and economic policies formulated by the local government, but also the unique local ceramic history and culture tradition. This socio-historical and cultural influence has a profound impact on the innovation behavior and efficiency of cluster companies. This is reflected in the following two aspects: [Figure 5](#).

- Social perceptions, industrial atmosphere - technological heritage
- Local Oral Tradition, Interactive Learning - Imitation of Innovation

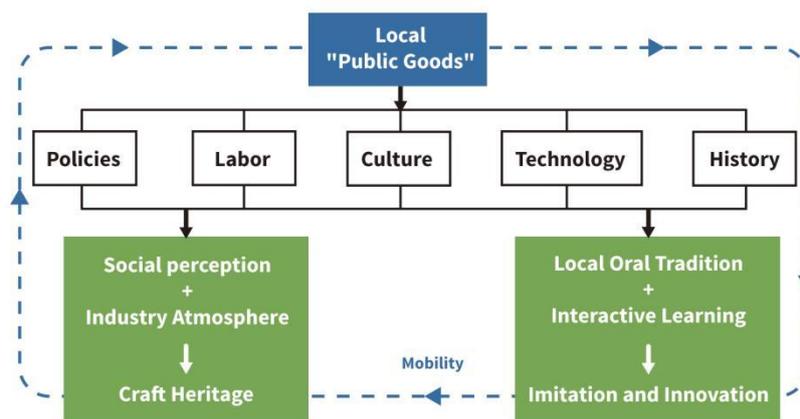


Figure 5. Circulation of elements in the social field

All economic behavior is rooted within the local social context, historical tradition and institutional framework. The deep industrial atmosphere created by the long history and tradition of FAENZA and YUZHOU promotes the cost-free flow of local ceramic technical craft knowledge,

forming a huge regional knowledge base and a habitat for ceramic craftsmen, artists and designers to start their own businesses. The formation of local enterprises' product and craft technology information has also prompted local enterprises to imitate each other, interact with each other for learning and further innovation.

(4) Temporary Fields - External Access and Sustainable Development of Ceramics

Temporary arenas are important sites for intensive knowledge exchange, network building and idea generation. The "local buzz-global channel" was used by Bathelt to represent the relationship between local interactions and global connections, and "global buzz" was used to describe the phenomenon of information exchange and knowledge dissemination in specialized clusters ^[37]. Later, Maskell and Malmberg proposed the definition of "temporary clusters", which is a temporary human agglomeration, socio-economic cyclical behavior, and specialized clusters with organizational proximity that have permanent knowledge exchange mechanisms of industrial clusters. The definition of "temporary industry clusters" ^[38] includes international exhibitions, industry conferences and seminars.

Temporary clusters solve the problem that sticky knowledge cannot be spread over long distances through short-time spatial clustering among actors and organizations, and can achieve the purpose of information transfer and knowledge exchange, complementing each other with physical industrial clusters as an alternative way to obtain external information and technology. Here, this section draws on the concept of temporary clusters, and according to the discussion of 3.2.3 in Chapter 3, 4.2 in Chapter 4 and 5.3.1 in Chapter 5, the temporary agglomeration of the ceramic industry in both FAENZA and YUZHOU regions is mainly manifested in two types of situations: temporary exchange learning and temporary assembly (Figure 6).

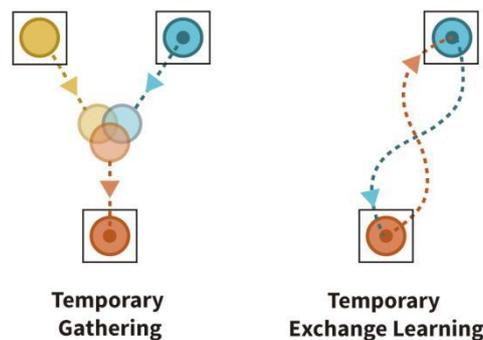


Figure 6. Temporary field and external channels

Temporary exchange learning mainly refers to short-term training and learning by ceramic craftsmen, designers, and artists at institutions, or practical learning by teachers and students from other institutions, such as art colleges, at ceramic production sites.

^[37] Bathelt, H., & Malmberg, A. (2004). Clusters and knowledge: Local buzz, global pipelines and the process of knowledge creation. *Progress in Human Geography*, 28(1), p31-56.

^[38] Bathelt, H. (2002). The reemergence of a media industry cluster in Leipzig. *European Planning Studies*, 10(5), p583-611.

Temporary gatherings on the ceramic industry mainly include domestic and international ceramic exhibitions and fairs with time limits, special lectures and forums, seminars on ceramic industry development, ceramic cultural festivals, etc. It also includes a number of ceramic industry competitions, such as ceramic industry skill competitions, art master competitions, etc. These temporary gatherings bring together competing companies, ceramic experts, craftsmen, designers, artists or business managers from around the world, increasing the opportunities for innovative industry exchanges.

(5) Summary

Above all, the technical knowledge of ceramic industry has the characteristics of experience, meaningfulness, cultural symbolism and "stickiness", so its technical knowledge flow needs to be carried out in a certain field. According to Bourdieu's field theory and the special characteristics of technical knowledge flow in ceramic industry in FAENZA and YUZHOU, the innovation field of ceramic industry is divided into "production field", "relationship field", "social field" and "temporary field". Each of these fields plays a different role and is an important place for ceramic innovation to occur. [Figure 7](#).

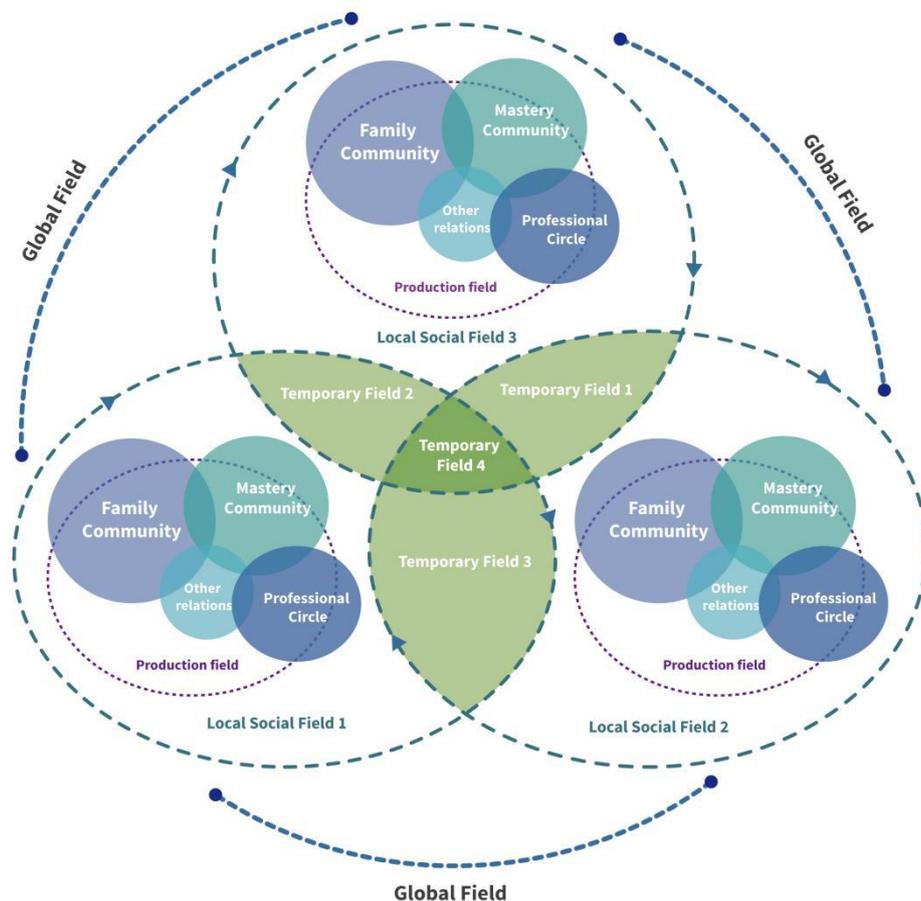


Figure 7. Diverse Fields and Learning Innovation in Ceramic Cultural and Creative Industry Clusters

In other words, the "production field" is an important place for ceramic craftsmen and masters to accumulate and improve technical knowledge in the ceramic industry cluster through interactive

learning; The "relationship field" formed by ceramic enterprises through enterprise derivation, such as the professional circle (field), master community (field) and family community (field), is an important way to promote the flow of ceramic skill knowledge dissemination and inheritance; The "social field" formed by the strong industrial atmosphere is an important environment for generating ceramic technical knowledge spillover and interactive imitation innovation; The "temporary field" is an important external channel to realize local and global connections. With the overlapping and complementary effects of multiple fields, ceramics is continuously given new life, which improves the creative vitality and competitiveness of industrial clusters and promotes the sustainable development of ceramic cultural and creative industries.

6.1.2 Ceramic cultural tourism development model

In the previous chapters, it is clear that ceramic cultural tourism has become one of the most important initiatives to promote "territorial development dynamics" in the FAENZA and YUZHOU regions. At present, the development model of ceramic tourism as a cultural tourism product is mostly based on the combination of local characteristics, especially natural landscapes. According to the characteristics and functions of ceramic tourism resources and products, there are 9 main types of ceramic cultural tourism development models. [Figure 8.](#)

Ceramic Culture Tourism Development Model	No.	Examples
Thematic Museum Model	A	Jingdezhen Ceramic Museum, Sichuan Song Porcelain Museum, Luoyang Peony Porcelain Museum
Kiln Site Museum Model	B	Chengdu Sui Tang Kiln Site Museum, Yuzhou Junguan Kiln Site Museum
Ruins Park Model	C	Sichuan Qiong Kiln Site Park, Yu Kiln Factory National Archaeological Site Park
Creative Industrial Park Model	D	Jingdezhen Ceramic Culture and Creative Industry Base, Liling Ceramic Museum
Production Field-led Model	E	Jingdezhen Ancient Kiln Folklore Expo Area
Shopping tourism-led model	F	Jingdezhen Pottery World Art Space, Jingdezhen Pottery Street, Yuzhou Jun Porcelain Old Street
Industrial tourism model	G	Fuda Ceramic Industrial Tourism Zone, Guangdong Chaozhou Chinese Porcelain Capital Exhibition Hall, Tangshan Meigere Porcelain Factory
Joint development model of natural scenery and ceramic culture	H	Icheon World Ceramic Center in Korea, Shinra World Ceramic Art Center in Japan
Joint development model of historical city and ceramic culture	I	Faenza in Italy, Rouen in France

Figure 8. Ceramic Culture Tourism Development Model

A. Thematic Museum

This type of ceramic tourism is mainly the theme of the characteristics of ceramics produced in different periods and regions for the display of cultural relics and collections for tourists to visit and experience. Museum tourism is through modern technology and concepts combined with tourism development of heritage conservation and utilization, so as to achieve a set of leisure, sightseeing, science education and other functions as one of the tourism products.

B. Kiln Site Museum

This model differs from the thematic museum model in that it is based on the excavated ceramic kiln site, not on a separate museum. This model is a combination of a museum and the remains of a kiln site or part of a prototype of a restored kiln site. This type of museum displays a collection of artifacts excavated at the kiln site or at all the sites in the vicinity, and it varies widely from small to large museums.

C. Ruins Park

This type of model is built on the basis of preserving the remains of ceramic heritage sites in combination with the surrounding natural environment, and generally includes a protected area of ruins, a small museum, and some recreational facilities for the public, which are mostly found in places with beautiful natural surroundings.

D. Creative Industrial Park

This model refers to the economic space organization which is guided by industrial clusters, with cultural and creative industries clustering as the main focus and other related cultural industries and extended supporting industries, which are linked to each other. It has a special distinctive cultural phenomenon, a perfect industrial chain, and multi-functional functions such as residence, production, creativity, leisure and consumption in one or only individual functions of the park. The ceramic creative industrial park model mainly highlights its creative novelty and uniqueness and the formation of a large-scale cultural industry chain, including celebrity workshops, ceramic art exhibition centers, ceramic bazaars and ceramic shopping streets. In addition to setting up several celebrity workshops, the ceramic creative industry base will also recruit innovative groups and artists with unique styles in the industry and hold regular ceramic art exchanges and lectures, which will attract a large number of ceramic enthusiasts and bring economic benefits to the industry base.

E. Production Field-led

This is a tourism development model that reproduces traditional ceramics workshops, kilns, halls, ceramics production lines, and artisan life scenes for tourists to visit and experience.

F. Shopping tourism-led

This type is a form of tourism, a product of the development of tourism to a certain stage, "is a form of tourism with the main purpose of going to foreign places to buy various goods in kind" ^[39]. The shopping tourism-led model is a tourism development model that combines leisure and entertainment with ceramic shopping as the main focus. As a representative of the excellent traditional history and culture, ceramic culture has a large number of ceramic lovers, and ceramic shopping-oriented tourism development has a huge market of tourists.

G. Industrial tourism model

Industrial tourism model is a modern understanding of tourism resources to expand the development model, "industrial tourism is based on industrial resources, market demand-oriented,

^[39] Hu,L. (2008). Research on the demand and behavior characteristics of shopping tourism - taking mainland shoppers to Hong Kong as an example. Jiangxi Social Science, (7).

through the integration of industry and tourism development to meet the tourist demand for science education, sightseeing, leisure, entertainment and other tourism needs, and for the government and enterprises to obtain economic benefits, social benefits and environmental benefits of special tourism products. " [40] Industrial tourism is mostly a tourism activity carried out by some famous industrial enterprises, which is open to tourists to show their corporate culture and obtain the recognition of consumers so as to expand the influence of the brand, from which tourists can truly experience the production process and details of modern industrial ceramics, and grow both insight and experience the pleasure of product making.

H. Joint development mode of natural scenery and ceramic culture

This type of development model mainly combines ceramic culture resources with surrounding natural resources for development, or ceramic resources are directly transferred or established in places with beautiful natural environment for tourism development. For example, the Icheon World Ceramic Center in Korea is directly established in Seolbong Park, which is a Korean national park with natural resource types such as woodlands, hot springs, lakes, and mountains, and several ceramic culture tourism resource monoliths in the surrounding area, forming a ceramic culture tourism resource cluster.

I. Joint development model of historical cities and ceramic culture

This type of model is mainly reflected in some ceramic birthplace and porcelain production area, many medieval and even earlier period of the building as a cultural heritage is preserved, in these ancient cities for ceramic tourism development for foreign tourists is a unique experience.

6.2 Diversity model of " Symbiosis " development system

Based on the research contents of the above chapters, combined with the results of field research and case studies, this section constructs the key elements system for the ecological " Symbiosis" development below traditional handicraft culture, which mainly consists of " Two layers with Eight elements". The system is divided into "'Two layers'" of ontology and environment, and "'Eight elements'" of subject, spatial, technology, representation, politics, industry, service and capital.

6.2.1 "Symbiosis" - Ontology layer

This section will focus on the four key elements of the ontology layer, " Subject", " Spatial", "Technology" and "Representation".

6.2.1.1 Subject: Diverse collaborative innovation network

In biology, Producer, Consumers and Decomposers are the three major constituents of the ecosystem. In the cultural ecosystem of regional traditional handicrafts, the subjects can also be categorized and studied in this way. These stakeholder interact with each other and together form a collaborative innovation network of multiple subjects of handicrafts (Figure 9). Based on the differentiated perspectives of different subjects, a pluralistic subject system is constructed across

[40] Sun,W.Z. (2008). Research on Industrial Tourism Development Model. Shandong University.

interculturality to stimulate the cultural consciousness, subjective initiative and innovation enthusiasm of the subjects of regional traditional handicrafts to participate in innovation.

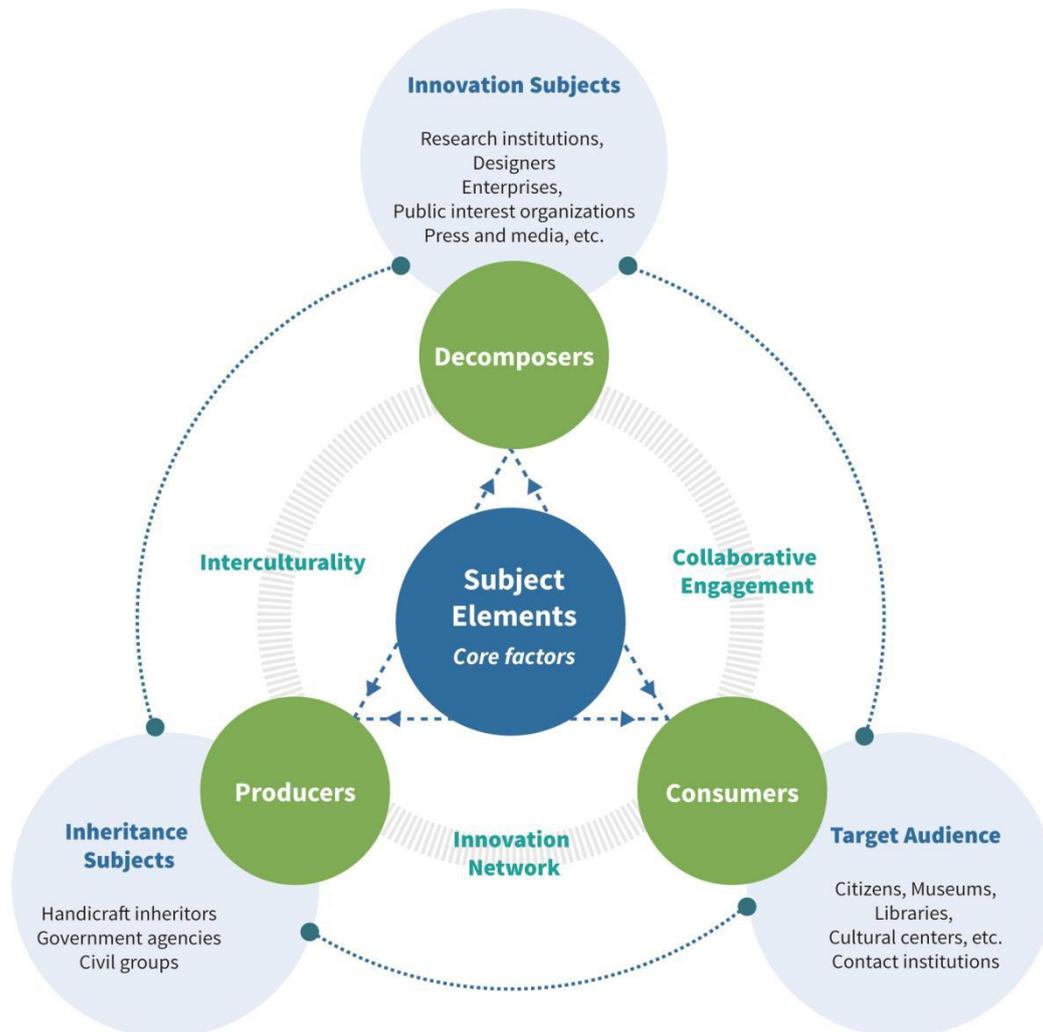


Figure 9. Collaborative innovation network of multiple subjects

(1) "**Producers**" are the cultural holders and inheritors of handicrafts, mainly including inheritors, government agencies and civil society organizations. Producers are the most important subjects of handicraft inheritance and protection, and are also the cornerstone of this collaborative innovation network.

(2) "**Consumers**" are the purchasers and experiencers of handicraft products or services, mainly composed of the public and other audience groups, and also include museums, libraries, cultural centers and other institutions that provide contact points. Consumers are an important driving force for the living heritage of handicrafts and can promote cultural experiences and industrial applications.

(3) "*Decomposers*" are groups that transform and innovate handicrafts, mainly including universities, research institutions, designers, data architects, etc. The decomposers are indispensable catalysts in the collaborative innovation network of handicrafts, which can accelerate the speed of consumption and circulation and build a "knowledge community" under interculturality. In particular, designers, as the core force to promote the innovation of intangible cultural heritage crafts, have been explored and stimulated to form a "1+1>2" participatory design innovation network through the aggregation effect, which is of great significance to promote the exchange and interaction of subjects in different cultural backgrounds.

6.2.1.2 Spatial: Ecological environment and cultural space

Ecological environment and cultural space are the basic elements of the cultural ecology of regional traditional handicrafts. Crafts are often rooted in unique regional spaces: different environments have different effects on the crafts themselves, and different types of crafts have their own spaces for transmission. As the German ethnographer Robert Fritz Graebner has proposed the concept of "cultural circles" and Terry Clark's "scene theory," culture is distributed according to geographic space, the locational scene contains specific cultural values, and this synthesis of environments is also known as "ecology". Most traditional crafts can only be effectively protected, inherited and developed in their original geographical location, environmental conditions and cultural space, which is why they cannot be "transplanted".

In 1974, French sociologist Henri Lefebvre first introduced the concept of cultural space in "The Production of Space" ^[41]; since 1998, UNESCO has been developing specific policies to support cultural space. Since 1998, UNESCO has been developing policies to support cultural space. With the UNESCO Convention emphasizing the importance of "cultural space" in the definition of ICH, the theory of cultural space has been widely applied in the conservation of ICH. According to the definition of cultural space, the cultural space of handicrafts is both spatial and temporal, as well as immaterial and material, and is constantly changing with the changes of material forms, social consciousness, lifestyles, economic systems and other elements ^[42].

Among them, cultural spaces have different ways of classification: according to the content, they can be divided into festival ceremony places, theater performance places, craft inheritance spaces, etc.; according to the functions, they can be divided into production spaces, inheritance spaces, study spaces, sales spaces, dissemination spaces, service spaces, etc.; according to the attributes, they can be divided into urban spaces, rural spaces and virtual spaces, etc. In recent years, with the development of Internet information technology, the protection and dissemination space of handicrafts has been gradually expanded from offline to online. For example, the popularity of virtual communities such as the China Digital Museum of Intangible Heritage, the Racer Institute of Intangible Heritage, and the Tiktok "Intangible Heritage Partner Program" has greatly increased the speed and breadth of traditional handicrafts dissemination and expanded the forms of existence and innovative methods of their cultural space.

^[41] Lefebvre, H., & Nicholson-Smith, D. (1991). *The production of space*. Blackwell: Oxford, 1991.

^[42] Zhuge, G.K. (2008, 06). Reflections on the Intangible Cultural Space of Handicrafts. *Journal of Nanjing Art Institute (Art and Design Edition)*, p119-123+206.

The "spatial element" of the cultural ecology of traditional handicrafts can be interpreted at two levels, abstract and figurative:

Firstly, on the abstract level, this element refers to the holistic consideration, global perspective and structural layout of traditional handicraft protection, which means that the discourse system of traditional handicraft should be based on the holistic living space and cultural context, so as to effectively avoid the phenomenon of cultural fragmentation and cultural isolation and promote the sustainable development of handicraft;

Secondly, at the figurative level, this element refers to the cultural scenes of traditional handicrafts, natural ecological environment and presentation carrier space, including geographical ecological environment, raw material supply place, creation or production place, inheritance place, trading market, display space, etc., such as various traditional villages, handicraft workshops, market towns, old streets, ancient cities, characteristic towns, museums, etc. should give full play to its role in carrying the development of handicraft inheritance. [Figure 10](#).

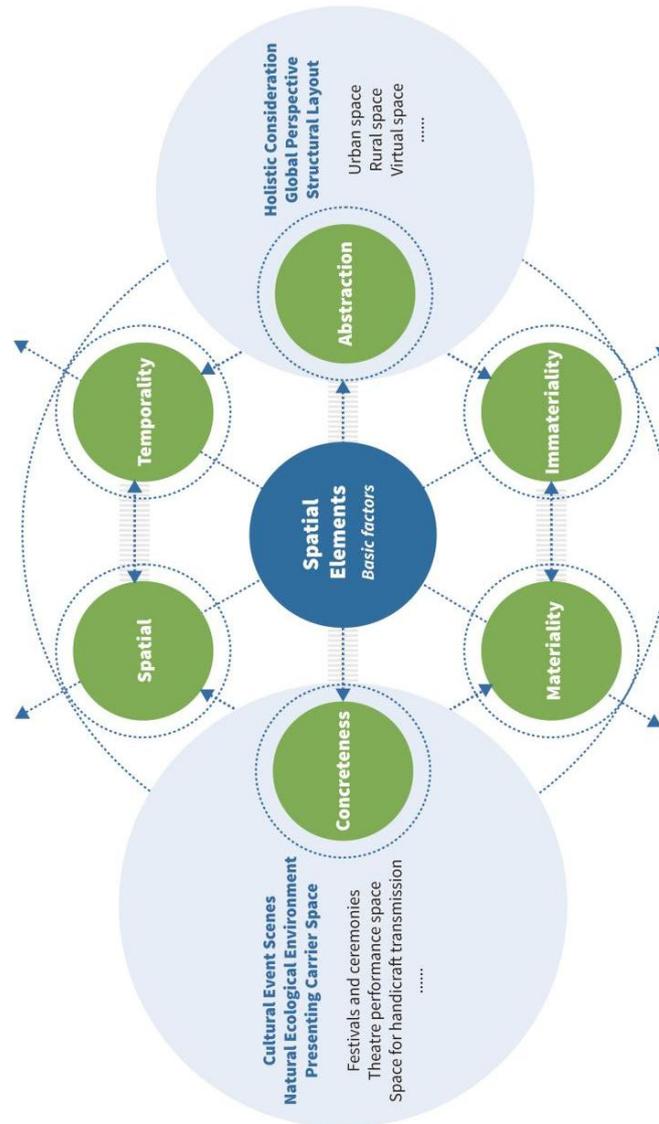


Figure 10. Multi-level interpretation of spatial elements

6.2.1.3 Technology: Production methods and technological applications

William Mc Gaughey, an American historian, suggests that human civilization is defined by Cultural Technologies as a reference value ^[43]. From ancient times to the present, the four industrial revolutions have been marked and driven by major technological changes. For example, James Hargreaves invented the "Jenny Loom" in 1764, which inaugurated the first industrial revolution and replaced the manual workshops with mechanized production; the second industrial revolution was triggered by the electric generator made by Siemens in 1866, which brought people into the electric age; in the 1940s, electronic computers, atomic energy, and other technologies were introduced. In the 1940s, the invention and application of technologies such as electronic computers, atomic energy, space technology and bioengineering opened up the third industrial revolution characterized by information technology, and the production process was gradually automated; in the 21st century, the Internet, the Internet of Things, big data, cloud computing and other intelligent technologies brought about the fourth industrial revolution, and people entered the "Industry 4.0 "The era of industrial change. It can be seen that each technological revolution brings about great changes in the cultural, social, economic and political fields, and plays an important role as a dividing line.

In the different stages of development of agrarian society, industrial society, information society and intelligent society, traditional handicrafts have different fates and situations, thus it is inevitable to incorporate technological elements into the research system of cultural ecology of handicrafts. Professor Mark Q. Sutton of the University of San Diego proposed that "technology is an important factor in the development of culture" ^[44]; The American anthropologist Leslie White proposed the formula "C=E*T", in which C refers to Culture, E refers to Energy, and T refers to Technology, to express the decisive role of energy and technology in the development of culture ^[45]; The American anthropologist Julian Haynes Steward proposed that "analyzing the interrelationship between exploitative or productive technology and the environment is the first step in the study of cultural ecology" ^[46]; Song suggests that "digital technology has significantly changed the cultural ecology and conservation concept of ICH" ^[47]. It is thus clear that technological applications and production methods are the important driving factors of the cultural ecology of handicrafts.

The development process of technology is complex, and there are theories such as "technological determinism", "Social Shaping of Technology (SST)" and "Technology threat avoidance theory (TTAT), etc. All of them express the importance and cautious attitude towards the development of technology and its application, especially in the field of handicrafts. Technology itself is influenced by complex elements such as politics, culture and economy, and is a complex sum of technical and social behaviors; At the same time, technological change leads to a diversity of "innovation dimensions" and "social demands" in the social structure, which not only affects the

^[43] Steffel,V. (2002). Five epochs of civilization: world history as emerging in five civilizations. Thistle rose Publications.

^[44] Sutton,M.Q. (2020). Anderson E N. Introduction to cultural ecology. Routledge, 21.

^[45] White,L.A. (1949). The science of culture, a study of man and civilization.

^[46] Steward,J. (2016). The Concept and Method of Cultural Ecology. New York University Press.

^[47] Song,J.H. (2015,02). A few thoughts on the digital preservation of intangible cultural heritage. Cultural Heritage, p25-26.

way crafts are produced and promotes the generation of socialization, but also affects the complex relationship between the ontological and environmental elements of crafts.

We must realize that technology is a double-edged sword. In the cultural ecosystem of handicrafts, changes in technological elements will directly affect the existence and interrelationship of all other elements, such as materials, structures, production methods, collaboration mechanisms, cultural spaces, cultural forms, and industrial patterns; With proper application, technology can promote the integration and extension of industries and different business forms, and directly "empower" the innovative development of regional traditional handicrafts.

Technology and art need to be combined in the innovation process of handicrafts. Nowadays, under the strategic guidance of cultural and technological integration, more and more high technologies are applied to the innovation process of handicrafts. For example, digital technologies such as digital photography, 3D printing, mixed reality, virtual scenes, interactive experiences, and intelligent technologies such as intelligent generation, virtual simulation, and cloud computing. In this process, the relationship between technology and culture needs to be carefully handled in order to master the balance and sustainable development of cultural ecology. [Figure 11.](#)

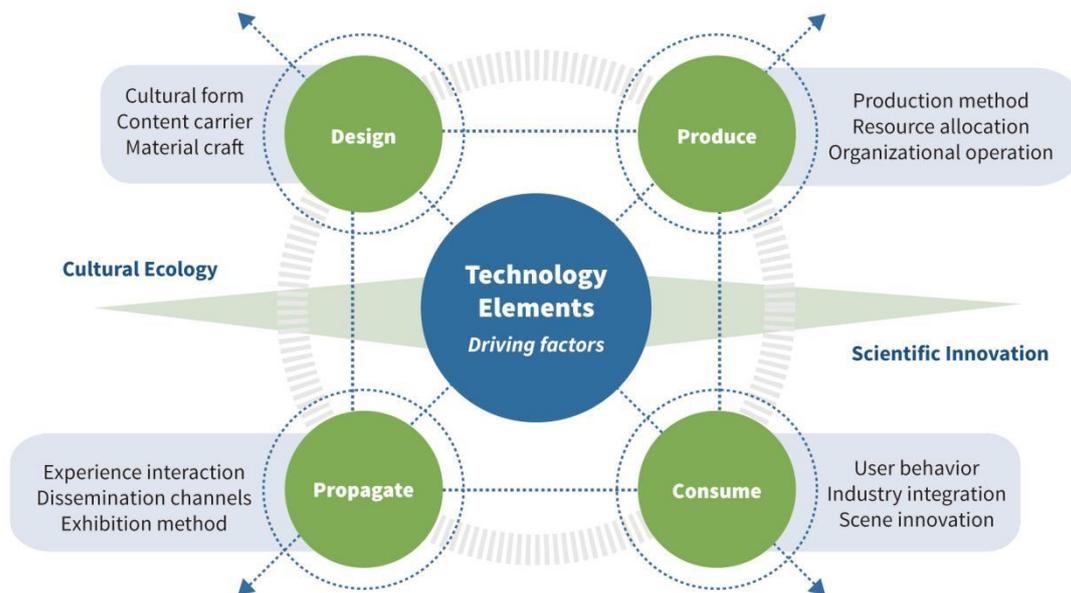


Figure 11. Driving force of technology elements

6.2.1.4 Representation: Cultural forms and social functions

"Representation" refers to the symbol system and expression carrier that conveys the cultural meaning of traditional handicrafts, and it is the framework system and expression characteristics in the process of inheritance, transmission and practice. "representation" includes cultural forms and social functions, and is an important and indispensable element in the cultural ecosystem of traditional handicrafts, which is also the most influential and expressive part. From the surface level, "representation" includes the form, symbols, imagery, color, material, texture, landscape, etc. of handicrafts, reflecting and mapping the material or immaterial world; From the connotation

level, "representation" represents a process of cultural construction, that is, the process of "externalizing" and "expressing" the core values of handicrafts ^[48]. The element of "representation" not only combines and connects other elements to form a unity, but also positions the social function of handicraft in the opposite direction, which has the double meaning of expression and connection.

The concept of "representation" first emerged in the 14th century from Stuart Hall's Theory of Articulation and the Circle of Culture theories. From the early 20th century, many scholars began to conduct in-depth research on ICH handicrafts from the perspectives of aesthetics, visual representation, cultural function, and social function. In 1922, the "Culture Functionalism" proposed by Bronislaw Malinowski expressed the relationship between cultural forms and cultural functions through the case of tree branches: through human design and transformation, tree branches (the product of nature) become sticks. The transformation of cultural form also brings about a transformation of its social function, and this process is culture ^[49]. Taking "ceramics" discussed in the previous chapter as an example, through the design of cultural and creative products based on a series of handicrafts such as billet shaping, grouting, firing, glazing, etc., clay (a product of nature) is transformed into ceramic handicrafts (a product of adaptation to the environment) and given rich forms of organization and expression, and with it, its cultural transformation of both its form and social function has taken place, thus activating its cultural connotation and modern value.

In terms of the internal relationship between the elements of "representation," the cultural forms and social functions of handicrafts are complementary and harmonious. In the cultural ecosystem of handicrafts, social functions can be expressed through cultural forms, which in turn influence their social functions. In terms of the external influence of the "representation" element, the complex elements under social transformation influence the change of "representation" and dynamically and fluidly reshape its development environment. The external factors affecting the "representation" of traditional handicrafts are very complex, ranging from social background, technological change, cultural transformation, to innovative tools, morphological carriers and communication channels, which dynamically reshape the ecological environment of the "representation" of handicraft culture. Taking paper-cutting as an example, in the early days, paper-cutting was often used to express people's beliefs with animal and plant motifs such as chicken, cow, gourd, etc., and was used for witchcraft and blessing activities, carrying social functions such as folk beliefs; but with the transformation of society, the belief function of paper-cutting gradually became weaker and was replaced by its aesthetic function and cultural value, so its cultural form also broke through its original limitations and gradually became richer.

[Figure 12.](#)

^[48] Barker,C. (2004). The Sage dictionary of cultural studies. Sage.

^[49] Malinowski,B. (1922). Ethnology and the Study of Society, (6), p208-219.

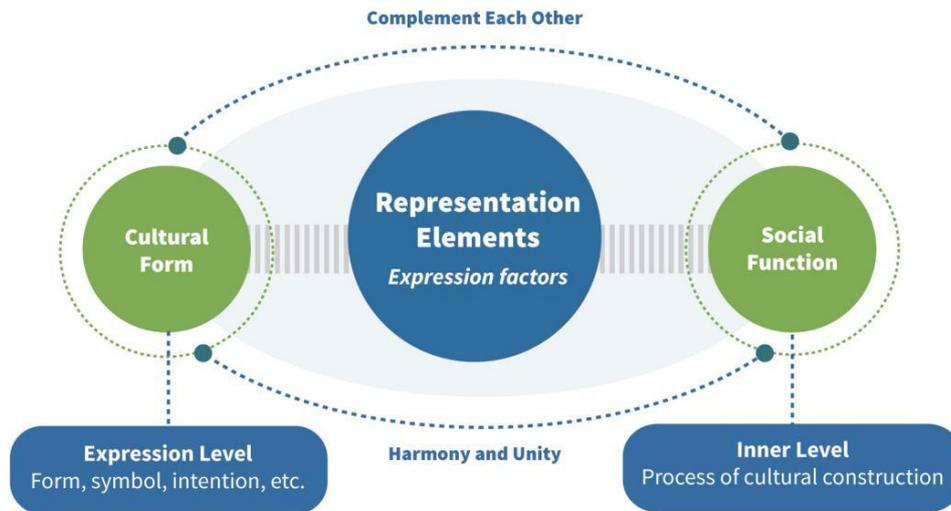


Figure 12. Dual meaning of representational elements

Innovation of "Representation" under Social Transformation

Traditional handicrafts present different cultural forms and social functions in different cultural time and space, and keep flowing and intersecting in the scenes of technological and social changes. Therefore, in view of the changing needs and reorganization of handicrafts in the new era, and the requirements of "creative transformation and innovative development", it is necessary to carry out "representation" innovation of regional traditional handicrafts. In this process, the expression and participation of design and art are indispensable, and the intervention of creative design also needs to balance the relationship between its cultural representation and social function. Only by finding the most appropriate way of "revitalization" can the core path of regional traditional handicraft innovation be found. It is worth noting that with the continuous change and upgrade of digital technology, the participation of digital media and intelligent tools has also reshaped the cultural form and social function of handicrafts, which are being converted from physical form to digital form on a large scale, and the participation of creative design can make the greatest scene and functional breakthrough for handicrafts in this dimension.

6.2.2 "Symbiosis" - Environmental layer

In addition to the influence of the ontology layer, with the accelerating process of social transformation, the cultural ecology of traditional handicrafts is also extending and expanding, and gradually begins to be inextricably linked to and influenced by complex social environmental factors, with the ontology layer and the environment layer together constructing a complete cultural ecology of handicrafts. This section focuses on four key elements of the environmental layer, including politics, industry, services, and capital.

6.2.2.1 Politics: Macro-environment and policy orientation

Political factors mainly include institutions and regulations, ideology, macro environment, policy orientation, values, social organization, etc., which influence the development context, importance and participation mechanism of regional traditional handicrafts from top to bottom and play an important top-level guiding role in its cultural ecosystem.

Intangible cultural heritage is essentially the embodiment and application of political philosophies such as cultural pluralism, human rights theory, historicism and communityism in the field of culture ^[50], and it is also influenced by a combination of political elements such as institutional regulations, policy guidance and values. Therefore, political factors determine the development direction and conservation mode of handicrafts, and also provide strong support for the conservation of local traditional handicrafts. Through diversified initiatives such as directory construction, resource census, tax relief, talent support, project support, activity organization, system improvement, funding allocation, festival setting, education and popularization, exchange and cooperation, the government has attracted and organized the participation and attention of the whole society and provided more comprehensive support and encouragement for craftsmen.

For example, Shirakawa-go and Gokayama, located in Gifu Prefecture, Japan, were selected as UNESCO World Heritage Sites and Japan's most beautiful villages in 1995 for their unique traditional wooden construction techniques in the shape of "Gassho-style". They have established a complete cultural tourism industry chain, including folklore tourism and lodging experience, and are a model project for rural revitalization. [Figure 13](#).

From the political point of view, Shirakawa Village came into existence in 1888 under the Japanese municipal system, and in 1950 the Japanese Cultural Properties Preservation Law stipulated that local governments could establish "traditional building complex protection areas" on their own, and that the national government would select important preservation areas for inclusion in the central government's The national government selects the important preservation areas on the basis of these areas and incorporates them into the central government.

In 1976, the Ogimachi district of Shirakawa-go was selected as a national "Important Traditional Building Group Preservation Area", and since then, the district has been protected by relevant laws and policies, and has received significant financial support from the government, with the national, prefectural, and village governments paying for the maintenance and repair of 90% of the "Gassho-style" buildings.

At the same time, in order to promote the revival of local traditional culture and the sustainable development of tourism, villagers have established the Shirakawa-go Gero Preservation Fund and the Shirakawa-go Gero Nature Conservation Association on their own initiative, and have formulated policies such as the "Constitution of Indigenous People" and "Landscape Conservation Standards" as well as five-year plans for the preservation of local traditional culture.

^[50] Pu,Y.G. (2008). The political interpretation of intangible cultural heritage. Journal of Yunnan University for Nationalities (Philosophy and Social Science Edition), p31-33.



Figure 13. Gifu Prefecture, Japan, Shirakawa-go, "Gassho-style" buildings

6.2.2.2 Industry: Market demand and industry integration

Under the new economic and social development structure, traditional handicrafts are facing the changes of new production and life style arising from the new technological revolution. Industrial applications can drive the endogenous power and inheritance vitality of handicrafts, and are an important activating element in the cultural ecosystem. As the core part of creative economy, cultural industry is the unity of cultural value, social value and economic value, and its innovation elements include market demand, technology application, talent cultivation, business model, service system, creative resources and organizational structure. In response to the market demand in different periods of social transformation, there will be different industrialization modes and business models emerge. The cultural resources of traditional handicrafts are the cornerstone of the development and globalization of the distinctive cultural industries, which need to be given new vitality through creative design. Therefore, empowering traditional industries and real economy through creative design is an effective innovation path for the development of traditional handicraft cultural industry.

With the increase of the income of the residents, the demand of the cultural consumption market is growing, the huge economic value contained in traditional handicrafts is gradually tapped out, the development mode of cultural industry is constantly transformed and upgraded, and innovative models such as "traditional handicrafts + cultural creation", "traditional handicrafts + tourism", "traditional handicrafts + agriculture", "traditional handicrafts + education" and other business integration are emerging. Take Etsy, an American cross-border e-commerce company, as an example. It was founded in 2005, and as the most influential and largest C2C handicraft e-commerce platform in the world, it strictly controls the handicraft attributes of the products on sale, controls the niche market of handicraft, strongly supports independent creators, and brings

together handicrafts, antiques and handmade goods from all over the world. With more than 10 million sellers and 81.9 million active buyers, it has built a virtual community to promote the development of small and micro businesses and communication among craft enthusiasts through its linkage with social media and the implementation of an instant feedback mechanism.

Figure 14.

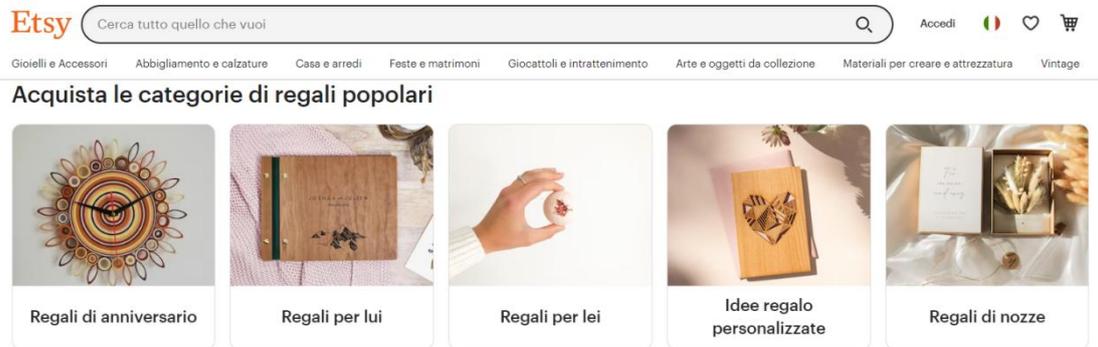


Figure 14. Cross-border e-commerce Etsy-Crafts e-commerce platform

<https://www.etsy.com/>

6.2.2.3 Services: Cultural services and talent training

With the increasing importance of "community" and "talent" in the sustainable development of traditional handicrafts, a perfect and effective public cultural service system can protect the innovative development of traditional handicrafts. Optimizing the mechanism of training and introducing talents can bring fresh blood and inheritance power to traditional handicrafts. Public cultural services and talent cultivation mechanism become important guarantee elements of the cultural ecology of traditional handicrafts.

Among them, public services mainly include public cultural institutions, industry organizations, industry standards, information dissemination, rights and interests protection, exhibition and performance experience, supervision mechanism, intellectual property protection, and organization of transmission and exchange activities, etc. Talent cultivation mainly includes the construction of education system, transmission mechanism, knowledge system, technical titles, talent team, and expert think tank, etc.

For example, the Textiles Zentrum Haslach was founded in 1991 as a textile art center jointly organized by the Textile Museum Haslach, the Textile Culture Association Haslach, the Textile Manufacturing Factory Haslach, and the University of the Arts Linz. The aim is to promote the heritage and preservation of traditional spinning technology and has now established effective synergies and innovations between the different fields of exhibition, production, technology, research, education, art, experimentation and practice.

In terms of public services, the center organizes a rich program of open days, including exhibitions, workshops, lectures, theater performances, reading and sharing, music experiences and other supporting programs to provide visitors with an immersive experience of textile manufacturing and design, helping consumers to understand the complex textile technology and

environment, while providing employment and training opportunities for 12 disabled people in the textile manufacturing plant. In the area of human resource development, a regular training course called "Shuttle" was launched in cooperation with the Textile Department of the University of the Arts Linz.

The course is divided into five modules: " Process and Design Basics, Quality and Application Areas, Practice Areas and Personal Orientation, Creative Practice, Final Report", with the aim of opening up the interface between machine construction and innovative design and becoming a hotbed of creativity. It can be seen that Haslach Textile Center has created a diversified public service platform for ICH handicrafts and has achieved rich practical results in talent training.

Figure 15.



Figure 15. Haslach Textile Center

<https://textile-kultur-haslach.at/en/textile-centre-haslach>

6.2.2.4 Capital: Cultural Finance and Market Operation

In the past, traditional handicrafts should not be associated with capital or finance, because too much commercialization would threaten the historical and cultural values of the handicrafts themselves. However, the changes in social transformation have forced us to face up to the enormous influence of capital. In this industrialized information economy, handicrafts have entered a mixed field composed of technological innovation, bio-intelligence, capital operation, cultural interaction and cultural finance, etc.

The development of traditional handicrafts needs capital investment and support, and capital is gradually attracted to the traditional cultural industry represented by handicrafts. Concepts such as ICH e-commerce, ICH finance and ICH real estate have emerged, and the services of cultural finance and market operation including investment and financing support and services, financial products and services, and asset evaluation guidelines have become the enabling elements of the cultural ecology of traditional handicrafts.

It is with the support of cultural finance and market operation that traditional handicrafts can be successfully transformed into modern industries such as cultural tourism projects, commercial districts, cultural and creative products, industrial parks, film and entertainment, etc., truly achieving "living inheritance" and "productive protection" and realizing a harmonious balance between commercial and cultural values. To achieve a coordinated and balanced development

between commercial value and cultural value. Although the cooperation between traditional handicrafts and capital still faces many problems that need to be solved, such as the valuation of intangible assets, the establishment of industry standards, the transmission of value identity, and the management of investment risks, cultural finance and market operation have become one of the important enabling elements of the cultural ecology of handicrafts.

For example, Beijing Pop Mart Culture and Creativity Co., Ltd. was established in 2010, the main business areas include artist mining, IP incubation and operation, and the promotion of trendy play culture, etc. It has built a comprehensive operation platform throughout the whole industry chain of trendy toys, as well as the layout of "IP sustainable operation" ecology.

According to Pop Mart's financial report, Pop Mart sold 50 million trendy toys in 2020, with total revenue of 2.51 billion RMB, up 49.3% year-on-year, of which Sequoia Capital, Black Ant Capital and Zhengxin Valley Innovation Capital are its major institutional investors. Head artists and creative design is one of the core barriers of Pop Mart. In terms of traditional culture inheritance and application, Pop Mart was officially listed on the Hong Kong Stock Exchange in 2020 as the "No.1 stock of trendy toys", invested in the animated movie "Nezha Reborn", and was stationed in Shenzhen Wenheyou in 2021, followed by the investment in the Chinese clothing national style brand "Thirteen Yu".

In addition, it has developed national style product series such as "Journey to the West", "Palace Royal Beast", "Miao Dragon Baby" and "Twelve Chinese Zodiac Signs", which integrate and innovate ICH traditional culture with modern pop culture. [Figure 16.](#)



Figure 16. POP Mart Culture and Creativity

<https://www.popmart.com>

6.2.3 Summary

Based on the above definitions of the key elements of the ontology and environment layers, it is necessary to clarify the organizational structure, logical relationships and interaction mechanisms between different elements, so as to establish the overall relationship and characteristics of the "Symbiosis" of the regional traditional handicraft cultural ecosystem. [Figure 17](#), [Figure 18](#).

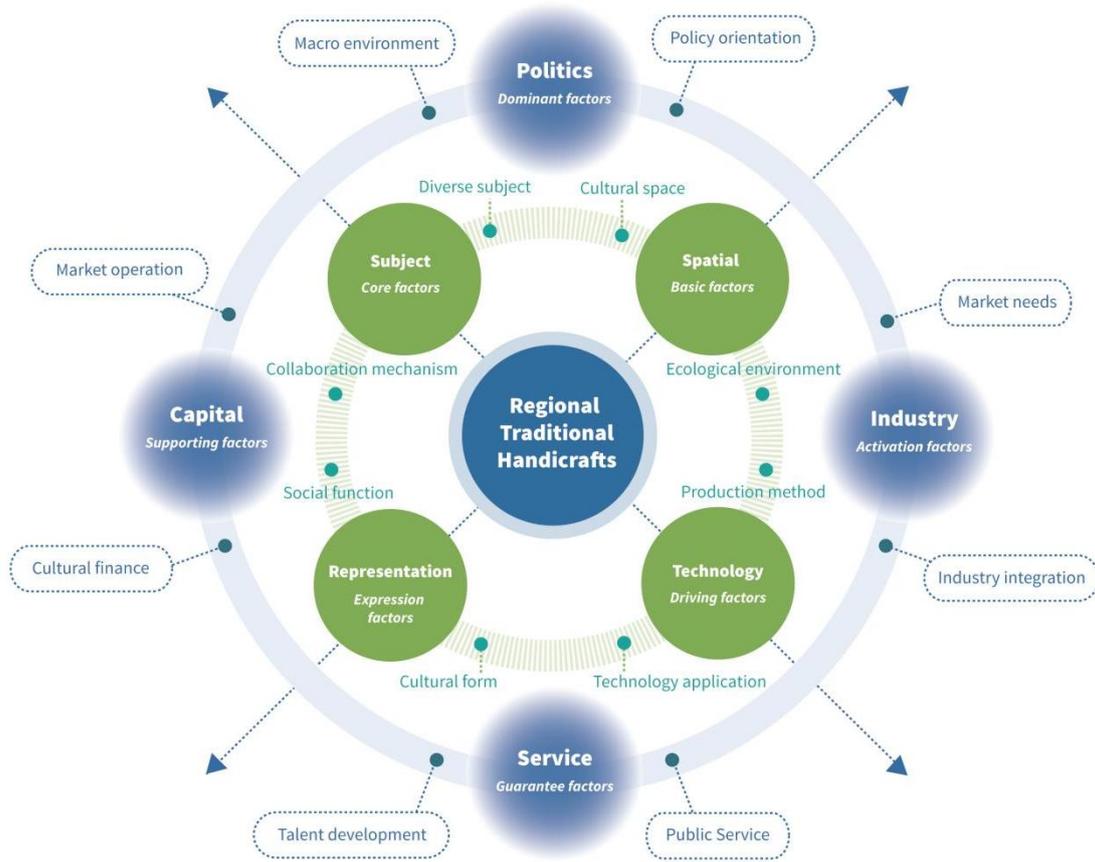


Figure 17. Regional traditional handicrafts " Symbiosis" cultural ecosystem

Symbiosis	Elements	Details	Roles
Ontology layer	Subject	Diverse subject & Collaboration mechanism	Core factors
	Spatial	Cultural space & Ecological environment	Basic factors
	Technology	Production method & Technology application	Driving factors
	Characterization	Cultural form & Social function	Expression factors
Environmental layer	Politics	Marco environment & Policy orientation	Dominant factors
	Industry	Market needs & Industry integration	Activation factors
	Service	Public Service & Talent development	Guarantee factors
	Capital	Cultural finance & Market operation	Supporting factors

Figure 18. Organizational structure of the "Symbiosis" system of local traditional handicrafts

Dynamic cycle of organizational relationship

The "symbiotic" cultural ecological elements of traditional handicrafts can be divided into the ontological and environmental layers. The ontology layer is directly related to the formation, evolution and development of the cultural ontology of handicrafts, including "subject", "technology", "representation" and " spatial"; The environmental layer is the elements that influence the " Symbiosis" development path of handicrafts from a more macro perspective in the

process of social transformation, including politics, industry, service and capital. Based on the above two levels and eight elements, the study of the organizational relationships of the cultural ecosystem is also very important.

Therefore, this study defines the organizational relationship as "dynamic cyclic 'symbiosis' organizational relationship". The dynamic circulation mechanism refers to the communication and interaction among the factors in the system, as well as the flow and circulation between different elements, which expresses the structure, function and interrelationship among the elements in the "symbiosis" system. In this system, all the elements interact with each other, are interrelated and indispensable, and together form a dynamic, open and sustainable cultural ecosystem of traditional handicraft "symbiosis".

(1) Interaction within the "symbiosis" hierarchy

First, within the two levels, the elements are interconnected and indispensable. In the ontological element layer, the diverse "subjects" need to realize different "representations" in "spatial" through the drive of "technology". The "subject" is the core force, the "spatial" provides the basic conditions such as materials and places, and the "technology" application and production methods are the important driving paths and methods of conservation and heritage, which ultimately need to carry the expression of social functions through cultural forms.

In the environmental layer, "politics" is the leading force, "service" is the foundation guarantee, "capital" is the empowering push, "industry" is the activating power. "Politics", as a macro strategic guidance and social background, directly determines the development direction of industry, service and capital. The "capital" provides the production factors for the industry, the "industry" is the scenario for the use of the capital, and the "service" is the basic condition to ensure the successful performance of the above elements.

(2) Flow relationship between the "symbiosis" hierarchy

Between the two layers, the ontology layer and the environment layer are mutually influencing and circulating in both directions. The ontology layer is the core element of the cultural ecology of traditional handicrafts and it is directly related to the development of the ontology. Without the ontology layer, the environment layer will have no meaningful existence and become a pool of stagnant water. The environmental layer is the related element of the cultural ecology of traditional handicrafts, providing macro orientation, service support and factor support for the development of the ontology layer. Without the environmental layer, the ontology layer would be like a fish out of water, losing its environment and direction of development.

At the same time, the elements in the ontology layer must cooperate and communicate with the elements in the environment layer in order to ensure the sustainable development of the cultural ecosystem. "Technology" influences the direction of "industry" development and business innovation, "spatial" determines the deployment and layout of "services", and "representation" attracts the attention and investment of "capital", and "subject" could determine the direction of "politics". The opposite is also true, the development of "industry" brings about changes in

production methods, the creation of "services" can reshape local communities, the investment of "capital" promotes the continuous innovation and development of cultural forms, and the macro "politics" direction influences the development of cultural forms.

(3) *Dynamic cyclic properties of the " symbiosis" system as a whole*

The dynamic nature of the symbiosis is reflected in three dimensions:

First, it is in the dimension of temporal flow. The system is not static, but is constantly updated and changed with the evolution of the times, and this variability, ambiguity and uncertainty reflect the dynamic nature of the system;

Second, it is in the dimension of spatial distribution. The social functions of the system are not bound to a certain cultural space, but are adapted and moved in different contexts;

Third, it is in the dimension of operation mechanism. The basis of the existence of the system lies in the continuous interaction, communication and cooperation among its internal constituent elements, and the value and connotation elements of traditional handicrafts constantly flow between the system, which constitutes a relatively stable dynamic balance mechanism.

6.3 Innovative design of " Symbiosis " development system:Digitization as a turn

Under the continuous change of social and technological systems, innovative design for traditional handicraft has become a very important strategy for traditional cultural preservation. At the same time, the innovation path of design participation in traditional handicrafts has gradually diversified, from industrial design, product design, ecological design, environmental design, landscape design, etc. in the early days, to design ecology, ecological aesthetics, design ecosystem, etc., which are more systematic, holistic and dynamic today. "Innovative design" has become an important intersection of complex elements in the gradually expanding cultural ecology, and " digitalization" has become an important development direction and guiding force of innovative design ecology.

In this section, traditional handicraft innovation design ecology is constructed from the path of "deconstruction - reconstruction - expression - regeneration".

6.3.1 Deconstruction: Diversification of cultural forms and social functions

How to "deconstruct" the rich traditional handicraft cultural resources into design knowledge that can be developed, reused, shared and created under new technological conditions, and activate the endogenous power and creative wisdom of multiple subjects, is the first key issue to be solved in the process of traditional handicraft innovation and design.

6.3.1.1 Collecting and transforming cultural resources

(1) Methods of collection and transformation

Traditional handicraft cultural resources are rich in class and diverse in form, and the prerequisite to be able to develop and utilize these resources smoothly is to be able to collect, define and transform the resources correctly and effectively. In this process, innovative design is the key connecting link that can play an effective role in transformation and integration. Its transformation role is mainly reflected in the following three aspects:

A. Data collection methods.

Digital collection methods such as design-based active collection, stimulating user-generated content, network open resource crawling, cultural institution data sharing, literature knowledge mapping analysis, multimedia image recording and 3D modeling are used to collect cultural prototype data, innovative product data, application scene data and interactive experience data related to traditional handicrafts, and to mine the cultural genes, artistic genes and historical genes in traditional handicraft cultural resources.

B. Logical hierarchy sorting.

According to Design Thinking, the logical relationships between the layers of cultural elements classification, cultural information definition, cultural semantic description and media resource type are sorted out.

According to the "symbiosis" cultural ecosystem constructed in Chapter 6, Section 6.2 of this paper, the resources are organized according to the four elements of the ontology layer:

These include subjects (inheritors, cooperation methods, organizational structure, etc.), and Spatial (geographical environment, transmission scenes, rituals, etc.), and Technology (production method, function, structure, technique, etc.), and Representation (form, texture, color, material, ornamentation, etc.), and Spiritual level (cultural background, allusions and legends, spiritual emotions, stories of people) etc., and finally form a design knowledge database based on traditional handicraft cultural resources, and build a multi-source collection, integration and sharing method to form the data of classic elements of handicraft culture.

C. Docking with industrial needs.

Based on the market acumen and user understanding of design, selective, targeted and purposeful design translation of handicraft resources is carried out to dovetail with the actual needs of creative economy and special cultural industries and other industries to improve the effective conversion rate of traditional handicraft cultural resources and avoid the emergence of problems such as waste of resources and semantic misalignment. Through online resource platform and virtual community construction, etc., it provides targeted theoretical and material support for public cultural services, cultural industry applications, and design professional needs.

(2) Digital integration of cultural resources

Digital integration of cultural resources mainly refers to the integration, classification and storage of traditional handicraft cultural resources by means of digital acquisition and collection, which is the key step and important foundation for the digitization of cultural resources, mainly in the form of digital knowledge base or database, construction and management of digital virtual museum, etc. In recent years, various fields in the world have made more attempts in the digital integration of traditional cultural resources. In recent years, more attempts have been made in the digital integration of traditional cultural resources in various fields around the world, and a wealth of experience has been accumulated. The representative projects include: UNESCO Memory of the World global cultural heritage database, European Union Europeana digital resource integration system, French Library Galica digitization project, Korean Ichpedia non-heritage encyclopedia project, American Memory project, Chinese "Digital Forbidden City", "Digital Dunhuang" and Digital Museum of Chinese ICH, etc. In addition, with the widespread use of intelligent development tools such as Europeana Labs and Culture Moves, more and more companies, universities, individuals and organizations are joining the innovative development of NRM, including Google, IBM, Etsy, Apple, BMW, etc.

6.3.1.2 Establishing a revitalized knowledge system

At present, the resource collection, structured storage and knowledge expression of cultural resources data are mostly based on the ontology of cultural resources, while the semantic analysis and semantic association of them are less. Especially for the heterogeneous data of traditional handicrafts, it is not adjusted for the needs of cultural creative design, thus resulting in the phenomenon of "experts are reluctant to read, public can't understand, and designs are casually used", and it is impossible to effectively integrate traditional cultural resources and carry out innovative transformation and development and utilization of them.

Therefore, there is an urgent need for the cultural and design communities to establish a revitalized knowledge system oriented to creative design, to comprehensively analyze the intangible characteristics and semantic associations of traditional handicraft cultural resources, and to discover the implicit, effective, valuable and understandable information and patterns. From the perspective of design, the cultural differences and local knowledge acquisition methods of different handicrafts are studied and applied to public cultural services and value transformation, providing users with decision support capabilities at the level of problem solving.

(1) Knowledge system construction path

In view of the actual demand for traditional culture and creative design in the new era of cultural inheritance and industrial manufacturing, traditional handicraft resources need to be transformed into design knowledge and group wisdom through design-driven and technology-driven ways, and provide strong support for the revitalization, evolution, innovation and international dissemination of traditional handicrafts through the "resource-knowledge-value" sharing mechanism. In this process, it is necessary to build a revitalized knowledge system of handicrafts, and its construction path mainly includes the following three aspects:

A. Construct a knowledge map of cultural elements.

Based on the "symbiosis" element system of traditional handicrafts proposed in part 6.2, the content attributes, management attributes and form attributes of typical traditional handicraft cultural resource elements are sorted out from the three-dimensional dimension of "two layers and eight elements". Combining with big data analysis technology and the "people - objects - fields" feature structure, this system constructs a handicraft knowledge map including cultural metadata structure and web semantic evolution.

B. Establish an open knowledge expression platform.

Based on the local knowledge structure and knowledge map, it integrates the resources of nature, behavior, organization and representation related to traditional handicrafts to form a system of handicraft cultural expression elements, and establishes an open knowledge and communication platform that integrates the cooperation of various media forms such as portals, mobile APPs and third-party applications. Its openness is mainly reflected in the openness of digital cultural resources sources, the openness of expression tools and methods, and the openness of facing user groups.

C. Formation of the framework of revitalized knowledge system.

Based on the above knowledge map of cultural elements and open knowledge expression platform, through the application of new technologies such as intelligent classification and annotation, association representation and genetic evidence, the problem of Semantic Gap in the process of excavation and reuse of handicraft materials is solved, and traditional cultural resources are transformed into multimodal design knowledge to build and form a revitalized knowledge system. The "activation" is mainly reflected in the openness of knowledge sources, plurality of knowledge management, mobility of knowledge dissemination and dynamism of knowledge application.

(2) Construction of endogenous creative system

Based on the construction of a revitalized knowledge system, the construction of an endogenous creative system can stimulate the endogenous motivation of traditional handicraft inheritance subjects, convert cultural resources into knowledge and value, and continuously generate new business modes and transformation methods, create a handicraft cultural ecology with "endogenous motivation", and promote the sustainable development of traditional handicrafts. The main idea of this system is to integrate "content-design-production-market-value" and explore the innovation path from regional resources to global value, including the following three aspects (Figure 19)

A. In terms of system organization.

The system is designed to be "local", "connected" and "sustainable", and includes practices, organizations, resources, activities and connections related to traditional handicraft innovation. The design approach includes community research, social innovation, collaborative design, and participatory design to "recreate" and "redesign" the traditional handicraft cultural resources of the region. The specific design path includes six stages: cultural research, demand definition, design positioning, design plan, design evaluation, production system and channel construction, and each stage has corresponding design innovation methods, such as field survey, semi-structured

interview, market research, function definition, scenario mapping, service design, business model design, and Self-media communication, etc. Under the overall system development path, the six stages cooperate and support each other, and jointly promote the construction and transformation of design knowledge system.



Figure 19. Endogenous creative system of "Symbiosis" cultural resources

B. In terms of collaborative innovation.

Organize actors from interdisciplinary and cross-cultural backgrounds to participate in the process of cultural resource transformation and design innovation, including government, cultural holders, designers, universities, and industries. Among them, the government role can provide policy guidance, resource allocation, platform support, etc; Culture holders can promote collaborative innovation through their internal eyes; designers can promote the creative transformation and globalization of handicraft cultural resources through creative design; universities can provide academic research and think tank construction support for the construction of the knowledge system and future development direction; and industries can realize the practical landing and market operation of handicraft-related innovation achievements. Through the participation of multiple subjects, a local knowledge platform with the content of local cultural resources, natural resources and behavioral resources is jointly constructed, forming a complex, diversified and open interactive network.

C. In terms of application value.

Through the construction of this system, it can effectively integrate the needs of local communities and cultural resources through the participation of creative design. In the horizontal path, it promotes the transformation from "local resources - design knowledge - global value", and in the vertical path, it promotes the diversified output under collaborative design, so that cultural creativity, cultural ecology, cultural consumption and cultural communication can be supported by an integrated system. At the same time, the synergistic and optimal allocation effects are enhanced to promote the " symbiosis " sustainable development of local natural, cultural and social resources, and to realize the upgrade and leap from "design knowledge" to "group wisdom".

6.3.2 Reconstruction:

Construction of cultural space with the participation of diverse subjects

At present, traditional culture is facing the changes of new production and life styles arising from the new technological revolution. Traditional handicrafts can only be integrated into the environment of industrialized society through recombination with modern elements, and thus be "regenerated" ^[51]. How to promote the cultural resources and design knowledge system of traditional handicrafts to meet the needs of the market and society through the participation of design, to solve the contradictions and conflicts between cultural resources and distinctive cultural industries, and to form differentiated, diversified and distinctive cultural and creative products and business models, so as to "reconstruct" the relationship between design, industry and society. This is the key issue that needs to be solved in the process of building an innovation ecosystem for traditional handicrafts.

This section will focus on the study of traditional handicrafts in the complex scenario of creative economy, modern service industry and cultural science and technology integration, presenting technological support and technology application, cultural form and cognitive environment, cultural industry and scene integration, etc. To explore the productive protection mechanism of

^[51] Zhu,G.K. (2003,04). Survival of the fittest: The metamorphosis and regeneration of traditional Chinese handicrafts. *Decoration*, p4-5.

traditional handicrafts in the new era, to form a systematic resource integration method of "content-design-production-channel" for special cultural industries, and to build a design-driven development model for the transformation and upgrading of cultural industries.

6.3.2.1 Technology support and cultural form innovation

Digital multimedia technologies such as virtual reality, 3D scanning, stereoscopic projection, real-time rendering, style reuse and migration, knowledge mapping, high-precision indoor positioning, interactive genetic algorithms, intelligent somatic control, motion recognition, and brain-machine fusion are being used on a large scale worldwide to convert handicrafts from traditional cultural forms to digital cultural forms. It also combines the innovative methods of experience under the fusion of cultural forms, improves digital acquisition modeling, generation and rendering, multi-platform presentation, visual machine evaluation, cross-media virtual experience and other services for handicrafts, and provides immersive, contextualized, somatic, all-round and multi-view regional cultural experiences.

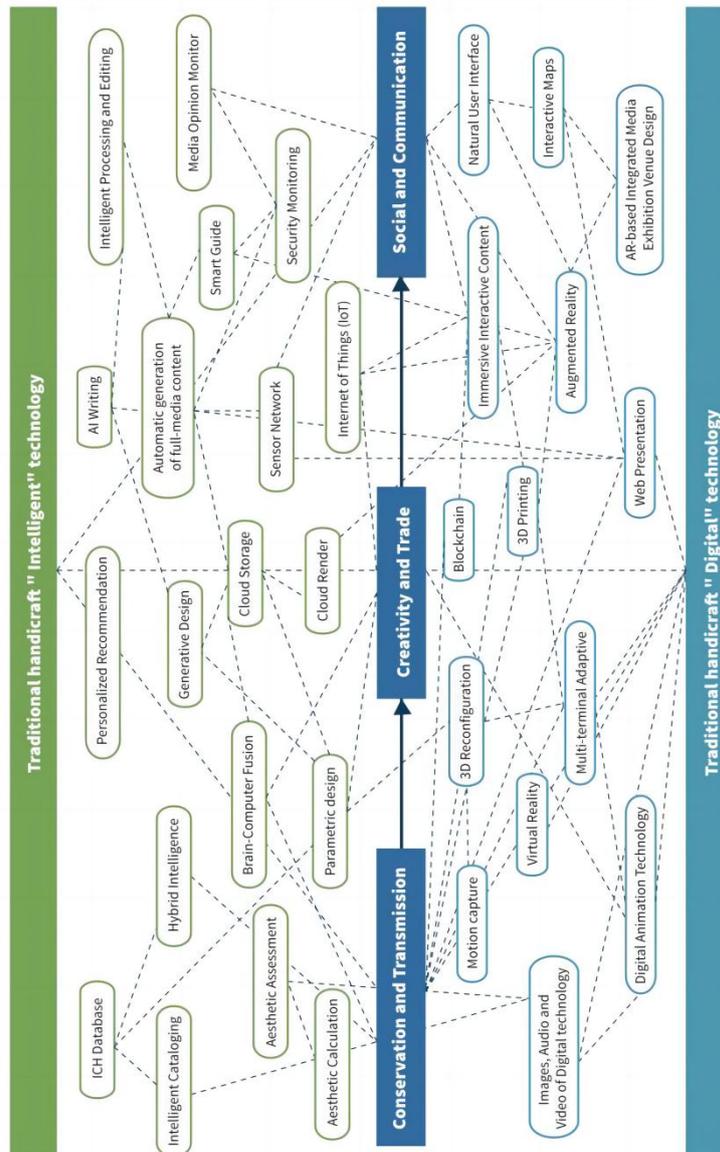


Figure 20. Technology-driven "Symbiosis" cultural form innovation

Thus, the innovative use of "intelligent" technology and "digital" technology generates new content carriers, production methods, cultural experiences and interaction scenarios, forming a design technology system structure of original development, production, consumption and circulation, and terminal experience.

Through the whole process of "protection and practice - creativity and trade - socialization and dissemination", it promotes the innovative transformation of traditional handicraft cultural forms, builds cultural and traditional value identity, and forms a diversified cultural ecology. [Figure 20](#).

In this process, design methods such as Generative design, Parametric design, Distributed Collaborative Design, Computational Aesthetics In this process, through the intervention of design methods such as Generative design, Parametric design, Distributed Collaborative Design, Computational Aesthetics Evaluation, etc., diversified cultural forms can be innovated through online and offline integration, including digital animation design, interactive image design, multimedia display design, immersive exhibition design, interactive map design, user experience design, etc.

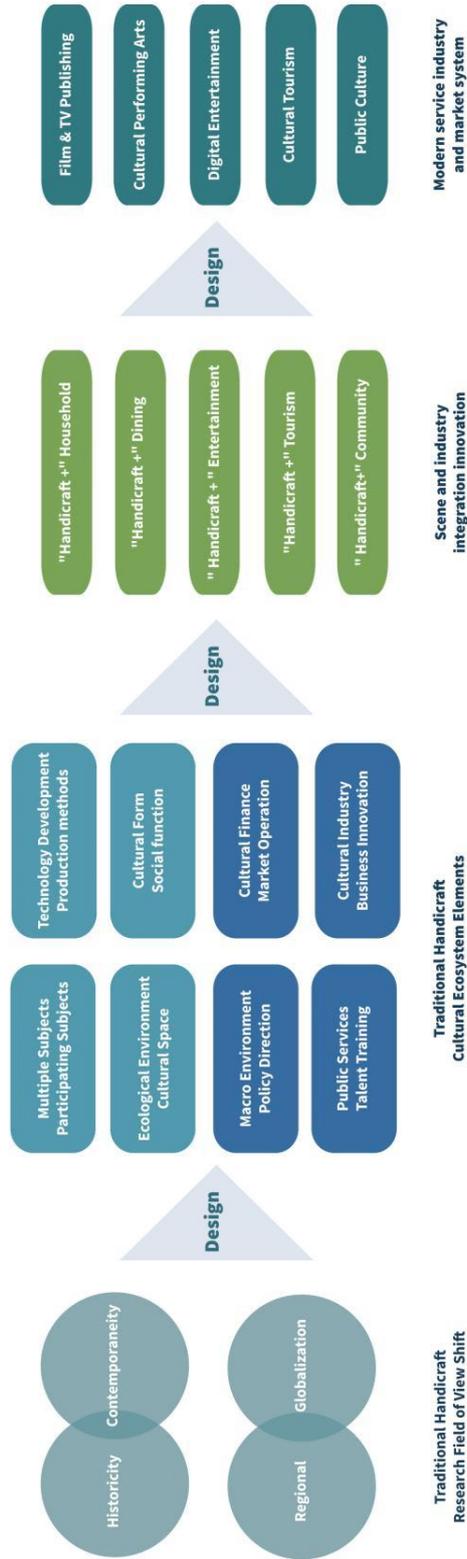


Figure 21. Design-driven scene integration innovation

Different business forms have given rise to diversified cultural scenes, which constitute an innovative path of mutual integration and promotion driven by design, and become an important method to promote the development of cultural industries. With the cultural connotation of

traditional handicrafts as the core, the integration of "handicrafts + home", "handicrafts + catering", "handicrafts + tourism", "handicrafts+tourism", "handicrafts+film", "handicrafts+entertainment" and other different business modes and scenes; At the same time, different industries are joining hands across borders, promoting the creation of new scenarios and services through the integration of online and offline, promoting the division of labor and resource sharing among relevant stakeholders, and dovetailing with the actual needs of the modern service industry and market system (Figure 21).

6.3.2.2 Innovation of industrial transformation and upgrading mode

Industrial transformation and upgrading is not simply a linear development, but in the new technological conditions, economic environment, international competition and industrial ecology, through "digitalization, networking, intelligence, greening" and other methods, to explore the "new industry, new business model, new mode" of innovation-driven mode, to create a collaborative innovation community under the integration of culture and technology, so as to promote the transformation and upgrading of traditional industries.

Among them, the method of design participation also requires systematic innovation, through social transformation design, regional revitalization design, complex system design, open dynamic design, social innovation design, community creation design, etc. It is able to promote new technologies such as big data analysis and deep learning, cloud computing and block chain, whole process service integration, etc., and deep integration and development of rich regional traditional handicraft and cultural resources. Transformation and upgrading of traditional industries into new characteristic cultural industries, development of new industries and new models including smart city and big data, regional tourism and ecological cultural tourism, integrated media content dissemination services, environmental protection ecology and big health, artificial intelligence and information interaction, digital economy and financial technology, etc.

In this transformation and upgrading process, it mainly includes the following five key points: (Figure 22)

First, it is the transformation of traditional industries driven by emerging technologies represented by the Internet as the driving force;

Second, is to take digital content production as a breakthrough point for development and cultivate new industrial growth;

Third, it is to use creative design as a means to revitalize traditional handicrafts and enhance the competitiveness of traditional industries;

Fourth, it is to meet the new cultural consumption needs as the guide to clarify the direction of industrial development;

Fifth, it is to improve the cultural industry ecosystem by design and effectively dock the industrial elements and environment .

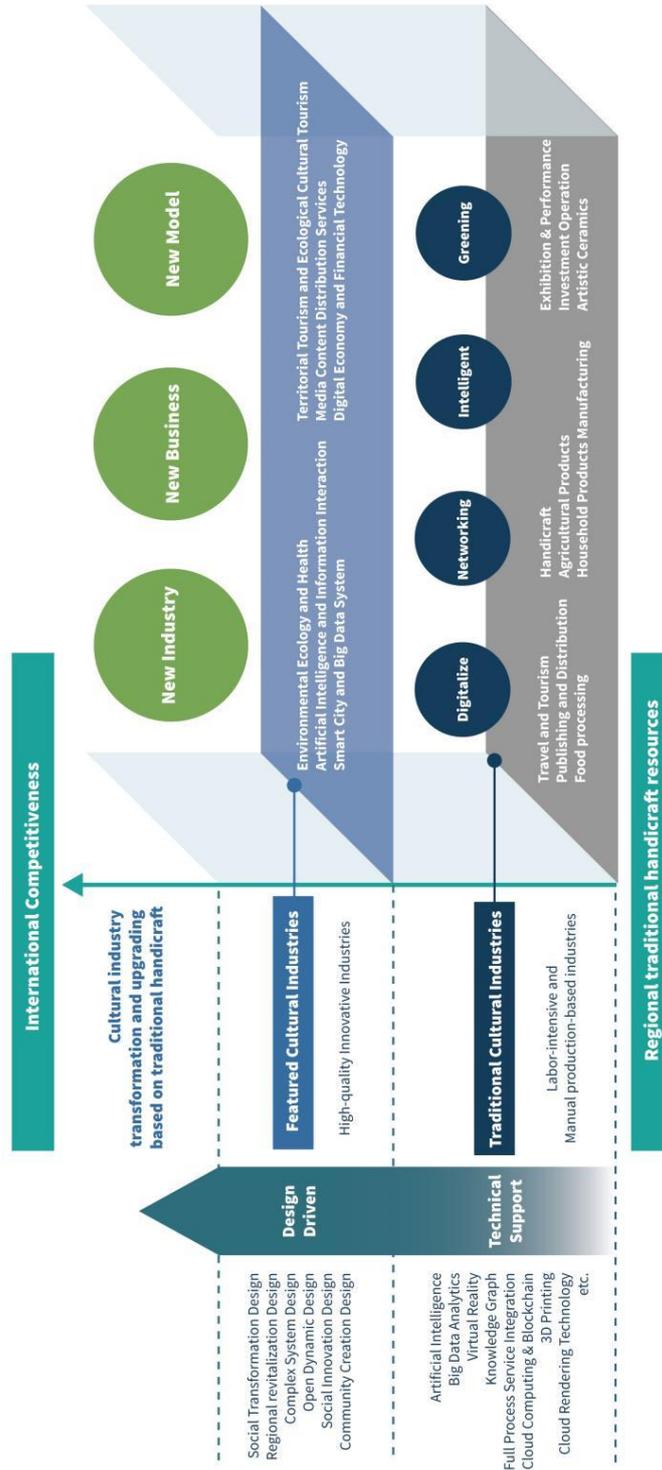


Figure 22. Design-driven upgrade model of traditional handicraft culture industry

Through the resource integration of the cultural industry, it incorporates the creation, research and development, design, trial production, display, sales, experience, training and other rich business modes of traditional handicrafts, and promotes the division of labor and resource sharing among various related stakeholders, such as inheritors, indigenous people, consumers, government, enterprises, universities and non-profit organizations. To adjust the structure of cultural industries,

optimize and integrate resources, create richer industrial formats, and stimulate the diversification, digitization, networking and intelligence of creative products. Promote the integration of traditional handicraft culture into the transformation and upgrading of traditional industries such as publishing and distribution, film and television production, arts and crafts, printing and reproduction, advertising services, and cultural entertainment. Encourage the integration of traditional industries such as performance, entertainment, and art exhibitions online and offline. New links, chains, and activities are derived from existing industries, while responding to diversified and personalized product or service needs to create new industries, new business models, and new modes (Figure 23).

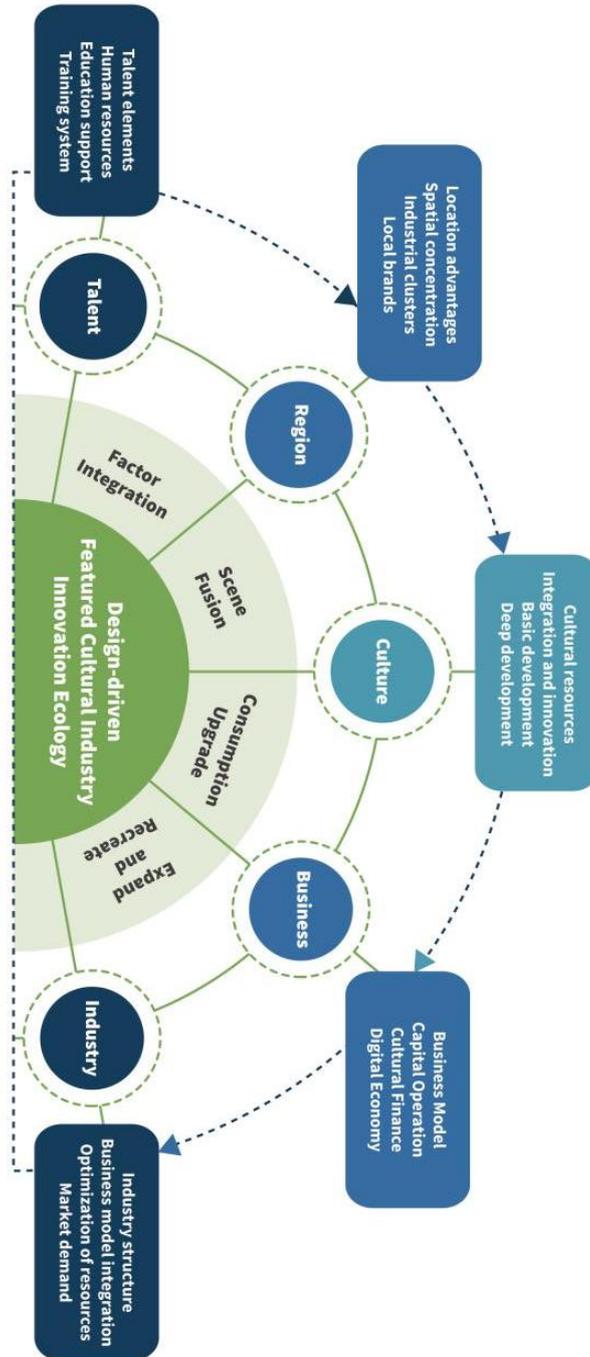


Figure 23. Design-driven innovation ecology of featured cultural industry

Talent: Gathering superior talent resources
Region: Build cultural industry innovation cluster
Culture: Establishing a public service platform for culture
Business: Innovate the whole value chain business model
Industry: Drive diversified industry integration

6.3.3 Expression: Public Service and Cultural Confidence

In the international context of multipolarization of the world, economic globalization, cultural diversification, and in-depth development of social informatization, traditional handicrafts are faced with more than the issues of resource collection and preservation, knowledge collection and transmission, and industrial innovation and development. What is more important is to express a cultural ecological picture of reconstructing and reassembling in the process of the encounter between the forces of localization and globalization, and to convey the core values of the traditional culture of a nation.

The transformative power of design language enables the use of digital methods and media convergence in the process of globalized cultural communication, and promotes interaction and protection between the subject of dissemination and the audience. To promote the establishment of a modern communication system that is distributed, resilient and highly flexible from three levels: presentation and media carrier, communication channels and platform construction, and cultural experience and cognitive environment.

(1) Presentation methods and media carriers

Through the participation of design, 3D information system, style migration, mixed reality (MR) technology, real-time rendering, 3D projection and other technologies can bring traditional handicrafts to life and create a sense of immersion for the audience. In the face of globalized cultural competition, design is a cross-media carrier that transcends language and regional differences, which can not only effectively extract and transform local cultural characteristics, but also present regional traditional handicrafts through various expressions and languages, promote cross-media communication and dissemination of handicrafts under interculturalism, and use "localized stories, globalized language" to export the traditional handicrafts of the region.

(2) Communication channels and platform construction

With the popularization of big data, Internet of Things, 5/6/7G mobile Internet, artificial intelligence and other technologies, data collection, content generation and interaction carriers have broken through new orders of magnitude, and information dissemination has become increasingly diversified, personalized, mobile, massive and holographic. In the era of media convergence, the regulatory environment, subject participation, and problematic processes are more intricate and complex. It is necessary to adopt a designed co-regulation method, connect the scattered handicraft inheritance population with society at large by means of digital means and integrated media platforms, continuously promote the construction of external cultural communication networks and new media platforms, and upgrade the existing handicraft communication channels.

(3) *Cultural experience and cognitive environment*

Based on the construction of content presentation and communication channels for regional traditional handicrafts, we also need to create a new cultural experience and cognitive environment through diverse creative design methods.

We should adopt a "segmented" communication strategy and method for different audiences in different countries, use algorithmic content distribution and social chains to implement accurate communication, establish a cross-platform all-media content association and collaboration mechanism, and form a "recentered" distributed communication model to meet the needs of diverse users. This is an inevitable choice to improve the effectiveness of international communication.

According to the above three points, based on the invisible network of globalized dissemination of traditional handicrafts, it is necessary to build a distributed modern dissemination system of "resource-creation-production-dissemination-experience".

We should make full use of new technologies to integrate traditional handicraft cultural resources and couple local society with global socio-economic development patterns in terms of dissemination channels, integration methods and cultural experiences (Figure 24).

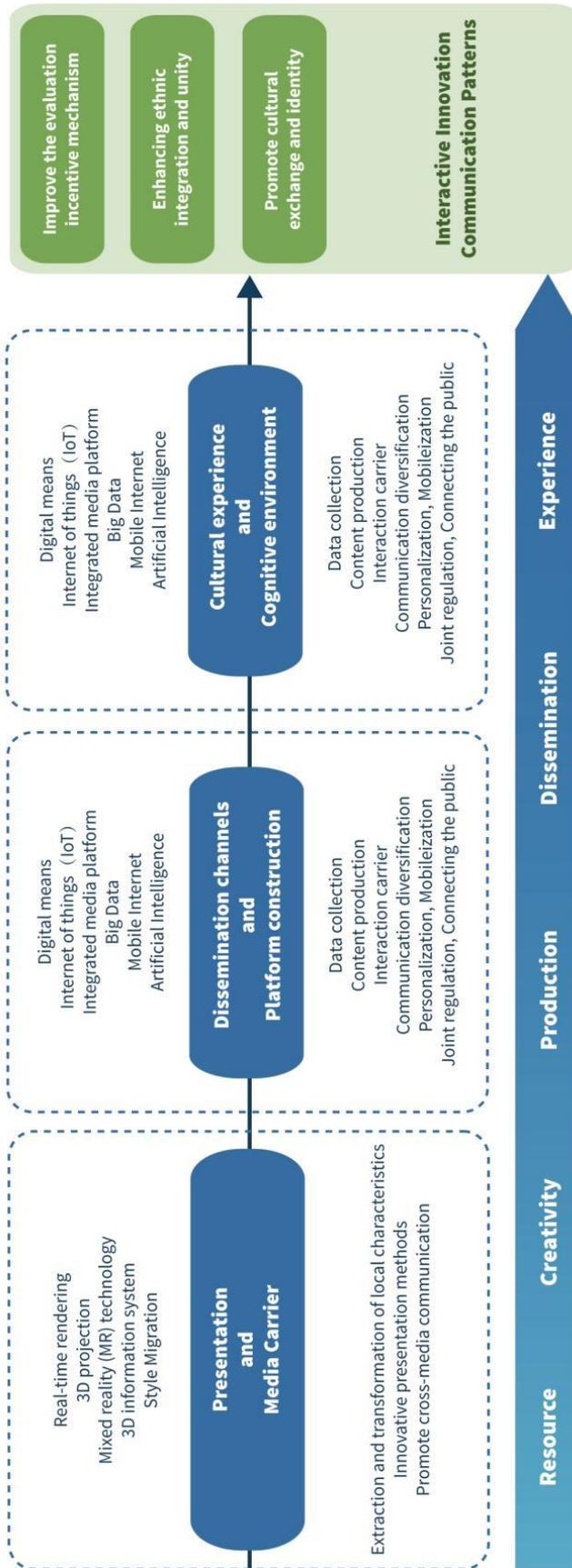


Figure 24. Design-driven system for the distributed dissemination of traditional handicraft

6.3.4 Regeneration: Cultural Capital and Industry Drive

Diverse local knowledge builds a diverse world. In order to achieve the innovation and sustainable development of traditional crafts, it is most important to "return to the local", no matter how rich the cultural form, how many types of industries and how wide the scope of dissemination is. Based on its native cultural ecology, it should tap its endogenous wisdom and power, and drive the revitalization of the region through innovative design. Based on the above-mentioned deconstruction, reconstruction and expression paths, the development path of regional revitalization for regions with rich regional cultural characteristics can be innovative along the following lines:

6.3.4.1 Regional Cultural Innovation Design

Regional cultural resources are the premise and foundation for cultural and creative design, industrial development and regional revitalization, as well as the core of the ecological construction of traditional handicraft innovation and design. Therefore, it is necessary to gradually improve the regional cultural innovation design process and shape a competitive cultural brand, which mainly includes the following four aspects:

(1) Cultural innovation brand

Digitally preserve and intelligently apply traditional handicraft cultural resources with regional characteristics, create personalized cultural and creative products, and build a cultural and creative brand with national influence.

(2) Cultural and Creative Tourism

For the advantageous ecological and cultural resources of each region, create a comprehensive public service platform of intelligent cultural tourism that integrates intelligent cultural tourism management, intelligent cultural tourism services and intelligent cultural tourism marketing, and promote the digitalization and intelligence of the whole process of cultural and creative tourism ecology.

(3) Cultural and creative experience

With the help of virtual reality, three-dimensional projection and other digital multimedia technologies, form an innovative approach to experience under the integration of cultural forms, and provide immersive, all-round and multi-angle regional cultural experience.

(4) Cultural and Creative Communication

Focusing on the display, protection, inheritance, and trade of regional cultural resources, it creates an integrated cultural and creative digital display and dissemination platform covering science and technology, education, tourism, and other fields.

6.3.4.2 Transformation and Upgrading of Traditional Enterprises

(1) Transformation to technology-based cultural industry:

For the traditional cultural industry, it is necessary to actively introduce new technologies to promote the digitalization and intelligence of the whole process of "content production - content

presentation-interactive participation-service management" and transform into a technology-based cultural industry. Take the film and media industry as an example. First, strengthen the synergistic innovation of technical equipment and content creation, and deeply apply the latest technological achievements in interactive entertainment engines, interactive film and television, etc.; second, explore the value of local IP, cultivate a number of digital cultural products, enterprises and platforms, and form a digital content industry chain; third, cultivate cultural content creation brands, and create a matrix of IP landmark products with strong regional characteristics.

(2) Transformation to culture-based science and technology industries:

For technology-based industries, they need to give full play to their technological advantages and combine them with the value-led role of culture to create a new cultural dissemination and service model linked to the whole industry chain. Build a public digital cultural service platform, coordinate and integrate cultural sharing projects and digital library promotion projects, and explore the provision of one-stop, multi-terminal and interactive public digital cultural services. Strengthen digital content copyright protection, help digital culture enterprises innovate in copyright development, protection, trading and application, promote digital book planning, production, dissemination and trading, and promote the comprehensive upgrade of the cultural consumption industry chain through the participation of creative design.

6.3.4.3 Innovation factors support

(1) Science and technology support.

Science and technology is the strongest driving force and support for innovation, need to strengthen ICT (information and communication technology) infrastructure construction, promote the deep integration of science and technology and industrial development, encourage the establishment of technology innovation service centers, strengthen the joint innovation platform of industry, academia and research, and promote the transformation of scientific and technological achievements and industrialization.

(2) Financial support.

Further broaden investment and financing channels and areas, encourage financial institutions to innovate financial products and services, innovative ICH loans, copyright union loans, film and television production loans, trademark pledge loans and other financial products to enhance the scale and efficiency of enterprise financing, to create a financial product service product system that better meets the needs of local enterprises.

(3) Talent support.

Innovative talent introduction mechanism, improve the policy of talent introduction, training, assessment, incentive and service guarantee, adopt entrusted training, base co-construction, enterprise participation in education, professional co-construction, etc., to provide local targeted digital culture, software research and development, creative design and other professional high-end talents.

6.3.4.4 Cultural service system

(1) Industrial integration.

Comprehensive industrial development prospects and the long-term goal of building an integrated ecology, adjusting and optimizing traditional cultural industries, cultivating and developing new cultural industries, encouraging inter-enterprise cooperation and "industry- academia- research- application" cooperation in the integration of culture and technology, and promoting the transformation of innovative achievements into the ground.

(2) Re-branding.

Encourage enterprises to expand their business boundaries, develop digital cultural content production and new cultural and creative industries, and use cutting-edge design ideas and expressions to shape national cultural brands with wide influence and an eye on the future.

(3) Consumption upgrade.

Through the participation of new manufacturing technologies, we will improve and optimize the production process and realize the "technological value-added" of cultural and creative products; Through design that goes deep into the roots of culture and combines with the needs of modern society, we can create a branded and systematic product group and realize the "design value-added" of cultural and creative products.

(4) Scene fusion..

Based on more segmented, more scenes and more channels of the consumer market, we can expand the application scope of the outstanding achievements of the distinctive cultural industry, create a differentiated competitive advantage, and achieve the effect of "cross-scene" and "scene integration" in the whole area of communication.

In summary, the above innovative design methods together form the "One, Two, Three, Four" regional revitalization of traditional handicraft design path, and show a gradual expansion of the trend (Figure 25).

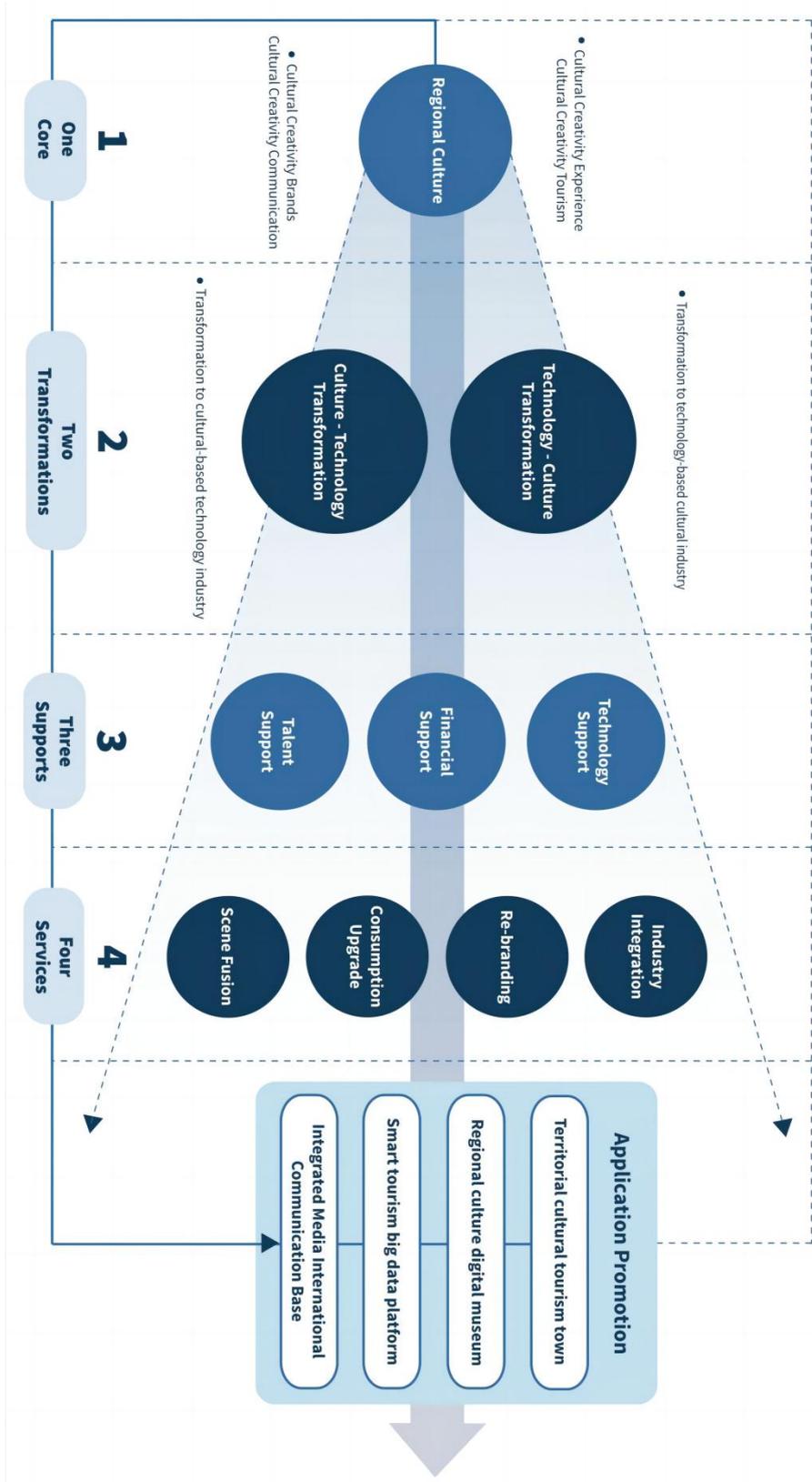


Figure 25. Design path for regional revitalization

6.3.5 Summary

In this section, through the design thinking method, the digital design innovation method system of "Deconstruction-Reconstruction-Expression-Regeneration" is constructed based on the cultural ecosystem of handicrafts and the core value of regional traditional handicrafts (Figure 26).

Firstly, it sorted out the evolutionary relationship from cultural ecology to innovation design method system, including the progressive relationship of ecological development, the corresponding relationship of innovation elements and the consistent relationship of organizational characteristics; Secondly, various innovation elements and methods are integrated and analyzed, and a "deconstruction-industrial transformation-global communication-revitalization" innovation path is constructed throughout the whole process of "cultural resources-industrial transformation-global communication-revitalization". -Reconstruction - Expression - Regeneration" innovation path. Through the methods of design translation, digital design drive, design language and design path, it promotes the innovative development of traditional handicrafts.

The discussion includes how to deconstruct the cultural resources of traditional handicrafts into creative knowledge, how to promote the innovation of special cultural industries through the reconstruction of design, how to promote the global communication and exchange of traditional handicrafts through digital design language, and how to feed local communities through the revitalization of the region with the participation of design, which constitute the "symbiotic" innovative design ecology of regional traditional handicrafts.

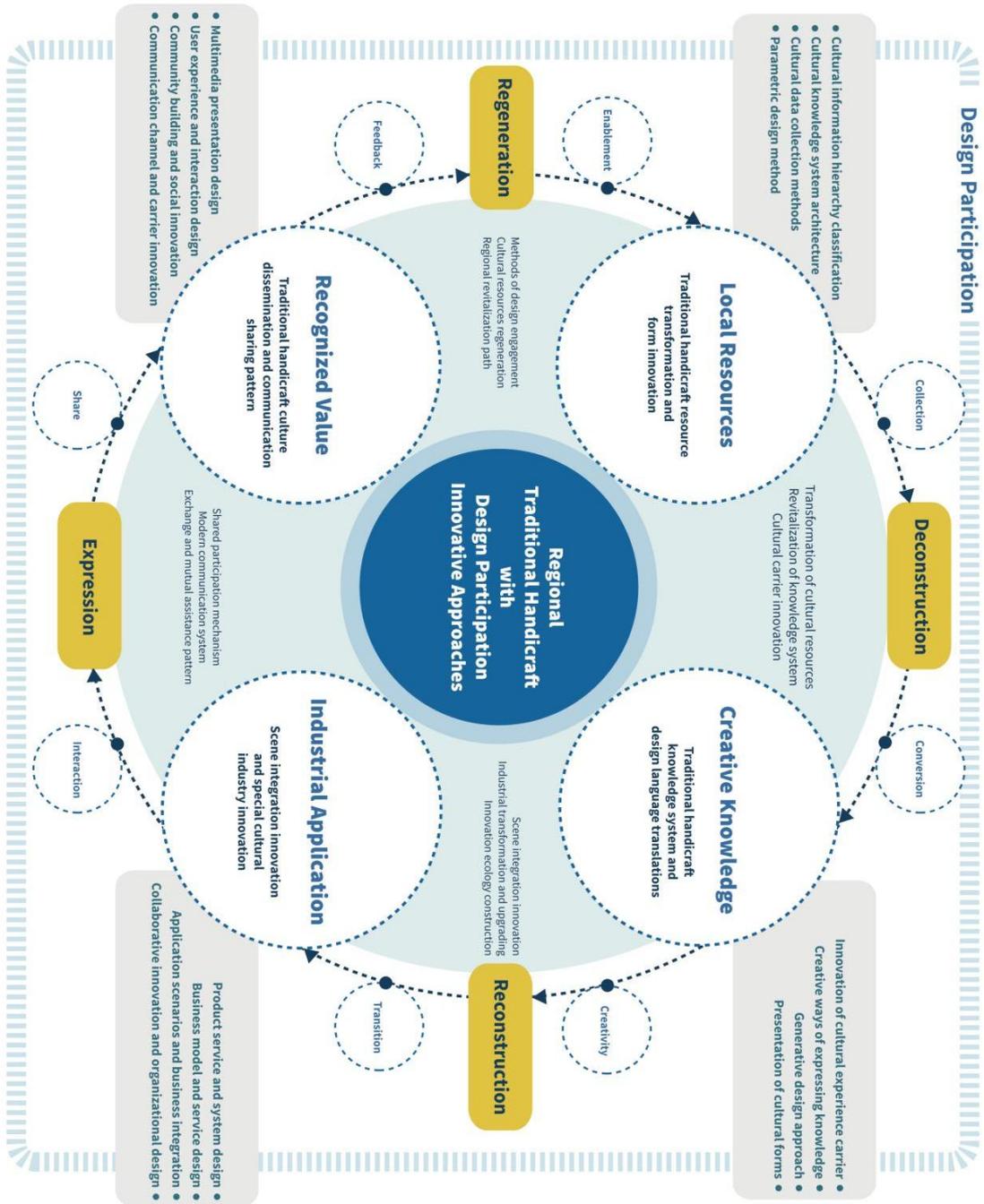


Figure 26. Traditional handicraft "Symbiosis" innovation design system

PART

V

Conclusion

&

Prospect

Conclusion and Prospect

As one of the most universal and far-reaching modes of production of human beings, handicrafts have shaped the splendid cultures of different countries and nations in the long history. However, under the impact of modern civilization, this creative power gradually sinks to the bottom of the riverbed of civilization, and more and more traditional handicrafts are included in the ranks of intangible cultural heritage, which cruelly points out the weakness and helplessness of handicraft its own regenerative capacity.

At the same time of global economic integration, culture needs to be nationalized and localized even more. Although traditional handicraft is a product of ancient civilization, as a social and cultural gene, it has penetrated into the modern information society, and it is a tangible national cultural resource and an intangible human spiritual wealth.

The reinvention of tradition is an intricate process, and the close connection between culture and social change is an important reason for cultural transformation. According to Daniel Bell's assertion, the advent of post-industrial society ^[1] is an inevitable trend of historical development, which does not change according to the different social forms. In the face of the more powerful technological challenges of contemporary post-industrial society, it is obvious that the way traditional handicrafts play modern civilization with technology is no longer a rational strategy for their continuity and development. For traditional handicrafts, if they change their thinking about the game and do not substitute their habitual technical game into the post-industrial society with informationization, intelligence and personalization, then the post-industrial society will not only provide challenges but also opportunities.

Under the multidimensional reconstruction of social transformation, design constantly changes its role to resonate and innovate with traditional handicrafts. The multiple paths of design

^[1] Daniel Bell is regarded as one of the most reputable and influential thinkers in the contemporary social sciences. In 1973, Daniel published "The Coming of Post-Industrial Society", in which he divided society into pre-industrial, industrial and post-industrial based on industrial society as a watershed. He explained: "The concept of post-industrial society is a social projection of the changing social structure of Western society. One of the major problems of post-industrial society is the development of an appropriate infrastructure for the development of a computerized communication network of digital information that will link post-industrial society information, intelligent, miniaturized and individualized production organization replaces the industrial mass production approach and becomes mainstream. "It will be a 'service society', an 'information society', and a 'knowledge society'"; "The post-industrial society is no longer characterized by the labor theory of value, but by the knowledge theory of value".

participation explore the multimodal heritage, cross-cultural communication and intelligent innovation of traditional handicrafts. In the process of "integration" and "symbiosis" of traditional handicraft protection and innovation, this study considers the core values of traditional handicrafts from an integrated, systematic and dynamic perspective, and proposes the elements and components of the cultural industry of regional traditional handicrafts. The study proposes the elements and components of regional traditional handicraft cultural industry and constructs a design-involved traditional handicraft innovation system, which provides new ideas, methods and perspectives for the sustainable development of regional revitalization.

The main innovative points of this study are:

1 Propose the transformation significance of the contemporary value of traditional handicraft

With more pursuit of spirituality in post-industrial society, diversified consumer aesthetics in mass consumption culture, and diversified needs of contemporary culture all provide new opportunities for traditional handicrafts. The reinterpreted contemporary traditional handicrafts (material value + cultural value + spiritual value + aesthetic value) have become a special way to alleviate contemporary social problems by paying attention to life, promoting individuality, respecting symbiosis with nature, and identifying with cultural differences and other characters.

2 Propose the scientific theory of "Symbiosis" - Cluster effect

By introducing the theory of "Regional Circular and Ecological Sphere", this study explores the regional revitalization practices of traditional handicrafts in different countries, and takes Chinese traditional handicrafts as a case study to explore its production organization mode and production, supply and marketing system. After comparing the industrial research of "ceramics" in Italy (FANEZA) and China (YUZHOU), this study has refined the scientific theory of "symbiosis" of clusterization. This idea of breaking through geographical limitations, highlighting local characteristics, and concentrating production, creates a local virtuous circle and promotes comprehensive environmental, economic and social improvement. This is reflected in :

- A. Shared historical and cultural traditions, diverse local cultural knowledge base, etc. form the industrial atmosphere for the development of regional traditional handicrafts;
- B. The different roles played by diverse fields in technical knowledge enhancement, knowledge dissemination and exchange, knowledge spillover and interactive imitation innovation, etc., which jointly promote the innovation of handicraft industry clusters;
- C. The development strategy of clustering has changed the problems in the scattered production layout, inconvenient organization, environmental governance and social marginality of intangible cultural heritage such as traditional handicrafts.

3 Build a "Symbiosis" innovation development relationship network

The cluster effect has a good innovation atmosphere and good innovation encouragement policies, which promote mutual trust and cooperation among network subjects, a high degree of sharing of resources such as information and knowledge, a smooth flow in the network, and a prominent positive externality effect, which can improve the innovation and sustainable development ability of the whole cluster. This study constructs a "symbiosis" relationship network of regional traditional handicrafts, which is reflected in the following aspects:

A. Proposed a cultural ecology of traditional handicrafts consisting of "two layers and eight elements". The "two layers" refer to the ontology and environment layer, and the "eight elements" refer to the subject (multiple subjects and collaboration mechanism), technology (technology application and production method), representation (cultural form and social function), spatial (ecological environment and cultural space) and politics (macro environment and policy guidance), capital (cultural finance and market operation), industry (market demand and industry integration), and service (cultural service and talent training). The first four elements constitute the ontology layer and the last four elements constitute the environment layer. In addition, the dynamic and cyclical relationship between the above elements, the multifaceted and complex characteristics, and the elastic and expanding development trend are proposed.

B. Build an innovative design ecology of traditional handicrafts with digitalization and design participation. Based on the circular path of "deconstruction- reconstruction- expression- regeneration", this study constructs an innovative design ecosystem for traditional handicrafts in the region that runs through the whole process of "cultural resources- industrial transformation- global dissemination- revitalization". The "deconstruction" refers to the diversification of cultural forms and social functions; "Reconstruction" refers to the construction of cultural space with the participation of multiple subjects; "Expression" refers to public service and cultural confidence; "Regeneration" refers to cultural capital and industrial drive.

With the participation and transformation of design, the development elements of regional traditional handicrafts together constitute the cultural innovation ecosystem of "handicraft production ecology - industrial transformation ecology - digital intelligence ecology". Looking into the future, under the continuous reconstruction of the socio-technical system, the innovation of traditional handicrafts presents a new ecology including digital artisans, cultural creators, scene innovation and sensory integration.

In the context of positive interaction between regions (urban, rural and remote areas), traditional handicrafts are also undergoing great changes in terms of social, historical and aesthetic values, and the design is capable of integrating technological, social and industrial innovation elements to achieve regional revitalization and sustainable development through the medium of traditional handicrafts.

However, there are still some shortcomings in this study:

Firstly, the framework of this study has a large scope, and with limited content and research efforts, the study of specific industries is only related to China and Italy, and there is a lack of fieldwork for more countries;

Secondly, the logical relationship between the ontology and the environment is not clear enough in the construction of the "symbiosis" system, especially in the operation mechanism and the future development path, which needs to be further supplemented;

Thirdly, the conclusions are not sufficiently substantiated, and assessment tools and scientific methods should be used to verify the actuality and rigor of the conclusions;

Fourth, the structure of the argument can be more complete, and the universality and impact of the "symbiosis" innovation development system could be expanded through richer practical experience.

ACKNOWLEDGEMENTS

The road to knowledge is never-ending, and in the 4 years of study, I always have a grateful heart, remembering all the people who gave me help.

First of all, I would like to thank my supervisor Prof. Carlo Vannicola, for his long-time teaching, constant guidance in the selection of thesis topic, structure, writing, trust and support in my research activities. Prof. Vannicola not only has a keen and forward-looking academic insight and a broad intellectual vision, but also always gives me a lot of help and kindness, so that I could learn in an equal and open sharing experience; Thanks to Prof. Cao Yang in China for his encouragement when I encountered bottlenecks in my writing and for his advice on academic orientation; I would also like to express my gratitude to Prof. Lucia Pietroni, Prof. Carlo Vinti and other professors for their guidance and assistance in my study and research, which not only inspired me with many valuable scientific research methodologies, but also broadened my research horizons.

Secondly, I would like to thank Cristina Soave, Daniele Quadrani, and many other people in charge of the office of School of Advanced Studies; My colleagues Manuel Scortichini, Enrica Lovaglio, Francesca Fontana and others; My Italian teachers Eleonora Zanotti and Jessica Falcioni; As well as my friends in Italy. He/she has always been patient, warm and kind, and has always given me great help and support in my life and studies in a foreign country.

Last but not least, I am very grateful to my family for giving me unreserved care, understanding and love all the time in the midst of my heavy work and study.

Whether at that time or at this moment, I could feel the power of even a small drop of warmth when life is difficult; Thanks to the years, those puzzling and difficult experiences in the constant collision, so that I once again see the true face of Love.

ACTIVITIES AND PUBLICATIONS

Activities

As speaker :

Seminar Program PhD Research Talks | Dottorandi SAAD ; April 22, 2021

Seminar UNICAM-ZZULI: Build Research Bridges (International) ; March 30, 2021 to April 1, 2021

As participant :

Seminar Phd Research Talks | Dottorandi SAAD ; October 15, 2020 to June 3, 2021

International Conference on 2021 ZZULI_ User Experience Design International Forum ; November 6 , 2021

S.A.F.E. Design sostenibile di sistemi di arredo intelligenti con funzione salva-vita durante eventi sismici; 1 November 12, 2021

Symbiosis·Leading·Green Sustainable Design International Academic Conference ; November 26-27,2021

I Diversi Approcci della Ricerca: Teorico - Metodologica, Applicata e Industriale; May 09, 2022

Riccardo Morandi e il ponte di Genova ; July 06, 2022

Conoscenza Progetto Governance : Metodi e Strumenti Innovativi per Rigenerare le Fragilita Territoriali ; October 07, 2022

#1 Ghost \ Compasso d'oro alla carriera del prodotto, I incontro del ciclo: I protagonisti della XXVII edizione del premio Compasso d'oro ADI ; October 14, 2022

#2 Ordine \ Compasso d'oro, I incontro del ciclo: I protagonisti della XXVII edizione del premio Compasso d'oro ADI ; October 21, 2022

International Multiplier Event EDUSCAPE Project_ Landscape and Climate Change Adaptation in Education ; November 03, 2022

Thematic courses

Science communication against rising infodemic ; February 23, 2021

English for scientific purposes - scientific writing ; February 23, 2021 to February 26, 2021

Creative Thinking and Innovation ; February 23, 2021 to February 26, 2021

Digital tools for design research ; May 18 , 2021 to June 22 , 2021

Writing a Grant Proposal ; February 15, 2022

Project evaluation processes in the frame of European Commission R&I funding programmes ; February 16, 2022

Intellectual Property and Impact of Research ; February 17, 2022

Blockchain: intro and applications ; February 18, 2022

Open science ; February 18, 2022

Scientific Research Methodology for Advanced Design ; March 19 , 2022 to June 07 , 2022

Visual arts in contemporary Architecture, Design and Landscape ; May 13, 2022 to June 04 , 2022

Architects and Architectural Photography ; March 22, 2023 to June, 2023

Training Course: UNICAM Corso di Formazione Generale sulla Sicurezza per i Lavoratori - 4 ore
- A.A. 2021/2022; October 11, 2022

PUBLICATIONS

Y.Fu ; Digital Development of Intangible Cultural Heritage Based on XR Technology: New Tools for Sustainable Development of Traditional Handicraft; X International Congress of the Italian Association of Urban History AISU, Torino, 2022.

Y.Fu ; Analysis of the Transmission and Development of Traditional Handicrafts in Intangible Cultural Heritage. Francis Academic Press, Frontiers in Art Research, ISSN:2618-1568. 2023.

Y.Fu ; Reflections on the Digital Protection and Dissemination of Traditional Ceramic Handicrafts of Non-Foreign Heritage. Clausius Scientific Press (CSP), Art and Performance Letters , ISSN:2523-5877. 2023.

CONSOLIDATED LIST OF REFERENCES

- Acbean,A. (2004). *Tangible and Intangible Heritage: from difference to convergence of the Intangible Culture heritage*. Museum International, 56(01-02), p12-20.
- Amin,A.,& Thrift,N. (1992). *Neo-Marshallian nodes in global networks*. International Journal of Urban and Regional Research, (16), p571-587.
- Barker,C. (2004). *The Sage dictionary of cultural studies*. Sage.
- Bathelt,H. (2002). *The reemergence of a media industry cluster in Leipzig*. European Planning Studies, 10(05), p583-611.
- Bathelt,H.,& Malmberg,A.,& Maskell,P. (2001). *Clusters and knowledge:Local buzz,global pipelines and the process of knowledge creation*. Progress in Human Geography, 28(01), p31-56.
- Becattini,G. (1990). *The Marshallian industrial district as a socio-economic notion*. Geneva:Internationalinstitute for labour studies, p31-57.
- Beck,U.,& Giddens,A.,& Lash,A. (2001). *Reflexive Modernization Politics, Tradition and Aesthetics in the Modern Social Order*. Stanford University Press, p72.
- Bell,D. (1984). *The Coming of Post-Industrial Society*. Translated by Gao,P.,& Wang,H.Z. The Commercial Press, p131.
- Berman,M. (2003). *All that is solid melts into air - The experience of modernity*. Translated by Xu,D.J and Zhang,S. Beijing: The Commercial Press, p15.
- Blake,J. (2000). *On defining the cultural heritage*. The International and Comparative Law Quarterly, 49(01), p61-85.
- Boehnert,J. (2018). *Design, ecology, politics: Towards the ecocene*. Bloomsbury Publishing.
- Brown,T.,& Wyatt,J. (2010). *Design thinking for social innovation*. Development Outreach, 12(01), p29-43.
- Ceschin,F.,& Gaziulusoy,I. (2016). *Evolution of design for sustainability: From product design to design for system innovations and transitions*. Design studies, 47, p118-163.
- Chen,M. (2021). *Research on the dissemination of intangible cultural heritage in the Central Plains of the Yellow River Basin in the new media environment*. Zhengzhou University.
- China Jun Porcelain Yearbook Compilation Committee, Yuzhou Local History Compilation Committee. (2009). *Chinese Jun porcelain yearbook*. Zhengzhou: Henan Fine Arts Publishing House, p57.
- Chinese Silicate Society. (1982). *History of Chinese Ceramics*. Beijing: Heritage Press, p294.
- Chinese Silicate Society. (2009). *History of Chinese ancient ceramics*. Beijing: Cultural Relics Press.

- Cominelli,F.,& Greffe,X. (2012). *Intangible cultural heritage: Safeguarding for creativity*. City, Culture and Society, 3(04), p245-250.
- Cooper,R.,& Conroy,E.J. (2019). *Measuring speech development in infants: methodological considerations based on experiences within the TOPS trial*. Trials, 20.
- Cui,J.M. (2013). *How to Avoid the Destruction of Intangible Cultural Heritage*. Technology and Enterprise,02.
- Cunningham,S.D. (2002). *From cultural to creative industries: Theory, industry, and policy implications*. Media International Australia. Incorporating Culture&Policy,102(102), p54-65.
- Dillon,P. (2001). *Cultural Niche and the Contexts of Craft, Design and Fine Art*. Design Journal, (11).
- Dillon,P. (2010). *Crafts and Craft Education as Expressions of Cultural Heritage*. International Journal of Technology and Design Education, (04).
- Dillon,P. (2012). *Framing craft practice cultural ecologically: Tradition, change and emerging agendas// M. Ferris (ed.), Making Futures: The Crafts as Change-maker in Sustainable Aware Cultures*. Plymouth College of Arts.
- Dixon,S. (2015). *Digital performance: a history of new media in theater, dance, performance art, and installation*. MIT press.
- Du,Gay.P.,& Hall,S.,& Janes,L. (2013). *Doing cultural studies: The story of the Sony Walkman*. Sage.
- Etterlinger,N. (2003). *Cultural economic geography and a relational and microspace approach to trusts,rationality. networks, and change in collaborative workplaces*. Journal of economic geography, (03), p145-171.
- Eyferth,J. (2010). *Craft knowledge between writing and oral culture: An exploration of knowledge relations in paper making in Jiajiang* . Translated by Hu,D.W. Journal of Southwest University for Nationalities, Humanities and Social Sciences, p35.
- Fang, L.L. (2008). *Heritage, Practice and Experience*. Yunnan Education Publishing House.
- Fang,Y.M. (2014). *2013 Top Five New Archaeological Discoveries in Henan Province*. Huaxia Archaeology, (02).
- Featherstone,M. (2000). *Consumer Culture and Postmodernism*. Nanjing: Jilin Publishing House.
- Fei,X.T. (1939/2001). *The Economy of Jiangcun*. Translated by Dai,K.J. Beijing: The Commercial Press, p20.
- Ferrer,J.B.,& Negny,S. (2012). *Eco-innovative design method for process engineering*. Computers & Chemical Engineering, 45, p137-151.
- Firebaugh,G. (1997). *Development sociology as we approach the 21st century*. International journal of sociology and social policy.
- Florida,R. (2002). *The Rise of the Creative Class*. Washington Monthly, 35(05), p593-596.
- Foucault,M. (2013). *Archaeology of knowledge*. Routledge.
- Fukumori,T.,& Nishiura,T.,& Yamashita,Y. (2012). *Digital Archive for Japanese Intangible*

Cultural Heritage Based on Reproduction of High-Fidelity Sound Field in Yamahoko Parade of Gion Festival. Yoichi, (03), p22-25

Gao,L. (2018). *The research of crisis of traditional crafts and cultural transformation*. Xi'an Academy of Fine Arts.

Ge,Z.M. (2010). *An Analysis of the Art of Decorative Pillow Decoration with Black Flowers on a White Ground at Pacun Kiln in Xuchang*. Central Plains Cultural Relics, no.05, p05.

Grossberg,L.,& Liu,K. (2007). *The Context of the Critical Moment: A Dialogue on Cultural Studies*. Journal of Nanjing University (Philosophy - Humanities - Social Sciences), 44(03), p75-81.

Gu, L.S., (1990,01). *Theory and Practice of the Reform of China's Handicraft Industry*. Research on the History of the Communist Party of China.

Gumus-Ciftci,H.,& Walker,S. (2017). *Design for grassroots production in Eastern Turkey through the revival of traditional handicrafts*. The Design Journal, 20(sup1): S2991-S3004.

Han,S. (2021). *Italy keeps traditional crafts alive*. China Small & Medium Enterprises, (01), p65-66.

Harris,M. (2001). *The rise of anthropological theory: A history of theories of culture*. Alta Mira Press.

Holden,J. (2005). *Valuing culture in the South East*. London:Demos Report.

Hoover,E.M. (1990). *Introduction to regional economics*. Beijing: Commercial Printing House.

Hospers,G.J. (2003). *Creative Cities: Breeding Places in the Knowledge Economy*. Knowledge,Technology and policy, 16(03), p143- 162.

Hu,L. (2008). *Research on the demand and behavior characteristics of shopping tourism - taking mainland shoppers to Hong Kong as an example*. Jiangxi Social Science, (07).

Irwin,T. (2015). *Transition design: A proposal for a new area of design practice, study, and research*. Design and Culture, 7(02), p229-246.

Irwin,T.,& Kossoff,G.,& Tonkinwise,C. (2015). *Transition design provocation*. Design Philosophy Papers, 13(01), p3-11.

Jakob,D.,& Thomas,N.J. (2017). *Firing up craftcapital: the renaissance of craft and craft policy in the United Kingdom*. International Journal of Cultural Policy, Volume23, Issue 4.

Jin,Q.W. (2002). *On a piece of Jun porcelain in Song Emperor Huizong's "Listening to the Qin" - and some controversies about the "Listening to the Qin"*. Journal of Zhangzhou Normal College (Philosophy and Social Science Edition), (03), p56.

Jung,J.,& Walker,S.,& Evans,M. (2016). *Design routes and creative ecology: understanding culturally significant designs, products and practices*. Making Futures, 04.

Kang,B.C. (2012). *Chinese Intangible Cultural Heritage Protection Development Report (2012)*. Social Science Literature Press, p256.

Kapchan,D. (2014). *Cultural heritage in transit: intangible rights as human rights*. University of Pennsylvania Press.

- Kirshenblatt-Gimblett, B. (2004). *Intangible heritage as meta cultural production*. Museum international, 56(01-02), p52-65.
- Knudsen, B., & Florida, R. (2007, 05). *Urban density, creativity, and innovation*.
- Koslowski. (2011). *Postmodern Culture - The Socio-Cultural Consequences of Technological Development*. Mao, Y.H. Central Translation and Publishing House.
- Kurin, R. (2004). *Safeguarding Intangible Cultural Heritage in the 2003 UNESCO Convention: a critical appraisal*. Museum international, 56(01-02), p66-77.
- lake, J. (2000). *On defining the cultural heritage*. The International and Comparative Law Quarterly, p61-85.
- Landriani, L., & Pozzoli, M. (2013). *Management and valuation of heritage assets: a comparative analysis between Italy and USA*. Springer Science & Business Media.
- Landry, C. (2008). *The Creative City: A Tool kit for Urban Innovators (2nd edition)*. London: Earth scan Publications Ltd.
- Larkham, P.J., & Ashworth, G.J. (1994). *Building a new heritage: tourism, culture and identity in the new Europe*. Routledge. London and New York.
- Lash, S., & Lury, C. (2007). *Global culture industry: The mediation of things*. Polity Press.
- Lefebvre, H., & Nicholson-Smith, D. (1991). *The production of space*. Blackwell: Oxford.
- Leidner, D.E., & Kayworth, T. (2006). *A review of culture in information systems research: Toward a theory of information technology culture conflict*. MIS quarterly, p357-399.
- Lenzerini, F. (2011). *Intangible cultural heritage: The living culture of peoples*. European Journal of International Law, 22(01), p101-120.
- Li, G.P. (2019). *Balanced, compact and networked national land spatial planning: Japan's practice and implications*, 41(09), p1610-1618.
- Li, G.Q. (1999). *Social Change in Rural Japan: A Survey of Fujimi Town*. China Social Science Publishing House, Beijing, p193.
- Li, G.Q. (2018). *Japan's Local Environmental Revitalization: The Theory and Practice of the Eco-system of Recycling Symbiosis*. Japanese Studies, (05), p142-158.
- Li, H., & Wu, X.Y. (2022). *A review of international ethnic tourism research*. Journal of Chinese Ecotourism, 12(06), p993-1006.
- Li, J.D. (2013). *The Regulation of Compounding: Exploring the Regulatory Model in the Age of Media Integration*. International Journalism, 35(07), p126-133.
- Li, L.L. (2010). *The progress of cultural and economic geography and the proposal of "project network geography"*. Human Geography, 25(02), p1-7.
- Li, S.H. (2008). *Reiterating Tradition: A Comparative Study on The Holistic Philosophy of Technology*. Chinese Philosophy of Technology and STS Research Series, p12.
- Li, S.T. (2005). *Research on the Protection and Development Model of the Famous Historical and Cultural Towns of Henan*. Zhengzhou University.
- Li, W.F., & Wang, R.Z. (2005). *Creative Industries - A New Engine for Urban Development*.

Shanghai: Shanghai Academy of Social Sciences Press.

Li,W.W. (2006). *Introduction to Creative Industries*. Shanghai Xuelin Publishing House, p57.

Li,X. (2008). *Intangible cultural heritage: an important cultural capital for cultural industry development*. Guangxi Ethnic Studies, (03), p164-167.

Li,X.C.,& Zhu,X. (2005). *Yunnan Ethnic Folk Craft Technology*. Beijing: China Book Press.

Li,X.X.,& Miao,C.H. (2016). *Research on informal learning mechanism of arts and crafts industry clusters in China's agricultural areas-Example of Shenhou Jun porcelain industry cluster*. Journal of Henan University (Natural Science Edition), 46(02), p158-166.

Li,Y. (2014). *Study on the Chinese Communist Party and the Protection and Development of Traditional Culture of Ethnic Minorities*. Beijing: People's Publishing House, p693.

Li,Y.J. (2023). *Research on the protection and inheritance of Henan ceramic firing techniques based on intangible cultural heritage*. Foshan Ceramics, 33(01), p144-146.

Liu,C.Q. (2009). *Research on industrial agglomeration and agglomeration economy based on externality*. Shanghai Economic Research, 03, p99-105.

Liu,J.F. (2005). *Cultural Industry Studies*. Beijing: Economic Management Press, p01.

Lucie-Smith,E. (2013). *The story of craft: the craftsman's role in society*. Translated by Chun,Z.,& Ping,C. China Academy of Art Press, p249.

Lv,P.T. (2009). *Preservation and Development in Production - Talking about the Preservation of Traditional Handicrafts in a Productive Way*. Art Observation, No. 7.

Madden,M.,& Shipley,R. (2012). *An analysis of the literature at the nexus of heritage, tourism, and local economic development*. Journal of Heritage Tourism, 07(07) p103-112.

Malinowski,B. (1922). *Ethnology and the Study of Society*. Economica, (06), p208-219.

Manzini,E.,& Vezzoli,C.A.,& Clark,G. (2001). *Product-Service System: Using on Existing Concept as a New Approach to Sustainability*. Inder Science, p27-40.

Marshall,A. (1991). *Principles of economics*. Beijing:The Commercial Press.

Mater Ceramica. (2019). *La ceramica artistica in Italia. Imprese, luoghi, scenari e prospettive*. AiCC-Artex, International University, Venezia.

Mc Gaughey,W. (2000). *Five epochs of civilization: world history as emerging in five civilizations*. Thistle rose Publications.

Mizzau,L.,& Montanari,F. (2008). *Cultural districts and the challenge of authenticity:The case of Piedmont,Italy*. Journal of Economic Geography, 08(05), p651-673.

Murray,R.,& Caulier-Grice,J.,& Mulgan,G. (2010). *The open book of social innovation*. London: Nesta.

Nachum,L.,& Keeble,D. (2003). *Clusters and global networks:the linkages of media firms in Central London*. Long Range Planning, 36, p459-480.

Nettleford,R. (2004). *Migration,Transmission and Maintenance of the Intangible Heritage*. Museum International, 56(01-02), p78-83.

- Nimkulrat,N.,& Kane,F.,& Walton,K. (2016). *Crafting textiles in the digital age*. Bloomsbury Publishing.
- Odachi,T.,& Hashiguchi,T. (2018). *Endogenous Rural Development Theory: Theory and Practice*. Tokyo: Agricultural and Forestry Statistics Publishing.
- Pan,J.H. (2015). *Rethinking the Economics of Sustainable Development*. People's Daily, (06).
- Papanek,V.,& Fuller,R.B. (1972). *Design for the real world*. London: Thames and Hudson.
- Parsons,T. (2013). *The social system*. Routledge.
- Petronela,T. (2016). *The importance of the intangible cultural heritage in the economy*. Procedia Economics and Finance, 39, p731-736.
- Petronela,T. (2016). *The importance of the intangible cultural heritage in the economy*. Procedia Economics and Finance, (39), p731-736.
- Piore,M.,& Sable,C. (1984). *The second industrial divide*. New York:Basic Brooks.
- Poria,Y.,& Butler,R.,& Airey,D. (2003). The core of heritage tourism. *Annals of Tourism Research*, 30(01), p238-254.
- Pratt,A.C. (2006,10). *Inside and across clusters: production and peer respect networks* .Paper presented tocultural creative spaces conference. Creative spaces conference.Beijing, 19 to 21.
- Pu,Y.G. (2008). *The political interpretation of intangible cultural heritage*. *Journal of Yunnan University for Nationalities (Philosophy and Social Science Edition)*, (01), p31-33.
- Qi,Z.X. (2021). *Research on digital experience design of traditional handicraft in Wuling area from the perspective of rural revitalization*. South-Central Minzu University.
- Qin,J.Y.,& Jia,R. (2020). *Research on the innovative design of artificial intelligence in intangible cultural heritage : cloisonné as an example*. *Packaging Engineering*, (03), p1-6.
- Qiu,C.L. (2011). *Cultural Changes in Chinese Handicrafts*. East West Books, p17.
- Rifkin. (2012). *The Third Industrial Revolution*. Zhang,S.W.,& Sun,Y.N. Beijing: Zhongxin Publishing House.
- Rodzi,N.I.,& Zaki,S.A. (2013). *Between tourism and intangible cultural heritage*. *Procedia-Social and Behavioral Sciences*, 85, p411-420.
- Rogers,R.A. (2006). *From cultural exchange to transculturation: A review and reconceptualization of cultural appropriation*. *Communication Theory*, 16(04), p474-503.
- Saxenian,A. (1994). *Regional advantage: culture and competition in silicon valley and Route 128*. Harvard University Press.
- Schein,E.H. (2010). *Organizational culture and leadership*. John Wiley & Sons.
- Scott,A.J. (1988). *New industrial space*. London:Pion.
- Scott,A.J. (1997). *The cultural economy of cities*. *International Journal of Urban and Regional Research*, 21(02), p323-340.
- Scott,A.J. (2000). *The Cultural Economy of Cities*. London:SAGE Publications, p30-39.

- Scott,A.J. (2004). *Cultural-products industries and urban economic development:Prospects for growth and market contestation in global context*. Urban Affairs Review, 39(04), p461-490.
- Scott,A.J. (2006). *Entrepreneurship, innovation and industrial development:Geography and the creative field revisited*. Small Business Economics, (26), p1-24.
- Sen,W. (2017). *Research on Design Systems and Design Practices Based on Cultural Ecology View*. Hunan University .
- Shi,H.,& Shan,Z. (2007). *Modern Fiber Art Research*. New Art, No. 4, p50-62.
- Song,J.H. (2015). *A few thoughts on the digital preservation of intangible cultural heritage*. Cultural Heritage, (02), p25-26.
- Song,J.X. (2021). *Living Heritage, Empowering the Villages*. China Culture Daily, (03), p8.
- Song,W. (2010). *Functional orientation and industrial selection of industrial cluster -- Reflections on the development of industrial cluster in Henan*. Journal of Pingdingshan College, 10, p97-101.
- Steward,J. (2016). *The Concept and Method of Cultural Ecology*. New York University Press.
- Sun,W.Z. (2008). *Research on Industrial Tourism Development Model*. Shandong University.
- Sutton,M.Q.,& Anderson,E.N. (2020). *Introduction to cultural ecology*. Routledge, 21.
- Tang,X.B. (2005). *Postmodernism and the Theory of Culture*. Beijing: Bejing University Press.
- Teruyuki, T. (2009). *Understanding Environmental Sociology (Yawaraka Academism, Understanding Series)*. Minerva Bookshop, p4.
- Thompson,J.,& Wijesuriya,G. (2018). *From 'Sustaining heritage' to 'Heritage sustaining broader societal wellbeing and benefits'*. World Heritage and Sustainable Development,chapter 12.
- Tian,J. (2013). *Art Production as Collective Action in Sociological Perspective: On Howard Baker's Theory of Art Production*. Art 100, 29(S1), p50-54.
- Tokumi,O. (2013). *New developments in rural area policy in Japan*. Journal of Agricultural and Forestry Issues, (12), p463 - 472.
- Twigger-Holroyd,A.,& Cassidy,T.,& Evans,M. (2017). *Wrestling with tradition: Revitalizing the Orkney chair and other culturally significant crafts*. Design and Culture, 9(03), p283-299.
- Van-Zanten,W. (2004). *Constructing new terminology for intangible cultural heritage*. Museum international, 56(01-02), p36-44.
- Vargas,A. (2018). *The tourism and local development in world heritage context. The case of the Mayan site of Palenque, Mexico*. International Journal of Heritage Studies, 24(09), p984-997.
- Walsh,V.,& Dewdney,A.,& Pringle, E. (2014). *Modelling Cultural Value within New Media Cultures and Networked Participation*. Cultural Value.
- Wang G.C. (1988). *Handmade Carpets*. Shanghai: Guangming Daily Publishing House, p15.
- Wang G.C. (1988). *Handmade Carpets*. Shanghai: Guangming Daily Publishing House, p6.
- Wang,F.M. (2009). *Creative Industry Clusters: An Explanation Based on Knowledge Spillover*. Science and Technology Management Research, (11), p272-274.

- Wang,H. (1998). *Chinese Families and the Spread of Handicraft Culture*. Shandong Social Science, No. 6.
- Wang,S.H.,& Liao,R. (2008). *The protection of intangible cultural heritage from the perspective of industrialization*. Journal of Tongji University (Social Science Edition), 19(1), p107-112.
- Wang,W.,& Bryan-Kinns,N.,& Ji,T. (2016). *Using community engagement to drive co-creation in rural China*. International Journal of Design, p37-52.
- Wang,W.N. (2007). *Research on Location Factors and Regional Organization of Urban Cultural Industries*. Changchun: Northeast Normal University.
- Wang,Y.,& Lin,L. (2017). *The construction of innovation ecosystem of industrial design industry-academia-research collaboration*. Packaging Engineering , (24), p22-29.
- Wang,Y.Y.,& Duan,Y. (2022). *From Heritage to Resources: A Study on the Rural Role of Intangible Cultural Heritage of Traditional Craftsmanship—Guizhou Province as an Example*. Southeast Culture , No. 289.
- Wenting,R. (2008). *The Evolution of a Creative Industry:The industrial dynamics and spatial evolution of the global fashion design industry*. Utrecht City:Utrecht University.
- Wiener,L.W. (1980). *Cultural resources: An Old Asset - A New Market for Tourism*. Journal of Cultural Economics, 4, p 1-7.
- Wu,Q. (2006). *Revitalizing Changzhou traditional handicraft industry with modern industrial design concept*. Nanjing Forestry University, p04.
- Xiang,Y. (2015). *Introduction to Cultural Industries*. Beijing University Press.
- Xin,X.R. (2017). *Network Research of Film Industry in the Perspective of Economic Geography*. Shanghai:East China Normal University.
- Xing,X.,& Xu,C.G. (2022). *Consumption of traditional handicraft fashion: Motivations, intentions and behaviour of Chinese consumer*. Cleaner and Responsible Consumption, Volume 4, (03).
- Xu,G.Z. (2011). *Ceramic Art in Henan*. Henan Fine Arts Press, (08),p2.
- Xu,J.Y. (2018). *Exploration on the Construction of Characteristic Towns in Henan under the Strategy of Rural Revitalization*. Journal of Zhengzhou Municipal Party School of the Communist Party of China, (06), p50-53.
- Xu,Y.Y. (2012). *The role of inheritors in the productive protection of intangible cultural heritage*. Guizhou Social Science, No. 12.
- Xu,Y.Y.,& Dong,J. (2009). *Report on Analysis of the Succession and Development of Chinese Arts and Crafts*. Journal of Nanjing Arts Institute(Fine Arts & Design), (05), p38-40
- Xu,Z.H. (2010). *Yinliuzhai talk porcelain*. Jinan: Shandong Pictorial Press, p29.
- Ye,H.G. (2011). *The Historical Lineage of Chinese Ceramics*. China Ceramic Industry, No.05.
- Ye,J.Z. (2018). *Rural revitalization strategy:history along, general layout and path introspection*. Journal of South China Normal University (Social Science Edition), (2), p64.
- Yoshida,K. (2004). *The Museum and the Intangible Cultural Heritage*. Museum International, 56(01-02), p108-112

- Yu,J.G. (2013). *Research on the Interactive Development of Cultural and Creative Industrial District and Urban Space*. Tianjin University.
- Yu,L. (2022). *Practice and research of design intervention in rural revitalization*. Journal of Taiyuan City Vocational and Technical College, (06), p41-43.
- Zhang,C.,& Zhang,M. (2010). *The path and realization of sustainable development of Chinese traditional ceramic industry*. China Ceramic Industry, (05), p75-77.
- Zhang,D.Y. (1997). *The Present and Future of Chinese National Art*. Art Watch, No.02.
- Zhang,H.T.,& Su,T.H. (2006). *Background Analysis of the Emergence of Creative Industries and Its Implications*. China Soft Science, No.12.
- Zhang,W.M.,& Zhang,Z.M. (2018). *Resource-Participation-Identification: the endogenous development logic and path choice of rural revitalization*. Social Science, (11), p75- 85 .
- Zhang,X.Y. (2016). *Techniques and Imperial Power: a Study on the History of the Imperial Workshops*. University of Science and Technology Beijing, (12).
- Zhao,N. (2011). *The Creation and Inheritance of the Folk Craftsmanship*. Creation and Design, (06), p36-47.
- Zheng,L.L. (2017). *Value Assessment and Conservation Pattern of Cultural and Ecological Protection Areas*. Southeastern University.
- Zhu,G.K. (2003). *Survival of the fittest: The metamorphosis and regeneration of traditional Chinese handicrafts*. Decoration, (04), p04-05.
- Zhu,W.L. (2020). *The connotation and dissemination of the Yellow River culture*. News Lovers, (01), p32-35.
- Zhuge,G.K. (2008). *Reflections on the Intangible Cultural Space of Handicrafts*. Journal of Nanjing Art Institute (Art and Design Edition), (06), p119-123+206.