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Article

Research on the Mechanism Influencing the Sustainable Development of a Contemporary Chinese Artist Village

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Abstract: Contemporary Chinese artist villages (CCAVs) have been developing rapidly and have become an important locus for developing cultural and creative industries, providing a strong pathway for China to achieve high-quality development and promote new urbanization. However, in practice, there are still many CCAVs that struggle with sustainable development. At present, the academic research on CCAVs mainly focuses on demonstrating the role of artist villages in promoting development in economic, social, artistic, and other fields without forming a systematic, sustainable development model or targeted policy recommendations. Therefore, the CCAV must be taken as a research object, and the influencing factors and mechanisms of its development must be analyzed through systematic quantitative research to provide a theoretical basis for the sustainable development (SD) of CCAVs. This paper identifies the factors influencing the sustainable development of CCAVs through grounded theory and expert interviews and creates a list of 21 influencing factors. Based on internal and external considerations, these influencing factors can be divided into the following four categories: artists, government, company/capital, and outside environment. This paper constructs a mechanism model for the SD of CCAVs with the help of a structural equation model, which is a quantitative analysis tool based on empirical research. The key mechanisms influencing the SD of CCAVs are obtained through research. Using quantitative research, the paper determines four categories of influencing factors and the mechanisms influencing the SD of CCAVs. This study provides an important resource for governments at all levels to promote the sustainable development of artist villages in the region.

Keywords: contemporary Chinese artist village (CCAV); sustainable development (SD); influencing factors; influence mechanisms; structural equation model (SEM)

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1. Introduction

An artist village is a space where artists gather together to live and create, accompanied by opportunities for professional networking. It is also a special space where cultural and creative industries can cohere after a certain stage of social and productive development [1]. Unlike ordinary commercial arts districts, artist villages provide original artists with a place for long-term creation and residence. They offer opportunities for strong artistic creation in addition to the marketing or copying of existing artistic works [2].

The Painters' Village in the Old Summer Palace in the suburbs of Beijing at the end of the 1980s and early 1990s is the earliest artist village in China. Artist villages entered a period of rapid development in the 21st century. According to statistics, there were about 140 artist villages in China by 2011, by which time there were at least 30 over a certain size [3]. There were more than 400 artist villages in China by 2018, including more than

50 of a certain size (more than 50 artists). The 10 most influential ones included Beijing's Songzhuang Artist Village, Beijing's 798 Artist Village, Shanghai's FengJing Peasant Artist Village, and Chengdu's Artist Village [4].

After periods of reform and opening up, the earliest artist villages were developed in the suburbs of Beijing, Shanghai, and other places. They played a positive role in promoting the urbanization process of local cities and urban renewal and provided opportunities for artists to create and sell their works. The win–win scenario of artists, the government, and residents has resulted in a "herd effect". Artist villages have been recognized as a model of development in cultural and creative industries by artists, enterprises, and governments in the central and western regions, so the number of artist villages in the central and western regions has shown explosive growth in recent years [5]. At present, the number of artist villages in Jiangsu, Zhejiang, Fujian, and other developed coastal areas is still growing, and artist villages are also emerging in Xinjiang, Yunnan, and other minority and rural areas. For example, Shangxiaozi Village in Changji, Xinjiang, and Shuanglang Village in Dali, Yunnan, are cities that have retained their traditional residential atmospheres and have attracted many artists to gather there for long periods due to their beautiful natural landscape and rich cultural traditions, thus forming new artist villages [6,7]. As an important carrier of cultural and creative industries, the contemporary Chinese artist village will maintain rapid momentum in its development thanks to the development of cultural and creative industries, the government's increasing attention to the artist village, and the growing consumer demand for cultural and creative products. It can be predicted that in the near future, the number of contemporary artist villages will continue to increase, and the distribution area will also be wider.

Ren (2012) pointed out that the development of the artist village can directly promote local urbanization [8]. The development of artist villages with cultural and creative industries at their core has brought about the integration of primary, secondary, and tertiary industries. This is a favored development path for rural areas compared with traditional industries, which result in high pollution, high energy consumption, and low added value [9]. The development of artist villages in suburban and rural areas has shown initial success in some areas. Qi (2013) found that the arrival of artists promoted the transformation of Songzhuang from an agricultural economy to a cultural economy, and rural residents also changed from engaging in agriculture to engaging in secondary and tertiary industries through the development of the artist village, resulting in sustainable, effective, and low-cost local urbanization [10].

While the number of contemporary Chinese artist villages has grown, their sustainable development has also received more and more attention. However, in practice, the development of contemporary Chinese artist villages has encountered many difficulties. Some artist villages that formed spontaneously lacked the ability to open up the market and gain the necessary support during the initial stage of development, which led to a lack of follow-up and eventually caused them to disappear. Shanghehejia Village in Bao'an, Shenzhen, once attracted twenty or thirty writers to write there. However, although literary works have been generating income for a long time, the settled writers did not receive support from the market or the government and disappeared after only five years [11]. Some artist villages that formed spontaneously in the suburbs of big cities were forced to relocate or disappeared rapidly due to their limited contributions to GDP. Many artist villages, such as Heiqiao, Tiehuan, Dongying, and Jiangfu in the suburbs of Beijing, and Shanghai Painter Village in Shanghai, have disappeared due to urbanization. At present, this trend occurs not only in international metropolises but also in some second- and third-tier cities, such as the North Village Artist Village in Chengdu and the Wayaobao Artist Village in Nanning, which disappeared due to government planning. At the same time, artist villages deliberately built for commercial purposes often become "empty shell villages" due to a lack of endogenous power after the completion of houses and gradually die out. Nanchang Shuicheng Art District in Jiangxi Province was set up locally to attract people. Because its positioning and housing design did not meet the needs of artists'

creations and life, the artist village quickly disappeared after several artists settled there for a short time [12]. Similar to Nanchang Water City are Nanjing Liuhe Jasmine Artist Village, Changsha Creative West Street, and Beijing Wayaobao Art Village.

Economic sustainability, social sustainability, and ecological sustainability are essential to sustainable development. Any social organization can only exist for a long time by generating sustainable benefits to the economy, continuously improving the ecological environment of the organization's region, and improving the lives of local residents. As a form of social organization, artist villages therefore need to meet these three requirements in order to achieve long-term and sustainable development. An artist village that does not achieve sustainable development will eventually face extinction.

The failure of the development of artist villages has brought about many negative impacts on the local economy and society. This not only affects the artistic atmosphere that has been built for many years but also causes artists to lose the psychological sense of security and belonging, which, to some extent, harms the development of China's cultural and creative industries [13]. Therefore, going deep into the SD of CCAVs is crucial.

The research objective of this paper is to reveal the mechanism influencing the SD of CCAVs. Firstly, this paper comprehensively identifies the factors influencing the SD of CCAVs based on grounded theory and expert interviews. Secondly, the influence mechanism model of the SD of CCAVs is constructed based on the SEM. Thirdly, the paper empirically studies the impact mechanism of the SD of CCAVs to obtain the key factors affecting the SD of CCAVs through the data obtained from the questionnaire survey. The theoretical contribution of the thesis lies in revealing the mechanism influencing the SD of CCAVs and providing a theoretical basis for constructing an SD model of CCAVs. At the same time, it also provides a scientific basis for the sustainable development practice of CCAVs. Figure 1 illustrates this paper's primary research steps.

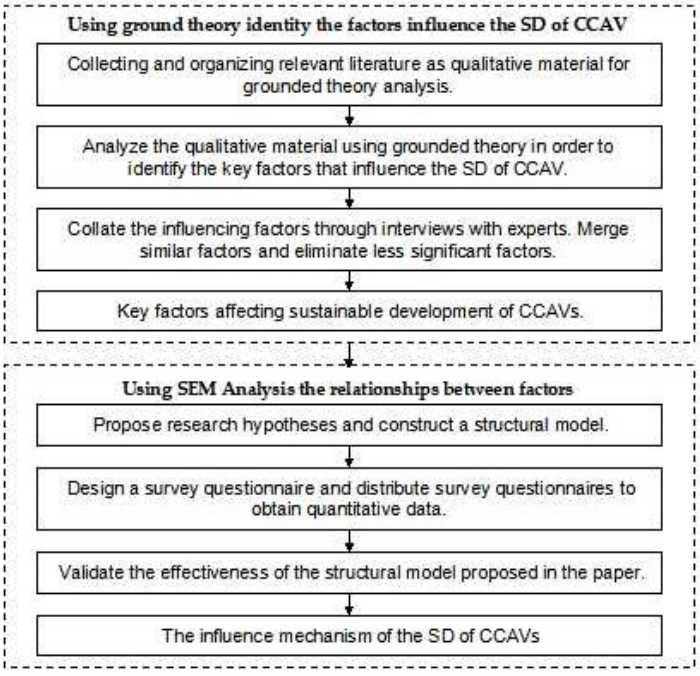


Figure 1. The primary research steps of this paper.

2. Literature Review

In early research, artists were considered to be the most important driving force for the formation and development of cultural and creative industries such as artist villages.

Webster et al. (2011) studied the development of art villages in Western countries. They believed that successful clusters of creative industry were formed from bottom to top and that the most important influencing factor in their initial stage was artists rather

than other entities such as governments and enterprises [14]. Portert (2006) and Stern (2005) believe that artist villages that formed naturally under the leadership of artists have rich creativity and endogenous power because artists have more foresight and follow the laws of industrial development when planning the development of artist villages, and that they are more capable of sustainable development than those formed by government planning [15,16]. With the continuous rise and development of China's cultural and creative industry space, scholars have gradually realized that more artists and other cultural and creative talents are needed as the basis for the development of contemporary Chinese artist villages. Wan Yan and Xiang Yong (2012) noted that "the cultural industry is the building of houses". They said that "the quality of talents and industrial development" is the basis for determining whether a region has the ability to develop the industry. Only on this basis can it develop related tourism industries and cultural industry parks. Otherwise, it is just an increase in physical space and lacks the original power of development [17].

Many scholars believe that the market power represented by enterprises is the force driving the artist village to achieve sustainable development. Moss conducted a comparative study on the sustainable development of the north district of Manchester and the art district of Sheffield. Their research found that the north area of Manchester is more dependent on the cheap rent for local houses and the accumulation of traditional music, and that this area develops further on this basis. Sheffield was formed and developed under the promotion of the government with the aim of reviving the local urban economy. For this reason, the Sheffield government invested a lot of money in improving the infrastructure in the planned art district and building related art theaters, exhibition halls, etc., but due to the lack of real participation of artists, the law of market development has been replaced by administrative orders and the vision of government officials. Even though the Sheffield government has continuously supported it for more than 20 years, there is still no influential art district and art leader there, which has become a typical failure of "top-down" creative districts [18]. Tang Zitao (2012) believed that the market is a key force for the development of the artist village. After analyzing Chongqing Huangjueping Artist Village, he found that the formation of an artist village here depended more on the prosperity of the art market at that time than on the talent resources of the Sichuan Academy of Fine Arts. At the same time, the government attracts people by holding relevant activities, which can only be effective when the art market is depressed but cannot support the artist village to achieve long-term sustainable development [19]. Kang Sheng and Jin Bo (2014) believe that under China's special social system, the formation of an artist village needs the support of the government and the intervention of enterprise market forces; however, after the artist village has taken shape, it should integrate resources from all aspects through market-oriented operation to achieve the sustainable development of the artist village [20].

The government is an important factor in the formation of artist villages. O'Conner (2000) found that many creative industries in the UK were brought in by local governments through massive investments in house repair, tax relief, and rent reduction, thus activating these once-declining areas. The local government of Liverpool alone invested a total of 100 million pounds to improve the local hard environment and make it more attractive to artists [21]. Frost Kumpf (1998) pointed out that by the 1990s, the governments of more than 90 cities had planned the areas to develop creative industries in old industrial zones. Through administrative forces, idle or abandoned factories were transformed into artist studios, thus promoting the formation and development of creative industrial zones [22]. Zhang (2017) believed that an art district such as Songzhuang forms when the Chinese government allows artists to gather to establish an open and inclusive image in an environment of globalization. Therefore, the government and its related political environment are important factors in the formation and development of art districts [23]. More and more artist villages have received government support for their development in China. Sonn (2017) showed that the 798 art cluster, which formed spontaneously in the early stage, won a lot of support from the government in the follow-up development and achieved "the development of creativity under the influence of the government" [24]. In

fact, some scholars believe that there can be no pure "bottom-up" artist village and that only the combination of government and market forces in a certain way can play the best role. McCarthy (1998) analyzed the gathering places of artists, such as the Temple Bar in Dublin, Ireland, and found that these areas were spontaneously formed by artists in their early days. The government did not directly interfere with their development, but it indirectly supported their development platforms and other methods. Otherwise, under rising rent and other pressures, artists can hardly stay standing in these areas [25]. Park (2015) studied the Changdong Art Village project in Changyuan, South Korea, Guangzhou Daguan Art Market, and Busan Totatoga Art Cluster and found that in the development of these three artist villages, the government intervention functioned differently as follows: the government played the role of "director" in Changdong Art Village, appeared as "partner" in Daguan Art Market, and silently supported as "sponsor" behind the scenes in the Totatoga Art Cluster. Among these three artist villages, the Totatoga art cluster has fully respected the opinions of artists and local culture lovers and has developed the best. Therefore, the most important role for the government is to give the leading power to artists while giving corresponding support without direct intervention [26]. Under the special national conditions of China, the space of cultural and creative industries, including the artist village, is regarded as the result of the joint promotion of the government and market forces. Zhao Kaixu (2019) believed that the government would focus on promoting local regional development or economic progress, maintaining social stability, and participating in the generation and development of cultural and creative industry space through policies [27].

From existing research, whether domestic or foreign, and whether using qualitative or quantitative research, we have examined the factors influencing the artist village to varying degrees. However, this review is often based on the characteristics of a certain discipline or only a certain influencing factor, which is fragmented, one-sided, and highly subjective. At the same time, there is a lack of research on the influencing factors of industrial spatial development from the perspective of importance and ranking. There is also a lack of systematic analysis of the roles and ways in which relevant stakeholders such as artists, governments, and enterprises can play their roles.

Therefore, it is necessary to identify the factors influencing the SD of CCAVs and explore the mechanism influencing the SD of CCAVs.

3. Identifying the Factors Influencing the SD of CCAV

This paper identifies the factors affecting the sustainable development of CCAVs using grounded theory and expert interviews. "Chinese artist village" was used as a keyword to search Chinese websites such as CNKI, Wanfang, and Weipu, and "artist village" was used as a keyword to search foreign periodical websites such as Web Science. Only a dozen related studies were found. A considerable part of these documents has nothing to do with this study, such as some studies on the housing property disputes in the artist village from the legal perspective, the design of public space in the artist village from the planning perspective, and the impact of artists entering the community from the sociological perspective, and their role in improving the local social culture, reducing juvenile delinquency, and accelerating the rehabilitation of patients. In this regard, the paper includes "artist village", "art village", "painter village", "writer village", "art district", "art space", and "cultural and creative space" as keywords and also includes "art village", "art zone", "artist community", "artist in residence", etc., into the search. At the same time, the paper expanded the scope of the literature to include authoritative media, such as People's Daily, China Youth Daily, etc., and found 529 relevant materials. Extensive reading and sorting of these documents were carried out to eliminate content that was not related to this or had a low degree of correlation, and 109 documents were selected for key analysis and research.

These 109 articles were divided into two categories. One was those that obtained the core classification after open coding and spindle coding for 80%, or about 87 articles. In

order to verify whether the core classification reached theoretical saturation, the remaining 22 articles were used for testing. The coding and classification obtained in the previous section could cover the coding and classification of the following 22 articles, proving that theoretical saturation had been reached.

This paper applies the grounded theory to identify the factors influencing the sustainable development of CCAVs. Firstly, we needed to show that the research purpose was to find the factors affecting the sustainable development of the artist village. Secondly, through three-level coding from the literature, concepts were constantly generated, and the core concepts of 30 influencing factors were formed.

To ensure the comprehensiveness and accuracy of the preliminary factors affecting artist villages, we further conducted field interviews and research on some artist villages and conducted in-depth interviews with relevant experts based on the preliminary identification of the influencing factors using the grounded theory. From 2017 to 2019, the authors conducted in-depth research and interviews in China Songzhuang Art District, 798 Art District, Guangzhou Xiaozhou Art District, Chongqing Gujianshan International Artist Village, Chengdu Lanting Art District, Chengdu Nongyuan International Art District, Guiyang Banqiao Art District, Houhu International Art District, etc. Among these districts, 798 Art District, China Songzhuang Art District, Chengdu Lanting Art District, Chongqing Gujianshan Art District, and Guangzhou Xiaozhou Art Village were visited twice, and other artist villages were visited at least once. The interviewees included artists, local villagers, local village and town cadres, cadres of relevant cultural authorities, heads of enterprises, heads of galleries and training institutions, heads of exhibition halls, and relevant experts.

In the expert interviews, the experts believed that the development of the contemporary artist village was affected by both the internal environment and the external environment. The stakeholders of the internal environment included artists, governments, and company/capital. Therefore, the factors influencing the sustainable development of the artist village can be divided into the following four dimensions: Artist, Government, Company/Capital, and the Outside environment. These four dimensions basically include the factors influencing the sustainable development of CCAVs and can effectively explain the role played by specific factors. For specific influencing factors, based on field research and expert interviews, we further combined the similar or repeated influencing factors and removed the factors generally considered to have less impact so as to obtain the list of influencing factors for the sustainable development of CCAVs. The list of influencing factors for the sustainable development of CCAVs includes 4 dimensions and 21 influencing factors, as shown in Table 1.

Table 1. A list of factors affecting sustainable development of CCAVs.

Serial No.	Impact Dimension	Serial No.	Dimension No.
1	Artist	A_1	Artists improve the level of artistic creation through tacit knowledge
2		A_2	The need for artists to realize their professional value
3		A_3	Artists drive local development
4		A_4	Cultivation of artistic talent resources
5		A_5	Artists are eager for cultural recognition
6		A_6	Self-organization ability of artists
7	Government	G_1	The government attaches importance to the cultural and creative industry with art as the core
8		G_2	Government policy support
9		G_3	The government's pursuit of political achievements
10		G_4	The government's demand for promoting economic growth
11		G_5	Create a macro atmosphere for the development of art and culture

Table 1. *Cont.*

Serial No.	Impact Dimension	Serial No.	Dimension No.
12	Company /Capital	C_1	The need for enterprises to improve brand awareness
13		C_2	Enterprises' pursuit of economic benefits
14		C_3	Enterprises' demand for activating idle resources
15		C_4	Reduce transaction costs by participating in the perfect industrial chain
16		C_5	Innovate the development model to obtain new profit growth points
17	Outside environment	O_1	Market demand (public demand for spiritual products)
18		O_2	Good natural ecological environment
19		O_3	Rich historical and cultural details
20		O_4	The living and creative cost of artists represented by house price or rent
21		O_5	Social system changes

4. Theory and Hypothesis of the Impact Mechanism Model of the SD of CCAVs

4.1. Proposed Theoretical Model

On the basis of theoretical experience, we built a theoretical model, proposed corresponding research assumptions, and analyzed the relationship between the variable composition and different factors in the structural equation so as to verify whether the assumptions and models are reasonable. The main purpose of the research is to verify whether the model's assumptions are valid and determine the key influence paths in the model. Based on the identified factors affecting the sustainable development of the artist village and further combining the information obtained from the field visits and in-depth interviews, a theoretical model of the sustainable development of the artist village is constructed.

4.1.1. Build Measurement Model

Through analysis, we determined that the relationship between the factors affecting the development of the artist village (A "Artist", G "Government", and C "Company/Capital") and their corresponding secondary influencing factors, as well as the relationship between the primary indicators of sustainable development of the artist village and its specific indicators, are similar to the potential variables and observation variables that the structural model requires. The secondary indicators under the O, "Outside environment", are a separate indicator in the model. In the research process, two pairs of similar variables were classified; that is, the first-level indicators are regarded as potential variables, and the corresponding second-level indicators are regarded as observation variables. Table 1 shows the internal logical relationship between the first-level indicators and their specific factors (i.e., the second-level indicators). We can thereby obtain the relationship between potential variables and observation variables, and then, according to this correspondence, we can build a measurement model of the factors affecting the development of contemporary Chinese artist villages, as shown in Figure 2.

4.1.2. Building a Structural Model

A structural model is used to describe the causal relationship between the potential variables in the system, and in this paper, it is used to describe the causal relationship between the influencing factors and the level of development of the artist village. Generally speaking, based on relevant theories and practical experience, a causal relationship must be assumed between potential variables to build a more reasonable structural model. The paper studies the various factors affecting the sustainable development of the artist village. Combining the collected data, field visits, and in-depth interviews, it considers the effect of all the factors for the sustainable development of the artist village and assumes that each factor plays a role in the sustainable development of the artist village. Each factor in the "external environment", i.e., variables not subject to human and experimental control, has

varying degrees of influence on other variables, so it exists in the model as a covariate. Figure 3 shows the structural model built on this basis.

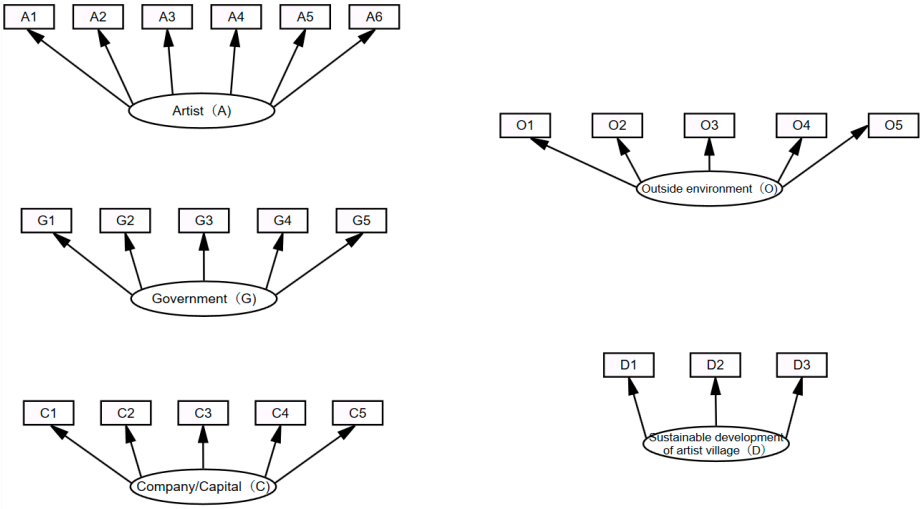


Figure 2. Measurement model of the factors influencing the development of an artist village.

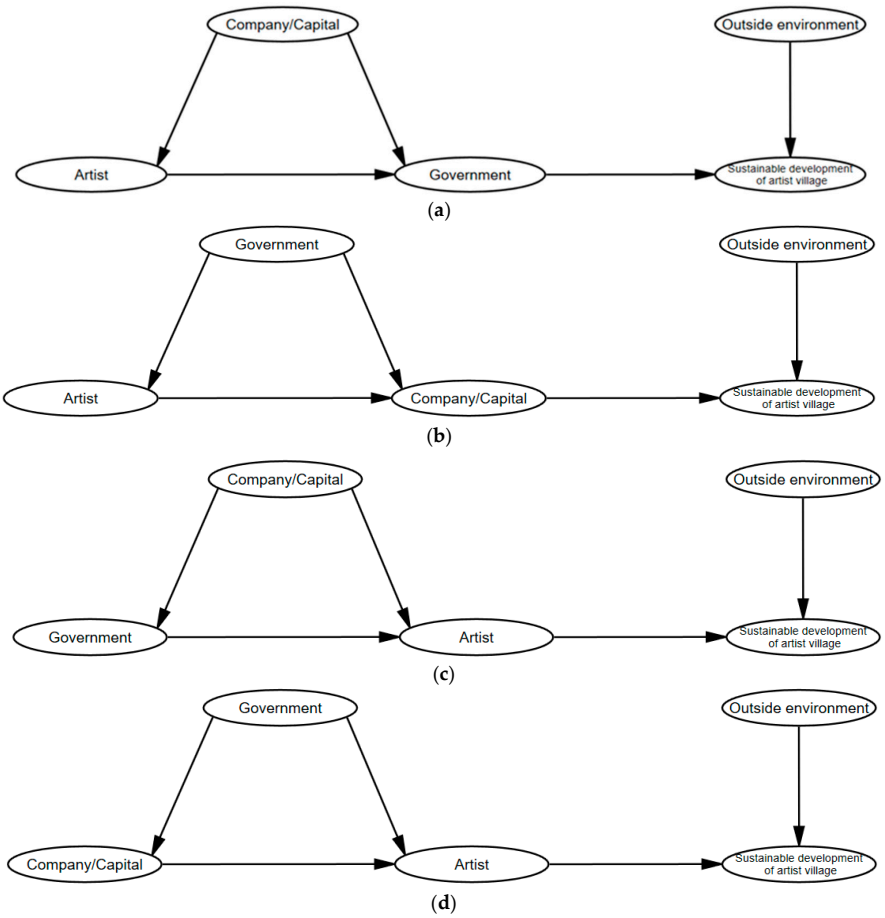


Figure 3. Structural model of factors affecting the sustainable development of an artist village. (**a**) "Company/Capital" as an adjusting variable, "Government" as a direct influencing variable; (**b**) "Government" as an adjusting variable, "Company/Capital" as a direct influencing variable; (**c**) "Company/Capital" as an adjusting variable, "Artist" as a direct influencing variable; (**d**) "Government" as an adjusting variable, "Artist" as a direct influencing variable.

The cause and effect in the structural model correspond to the potential independent variable and the potential dependent variable, respectively. However, the residuals present in the model can lead to a certain degree of explained variation in the potential dependent variable when explaining the potential independent variable. In this regard, the paper takes O "Outside environment" as a potential independent variable, and A "Artist", G "Government", C "Company/capital", and "artist village development" as potential dependent variables. Theoretically, A, G, and C are affected by O, and D is affected by A, G, C, and O. The causality in Figure 2 can be expressed by linear regression as follows:

$$D = \alpha 1A + \alpha 2G + \alpha 3C + \alpha 4O1 + \alpha 5O2 + \alpha 6O3 + \alpha 7O4 + \alpha 8O5 + \delta 1 \quad (1)$$

$$A = \beta 1O1 + \beta 2O2 + \beta 3O3 + \beta 4O4 + \beta 5O5 + \delta 2 \quad (2)$$

$$G = \gamma 1O1 + \gamma 2O2 + \gamma 3O3 + \gamma 4O4 + \gamma 5O5 + \delta 3 \quad (3)$$

$$C = \varepsilon 1O1 + \varepsilon 2O2 + \varepsilon 3O3 + \varepsilon 4O4 + \varepsilon 5O5 + \delta 4 \quad (4)$$

where $\alpha 1$, $\alpha 2$, $\alpha 3 \ldots \ldots$, respectively, represent the degree of influence of A, G, and C on O, δ is used to represent the residual error of the equation, and so on for the others.

4.1.3. Construction of Structural Equation Theory Model

There are two aspects to the construction of the structural equation model. First, it is constructed through the measurement model and structural model. Then, the above two are combined to obtain a complete initial theoretical model of the factors influencing the sustainable development of the artist village. The model displays the relationship between potential variables, and the relationship between potential variables and observation variables is described in detail. Figure 4 shows the specific path of the model.

4.2. Research Assumptions of the Model

SEM analysis requires researchers to explain the assumptions of each specific path and more rigorously consider the corresponding relationships between variables in the theoretical model. This paper proposes its hypotheses on this basis.

According to the theory of collaborative governance and stakeholder theory, the subjects in a system are pluralistic [28]. The benign interaction between them can promote the overall development of the system. Through an analysis of the literature based on grounded theory and information obtained through field visits and expert interviews, the paper finds that the contemporary Chinese artist village, as a complex system, has multiple stakeholders and formal and informal institutional arrangements. Among these subjects, the most important comes from the influence of the Artist, Governments, the Company/Capital, and the Outside environment. However, in different artist villages, artists, governments, enterprises/capital, and the external environment show different functional relationships.

This study analyzes four typical artist villages—Government-led [29], Company/Capital-initiated [30], Artist-led [31], Artist and Company/Capital jointly led [32]—and identifies assumptions about the impact of each type of artist village on sustainable development.

4.2.1. Government-Led

The government plays the most direct role in the development of these artist villages, represented by Chongqing Gujianshan International Artist Village and Jiangxi Nanchang Shuicheng Art District. According to the region's development needs, the government plans the relevant plots in the region as artist villages. In this process, enterprises become an important regulatory variable that determine the development of government-led artist villages. When the development value of the plot is high and the location is well adjusted, the enterprise/capital will provide funds for the development of the artist village, which can quickly cause artists to form a scale effect. On the contrary, if the enterprise/capital

investment intention is not strong, it will be less attractive to artists, and it will be difficult to achieve the government's expected development goals.

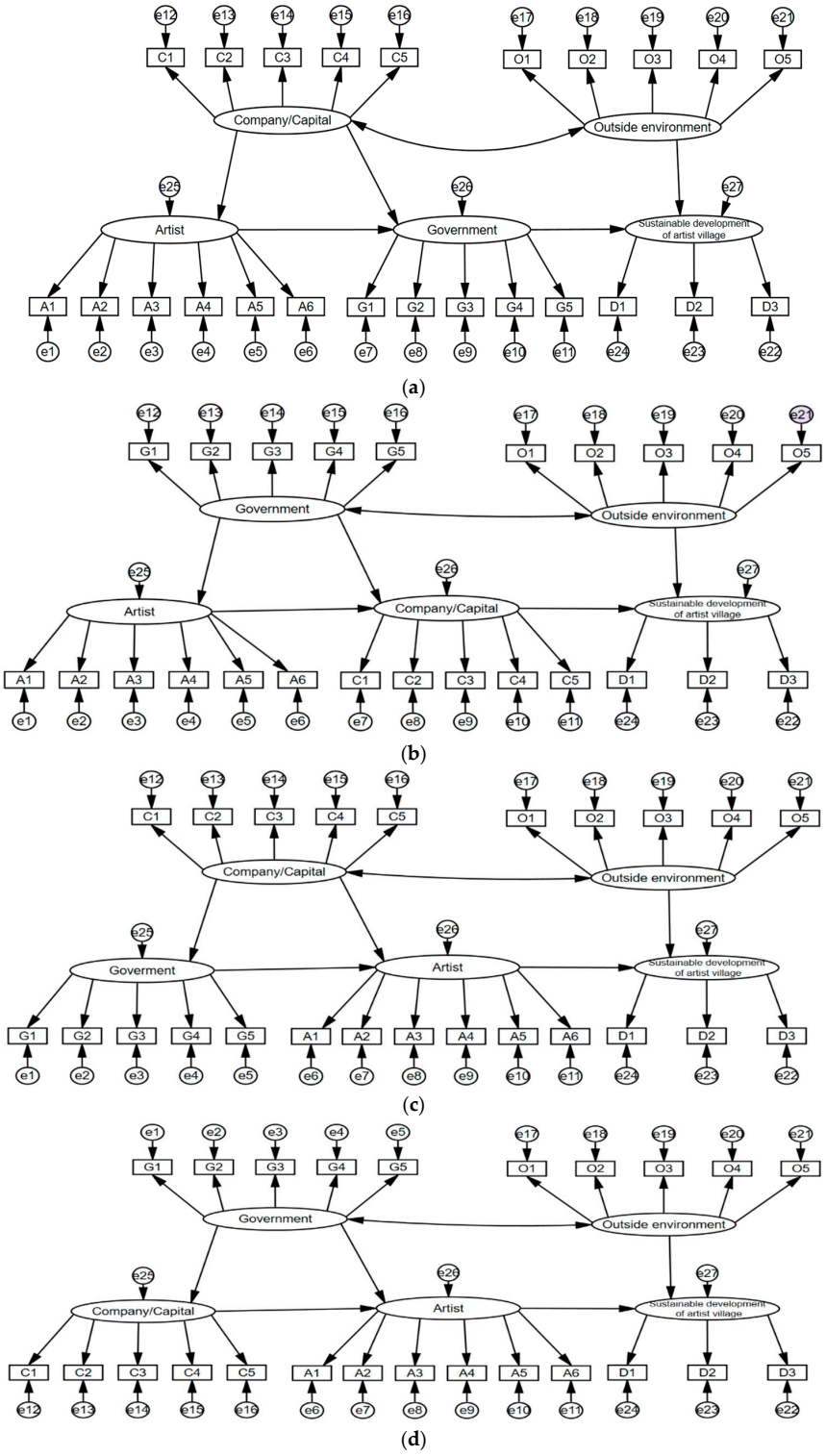


Figure 4. Initial model path diagram of factors influencing the sustainable development of artist village. (**a**) "Company/Capital" is an adjusting variable, "Government" is a direct influencing variable; (**b**) "Government" is an adjusting variable, "Company/Capital" is a direct influencing variable; (**c**) "Company/Capital" as adjusting variable, "Artist" as direct influencing variable; (**d**) "Government" is an adjusting variable, "Artist" is a direct influencing variable.

In this development model, the following assumptions are made about the government as the direct factor and the enterprise/capital as the adjusting variable:

H1: *The Government has a significant impact on the sustainable development of the artist village*;

H2: *The Outside environment has a significant impact on the artist village*;

H3: *Artists have a significant influence on the government*;

H4: *Company/Capital will regulate the interaction between artists and the government*.

4.2.2. Company/Capital-Initiated

Represented by Beijing 798 Art District and Sichuan Chengdu Nongyuan Art District, enterprises have played a direct role in the development of these artist villages. Some cultural and creative enterprises plan to build a certain area into an artist village to develop a certain area. In this process, the government has become an important regulatory variable in determining the development of the artist village. If the government where the Company/Capital is located supports the development of cultural and creative industries, it will be easier for the Company/Capital to recruit or invite artists to work in the artist village. On the contrary, if the government's support is not strong, it will be difficult to achieve the expected goals of the Company/Capital.

In this development model, the following assumptions are made about the enterprise/capital as a direct factor and the government as a regulatory variable:

H5: *The Company/Capital has a significant impact on the sustainable development of the artist village*;

H6: *The Outside environment has a significant impact on the development of the art village*;

H7: *Artists have a significant influence on Company/Capital*;

H8: *The Government will regulate the interaction between artists and the Company/Capital*.

4.2.3. Artist-Led

Representatives from Songzhuang Art District of China and Cuigang Artist Village of Anhui Province played the most direct role in the development of these artist villages, and the government also led the development of artist villages to a large extent through support in the later stage. Some artists gathered in a specific area to form a scale effect due to the needs of their work. Later, the government made a unified plan for the area and developed it into an artist village. Enterprises play a regulatory role in the process of cooperation between artists and the government to promote the development of the artist village. When the government carries out unified planning for the artist village, there will be sufficient social capital or powerful enterprises willing to invest, which will accelerate the implementation of government planning projects and attract more artists to gather there. On the contrary, if the government's development plan fails to attract enterprises, it will lead to slow project implementation, which may also lead to the original artists leaving the gathering area.

In this development model, the following assumptions are made about the artists as direct factors and corporate and social capital as regulatory variables:

H9: *Artists have a significant impact on artists' sustainable development*;

H10: *The outside environment has a significant impact on the development of the artist village*;

H11: *The government has a significant influence on artists*;

H12: *Company/Capital will regulate the interaction between the government and artists*.

4.2.4. Artist and Company/Capital Jointly Led

Taking Changsha Houhu International Art District as a representative, artists played the most direct role in the development of these artist villages, and enterprises/capital led the development of artist villages to a certain extent through their later participation.

Some artists gather in specific areas for daily work and creation to form a scale effect due to the of their work. The value of these artists is valued by some enterprises, and they hope to develop the place into an artist village. The government plays a regulatory role in the process of cooperation between artists and enterprises. When the government supports cooperation between enterprises and artists, it can properly provide the support and policies needed for the development of the artist village, making the cooperation between artists and enterprises smoother. On the contrary, if the government does not support cooperation between enterprises and artists, the relationship between artists and enterprises will become insignificant.

In this development model, the following assumptions are made about the artists as the most direct factor and the government as a regulator:

H13: *Artists have a significant impact on the sustainable development of the artist village*;

H14: *The outside environment has a significant impact on the development of the artist village*;

H15: *Company/Capital have a significant impact on artists*;

H16: *The government will regulate the interaction between Company/Capital and artists*.

5. Empirical Analysis of the Impact Mechanism Model of the SD of CCAV

5.1. Data Collection and Analysis

As the basis for model operation and simulation results, empirical data from reality are important in research. Since the quality and quantity of the data obtained from the samples directly affect the final simulation effect of the structural equation model, during the data collection process, we should not only pay attention to the sample size but also carefully examine whether the data results have typicality, stability, and consistency.

5.1.1. Questionnaire Design, Distribution, and Recovery

The structural equation model (SEM) is an empirical method that requires researchers to collect sample data to evaluate whether the theoretical model is reliable and effective. For the obtained results, more scientific quantitative results must be obtained through optimization. To test whether the theoretical model of the impact mechanism of the sustainable development of a contemporary Chinese artist village is both reliable and effective, we collected the data needed for the model using a questionnaire survey. Because SEM requires a high number of samples, the sample size required for this paper was more than 200. While ensuring sufficient data, we also needed to pay attention to the quality of the data obtained to ensure that these data met the needs of the research.

A questionnaire is an important way to obtain empirical data. By decomposing the research questions into a number of small quantifiable questions for the research objects to answer, the relevant data required by the research can be obtained. The data obtained from the questionnaire were mainly used for further empirical analysis of the above 16 research hypotheses. The questionnaire of this research has the following four main steps:

1. Design of the first draft of the questionnaire. By analyzing and sorting out the literature in the early stage and borrowing the relevant structure of the classic questionnaire, the overall structure and corresponding form of the paper questionnaire were drawn up, and the required survey content and measurement indicators to be collected were determined to form the first draft of the questionnaire before the formal survey;
2. Evaluation and adjustment of the first draft. The first draft of the questionnaire was distributed to the staff in the cultural and creative industry chain, with art as the core and relevant professional scholars and experts, who revised the rationality of the questionnaire structure and the accuracy of terms. After the expert consultation was completed, the survey was modified based on the feedback of all parties;
3. Formation of a formal questionnaire. After expert argumentation and research, the final formal questionnaire was formed after the measurement model framework was further refined and designed. One or more questions in the questionnaire re-

flect the observed variables in the measurement model. The questionnaire on the factors influencing the artist village in this paper is in the category of qualitative research. The weight value was set and measured with a Likert scale. The respondents' attitudes were divided into the following five levels through a five-point scale: "5 = very important, 4 = relatively important, 3 = generally important, 2 = not very important, 1 = very important". The interviewees combined their professional knowledge, practical experience, and specific thinking to outline the corresponding level. The questionnaire mainly consists of the following two parts: The first part focuses on the basic information of the interviewees to determine whether they are representative and professional. The second part is a survey on the importance of the factors influencing the sustainable development of contemporary Chinese artist villages and the status of sustainable development. It lists relevant factors such as artists, governments, enterprises, and external conditions. The interviewees could objectively evaluate their impact;

4. Distribution and recovery of questionnaires. The questionnaire lasted 7 months, from distribution to recovery. The questionnaire distribution and filling mainly consisted of face-to-face filling and network platform distribution and filling. The objects of the field survey mainly came from the artist villages visited on the spot, including China Songzhuang Art District, Beijing 798 Art District, Guangzhou Xiaozhou Art Village, Chengdu Nongyuan International Art Village, Chengdu Lanting Art District, Nanjing International Painter Village, Jiangxi Nanchang Shuicheng Art District, Changsha Houhu International Art District, Guiyang Banqiao Art District, and Chongqing Gujian Mountain International Painter Village. The online platform was mainly distributed and filled out through questionnaires and emails. Among them, the Questionstar platform is one of the main platforms for collecting questionnaires in China. A total of 327 questionnaires were returned from this survey, excluding unreasonable questionnaires with incomplete answers and only one choice, and finally, 239 valid questionnaires were obtained, with an effective recovery rate of 73.23%. In general, SEM requires more than 200 samples. Therefore, the 239 samples recovered to meet the basic operational requirements of SEM.

5.1.2. Data Analysis, Processing and Description Statistics

First, descriptive statistics were analyzed on the questionnaires. This survey selected relevant samples from the three major economic belts in eastern, central, and western China, involving artists, government officials, business owners and operators, local residents, students and teachers of art schools, relevant leading research experts, tourists, galleries, collectors, etc. Descriptive statistics of samples are shown in Table 2.

Table 2. Sample description statistics of interviewees.

Basic Information of Interviewees		Number of Samples	Percentage
Location	East	81	33.82%
	Central section	23	9.56%
	West	135	56.62%
Relevant identity	Artist	84	35.15%
	Government official	27	11.29%
	Enterprise	67	28.03%
	Other	61	25.52%
Industry working years	0–2 years	14	5.86%
	2–5 years	98	41.00%
	5–10 years	56	23.43%
	10–19 years	47	19.67%
	More than 20 years	24	10.04%

5.1.3. Statistical Analysis of Observed Variables

This study used the descriptive statistical analysis function in SPSS20.0 to analyze the quality of sample data by calculating the mean, standard deviation, skewness, kurtosis, and other statistical data of each variable and its measurement indicators so as to grasp the distribution pattern of sample data as a whole. Table 3 shows the analysis results of each variable and measurement index.

Table 3. Statistical analysis of observed variables.

Variable	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis
A_1	1	5	2.74	1.493	0.147	−1.415
A_2	1	5	2.77	1.493	0.191	−1.380
A_3	1	5	2.75	1.444	0.230	−1.290
A_4	1	5	2.82	1.500	0.131	−1.401
A_5	1	5	2.78	1.498	0.162	−1.389
A_6	1	5	2.77	1.504	0.197	−1.372
G_1	1	5	2.99	1.319	−0.019	−1.211
G_2	1	5	2.99	1.326	0.002	−1.171
G_3	1	5	2.99	1.382	−0.008	−1.223
G_4	1	5	2.95	1.316	0.031	−1.131
G_5	1	5	2.95	1.328	0.063	−1.179
C_1	1	5	2.99	1.324	0.060	−1.172
C_2	1	5	3.04	1.324	0.000	−1.127
C_3	1	5	3.01	1.337	−0.053	−1.086
C_4	1	5	3.01	1.371	−0.006	−1.197
C_5	1	5	3.01	1.316	−0.003	−1.128
O_1	1	5	3.12	1.319	−0.196	−1.101
O_2	1	5	3.10	1.353	−0.159	−1.174
O_3	1	5	3.12	1.339	−0.189	−1.153
O_4	1	5	3.16	1.321	−0.145	−1.103
O_5	1	5	3.11	1.329	−0.220	−1.081
D_1	1	5	3.01	1.207	0.108	−1.036
D_2	1	5	3.04	1.209	0.080	−1.002
D_3	1	5	3.00	1.259	0.023	−1.056

The range of all variables in Table 3, whether kurtosis or skewness, is in the range (−1.487, 1.852). This meets the requirements of the structural equation model and normal distribution.

5.2. Data Inspection

Data validation is key to the application of structural equation models. Only when the data meet the inspection standard can the relevant analysis and calculation be carried out. If the data do not meet the model's inspection standard, the relevant indicators in the model shall be modified until they can pass the inspection. The data in the questionnaire were tested, mainly including the reliability test and the validity test.

5.2.1. Reliability Test

The paper passes the Cronbach α Coefficient to reflect the reliability index of sample data. Cooper and Schindler believe that the Cronbach α coefficient is the most effective in reflecting the consistency of the internal reliability of the scale [33]. Guilford pointed out that when Cronbach $\alpha < 0.35$, the reliability of the scale is low; at $0.35 <$ Cronbach $\alpha < 0.7$, the reliability is medium; Cronbach $\alpha > 0.7$ represents a high confidence level [34]. The sample reliability of the questionnaire was analyzed using SPSS20.0 software, and the results are shown in Table 4. The table shows the Cronbach α of the all potential variables were greater than 0.7. Therefore, the questionnaire passed the reliability test.

Table 4. Reliability analysis results.

Latent Variable	Cronbach α Value	Number of Items	Whether It Is Credible
A	0.970	6	Yes
G	0.966	5	Yes
C	0.970	5	Yes
O	0.981	5	Yes
D	0.900	3	Yes
Total	0.983	24	Yes

5.2.2. Validity Test

Validity is an indicator that measures the accuracy of detection tools. If the tool used for measurement cannot truly reflect the situation, it indicates its invalidity. The validity of general measurement tools can be judged from content validity and structural validity. Content validity refers to the degree to which the measurement tool can truly reflect the content to be evaluated [35]. If the questionnaire fully reflects the content to be evaluated, the content validity of the questionnaire is good. Structural validity refers to the degree of theoretical structure that measuring tools can achieve. It measures the model as a whole and evaluates the relationship between each potential variable and its measurement index [36]. If the relationship between the latent variables reflected by each measurement index conforms to the research hypothesis, the structural validity of the measurement tool is good.

When testing content validity and structural validity, factor analysis is required first. The KMO test and the Bartlett sphere test are to be conducted before factor analysis. The KMO can be between 0 and 1. When the KMO detection value exceeds 0.7 or above and the P value of Bartlett's sphere test is not greater than 0.05, the content analysis can meet the needs of factor analysis [37].

The results of the calculation and analysis using SPSS20.0 are shown in Table 5. The KMO value of sample data was 0.739, and the significance level value of the Bartlett test was <0.001. According to the requirements of the KMO test value and the Bartlett sphere test's P value, the data obtained from the questionnaire meet the subsequent factor analysis criteria of the paper.

Table 5. KMO test and Bartlett's sphere test results.

KMO Test and Bartlett's Sphere Test		
Kaiser Meyer Olkin measurement of sampling adequacy		0.965
Bartlett's sphere test	Approximate chi-square	8896.017
	df	276
	Sig.	<0.001

Using the "factor analysis" function in SPSS20.0, this paper evaluates the content validity and structural validity of the questionnaire. To test the content validity, we mainly calculated the eigenvalue and total variance contribution rate of the principal components, as shown in Table 6. In this paper, five principal components were extracted from the calculation, and the value of the explanatory power of these five principal components to the variance of variables reached 91.084%. Generally speaking, if the cumulative contribution rate of the components extracted from the analysis sample data exceeds 60%, the content validity reaches the standard [38], so the content validity of this questionnaire reaches the standard.

Next, the paper conducted a structural validity test, mainly by calculating the component matrix after the transition. In general, the rotated component matrix does not limit the size of the factor value. Generally, if the factor load is higher than 0.4, the questionnaire structure validity has reached the standard [39]. The factor loads of 0.434–0.787 calculated from the paper data are all above 0.4. The detailed calculation results are shown in Table 7.

Table 6. Eigenvalues and variances of the principal components.

Composition	Initial Characteristic Value			Extract Square Sum Load		
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %
1	16.311	67.964	67.964	16.311	67.964	67.964
2	1.844	7.685	75.649	1.844	7.685	75.649
3	1.546	6.441	82.090	1.546	6.441	82.090
4	1.123	4.679	86.768	1.123	4.679	86.768
5	1.036	4.315	91.084	1.036	4.315	91.084
6	0.275	1.146	92.230			
7	0.214	0.890	93.119			
8	0.205	0.853	93.972			
9	0.185	0.769	94.741			
10	0.174	0.723	95.465			
11	0.138	0.574	96.039			
12	0.115	0.480	96.519			
13	0.103	0.429	96.948			
14	0.096	0.398	97.347			
15	0.094	0.390	97.737			
16	0.084	0.349	98.086			
17	0.081	0.339	98.424			
18	0.068	0.285	98.709			
19	0.066	0.274	98.983			
20	0.058	0.241	99.225			
21	0.055	0.227	99.452			
22	0.049	0.206	99.658			
23	0.043	0.180	99.838			
24	0.039	0.162	100.000			

Table 7. Factor load table after rotation.

Variable	Composition				
	1	2	3	4	5
A_1	0.811	0.251	0.282	0.282	0.239
A_2	0.810	0.262	0.274	0.276	0.265
A_3	0.810	0.276	0.259	0.267	0.254
A_4	0.790	0.260	0.249	0.247	0.198
A_5	0.768	0.320	0.247	0.236	0.197
A_6	0.805	0.292	0.237	0.194	0.168
G_1	0.349	0.262	0.302	0.748	0.277
G_2	0.284	0.300	0.309	0.776	0.271
G_3	0.256	0.404	0.265	0.720	0.172
G_4	0.344	0.320	0.278	0.760	0.213
G_5	0.287	0.281	0.365	0.764	0.214
C_1	0.284	0.251	0.812	0.266	0.253
C_2	0.302	0.261	0.796	0.305	0.239
C_3	0.297	0.274	0.792	0.259	0.244
C_4	0.328	0.286	0.763	0.278	0.240
C_5	0.256	0.304	0.781	0.296	0.226
O_1	0.289	0.846	0.242	0.246	0.137
O_2	0.287	0.834	0.248	0.251	0.177
O_3	0.284	0.840	0.237	0.263	0.170
O_4	0.253	0.852	0.242	0.251	0.154
O_5	0.283	0.850	0.246	0.247	0.133
D_1	0.285	0.167	0.269	0.244	0.803
D_2	0.263	0.211	0.290	0.231	0.792
D_3	0.268	0.159	0.239	0.217	0.818

To sum up, the reliability and validity of the questionnaire and its data passed the relevant tests are required before the model is run.

5.3. Model Identification

The verification and modification of the models are important prerequisites for identifying models. The so-called model identification refers to the judgment that the unique estimated value of each parameter to be estimated can be obtained from the observation data. If a parameter cannot be estimated from the observation data, the model cannot be identified. Only when all the parameters are obtained from the observation data can the model be identified. This recognition includes just recognition and over-recognition, and the latter can be used for model checking. At present, model recognition mainly includes the MIMIC rule, the two-step rule, the t rule, etc. According to the research needs, the paper will adopt the t rule, where t is the number of parameters to be estimated, p is the number of endogenous measurable variables, and q is the number of exogenous measurable variables.

According to the t rule, if $t < 1/2\ (p + q)\ (p + q + 1)$, the model is over-recognized. There is no solution to the equation set under the condition of over-identification, which is also an ideal condition for model checking. At this time, researchers can use the least squares method or the maximum likelihood method to calculate a group of estimated values $\hat{\theta}$ of parameter θ, which minimizes the difference between the reproducing covariance matrix $\sum(\hat{\theta})$ and the sample covariance matrix S. The model is rich in information that can be used for testing, so new models can be developed.

If $t = 1/2\ (p + q)\ (p + q + 1)$, the model provides "just identification". At this time, the model has a unique solution, which shows that the model built based on the parameter estimation is completely consistent with the model of exploratory factor analysis, and the degree of freedom of the model is 0, so the entire model cannot be tested. Because there is no falsification in this case, it does not belong to an effective model.

If $t > 1/2\ (p + q)\ (p + q + 1)$, the model provides "insufficient recognition". At this time, there are infinite solutions to the equations, and there are no solutions to the parameters. In this case, the model has no meaning.

In this study, $t = 43$, $p = 5$, $q = 19$. At this time, $24 < 1/2\ (5 + 19)\ (5 + 19 + 1)$, so the model has strong identifiability.

5.4. Model Fitting and Correction

In order to fit the model and revise it on this basis, the paper uses the Maximum Likelihood method to estimate the model. Then, through comparative analysis of the data obtained from the sample and the fitting index of the model, the substandard content of the fitting index is debugged, and the modified model fitting degree is analyzed in detail so as to finally obtain a stable structural equation model.

Hair believes that the absolute fitting index (AFI), incremental fitting index (IFI), and parsimonious fitting index (PFI) can be used to reflect the degree of model fitting [40]. The evaluation criteria for each fitting index are shown in Table 8.

Table 8. The index of fit degree of the whole SEM model and its evaluation standard.

Indicator Type	Statistical Inspection Quantity	Applicable Standard or Critical Value
Absolute fitting index	GFI Value	>Above 0.80
	AGFI Value	>Above 0.8
	RMR Value	<0.05
	RMSEA Value	<0.05 (good adaptation); <0.08 (reasonable adaptation)
Relative fitting index	NFI Value	>Above 0.90
	NFI Value	>Above 0.90
	RFI Value	>Above 0.90
Absolute fitting index	CFI Value	>Above 0.50
	PGFI Value	>Above 0.50

The model fitting results obtained by running AMOS20.0 are shown in Table 9. All indicators met the evaluation criteria, so hypothesis testing could be conducted.

Table 9. Initial model fitting index test results.

The Model Fit: "Company/Capital" as a Moderator, "Government" as a Direct Influence Variable				
Indicator Type	Statistical inspection quantity	Applicable standard or critical value	Inspection results	Acceptance
Absolute fitting index	GFI Value	>Above 0.80	0.825	Accept
	AGFI Value	>Above 0.8	0.812	Accept
	RMR Value	<0.05	0	Accept
	RMSEA Value	<0.05 (good adaptation); <0.08 (reasonable adaptation)	0.08	Accept
Relative fitting index	NFI Value	>Above 0.90	0.927	Accept
	NFI Value	>Above 0.90	0.918	Accept
	RFI Value	>Above 0.90	0.952	Accept
Parsimony fit index	CFI Value	>Above 0.50	0.676	Accept
	PGFI Value	>Above 0.50	0.826	Accept
The model fit: "Government" as a moderator, "Company/Capital" as a direct impact variable				
Indicator Type	Statistical inspection quantity	Applicable standard or critical value	Inspection results	Acceptance
Absolute fitting index	GFI Value	>Above 0.80	0.839	Accept
	AGFI Value	>Above 0.8	0.803	Accept
	RMR Value	<0.05	0	Accept
	RMSEA Value	<0.05 (good adaptation); <0.08 (reasonable adaptation)	0.079	Accept
Relative fitting index	NFI Value	>Above 0.90	0.934	Accept
	NFI Value	>Above 0.90	0.926	Accept
	RFI Value	>Above 0.90	0.959	Accept
Parsimony fit index	CFI Value	>Above 0.50	0.688	Accept
	PGFI Value	>Above 0.50	0.832	Accept
The model fit: "Company/Capital" as the adjusting variable, "Artist" as the direct variable				
Indicator Type	Statistical inspection quantity	Applicable standard or critical value	Inspection results	Acceptance
Absolute fitting index	GFI Value	>Above 0.80	0.827	Accept
	AGFI Value	>Above 0.8	0.8	Accept
	RMR Value	<0.05	0	Accept
	RMSEA Value	<0.05 (good adaptation); <0.08 (reasonable adaptation)	0.084	Accept
Relative fitting index	NFI Value	>Above 0.90	0.929	Accept
	NFI Value	>Above 0.90	0.92	Accept
	RFI Value	>Above 0.90	0.954	Accept
Parsimony fit index	CFI Value	>Above 0.50	0.678	Accept
	PGFI Value	>Above 0.50	0.828	Accept
The model fit: "Government" as a regulating variable, "Artist" as a direct variable				
Indicator Type	Statistical inspection quantity	Applicable standard or critical value	Inspection results	Acceptance
Absolute fitting index	GFI Value	>Above 0.80	0.837	Accept
	AGFI Value	>Above 0.8	0.801	Accept
	RMR Value	<0.05	0	Accept
	RMSEA Value	<0.05 (good adaptation); <0.08 (reasonable adaptation)	0.08	Accept

Table 9. *Cont.*

Relative fitting index	NFI Value	>Above 0.90	0.933	Accept
	NFI Value	>Above 0.90	0.925	Accept
	RFI Value	>Above 0.90	0.959	Accept
Parsimony fit index	CFI Value	>Above 0.50	0.686	Accept
	PGFI Value	>Above 0.50	0.832	Accept

5.5. Model Hypothesis Test

5.5.1. Direct Relation Test

Based on the results of AMOS20.0 analysis, the first three direct relationship assumptions among the four assumptions of the above models were verified. The results show that all 12 direct assumptions were verified, as shown in Table 10.

Table 10. Direct hypothesis testing of the influencing factors of the SD of CCVA by SEM.

The Model Coordination Hypothesis: "Company/Capital" as a Moderator, "Government" as a Direct Influence Variable							
			Unstd Estimate	Estimate	S.E.	C.R.	*p*
Artist	<---	Company/Capital	0.779	0.801	0.056	14.369	<0.001
Government	<---	Artist	0.535	0.52	0.067	7.816	<0.001
Government	<---	Company/Capital	0.333	0.334	0.065	5.1	<0.001
Sustainable development	<---	Government	0.256	0.205	0.04	5.103	<0.001
Sustainable development	<---	Outside environment	0.705	0.562	0.047	12.049	<0.001
The model coordination hypothesis: "Government" as a moderator, "Company/Capital" as a direct impact variable							
			Unstd Estimate	Estimate	S.E.	C.R.	*p*
Artist	<---	Government	0.805	0.83	0.055	15.067	<0.001
Company/Capital	<---	Artist	0.474	0.439	0.07	6.28	<0.001
Company/Capital	<---	Government	0.364	0.348	0.07	4.959	<0.001
Sustainable development	<---	Company/Capital	0.368	0.311	0.043	7.175	<0.001
Sustainable development	<---	Outside environment	0.623	0.498	0.044	11.223	<0.001
The model coordination hypothesis: "Company/Capital" as the adjusting variable, "Artist" as the direct variable							
			Unstd Estimate	Estimate	S.E.	C.R.	*p*
Government	<---	Company/Capital	0.748	0.748	0.05	14.906	<0.001
Artist	<---	Government	0.475	0.499	0.064	7.839	<0.001
Artist	<---	Company/Capital	0.425	0.447	0.063	7.082	<0.001
Sustainable development	<---	Artist	0.437	0.33	0.041	8.1	<0.001
Sustainable development	<---	Outside environment	0.554	0.437	0.043	10.143	<0.001
The model coordination hypothesis: "Government" as a regulating variable, "Artist" as a direct variable							
			Unstd Estimate	Estimate	S.E.	C.R.	*p*
Company/Capital	<---	Government	0.745	0.712	0.05	14.153	<0.001
Artist	<---	Government	0.525	0.553	0.064	8.633	<0.001
Artist	<---	Company/Capital	0.376	0.415	0.066	6.319	<0.001
Sustainable development	<---	Artist	0.436	0.333	0.043	7.761	<0.001
Sustainable development	<---	Outside environment	0.524	0.433	0.045	9.585	<0.001

5.5.2. Indirect Relation Test

With the results of AMOS20.0 analysis, we verify whether the last coordination relationship assumption among the four assumptions in the above models is true, and all four coordination relationship assumptions are verified, as shown in Table 11.

5.6. Analysis of Results

5.6.1. Results of Measurement Model Demonstration

It can be seen from the above results that when artists are the leading factor, internal variables have the greatest impact on the sustainable development of the artist village. The calculation results of the model in which "Company/Capital" is a regulating variable, "Artist" is a direct variable, "Government" is a regulating variable, and "Artist" is a direct variable are shown in Figure 5.

Table 11. The coordination hypothesis test of SEM for influencing factors of SD of CCVA.

The Model Coordination Hypothesis: "Company/Capital" as a Moderator, "Government" as a Direct Influence Variable						
Adjustment path	Estimated value			Reliability interval		Two tailed test
	Point estimation	S.E.	Z	Lower	Upper	*p*
Artist -->"Company/Capital" --> Government	0.154	0.023	4.09	0.053	0.143	<0.001
The model coordination hypothesis: "Government" as a moderator, "Company/Capital" as a direct impact variable						
Adjustment path	Estimated value			Reliability interval		Two tailed test
	Point estimation	S.E.	Z	Lower	Upper	*p*
Artist --> Government -->"Company/Capital"	0.163	0.015	4.41	0.106	0.131	<0.001
The model coordination hypothesis: "Company/Capital" as the adjusting variable, "Artist" as the direct variable						
Adjustment path	Estimated value			Reliability interval		Two tailed test
	Point estimation	S.E.	Z	Lower	Upper	*p*
Government -->"Company/Capital" --> Artist	0.131	0.021	4.21	0.025	0.127	<0.001
The model coordination hypothesis: "Government" as a regulating variable, "Artist" as a direct variable						
Adjustment path	Estimated value			Reliability interval		Two tailed test
	Point estimation	S.E.	Z	Lower	Upper	*p*
"Company/Capital" --> Government --> Artist	0.127	0.017	3.96	0.045	0.114	<0.001

5.6.2. Analysis of Empirical Results of the Measurement Model

The paper analyzes the empirical results of the measurement model path. According to the same criteria, the factor grades are shown in Table 12.

Table 12. Analysis of the measurement model.

Factor	Measuring Model Path	Coefficient	Final Coefficient	Effect Size	Grade
A	A→D	0.44	0.44	Great influence	Primary factor
G	G→D	0.285	0.285	General impact	Secondary factor
C	C→D	0.257	0.257	General impact	Secondary factor
O	O→D	0.545	0.545	Great influence	Primary factor
A_1	A_1→A	0.97	0.427	Great influence	Primary factor
A_2	A_2→A	0.98	0.431	Great influence	Primary factor
A_3	A_3→A	0.96	0.422	Great influence	Primary factor
A_4	A_4→A	0.87	0.383	General impact	Secondary factor
A_5	A_5→A	0.86	0.378	General impact	Secondary factor
A_6	A_6→A	0.88	0.387	General impact	Secondary factor
G_1	G_1→G	0.945	0.269	General impact	Secondary factor
G_2	G_2→G	0.95	0.271	Great influence	Primary factor
G_3	G_3→G	0.81	0.231	General impact	Secondary factor
G_4	G_4→G	0.95	0.271	Great influence	Primary factor
G_5	G_5→G	0.945	0.269	General impact	Secondary factor
C_1	C_1→C	0.95	0.244	Great influence	Primary factor
C_2	C_2→C	0.97	0.249	Great influence	Primary factor
C_3	C_3→C	0.92	0.236	General impact	Secondary factor
C_4	C_4→C	0.9	0.231	General impact	Secondary factor
C_5	C_5→C	0.91	0.234	General impact	Secondary factor
O_1	O_1→O	0.92	0.501	Great influence	Primary factor
O_2	O_2→O	0.925	0.504	Great influence	Primary factor
O_3	O_3→O	0.92	0.501	Great influence	Primary factor
O_4	O_4→O	0.9	0.491	Great influence	Primary factor
O_5	O_5→O	0.91	0.496	Great influence	Primary factor

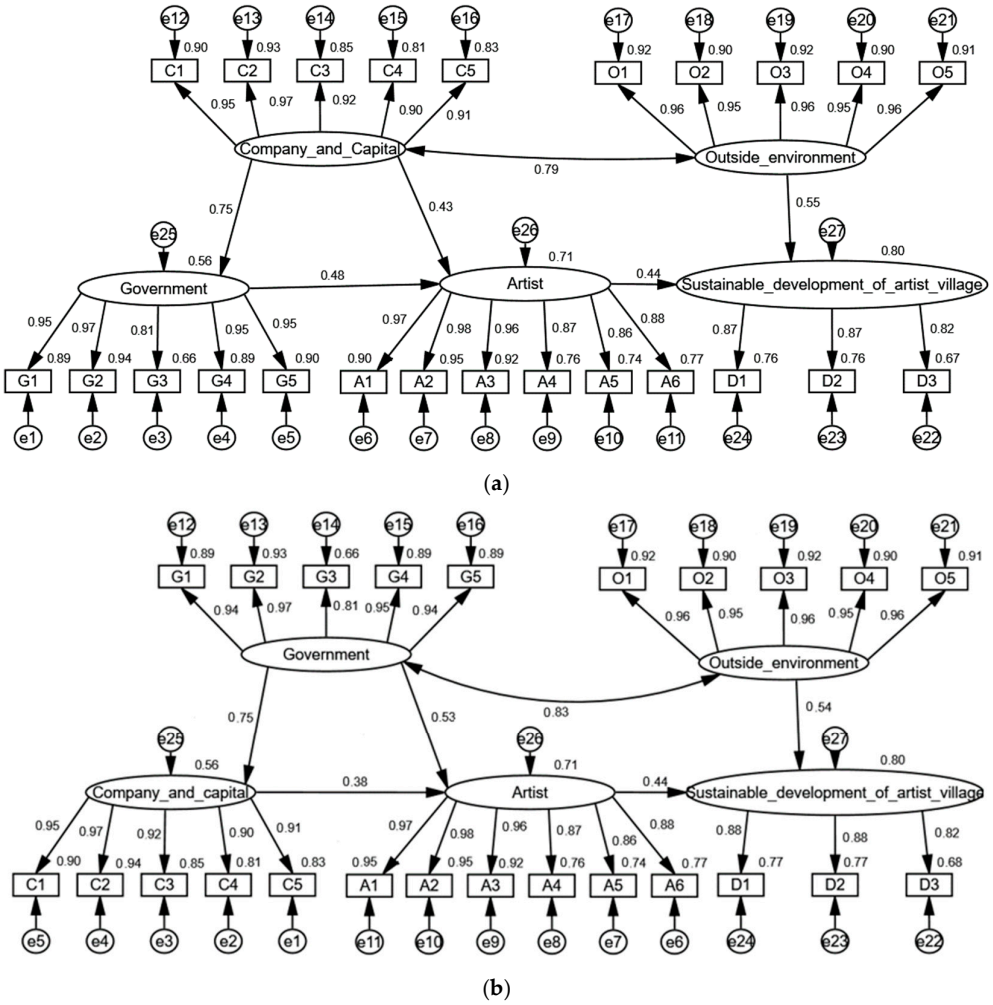


Figure 5. Measurement model empirical results. (**a**) Company/Capital as a coordinating variable; artist as a direct variable in the model; (**b**) government as a coordinating variable; artist as a direct variable in the model.

Table 12 shows the following results. The final coefficients are 0.440, 0.285, 0.257, and 0.545, respectively, for the factors A, G, C, and O. The internal factors A, G, and C account for 64%, and the outside environment (O) accounts for 36%. From a single dimension, artists (A) and the outside environment (O) can be divided into primary factors, while government (G) and company/capital (C) can be divided into secondary factors.

As far as the specific influencing factors are concerned, the final coefficients of the external influencing factors are all greater than 0.49, which has a great impact on the sustainable development of artists and can be divided into primary factors. The final coefficients of the A1, A2, and A3 factors related to the artist dimension among the internal influencing factors are greater than 0.4, which can be divided into the first-level factors. For the factors of government and company/capital dimensions, the top two factors are divided into the first-level factors according to the size of the final coefficient, namely, G2, G4 and C1, C2. Therefore, among the internal influencing factors, the first-level factor, namely, the factor of "great influence", includes A1 ", the improvement of artists' own creative level", A2 "the need for artists to realize their own professional value", A3 "artists to drive local development", G2 "the importance and policy support of the government", G4 "the need for the government to promote economic growth", C1 "the need for enterprises to enhance brand awareness", and C2 "the need for enterprises to pursue economic profits".

6. Conclusions

This paper explores and identifies the factors influencing the sustainable development of CCAVs through grounded theory and expert interviews. These factors are categorized into the following four dimensions: Artist, Government, Company/Capital, and Outside environment. On this basis, the final list of influencing factors for the SD of CCAV was determined, including 21 influencing factors. This provides a basis for the construction of the impact mechanism model of the SD of CCAVs.

With the structural equation model as a research tool, this paper proposes the theoretical model and research hypothesis of the impact mechanism of the sustainable development of CCAVs and establishes the framework of the impact mechanism model. Based on the survey data, the impact mechanism model was tested, identified, fitted, and modified, and hypothesis testing was conducted to obtain the size of the model's action path. The paper finds that the most important factors influencing the sustainable development of contemporary Chinese artist villages are the need for artists to drive local development, the need for artists to realize their professional value, the improvement in artists' creative level, the government's attention and policy support to the artist village, the need for enterprises to pursue economic profits, and the need for enterprises to improve brand awareness.

As the primary constituents of artist villages, artists' individual capabilities and future development have significant implications for the sustainable evolution of these communities. Villages housing high-caliber artists generate more valuable artistic output, thereby securing income, prestige, and more promising growth trajectories for the artist villages. This has the potential to sway governmental and corporate investment decisions concerning artist villages, making it a fundamental determinant of whether these villages can achieve sustainable development. Given the limited resources available for artist recruitment during the initial construction phase of artist villages, assembling a small team of high-quality artists with a strong sense of local identity and willingness to foster local development is a judicious strategy.

The government's attention to and policy support for the artist village, the need for enterprises to pursue economic profits, and the need for enterprises to improve brand awareness are factors that directly influence whether governments and businesses invest in artist villages. An artist village in a region where the government emphasizes the development of the art industry and where businesses are involved in the art sector is favorably positioned for sustainable development. Therefore, considering the attitudes of the local government and the structure of the industry during the establishment of an artist village is crucial for its sustainable development.

7. Research Limitations and Future Outlook

The sustainable development of contemporary Chinese artist villages involves multiple disciplines and stakeholders. Although this paper has conducted a relatively in-depth study on its sustainable development model and has proposed corresponding sustainable development strategies, there are still many limitations and areas to be explored in future research.

Firstly, contemporary Chinese artist villages are a relatively new phenomenon, and continuous observation is needed to identify and address newly emerging impediments and influential factors. Given that contemporary Chinese artist villages have only been established for just over 30 years, many have not yet experienced a full life cycle, and many influential factors are still in their nascent stages without having fully exerted their influence. Future research will need to continually follow up on these developments.

Secondly, the quantitative analysis process in the paper could be further refined. The study collected as many data as possible on the development of artist villages through the literature and field visits. In future research, it would be advantageous to select samples from different regions that are representative and have typical characteristics.

Lastly, considering China's vast territory and the different levels of socio-economic development across regions, future efforts should continue exploring development models

that incorporate local characteristics in terms of key development areas, steps, and strategies. By supplementing or subtracting from this model, it can be continually improved and refined in practice, thereby advancing the overall sustainable development of contemporary Chinese artist villages.

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