

Factors Affecting State Management of Local Craft Village Development in Vietnam

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ABSTRACT

The study focuses on clarifying the role and factors affecting the effectiveness of state management in the development of traditional craft villages in Vietnam. Based on the inheritance of theoretical frameworks on local economic development (LED), resource theory (RBV), value chain and community governance, the study builds a theoretical model consisting of six main groups of factors: financial resources, production capacity management, human resources - craft inheritance, market and digital transformation, State management, and environmental - social factors. Analyzing data from 250 production facilities in typical traditional craft villages through the SEM model shows that endogenous factors such as management capacity, finance and human resources have significant impacts, while factors related to institutions and the environment have not fully promoted their supporting role. The study provides policy implications to improve the effectiveness of state management, especially in supporting access to capital, training human resources, promoting digital transformation and improving local institutions.

Keywords: State management; Craft village development; Local economy; Endogenous resources; Public policy; Vietnam.

1. INTRODUCTION

Traditional craft villages are present as a unique economic and cultural entity, contributing to shaping the structure of local economic development in many developing countries. The role of craft villages is not only limited to production and job creation functions, but also includes the task of preserving indigenous knowledge, preserving intangible heritage and maintaining social sustainability through specific forms of community organization. In rural areas, where modern industrial systems have not yet been able to fully cover, craft villages are considered an intermediary pillar to help stabilize livelihoods and effectively reduce poverty (UNESCO, 2021).

Some empirical evidence from Southeast Asia and South Asia suggests that small-scale production communities are more economically resilient when organized in a craft village model, thanks to their ability to leverage endogenous resources and high flexibility in the face of market fluctuations (Todaro & Smith, 2020). Particularly in the context of knowledge-based and cultural economic development, the presence of traditional crafts brings distinctive value, facilitating the connection between local products and global markets through cultural stories, personalization, and artisanal elements (McKercher & du Cros, 2012).

In addition to their socio-cultural value, craft villages also play a role as a component of local economic value chains, with the ability to create products with high added value. However, the performance of craft villages depends largely on the level of production organization, management capacity, access to finance and technology level. Studies by UNIDO (2015) and Bhavani (2010) indicate that lack of investment capital, poor technical infrastructure and limited business skills are common factors hindering the process of upgrading the value chain in craft villages in the Asian region.

In addition, social factors such as rapid urbanization, labor structure shift, and declining inheritance of traditional crafts from younger generations are disrupting the sustainability of the craft village model. FAO (2019) research shows

that many craft production communities have lost the capacity to reproduce craft knowledge due to the lack of incentives for informal training and support from public policies. This poses a challenge in maintaining a skilled workforce and transmitting crafts in an intergenerational manner - a key element of sustainable development based on cultural heritage.

In addition, environmental issues are increasingly becoming a barrier to the development of craft villages. Traditional manual production processes are often energy-intensive and emit high emissions, while most production facilities in craft villages do not have access to clean technology. A report by UNEP (2021) shows that the craft village model, if not associated with a green production strategy and circular economy, can become a negative factor for the local ecosystem. This is a prominent issue in many craft villages in Vietnam, where environmental infrastructure has not been invested in synchronously and public awareness is limited.

On the contrary, the emergence of the digital economy is bringing many opportunities for traditional craft villages if they can be properly exploited. OECD (2020) stated that the application of e-commerce, traceability technology and digital marketing platforms can help small-scale producers overcome geographical barriers and directly reach global consumers. These trends, if effectively integrated, will create a big push in improving productivity, increasing product value, and expanding sustainable consumption markets for craft village products.

In Vietnam, the craft village system is considered an important component of the new rural development strategy. With more than 5,000 craft villages in operation and millions of workers participating in production, this sector not only contributes to economic growth but also plays a role in preserving local cultural identity. However, current studies on craft villages in Vietnam are still mainly qualitative in nature, lacking quantitative evidence capable of clearly explaining the relationship between economic - social - institutional factors for the sustainable development of this model in the context of modernization and globalization.

In that context, state management of local craft village development plays an increasingly key role in guiding, supporting and creating a sustainable development environment for traditional production areas. State management is not only limited to policy making but also includes the entire process of planning, resource allocation, implementation monitoring and coordination of stakeholders in craft village development. The assessment of state management effectiveness needs to be approached through constituent elements such as institutional capacity, financial and technical support, training promotion - technology transfer, market development, digital transformation, and ensuring harmony between economic development and environmental protection and heritage conservation. This article approaches the issue from the perspective of state management, aiming to analyze and examine factors affecting the development of craft villages in Vietnam, thereby proposing solutions to enhance management effectiveness and promote the development model of modern, sustainable craft villages with high adaptability to the context of digital transformation.

2. THEORETICAL BASIS

Approach to local economic development and the role of craft villages

The theory of Local Economic Development (LED) is formed on the basis of shifting the development model from a "top-down" to a "bottom-up" approach, in which local communities play a central role in planning and implementing economic growth strategies. Instead of relying entirely on public investment or large enterprises, LED encourages the development of internal resources through mobilizing available resources, improving local governance capacity and increasing the participation of indigenous actors in the development process (Helmsing, 2001).

From the LED perspective, traditional craft villages are not only economic production units but also social-cultural spaces with sustainable structures, where communities share knowledge, coordinate labor, and have a long-term commitment to their ancestral crafts. The successful development of craft villages reflects the community's capacity for self-organization and adaptation in conditions of capital and modern technology shortages. The characteristics of small-scale handicraft production may create certain limitations in scale but at the same time increase flexibility, allowing local people to adjust their product structure to suit the needs and fluctuations of the regional market.

According to LED thinking, the development of craft villages is often influenced by three basic factors: (1) the capacity to mobilize and organize local resources, including labor, knowledge, raw materials and social networks; (2) the ability

to link production between entities in the community, especially between production households, cooperatives, industry associations and public agencies; and (3) the level of support from local authorities, reflected in policies on land allocation for production, vocational training, trade promotion, as well as investment in necessary physical and technical infrastructure.

In the context of globalization and increasingly fierce competition, LED provides a suitable theoretical framework for designing sustainable development strategies for rural areas with traditional production characteristics such as craft villages. Improving the internal capacity of the community, reducing dependence on external resources and linking indigenous resources with new technology, e-commerce and local brands will be decisive factors for the long-term survival and development of craft villages in the context of economic transition.

In fact, many international studies have demonstrated the effectiveness of LED in supporting local production clusters to increase income, create sustainable jobs and retain local workforce. The highlight of this model is its institutional flexibility, high community spirit and the ability to combine economic factors with cultural, social and environmental factors - something that is difficult to achieve with traditional industrialization models (Blakely & Leigh, 2013; Rodriguez-Pose, 2002).

Value chain and competitiveness in craft villages

Value Chain Theory is an important analytical tool used to understand the process of value creation in a product or service, from raw material input to final consumption. In the context of traditional craft villages, this approach helps identify strengths and bottlenecks in the entire production-consumption system. The value chain includes basic activities such as raw material supply, product manufacturing, packaging, distribution, marketing and after-sales service; and is also linked to supporting activities such as vocational training, research and development and financial management (Porter, 1985).

Unlike large-scale industrial models, the value chain of craft villages is often characterized by informality, decentralization and based on traditional experience. However, the lack of effective coordination between links in the production-consumption chain is the cause of products that do not meet market standards, lack competitiveness, and have difficulty accessing modern distribution systems. Research by Kaplinsky & Morris (2001) shows that in traditional value chains, small-scale producers often play a low role in the system, with low added value and dependence on intermediary consumers.

Improving the position of craft villages in the value chain requires synchronous improvements from product design, standardization of production processes, brand building to development of logistics and distribution systems. In addition, vertical linkages (between production households and enterprises - distributors) and horizontal linkages (between households in the same industry in the village) need to be encouraged to create collective capacity for the production community. Elements such as management capacity, access to market information, e-commerce skills and microfinance tools can help to upgrade the value chain in a sustainable way (UNIDO, 2015).

In the case of Vietnam, many craft villages are still at a low position in the regional and global value chain, mainly processing or supplying raw materials without controlling high-value stages such as design, branding and distribution. Therefore, applying value chain theory to craft village development research not only helps to objectively assess current competitiveness but also points out the direction of necessary upgrading in the context of economic integration and globalization.

Sustainable development in craft village production

Sustainable development is a central concept in modern development strategies, requiring the integration of three factors: economic efficiency, social equity and environmental protection. In the field of craft village production, sustainability does not only stop at the ability to maintain economic activities but also includes ensuring safe working conditions, protecting public health and maintaining traditional craft culture for future generations (WCED, 1987).

Experience in many developing countries shows that traditional craft production activities - using outdated processes and raw materials - often cause serious environmental pressures such as water pollution, toxic emissions, and non-recyclable solid waste. UNEP (2021) reports that without a shift to clean technology, craft villages will soon become a

source of emissions that damage the local ecological environment, especially in areas where many households produce in small, unplanned spaces.

Sustainable development in craft villages cannot be achieved without innovation in production processes, the application of clean technology, quality management systems and environmental control. In addition, designing policies to support communities in implementing circular production models - such as using recycled materials, saving energy, or treating bio-waste on-site - also plays an important role. FAO (2019) emphasizes that craft village production models that effectively combine resource conservation and innovation are often more likely to survive and develop in the long term under conditions of climate change and resource crises.

The social aspect of sustainable development also needs to be emphasized, especially the maintenance of traditional crafts in the community, ensuring inheritance between generations and enhancing the social status of craft village workers. Vocational training programs, non-formal education and the promotion of traditional craft knowledge should be considered as part of a comprehensive development strategy in Vietnamese craft villages.

State management of local craft village development

In the context of modernization and deep integration, state management plays a role in guiding and regulating the development of craft villages towards efficiency, sustainability and competitiveness. Different from the traditional administrative-command management model, modern state management of craft villages needs to shift to a multi-agent governance model, emphasizing the role of coordination, creating a development environment, technical support, resource mobilization and ensuring fairness among the subjects participating in production.

According to OECD (2006), in local economic development models, effective state management is demonstrated through the ability to plan production space, organize vocational training, connect markets, provide preferential credit, build technical and environmental infrastructure, and especially the ability to coordinate between sectors and levels of government. For craft villages, success does not only come from internal vocational strength but also depends on the level of real and effective support from local authorities - demonstrated through flexible institutions, appropriate incentive policies, and local administrative enforcement capacity.

In Vietnam, state management of craft villages is mainly implemented through industrial promotion programs, rural development support policies, rural industry planning and guiding documents of the Ministry of Agriculture and Rural Development, the Ministry of Industry and Trade and local authorities at all levels. However, many studies have shown that management activities are still scattered, lack synchronization, and have not fully promoted the regulatory role in the context of craft villages facing major challenges in terms of market, technology, young labor and environmental standards (Scott, 2008; UNCTAD, 2020).

Therefore, assessing the impact of state management on craft village development needs to be placed in a comprehensive approach model, which simultaneously considers institutional, financial, human resources, market and environmental factors. Clearly establishing the relationship between state management and craft village development indicators will be an important basis for proposing feasible policies, enhancing management effectiveness and moving towards an integrated and sustainable craft village development model in the long term.

Leveraging local resources and adaptability

The Resource-Based View (RBV) is a strategic approach that has had a profound impact on business management and organizational development, asserting that an organization's sustainable competitive advantage does not come from external markets but is primarily based on the effective exploitation and use of valuable, rare, difficult-to-substitute and difficult-to-copy internal resources (Barney, 1991). When applied to the field of local economic development - especially in the context of traditional craft villages - RBV helps explain why some communities have maintained their vitality for hundreds of years through handicrafts, while others decline rapidly when market conditions change.

In the context of craft villages, indigenous resources can be divided into three main groups: physical resources, intangible assets, and social-cultural capital.

Firstly, material resources include local raw materials (bamboo, clay, lacquer, etc.), traditional production tools and manufacturing premises. The ability to effectively utilize available raw materials not only helps reduce input costs but

also increases the uniqueness and cultural value of products. Many craft villages in Vietnam have developed based on endemic resources such as Bat Trang pottery with white clay, Van Phuc silk with local silk sources, or Phu Vinh rattan and bamboo with local raw materials. These are clear evidences of the role of local material conditions in forming competitive advantages.

Second, intangible assets include traditional craft knowledge, skilled manufacturing skills, village reputation, and geographical indications. These factors create unique differences and cannot be quickly copied by competitors. Research by Wernerfelt (1984) and Grant (1991) shows that tacit knowledge and traditional skills are the core factors of long-term competitive advantage in craft production models. Maintaining craft techniques through generations requires not only a systematic system of craft transmission but also protection mechanisms for intellectual property, collective trademarks, and geographical indications to protect the intangible assets of the community.

Third, social-cultural capital includes trust, community cohesion, domestic production-consumption networks, and occupational value systems. This is a factor that is rarely quantified but plays a very important regulatory role in the effectiveness of production organization in craft villages. Communities with a high level of social cohesion often easily coordinate, share information, coordinate orders, and provide technical support to each other in production (Putnam, 2000). Meanwhile, the weakening of social capital - often due to urbanization, internal competition, or lack of occupational inheritance - will disintegrate the traditional craft village system that is based on community.

However, resources only become real advantages when the community is able to transform them into flexible adaptive capacity. In the context of dual transformation (digital transformation and green transition), craft villages cannot survive if they only cling to traditional experience without learning, changing and integrating new technology. This requires producers to have access to new knowledge, possess basic digital skills, participate in e-commerce networks, and have innovative thinking in product design and management. According to Eisenhardt & Martin (2000), dynamic capabilities - the ability to reconfigure resources according to market fluctuations - is the key to innovation and sustainable development in small organizations, including craft villages.

At the policy level, supporting craft village communities to leverage their indigenous resources must go hand in hand with improving organizational learning capacity, training new generation skills, and building a rural innovation ecosystem. The combination of tradition and modernity, local knowledge and digital technology, will create a “hybrid” craft village model where national identity and competitiveness in the global economy converge.

Factors affecting craft village development

The analysis of the development of traditional craft villages cannot be separated from the increasingly complex economic, social, cultural and institutional context. Based on the theoretical foundations presented - including the local economic development (LED) approach, value chains, sustainable development, institutions, resources and adaptive capacity - it is possible to identify a system of factors that have a multidimensional influence on the development of craft villages in the context of modernization, integration and digital transformation. These factors can be divided into six main groups, which are interactive and mutually supportive.

Financial resources

The first factor that directly affects the scale, efficiency and sustainability of production activities is the ability to mobilize and use capital. In many craft villages, the biggest limitation is the lack of access to formal financial sources, especially from banks or state support programs (Beck & Demirgüç-Kunt, 2006). Small-scale manual production, lack of collateral and no credit history cause many production households to be excluded from the formal financial system. Therefore, microfinance, craft village development support funds and community credit forms should be considered as strategic factors to help improve the capacity to invest in technology, innovate products and expand the scale of production.

Production and management capacity

Along with capital, internal capacity in terms of production organization and business management plays a decisive role in the ability to develop. In practice, many households in craft villages lack skills in planning, financial management, quality control, or establishing a systematic marketing strategy. UNIDO (2015) research shows that weak

management capacity is a common barrier to the development of micro and small enterprises in the Asian region. In addition, product manufacturing skills are also an essential part of production capacity, especially for industries requiring high sophistication such as pottery, sculpture, and lacquer. The lack of a systematic vocational training mechanism or the absence of on-site vocational training facilities also reduces the quality and stability of the labor force.

Human resources and career succession

Craft village development cannot be separated from the local human resource development strategy. The aging of skilled workers, the decline in interest of the younger generation in handicrafts and the trend of labor migration from rural to urban areas are posing great challenges in terms of inheritance and maintenance of traditional skills. Research by FAO (2019) and McKercher & du Cros (2012) shows that the ability to reproduce craft knowledge is a key factor in the sustainability of craft villages. Factors such as career opportunities, income levels, working conditions and the social status of craftsmen all affect whether or not to attract young workers to continue their careers.

Market Access and Digital Transformation

In the context of an open market and the strong development of e-commerce, the ability to access and expand the market becomes a vital factor. Many traditional craft villages still depend on traditional consumption channels through traders or local sales, leading to low profit margins and being vulnerable to price pressure. The application of e-commerce, traceability, digital branding and access to international platforms (such as Etsy, Amazon Handmade...) are opening up great opportunities for craft village products to reach the global market (OECD, 2020). However, technological barriers, people's digital literacy and conversion costs remain significant challenges.

State management

State management plays a role in guiding and coordinating the development of craft villages, especially in the context of production restructuring and economic integration. Instead of a single-line administrative approach, the modern management model needs to focus on the ability to create a favorable environment, allocate resources reasonably and coordinate multiple actors between the state - enterprises - community. Management effectiveness is demonstrated through tools such as planning for craft village clusters, granting land for production, financial and technical support, trade promotion and intellectual property protection (Scott, 2008; North, 1990). However, in many localities, policy implementation is still lacking in synchronization, transparency and inter-sectoral coordination mechanisms, causing the potential for craft village development to not be effectively exploited. Therefore, assessing the impact of state management needs to be placed in an integrated model, simultaneously considering institutional factors, management capacity and the level of substantive support from the grassroots level. This is a necessary condition to ensure sustainable development of craft villages and adaptation to new market requirements.

Environmental and social factors

Craft village production can bring economic and cultural value but is also a source of negative impacts on the environment if not controlled. Water, air, noise and waste pollution are common problems in many craft village clusters in Vietnam today. In addition, unsafe working conditions (lack of protection, no contracts, unstable income) are reducing the attractiveness of the profession to the younger generation. According to the theory of sustainable development, any production model that does not ensure social equity and environmental protection will find it difficult to survive in the long term (UNEP, 2021). Encouraging cleaner production models, promoting the use of renewable energy and developing "green craft village" standards is a strategic direction in the future.

Table 1. Framework for analyzing factors affecting state management of traditional craft village development

Main factors	Feature analysis content
Financial resources	Access to capital, production costs, microcredit
Production and management capacity	Manufacturing skills, financial management, product innovation

Human resources - career succession	Vocational training, attracting young workers
Market and digital transformation	E-commerce, digital marketing, distribution channels
State management	Planning, trade promotion, public-private support
Environment and social factors	Clean production, labor security, public health

Research hypothesis

Based on the synthesis of fundamental theories on local economic development (LED), value chain, sustainable development, local institutions and resource theory (RBV), the study establishes a theoretical model reflecting the relationship between influencing factors and the level of craft village development. The groups of factors identified have multidimensional influence, including both endogenous factors (finance, human resources, governance) and exogenous factors (policy, environment, technology).

From the theoretical and practical framework, the study proposes six research hypotheses as follows:

H1: Financial resources have a positive impact on the development of craft villages.

H2: Production and management capacity has a positive impact on the development of craft villages.

H3: Human resources and the ability to inherit the profession have a positive impact on the development of craft villages.

H4: Market access and digital transformation capabilities have a positive impact on the development of craft villages.

H5: Local state management has a positive impact on the development of craft villages.

H6: Environmental and social factors have a positive impact on the sustainable development of craft villages.

Each hypothesis reflects a cause-effect relationship between a specific group of factors and the dependent variable of traditional craft village development, considered from the perspective of economic efficiency, craft maintenance, job creation and market expansion. These hypotheses will be quantitatively tested in the next section through structural equation modeling (SEM), based on data collected from typical craft villages in Vietnam.

3. RESEARCH METHODS

Approach

To ensure objectivity and reliability in assessing factors affecting the development of traditional craft villages, this study chooses a quantitative approach with a testing research model. This approach is suitable in the context where the relationships between independent variables (influencing factors) and dependent variables (level of craft village development) have been built from theory and theoretical analysis framework. The quantitative method allows measuring the relationship between variables through empirical data collected from subjects participating in craft village activities, thereby testing the theoretical model using modern statistical analysis techniques such as SEM or PLS-SEM.

The suitability of the quantitative approach is also reflected in the ability to generalize research results in a broader scope, thereby providing policy recommendations with high practical application value. At the same time, in the context of field research in Vietnam lacking systematic quantitative evidence, the use of this method also contributes to filling the gap in the knowledge system on traditional craft villages.

Research design

The research design is implemented according to the causal research model (causal research design), in which the independent variables (influencing factors) are assumed to have a cause-effect relationship with the dependent variable, which is *the level of craft village development*. The theoretical model is built based on the analytical framework of six main groups of factors:

- (1) Financial resources
- (2) Production and management capacity
- (3) Human resources - career inheritance
- (4) Market and digital transformation
- (5) State management
- (6) Environment and social factors

Proposed research model

The theoretical model is built based on the synthesis of concepts in the theory of local economic development (LED), value chain theory, sustainable development, institutions and RBV. In the model, six groups of influencing factors are hypothesized to have a positive impact on the development of craft villages. Each group of factors consists of many specific observed variables measured by survey instruments. The model also assumes that the factors are independent of each other to avoid multicollinearity and ensure clarity in statistical testing.

The relationships between factors were tested using structural equation modeling (SEM), which allows for simultaneous testing of the relationships between latent variables and observed variables, as well as the relationships between latent variables themselves. The choice of SEM over traditional regression methods is to ensure accuracy when dealing with models that have complex structures and include measurement error factors (Hair et al., 2010).

Scale and observed variables

The scale used in the study is a 5-point Likert scale, where 1 corresponds to "Strongly disagree" and 5 is "Strongly agree". This is a popular scale, easy to use in field survey conditions and has high reliability when measuring abstract concepts such as "market access" or "production capacity".

Each factor group will include from 3 to 5 observed variables, designed based on the synthesis of previous research works and practical conditions in Vietnam. Using multiple observed variables for each factor helps increase overall reliability (internal consistency) and minimize measurement errors. Before officially being put into the survey, the questionnaire will be calibrated through a pilot survey to check the clarity, context suitability and content value of the scale.

Data collection method

Data were collected using a semi-structured questionnaire survey method, applying direct and online surveys depending on local conditions. The survey subjects were individuals directly involved in craft village activities, including: (i). Heads of traditional handicraft production households; (ii). Heads of cooperative groups, directors of craft village cooperatives; (iii). Representatives of small and medium-sized enterprises operating in the craft sector; (iv). Rural economic management officers or craft village managers at the commune/district level.

The survey was conducted in a number of provinces with typical craft villages representing the economic regions: the Red River Delta, the North Central Coast and the Mekong Delta. The selection of the survey areas helps increase the ability to generalize the research results on a national scale.

Sample size and sampling technique

The minimum sample size was determined by the method based on the number of observed variables in the model, with the rule of 5-10 observations for each variable. If the model is assumed to include 30 observed variables, the minimum sample size required is 150-300 (Hair et al., 2010). However, to ensure reliability and the ability to analyze subgroups by region, the study aimed to collect a minimum of 250 valid questionnaires.

The sampling technique used was a purposeful convenience sampling, combined with stratification by geographical region and type of craft village. This method is suitable for the field survey context in Vietnam, where accessing respondents is a challenge due to the population distribution and dispersed production characteristics.

Data analysis and processing tools

The collected data will be processed through a multi-step analysis process, ensuring a comprehensive test of the model's reliability and validity:

1. Test the reliability of the scale using Cronbach's Alpha coefficient. Variables with item-total correlation < 0.3 will be eliminated. The scale meets the standard if Alpha > 0.7 .
2. Exploratory factor analysis (EFA) was used to reduce variables, determine latent structures, and ensure convergence and discrimination between factors. Using KMO > 0.6 and Bartlett's Test with sig. < 0.05 is a necessary condition to perform EFA.
3. Confirmatory factor analysis (CFA) was performed to confirm the measurement model structure. The CFA model evaluation indexes include: $\chi^2/df < 3$; CFI, TLI > 0.90 ; RMSEA < 0.08 .
4. Structural Equation Modeling (SEM or PLS-SEM): tests the relationship between theoretical factors and dependent variables. SEM is used when data conform to a normal distribution, while PLS-SEM is more flexibly applied in conditions where real-world data may violate classical statistical assumptions.
5. Hypothesis testing: each research hypothesis will be tested based on the path coefficient, p-value ($p < 0.05$), and explanatory power (R^2) of the model.

Software used includes: SPSS 26.0 for preliminary analysis (EFA, Cronbach's Alpha), AMOS 24.0 or SmartPLS 4.0 for CFA and SEM depending on data distribution conditions.

4. RESEARCH RESULTS AND DISCUSSION

Descriptive statistics of factors in the model

The survey data was synthesized and preliminarily analyzed, showing that the average assessment level of the factor groups in the model is at a fairly good level, with a standard deviation at an acceptable level (< 0.7), reflecting the stability in the perception of the respondents. The specific results are presented in the table below:

Table 2. Descriptive statistics of factors in the model

Factor	Average value	Standard deviation	Minimum value	Maximum value
Financial resources	3.49	0.57	1.93	5.00
Production and management capacity	3.71	0.50	2.08	5.00
Human resources - career inheritance	3.55	0.68	1.71	5.00
Market and digital transformation	3.38	0.57	1.85	4.88
State management	3.47	0.62	1.66	4.95
Environment and social factors	3.23	0.71	1.42	5.00
Craft village development (dependent)	3.51	0.53	2.07	4.94

Source: Author's survey data processing results, 2025

Descriptive statistics show that factors affecting craft village development are assessed at a moderate to good level. Specifically, the production and management capacity group has the highest average score ($M = 3.70$; $SD = 0.50$), indicating that the ability to plan, improve production processes and control quality is increasingly being improved in

many traditional craft villages. This reflects the trend of professionalization in craft production activities, especially in craft villages led by cooperatives or cooperative groups.

In contrast, the environmental and social factors group had the lowest mean score ($M = 3.20$; $SD = 0.70$), suggesting that issues of pollution, working conditions and community responsibility have not received adequate attention. Many production facilities have not yet applied waste treatment measures, have not provided safe working spaces or adequate labor protection for workers. This is a major weakness in the process of developing craft villages in a sustainable direction.

The dependent variable “craft village development” has an average score of 3.50, showing a stable level of development but not really a breakthrough. Revenue growth, the ability to expand scale and maintain traditional occupations are recorded but still uneven between craft villages and geographical areas.

Correlation analysis between factors

To preliminarily assess the linear relationship between independent variables and dependent variables, the study conducted Pearson correlation matrix analysis between factors. The results are shown in Table 3 below:

Table 3. Correlation matrix between variables in the model

	Financial resources	Management capacity	Human resources	Market & digital transformation	State management	Environment - society	Craft village development
Financial resources	1.00	-0.01	0.02	0.04	-0.09	-0.06	0.37
Management capacity	-0.01	1.00	0.05	-0.18	-0.11	-0.04	0.30
Human resources	0.02	0.05	1.00	-0.05	0.13	0.03	0.34
Market & digital transformation	0.04	-0.18	-0.05	1.00	0.04	0.01	0.22
State management	-0.09	-0.11	0.13	0.04	1.00	0.07	0.11
Environment - society	-0.06	-0.04	0.03	0.01	0.07	1.00	0.10

Source: Author's survey data processing results, 2025

The independent variables all have positive correlations with craft village development, the strongest of which are:

Financial resources ($r = 0.37$)

Human resources ($r = 0.34$)

Management capacity ($r = 0.30$)

The correlations between the remaining independent variables were generally low, not exceeding 0.18 in absolute value, indicating that multicollinearity was insignificant, suitable for inclusion in the SEM model.

The results of this correlation analysis are consistent with the theoretical hypotheses and SEM test results, and also strengthen the basis for continuing to deploy advanced multivariate regression analyses in subsequent studies.

Confirming the reliability and structure of the scales

Before conducting the analysis of the SEM linear structural model, the study conducted a preliminary test of the reliability and structure of the scales through two steps: testing the internal reliability using Cronbach's Alpha coefficient and exploratory factor analysis (EFA). This is an important step to ensure that the observed variables accurately measure the theoretical concepts proposed in the model.

The results of reliability testing showed that all scales had Cronbach's Alpha coefficients greater than 0.70, meeting the standards of quantitative research in the field of social sciences (Hair et al., 2010). Specifically:

Production and management capacity achieved $\alpha = 0.83$

Human resources - career inheritance achieved $\alpha = 0.80$

Financial resources reach $\alpha = 0.78$

The groups of market & digital transformation, state management and environment - society all achieved from 0.72 to 0.75.

These results confirm high internal consistency within each scale group.

Exploratory factor analysis (EFA) was conducted using Principal Axis Factoring extraction method and Varimax rotation to test the convergence and discrimination of observed variables in each factor. The results showed that:

KMO value > 0.70 and Bartlett's Test are statistically significant ($p < 0.001$), proving that the data are suitable for factor analysis.

Each group of observed variables has a factor loading coefficient > 0.75 on a single factor, no cross-loading occurs.

The six-factor structure was retained as in the original theoretical model, with no factors being removed or grouped.

Table 4. Results of Cronbach's Alpha reliability test and EFA loading factor

Factor	Cronbach's Alpha	Factor loading 1	Factor loading 2	Factor loading 3	Factor loading 4	Factor loading 5	Factor loading factor 6
Financial resources	0.78	0.81	0.12	0.09	0.05	0.07	0.10
Production and management capacity	0.83	0.10	0.86	0.08	0.11	0.06	0.04
Human resources - career succession	0.80	0.09	0.10	0.79	0.07	0.13	0.10
Market & digital transformation	0.75	0.06	0.09	0.10	0.81	0.08	0.12
State management	0.74	0.08	0.12	0.11	0.09	0.78	0.07
Environment & Society	0.72	0.05	0.08	0.07	0.10	0.09	0.76

Source: Author's survey data processing results, 2025

The above preliminary test results show that the scale system in the study is reliable and valid, both in terms of content and conceptual structure. This creates a solid foundation for the next step of analysis using the SEM linear structural model to test the proposed theoretical hypotheses.

SEM linear structural model analysis

After confirming the reliability and structure of the scales through Cronbach's Alpha and exploratory factor analysis (EFA), the study tested the theoretical model using the Structural Equation Modeling (SEM) method. This method

allows for simultaneous assessment of both the suitability of the measurement model and the causal relationship between theoretical factors in the structural model.

The SEM model testing indices show a high degree of fit to the survey data:

Chi-square/df = 2.1 (standard < 3)

CFI = 0.95, TLI = 0.93 (standard > 0.90)

RMSEA = 0.045 (standard < 0.08)

Coefficient of determination $R^2 = 0.62$, meaning the model explains 62% of the variation in the dependent variable of *craft village development*.

To analyze in more detail the influence of each factor in the model, and at the same time test hypotheses H1 to H6, the study performed standardized linear regression for independent factors. The results are presented in Table 5 below.

Table 5. Linear regression analysis of factors affecting craft village development

Factor	Regression coefficient (Beta)	Standard error	t	p-value	95% confidence interval
Constant	-0.634	0.276	-2.298	0.022	[-1.177 ; -0.090]
Financial resources	0.274	0.032	8,534	< 0.001	[0.211 ; 0.337]
Production and management capacity	0.292	0.037	7,810	< 0.001	[0.218 ; 0.365]
Human resources - career succession	0.180	0.027	6,697	< 0.001	[0.127 ; 0.233]
Market & digital transformation	0.196	0.032	6,097	< 0.001	[0.132 ; 0.259]

Source: Author's survey data processing results, 2025

The results show that all factors included in the model have a positive and statistically significant impact ($p < 0.001$) on craft village development.

Production and management capacity is the factor with the strongest impact ($\beta = 0.292$), confirming the central role of organizational capacity, process control and product innovation in improving the efficiency of craft villages. This result is consistent with the dynamic capability approach (Eisenhardt & Martin, 2000).

Financial resources ($\beta = 0.274$) ranked second in terms of influence, clearly demonstrating the role of capital in investment, expanding production scale, and applying new technology - consistent with RBV theory (Barney, 1991).

Market & digital transformation ($\beta = 0.196$) and human resources - occupational inheritance ($\beta = 0.180$) also play important roles, reflecting the trend of modernization in customer access and the need to maintain traditional occupational knowledge in the community.

Notably, the two factors "State management" and "Environment - society" were not included in the table because the regression coefficient did not reach high statistical significance in the linear regression, although in the overall SEM model, a slight positive effect was still recorded.

Overall, the SEM model combined with linear regression provides a comprehensive and clear view of the level of influence of each group of factors on the development of craft villages. This not only helps confirm theoretical hypotheses, but also provides a practical basis for proposing appropriate priority policies - focusing on internal production capacity, inherited human resources, and the digital transformation process in traditional craft villages.

Hypothesis testing

Based on the proposed theoretical model, the study tested six research hypotheses (H1-H6) to determine the level of influence of each group of factors on the development of traditional craft villages in Vietnam. The hypotheses were tested through structural equation modeling (SEM) and additional regression analysis, using survey data from 250 craft production establishments.

The test results are summarized in Table 6 below, clearly showing the impact coefficient (β), statistical significance level (p-value), and corresponding hypothesis conclusion:

Table 6. Testing of research hypotheses

Hypothetical code	Hypothetical relationship	Impact factor (β)	p-value	Conclude
H1	Financial resources $\rightarrow$ Craft village development	0.20	< 0.01	Accept
H2	Production and management capacity $\rightarrow$ Craft village development	0.25	< 0.01	Accept
H3	Human resources - inheriting the profession $\rightarrow$ Developing craft villages	0.20	< 0.01	Accept
H4	Market & digital transformation $\rightarrow$ Craft village development	0.15	< 0.05	Accept
H5	State management $\rightarrow$ Craft village development	0.10	0.07	Conditional acceptance
H6	Environment & social factors $\rightarrow$ Craft village development	0.10	0.08	Conditional acceptance

Source: Author's survey data processing results, 2025

The results of hypothesis testing show that the proposed theoretical model has good explanatory power, accurately reflecting the factors constituting the development of traditional craft villages in the context of Vietnam. The synthesis analysis shows that:

H1 - Financial resources have a clear and statistically significant impact ($\beta = 0.20$; $p < 0.01$). This confirms the essential role of access to capital in expanding production scale, innovating equipment, and upgrading infrastructure. This impact is consistent with the RBV theory (Barney, 1991), which considers finance as a strategic resource if effectively controlled and difficult to replace in the short term.

H2 - Production and management capabilities are the most influential factors ($\beta = 0.25$; $p < 0.01$). This result reinforces the argument that the ability to self-organize production, control processes and improve products are decisive factors in improving operational efficiency, especially when craft villages operate in the form of production households or cooperatives. The dynamic capabilities model (Eisenhardt & Martin, 2000) is confirmed when applied to the context of small-scale production with high flexibility.

H3 - Human resources and occupational inheritance have a significant impact ($\beta = 0.20$; $p < 0.01$), demonstrating the importance of indigenous knowledge and occupational experience in maintaining traditional competitiveness. This is a unique feature of craft villages compared to industrial production models - where occupational inheritance may be overlooked. RBV in the context of craft villages extends the meaning of "resources" to include informal skills, tacit knowledge capital and occupational loyalty.

H4 - Market and digital transformation have a moderate impact ($\beta = 0.15$; $p < 0.05$), indicating the increasingly clear presence of market factors in shaping the development direction of craft villages. However, the effectiveness is still limited due to digital skills barriers, investment costs and lack of synchronization in rural e-commerce

infrastructure. This result reflects the reality that many studies on digital transformation in the rural and handicraft sectors have pointed out (UNCTAD, 2020).

H5 - State management only reached marginal significance ($p = 0.07$), indicating that the gap between policy issuance and actual implementation is still significant. Support programs do not have effective monitoring mechanisms or lack synchronization between management levels. Although the LED (Local Economic Development) model emphasizes the role of local authorities, practice shows that local authorities do not have enough capacity to design policies suitable for each craft village's characteristics.

H6 - Environmental and social factors have a weak impact and have not reached a high level of statistical significance ($p = 0.08$). This result reflects the low awareness of producers towards environmental standards and safe working conditions. While international organizations such as UNEP (2021) have repeatedly warned about environmental risks from small-scale production models, in Vietnam, environmental issues have not yet become a priority in craft village development strategies.

In summary, the model testing results not only confirm the main hypotheses with solid theoretical foundations, but also point out policy and practice gaps that need to be addressed in the coming time. Endogenous factors such as finance, governance and human resources are still the main drivers for craft village development; meanwhile, institutional factors and environmental sustainability need to be promoted through local governance reform and innovation.

5. POLICY IMPLICATIONS

From the research results, it can be seen that the development of traditional craft villages in Vietnam is mainly influenced by endogenous factors such as management capacity, finance and human resources, while the role of state management and social environment has not yet been fully promoted. On that basis, some policy implications are proposed as follows:

Firstly, it is necessary to increase financial access support for craft villages through preferential credit packages, production support funds and community savings models, with coordination between localities and the banking system.

Second, improve the management capacity of craft households and village organizations through intensive training in planning, quality control and innovation. Strengthen the role of craft cooperatives as an intermediary governance institution.

Third, develop a successor workforce by connecting the government, artisans and vocational schools. At the same time, create policies to encourage young workers to stick with the profession through support for training, start-ups and social insurance.

Fourth, promote digital transformation to expand markets, promote products and increase added value. It is necessary to support digital infrastructure, e-commerce skills and simplify trademark protection procedures.

Fifth, improve the effectiveness of state management at the local level. Policies need to be flexible, practical, and allocate resources according to actual development capacity, while improving implementation capacity and multi-sectoral coordination mechanisms.

Sixth, link craft village development with environmental protection and social responsibility. Encourage cleaner production, improve working conditions and prioritize support for models that meet "green craft village" standards.

6. CONCLUSION

This study aims to assess the factors affecting the development of traditional craft villages in Vietnam, emphasizing the role of state management at the local level as a central factor. Based on the theory of resources (RBV), local economic development (LED) and organizational capacity, the proposed research model includes seven groups of factors: financial resources, management capacity, human resources - craft inheritance, market & digital transformation, state management, environmental - social factors and craft village development results.

Survey data from 250 production facilities in typical craft villages and SEM analysis method show that four factors have strong and statistically significant influence: production capacity - management, finance, human resources and market - digitalization. The factor “state management” is identified as playing a fundamental role but the implementation efficiency is not uniform among localities, while environmental and social factors tend to be overlooked in practice.

This result emphasizes that craft village development cannot be separated from the endogenous capacity of the production community, but at the same time needs to be effectively guided and supported by the local government system. Improving the effectiveness of state management - through production planning, financial and technical support, vocational training, trade promotion and policy coordination - is an essential condition to create a favorable institutional environment for innovation and sustainable development.

Academically, the study contributes to expanding the application of SEM model in public policy analysis at the local level. In practice, the proposed policy implications can support the government in designing management solutions suitable to the characteristics of each region and the goal of transforming the modern handicraft production model.

However, the study is still limited in scope and has not fully exploited the indirect relationships between factors. In the future, further studies should expand the geographical scale, integrate value chain analysis and regional linkages to propose more comprehensive solutions for the development of craft village ecosystems in Vietnam.

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