

Article

Balancing Efficiency and Equity in Configurational Pathways to Rural Entrepreneurial Activity in China: Evidence from Qualitative Comparative Analysis

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Abstract

Entrepreneurship is widely recognized as a critical engine of economic growth. This is especially true in rural areas, where resources, policy support, and talent pools are often constrained. Stimulating entrepreneurial vitality in these regions has thus become an urgent policy and research priority. This study adopts an inclusive growth perspective, selecting six key elements—economic level, industrial structure, financial development, educational condition, medical condition, and social security—to construct a theoretical model exploring the configuration pathways that drive rural entrepreneurial activity. Using fuzzy set qualitative comparative analysis (fsQCA), the study examines 982 rural regions in China and draws the following conclusions: (1) None of the six key elements is a necessary condition for rural entrepreneurial activity. (2) The “finance and healthcare-driven” type (C1), “industrial and educational balance” type (C2), “financial and educational synergy” type (C3), and “industrial and healthcare support” type (C4) are the configuration paths to achieve high rural entrepreneurial activity. The findings provide both theoretical and practical insights for stimulating entrepreneurship in rural China. Specifically, they highlight how different developmental configurations can activate local entrepreneurial ecosystems, expand employment and entrepreneurship opportunities for vulnerable groups, and contribute to sustainable poverty alleviation.

Keywords: efficiency; equity; rural entrepreneurship activity; fsQCA



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1. Introduction

As a key driver of economic development, entrepreneurship has been widely recognized and promoted globally and has gradually become a significant consideration in policy formulation across various countries. Entrepreneurial activities play a vital role in the economic system of many countries and promote sustainable socioeconomic development [1]. They provide more jobs [2], absorb a large amount of labor, and ensure social employment. In the context of increasing downward pressure on the economy and a severe employment situation, stimulating market vitality through entrepreneurship has become a top priority [3]. Although global entrepreneurial activity is steadily increasing, this trend remains immature and unstable, with significant regional differences [4]. Especially in

some peri-urban areas, such as rural areas, due to resource constraints, policy environment, talent pool, and other factors, the development of entrepreneurial activities faces numerous challenges [5]. Therefore, it is of great significance to thoroughly analyze the actual situation in these areas and explore the path to realizing high rural entrepreneurial activity, which differs from that in urban areas, for promoting poverty reduction and sustainable development on a global scale.

The existing research has made remarkable progress in the field of entrepreneurial activity, but most of it focuses on the national or urban level and pays relatively little attention to rural entrepreneurial activities. A few studies involving rural entrepreneurship mostly adopt the idea of “net effect” to explore the direct influence of a single factor, such as the policy of “withdrawing counties and establishing districts” [6]. Although these studies are helpful to understand the linear causality of rural entrepreneurial activity, it is difficult to reveal how multiple influencing factors combine to affect rural entrepreneurial activity [7]. This limitation lies in ignoring the fact that entrepreneurs are often in a complex entrepreneurial environment composed of various interdependent factors, which can jointly promote or restrict the development of entrepreneurial activities in a specific region [8]. Considering the vast territory of China and the diversity of rural areas, except for the core cities, it can provide rich cases for the study and help to reveal the universal conclusion of achieving high-level entrepreneurship. Therefore, it is necessary to deeply study how the configuration effects among the antecedents have a synergistic effect on the entrepreneurial activity in rural areas of China in the real rural entrepreneurial environment.

Inclusive growth theory offers a fresh perspective on understanding the complex mechanisms of rural entrepreneurship. This theory emphasizes that economic growth should consider both efficiency and equity [9] and ensure that all social groups can participate in and share the benefits of development [10]. However, there are many constraints in rural areas of China, including resource conditions, policy environment, and talent reserves. At the same time, it is particularly appropriate and essential to introduce the efficiency and equity of inclusive growth into the study of rural entrepreneurship. Therefore, compared to the existing theoretical framework, which has not prioritized the equity dimension, inclusive growth can offer a theoretical framework for understanding how rural areas can protect entrepreneurs to utilize their abilities, thereby enabling them to capitalize on entrepreneurial opportunities and engage in entrepreneurial activities. In view of the fact that the fuzzy set qualitative comparison method (fsQCA) is used to analyze the configuration problem rather than the traditional net effect problem [11], this study chooses the fsQCA method, taking 982 rural areas in China as the research sample, to explore the synergistic influence of several key elements in the efficiency and equity dimensions of inclusive growth theory on rural entrepreneurial activity, mainly around the following research topics: (1) Based on the inclusive growth theory, what are the factors that affect the activity of rural entrepreneurship? (2) Based on the configuration perspective, are there necessary conditions that lead to high or low rural entrepreneurial activity? How do these factors work together in rural entrepreneurial activity?

The remainder of this paper is organized as follows: Section 2 reviews the relevant literature and outlines the theoretical framework; Section 3 introduces the research methods and variable measurement methods; Section 4 presents the results of the configurational analysis and interprets them; Section 5 discusses the research conclusions and their theoretical and practical implications; and Section 6 elaborates on the research conclusions, objectively identifies the limitations of the study, and points out future research directions.

2. Literature Review and Model Design

2.1. Literature Review

George and Zahra define entrepreneurship as an act and process through which individuals, groups, or enterprises create wealth by setting up new organizations or launching new businesses, either through self-employment or the development of existing enterprises [12]. Therefore, rural entrepreneurial activity refers to the prosperity of entrepreneurial activities measured by the number of new enterprises in rural areas in a specific period of time. Compared to urban entrepreneurial activities, rural entrepreneurial activities face unique challenges because access to resources such as talent, technology, and capital in rural areas is often restricted, which gives rural entrepreneurial activities their own distinct characteristics. However, most existing entrepreneurial research focuses on national or urban entrepreneurship, while rural entrepreneurial activity research primarily examines the single influence of a specific factor. For example, scholars such as Obschonka [13] and Audretsch [14] have focused on the personal characteristics of entrepreneurs, studying the differences in personality traits and cultural identity among rural entrepreneurs, respectively. Although these studies can provide insights into the intrinsic motivation of entrepreneurs in rural areas, they lack consideration of the entrepreneurial environment in which entrepreneurs operate. In terms of the entrepreneurial environment factors faced by individuals, Patel and Devaraj studied the influence of a particular legal principle on employees' entrepreneurial activities [15]. Fossen's research found that the introduction of health insurance can increase entrepreneurial activities in rural areas by reducing entrepreneurial obstacles [16].

The above research reveals the impact of certain entrepreneurial entities' characteristics and entrepreneurial environmental factors on rural entrepreneurial activities; however, it employs traditional statistical analysis methods, focusing on the net effect of a single factor, and lacks a systematic analysis of the influencing factors and their interactions in rural entrepreneurial activities. In fact, entrepreneurial activities in rural areas are often synergistically influenced by multiple factors, and net effect analysis alone fails to capture the complex mechanism. Therefore, some scholars have applied configuration thinking to entrepreneurship research, innovatively analyzing the configuration effects of multiple factors on entrepreneurial activity based on theoretical frameworks such as the institutional environment [17], entrepreneurial ecosystem [18], and business environment [19]. However, although the entrepreneurial ecosystem emphasizes efficiency factors such as capital flow and policy support, it relatively neglects the critical role of basic public services such as medical condition and social security for entrepreneurs. In fact, factors such as equity dimensions, including education and medical condition, will profoundly affect entrepreneurial qualities and decisions by shaping entrepreneurial health levels, knowledge structure, and risk-bearing ability. At the same time, although the institutional environment focuses on the constraints and guiding role of the system, it is difficult to effectively explain how these institutional arrangements directly affect individuals' desire to turn their entrepreneurial intentions into actionable capabilities, thus unable to fully reveal the micro-actual path of the institutional environment affecting rural entrepreneurial activities.

This study expands the above theoretical framework by introducing the theory of inclusive growth. The concept of inclusive growth stems from the continuous focus on poverty and growth in developing countries and the world. From the perspective of vulnerable groups, inclusive growth is a growth committed to alleviating discrimination against vulnerable groups or poor people in the process of economic development in order to eliminate poverty and social exclusion. The focus of economic growth under this definition is to narrow the income gap among vulnerable groups and reduce income inequality. From the perspective of equal opportunities, inclusive growth emphasizes that

the results of economic growth come from all members of society and should also be shared by all members of society. Therefore, inclusive growth advocates fair opportunities in economic development [20], and its ultimate goal can be considered to give all groups of society the opportunity to participate in the economic development process and ensure the fairness of the allocation of factor resources in the economic growth process [21]. On the one hand, this theoretical framework clearly divides the resource elements in the entrepreneurial ecosystem into two complementary dimensions, efficiency and equity, and redefines traditionally marginalized public services, such as education and medical conditions and social security, as the infrastructure of the entrepreneurial ecosystem, making it an important capital that affects entrepreneurs' feasible abilities. On the other hand, it can also build a systematic analytical framework of "efficiency creates opportunities-fair empowering subjects", thereby providing a suitable perspective for the research on the driving mechanism of rural entrepreneurship, and exploring multiple concurrent causal paths with high rural entrepreneurship activity. This reflects the internal mechanism by which the efficiency dimension factor creates external market opportunities required for entrepreneurial activities, and the fair dimension factor empowers entrepreneurs' own subjective capabilities.

In addition, the applicability of this concept to the rural entrepreneurial situation lies in the "efficiency" bottleneck faced by rural areas in China, particularly in terms of resource acquisition and market opportunities, while there is a certain degree of "equity" imbalance and an insufficient provision of basic public services. This double challenge of efficiency and equity coincides with the core concern of inclusive growth theory. Therefore, adopting this theory as the macro-analysis framework for this study can provide a holistic perspective on both development and fairness, facilitating an understanding of the micro-mechanisms that activate rural entrepreneurs' entrepreneurial abilities. This approach can also help inform policy suggestions on how to allocate limited resources effectively between efficiency and equity in rural areas.

2.2. Model Design

Efficiency and equity have always been the two most closely monitored dimensions in inclusive growth research [22]. Efficiency reflects the concept that inclusive growth is fundamentally based on economic growth, while equity refers to the fair distribution of development outcomes [9]. Many scholars have analyzed the constituent elements of inclusive growth around these two core dimensions. Therefore, this study uses these two dimensions to select the key factors that affect the activity of rural entrepreneurship. In terms of efficiency, rural areas have fewer market opportunities than urban areas [5]. Goldberg and Johnson [23] and Galindo and Mendez [24] have shown that economic level can activate market opportunities in a region, and that industrial structure and financial development are relatively important factors in economic development. Therefore, from the efficiency dimension, this study chose three key antecedent conditions: economic level, industrial structure, and financial development. In terms of equity, rural entrepreneurial activity is relatively sensitive to access to public resources. China's provinces have been continuously promoting the optimal allocation of rural education and medical resources and are committed to improving rural infrastructure to promote equity in access to public resources in rural areas [25]. Therefore, from the equity dimension, another three key conditions were chosen: education condition, medical condition, and social security. To sum up, based on the concept of inclusive growth, this study regards economic level, industrial structure, financial development, educational condition, medical condition and social security as the key factors affecting rural entrepreneurship activity.

Economic level and rural entrepreneurial activity. In this study, economic level refers to the overall economic development degree of rural areas measured by per capita GDP, which reflects the local market size and residents' consumption power. Rural areas often have smaller populations and lower knowledge accumulation, meaning that entrepreneurs in rural areas have fewer market opportunities. In regions with higher economic levels, as residents' income levels rise, consumption demands gradually become more diversified and personalized, providing rural entrepreneurs with more entrepreneurial opportunities to meet consumers' diverse needs [26]. Furthermore, in relatively economically developed rural areas, production factors such as talent, capital, and technology often form a cluster effect, which is conducive to entrepreneurs obtaining the resources they need to start a business and ensures the smooth progress of entrepreneurial activities [27]. However, some scholars have found that the impact of economic development levels measured by indicators such as per capita GDP on the growth of entrepreneurial activity is complex and ambiguous, and that the relationship between the two depends on factors such as the level of research and the relative length of time [28]. Therefore, the impact of economic level on the rural entrepreneurial activity is not yet clear, and further investigation is needed into the interaction between this factor and other elements. Based on this, this study proposes the following hypothesis:

H1. *Economic level can influence rural entrepreneurial activity.*

Industrial structure and rural entrepreneurial activity. In this study, industrial structure refers to the proportion of different industries in rural areas and their internal composition, which reflects the rationality of the economic structure's transformation toward a service-based economy and directly affects the entrepreneurial space. A diversified and rational industrial structure means that there are multiple types of industries that support and promote each other. Existing research on the relationship between industrial structure and entrepreneurship has reached two completely opposite conclusions. On the one hand, the diversification of industries in a region can stimulate entrepreneurial activity in that region [29]. This means that if agriculture, industry, and services develop in a balanced manner, entrepreneurs will be able to select appropriate business directions flexibly based on their professional knowledge and market demand. At the same time, mutual support between different industries will also help start-ups respond quickly to changes in the external economic environment [30]. In addition, the concentration of companies in a particular industry in a specific region can promote technology and knowledge spillovers among companies in that industry, thereby having a positive effect on innovation and entrepreneurship activities within the industry [31]. This means that although the industrial structure may be biased toward the primary sector, it can actually promote innovation and entrepreneurship through specialization spillovers and industrial cluster effects. Therefore, the impact of industrial structure on rural entrepreneurial activity remains unclear. This study proposes the following hypothesis:

H2. *Industrial structure can influence rural entrepreneurial activity.*

Financial development and rural entrepreneurial activity. In this study, financial development refers to the comprehensive level of the rural financial system in terms of scale, structure, efficiency and availability, which can reflect the convenience for entrepreneurs to obtain financial products and services. Entrepreneurs in rural areas often face a lack of capital, and a higher level of financial development can directly provide start-up capital to entrepreneurs through credit guarantees, venture capital funds, and other means, thereby alleviating financing constraints [32]. Additionally, newly established businesses often

require significant capital investment during their initial stages to support marketing and promotion, equipment procurement, raw material purchases, and other activities, which also necessitate robust financial services to support entrepreneurial success. Furthermore, well-developed financial services can enhance entrepreneurial confidence by mitigating and managing risks. This is because entrepreneurs in rural areas often face significant risks when deciding to engage in entrepreneurial activities. A high level of financial development means that local financial institutions can provide financial tools such as agricultural insurance to help entrepreneurs diversify risks [33], thereby mitigating the potential impact of entrepreneurial failure and encouraging more people to attempt entrepreneurship. Based on this, financial development may have a significant impact on rural entrepreneurial activity. This study proposes the following hypothesis:

H3. *Financial development can influence rural entrepreneurial activity.*

Educational condition and rural entrepreneurial activity. In this study, educational condition refers to the relative abundance of various educational resources available to residents in rural areas. Therefore, enjoying equitable educational conditions means that individuals should have equal access to educational resources and participate in educational activities regardless of their social background. However, due to significant disparities in development levels, rural areas often have uneven educational conditions. Practice has proven that access to comprehensive educational conditions can enhance an individual's human capital, which can then be translated into development capabilities in practice, thereby helping entrepreneurs gain a deeper understanding of market dynamics and grasp industry trends. This means that entrepreneurs in rural areas may struggle to acquire sufficient knowledge reserves and technical capabilities as human capital. Research indicates that entrepreneurs who have access to comprehensive educational conditions and can thereby develop human capital are better able to identify and capitalize on new entrepreneurial opportunities [34]. In addition, individuals often participate in various teacher-student interactions and teamwork activities during their education, which can help entrepreneurs accumulate valuable personal connections and lay the foundation for effectively integrating entrepreneurial resources [35]. Based on this, educational conditions may have an important impact on entrepreneurs in rural areas engaging in entrepreneurial activities. This study proposes the following hypothesis:

H4. *Educational conditions can influence rural entrepreneurial activity.*

Medical condition and rural entrepreneurial activity. In this study, medical condition refers to the accessibility of rural residents to basic medical and health resources, which is the guarantee of rural residents' health capital. Enjoying equitable medical conditions means that everyone can obtain the medical services they need on an equal footing, without discrimination or restrictions, including the reasonable layout of medical facilities. Currently, the public healthcare service system in rural areas still faces issues such as unreasonable resource allocation and a lack of division of labor and collaboration among medical institutions. This means that maintaining good health may be relatively challenging for entrepreneurs in rural areas. However, as individuals, entrepreneurs' physical and mental health directly impacts the sustainability and success rate of their entrepreneurial activities. For example, some scholars have found that health is an important form of human capital, and having a certain level of health is an antecedent condition for engaging in entrepreneurial activities [36]. Some scholars also believe that the more unhealthy members there are in a family, the less able it is to bear the risks associated with entrepreneurship, and the less likely it is to choose entrepreneurship [37]. Therefore, adequate medical condi-

tions can provide them with effective medical protection to ensure that they maintain high energy levels when facing entrepreneurial pressures. Based on this, medical conditions may have a significant impact on rural entrepreneurial activity. This study proposes the following hypothesis:

H5. *Medical conditions can influence rural entrepreneurial activity.*

Social security and rural entrepreneurial activity. In this study, social security means that the country ensures that residents in rural areas can get necessary material help when facing life difficulties or specific risks through a series of institutional arrangements, so as to maintain their basic living standards and promote social equity. Therefore, equitable social security means that every citizen has the right to receive social security benefits of the same standard or distributed proportionally, ensuring that everyone is appropriately protected and assisted in the face of social risks. Social security influences individuals' entrepreneurial decisions, and most research findings indicate that social security has a negative impact on entrepreneurial activities [38]. This is mainly because when social security is too comprehensive, entrepreneurs often feel that they have sufficient livelihood security, which weakens their determination to engage in entrepreneurial activities. However, some scholars have distinguished between different types of entrepreneurial activities and found that social security can have a positive impact on opportunity-driven entrepreneurial activities [39]. This may be because adequate social security can provide entrepreneurs with the necessary financial support and security, enabling them to actively explore market opportunities and engage in entrepreneurial activities. This suggests that the higher the level of social security in a region, the higher the level of innovation and entrepreneurship may be [40]. Based on this, the direction of the impact of social security on entrepreneurial activity is still unclear. This study proposes the following hypothesis:

H6. *Social security can influence rural entrepreneurial activity.*

2.3. Theoretical Model

The literature on the relationship between various efficiency- and equity-related factors and rural entrepreneurial activity provides a theoretical basis for the selection of antecedent conditions. However, the traditional net effect research has limitations in capturing the complexity of entrepreneurial activities, and it is difficult to clearly reveal the synergistic relationship of complementarity, substitution, or inhibition among multiple factors. In fact, there are many interrelated factors in the entrepreneurial environment in which entrepreneurs operate, so it is necessary to consider the overall, dynamic, and systemic characteristics of these factors in entrepreneurial research [41]. At the same time, a large number of scholars' studies have also clearly revealed the complementary and substitutive relationships between certain factors. For example, Liu et al. found that tax incentives can increase the number of new enterprises, but whether this effect holds true depends on the local industrial base and market environment [42]. Patel and other scholars have found that economic ties are associated with higher levels of entrepreneurial activity, while regional social capital weakens this relationship [43].

Since the configuration perspective emphasizes starting from the whole, it analyzes the concurrent causes and equivalent paths that lead to the results [44]. This is applicable to exploring the nonlinear and asymmetric complex causal relationship between various factors and rural entrepreneurial activity from the perspective of inclusive growth. Therefore, this study is based on the theory of inclusive growth and regards entrepreneurial activities as the outcome variable of a complex system composed of elements of efficiency and equity. In other words, the activity of rural entrepreneurship does not depend on a

single factor, but on whether an effective configuration match can be formed between the market opportunities created by the efficiency dimension and the entrepreneurial entities empowered by the fair dimension. Among them, the efficiency dimension factors jointly determine the business opportunity space in rural areas and provide objective possibilities for entrepreneurial activities. The equity dimension factor is to better grasp entrepreneurial opportunities by shaping entrepreneurial ability. The nonlinear, asymmetric synergistic model between the efficiency and equity factors works together on entrepreneurs in rural areas, allowing them to have entrepreneurial capabilities and opportunities at the same time, and ultimately increasing the number of new startups in rural areas. Based on this, this study proposes the following hypotheses:

H7. *High rural entrepreneurial activity can be achieved through multiple, causally complex configurations of the six antecedent conditions, demonstrating the principles of conjunctural causation and equifinality.*

The theoretical Model of this study is depicted in Figure 1. Based on the theoretical model, the following hypotheses are proposed in Table 1.

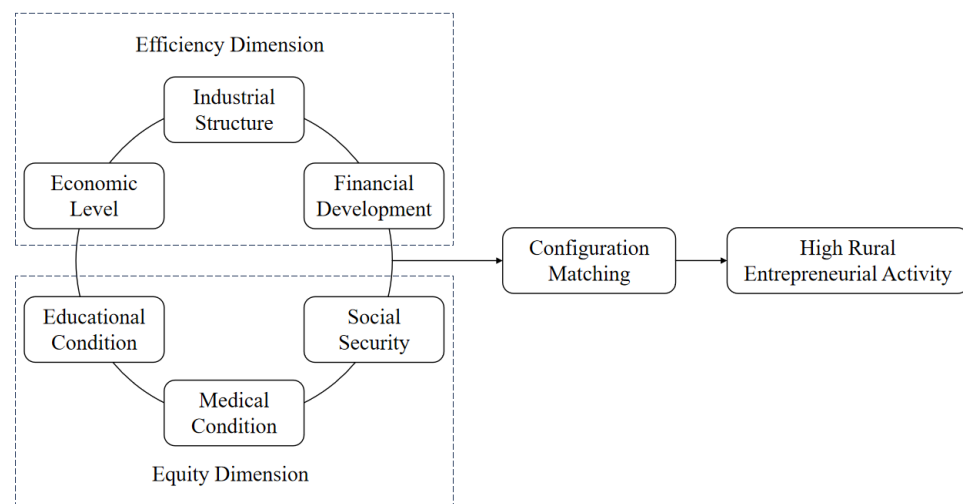


Figure 1. Theoretical model.

Table 1. Specific hypothesis.

Hypotheses	
H1	Economic level can influence rural entrepreneurial activity.
H2	Industrial structure can influence rural entrepreneurial activity.
H3	Financial development can influence rural entrepreneurial activity.
H4	Educational conditions can influence rural entrepreneurial activity.
H5	Medical conditions can influence rural entrepreneurial activity.
H6	Social security can influence rural entrepreneurial activity.
H7	High rural entrepreneurial activity can be achieved through multiple, causally complex configurations of the six antecedent conditions, demonstrating the principles of conjunctural causation and equifinality.

3. Research Design

3.1. Method

To conduct a more comprehensive analysis of how various factors interact to influence rural entrepreneurial activity within the dimensions of efficiency and equity, this study adopts a research methodology centered on fsQCA. Qualitative comparative analysis (QCA)

is a method that combines the strengths of qualitative and quantitative research, and it is based on three important assumptions regarding causal complexity: (1) Asymmetry: The presence of a condition implies the realization of a certain outcome, but the absence of that condition does not necessarily mean the outcome will not occur; (2) Equivalence: Different combinations of conditions may lead to the same outcome; (3) Concurrency: multiple conditions jointly lead to an outcome [45]. Therefore, QCA is suitable for analyzing how multiple antecedent conditions influence outcomes through combinations, conducting necessity and sufficiency analyses by treating cases as sets of attributes, thereby revealing the complex causal relationships between antecedent conditions and outcomes.

FsQCA is an advanced form of QCA, and its core lies in fuzzy set theory. Unlike the traditional dichotomy, where a case fully belongs to a set or does not belong at all, fuzzy sets allows antecedent conditions to exist to a certain extent, that is, it permits variable membership degrees to take any value between “0” and “1”, thus quantifying the degree to which different cases belong to a set, which is more in line with the complexity of the real world. This method mainly converts the continuous original data into the membership degree of fuzzy sets through the subsequent variable calibration steps. The research process based on fsQCA includes: (1) case selection based on theoretical and practical standards; (2) Definition and calibration of variables based on established theory and data distribution; (3) necessity analysis; (4) Configuration analysis to derive the solution; (5) Robustness test. This design allows us to solve our research problems systematically.

Compared to traditional statistical analysis methods, the specific reasons for selecting the fsQCA method in this study are as follows: (1) The key issue addressed in this study is “how various factors interact to influence rural entrepreneurial activity under the dimensions of efficiency and equity”, and this method examines the sufficient and necessary subset relationships between antecedent conditions and outcomes, exploring the synergistic effects among multiple antecedent conditions from a configurational perspective. (2) The QCA method posits that different combinations of antecedent conditions can achieve equivalent outcomes, and that different combinations of antecedent conditions leading to the same outcome are not mutually exclusive. While traditional statistical analysis methods can also incorporate multiple antecedent conditions into the same model, they only treat outcomes as having either a substitute or additive relationship [46]. (3) All variables in this study are continuous variables. Unlike csQCA and mvQCA, which primarily handle categorical or multi-value data, fsQCA is uniquely suited to handle continuous variables and partial set memberships, enabling a more nuanced analysis.

3.2. Data Sources

This study selects rural China as the analysis unit, and the final sample comprises 982 areas (including counties, autonomous counties, county-level cities and municipal districts) after excluding cases with missing data. On the one hand, rural China, as the peripheral area of cities, serves as the most basic unit for observing entrepreneurial and employment activities. The differences in internal resource endowments, industrial structures, and institutional arrangements within rural areas can provide support for revealing the complex relationship between entrepreneurship and employment. On the other hand, since the fsQCA method cannot control for other factors by including control variables, limiting the research cases to a single country reduces the influence of background factors such as cultural context. These reasons all contribute to ensuring the homogeneity and heterogeneity of the research cases [45]. At the same time, the case screening process is based on data integrity considerations, rather than human subjective selection, to some extent, to avoid systematic deviation. Additionally, considering the lag between antecedent conditions, entrepreneurial activities, and employment activities, the data used in this

study spans the years 2021–2022. Specifically, data on the six ex ante conditions—economic level, industrial structure, financial development, educational condition, medical condition, and social security—are sourced from the China County Statistical Yearbook in 2022 (County and City Volume) (the yearbooks are based on statistical data from 2021). Rural entrepreneurial activity data are derived from the number of newly registered enterprises in each region in 2022, as statistically compiled through advanced searches on Tianyancha, an online commercial information platform open to the public for inquiry of enterprise information including registration, equity, shareholders, etc.

3.3. Variable Measurement

3.3.1. Outcome Variable

Rural Entrepreneurial Activity (REA). When studying entrepreneurial activity within specific geographical areas, scholars typically employ ecological research methods, labor market methods, and demographic methods. The core principle of these three methods is to measure the level of entrepreneurial activity in a region based on the number of newly established businesses during the observation period, while introducing a standardized base to mitigate the influence of regional scale effects [47]. The differences lie in the standardized base used: the ecological research method uses the number of existing enterprises in the region, the labor market method uses the number of working-age population (15–64 years old) in the region [48], and the demographic method uses the total population [49]. Given that the ecological research method may overestimate entrepreneurial activity due to the presence of large-scale enterprises [50], and considering China's actual conditions and data availability, the population method is often used to characterize entrepreneurial activity in urban peripheral areas in China. Therefore, this study adopts the population method to measure rural entrepreneurial activity. Specifically, this study utilizes the Tianyancha database to obtain the number of newly registered enterprises in each region for the year 2022, using the cases listed in the China County Statistical Yearbook in 2022 (County and City Volume) as the standard. The rural entrepreneurial activity level is then calculated using the registered population figures from the China County Statistical Yearbook in 2022 (County and City Volume) as the standardized base.

3.3.2. Antecedent Variables

Economic Level (EL). Although GDP growth does not always translate into improved living standards due to income distribution disparities, it remains a key indicator for assessing the overall economic level of a country or region. When evaluating the economic level, it is important to consider not only the overall economic scale but also regional population factors, which means that the regional economic level should be assessed from a per capita perspective. Additionally, in selecting economic level and industrial structure as antecedent variables in this study, it is assumed that these factors can influence market opportunities in the environment. In the research by Eaton and Tamura, it was found that the larger the market size measured by per capita GDP, the more market opportunities are provided [51]. Therefore, this study uses the ratio of GDP to registered population to measure the economic level of rural areas.

Industrial Structure (IS). According to Kuznets' view, the proportion of primary industry value added in GDP continues to decline, while the proportion of secondary and tertiary industry value added, especially that of the service sector, continues to increase. This is an important pattern in economic structural transformation [52]. Additionally, according to the Petty-Clark theorem, the proportion of tertiary industry value added in GDP reflects the rationality of a region's industrial structure. This measurement method implies that the measures taken to optimize the economic structure for sustainable development are

often aimed at achieving industrial rationalization and upgrading. To highlight this feature, this study uses the proportion of tertiary industry value added in GDP as a measure of industrial structure, with higher values indicating a more rational industrial structure.

Financial Development (FD). The year-end balance of various loans extended by financial institutions directly reflects the financial resources provided by the local financial system to market entities, and indirectly reflects the vitality of multi-dimensional economic activities such as corporate financing and consumer credit for residents. To a certain extent, it can describe the efficiency of financial capital allocation in the region. Therefore, this study selects the year-end balance of various loans from financial institutions as the core indicator for the variable of financial development. To avoid the interference of differences in regional economic aggregates, this study ultimately uses the ratio of the year-end balance of various loans from financial institutions to GDP to measure financial development. This not only objectively reflects the penetration of the financial system into economic activities but also facilitates cross-regional comparisons.

Educational Condition (EC). The inclusive development of education hinges on the inclusivity of its target population, with ensuring equal educational opportunities for all being the most fundamental standard. The purpose of China's universal nine-year compulsory education is to promote equal educational opportunities for all. Therefore, the number of students enrolled in nine-year compulsory education is a commonly used indicator for measuring educational conditions. Additionally, considering that the registered population provides a relatively stable and broad population base [53] and can, to some extent, reflect the rationality of the government's long-term educational planning and resource allocation, it helps distinguish educational conditions across different rural regions. Therefore, this study uses the ratio of the number of students enrolled in regular middle schools and elementary schools to the registered population to measure educational conditions. The higher the value, the more developed the educational condition in the region.

Medical Condition (MC). Medical condition represents the level of basic medical resources available in a region to ensure the physical health of its residents. A direct indicator of this is the availability of hospital beds in the region, which is an important parameter for measuring the capacity and capability of medical and health services. By calculating the ratio of hospital beds to population, it is possible to accurately assess the relative adequacy of medical resources in the region, as well as the convenience and accessibility of medical care for residents. Therefore, this study selects the ratio of healthcare institution beds to registered population as an indicator of medical condition to directly reflect the allocation of basic healthcare resources in a region. The higher the value, the more developed the medical condition in the region.

Social Security (SS). Given that the general public budget expenditure indicator comprehensively covers investments in areas such as infrastructure, it can directly reflect local governments' investments in ensuring the well-being of their residents. Therefore, this study selects the ratio of local general public budget expenditure to registered population as an indicator for measuring social security. The reason is that this indicator can intuitively reflect the intensity of local governments' investments in social security, as well as the average level of protection these investments provide to residents. Additionally, this indicator has strong data availability, making it convenient for cross-regional comparisons and reflecting changes in protection levels resulting from policy adjustments. A higher value indicates greater government investment in infrastructure and other areas to provide residents with social security.

4. Research Results and Analysis

4.1. Variable Calibration

Variable calibration involves setting three calibration anchor points—full membership, crossover point, and full non-membership—based on theoretical and practical standards, followed by converting the original data into a membership degree ranging from 0 to 1. Due to the lack of mature theories and external standards, this study adopts the direct calibration method, using objective quantiles as the standard for variable calibration [54]. Specifically, this study sets the calibration anchor points for rural entrepreneurial activity and the six antecedent conditions as the 75th percentile, median, and 25th percentile of the data, respectively. This is because the median, as the intersection, conforms to the theoretical definition of “the degree of membership of cases in the set is the fuzziest”, and the upper and lower quartiles can effectively distinguish the relative positions of cases in the set. Since a calibrated membership degree of 0.5 would result in the loss of research cases, this study replaces it with 0.5001. The calibrated membership degree for non-high rural entrepreneurial activity is achieved by taking the non-set of high rural entrepreneurial activity. The calibration anchor points and descriptive statistics for each variable are shown in Tables 2 and 3.

Table 2. Calibration anchor points.

Variables		Calibration Anchor Points		
		Full Membership	Cross Over Point	Full Non-Membership
Antecedent variables	EL	6.769	4.263	2.971
	IS	0.517	0.456	0.403
	FD	1.120	0.847	0.619
	EC	1.374	1.164	0.926
	MC	5.937	4.993	4.078
	SS	1.232	0.876	0.663
Outcome variable	REA	16.90	11.08	8.078

Note: Economic Level (EL), Industrial Structure (IS), Financial Development (FD), Educational Condition (EC), Medical Condition (MC), Social Security (SS), Rural Entrepreneurial Activity (REA).

Table 3. Descriptive statistics of each variable.

Variables		Mean	SD	Min	Max
Antecedent variables	EL	6.012	5.698	0.832	62.20
	IS	0.458	0.103	0.108	0.870
	FD	0.926	0.442	0.010	4.478
	EC	1.180	0.377	0.188	3.863
	MC	5.321	2.050	1.610	21.10
	SS	1.122	0.878	0.227	8.937
Outcome variable	REA	14.46	13.31	1.496	180.5

Note: Economic Level (EL), Industrial Structure (IS), Financial Development (FD), Educational Condition (EC), Medical Condition (MC), Social Security (SS), Rural Entrepreneurial Activity (REA).

As can be seen from Table 2, in this study, rural areas with a per capita income of more than 67,690 yuan are designated as high-level areas, while those with a per capita income of less than 29,710 yuan are designated as low-level areas. The rural areas where the ratio of the added value of the tertiary industry to the regional GDP is greater than 0.517 are set as areas with a completely reasonable industrial structure, and those with less than 0.403 are set as areas with a completely unreasonable industrial structure. The rural areas whose ratio of the year-end balance of various loans from financial institutions to GDP is greater than 1.12 are set as high financial development level areas, and those

less than 0.619 are set as low financial development level areas. The rural areas where more than 1.374 individuals are students in primary and secondary schools are set as areas with perfect educational conditions, and those below 0.926 are set as areas without educational conditions. Rural areas with more than 5.937 beds per thousand people are designated as areas with perfect medical condition, and areas with fewer than 4.078 are designated as areas with poor medical condition. Rural areas with per capita general public budget expenditure of more than 12,320 yuan are designated as areas with adequate social security, while those with per capita general public budget expenditure of less than 6630 yuan are designated as areas with insufficient social security. The rural areas with more than 16.9 enterprises per thousand people are designated as areas with high rural entrepreneurial activity, and those with fewer than 8.078 enterprises are designated as areas with low rural entrepreneurial activity.

4.2. Necessary Condition Analysis

A necessary condition is a condition that must exist for a result to occur, but it does not guarantee that the result will necessarily occur. Before conducting a configuration Analysis, it is necessary to use a necessary condition analysis to determine whether each antecedent condition is a necessary condition for the result. Among these, consistency indicators can be used to assess the necessity of each antecedent condition for the result. The results of the analysis conducted using the fsQCA 3.0 software are shown in Table 4. The consistency is all below 0.9, indicating that none of the six antecedent conditions are necessary conditions for achieving high rural entrepreneurial activity.

Table 4. Results of the analysis of necessary conditions.

Antecedent Variables		Outcome Variable			
		High Rural Entrepreneurial Activity		Non-High Rural Entrepreneurial Activity	
		Consistency	Coverage	Consistency	Coverage
Efficiency	EL	0.718	0.712	0.378	0.392
	~EL	0.388	0.373	0.723	0.727
	IS	0.542	0.526	0.559	0.569
	~IS	0.556	0.547	0.534	0.550
	FD	0.537	0.532	0.545	0.566
	~FD	0.562	0.541	0.549	0.554
Equity	EC	0.569	0.557	0.518	0.531
	~EC	0.521	0.508	0.568	0.579
	MC	0.617	0.605	0.485	0.498
	~MC	0.487	0.475	0.615	0.627
	SS	0.636	0.635	0.445	0.465
	~SS	0.465	0.445	0.651	0.652

Note: Economic Level (EL), Industrial Structure (IS), Financial Development (FD), Educational Condition (EC), Medical Condition (MC), Social Security (SS). “~” indicates the logical operation “not”.

4.3. Configuration Analysis

In fsQCA, configuration Analysis is primarily used to identify multiple combinations of sufficient conditions that can lead to the observed outcomes. Due to the limited diversity of cases, some logically possible condition combinations lack empirical support. These condition combinations are referred to as logical remainders in configuration Analysis. By incorporating different numbers of logical remainders, three types of solutions can generally be obtained: complex solutions, intermediate solutions, and parsimonious solutions. Among these, complex solutions do not incorporate any logical remainders, parsimonious solutions incorporate all logical remainders, while intermediate solutions only incorporate logical remainders predefined based on theoretical and substantive knowledge. To effec-

tively reveal the configuration paths for achieving high rural entrepreneurial activity, this study selects the results of combining intermediate and parsimonious solutions, reporting the configuration Analysis results in terms of core conditions and edge conditions [55]. Among these, core conditions are antecedent conditions that appear simultaneously in both parsimonious and intermediate solutions, exerting a significant influence on the results; edge conditions are antecedent conditions that appear only in intermediate solutions, playing a supplementary role in the results.

In setting the raw consistency threshold, due to the natural truncation of consistency in the truth table constructed in this study, and considering Fiss's recommended consistency threshold standard [54], this study chose to set the raw consistency threshold at 0.8 to ensure the stability and reliability of the results. Given that the number of cases in this study is 982, which qualifies as a large-sample study in QCA, it is necessary to ensure that the number of configurations with a case frequency threshold greater than or equal to the threshold constitutes at least 75–80% of the total number of cases [56]. Therefore, this study sets the frequency threshold at 10. Considering that a PRI consistency threshold of 0.5 or above can avoid a configuration that could lead to both the result and its non-set, this study referenced Ding's research [57] and set the PRI consistency threshold to 0.6. Since hypothetical selections must be made for logical remainders before identifying complex, intermediate, and parsimonious solutions [58], this study assumes, based on prior discussions, that the presence or absence of each antecedent condition influences rural entrepreneurial activity. After running the fsQCA 3.0 software, the configuration Analysis results are shown in Tables 5 and 6.

Table 5. Configuration of high rural entrepreneurial activity.

Antecedent Variables	High Rural Entrepreneurial Activity			
	C1	C2	C3	C4
EL	●	●	●	●
IS		●		●
FD	●		●	⊕
EC		●	●	•
MC	●			●
SS	•	●	•	
Consistency	0.865	0.853	0.850	0.844
Raw coverage	0.199	0.200	0.222	0.091
Unique coverage	0.046	0.020	0.026	0.025
Solution consistency		0.829		
Solution coverage		0.338		

Note: ● = core conditions exist, • = edge conditions exist, ⊕ = edge conditions are absent. The term “blank” indicates that the conditions may or may not be present in the configuration. Economic Level (EL), Industrial Structure (IS), Financial Development (FD), Educational Condition (EC), Medical Condition (MC), Social Security (SS).

4.4. Interpretation of Configuration Results for Achieving High Rural Entrepreneurial Activity

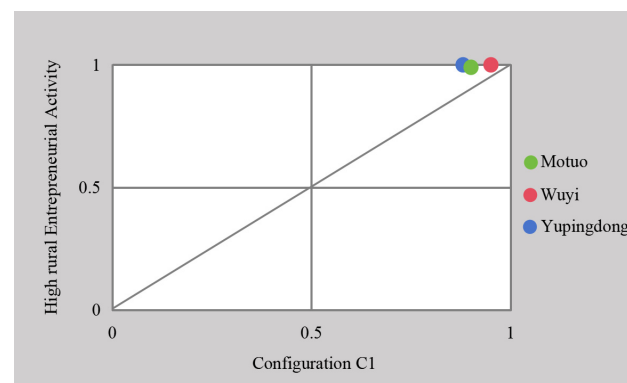
This study conducted a configurational analysis with high rural entrepreneurial activity as the dependent variable, resulting in configurations C1, C2, C3, and C4. Among these, the raw consistency of all four configurations exceeded 0.8, with a solution consistency of 0.829, indicating that each of the four configurations and their collective set constitutes sufficient conditions for explaining high rural entrepreneurial activity. Additionally, the raw coverage of each configuration in Table 4 represents the proportion of cases that can be explained by that configuration. It is important to note that some cases can also be explained by other configurations simultaneously. Therefore, the unique coverage refers to the extent to which a single configuration explains the cases after excluding those shared with other configurations. Table 4 shows that the solution coverage is 0.338, indicating that

the four configurations explain 33.8% of the 982 cases. Furthermore, this study has mapped typical case diagrams for the four configurations, as shown in Figure 2.

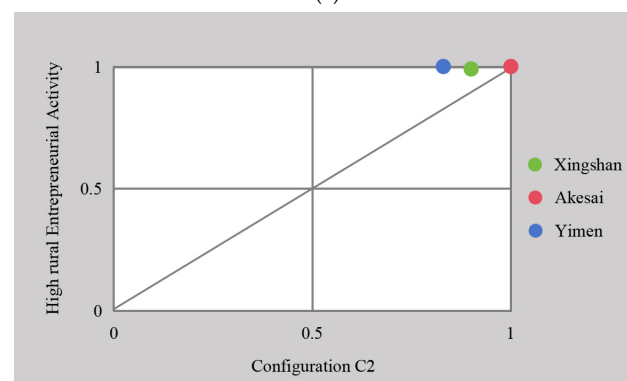
Table 6. Configuration of non-high rural entrepreneurial activity.

Antecedent Variables	NC1	NC2	NC3	NC4	NC5	NC6
EL	⊕	⊕	⊕	⊕	⊕	⊕
IS				•	•	•
FD			•	•	⊕	
EC		⊕		⊕	•	•
MC	⊕					⊕
SS	⊕	⊕	⊕		•	
Consistency	0.810	0.812	0.809	0.822	0.789	0.815
Raw coverage	0.363	0.302	0.331	0.195	0.078	0.211
Unique coverage	0.034	0.036	0.041	0.040	0.012	0.024
Solution consistency				0.766		
Solution coverage				0.594		

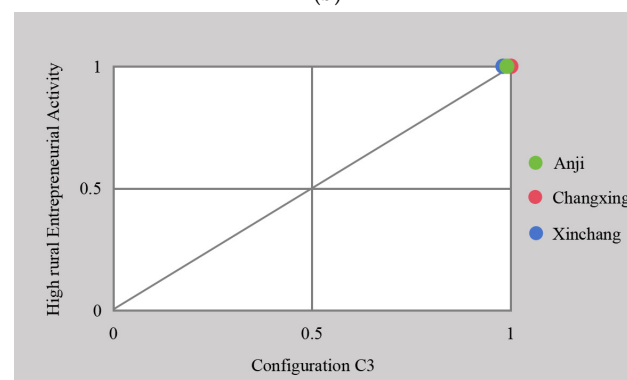
Note: • = core conditions exist, ⊕ = core conditions are absent, • = edge conditions exist, ⊕ = edge conditions are absent. The term “blank” indicates that the conditions may or may not be present in the configuration. Economic Level (EL), Industrial Structure (IS), Financial Development (FD), Educational Condition (EC), Medical Condition (MC), Social Security (SS).



(a)



(b)



(c)

Figure 2. Cont.

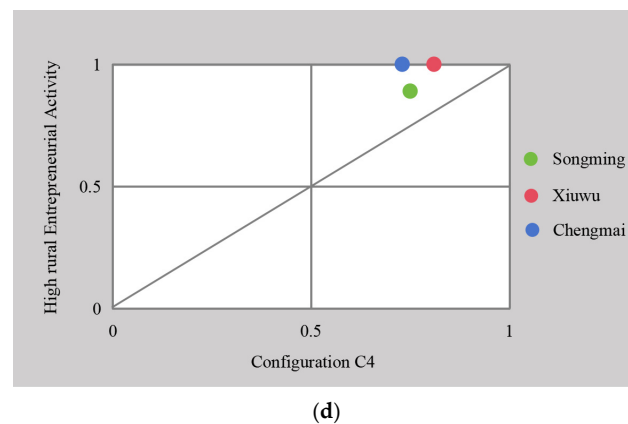


Figure 2. Typical examples of each configuration. (a) Typical case of configuration C1; (b) Typical case of configuration C2; (c) Typical case of configuration C3; (d) Typical case of configuration C4. Note: The vertical axis represents the membership degree of typical cases in the set of high rural entrepreneurial activity, and the horizontal axis represents the membership degree of typical cases in the set of key elements contained in configurations C1, C2, C3 and C4, respectively. Economic Level (EL), Industrial Structure (IS), Financial Development (FD), Educational Condition (EC), Medical Condition (MC), Social Security (SS).

Figure 2 provides a visual representation of the fit between the theoretical configurations and empirical cases. Each subplot (a–d) displays typical cases for configurations C1 to C4, respectively. Among them, the X-axis represents the membership degree of a case in the set of antecedents represented by this configuration. For example, for C1, the value of the X-axis indicates the membership degree of the case in the configuration C1, and if the value is 1, it indicates that the case belongs to configuration C1 completely. The value of the Y-axis indicates the membership degree of the case in the outcome set, that is, the high rural entrepreneurial activity. If the value is 1, it indicates that the case belongs to the high rural entrepreneurial activity completely. Cases positioned in the upper-right corner, which exhibit high membership in both the solution and the outcome, are considered strong typical cases for that configurational path.

The “finance and healthcare-driven” type (C1). The raw coverage of this configuration is 0.199, and its unique coverage is 0.046, indicating that nearly 20% of cases can be explained by this configuration. The core mechanism for the configuration to achieve high rural entrepreneurship activity is the efficiency dimension creates capital and market conditions, and the fair dimension guarantees human capital and risk buffers, and these co-act to form a virtuous cycle. In the efficiency dimension, a higher economic level means that the region has a strong consumption capacity and can provide entrepreneurs with a broader market space and business opportunities; while financial development can transform economic advantages into available entrepreneurial capital by providing more flexible credit products and financial support, helping entrepreneurs transform market opportunities into entrepreneurial actions. In the equity dimension, a perfect medical condition provides a relatively stable human capital guarantee for entrepreneurial activities by protecting the physical health of entrepreneurs and labor [36], reducing the risk of entrepreneurship interruption. At the same time, sufficient social security is used as a marginal condition to reduce the risk of entrepreneurial failure by ensuring the basic living standards of entrepreneurs, thereby ensuring the ability of entrepreneurs to seize entrepreneurial opportunities. The synergistic mechanism between efficiency and equity lies in the fact that the market and financial opportunities created by economic and financial conditions need to rely on entrepreneurial abilities and willingness stimulated by medical and social security to be effectively utilized. On the contrary, the enhanced entrepreneurial ability of medical and social security also requires broad business opportunities to truly

transform into entrepreneurial actions. The two systems play a role in rural entrepreneurial activity through the interactive logic of “opportunity creation-enhancement of ability”.

Typical cases of Configuration C1 include Wuyi County, Motuo County, and Yuping Dong Autonomous County, as shown in Figure 2a. Taking Motuo County as an example, the county achieved a regional gross domestic product (GDP) of 852 million yuan in 2021, providing a solid market foundation for entrepreneurial activities. Meanwhile, as the sole financial institution in Medog County, the Medog County Branch of the Agricultural Bank of China established a financial services team to provide mobile financial services in rural areas. Through inclusive financial products such as Taxpayer e-Loan, it provided adequate financial support to small and medium-sized enterprises, helping to address the financing difficulties faced by local entrepreneurs. The Social Security Center of the County’s Bureau of Human Resources and Social Security has achieved a 99% social security card coverage rate and a 99% pension insurance participation rate, providing adequate protection for entrepreneurs to engage in entrepreneurial activities. Additionally, under the support of targeted medical assistance policies, the new Motuo County Tibetan Hospital was completed and put into use in 2021, featuring a 600-square-meter Tibetan medicine preventive healthcare specialty clinic and inpatient department, providing stable human capital conditions for entrepreneurial activities. As a result, returning entrepreneurs like the sisters Cirenlazhen have been able to engage in diverse entrepreneurial activities under the supportive conditions provided by Motuo County.

The “Industry and Education Balance” type (C2). The raw coverage of configuration C2 is 0.200 and the unique coverage is 0.020, indicating that 20% of cases can be explained by this configuration. The core mechanism for achieving high rural entrepreneurship activity is that the efficiency dimension element provides a broad business space, and the fair dimension element provides intelligence and risk buffers. The two together form a virtuous cycle of “opportunity-ability”. In the efficiency dimension, a higher economic level can provide a solid market foundation and consumption potential for entrepreneurial activities. A reasonable industrial structure means that the local existing industries are more inclined towards the tertiary industry, which will help the region form a relatively complete industrial chain and supporting facilities. This can not only lower the threshold for entrepreneurship, but also create entrepreneurial opportunities in logistics, e-commerce and other fields [59]. In the equity dimension, perfect educational conditions can provide favorable support for entrepreneurs to accumulate entrepreneurial knowledge and skills, especially to cultivate technical workers and service personnel that match the needs of the tertiary industry, achieving a supply-demand balance between industrial demand and educational supply. At the same time, perfect social security can alleviate entrepreneurs’ concerns about entrepreneurial failure and enhance their willingness to take risks, so they are more willing to accumulate wealth by carrying out entrepreneurial activities. The synergistic mechanism between efficiency and equity lies in that the entrepreneurial opportunities provided by the efficiency dimension elements are highly dependent on the intellectual and social security provided by the fair dimension, so that they can be effectively identified and utilized; and the continuous optimization of the education and social security system is also inseparable from the economic and industrial foundation provided by the efficiency dimension. These factors form a dynamic balance between efficiency and equity, which helps entrepreneurs in rural areas fully utilize their own abilities and thus transform entrepreneurial opportunities into entrepreneurial actions.

Typical cases of the configuration C2 include Aksai Kazakh Autonomous County, Xingshan County, and Yimen County, as shown in Figure 2b. Taking Yimen County as an example, the county’s GDP increased from 4.73 billion yuan in 2012 to 15.38 billion yuan in 2021, with its ranking among the 129 counties and cities in Yunnan Province improving

from 64th to 50th, providing favorable conditions for the development of entrepreneurial activities. Additionally, Yimen County has established a modern industrial system encompassing tourism and culture, biopharmaceuticals, modern logistics, construction and real estate, and new energy, with a focus on promoting the integrated development of the primary, secondary, and tertiary industries. As a result, Yimen County has achieved synergistic development between modern services and traditional services such as wholesale, retail, accommodation, and catering. From 2012 to 2021, the added value of the tertiary industry quadrupled, both extending the industrial chain and enriching entrepreneurial opportunities. Furthermore, Yimen County launched the expansion and renovation project of Yimen No. 1 High School on 9 March 2021, aiming to enhance educational capacity and address the lag in basic education. In terms of infrastructure and other support measures, Yimen County has invested 58.9 billion yuan over the past decade to implement 1395 key projects, with major infrastructure projects such as the Wuyi Expressway completed and put into use, and the rural road paving rate reaching 82%. All these achievements have collectively created favorable conditions for promoting entrepreneurial activities.

The “Financial and Educational Synergy” type (C3). The raw coverage of configuration C3 is 0.222, and the unique coverage is 0.026, indicating that 22.2% of cases can be explained by this configuration. The core mechanism for achieving high rural entrepreneurship activity lies in the fact that the market and capital foundation constructed by the efficiency dimension, the intellectual support and risk buffer provided by the fair dimension, jointly act on the rural entrepreneurship activity, especially the deep coordination between finance and education. In the efficiency dimension, a higher economic level supports entrepreneurial activities by increasing market capacity, while financial development transforms the economic foundation into diversified financial tools and credit supply, effectively reducing the financing constraints faced by entrepreneurs by providing financial support, and helping business opportunities to transform into implementable entrepreneurial projects. In the equity dimension, educational condition not only improves entrepreneurs’ key abilities, such as opportunity identification and management, and operational capabilities by improving the quality of regional human capital, but also provides high-quality talents. Social security, which is a marginal condition, strengthens entrepreneurs’ psychological sense of security and entrepreneurial desire by providing entrepreneurs with basic living security. The synergistic mechanism of efficiency and equity is prominently reflected in the coupling effect of finance and education. On the one hand, financial development provides financial support for the human capital formed by education to realize its entrepreneurial ambitions, and on the other hand, education provides entrepreneurial entities with professional capabilities for the allocation of financial resources. The two form a benign interaction on a solid economic basis, and social security guarantees the risk resistance of this path in this process, thereby forming a dynamic balance between efficiency and equity as a whole to stimulate the vitality of rural entrepreneurship.

Typical examples of Configuration 3 include Changxing County, Anji County, and Xinchang County, as shown in Figure 2c. Taking Xinchang County as an example, the county’s comprehensive strength continued to improve steadily in 2021, with a total GDP of 51.74 billion yuan and a total retail sales of consumer goods of 18.274 billion yuan. The recovery and warming of the consumer market have facilitated entrepreneurial activities. Additionally, under the backdrop of the establishment of the “Financial Support for Rural Prosperity Alliance” by the Shaoxing Banking and Insurance Regulatory Bureau, Xinchang County actively promoted the “government-bank-insurance-enterprise” cooperation model. This model organizes villages or industries into units, with one financial institution taking the lead and others participating, forming a closely connected and efficient financial collaboration to support agricultural and rural prosperity, thereby facilitating the development of

relevant market entities. Furthermore, in terms of educational condition, Xinchang County has actively increased investment in hardware facilities, improved educational conditions through optimized resource allocation, and constructed, renovated, or expanded schools. It has also deeply implemented the theory of selective education in compulsory education and implemented humanities-oriented education in high school education, continuously providing high-quality talent for entrepreneurial projects. Building on this foundation, Xinchang County has also actively tilted its fiscal and tax policies toward innovation and entrepreneurship. Since 2019, it has established a 300-million-yuan industrial fund, providing robust policy support for mass entrepreneurship and innovation, significantly reducing the cost of entrepreneurial failure. These conditions have collectively facilitated Xinchang County's transformation from a small mountainous county in Zhejiang Province into an innovative county.

The "Industry and Healthcare Support" type (C4). The raw coverage of configuration C4 is 0.091, and the unique coverage is 0.025, indicating that 9.1% of cases can be explained by this configuration. The explanatory power of this configuration is at a lower level compared to the other three configurations, but this does not mean that the configuration is not typical. The unique feature of this configuration is that, in the absence of financial development, the linkage and complementation of efficiency and equity can be built to build a feasible, high rural entrepreneurial activity realization path. In the efficiency dimension, a higher economic level provides a market foundation, while a reasonable industrial structure enriches entrepreneurial opportunities by improving the industrial chain, helping entrepreneurial activities to obtain support in raw materials, logistics, and other aspects more easily. In the equity dimension, a perfect medical condition provides relatively stable human capital, making entrepreneurs more willing to continue to invest in entrepreneurial activities. As marginal conditions, educational conditions, and medical conditions form the pillar of human resources, improving the comprehensive quality of entrepreneurs and labor, and forming a fair support system for education and medical conditions to empower entrepreneurial capabilities. The synergistic mechanism of efficiency and equity plays a special role in this configuration. Despite the lack of financial development, the market foundation provided by the efficiency dimension can still be deeply integrated with the human resources guaranteed by the fair dimension, helping entrepreneurs make full use of informal financing methods such as acquaintance credit, and convert their own funds and social networks into entrepreneurial capital. At the same time, the combined effect of education and medical condition ensures that entrepreneurs in rural areas have the quality of grasping entrepreneurial opportunities, make up for the shortcomings of financial services, and ultimately achieve high rural entrepreneurial activity.

Typical examples of Configuration 4 include Xiuwu County, Chengmai County, and Congming County, as shown in Figure 2d. Taking Xiuwu County as an example, as one of the first national pilot zones for all-round tourism, the county has proposed a new concept of "leading all-round tourism with all-round aesthetics", using the homestay industry to drive the integrated development of agriculture, health and wellness, and education and research industries, thereby promoting the integrated development of the primary, secondary, and tertiary industries in rural areas. Additionally, the county achieved a regional GDP of 15.41 billion yuan in 2021, providing a solid market foundation for the aforementioned industries and lowering the barriers to entrepreneurship. Furthermore, the county medical insurance bureau has established medical insurance service stations in towns such as Zhouzhuang and Qixian in Xiuwu County, actively delegating administrative authority to the village, significantly reducing health risks for farmers and entrepreneurs, and ensuring a stable supply of labor. Furthermore, Xiuwu County has focused on controlling dropout rates, rotating rural teachers, and leveraging "Internet + Education" to

ensure that dropout students from poverty-stricken families remain at a dynamic zero level, continuously improving the educational capacity and teaching quality of rural schools, and ensuring a stable output of basic human resources. Based on this, Xiuwu County's economic foundation, industrial structure, and educational condition have formed a powerful driving force for rural entrepreneurial activity, while also addressing the shortcomings in financial development.

4.5. Configuration Paths for Achieving Non-High Rural Entrepreneurial Activity

This study took non-high rural entrepreneurship activity as the result variable, and further obtained six configurations that could achieve non-high rural entrepreneurship activity through adequacy analysis. These paths jointly revealed the internal mechanism of the coordinated suppression of rural entrepreneurship activities by efficiency and equity dimension elements. The configuration of NC1–NC3 collectively reflects the inhibitory effect caused by the common lack of efficiency and equity dimension elements. Among them, low economic levels and insufficient social security are common core conditions, which will inhibit the activity of rural entrepreneurship. On this basis, the configuration of NC1 further shows that the lack of healthy capital will aggravate the exhaustion of entrepreneurial ability; NC2 indicates that a lower economic level is likely to limit the improvement of educational condition, which will affect the regional human capital level and further weaken the willingness and human support of entrepreneurs; the configuration of NC3 means that even if financial development can alleviate financing constraints for entrepreneurs, it still cannot make up for the systematic constraints brought about by the lack of core conditions, indicating that the existence of a single factor is difficult to reverse the entrepreneurial inhibitory effect brought about by the double lack of efficiency and fair factors.

The configuration of NC4–NC6 together indicates that the lack of efficiency dimension elements plays a path characteristic that predominates and inhibits. Even if some core conditions are in existence, it is difficult to break through the restrictions on improving rural entrepreneurship activity at a lower economic level. Specifically, configuring NC4 means that a weak market foundation and imperfect educational conditions will limit entrepreneurs' ability to seize business opportunities. Even if the entrepreneur has sufficient financial support at this time, it cannot make up for the lack of ability. Configuring NC5 reflects that when entrepreneurs have the ability to seize business opportunities, it is difficult to carry out entrepreneurial activities without sufficient financial support and market foundation. Comparing configuration NC6 with configuration NC5, it was found that higher health risks will further suppress entrepreneurs' willingness to actively seize business opportunities. In summary, these six configurations all show that efficiency factors constitute the key to achieving high rural entrepreneurship activity, and the absence of any element in the equity dimension may amplify the inhibitory effect of the configuration, which highlights the characteristics of efficiency and equity that cannot be neglected in the configuration that stimulates entrepreneurial vitality in rural areas, that is, it confirms the rationality of the path to achieve high rural entrepreneurship activity that takes into account efficiency and equity from the opposite side.

4.6. Robustness Test

Robustness tests for QCA studies typically involve methods such as adjusting analysis thresholds and changing calibration anchors. If the solutions obtained under different operations exhibit similar condition combinations, consistency, and coverage compared to the original solution, the solution can be considered robust [60]. First, referring to Leppänen's research [61], the calibration thresholds for full membership and full non-membership were

adjusted to the 80th percentile and 20th percentile based on the data distribution, as shown in Table 7 (Column 1). It can be observed that the resulting configurations are essentially consistent with the original configurations. Second, considering that configurations with a number of cases greater than or equal to the case frequency threshold should account for 75–80% of the total number of cases, this study adjusted the case frequency threshold to 9, with the results shown in Column (2) of Table 5. It can be observed that the adjusted configurations are essentially consistent with the original configurations. Third, considering that a PRI consistency threshold greater than 0.5 can avoid the problem of different outcomes for the same cause [62], and to be closer to the raw consistency threshold, this study adjusted the PRI consistency threshold to 0.7. The results are shown in Table 5, column (3). It can be seen that the results remain largely unchanged. Fourth, considering the limitation of the fsQCA method in easily identifying false causal combinations [63], this study also followed Braumoeller’s suggestion and used a permutation test with 10,000 iterations to avoid accidental causal relationships in the original solution [64]. The results are shown in Table 8. It can be observed that the adjusted *p*-value is highly significant. Based on this, the above results all indicate that the original solution in this study has good robustness.

Table 7. Robustness test results.

Antecedent Variables		Outcome Variable (High Rural Entrepreneurial Activity)											
		(1)				(2)				(3)			
		C1_1	C2_1	C3_1	C4_1	C1_2	C2_2	C3_2	C4_2	C1_3	C2_3	C3_3	C4_3
Efficiency	EL	●	●	●	●	●	●	●	●	●	●	●	●
	IS		●		●		●		●	●	●		●
	FD		•	●	⊕	●		●		●	•	●	
Equity	EC			●	●			●	●		●	●	●
	MC	●			•	●	●		•	●		●	•
	SS	●	●	•		•	●	•		•	●	•	●
Consistency		0.841	0.860	0.825	0.854	0.850	0.853	0.865	0.860	0.863	0.888	0.888	0.893
Raw coverage		0.278	0.262	0.379	0.267	0.222	0.200	0.199	0.177	0.156	0.139	0.153	0.138
Unique coverage		0.039	0.040	0.130	0.033	0.026	0.018	0.046	0.039	0.044	0.027	0.041	0.026
Solution consistency			0.808				0.828				0.870		
Solution coverage			0.550				0.352				0.251		

Note: ● = core conditions exist, • = edge conditions exist, ⊕ = edge conditions are absent. Economic Level (EL), Industrial Structure (IS), Financial Development (FD), Educational Condition (EC), Medical Condition (MC), Social Security (SS).

Table 8. Permutation test results.

Configuration	Counterexamples				Consistency			
	Observed	Upper Bound	Lower c.i.	<i>p</i> -adj	Observed	Lower Bound	Upper c.i.	<i>p</i> -adj
C1	132	230	185	0.000	0.865	0.502	0.665	0.000
C2	96	199	153	0.000	0.853	0.501	0.683	0.000
C3	122	218	170	0.000	0.850	0.520	0.672	0.000
C4	95	161	111	0.000	0.844	0.578	0.739	0.000

Note: C1, C2, C3, and C4 represent three configurations. “Counterexamples” and “Consistency” represent the results of the replacement test for case frequency and consistency, respectively. Among them, “Observed” represents the case frequency and consistency of each configuration; “Upper Bound” and “Lower c.i.” represent the upper limit and lower limit, respectively. If the “Observed” value falls between the upper and lower bounds, it is considered a random result; “*p*-adj” indicates a significant result, and a value less than 0.05 suggests that the configuration is not a random, chance result.

5. Discussion

5.1. Research Finding

This study integrates the theory of inclusive growth into research on achieving synergistic development between rural entrepreneurship and employment. It explores the combination of factors that drive rural entrepreneurs to engage in entrepreneurial activities, examining the dimensions of opportunity equity and economic efficiency. The analysis identified four configuration paths that can achieve high rural entrepreneurial activity: the “Finance and Healthcare-Driven” type (C1), the “Industrial and Educational Balance” type (C2), the “Financial and Educational Synergy” type (C3), and the “Industrial and Healthcare Support” type (C4). Therefore, all seven hypotheses are supported. See Table 9 for details.

Table 9. Hypothetical test results.

	Hypotheses	Results
H1	Economic level can influence rural entrepreneurial activity.	Support
H2	Industrial structure can influence rural entrepreneurial activity.	Support
H3	Financial development can influence rural entrepreneurial activity.	Support
H4	Educational conditions can influence rural entrepreneurial activity.	Support
H5	Medical conditions can influence rural entrepreneurial activity.	Support
H6	Social security can influence rural entrepreneurial activity.	Support
H7	High rural entrepreneurial activity can be achieved through multiple, causally complex configurations of the six antecedent conditions, demonstrating the principles of conjunctural causation and equifinality.	Support

H1 assumes that the economic level measured by per capita GDP can have an impact on rural entrepreneurial activity. The results show that economic level is present in all configurations, indicating a positive correlation between economic level and rural entrepreneurial activity. This may be due to the increased market opportunities in regions with high economic levels. H2 assumes that the industrial structure measured by the proportion of added value of the tertiary industry can have an impact on the activity of rural entrepreneurship. In both configurations C2 and C4, the industrial structure is evident, indicating that H2 has been confirmed [65]. Although there are also studies that show industrial diversification has no apparent promoting effect on regional entrepreneurship and enterprise innovation [66], this study suggests that the industrial structure will interact with other factors, likely improving the vitality of rural entrepreneurship. H3 assumes that financial development, measured by the loan balance of financial institutions, can have an impact on rural entrepreneurial activity. Financial development is evident in the form of existence and absence in configurations C1 and C4, respectively, indicating that economic growth can indeed affect entrepreneurial activities; however, its impact direction depends on other key elements that interact with it.

H4 hypothesizes that educational conditions can affect the activity of entrepreneurship in rural areas. The results show that the educational conditions in configurations C1, C2, and C3 all appear to exist, which shows that educational conditions can indeed affect rural entrepreneurship activities. This research finding is in line with Mickiewicz’s research conclusions [34], that is, a perfect educational condition can help entrepreneurs better identify and utilize new entrepreneurial opportunities. H5 assumes that a medical condition can affect the activity of entrepreneurship in rural areas. The results show that medical conditions appear in both configurations: configuration C1 and configuration C4, indicating that rural entrepreneurial activity is at a higher level in areas with good medical conditions. This may be because entrepreneurs who enjoy perfect medical conditions are relatively

more likely to have healthy physical qualities, thus carrying out entrepreneurial activities smoothly [36]. H6 assumes that social security can affect the activity of entrepreneurship in rural areas. The results show that social security in configurations C1, C2, and C3 all appear in the form of existence, indicating that the more social security entrepreneurs enjoy, the easier it is for them to engage in entrepreneurial activities, which is in line with the conclusion that social security has a positive impact on entrepreneurial activities obtained in previous research [67]. Although this positive correlation may also be the result of the interaction between the antecedent conditions, as studies have also shown that people in areas with a well-developed social security system are more likely to give up entrepreneurship due to fear of losing social security benefits [68].

H7 assumes that high rural entrepreneurial activity can be achieved through multiple, causally complex configurations of the six antecedent conditions, demonstrating the principles of conjunctural causation and equifinality. The results of this study show that each antecedent condition appears in at least one of the four configurational paths that lead to high rural entrepreneurial activity, and not all antecedent conditions appear in each configurational path. This indicates that the six antecedent conditions can interact with and substitute for each other, thus creating a complex causal relationship with rural entrepreneurial activity. Therefore, hypothesis 7 is confirmed. Its internal core mechanism is that the efficiency dimension elements create entrepreneurial opportunities, and the fair dimension elements guarantee entrepreneurs' ability to identify and utilize these entrepreneurial opportunities. The two jointly promote the realization of high rural entrepreneurial activity through functional complementarity and path substitution. Among them, the functional complementarity characteristics indicate that the common efficiency and fair elements in a certain configuration play a different role in promoting rural entrepreneurship activities, that is, the market and financial opportunities provided by the three efficiency dimension elements, economy, industry, and finance, need the quality and ability guaranteed by the three fair dimension elements, education, medical condition, and social security, to be effectively utilized; the continuous investment of the fair dimension elements also depends on the economic foundation created by the efficiency dimension. The path substitution feature shows that the advantages in one dimension can make up for the relative shortcomings in another dimension to form functional substitution, especially reflected in C4, that is, industrial and medical conditions can effectively make up for the financial constraints brought about by the insufficient level of financial development. At the same time, education and social security alternately appear as core and marginal conditions in different paths, which also shows that they have certain mutual substitution in empowering subjects.

5.2. Theoretical Implications

First, to address limitation of conventional regression analyses that often relies solely on linear models to determine the net effect of independent variables on dependent variables, this study adopts the configurational perspective using fsQCA. When discussing the influencing factors of rural entrepreneurial activities, the existing literature relies too heavily on traditional statistical analysis methods, such as regression analysis. Scholars such as Li have empirically analyzed the influence and transmission mechanism of digital inclusive finance on rural entrepreneurial activity using the regression method, confirming that human capital, regional industrial structure, and infrastructure play an effective role in this process [69]. However, although the research using similar regression methods can effectively test the net effect of a single variable on rural entrepreneurial activities, it implies a flawed assumption that the possible influencing factors are independent of each other and their influence on rural entrepreneurial activities is symmetrical. This limitation

prevents existing research from revealing how multiple conditions form multiple driving paths that collectively affect rural entrepreneurial activities. In fact, entrepreneurs in rural areas are often influenced by many factors when starting their businesses. Therefore, this study employs fsQCA from a configurational perspective, revealing the combination of key elements necessary to achieve high rural entrepreneurial activity. Among them, the role of financial development, social security, and other factors is highly dependent on various conditions, which directly addresses the one-sidedness of the existing regression model and has significant reference value for understanding the complex causal mechanism of entrepreneurial activities.

Second, by incorporating inclusive growth theory, this study addresses the path dependence of rural entrepreneurship research that has tended to foreground economic efficiency while relatively neglecting opportunity equity. Existing research has studied the influence of multiple factors on entrepreneurial activities from various perspectives, including the entrepreneurial ecosystem [70]. Entrepreneurial ecosystem theory remains valuable for outlining the market, capital, facilities, and institutional factors that influence entrepreneurial activities, but it often falls short in addressing how scarce resources are allocated to balance efficiency and equity in rural contexts. This is mainly because the theory relatively ignores the critical role of equity in resource allocation in rural entrepreneurial activities. In this study, the concept of inclusive growth is introduced into the analysis of influencing factors on entrepreneurial activity, and the path to achieving high rural entrepreneurial activity with both efficiency and equity is explored. This further accurately reveals the complementary characteristics of efficiency and equity in driving rural entrepreneurial activities, effectively responding to the policy requirement of grasping the relationship between efficiency and equity in rural development, and proving that investing capital resources in the improvement of social equity is itself a productive investment, thus expanding the application field of inclusive growth theory and the theoretical boundary of rural entrepreneurial research. This means that in the peripheral areas of the city, it is essential to ensure sustainable economic growth, allowing everyone to enjoy entrepreneurial opportunities fairly and ultimately promoting the inclusive growth of the local economy.

Third, this study concentrates on rural areas in China, addressing the limitations of research that centers on core cities or national aggregates. Most of the existing empirical research uses countries or urban areas as the analysis units, and the conclusions obtained are mostly applicable to entrepreneurial activities in relatively macro areas. For example, scholars such as Guo discussed in his research the complex influence mechanism of six conditions in the three categories of demand side, supply side and culture on national entrepreneurial activities [71]. Obviously, the configuration path obtained from this cannot be applied to entrepreneurial activities in rural areas. This is because, unlike urban areas with the characteristics of economic development and frequent commercial activities, entrepreneurial activities in surrounding urban areas have essential differences from cities or countries in terms of resource endowment, social network, market structure, etc. The market is relatively small and the infrastructure is relatively backward, but targeted support policies are often more sufficient; however, there are relatively few entrepreneurship studies on surrounding Chinese cities. Therefore, this study takes rural areas as the analysis level, which not only confirms the uniqueness of the driving path of rural entrepreneurship activities, such as the configuration C4, which shows that even in the absence of financial development, strong industrial and public service support can still stimulate entrepreneurial vitality. At the same time, this study also responds to the call to focus on urban surrounding areas to study entrepreneurial activities [72], offering a robust complement to broader entrepreneurship research.

5.3. Practical Implications

This study takes 982 rural areas in China as research cases, and obtains four configuration paths to achieve high rural entrepreneurial activity, which can not only provide policy enlightenment for rural areas with different resource endowments in China, but also reveal the synergy mechanism of efficiency and equity, which has important reference value for other rural areas facing similar development challenges. For example, Trinh [73] shows that farmers' educational background helps them acquire business skills, thus contributing to the development of rural tourism in Vietnam. If it can be supplemented by the development path revealed by the configuration of "industry and education balance", it can further stimulate the vitality of rural development. In addition, Paunović's research shows that the demand for high-quality medical entrepreneurship in rural areas of Serbia is increasing, but it faces the problem of uneven development [74]. At this time, the region can learn from the configuration of "industry and medical support" to alleviate the shortage of rural health entrepreneurship. Naturally, the application of the model must be adapted to local conditions, but the framework of configuration thinking and analysis provided by this study still has reference significance for rural entrepreneurial activities in different situations.

First, for rural areas that fit the configuration characteristics of "finance and healthcare-driven", it is essential to fully leverage the advantages of a strong economic foundation and strategically invest financial resources in the coordinated development of financial deepening and medical services, thereby guaranteeing the entrepreneurial will supported by social security. Specifically, on the financial side, local financial institutions can be encouraged to set up rural business incubation funds for entrepreneurs, with a focus on supporting local characteristic industries. Measures can be taken to encourage financial institutions to optimize the financial credit products provided to local small and medium-sized enterprises or individual entrepreneurs, thereby enabling rural entrepreneurs to access "borrowing with repayment, lending with use" and systematically reduce financing thresholds and transaction costs. On the medical side, it should speed up the construction of the county medical community, including county hospitals, township hospitals, and village clinics in the medical community, improve the remote diagnosis and treatment and chronic disease management service system, effectively reduce poverty caused by illness and disability, and stabilize the supply level of local labor. At the same time, we can explore the construction of a digital sharing platform for medical resources, which can help small medical institutions obtain medical resources, ensure the fairness of medical services, solve the health needs of local people, and also create localized entrepreneurial opportunities such as health management, medical assistance, and remote monitoring.

Second, for rural areas that fit the configuration characteristics of "industry and education balance", we should actively build a trinity development system of "industry upgrading, education adaptation and financial support" to form a benign development pattern. Specifically, in terms of industrial development, we should focus on cultivating diversified industries, such as deep processing of agricultural products, rural tourism and rural e-commerce, by setting up industrial guidance funds and providing financial incentives, so as to stimulate the vitality of industrial innovation, expand business opportunities and optimize the regional industrial layout. In terms of improving educational conditions, it is necessary to establish a cooperative training mechanism between schools and enterprises, promote in-depth cooperation between secondary vocational and higher vocational colleges and local enterprises, carry out targeted vocational skills training and on-the-job training, ensure a precise match between talent training and industrial demand, and generally improve the quality level of the local labor force. At the same time, it is necessary to support the discount policy of business guarantee loans, reduce the cost of

trial and error, and establish a regular docking mechanism between industrial demand and education and training to ensure that educational output can respond to industrial development and changes in time, and realize the transformation of the advantages of integration of production and education into the path of increasing farmers' income.

Third, for rural areas that fit the configuration characteristics of "financial and educational synergy", the financial resources brought by economic growth should be actively used in the financial and educational fields to provide financial and human support for entrepreneurial activities. Specifically, at the financial support level, it can actively promote the sinking of inclusive finance to rural areas, rely on rural banks and digital inclusive platforms to develop special financial products such as "entrepreneurship loans" and "agricultural machinery loans", and effectively reduce financing costs through differentiated interest rates and flexible repayment methods to ensure the financial needs of entrepreneurs. In terms of education empowerment, a financial and educational data sharing platform can be built, a credit assessment system based on credit banking, skill certification, and training evaluation can be established, and financial institutions can provide precise credit support based on students' learning trajectory and ability certification to lower the threshold for entrepreneurship. At the same time, entrepreneurship risk compensation and social security subsidy policies should be implemented to provide entrepreneurs with phased social security payment support, effectively mitigate entrepreneurship risks, and enhance the entrepreneurial success rate.

Fourth, for rural areas that fit the configuration characteristics of "industry and health-care support", regional economic efficiency should be strengthened while ensuring fairness in the allocation of regional resources. Specifically, at the level of industrial development, we should base ourselves on the existing industrial foundation, focus on the development of advantageous industries such as characteristic agricultural product processing and rural tourism, increase the added value of the industry through the extension of the industrial chain, and provide entrepreneurs with diversified market opportunities. In terms of medical and educational services, we should strive to rationally allocate medical and health and educational resources to ensure the equitable allocation and efficient use of these resources. For example, must accelerate the construction of a three-level digital health service system that is linked to "county-town-village", promote remote diagnosis and treatment and intelligent health management, effectively protect the physical health of entrepreneurs and workers by improving the level of primary medical services, and reduce the risk of poverty caused by illness. At the same time, we will implement rural teacher support plans and digital education projects to improve the quality of basic education, and at the same time, carry out vocational skills training that matches local industries to provide talent reserves for entrepreneurial activities. The above measures can mitigate the inhibitory effect of low financial services on entrepreneurial activities. However, the local government should still strive to invest the financial resources generated by economic growth in the development of the financial industry and increase efforts simultaneously on both the monetary and educational fronts to mitigate their adverse effects on entrepreneurial levels.

6. Conclusions

In research on the factors influencing entrepreneurial activity, clarifying the synergistic effects among multiple elements from the dual dimensions of economic efficiency and opportunity equity is essential. Such clarification enables rural areas to better seize opportunities and leverage resources, thereby achieving the twin goals of economic growth and livelihood security. Grounded in the theory of inclusive growth, this study identifies and selects six key antecedent conditions that balance efficiency and equity: economic level, industrial structure, financial development, educational condition, medical condition, and

social security. A theoretical model is constructed to explore the configurational pathways that enhance rural entrepreneurial activity. Using the fsQCA method, the study examines and reveals multiple concurrent causal pathways that stimulate rural entrepreneurial vitality in rural areas. The main findings are summarized as follows:

- (1) Economic level, industrial structure, financial development, educational condition, medical condition, and social security are not necessary conditions for increasing rural entrepreneurial activity.
- (2) Four configurations constitute the driving paths of rural entrepreneurial activity, namely the “finance and healthcare-driven” type, the “industry and education balanced” type, the “finance and education coordinated” type, and the “industry and healthcare supported” type.

The results of this study indicate that the configuration path promoting rural entrepreneurial activity strikes a balance between economic efficiency and equity of opportunity. However, there are still the following shortcomings: First, data from 2021 are used for several key variables, and data from 2022 are used for the result variables, all of which are cross-sectional. Although the realization path of high rural entrepreneurial activity can be partially understood, it is challenging to capture the dynamic evolution of these configurations or their long-term impacts. In the future, panel data and the dynamic QCA method can be used to analyze the dynamic changes in configuration. Furthermore, the QCA method can be combined with traditional statistical analysis methods to determine the correlation between configurations and other variables. Second, for measuring the six antecedents and rural entrepreneurial activity, this study employs a single index measurement method, which improves data availability but may affect the robustness of the conclusions. This is because the current measurement of indicators such as educational condition and medical condition primarily captures the quantity of public services. Still, it is impossible to determine the qualitative impact, which leads to the inability to distinguish whether vocational education or general education plays a leading role in the existence of educational conditions. In other words, using a single index measurement method will limit the in-depth exploration of the specific mechanism behind the configuration. Therefore, future studies should adopt more comprehensive and precise measurement methods, such as averaging multiple indicators, to enhance the reliability of research conclusions. Third, while opportunity equity in entrepreneurship research typically refers to the fairness of individuals’ access to capital, this study, based on inclusive growth theory, focuses on the impact of fairness factors at the macro-regional level on rural entrepreneurial activity. This approach lacks consideration of fairness factors related to capital acquisition during the individual entrepreneurial process. Therefore, future research should explore the impact of fairness factors more closely linked to the individual entrepreneurial process on rural entrepreneurial activity. Fourth, the results of the configuration analysis aimed at achieving high rural entrepreneurial activity in this study indicate that the overall coverage is only 0.338, suggesting that the empirical explanatory power may be moderate [75]. The reasons may be that the calibration threshold is set, the main explanatory factors are ignored, and the heterogeneity and skewness of the case are not guaranteed. However, in the study of QCA with small samples, almost-perfect overall solution coverage can usually be achieved. In contrast, the focus of QCA with large samples is more deductive, and most researchers may have to settle for a lower level of solution coverage. Therefore, future research can attempt to incorporate additional variables to explain the solution further.

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