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Resource acquisition, entrepreneurial competence, and entrepreneurial growth performance of new farmers

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Introduction: Entrepreneurial resources and abilities are pivotal factors influencing the success of new farmers' ventures. Understanding how these elements drive entrepreneurial growth is of significant practical importance.

Methods: Grounded in a framework system for entrepreneurial competence (comprising opportunity recognition/exploitation capabilities and operational/strategic management proficiencies), this study uses field data from 512 new farmers in Jiangxi, Henan, and Anhui provinces. Mediation and structural equation models are applied to assess the impact of resource acquisition on entrepreneurial growth and explore the mediating role of entrepreneurial ability.

Results: Resource acquisition significantly bolsters entrepreneurial growth performance. Within entrepreneurial skills, both opportunity recognition and operational management capabilities mediate the relationship between human, social, material resources and growth performance (effect sizes: 0.134, 0.286, 0.257, 0.105, 0.279, and 0.240). No mediation is observed for policy resources. The study identifies eight pathways: human, social, and material resources influence performance both directly and indirectly, while policy resources exert only a direct effect.

Discussion: These findings underscore the imperative to enhance new farmers' accessibility to entrepreneurial resources, augment their capabilities (particularly opportunity recognition and operational management), reinforce policy support, and cultivate sustainable development of their entrepreneurial endeavors.

KEYWORDS

resource acquisition, entrepreneurial competence, growth performance, new farmer entrepreneurship, entrepreneurial spirit

1 Introduction

In recent years, the trend of back-to-the-land migration has become a prominent phenomenon in China, giving rise to a group known as "new farmers." Unlike other emerging agricultural entities such as professional farmers, high-quality farmers, and return-to-the-land groups, new farmers are agricultural producers and operators directly engaged in farming activities. They are distinguished by traits such as innovation, ecological consciousness, and digital thinking. This group includes returning college students, migrant workers, cross-boundary entrepreneurs, and local agricultural entrepreneurs (Li, 2024). With the ongoing implementation of China's rural revitalization strategy, new farmers are playing an increasingly critical role in revitalizing rural areas, particularly by fostering the integration of rural industries. They have

become a driving force for innovation and entrepreneurship in the agricultural sector (Research Group of the Rural Economic System and Management Department of the Ministry of Agriculture, 2016).

The 2024 No. 1 Document from the Central Committee of the Chinese government emphasizes the need to implement the Rural Revitalization Talent Support Program, which aims to cultivate local rural talents and guide various professionals from urban areas to offer services in the countryside. This initiative seeks to enhance the overall quality of farmers comprehensively. However, despite over a decade of development since 2013, new farmers' entrepreneurial endeavors remain constrained by challenges such as the low entry barriers of agriculture, high risks, weak competencies, and limiting policy conditions. As a result, survival rates are low, and growth is limited (Cao and Li, 2021). Numerous practices demonstrate that entrepreneurial resources are pivotal for success, while entrepreneurial ability significantly influences growth. Therefore, addressing the resource constraints of new farmers, enhancing their entrepreneurial abilities, and improving their growth performance are pressing and practical issues that need urgent attention.

Currently, research on new farmers has deepened, with a particular emphasis on entrepreneurial studies. This shift has transcended merely conceptual and qualitative examinations of their characteristics, roles, driving factors, and strategic responses. Increasingly, empirical research is emerging, particularly on the factors influencing new farmer entrepreneurship (Wang et al., 2020; Zhu et al., 2023). Scholars have focused on various elements such as social and industrial networks (Zhang and Gao, 2021), relational network embeddedness and entrepreneurship (Zhu et al., 2023), internet finance and entrepreneurial learning (Yan et al., 2020), as well as the effects of entrepreneurial timing and product distribution patterns (Peng C. et al., 2021). Additionally, the role of internet embeddedness and resource acquisition in driving entrepreneurial growth and performance has also been scrutinized (Li, 2024).

Despite these advances, existing studies have predominantly emphasized the importance of resource acquisition—such as material, human, knowledge, governance, network, and policy resources—while neglecting the role of entrepreneurial competence in influencing entrepreneurial performance. Meanwhile, the inefficient implementation of policies and the lack of precise alignment between financial support and training or market guidance make it difficult to transform resources into entrepreneurial capabilities. Moreover, comprehensive research integrating these three dimensions remains scarce. This raises critical questions: Can entrepreneurial competence enhance new farmer entrepreneurship? Does resource acquisition bolster entrepreneurial competence, thereby improving entrepreneurial growth and performance?

Based on field data from 512 new farmers across Jiangxi, Henan, and Anhui provinces, this study provides a valuable contribution by employing mediation effect models and structural equation modeling to examine the impact of resource acquisition on entrepreneurial growth performance, while also verifying the mediating role of entrepreneurial competence. The marginal contributions of this research lie primarily in its standardization of entrepreneurial competence indicators, particularly those related to operational and management skills, and in its further explanation of how entrepreneurial competence affects growth performance. By constructing a theoretical framework of

“Entrepreneurial Resources—Entrepreneurial Competence—Entrepreneurial Performance,” this study explores the mechanisms through which resource acquisition impacts entrepreneurial outcomes, thereby expanding the research scope on new farmer entrepreneurship. The use of field data and robust empirical methods ensures the reliability of the conclusions, offering valuable insights for decision-making to support the entrepreneurial growth of new farmers.

2 Literature review and research hypothesis

2.1 Literature review

Currently, studies on entrepreneurial resources, abilities, and performance among agricultural business entities tend to focus heavily on the relationship between entrepreneurial resources and performance, with significantly less attention paid to entrepreneurial ability and its connection to the other two. Therefore, this research aims to address this gap by classifying and measuring entrepreneurial abilities, examining their influencing factors and entrepreneurial effects, and investigating their mediating role within agricultural business entities. This will provide both a theoretical foundation and methodological reference for understanding the interplay between entrepreneurial resources, abilities, and performance.

2.1.1 Classification and measurement of entrepreneurial competencies

Scholars have approached the classification of entrepreneurial ability across various agricultural business subjects in diverse ways. A common classification divides entrepreneurial ability into two broad categories: opportunity ability and operation and management ability. Opportunity ability encompasses both the identification and development of opportunities, while operation and management ability includes organizational, strategic, relational, and commitment capabilities (Zhuang et al., 2014; Peng and Wang, 2017; Yi et al., 2018; Zhuang and Yang, 2020; Lü and Wang, 2021; Huang et al., 2023). Beyond these, some scholars argue that entrepreneurial ability should also include innovation (Su et al., 2016; Li, 2016; Su and Kong, 2020), resource acquisition and integration (Wu and Zhang, 2015; Zhang et al., 2019), basic entrepreneurial quality (Wu and Zhang, 2015; Huang et al., 2007), psychological resilience (Zhang et al., 2019; Wei and Party, 2012), as well as learning and dynamic capabilities (Rui and Zhuang, 2014; Zhuang et al., 2015; Rui and Shi, 2018; Liu et al., 2020). Building on this classification, researchers have further measured entrepreneurial abilities across various contexts, such as farmers in ethnic regions (Chen, 2016), heterogeneous urban entrepreneurs (Ye, 2010), and agricultural business subjects in Zhejiang (Zhang et al., 2019) and Jiangsu (Yuan et al., 2020). Comparative analyses have also explored the entrepreneurial abilities of returning rural migrant workers in Shaanxi and Sichuan (Wei and Party, 2012). From these studies, it is evident that innovation, resource integration, psychological endurance, and dynamic capabilities should all fall under the umbrella of operation and management ability, while basic entrepreneurial quality serves as a foundational attribute. Therefore, this study classifies the entrepreneurial abilities of new farmers into

two main categories: opportunity ability and operation and management ability.

2.1.2 Factors influencing entrepreneurial competence

In recent years, the factors influencing the entrepreneurial ability of agricultural business subjects have garnered increasing attention from scholars. On one front, comprehensive studies have identified a range of factors affecting the entrepreneurial capabilities of farmers, including personal attributes, human capital, entrepreneurial environment, motivation, family background, managerial skills, market strategy awareness, and social capital (Pan, 2019; Zhao, 2022; Wang, 2021). On another front, empirical research has delved into specific key drivers, revealing that the industrial cluster environment (Wu and Zhang, 2015), human capital (Zhuang and Yang, 2020), entrepreneurial resources (Zhuang et al., 2014), understanding of rural industrial integration and development (Zhang and Yuan, 2021), and social networks (Huang, 2021) significantly impact the entrepreneurial abilities of farmers and migrant workers. Overall, entrepreneurial competence among agricultural business entities is shaped by a multifaceted set of influences, with key variables such as human, social, financial, and policy resources playing a pivotal role in enhancing entrepreneurial ability.

2.1.3 Entrepreneurial effects of entrepreneurial competencies

Moreover, the entrepreneurial competence of agricultural entrepreneurs significantly affects their entrepreneurial outcomes. First, entrepreneurial ability has a direct impact on both performance and quality. Studies have demonstrated a positive correlation between the comprehensive entrepreneurial abilities of farmers and their entrepreneurial performance (Zhou and Xie, 2012). Similarly, the entrepreneurial competence of migrant workers facilitates the acquisition of entrepreneurial resources and enhances their performance (Rui and Shi, 2018), while network and dynamic abilities contribute positively to entrepreneurial outcomes (Rui and Zhuang, 2014). In addition to performance, entrepreneurial competence also influences aspects such as entrepreneurial well-being, sense of achievement, and resilience after failure. Higher entrepreneurial competence increases the likelihood of returning rural migrant entrepreneurs experiencing entrepreneurial satisfaction (Huang et al., 2023), and it has a notable positive effect on farmers' sense of accomplishment in entrepreneurship (Su et al., 2016). Furthermore, entrepreneurial competence supports business revitalization following setbacks (Hou et al., 2022). These findings underscore the critical role of entrepreneurial competence in driving the success and sustainability of agricultural business entities.

2.1.4 The mediating role of entrepreneurship

Scholars have explored not only the antecedents and outcomes of entrepreneurial competence but also its mediating role in various entrepreneurial contexts. Research indicates that the impact of social networks on the entrepreneurial performance of migrant workers is partially mediated by entrepreneurial ability (Lü and Wang, 2021). Additionally, entrepreneurial competence mediates the link between entrepreneurial bricolage and family farm performance (Yi et al., 2018). While the accumulation of entrepreneurial abilities in migrant workers' start-ups embedded within industrial networks plays a

pivotal role in fostering enterprise growth (Zhuang et al., 2015). Moreover, entrepreneurship policies indirectly influence both entrepreneurial willingness (Xie et al., 2018) and performance (Ding, 2014) by improving the entrepreneurial capacity of migrant workers. In agribusiness, entrepreneurial capacity similarly serves as a partial mediator between entrepreneurial efforts and performance outcomes (Yin, 2016). Thus, entrepreneurial resources not only exert a direct influence on performance but also an indirect one through entrepreneurial ability, which acts as a key mediating factor between resources and performance.

2.2 Research hypotheses

The traditional Resource-Based View (RBV) predominantly focuses on resource control at the organizational level. However, new farmers are mostly new-type business entities with diverse individual identities. Their resource acquisition mainly relies on policies and external networks, and the transformation of resources into performance is achieved through individual entrepreneurial capabilities. The Human Capital Theory (HCT) emphasizes the mediating role of individual capabilities but does not fully discuss the constraints of external resources on capability accumulation. The theoretical innovation of this study lies in integrating RBV and HCT. We propose a chain model of "Resource Acquisition—Entrepreneurial Capability—New Farmers' Entrepreneurial Growth Performance" to uncover the synergistic mechanism between the empowerment of external resources and the transformation of endogenous capabilities in new farmers' entrepreneurship, thereby enriching the research theory.

2.2.1 Resource access and growth performance of new farmer entrepreneurship

The availability and diversity of entrepreneurial resources are key determinants of differences in entrepreneurial performance. Human and financial resources, as well as the networks that facilitate their access, play a decisive role in entrepreneurial success (Annika, 2000). Research on agricultural business entities reveals that both asset-based and knowledge-based resources significantly contribute to the performance of rural microenterprises (Liu et al., 2016). Asset-based resources, including financial, human, and informational resources, are essential for supporting entrepreneurial activities (Chrisman et al., 1998), while knowledge-based resources act as the "soft power" that drives performance by expanding sales and increasing market share (Zahra and Bogner, 2000). For farmer entrepreneurs (Guo and Chen, 2015) and returning migrant workers (Peng S. et al., 2021), the efficiency and effectiveness of resource acquisition are critical factors affecting performance. Short-term access to entrepreneurial resources can provide a time advantage and substantially improve business conditions (Wang, 2023), whereas the effective acquisition and utilization of both internal and external resources determine an enterprise's competitiveness (Lin and Jiang, 2009), significantly influencing the survival, growth, and success of startups (Li and Lin, 2024). Access to industrial and service resources has a particularly strong economic impact on rural entrepreneurial performance, with industrial resources proving especially influential (He et al., 2012). Additionally, knowledge, relational, and policy resources have been shown to significantly enhance the entrepreneurial performance of

agribusinesses (Sang, 2013). External resource acquisition can mitigate challenges such as resource shortages, legitimacy deficits, and weak organizational structures, ultimately boosting competitive advantage and improving entrepreneurial performance (Geng et al., 2012). Social capital further influences the entrepreneurial success of returning rural migrant workers by enhancing opportunity identification (Wen et al., 2023), entrepreneurial environment perception (Ma et al., 2020), and self-efficacy (Wu et al., 2020).

Based on the analysis, it is clear that the acquisition of human, social, financial, and policy resources significantly impacts entrepreneurial growth and performance. From these insights, the following hypotheses are proposed:

H1: The acquisition of entrepreneurial resources significantly contributes to the growth performance of new farmers.

H1a: Human resource acquisition has a notable positive impact on the entrepreneurial growth performance of new farmers.

H1b: Social resource acquisition plays a significant role in enhancing the entrepreneurial growth performance of new farmers.

H1c: Access to financial resources significantly improves the entrepreneurial growth performance of new farmers.

H1d: The acquisition of policy resources significantly contributes to the entrepreneurial growth performance of new farmers.

2.2.2 Resource access and entrepreneurial capacity of new farmers

Drawing upon the human capital theory, this research investigates the mechanisms through which novice farmers augment their entrepreneurial capabilities and performance by investing in organizational human capital, encompassing knowledge, skills, experience, and other pertinent attributes. Entrepreneurial resource acquisition positively influences both the opportunity recognition and operational management capabilities of new farmers. First, the acquisition of human resources significantly enhances their entrepreneurial ability. On one hand, higher levels of knowledge enable new farmers to better understand market dynamics, accurately identify unmet consumer needs, and seize emerging business opportunities. This also allows them to recognize and develop opportunities across various industries, thereby improving their ability to capitalize on new ventures. On the other hand, the more industry-specific skills and management experience a new farmer possesses, the better equipped they are to make informed judgments about future industry trends, devise effective development strategies, and enhance their operational and management capabilities. Second, the acquisition of social resources also plays a pivotal role in strengthening new farmers' entrepreneurial abilities. The heterogeneity of real-world social resources allows new farmers to gather diverse information from their networks, improving their ability to identify and cultivate opportunities. Additionally, the breadth and depth of social resources help them secure essential capital, technology, and management expertise, further enhancing their operational and management skills. Furthermore, virtual social resources enable new farmers to connect with friends and relatives more

efficiently, maintaining and consolidating real-world social networks. These virtual connections also enrich information channels, providing access to more business opportunities. Through online platforms, farmers can exchange knowledge and learn from weak-tie relationships, improving their operational and management capabilities (Zhang et al., 2020). Third, access to financial resources fosters the development of entrepreneurial capabilities in new farmers. On one hand, acquiring resources such as capital, technology, and equipment needed for entrepreneurship boosts new farmers' confidence, enhances their risk-taking ability, broadens the scope of opportunity exploration, and encourages proactive identification and development of entrepreneurial opportunities. On the other hand, access to additional capital and material resources provides better entrepreneurial conditions, improves resource allocation and strategic decision-making abilities, and strengthens perseverance in the face of challenges. This access also facilitates better resource integration, thereby enhancing operational and management capabilities (Zhuang et al., 2014). Finally, access to policy resources significantly supports the development of entrepreneurial abilities among new farmers. Receiving comprehensive business information from the government aids in identifying opportunities, while frequent knowledge and skills training from governmental bodies enhances their ability to develop opportunities and improve operational management. In addition, financial subsidies, tax exemptions, low-interest loans, land concessions, and infrastructure support from government departments address the critical challenges of capital, land, and resource shortages. These measures not only increase entrepreneurial confidence and opportunity but also reduce operating costs, thereby enhancing management and operational efficiency. Meanwhile, on the one hand, the allocation of policy resources often relies heavily on government departments, lacking precise alignment with local actual conditions. On the other hand, new farmers have limited capacity to proactively integrate resources. Some entrepreneurs are confined by traditional agricultural thinking and lack sufficient sensitivity to the market-oriented allocation of policy resources.

Based on these considerations, the following hypotheses are proposed:

H2: Access to entrepreneurial resources significantly contributes to the entrepreneurial opportunity capacity of new farmers.

H2a: Human resource acquisition significantly enhances the entrepreneurial opportunity capacity of new farmers.

H2b: Social resource acquisition significantly contributes to the entrepreneurial opportunity capacity of new farmers.

H2c: Access to financial resources significantly boosts the entrepreneurial opportunity capacity of new farmers.

H2d: Access to policy resources significantly enhances the entrepreneurial opportunity capacity of new farmers.

H3: Access to entrepreneurial resources significantly contributes to the operational and management capabilities of new farmers.

H3a: Human resource acquisition significantly enhances the operational and management capabilities of new farmers.

H3b: Social resource acquisition significantly contributes to the operational and management capabilities of new farmers.

H3c: Access to financial resources significantly improves the operational and management capabilities of new farmers.

H3d: Access to policy resources significantly strengthens the operational and management capabilities of new farmers.

2.2.3 The mediating role of entrepreneurship

Cognition and identification of entrepreneurial opportunities constitute the initial step in entrepreneurial behavior, followed by the successful integration of operational and managerial resources, and ultimately leading to profitability (Zhuang et al., 2014). The innovative and developmental capabilities of farmers or migrant workers (Zhou and Xie, 2012), along with their networking, learning (Rui and Shi, 2018), and dynamic capabilities (Rui and Zhuang, 2014), have been shown to positively influence entrepreneurial performance. Similarly, individual migrant workers' entrepreneurial competence (Li, 2016), particularly their innovation, market acumen, and organizational management skills (Zhang, 2020), significantly impact entrepreneurial quality. It is posited that both opportunity recognition and operational management abilities play critical roles in driving the entrepreneurial growth performance of new farmers. Opportunity ability has a direct impact on growth performance. New farmers who possess the skill to recognize opportunities can accurately perceive the diverse needs of consumers, identify high-quality market prospects, and seize transient entrepreneurial opportunities. This ability to capture first-mover advantages directly influences market entry, ensuring a competitive edge and enabling early-stage development, which is fundamental for achieving strong entrepreneurial outcomes. Moreover, if new farmers exhibit opportunity development skills—such as a willingness to innovate, a keen understanding of consumer demand for new products, and the ability to pioneer new markets—they can swiftly introduce new products, explore untapped markets, and secure a leadership position, thereby enhancing and sustaining their growth performance (Zhuang and Yang, 2020). Operational management ability plays a pivotal role in enhancing the growth performance of new farmers. Greater proficiency in operational management allows new farmers to effectively integrate diverse resources, formulate strategic plans, and make sound decisions when facing entrepreneurial risks and uncertainties, thereby maximizing resource utilization and driving superior entrepreneurial outcomes. Additionally, operational management encompasses relationship management; stronger relational skills enable farmers to collaborate more effectively with upstream and downstream enterprises, government agencies, financial institutions, and other relevant stakeholders. This not only improves efficiency in handling emergencies but also fosters resilience, ultimately supporting entrepreneurial growth. Research shows that enhanced operational management mitigates negative emotions and optimizes entrepreneurial performance (Yi et al., 2018).

Building on the preceding hypotheses, the following are proposed:

H4: Opportunity capacity mediates the relationship between resource acquisition and entrepreneurial growth performance of new farmers.

H4a: Opportunity capacity mediates the relationship between human resource acquisition and entrepreneurial growth performance of new farmers.

H4b: Opportunity capacity mediates the relationship between social resource acquisition and entrepreneurial growth performance of new farmers.

H4c: Opportunity capacity mediates the relationship between financial resource acquisition and entrepreneurial growth performance of new farmers.

H4d: Opportunity capacity mediates the relationship between policy resource acquisition and entrepreneurial growth performance of new farmers.

H5: Operational management capacity mediates the relationship between resource acquisition and entrepreneurial growth performance of new farmers.

H5a: Operational management capacity mediates the relationship between human resource acquisition and entrepreneurial growth performance of new farmers.

H5b: Operational management capacity mediates the relationship between social resource acquisition and entrepreneurial growth performance of new farmers.

H5c: Operational management capacity mediates the relationship between financial resource acquisition and entrepreneurial growth performance of new farmers.

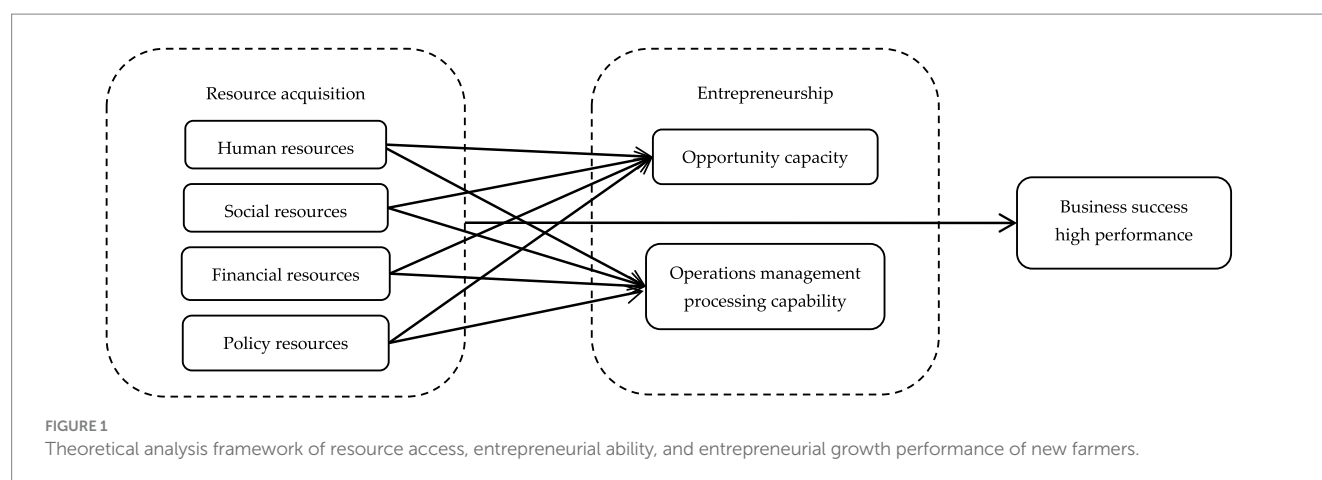
H5d: Operational management capacity mediates the relationship between policy resource acquisition and entrepreneurial growth performance of new farmers.

In summary, the theoretical framework of this study is presented in Figure 1.

3 Research design: data sources, variable selection, and modeling

3.1 Data sources

The data for this study are extracted from the field survey conducted under the Ministry of Education's Humanities and Social Sciences project, titled "Research on the Entrepreneurial Growth Path and Key Elements of New Farmers under the Strategy of Rural Revitalization" (20YJA630032). The survey was based on the economic development levels of 18 counties in 6 prefectures across three agricultural provinces—Jiangxi, Henan, and Anhui—and yielded 512 valid responses. The sample predominantly consists of well-educated, married, young to middle-aged males. Most of these new farmers are emerging business entities, with the majority having no familial entrepreneurial background. The reasons for selecting samples in this manner are as follows. Firstly, there are limitations in the sample acquisition channels. In this questionnaire survey, sampling was



primarily conducted through government—registered directories or lists of cooperative members. New—type operating entities (such as family farm owners and leaders of agricultural enterprises) are accurately registered, making them easy to sample. In contrast, non-registered groups like individual farmers and part-time producers are prone to being overlooked. Secondly, the willingness of the respondents to participate in the survey varies. Highly educated, married, young and middle-aged males generally possess stronger information—acquisition capabilities and a greater willingness to express their views. Moreover, as the main decision—makers in their families, they are more inclined to participate in the survey. On the other hand, female, elderly, or low—educated groups may avoid the survey due to time costs, cognitive barriers, or limitations imposed by their social roles. Household sizes are generally between 3 and 4 members. Additionally, the majority of respondents have been running their businesses for over 6 years, have established operations on a considerable scale, and over half employ more than 16 people. Their businesses are primarily engaged in farming and sales, often located in remote areas away from townships (Li, 2024).

Regarding the key variables, the Likert 5-point scaling method was employed to assign values to each indicator in this study. First, the research team conducted a small-sample test by selecting 30 samples in Jiangxi Province. After analyzing the data, feedback was collected from the respondents regarding the clarity of the statements and the reasonableness of the options. Items that were vague or ambiguous were adjusted accordingly. Subsequently, five experts in the field were invited to conduct content review and quantitative evaluation. Finally, a comprehensive survey and data analysis were carried out after performing exploratory factor analysis (EFA), confirmatory factor analysis (CFA), criterion-related validity tests, and reliability tests. The average entrepreneurial growth performance score among the new farmers is 3.274, indicating a medium-high level of growth. Human, social, financial, and policy resources scored 3.926, 3.568, 3.269, and 3.152, respectively, with human resources receiving the highest score and policy resources the lowest. Furthermore, the entrepreneurial abilities of these new farmers are relatively strong, with opportunity ability scoring 3.658 and operational and management ability scoring 3.817, showing a slightly higher proficiency in operational and management skills compared to opportunity identification.

3.2 Variable selection

3.2.1 Dependent variable: entrepreneurial growth performance of new farmers

Drawing from the research of Li (2024), the entrepreneurial growth performance of new farmers is categorized into two key dimensions: financial performance (measured through four items, such as the ability for profits to continually grow) and market performance (measured by four items, including the improvement of product sales). Together, these two dimensions are assessed using eight items.

3.2.2 Explanatory variables: access to resources

Resource acquisition, in this context, includes human, social, financial, and policy resources. Referring to the scale developed by Wang and Sun (2018), human resources are subdivided into three categories: knowledge (e.g., “rich knowledge of agricultural production and management”), technology (e.g., “high technical proficiency”), and experience (e.g., “extensive management experience”). Each category is measured with three items, totaling nine items. Social resources, based on the work of Wang and Sun (2018) and Zou and Huang (2014), are divided into two categories: virtual social resources (e.g., “I have a wide online network”) and real social resources (e.g., “I have close relationships with friends in real life”), each assessed by five items, for a total of ten items. Financial resources, as per Zou Fangfang et al., are examined through six factors: entrepreneurial investment capital, average annual household income, agricultural income share, operational arable land area, household deposits, and total household fixed asset value. Policy resources, following the framework of Li and Yang (2021), are evaluated across seven areas, including access to government financial subsidies, financial loans, tax exemptions and reductions, land use concessions, entrepreneurship training, information services, and infrastructure support.

3.2.3 Intermediary variable: entrepreneurial capacity

Based on the research findings of Zhuang et al. (2014), the entrepreneurial ability of new farmers is classified into two main categories: opportunity ability and operational management ability. Opportunity ability is further divided into two dimensions:

opportunity recognition ability (e.g., the ability to accurately identify unmet consumer needs) and opportunity development ability (e.g., proficiency in developing new products or services). These are measured by four questions. Operational management ability is subdivided into five dimensions: learning and innovation ability (e.g., the capacity to adopt advanced management practices from others), resource allocation ability (e.g., efficient allocation of enterprise resources), strategic planning ability (e.g., developing sound strategic plans), relationship and cooperation ability (e.g., maintaining strong collaborations with upstream and downstream enterprises), and risk tolerance ability (e.g., managing various potential risks in production and operations). These dimensions are measured by 10 items in total.

3.2.4 Control variables: entrepreneurial characteristics

Additionally, drawing on the research of other scholars, several entrepreneurial characteristics such as years in business, industry, scale, and geographic region are used as control variables. Referring to the findings of Zhang and Teng (2021), the duration of entrepreneurship is measured by the number of years new farmers have been running their businesses, entrepreneurial scale is gauged by the number of employees, industry is categorized based on the business sector, and entrepreneurial region is assessed by the distance of the enterprise from the county center.

The types, labels, measurement dimensions, and eigenvalues of all dependent, explanatory, mediating, and control variables are presented in Table 1.

3.3 Modeling

To investigate the impact of resource acquisition on the entrepreneurial growth performance of new farmers and its underlying mechanisms, both the mediating effect model and the structural equation model are employed for empirical analysis. The mediating effect model is used to examine how entrepreneurial ability mediates the relationship between resource acquisition and entrepreneurial growth performance, while the structural equation model provides a more comprehensive analysis of the pathways through which resource acquisition influences the growth performance of new farmers.

3.3.1 Mediated effects model

Resource acquisition plays a significant role in enhancing entrepreneurial growth performance. However, the intrinsic mechanism through which resource acquisition affects this performance remains unclear. This study proposes that entrepreneurial ability serves as a key mediating factor, acting as a bridge between resource acquisition and entrepreneurial growth performance. Specifically, resource acquisition is likely to improve entrepreneurial performance by enhancing entrepreneurial capabilities. To assess the mediating role of entrepreneurial ability in the relationship between resource acquisition and new farmers' entrepreneurial growth performance, this study adopts a stepwise regression approach using a mediation effect model. The analytical process is outlined as follows:

$$Y_i = c_1S_i + \beta_1Z_i + \varepsilon_i$$

TABLE 1 Types, names, measurement dimensions, and eigenvalues of the main variables of entrepreneurship among new farmers.

Variable type	Variable name	Dimension of measurement	Average value	(Statistics) standard deviation
Implicit variable	Growth performance	Financial performance, market performance	3.274	0.913
Explanatory variable	Human resources	Knowledge, skills, experience	3.975	0.902
	Social resources	Virtual society resources, real society resources	3.568	0.914
	Material resources	Capital invested in business, average annual household income, share of agricultural income, actual area of arable land in operation, household savings, total value of household fixed assets	3.269	1.048
	Policy resources	Financial subsidies, financial loans, tax exemptions, land concessions, entrepreneurship training, information services, infrastructure support	3.152	0.897
Intermediary variable	Opportunity capacity	Opportunity identification capability, opportunity development capability	3.658	1.024
	Operations management capability	Learning and Innovation, Resource Allocation, Strategic Planning, Relationships and Partnerships, Risk Tolerance	3.817	0.936
Control variable	Entrepreneurship	Farming of agricultural products = 1; Processing of agricultural products = 2; Marketing of agricultural products = 3; Services for agricultural products = 4; Leisure agriculture = 5	2.524	1.369
	Number of years in business	2 and below = 1; 3 to 5 = 2; 6 to 8 = 3; 9 to 12 = 4; 13 and above = 5	3.043	1.285
	Entrepreneurial scale	8 and below = 1; 9 to 15 = 2; 16 to 25 = 3; 26 and above = 4	2.594	1.165
	Start-up area	5 and below = 1; 6 and above = 2	1.756	0.433

The indicators for "Growth performance," "Human resources," "Social resources," "Policy resources," "Opportunity ability," and "Operation management ability" were scored using the Delphi consulting method to determine the weight of each factor. A 5-point Likert scale was employed to quantify specific indicators, where "1" represents strong disagreement and "5" represents strong agreement. For "Material resources" and control variables, values were assigned on a scale from 1 to 5 based on actual levels of performance or characteristics.

$$Y_i = c_1 S_i + \beta_1 Z_i + \varepsilon_1$$

$$M_i = a S_i + \beta_2 Z_i + \varepsilon_2$$

In this model, Y_i denotes the entrepreneurial growth performance of new farmers; S_i represents resource acquisition; M_i refers to the mediating variable of entrepreneurial competence; Z_i represents the control variables; a , b , c_1 , c_2 and $\beta_1, \beta_2, \beta_3$ are the coefficients to be estimated; and $\varepsilon_1, \varepsilon_2, \varepsilon_3$ is the random disturbance term.

3.3.2 Structural equation modeling

To evaluate the overall relational dynamics and transformation pathways between resource acquisition, entrepreneurial ability, and entrepreneurial growth performance among new farmers, this study constructs a structural equation model (SEM) to capture the causal relationships between observable and latent variables. The analysis is conducted using AMOS 23.0. The model comprises two components: the measurement equation and the structural equation. The specific model can be expressed as follows:

$$\text{Measurement equations: } X = \Lambda_x \xi + \delta Y = \Lambda_y \eta + \varepsilon$$

$$\text{Structural equations: } \eta = B\eta + \Gamma \xi + \zeta$$

In these equations, X and Y denote the exogenous and endogenous observed variables respectively; ξ and η represent the exogenous and endogenous latent variables respectively; Λ_x is the relationship matrix between exogenous latent variables and their observed variables, consisting of the factor loadings of X on ξ ; Λ_y denotes the relationship matrix between endogenous latent variables and their observed variables, consisting of the factor loadings of Y on η ; and δ and ε represent the error terms of the measurement model. B is the coefficient matrix of the endogenous latent variable, which characterizes the relationship between the endogenous latent variables; A is the coefficient matrix of the exogenous latent variable, which characterizes the effect of the exogenous latent variable ξ on the endogenous latent variable η ; and ζ is the error term of the structural model.

4 Empirical tests and analysis of results

4.1 Factor analysis and reliability and validity tests

Following the common methodologies in existing research, exploratory factor analysis (EFA) was employed using AMOS23.0 software to assess the internal consistency of the indicators measuring resource acquisition, entrepreneurial ability, and the entrepreneurial growth performance of new farmers. Confirmatory factor analysis (CFA) and Cronbach's alpha coefficients were then applied to evaluate the structural validity. The study's results indicated a Cronbach's alpha value of 0.893, a KMO test value of 0.893, and a Bartlett sphericity test result of 712.49 with a p -value of 0.000. Additionally, the standardized

factor loading coefficients for all observable variables exceeded 0.80, demonstrating good consistency in both the variable design and the results.

Furthermore, the reliability and validity test results for the three scales—resource acquisition, entrepreneurial ability, and entrepreneurial growth performance—are presented in Table 2. The factor loadings and Cronbach's alpha values for each variable all exceed 0.8, while the average variance extracted (AVE) values are above 0.5 and the composite reliability (CR) is no less than 0.8, indicating strong convergent validity. Additionally, the analysis found significant correlations between the key variables of resource acquisition, entrepreneurial ability, and entrepreneurial growth performance. The square root values of AVE for each variable are higher than their respective correlation coefficients, confirming the strong discriminant validity of the scales used in this study.

4.2 Test of the mediating role of entrepreneurship

The mediating effect model was employed to examine the mediating role of entrepreneurial competence. Since entrepreneurial competence is divided into two categories—opportunity competence and operations management competence—the mediating effects of each were analyzed separately.

4.2.1 The mediating role of opportunity capacity

First, the influence of resource acquisition on the entrepreneurial growth performance of new farmers was assessed, followed by the impact of resource acquisition on their opportunity capacity. Finally, the mediating role of opportunity capacity between resource acquisition and entrepreneurial growth performance was tested. The results of these analyses are summarized in Table 3.

As presented in Table 3, resource acquisition has a significant positive effect on the entrepreneurial growth performance of new farmers, with material resources exerting the greatest influence, followed by human resources, social resources, and, finally, policy resources. The estimation results from models (1)–(3) show that human, social, and material resources positively impact entrepreneurial growth performance at a 1% significance level, with standardized regression coefficients of 0.549, 0.447, and 0.681, respectively. Meanwhile, model (4) indicates that policy resources positively affect growth performance at the 5% significance level, with a standardized regression coefficient of 0.258. These results confirm that resource acquisition enhances the entrepreneurial growth performance of new farmers, though policy resources have the smallest impact. Thus, hypothesis H1, along with its sub-hypotheses H1a, H1b, H1c, and H1d, is supported.

Resource acquisition significantly enhances the opportunity capacity of new farmers, with material resources exerting the greatest influence, followed by social resources, human resources, and, finally, policy resources. The results from models (5)–(7) show that human, social, and material resources positively affect opportunity capacity at the 1% significance level, with standardized regression coefficients of 0.385, 0.576, and 0.769, respectively. Additionally, model (8) indicates that policy resources positively impact opportunity capacity at the 10% significance level, with a standardized regression coefficient of 0.153. These results confirm that access to resources improves the opportunity capacity of new farmers, with policy resources having the smallest effect. Thus,

TABLE 2 Reliability and validity tests for each variable.

Variable name	Dimension (math.)	Number of questions	Factor loading	Cronbach's α	AVE	CR
Resource acquisition	Human resources	3	0.895	0.925	0.746	0.915
	Social resources	4	0.912			
	Material resources	4	0.947			
	Policy resources	4	0.833			
Entrepreneurship	Opportunity capacity	4	0.924	0.914	0.695	0.926
	Operations management capability	10	0.918			
Entrepreneurial growth performance	Financial performance	4	0.872	0.896	0.715	0.884
	Market performance	4	0.905			

hypothesis H2, along with sub-hypotheses H2a, H2b, H2c, and H2d, is validated.

Opportunity capacity serves as a partial mediator between human resources, social resources, material resources, and the entrepreneurial growth performance of new farmers, but it does not mediate the relationship between policy resources and entrepreneurial growth performance. The results from models (9), (10), and (11) demonstrate that when human resources, social resources, material resources, and opportunity capacity are included in the regression simultaneously, all these factors have a significant positive effect on entrepreneurial growth performance. A comparison with models (1), (2), and (3) reveals that the regression coefficients for human, social, and material resources become smaller, indicating that opportunity capacity plays a partial mediating role, confirming hypotheses H4a, H4b, and H4c. However, model (12) shows that when both policy resources and opportunity capacity are included in the regression, the effect of policy resources on entrepreneurial growth performance is not significant, suggesting that opportunity capacity does not mediate the relationship between policy resources and entrepreneurial growth performance. Therefore, hypothesis H4d is not supported.

4.2.2 Mediating role of operations management capacity

The effects of resource acquisition on new farmers' entrepreneurial growth performance, the impact of resource acquisition on their operation and management capabilities, and the mediating role of these capabilities between resource acquisition and entrepreneurial growth performance were tested in sequence. The results of these tests are presented in Table 4.

As presented in Table 5, resource acquisition significantly enhances new farmers' operation and management capabilities, with human resources having the largest impact, followed by material resources, social resources, and policy resources having the smallest effect. The results from models (5)–(7) indicate that human, social, and material resources positively influence operation and management capabilities at the 1% significance level, with standardized regression coefficients of 0.716, 0.306, and 0.591, respectively. Model (8) shows that policy resources positively affect operation and management capabilities at the 5% level, with a standardized regression coefficient of 0.207. This confirms that resource acquisition improves new farmers' operational management abilities, with policy resources having the least effect, thus validating hypothesis H3, including sub-hypotheses H3a, H3b, H3c, and H3d.

Operation and management capabilities partially mediate the relationship between human resources, social resources, material resources, and entrepreneurial growth performance, but do not mediate the relationship between policy resources and entrepreneurial growth performance. Models (9), (10), and (11) show that when human resources, social resources, material resources, and operation management capabilities are included together in the regression, all have a significant positive effect on new farmers' entrepreneurial growth performance. A comparison with models (1), (2), and (3) reveals that the regression coefficients for human, social, and material resources become smaller, indicating that operation and management capabilities serve as partial mediators, confirming hypotheses H5a, H5b, and H5c. However, model (12) shows that when both policy resources and operation management capabilities are included, policy resources do not significantly affect entrepreneurial growth performance. This indicates that operation and management capabilities do not mediate the relationship between policy resources and entrepreneurial growth performance, and thus hypothesis H5d is not supported.

4.3 Validation of the structural equation model

To evaluate the overall impact and transformation pathways of resource acquisition and entrepreneurial ability on the entrepreneurial growth performance of new farmers, software was employed to conduct effect testing and parameter estimation using a structural equation model. The absolute fit indices were $CMIN/DF = 1.763$, $GFI = 0.958$, and $RMSEA = 0.127$, while the value-added fit indices (χ^2/NFI , IFI , CFI and RFI) were 0.915, 0.897, 0.886, and 0.932, respectively. Additionally, the parsimonious fit indices ($PNFI$ and $PCFI$) were 0.684 and 0.715. These fitness metrics generally meet the standard criteria, indicating that the model demonstrates a good fit with the actual data. The standardized path coefficients can now be analyzed to confirm the model's validity. The software generated a path diagram illustrating the influence of resource acquisition and entrepreneurial ability on the entrepreneurial growth performance of new farmers, as depicted in Figure 2.

The structural equation model results reveal the following:

- (1) Direct effects: Resource acquisition exerts a significant direct influence on the entrepreneurial growth performance of new

TABLE 3 Analysis of the mediating effect of opportunity ability between resource acquisition and entrepreneurial growth performance of new farmers.

Variable name	Models (1–4)	Models (5–8)	Models (9)	Models (10)	Models (11)	Models (12)
	Entrepreneurial performance	Opportunity capacity	Entrepreneurial performance	Entrepreneurial performance	Entrepreneurial performance	Entrepreneurial performance
Human resources	0.549*** (0.231)	0.385*** (0.102)	0.374*** (0.231)	–	–	–
Social resources	0.447*** (0.136)	0.576*** (0.214)	–	0.283*** (0.116)	–	–
Material resources	0.681*** (0.324)	0.769*** (0.223)	–	–	0.468*** (0.266)	–
Policy resources	0.258** (0.109)	0.153* (0.097)	–	–	–	0.202 (0.078)
Opportunity capacity	–	–	0.385*** (0.114)	0.457*** (0.092)	0.551*** (0.108)	0.273*** (0.129)
Con	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled
LR chi ²	–	78.65***	–	–	–	–
Pse R ²	–	0.038	–	–	–	–
F	29.65***	–	32.43***	28.53***	27.55***	30.48***
AR ²	0.396	–	0.388	0.417	0.427	0.395

Models 1–4 sequentially incorporate human resources, social resources, material resources, and policy resources, along with new farmers’ entrepreneurial growth performance, into the regression model. Models 5–8, in turn, sequentially include human resources, social resources, material resources, and policy resources, along with new farmers’ opportunity capacity, into the regression model. The symbols *, **, and *** denote significance at the 10, 5, and 1% levels, respectively. Values in parentheses represent standard errors.

TABLE 4 Analysis of the mediating effect of operations management capability between resource acquisition and entrepreneurial growth performance of new farmers.

Variable name	Models (1–4)	Models (5–8)	Models (9)	Models (10)	Models (11)	Models (12)
	Entrepreneurial performance	Opportunity capacity	Entrepreneurial performance	Entrepreneurial performance	Entrepreneurial performance	Entrepreneurial performance
Human resources	0.549*** (0.231)	0.716*** (0.248)	0.428*** (0.195)	–	–	–
Social resources	0.447*** (0.136)	0.306*** (0.085)	–	0.309*** (0.087)	–	–
Material resources	0.681*** (0.324)	0.591*** (0.154)	–	–	0.516*** (0.164)	–
Policy resources	0.258** (0.109)	0.207** (0.103)	–	–	–	0.149 (0.071)
Opportunity capacity	–	–	0.421*** (0.158)	0.365*** (0.137)	0.452*** (0.203)	0.336*** (0.154)
Con	Controlled	Controlled	Controlled	Controlled	Controlled	Controlled
LR chi ²	–	92.34***	–	–	–	–
Pse R ²	–	0.057	–	–	–	–
F	32.44***	–	31.05***	29.65***	28.42***	33.32***
AR ²	0.401	–	0.425	0.380	0.396	0.425

Models 1–4 sequentially incorporate human resources, social resources, material resources, and policy resources, along with new farmers’ entrepreneurial growth performance, into the regression model. Models 5–8 sequentially include human resources, social resources, material resources, and policy resources, along with new farmers’ operation and management capacity, into the regression model. The symbols *, **, and *** denote significance at the 10, 5, and 1% levels, respectively. The values in parentheses represent standard errors.

farmers. The path coefficients for human resources, social resources, material resources, and policy resources are 0.568, 0.415, 0.637, and 0.215, respectively, all of which are statistically significant.

- (2) Indirect effects: Opportunity ability and operation management ability serve as partial mediators between human resources, social resources, material resources, and entrepreneurial growth performance, but they do not mediate the relationship between policy resources and entrepreneurial growth performance. The path coefficients of opportunity ability and

operation management ability on entrepreneurial growth performance are 0.427 and 0.412, respectively, both statistically significant. Similarly, the path coefficients for human resources, social resources, and material resources on opportunity ability and operation management ability are significant, while the path for policy resources is not. This indicates that opportunity and operational management abilities do not mediate the relationship between policy resources and entrepreneurial performance. These findings align with the results from the earlier mediating effect analysis of entrepreneurial ability.

TABLE 5 Effect of resource acquisition, entrepreneurial ability on entrepreneurial growth performance of new farmers.

Pathway relationship	Straightforward effect (scientific phenomenon)	95% confidence interval		Overhead effect (scientific phenomenon)	95% confidence interval		Aggregate effect
		Lower limit	Upper limit		Lower limit	Upper limit	
Human resources → opportunity capacity → entrepreneurial performance	0.568	0.205	0.418	0.134	0.105	0.489	0.702
Social resources → opportunity capacity → entrepreneurial performance	0.415	−0.421	−0.255	0.257	0.089	0.397	0.672
Physical resources → opportunity capacity → entrepreneurial performance	0.637	0.178	0.324	0.279	0.224	0.386	0.916
Policy resources → opportunity capacity → entrepreneurial performance	0.215	0.159	0.287	–	−0.124	0.316	0.215
Human resources → operational capabilities → entrepreneurial performance	0.568	0.216	0.407	0.286	0.143	0.605	0.854
Social resources → operational capabilities → entrepreneurial performance	0.415	−0.359	−0.186	0.105	0.107	0.515	0.520
Physical resources → operational capabilities → entrepreneurial performance	0.637	0.255	0.437	0.240	0.026	0.304	0.877
Policy resources → operational capabilities → entrepreneurial performance	0.215	0.166	0.258	–	−0.093	0.278	0.215

To further analyze the impact of resource acquisition on entrepreneurial performance, the direct, indirect, and total effects of resource acquisition and entrepreneurial competence on the entrepreneurial growth performance of new farmers were calculated, as presented in Table 5.

As evident from the Table 5, the following observations can be made:

- (1) Out of the eight pathways through which resource acquisition influences entrepreneurial performance, six pathways exert indirect effects on entrepreneurial performance via opportunity capability or operational management capability. Conversely, two pathways demonstrate no indirect effects. Specifically, human resources, social resources, and material resources not only directly impact entrepreneurial performance but also engender indirect effects through entrepreneurial capabilities. In contrast, policy resources solely exert direct impacts.
- (2) Among the four pathways related to opportunity capability, the mediating effects of opportunity capability decline in the sequence of material resources, social resources, and human resources. Notably, the indirect effect of policy resources on the entrepreneurial growth performance of new farmers is not statistically significant, as the 95% confidence interval of the indirect effect encompasses zero (−0.124, 0.316), suggesting that opportunity capability does not mediate this relationship.

The underlying reasons for the persistence of this issue can be attributed to the following factors:

- ① The mismatch between policy resources and opportunity capabilities.
 - a Disconnection between policy design and actual needs: Policy resources, including financial subsidies and technical training programs, may fail to address the fundamental challenges faced by new farmers in recognizing and exploiting entrepreneurial opportunities. This disconnect often stems from a lack of in-depth understanding of the specific needs and constraints of the target beneficiaries.
 - b Inefficient resource allocation: Policy resources are frequently dispersed in a fragmented or “pepper-sprinkling” manner, rather than being strategically targeted towards high-potential entrepreneurs. This approach results in a misallocation of resources, preventing them from reaching those who are most capable of leveraging them to enhance their opportunity capabilities.
- ② Bottlenecks inherent in the capabilities of new farmers.
 - a Inadequate foundational capabilities: New farmers may lack essential business skills, such as market analysis and risk

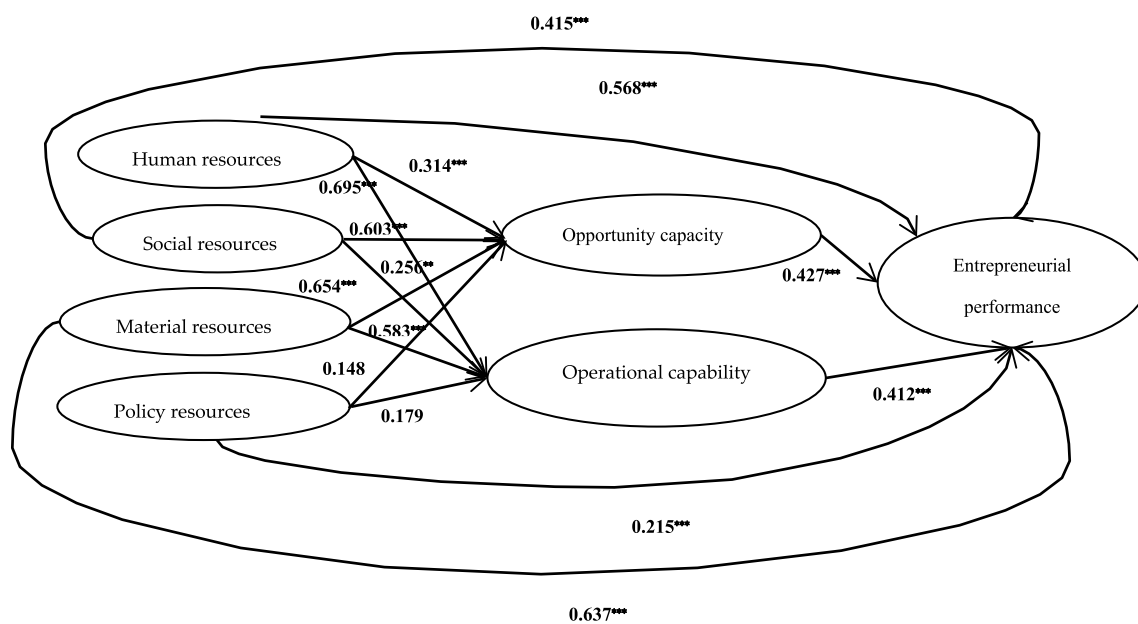


FIGURE 2

Results of structural equation analysis of resource access, entrepreneurial competence, and entrepreneurial growth performance of new farmers.

assessment, which are critical for transforming resources into actionable opportunities. Even with policy support, these deficiencies can hinder their ability to effectively identify and capitalize on potential ventures.

- b Cognitive constraints: Some new farmers may have a limited understanding of available policies, often due to complex application procedures and information asymmetry. Additionally, a “wait-and-depend” mentality may prevail, where farmers passively rely on policy support rather than proactively seeking out and exploiting entrepreneurial opportunities. This mindset can further exacerbate the challenges they face in leveraging policy resources for their growth and development.

- (3) In the four pathways involving operational management ability, its mediating role follows a similar hierarchy: human resources, material resources, and social resources, in descending order. As with opportunity ability, the indirect effect of policy resources is not significant, with a 95% confidence interval that includes 0 (−0.093, 0.278), confirming that operational management ability does not mediate the relationship between policy resources and entrepreneurial growth performance. The underlying reasons for the persistence of this issue can be attributed to the following aspects:

① Inadequate alignment between policy resources and operational management capabilities

- a Mismatch Between Policy Supply and Demand: Policy initiatives, including subsidies, training programs, and technological advancements, may not be tailored to address the specific deficiencies in the operational management skills of novice farmers. Consequently, these resources fail to effectively

translate into tangible enhancements in management capabilities.

- b Inefficient Resource Allocation Mechanisms: When policy resources are dispensed in a “one-size-fits-all” manner, such as through equal subsidy distribution, rather than being targeted towards high-potential entrepreneurs, it results in resource misallocation. This approach not only leads to wastage but also fails to bolster operational management capabilities effectively.

② Constraints in the capabilities and perceptions of novice farmers

- a Deficiency in Fundamental Management Experience: A significant number of novice farmers originate from traditional agricultural backgrounds and may lack exposure to modern enterprise management principles, such as financial planning and market analysis. Even with policy support, they may find it challenging to transform this assistance into effective management practices.
- b Limited Learning and Innovation Aptitude: Some novice farmers are accustomed to conventional business models and exhibit low receptiveness to new technologies and methodologies. As a result, policy resources, such as digital agriculture training, fail to inspire innovative applications and adaptations.
- c Risk-Averse Inclinations: Rural entrepreneurs often exhibit a propensity for conservative business practices. Consequently, policy resources, such as loan facilities, fail to adequately motivate them to undertake risks or pursue strategic expansions.

5 Discussion

This study utilizes survey data from 512 samples of new-age farmers' entrepreneurial ventures across three provinces—Jiangxi,

Henan, and Anhui—to construct a theoretical framework of “Resource Acquisition—Entrepreneurial Competence—Growth Performance of New-Age Farmers’ Entrepreneurial Ventures.” Using the Likert 5-point scaling method, we assigned values to indicators related to resource acquisition, entrepreneurial competence, and the growth performance of new-age farmers’ entrepreneurial ventures. We further employed the mediation effect model and structural equation modeling (SEM) to explore the impact of resource acquisition on the growth performance of new-age farmers’ entrepreneurial ventures and its underlying mechanisms. The key findings of this study are as follows:

5.1 Marginal contributions

Integrating the Resource-Based View (RBV) and Dynamic Capabilities Theory, this study examines the mechanisms through which resource acquisition and entrepreneurial competence influence the growth performance of new-age farmers’ entrepreneurial ventures. From the RBV perspective, we argue that new-age farmers gain a competitive advantage by acquiring scarce and irreplaceable human, financial, physical, and policy resources, which form the foundation of their entrepreneurial performance. From the Dynamic Capabilities Theory perspective, we posit that new-age farmers, through innovative capabilities such as opportunity identification, opportunity development, and operational management, integrate and reconfigure resources into business strategies that adapt to the changing entrepreneurial environment.

5.2 Theoretical implications

Our empirical evidence demonstrates that entrepreneurial resource acquisition significantly promotes the growth performance of new-age farmers’ entrepreneurial ventures. Resource acquisition also significantly affects their entrepreneurial competence, which partially mediates the relationship between resource acquisition and growth performance. This suggests that our study embodies both the “resource empowerment” attribute of RBV and the “capability development” attribute of the Human Capital Theory (HCT), thereby expanding the application scenarios of both theories.

5.3 Research methodology

We used the mediation effect model to analyze the mediating role of entrepreneurial competence between resource acquisition and the growth performance of new-age farmers’ entrepreneurial ventures. Through SEM, we further explored the pathways through which resource acquisition influences growth performance. We conducted a SWOT analysis of the SEM.

5.3.1 Strengths

SEM possesses the capability to model complex relationships. We constructed eight variable pathway relationships to quantify the direct and indirect effects of “Resource Acquisition—Entrepreneurial Competence—Growth Performance of New-Age Farmers’ Entrepreneurial Ventures,” clearly revealing the mediating mechanism

of entrepreneurial competence. Notably, entrepreneurial opportunity capability and operational management capability did not mediate the relationship between policy resource acquisition and growth performance, whereas they did mediate the relationships between human, social, and financial resource acquisition and growth performance.

5.3.2 Weaknesses

SEM requires a relatively large sample size and high data quality. The new-age farmer population is highly heterogeneous, and our effective sample of 512 predominantly consists of well-educated, married, young to middle-aged males, most of whom are new-type business entities. This overrepresentation, to some extent, leads to model instability, primarily due to: (1) limitations in sample acquisition channels and (2) variations in survey participants’ willingness to participate.

5.3.3 Opportunities

We employed a mixed-methods approach to supplement our findings. Through interviews, we analyzed why entrepreneurial opportunity capability and operational management capability did not mediate the relationship between policy resource acquisition and growth performance, primarily attributing it to the mismatch between policy resources and opportunity capabilities, bottlenecks in new-age farmers’ own capabilities, insufficient matching between policy resources and operational management capabilities, and limitations in new-age farmers’ own capabilities and cognition.

5.3.4 Threats

Emerging methodologies, such as causal inference techniques (e.g., instrumental variable methods), may challenge the causal interpretability authority of SEM. Additionally, factors such as difficulties in data acquisition, the mobility of the new-age farmer population, missing data tracking, or policy changes may limit the timeliness of our research conclusions.

Despite SEM’s irreplaceable advantages in elucidating the entrepreneurial mechanisms of new-age farmers, it is severely affected by sample bias and model construction pathways. We acknowledge the limitations of SEM and its inability to perfectly represent the phenomena under study. Future research could integrate dynamic data and mixed methods to enhance the policy and practical value of studies on the growth performance of new-age farmers’ entrepreneurial ventures.

6 Summary conclusions and policy recommendations

6.1 Brief conclusions

This study empirically examines the impact of resource acquisition on the entrepreneurial growth performance of new-generation farmers, based on data from 512 questionnaires. Furthermore, it investigates the underlying mechanisms through the lens of entrepreneurial capabilities. The findings indicate that resource acquisition significantly enhances the entrepreneurial growth performance of new farmers, with entrepreneurial ability acting as a partial mediator between human resources, social resources, material

resources, and entrepreneurial performance. However, entrepreneurial ability does not mediate the relationship between policy resources and entrepreneurial growth performance. The analysis reveals eight distinct pathways through which resource acquisition promotes growth performance. Human, social, and material resources not only exert a direct influence on entrepreneurial performance but also indirectly improve it through entrepreneurial ability. In contrast, policy resources affect entrepreneurial growth performance solely through direct effects, without any indirect impact *via* entrepreneurial ability.

6.2 Policy recommendations

Based on the above findings, the following policy recommendations are proposed: (1) Enhance Resource Acquisition: Acquiring entrepreneurial resources is fundamental to successful entrepreneurship for new farmers. Human, social, financial, and policy resources are critical for driving entrepreneurial growth performance and are key determinants of success or failure. Novice farmers are required not only to amass diverse financial and human resources but also to fortify their accumulation of social resources, with a particular emphasis on proactively soliciting policy resources from national governmental departments. They ought to intensify their engagement with policy resources, augment their resource base, and elevate the alignment between policy resources and their opportunity recognition as well as operational management capabilities. Moreover, novice farmers should actively leverage digital tools to access a wide array of resources, thereby compensating for their inherent resource limitations. (2) Strengthen Entrepreneurial Ability: Improving entrepreneurial ability is essential for sustained entrepreneurial growth. The strength of entrepreneurial skills directly impacts growth performance, with both opportunity identification and operational management abilities playing equally vital roles. Consequently, it is imperative for novice farmers to not only develop acute market opportunity identification and exploitation abilities but also endeavor to enhance their operational management competencies, including resource allocation, innovative decision-making, and risk tolerance. Strengthening specialized training programs for new farmers is crucial in overcoming their capability constraints and cognitive limitations, thereby ensuring that upon securing entrepreneurial opportunities, they can sustain and enhance their entrepreneurial growth performance. (3) Enhance Supportive Policies: Strengthening government support policies is essential for boosting new farmers' entrepreneurial performance. Government incentives related to land, capital, technology, and finance not only directly improve entrepreneurial growth but also significantly enhance entrepreneurial ability, indirectly contributing to growth performance. However, the current influence of policy resources on entrepreneurial ability remains underutilized, suggesting a gap between policy support and its impact on entrepreneurial skills. To address this, policy support for new farmers should be intensified, with a particular focus on providing targeted assistance to disadvantaged new farmers to promote equitable entrepreneurial growth. (4) Enhance the implementation of Sustainable Development Goal 8 (SDG8) on "Decent Work" to guarantee full employment and equitable opportunities for new farmers. This can be achieved by drawing upon international best practices and adapting them to the specific context

of China. Establishing rural digital platforms and financial inclusion mechanisms will ensure that new farmers have access to essential resources such as funding, technology, and market information, thereby reducing the barriers to entrepreneurship. Vocational education and mentorship programs should be strengthened to enhance entrepreneurial skills, with a particular focus on the application of green agricultural technologies and brand marketing capabilities, in order to facilitate the upgrading of the agricultural value chain. It is also crucial to develop an evaluation system for new farmers' entrepreneurial activities that incorporates ecological benefits, such as resource recycling, and employment generation, such as cooperative models, into its assessments, thereby incentivizing sustainable operations. Furthermore, integrating SDG8 with SDG5 (Gender Equality) will support female and young farmers in their entrepreneurial endeavors, transforming agricultural innovation and entrepreneurship among new farmers into inclusive growth engines. This approach will contribute to reducing the urban–rural employment gap and achieving a mutually beneficial outcome for decent work and economic resilience.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Author contributions

ShY: Investigation, Methodology, Writing – original draft. SoY: Data curation, Formal analysis, Supervision, Writing – review & editing. LL: Conceptualization, Data curation, Methodology, Supervision, Writing – original draft, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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