Farming experience, personal characteristics, and entrepreneurial decisions of urban residents: Empirical evidence from China

Deshui Zhou1 and Lele Li2*

1School of Finance and Public Management, Anhui University of Finance & Economics, Bengbu, China, 2School of Labor and Human Resources, Renmin University of China, Beijing, China

Entrepreneurship is an important way to provide solutions for social employment problems. Using data from the 2016 China Labor Force Dynamic Survey (CLDS), we explore the influence of farming experience on urban residents’ entrepreneurial decisions at the theoretical and empirical levels. A Probit model with instrumental variables method was used to analyze the influence of farming experience on urban residents’ entrepreneurial decisions, while a mediating effect model was used to test its channels of action. The results show that: (1) farming experience can contribute to the entrepreneurial decision of urban residents relative to those without experience in farming. To overcome possible endogeneity issues, an Eprobit model based on the estimation of instrumental variables was used for testing. (2) Heterogeneity tests based on age, city type, and physical capital found that this effect was more significant in urban residents with non-capital cities, middle-aged groups, and high-material capital. (3) Farming experience indirectly drives entrepreneurial decisions through the mediating role of promoting positive personality traits, such as "optimism" and "mutual aid consciousness." Therefore, the farming experience has a positive effect on urban residents’ entrepreneurial decisions and helps to understand the deeper influence of micro-individual characteristics on entrepreneurial decisions in the urbanization process.

KEYWORDS
farming experience, entrepreneurial decision, personal characteristics, physical capital, urban residents

Introduction

Promoting employment through entrepreneurship is an important element of China’s employment priority strategy. By the end of 2020, the number of market entities of all kinds in China had grown to 144 million, among which the number of self-employment as a direct business activity had reached 967 million (National Bureau of Statistics, 2021). Self-employment is not only a specific extension of
“entrepreneurship,” but also an employment choice made by entrepreneurs according to the economic market environment (Colovic and Schuivenenger, 2021), which is conducive to gaining social respect, realizing self-worth, and improving the level of economic returns (Blundel et al., 2010). Especially under the influence of the overall downward trend of the world economy, entrepreneurship-led employment has the important task of improving people's livelihood and promoting social development, and has become one of the driving forces for achieving macroeconomic growth (Qin and Kong, 2021; Azoulay et al., 2022). Under the influence of the epidemic, people's employment and entrepreneurship are facing severe challenges (Dias et al., 2022). Supporting and encouraging different groups to engage in entrepreneurship has become a public policy direction of concern for the Chinese government (Bublitz et al., 2020).

Therefore, it is important to study and explore the driving factors of entrepreneurship. In terms of the driving factors influencing individual entrepreneurial choices, the accumulation of knowledge, skills, cognition, and capital involved in prior experiences play an important role in facilitating the choice of entrepreneurial behavior (Hockerts, 2017). Also, farm-related experience is an important micro factor in the structure of the rural economy and a typical feature of the rapid urbanization process in China (Zhong and Chen, 2014). This process has resulted in a large number of rural laborers moving to urban areas or transforming into urban populations, who are divorced from agricultural labor and engaged in secondary or tertiary non-farm employment (Zhao et al., 2022). In the process of non-farm employment, the role of farming experience is reflected in at least three aspects: (1) it provides a comparison between the benefits of farming and non-farm employment and provides a reference for their subsequent career choices (Zhong and Chen, 2014). (2) Farming experience is a survival skill that expands workers' human capital accumulation. (3) It helps workers adapt to different labor styles in different environments and enhances their urban. At the same time, it is conducive to workers' adaptation to different environments and enhances their urban adaptation ability. As an important part of workers' prior experience, past experiences such as farming experience may have long-term effects on individual behavior (Kendler et al., 2002).

Previous studies have laid a good foundation for this study. Some scholars have conducted in-depth research on the impact of bad experience on individual economic behavior. For example, some scholars pointed out that farmers who experienced famine in their early years tend to have a higher tendency to save (Cheng and Zhang, 2011), and individuals with a difficult childhood experience are less likely to engage in self-employment (Drennan et al., 2005). Managers of firms who have had early experiences of famine will be less effective in leading the firm to make investments (Donaldson, 1990; Malmendier et al., 2011). In addition, urban residents with a rural upbringing experience will have a lower probability of participating in the stock market (Jiang et al., 2018). Fan (2017) states that people with upbringing experience are more inclined to purchase insurance and reduce their risky asset holdings.

However, some scholars have also identified individual-level traits and possession of experiences as important factors driving entrepreneurial behavioral choices (Clarysse et al., 2011; Iversen et al., 2016). Prior life experiences facilitate the accumulation of human capital, enhance information intake and interpretation, and facilitate entrepreneurial opportunity identification (Shane, 2000; Rerup, 2005). The relationship between individuals having relevant work experience and entrepreneurship shows an inverted U-type relationship that rises and then falls, but the positive effect remains significant (Rider et al., 2013). Similar to rural-related experience, a person's prior relevant experience has a significant driving effect on their decision to engage in venture-based entrepreneurship (Kendler et al., 2002). It has also been argued that corporate executives with early adverse experiences significantly increase social giving and treat others more generously (Yuan et al., 2019). A study based on data from the China Family Panel Studies (CFPS) concluded that the experience of going to the countryside could significantly increase the probability and size of investment in stocks and financial assets of urban households (Zhou et al., 2020).

Based on the existing research, the interest and question of this paper are to explore how the farming experience affects entrepreneurial decision? Further, if there is a significant effect, through which channels does it affect the entrepreneurial decision of the population? Does the identification of this effect vary across groups? Clarifying these questions will be useful in promoting the quality of employment and helping to promote the employment-first strategy.

The marginal contributions of this paper are as follows: First, from the perspective of farming experience, this paper excavates the influencing factors of urban residents' entrepreneurship, enriching the research field of people's entrepreneurial behavior. Second, it puts forward the theoretical hypothesis that agricultural experience affects entrepreneurship and empirically tests the indirect effect of personality characteristics in the process of agricultural experience affecting entrepreneurship, which expands the research depth. Third, the group regression is carried out from the heterogeneity of city type, age stage, and material capital, trying to capture which groups of farming experience are more likely to affect entrepreneurial activities.

**Literature review and research hypothesis**

Since China's reform and opening up in 1978, the development of urbanization and industrialization has promoted the rapid growth of China's economy (Duan and Zhang, 2009). However, constrained by the dualistic system of
urban–rural division, the transfer of agricultural labor during urbanization, although meaningful for promoting employment, has not been effectively linked to urban public services and management associated with the household registration system (Yu and Gao, 2009). This means that labels associated with rural areas, such as agricultural household registration and migrant workers, tend to impede their mobility to higher levels of the labor market (Wu and Zheng, 2018). With the rapid advancement of China’s household registration system reform and the citizenship process of the agricultural population, new citizens have gradually become the driving force influencing urban economic development (Liang et al., 2022), and the proportion of urban residents with experience in farming has gradually increased. If urban residents have engaged in agricultural labor, it may have a two-way effect of promoting and inhibiting residents’ entrepreneurship. On the one hand, past experience can enhance one's experience and personality traits, and give one the ability to cope with corresponding events and risks (Hoff and Stiglitz, 2016). At the same time, it is conducive to accumulating a certain amount of “potential human capital,” helping one to cope with setbacks and improve self-adaptability, and may have some positive effects on one's long-term development (Chetty et al., 2010). On the other hand, the farming experience tends to be constrained by the rural environment and has a solidifying effect on their cognitive thinking and behavioral performance, which may reduce their preference for venture capital and have a negative effect on their personal and economic behavior (Jiang et al., 2018). Therefore, the theoretical impact of farming experience on entrepreneurial decisions is uncertain and needs to be tested empirically.

Although farming experience may have a significant effect on entrepreneurial decisions, this hypothesis may have heterogeneous effects on different groups. First, for different age groups, middle-aged groups are more likely to have farming experience, while youth groups are largely disconnected from land in terms of income (Wang, 2008). Therefore, the impact of farming experience on economic activity may be higher for middle-aged groups than youth groups. Second, for different city levels, provincial capitals are more economically developed, with larger cities and earlier urbanization (Zhu and Yang, 2018), and thus policy support and economic advantages may form a substitution effect on individual factors. For the vast majority of non-capital cities, which are generally at the stage of rapid urbanization and have a higher hierarchy of economic development, the past experiences possessed by the labor force may be more sensitive to the impact of socioeconomic activities and generate a relatively larger marginal contribution compared to the provincial capitals. Third, for groups with different physical capital, it is easier to obtain desirable income returns in the labor market among high-physical capital groups, whose past experiences may be more effective in driving current economic activities (Shum and Faig, 2006), which is conducive to give better play to the advantages of their previous experience and have an impact on economic behavior.

Traditionally, agricultural labor is the main source of income for rural laborers and is responsible for maintaining household consumption and savings. As a result, rural laborers have to bear the risks involved in farming. In addition, if natural or man-made disasters occur, they may lose their source of income and fall into a “livelihood crisis” (Crupi et al., 2022). Because farming is subject to a variety of factors such as natural environment, weather conditions, and environmental changes, its output is far more uncertain than that of other industries (Timmer, 1988), and only hard-working and intelligent workers can earn a good income (Bernstein, 2001). So the complexity involved in the farming experience may be conducive to shaping an optimistic personality and the accumulation of the ability to cope with such “crises.” The sense of mutual help is likewise another important aspect in shaping personality traits. The sense of mutual help is inherited, and the promotion of traditional Chinese virtues is more deeply reflected in the values at the individual level. As an extension of personal traits, it not only helps to regulate the framework of economic behavior for those involved in economic activities, but also helps to stimulate various potentials of individuals in economic activities and increase their enthusiasm in economic activities, providing vitality for the development of market economy (Luthans et al., 2007).

Entrepreneurs are not sure if they are suitable to start a business at first, but they can learn from their existing experiences and become optimistic and confident as they gain social experience (Frazer and Greene, 2006). Choosing to start a business and becoming an entrepreneur are two processes of learning, and the personality characteristics of entrepreneurs have an important impact on the learning process of entrepreneurs (Littunen, 2013). Personality traits as a unique resource endowment of entrepreneurs are conducive to entrepreneurial performance (Zhang and Bruning, 2011), and personality traits remain largely stable over the life cycle after being formed at an early age (Caspì et al., 1984). Studies have found that personality quality with resilience as the core significantly improves entrepreneurial performance (Hmieleski and Carr, 2009). At the same time, entrepreneurship is a difficult process, which requires entrepreneurs to have comprehensive abilities (Cubero et al., 2022); among them, the excellent traits that entrepreneurs possess are crucial in the entrepreneurial process (Aldrich and Cliff, 2003), which helps to provide entrepreneurs with high motivation in the face of adversity and enhances the success rate of entrepreneurship (Urban et al., 2022).

Based on the above analysis, this paper puts forward the following three hypotheses:

Hypothesis 1: Farming experience has a significant impact on urban residents’ entrepreneurial decisions.
Hypothesis 2: The effect of farming experience on urban residents' entrepreneurial decisions is more significant in individuals with middle-aged groups, non-capital cities, and high-physical capital.

Hypothesis 3: Farming experience is conducive to positive personality traits and indirectly contributes to entrepreneurial decisions.

Materials and methods

Data description

The data in this paper are from the 2016 China Labor Force Dynamic Survey (CLDS) released by the Social Science Survey Center of Sun Yat-sen University. The survey is extensive, covering many aspects of the labor force, such as occupation, health, education, mobility, family, and community. In the survey process, the multi-stage, multi-level probability sampling method proportional to the labor force scale is adopted to ensure the randomness and unbiased of the data. This survey is widely represented in China, covering 29 provinces, autonomous regions, and cities (excluding Hong Kong, Macao, Taiwan, Hainan, and Tibet); it uses people aged 15–64 as respondents and adopts a multi-stage, multi-level, and probability sampling method to conduct a systematic survey. Moreover, we selected the sample of 18–59-years-old registered residence in urban areas as the research object. Because more rural labor force continues to work from affairs to agriculture, we cannot select the samples from the surveys that do not work in business agriculture but work in agriculture during the survey. In this way, it can test the probability and behavior choice of the group with agricultural experience among urban residents compared with the sample without agricultural experience. If all samples are included in the research scope, there will be a certain estimation deviation, and then it is impossible to accurately estimate the actual impact of farming experience on the entrepreneurial decision. Urban residents are basically separated from agricultural labor and can accurately estimate the actual impact of agricultural experience on their entrepreneurial decision. After data screening and eliminating the unqualified samples, the total number of samples is 2,690.

Variable selection

The explanatory variable in this paper is Entrepreneurial Decision. The corresponding design of the questionnaire is "have you tried to start a business." We assign the corresponding answer of "yes" to 1 and the corresponding answer of "no" to 0. The proportion of the sample that has tried to start a business is 9.54%. The explanatory variable in this paper is Farming Experience, and the corresponding design in the questionnaire is "Have you ever worked in farming." We assign the answer "yes" to 1 and the answer "no" to 0. The proportion of urban residents with farming experience in the sample is 22.98%. It should be noted that Table 1 is a descriptive analysis of explanatory variables and explained variables and examines the correlation between single variables. The total samples controlled in this paper are based on the benchmark results in Table 3, that is, the sample size when all variables are controlled. This includes the case that there are some missing values in the control variables, so these missing values are eliminated in the regression process, resulting in inconsistency in the number of samples.

To visually determine the difference between the means of the two types of samples of urban residents with and without experience in farming who have engaged in entrepreneurial decisions, the two groups of samples are compared in Table 1. It can be seen that in the subsample with farming experience, the percentage of those who have engaged in entrepreneurship is 13.63%, while the percentage of those who have engaged in entrepreneurship in the subsample without farming experience is 9.34%, and the difference in the percentage of entrepreneurial decisions between the two types of samples is 4.29%. This indicates that intuitively and statistically residents with farming experience have a higher proportion of entrepreneurship, but the causal relationship between the farming experience and an entrepreneurial decision needs to be further tested empirically.

For control variables, the effects of "Personal Characteristics," "Family Characteristics," "Socio-economic Characteristics," and "Regional Dummy Variables" were examined separately. For "Personal Characteristics," the mean value of Gender is 0.452, indicating that the overall ratio of male to female respondents is close to balanced. The mean value of age is 41.74 years old, indicating that the respondent sample is dominated by the middle-aged labor force. The proportion of the sample with Junior High School, High School, and University and above is 26.8, 28.1, and 30.8%, respectively, indicating that the sample is biased toward the middle to upper education level. The mean value of marriage is 0.79, indicating that the majority of the respondent sample is married. The proportion of respondents with a drinking history was 19.1%, indicating a low proportion of the sample with a history of

### Table 1 Comparison of entrepreneurial means.

| Projects            | Mean  | Sd    | Obs. |
|---------------------|-------|-------|------|
| Experience in farming | 0.1363 | 0.3434 | 675  |
| No farming experience | 0.0934 | 0.2910 | 2270 |
| Difference in sample means between two types of sample startups | 0.0429 |       |      |
### Variable setting and descriptive statistics

The explanatory variables in this paper are binary variables, so the Probit model is used for regression. Probit model is set as follows:

\[
P(Y = 1|T_i) = \varphi(\beta_0 + \beta_1 X_i + \beta_2 E_i + \mu_i) \tag{1}
\]

In Equation 1, the \( Y \) denotes entrepreneurship, and if the urban labor force surveyed has tried to start a business, then \( Y = 1 \). \( T_i \) denotes the vector of explanatory and control variables. \( X_i \) denotes the control variables, which specifically include "Personal Characteristics," "Family Characteristics," "Socio-economic Characteristics," and "Regional Dummy Variables," and \( E_i \) denotes the explanatory variable, farming experience. \( \beta_0 \) are constants, \( \beta_1 \) and \( \beta_2 \) are coefficients to be estimated, \( \mu_i \) denotes the random error term, and this paper assumes that the sample obeys normal distribution.

### Results

#### Analysis of baseline regression results

Table 3 shows the results of the baseline regression of the effect of farming experience on urban residents' entrepreneurial decisions. Models 1–4 control "Personal Characteristics," "Family Characteristics," "Socio-economic Characteristics," and "Regional Dummy Variables," respectively. In model 1, the Farming Experience is significantly positive at the statistical level of 1%, indicating that the agricultural alcohol consumption. For “Family Characteristics,” it controls Family Medical Expenses, Household Housing Expenditure, and Land Acquisition. For “Socio-economic Characteristics,” it investigates Housing Provident Fund, Internet Banking, Income Satisfaction, and Social Donation. For "Regional Dummy Variables," taking the middle as the reference group, the East and West dummy variables are included as the control variables. Variable definitions and descriptive statistics are shown in Table 2.

### Table 2  Statistical description of variables.

| Variable definition | Mean   | SD   |
|---------------------|--------|------|
| Entrepreneurial decision | Yes = 1, No = 0 | 0.0954 | 0.294 |
| Farming experience   | Yes = 1, No = 0 | 0.2298 | 0.421 |
| Personal characteristics | Gender | Male = 1, Female = 0 | 0.452 | 0.498 |
|                     | Age    | Continuous variable of age | 41.74 | 11.37 |
|                     | Junior high school | Junior high school is 1, otherwise is 0 | 0.268 | 0.443 |
|                     | High school     | High school is 1, otherwise is 0 | 0.281 | 0.449 |
|                     | University and above | University and above is 1, otherwise is 0 | 0.308 | 0.462 |
|                     | Marriage        | Married is 1, otherwise is 0 | 0.790 | 0.407 |
|                     | Drinking history | Yes = 1, No = 0 | 0.191 | 0.393 |
| Family characteristics | Family size | Number of Families | 3.616 | 1.733 |
|                     | Family medical expenses (log) | Continuous variables of family medical expenditure | 6.529 | 3.658 |
|                     | Household housing expenditure (log) | Continuous variables of household housing expenditure | 7.835 | 1.103 |
|                     | Land acquisition | Family land expropriated is 1, otherwise is 0 | 0.0069 | 0.0832 |
| Socio-economic characteristics | Housing provident fund | Yes = 1, No = 0 | 0.298 | 0.457 |
|                     | Internet banking use | Very unskilled, unskilled, average, relatively skilled, and very skilled are assigned as 1, 2, 3, 4, and 5, respectively | 2.919 | 1.288 |
|                     | Income satisfaction | Very dissatisfied, relatively dissatisfied, average, relatively satisfied, and very satisfied are assigned the values of 1, 2, 3, 4 and 5 | 3.058 | 0.981 |
|                     | Social donation | Yes = 1, No = 0 | 0.365 | 0.481 |
| Regional dummy variables (control: Central) | East | East is 1, otherwise is 0 | 0.465 | 0.499 |
|                     | West     | West is 1, otherwise is 0 | 0.270 | 0.444 |
### TABLE 3 Baseline regression of the effect of farming experience on urban residents’ entrepreneurial decisions.

|                      | Model 1   | Model 2   | Model 3   | Model 4   |
|----------------------|-----------|-----------|-----------|-----------|
|                      | 0.246***  | 0.232***  | 0.270***  | 0.283***  |
|                      | (0.077)   | (0.084)   | (0.088)   | (0.089)   |
| Personal characteristics |          |           |           |           |
| Gender               | 0.273***  | 0.301***  | 0.358***  | 0.363***  |
|                      | (0.073)   | (0.076)   | (0.078)   | (0.078)   |
| Age                  | 0.094***  | 0.101***  | 0.104***  | 0.111***  |
|                      | (0.029)   | (0.030)   | (0.032)   | (0.032)   |
| Age2                 | −0.001*** | −0.001*** | −0.001*** | −0.001*** |
|                      | (0.0003)  | (0.0003)  | (0.0003)  | (0.0003)  |
| Education level (reference: below primary school) |           |           |           |           |
| Junior high school   | 0.250*    | 0.352***  | 0.368***  | 0.374***  |
|                      | (0.129)   | (0.131)   | (0.138)   | (0.139)   |
| High school          | 0.209*    | 0.272**   | 0.273**   | 0.287**   |
|                      | (0.126)   | (0.129)   | (0.138)   | (0.138)   |
| University and above | 0.0568    | 0.140     | 0.168     | 0.203     |
|                      | (0.126)   | (0.129)   | (0.141)   | (0.142)   |
| Marriage             | −0.174*   | −0.260**  | −0.225**  | −0.211*   |
|                      | (0.100)   | (0.104)   | (0.108)   | (0.108)   |
| Drinking history     | 0.127     | 0.105     | 0.129     | 0.155*    |
|                      | (0.081)   | (0.085)   | (0.087)   | (0.087)   |
| Family characteristics |          |           |           |           |
| Family size          | 0.061***  | 0.637**   | 0.663**   |           |
|                      | (0.023)   | (0.317)   | (0.315)   |           |
| Family medical expenses | 0.019*   | 0.059***  | 0.055**   |           |
|                      | (0.010)   | (0.023)   | (0.023)   |           |
| Household housing expenditure | 0.093*** | 0.018*    | 0.021*    |           |
|                      | (0.031)   | (0.0106)  | (0.011)   |           |
| Land acquisition     | 0.695**   | 0.081**   | 0.044     |           |
|                      | (0.309)   | (0.032)   | (0.033)   |           |
| Socio-economic characteristics |           |           |           |           |
| Housing provident fund | −0.385*** | −0.397*** |           |           |
|                      | (0.080)   | (0.081)   |           |           |
| Income satisfaction  | −0.116*** | −0.123*** |           |           |
|                      | (0.035)   | (0.035)   |           |           |
| Social donation      | 0.324***  | 0.312***  |           |           |
|                      | (0.071)   | (0.072)   |           |           |
| Internet banking use | 0.122***  | 0.128***  |           |           |
|                      | (0.036)   | (0.036)   |           |           |
| Regional dummy variables (control: central) |           |           |           |           |
| East                 | 0.277***  |           |           |           |
|                      | (0.089)   |           |           |           |
| West                 | −0.034    |           |           |           |
|                      | (0.102)   |           |           |           |
| _cons                | −3.330*** | −4.677*** | −4.884*** | −4.891*** |
|                      | (0.550)   | (0.665)   | (0.707)   | (0.724)   |
| Pseudo R2            | 0.0277    | 0.047     | 0.0816    | 0.0907    |
| N Obs.               | 2,915     | 2,743     | 2,690     | 2,690     |

***, **, and * indicate significance at the 1, 5, and 10% statistical levels, respectively, with robustness standard errors in parentheses.
Endogeneity treatment: instrumental variables approach

Although the endogeneity problem in this paper is not very serious, there is still an estimation bias caused by the omitted variable problem, so this paper adopts the instrumental variable method to deal with it to demonstrate the robustness of the estimation results. We choose "distance from old home to local government" and "nature of household registration at birth" as the instrumental variables. First, if the distance of the respondent's hometown is far from the government, it is more likely that the hometown is in a rural area, and thus the more likely to have farming experience, so the distance variable is associated with the Farming Experience. The agricultural household registration at birth is associated with the Farming Experience. It is important to note that since Farming Experience and Entrepreneurial Decision are dichotomous variables, if we use a dichotomous variable as an instrumental variable to regress another dichotomous variable, it will cause some identification difficulties. For this reason, this paper uses the Eprobit model in the Extended regression model to deal with endogeneity to examine the robustness of the results of the instrumental variables.

Table 4 shows the regression results of the Eprobit model. The validity test of the Eprobit model is significant at the 10% statistical level, and the residual terms of the two regression equations are correlated in Table 4, indicating that the explanatory variables are indeed endogenous dummy variables and the use of the Eprobit model is justified. The regression of instrumental variables on the explanatory variable farming experience is statistically significant at the 1% level, indicating that the instrumental variables are highly correlated with the explanatory variables. The one-stage F-value of 51.51 corresponding to the instrumental variables is higher than the criteria for judging weak instrumental variables in the literature, and thus there is no weak instrumental variable problem. For exogeneity, none of the p-values of the overidentification tests were significant, indicating that the original hypothesis of exogeneity of instrumental variables was accepted. The coefficient value of the Farming Experience is positive and significant at the 1% statistical level, which is consistent with the results of the benchmark regression and the conclusions remain robust. However, the coefficient values estimated based on instrumental variables are significantly higher compared to the baseline regression, indicating that if the endogeneity issue is ignored, the positive effect of Farming Experience on urban residents' Entrepreneurial Decision is underestimated.

Analysis of heterogeneity

In the previous analysis, we have verified that the Farming Experience has a significant positive effect on entrepreneurship among urban residents. However, the above findings are the average effect examined from the perspective of the whole sample, and further in-depth research is needed for different group heterogeneity. This study groups the study sample according to three dimensions: "Age," "City Type," and "Physical Capital," hoping to make an in-depth extension of this research topic. Table 5 shows that there are significant heterogeneity differences in both "Age" grouping, "City Type" grouping, and "Physical Capital" grouping.

For "Age" grouping, the paper is divided into "Under 35" and "Over 35," and it can be seen that farming experience has a significant positive effect on "Over 35," while it has no significant effect on "Under 35." Second, in the "City Type" grouping, it is divided into "Provincial capital" and "Non-capital cities," and the Farming Experience is more significant in the subsample of "Non-capital cities." For the "Physical Capital" grouping, respondents' household economic status is used as a variable to measure physical capital. According to the median of family economy, they are divided into "Low-material capital" and "High-material capital." Table 5 shows that Farming Experience is significantly positive in the "High-material capital" sample but has no significant effect in the "Low-material capital", indicating that the effect of Farming Experience on Entrepreneurial Decision is more pronounced in the "High-material capital" group. These results validate H2.

Discussion

Equation 2 is the main regression of the effect of Farming Experience on entrepreneurship. Equation 3 is the effect of Farming Experience on the mediating variable, and Equation 4 is the effect of Farming Experience and the mediating variable on Entrepreneurial Decision, where $X_t$ denotes the
TABLE 5 Results of heterogeneity estimation.

| Age division | City type | Physical capital |
|--------------|----------|------------------|
|              | Under 35 | Over 35 | Provincial capital | Non-capital cities | Low material capital | High material capital |
| Farming experience | 0.213 | 0.322*** | 0.106 | 0.457*** | 0.117 | 0.495*** |
| (0.265) | (0.095) | (0.132) | (0.126) | (0.119) | (0.133) |
| Control variables | Yes | Yes | Yes | Yes | Yes | Yes |
| _cons | −2.510*** | −2.359*** | −4.672*** | −***5.510 | −***4.809 | −***5.628 |
| (0.741) | (0.421) | (0.896) | (1.222) | (0.927) | (1.202) |
| Pseudo R2 | 0.1036 | 0.1026 | 0.0726 | 0.1422 | 0.0899 | 0.1089 |
| N Obs. | 768 | 1,868 | 1,469 | 1,221 | 1,434 | 1,256 |

*** indicate significance at the 1% statistical levels, respectively.

TABLE 6 Test results of influence mechanism.

| Variables | Open personality (1) | Entrepreneurship (2) | Entrepreneurship (3) |
|-----------|----------------------|----------------------|----------------------|
|           | Daily emotional problems | Mutual aid consciousness |                        |
| Farming experience | −0.108** | 0.355*** | 0.273*** | 0.266*** |
| (0.055) | (0.063) | (0.089) | (0.088) |
| Optimism | 0.179** | (0.073) |
| (0.036) |                        |
| Mutual aid consciousness |                        |                        |
| Control variables | Yes | Yes | Yes | Yes |
| Pseudo R2 | 0.0244 | 0.0347 | 0.0983 | 0.0941 |
| N Obs. | 3,091 | 3,091 | 2,690 | 2,690 |

***, ** indicate significance at the 1, and 5% statistical levels, respectively.

explanatory variable Farming Experience, and $M_i$ denotes the mediating variable. According to the test procedure (Wen and Ye, 2014), first, the main effect of Farming Experience on entrepreneurship is tested for significance, i.e., the significance of $c$ in Equation 2. Second, the effect of Farming Experience on the mediating variable is estimated, i.e., the coefficient $a$ in Equation 3. Third, the effect of Farming Experience on entrepreneurship is examined by including both Farming Experience and the mediating variables in the regression equation, i.e., the coefficients $c$ and $b$ in Equation 4. If each process is significant, the mediating effect holds. However, if the $a$ in Equation 3 and $b$ in Equation 4 is not significant, it is necessary to apply the Bootstrap method to directly test $H_0$: $ab = 0$. If it is significant, the indirect effect still exists, and if it is not significant, the indirect effect does not hold.

$$Y_i = cX_i + \phi$$  \hspace{1cm} (2)

$$M_i = aX_i + \beta$$ \hspace{1cm} (3)

$$Y_i = cX_i + bM_i + \omega$$ \hspace{1cm} (4)

The mediating variables chosen in this paper are positive personality traits, which are measured by Optimism and Mutual aid consciousness. For mediating variables, the Optimism variable was designed as "Do you usually have emotional problems", and the corresponding responses were "No, rarely, sometimes, and often," and the values were assigned as "1, 2, 3, and 4." Luthans et al. (2007) classified psychological utility into four dimensions: self-efficacy, optimism, hope, and resilience. And individuals' usual emotional problems are not only a reflection of optimism and hope, but also an indirect refraction of self-efficacy. The questionnaire design for Mutual aid consciousness is "how often neighbors help each other," and we assign 0 to "very little, little, and average" and 1 to "a lot, and a lot." This is a dummy variable for the Mutual aid consciousness.

The results of the test for the mediating effect are shown in Table 6. Column (1) shows the effect of Farming Experience on positive personality traits, and the results show that Farming Experience significantly reduces disillusionment and has a positive effect on the development of a sense of mutuality. Columns (2) to (3) show the effect of Farming Experience and mediating variables on Entrepreneurial Decision, respectively. It can be seen that positive personality traits, consisting of optimism and a sense of mutuality, significantly increase the probability of entrepreneurship, and the values of Farming
Experience coefficients tend to decrease compared to the results of the baseline regression, indicating that the mediating variables partially dilute the effect of the explanatory variables. This validates the mechanism of positive personality traits in H3. The above findings suggest that Optimism and Mutual aid consciousness are the transmission mechanisms through which Farming Experience affects labor force entrepreneurship.

Conclusion

This paper examines the impact of farming experience on urban residents’ entrepreneurial decisions based on 2016 CLDS data. The estimation results show that having farming experience can play a significant role in promoting urban residents’ entrepreneurial decisions compared to those without farming experience. To verify the robustness of the estimation results, this paper applies the instrumental variables method to test the results, and the results remain significant. The analysis of potential mechanisms of action revealed that the farming experience indirectly promotes entrepreneurial decisions through the mediating role of promoting positive personality traits such as optimism and a sense of mutuality. The results of the subsample discussion show that the effect of farming experience on the entrepreneurial decision is more significant in the middle-aged group, in non-capital cities, and in groups with high-physical capital.

Farming experience has an impact on economic behavior, which has implications for understanding residents’ entrepreneurial decisions in terms of micro-individual characteristics. We argue that positive personality traits such as optimism and mutual aid can be used as theoretical mechanisms to promote entrepreneurial decision-making through farming experiences, thus fostering positive personality traits that can help complement formal social institutions to promote individual entrepreneurial intentions. It is undeniable that entrepreneurship is an important factor in promoting economic development, as it not only contributes to solving social employment problems, but is also important in promoting labor demand and achieving fuller and higher quality employment. Distinguishing from previous studies that have focused on macroeconomic aspects to enhance the scale of urban entrepreneurship, the findings of this study imply the importance of micro-individual characteristics to influence entrepreneurial decisions. Based on the main conclusions above, the following policy recommendations are proposed:

Education and cultivation of residents’ positive personality traits should be strengthened to enhance their ability to cope with risks, especially youth groups should be the focus of cultivation, and the construction of public cultural services in non-capital cities should be strengthened. When formulating public policies on entrepreneurship, the specificity of farming experience in the process of urbanization should be taken into account, and the application of farming skills in urban life should be brought into play. Broadening residents’, the third is to broaden the channels for residents to acquire material capital and promote the accumulation of material capital to enhance the material security of residents’ entrepreneurial decisions.

This paper studies the relationship between agricultural experience and people’s entrepreneurship. However, as entrepreneurship is a part of venture capital, it is planned to carry out the correlation between agricultural experience and venture capital in future research, including the similarities and differences between fund investment, stock investment, and bank time deposit. At the same time, this paper focuses on the indirect effect of personality characteristics. The follow-up study will further combine the relationship between personality characteristics and social and economic activities to explore the relationship between personality characteristics and new forms of employment. Of course, obtaining continuous dynamic tracking data is also the focus of this paper in the future.

Data availability statement

The original contributions presented in this study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Author contributions

DZ carried out the study and analyzed the data. DZ and LL drafted the manuscript and were responsible for writing the literary and revising the language. LL provided the guidance for revising the manuscript. Both authors read and approved the final manuscript.

Funding

This work was sponsored by the Anhui Province Department of Education (Project No. 2021XX074); the Anhui Province Federation of Social Sciences (Project No. 2021XX074); and the Anhui University of Finance and Economics (Project No. ACKYC21026).

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.
Publisher’s note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

Aldrich, H. E., and Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: toward a family embeddedness perspective. J. Bus. Ventur. 18, 573–596. doi: 10.1016/S0883-9026(03)00111-9

Azoulay, P., Jones, B. F., Kim, J. D., and Miranda, J. (2022). Immigration and entrepreneurship in the United States. Am. Econ. Rev. Insights 4, 71–88. doi: 10.1257/aerw.20200588

Bernstein, H. (2001). "The peasantry" in global capitalism: who, where and why. Soc. Reg. 37, 25–51.

Blundel, R. K., Spence, L. J., and Zerbinati, S. (2010). Entrepreneurial social responsibility: sizing the territory In Ethics in Small and Medium Sized Enterprises: A global commentary eds Spence, L., and Painter-Morland, M. (Dordrecht, NL: Springer), 123–145. doi: 10.1007/978-90-481-9331-8_8

Bublitz, M. G., Lan, N. C., Peracchio, L. A., Germin, A. D., Dida, M., Escalas, J. E., et al. (2020). Rise up: understanding youth social entrepreneurs and their ecosystems. J. Pub. Policy Mark. 40, 206–225. doi: 10.1177/073416562097702

Caspi, A., Roberts, B. W., and Shiner, R. L. (1984). Personality development: stability and change. Ann. Rev. Psychol. 36, 453–484. doi: 10.1146/annurev.psych.36.060184.114193

Cheng, L. G., and Zhang, Y. (2011). Did the early famine experience influence people’s saving behavior? A new explanation for the high saving rate of Chinese residents. Econ. Res. J. 36, 119–132.

Chetty, R., Friedman, J. N., and Hilger, N. (2010). How does your kindergarten experience. Arch. Gen. Psychiatry 67, 169–192. doi: 10.1111/j.1468-0335.2010.01964.x

Clarysse, B., Tartari, V., and Salter, A. (2011). The impact of entrepreneurial capability, experience and organizational support on academic entrepreneurship. Res. Policy 40, 1084–1093. doi: 10.1016/j.respol.2011.05.010

Colovic, A., and Schroutenberger, M. (2021). Entrepreneurship for deprived urban communities: exploring the role of micro-entrepreneurship. Eur. Manag. Rev. 3, 1–12. doi: 10.1111/emre.12458

Crupi, A., Liu, S., and Liu, W. (2017). "Does adversity affect long-term consumption and financial satisfaction. Pers. Psychol. 60, 541–572. doi: 10.1111/j.1744-6570.2007.0083x

Cubero, R. A., Rubio, F. T., and Hernández, A. (2022). Entrepreneurship: what matters most. Journal of Business Research 2022, 250–263. doi: 10.1016/j.jbusres.2022.01.087

Dias, ÁL., Silva, R., Patuleia, M., Estêvão, J., and González-Rodríguez, M. R. (2022). Selecting lifestyle entrepreneurship recovery strategies: a response to the COVID-19 pandemic. Tour. Hosp. Res. 22, 115–121. doi: 10.1016/j.jtourres.2022.01.087

Donaldson, G. (1990). Voluntary restructuring: the case of General Mills. J. Pub. Policy Mark. 11, 448–469. doi: 10.1111/j.1744-6261.2011.01685.x

Fan, Y. (2017). "Does adversity affect long-term consumption and financial behaviour? evidence from china’s rustication programme," in Proceedings of European Real Estate Society, (London).

Fraser, S., and Greene, F. J. (2006). The effects of experience on entrepreneurial optimism and uncertainty. Economica 73, 169–192. doi: 10.1111/j.1468-0335.2006.00488.x

Hamielecki, K. M., and Carr, J. C. (2009). The relationship between entrepreneur psychological capital and new venture performance. Front. Entrep. Rev.3. doi: 10.3389/fpsyg.2019.00789

Hockerts, K. (2017). Determinants of social entrepreneurial intentions. Entrep. Theory Pract. 41, 105–130. doi: 10.1111/etap.12171

Hoff, K., and Stiglitz, J. E. (2016). Striving for balance in economics: towards a theory of the social determination of behavior. J. Econ. Behav. Organ. 126, 25–57. doi: 10.1016/j.jebo.2016.03.005

Iversen, J., Malchow-Miller, N., and Rensen, A. (2016). Success in entrepreneurship: a complementarity between schooling and wage-work experience. Small Bus. Econ. 47, 437–460. doi: 10.1007/s11187-016-9732-y

Jiang, J. L., Wang, Z. W., and Liao, L. (2018). Rural growth experience and stock market participation. Econ. Res. Soc. Sci. 1, 84–99.

Kendler, K. S., Myers, J., and Prescott, C. A. (2002). The etiology of phobias: an evaluation of the stress-diathesis model. Arch. Gen. Psychiatry 59, 242–248. doi: 10.1001/archpsyc.59.3.242

Liang, L., Chen, M., and Lu, D. (2022). Revisiting the relationship between urbanization and economic development in China since the reform and opening up. Chin. Geogr. Sci. 32, 1–15.

Littunen, H. (2013). Entrepreneurship and the characteristics of the entrepreneurial personality. Int. J. Entrep. Behav. Res. 6, 295–310. doi: 10.1108/1355255100362741

Luthans, F., Avoiti, B. J., Avey, J. B., and Norman, S. M. (2007). Positive psychological capital: measurement and relationship with performance and satisfaction. Pers. Psychol. 60, 541–572. doi: 10.1111/j.1744-6570.2007.0083x

Malmendier, U., Tate, G., and Yan, J. (2011). Overconfidence and early-life experiences: the effect of managerial traits on corporate financial policies. J. Finance 66, 1687–1733. doi: 10.1111/j.1540-6261.2011.01685.x

National Bureau of Statistics (2021). Various Market Entities Have Reached 158 Million in China [EB/OL]. Available online at: http://www.gov.cn/xinwen/2022-05/08/content_5609196.htm (accessed May 08, 2022).

Qin, N., and Kong, D. (2021). Human capital and entrepreneurship. J. Hum. Cap. 15, 513–553. doi: 10.1086/716344

Rupur, C. (2005). Learning from past experience: footnotes on mindfulness and habitual entrepreneurship – sciencedirect. Scand. J. Manag. 21, 451–472. doi: 10.1016/j.scam.2005.09.010

Rider, C. I., Thompson, P., Kacperczyk, A., and Täg, J. (2013). Experience and Entrepreneurship. Working Paper. Stockholm: Research Institute of Industrial Economics.

Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. Organ. Sci. 11, 448–469. doi: 10.1287/orsc.11.4.448.14602

Shum, P., and Faig, M. (2006). What explains household stock holdings? Work. Papers 30, 2579–2597. doi: 10.1016/j.jbankinf.2005.11.006

Timmer, C. P. (1988). The agricultural transformation. Handbook Develop. Econ. 1, 275–331. doi: 10.1016/S1573-4471(88)01011-3

Urban, B., Murimbika, M. E., and Mhangami, D. (2022). Immigrant entrepreneurship with a focus on human and social capital as determinants of success: evidence from South Africa. J. Entrep. Emerg. Econ. 5, 1–16.

Wang, X. Z. (2008). An investigation into intergenerational differences between, and satisfaction. Res. Soc. Sci. China 29, 136–156. doi: 10.1007/s11269-015-9585-3

Wen, Z. L., and Ye, B. J. (2014). Intermediary effect analysis: method and model development. Prog. Psychol. Sci. 22, 731–745.

Wu, X. G., and Zheng, B. D. (2018). Household registration, urban status attainment, and social stratification in china – sciencedirect. Res. Soc. Stratif. Mob. 53, 40–49. doi: 10.1016/j.rssm.2017.11.002
Yu, J. X., and Gao, X. (2009). Government, market and society in agricultural and rural development: an analytical framework. Social Sciences in China. 180, 89–103.

Yuan, Y. F., Zhen, L. I., and Accounting, S. O. (2019). CEO’s early experience of great famine, managerial discretion and corporate donation—an empirical study based on the imprinting theory. Comm. Sci. Rev. 26, 111–119.

Zhang, D. D., and Bruning, E. (2011). Personal characteristics and strategic orientation: entrepreneurs in Canadian manufacturing companies. Int. J. Entrep. Behav. Res. 17, 82–103. doi: 10.1108/13552551111107525

Zhao, J., Xiao, Y., Sun, S., W, and Axmacher, J. C. (2022). Does China’s increasing coupling of ‘urban population’ and ‘urban area’ growth indicators reflect a growing social and economic sustainability? J. Environ. Manag. 301, 1–10. doi: 10.1016/j.jenvman.2021.113932

Zhou, G. S., Bian, X. Y., and Wu, Q. J. (2020). Upland experience and household investment in risky financial assets – evidence based on breakpoint regression. Financial Res. 1, 150–170.

Zhong, F. N., and Chen, Y. S. (2014). Agricultural experience, education level and career choice of first-time migrant workers – a study on the "frictional unemployment" of the new generation of migrant workers. China Rural Observ. 2, 2–9.

Zhou, G. S., Bian, X. Y., and Wu, Q. J. (2020). Upland experience and household investment in risky financial assets – evidence based on breakpoint regression. Financial Res. 1, 150–170.

Zhu, M. R., and Yang, Y. Y. (2018). Do big cities contribute to entrepreneurship of migrant workers. Finance Trade Res. 29, 33–42.