

# **Entrepreneurship and Credit Constraints: Evidence from Rural Households in China**

Cheng Yu<sup>\*</sup>

Much of the interest in “entrepreneurs” by economists reflects a curiosity about the role of entrepreneurs in fostering innovation and economic growth (Schumpeter, 1934). Encouraging entrepreneurship is increasingly an essential strategy for promoting economic development. With huge rural population and mass less-developed rural economy, China attaches more importance on rural entrepreneurs. “Seed money” is the most direct influential factor on entrepreneurial decision. Bunches of study demonstrate that liquidity constraints have substantial effect on entrepreneurial behavior. For example, wealthier people are more inclined to become entrepreneurs (Evans & Jovanovic, 1989; Fairlie, 1999; Quadrini, 1999; Gentry & Hubbard, 2000); Inheritance or asset revenue predicts the increase of probability of becoming entrepreneurs and amount of capital employed in the new enterprise (Holtz-Eakin et al, 1994, Lanchflower & Oswald, 1998; Cagetti & De Nardi, 2006). Credit market is another way to relax liquidity constraints. Therefore, perfect financial market and sufficient credit supply will promote entrepreneurship (Black & Strahan, 2002; Hurst & Lusardi, 2004).

However, less-developed countries face a serious problem of financial constraints. Financial constraints have already become the main factor restricting the development of rural economy in Chinese rural areas. So will the reform of China’s rural financial market and the relaxation of rural credit increase rural households’ entrepreneurs and promote the development rural economy? This paper will make strength to answer the question from both theoretical and empirical aspects.

This paper revises traditional entrepreneurial decision model (Evans & Jovanovic, 1989) by introducing the minimum entrepreneurial cost and taking entrepreneurial ability as an exogenous variable (That is to say, entrepreneurial ability has influence on households’ production function and entrepreneurial decision, while initial wealth determines whether being credit constraints). It finds different results from that of Evans & Jovanovic. The effect of credit constraints on entrepreneurship

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<sup>\*</sup> Institute of Policy and Management, Chinese Academy of Science  
Address: Box 8712 Beijing, No. 55 East Street of Zhongguancun, Beijing, China  
Email: [chengyu@casipm.ac.cn](mailto:chengyu@casipm.ac.cn); Tel: 86-10-82626490

is not monotonous, so it can't be guaranteed that the relaxation of credit constraints will increase entrepreneurial activities. Especially, due to the different scale and categories of entrepreneurship, credit constraints won't necessarily restrict entrepreneurial behavior; due to different reasons of credit constraints, relaxing credit supply won't necessarily increase entrepreneurial activities.

Then, this paper tries to find some empirical evidence about the above theory. It investigates the extent of credit constraints and its impacts on entrepreneurial decision of rural households in China, based on a large-scale rural financial survey in 2005 conducted by Development Research Centre of the State Council (DRC). The data provides us with detailed retrospect credit information from 2001 to 2004 of 1962 rural households covering 29 provinces of China.

First, it establishes a framework to identify the rural households facing credit constraints. According to Kon & Storey (2003) and Petrick(2004), there are a large group of borrowers who never apply bank credit because they take it for granted that they couldn't receive credit, which they called "discouraged non-borrowers". This paper also considers them as being credit constraints since the demand depression is due to long-term formal credit restriction. So the credit constraints can be divided into two categories: supply-side constraints and demand-side constraints. Surveyed by very detailed questionnaires, the data enables us distinguishing whether rural households are credit constraints and the reasons why they are credit constraints. Similar to Boucher (2005), this paper makes a deep analysis about the decision procedure of credit demand and loan activity to partition credit constraints into supply-side and demand-side. It highlights by the empirical investigation that 33.72 percent of rural households are credit constrained, among which supply-side constraints and demand-side constraints accounting for 17.12% and 16.6% respectively.

Second, it makes a definition about rural households entrepreneurs. In past researches, entrepreneurs are defined as those who start up enterprises or are self-employment. But different from urban households, rural households are not wage-earner but self-employment in nature. Therefore, self-employment is not a good sign for rural entrepreneurs. According to the "creative destruction" theory of Schumpeter, entrepreneurs are those who change the traditional operation modes and disrupt the steady state. So as for rural households, entrepreneur ranges from inventors who create new products or even new industries, conduct advanced

production, to local business people starting restaurants and retail stores. Three characteristics are used to identify entrepreneurial households. 1) Those who take themselves as specialized breeding households or business households are defined as entrepreneurs I; 2) those whose net operating revenue exceed 30 thousand yuan and prime operating revenue account for more than 80% or 60% (planting revenue accounting for more than 80% or breeding or business revenue accounting for 60%) are defined as entrepreneurs II; 3) those whose productive asset exceed 20 thousand yuan are defined as entrepreneurs III. Then, it finds from the data that entrepreneurs I, II and III respectively account for 20.29%, 6.22% and 4.54% of total sample and the total entrepreneurial proportion is about 27.98% in rural China.

Third, it examines whether credit constraints affect entrepreneurial activities using the above two indicators. This analysis uses structural technique and instrument variable. There is difficulty to separate the credit constraints effect on entrepreneur since credit constraints variable is endogenous (That is to say, credit constraints, entrepreneurial activities and household income are highly correlated). Variables of the distance to financial institution and members of rural credit cooperatives (dummy variable) are used as instrumental variable. Although different estimated models are tried and credit constraints are decomposed, it can't find evidence that credit constraints directly restrict rural entrepreneurial activities. However, it finds that demand-side and supply-side constraints affect entrepreneurial activity in different direction. Then, the sample is partitioned into constraints group and non-constraints group for deep analysis. The result shows that related variables have different effect on entrepreneurial activities for two groups. For example, education, land area and numbers of local enterprises are only significant in constraints group. Therefore, credit constraints won't have direct and monotonous effect on entrepreneurial activities because of endogenous relationship and widespread capital replacement by other factors. Under strict credit constraints, human capital and land resource will be used to replace capital, so rural households enriched with higher education, ample farm land and favorable business environment are more inclined to be entrepreneurs.

Finally, matching method is used to make a comparison about investment and income between constraints households and non-constraints households. The advantage of matching method is that it won't dependent on the linear relationship. Propensity score is used to adjust the participant probability of constraints group. It indicates that the average net operating revenue of constraints households is 1880

yuan lower than that of non-constraints. Demand-side constraints have far more negative effect on both investment and revenue. Average investment of constraints households is 1114 yuan lower than that of non-constraints and the difference of average net operating revenue expands to 3539 yuan.

Through both theoretical and empirical analysis, it finds that credit constraints won't restrict the entrepreneurial choice of rural households because entrepreneurial choice depends more on the entrepreneurial ability than financial capability. In rural China, people are self-employment in nature and the capital threshold of being entrepreneurs is very low. Moreover, rural households have independent land contract right, thus land will play an important role in smoothing credit constraints. However, it can't make conclusion that credit constraints won't affect entrepreneurial activities. Credit constraints will restrain rural households from making advanced investment and conducting expanded reproduction, so as to inhibit their income raising. That is to say, entrepreneurship won't be depressed by credit constraints, but credit constraints do hinder rural people attain prosperity and wealth.