

# **The Determinants of Entrepreneurial Activity in China**

## **-Empirical Analysis by Regional Level Data**

**Jian GAO, PhD, Professor**  
**Department of Innovation and Entrepreneurship**  
**School of Economics and Management,**  
**Tsinghua University, Beijing , China**

**Shude SHI, Master student of 2004 class**  
**Department of Innovation and Entrepreneurship**  
**School of Economics and Management,**  
**Tsinghua University, Beijing , China**

### **Abstract**

Entrepreneurial activity produces important effect on regional economic development. What determines the variation of new firm formation among different areas is one hot issue in the field. Answering this question can help to understand why new firms emerge frequently in some areas but not in others, how to improve regional entrepreneurial activity and what role government should play in the improvement.

The determinants of entrepreneurial activities have been analyzed for many developed countries. Developing countries, however, is lack of the analysis. The typical countries which have been analyzed are the United State(J.Bartik,1989; Shane,1996; Armington, Acs,2002; Lee, Florida, Gates, 2004 ;Sutaria , Hicks , 2004), Britain(J.Dean et al.1993;T. Robson , 1994; Keeble, Walker,1994; Basu, Goswami,1999; Johnson,2005), Germany(B. Audretsch, Fritsch, 1994, 1999; Fritsch, Falck, 2002; Fritsch, 2004; Fritsch, Mueller,2005; Brixy, Grotz,2005), Finland(Kangasharju, 2000), France(Guesnier,1994), Portugal(Lobo, Costa,2003), Japan(H Okamuro, N Kobayashi,2005, 2006), Ireland(Hart, Gudgin,1994). Researches in these developed countries conclude that regional variation may be explained by key factors in economy, culture, policy and society, such as industry structure, technology innovation, entrepreneurship culture, government expenditure, population, income, human capital and so on.

There are disparate results among present literatures, which make it difficult to get a coherent explanation of regional variation. For example, Fritsch and Mueller (2005) found unemployment rate had a strongly positive influence on new firm formation, while Sutaria and Hicks (2004) and Armington and Acs (2002) did not find the same effect. Reynolds (1994), Guesnier(1994), and Armington and Acs (2002) found the impact of population change was strongly positive, Audretsch and Fritsch (1994) and Garofoli (1994) proved there was no evidence of such impact. The reason for these disparate results may be induce by different countries and different periods that produce different national context. Accordingly, to make knowledge of the practice in China, we should do empirical analysis using Chinese data.

The study is to identify determinants of entrepreneurial variation in China at the regional level, tested by econometric model at the basis of theoretic analysis and

hypothesis. Data covers 31 provinces of the People's Public China (mainland).

First, the paper selects the measurement of entrepreneurial activity level in a region and analyzes the differences among province. Entrepreneurial activity rate is an index widely used to measure regional entrepreneurial activity level. We use a new method, CPEA (China Private Entrepreneurship Activity), to calculate entrepreneurial activity rate, which is different from the two present indicators: labor market approach and ecological approach<sup>1</sup>

Second, in the paper we analyze the impacts of possible determinants on entrepreneurial activity and put forward research hypothesis. Based on the synthesis of present literature, we raise eight hypotheses related to market demand, unemployment, industrial structure, entrepreneurial culture, technology innovation, availability of financing, and human capital. And we analyze how the factors from these aspects influence entrepreneurial activity, and hypothesize the influence direction of each factor.

Third, we collect data and examine these hypotheses by panel data model and pooled cross-section data model. The dependent variable of regression models in the paper is entrepreneurial activity rate (CPEA), and the explanatory (independent) variables are 8 factors from 7 aspects mentioned above. The data covers 31 provinces of the People's Public China (mainland) and 8 years from 1997 to 2004. The panel data model used in the paper can enrich sample data and weaken the possible errors made by lost explanatory variables in the model. Pooled cross-section data model is used to compare with the results of panel data model and see if there are similar in the estimation size, sign and significance. The main object of comparing the two models is to improve the reliability of the results.

Using a new measurement of entrepreneurial activity level, we analyzed the regional variation of new firm formation in China. We find considerable variation in entrepreneurial activity rate across regions. Eastern coastal regions, especially Beijing and Tianjin Region, Yangtze River Delta Region, Zhu Jiang Delta Region, have higher entrepreneurial activity rate than that of other regions.

The regional variations are substantially explained by market demand, industrial structure, unemployment rate, availability of financing, entrepreneurial culture and human capital. However, we find no evidence that the importance of technology innovation and rate of consumption growth on the entrepreneurship in China. Our findings suggest that a region with denser population, better development of service industry, higher unemployment rate, richer local bank deposit, stronger entrepreneurial culture, better average education of labors, the entrepreneurial activity is more active and new firm formation is more frequently.

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<sup>1</sup> The labor market approach is to standardize the number of new firms with respect to the size of the labor force (Robson, 1994; Davidsson and Wiklund, 1997; Armington and Acs, 2002; Lee, Florida and Acs, 2004; Fritsch and Mueller, 2005); The ecological approach is to standardizes the number of new entrants relative to the number of establishments already in existence.