Business Survival Inside and Outside of Chinese IT clusters

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ABSTRACT

This article examines the geographical effects of industrial clusters on the business survival (BS) of information technology (IT) companies in China. The authors aim to find the differences of BS among inside and outside of the clusters in four different regions by using the methodology of Cox Proportional Hazard Model. The authors find that large sized IT clusters in the Haidian district of Beijing and the Pudong district of Shanghai have higher risks of business withdrawal (BW) than their surrounding areas, whereas the medium-sized cluster in the Nanshan district of Shenzhen and medium-sized IT cluster in the Binjiang district of Hangzhou does not show significant risks compared with their surrounding areas.

KEYWORDS

Business Survival, Business Withdrawal, China, Cox Proportional Hazzard Model, Geographical effects, Industrial Clusters, IT Companies, Kaplan–Meier Estimator

INTRODUCTION

Recently, there has been a rapid development in the information technology (IT) industry in China, and several big companies have received considerable attention from the media. For instance, Alibaba Group Holding was ranked the 6th and Tencent holdings was ranked 7th in the world in terms of market capitalization during the third quarter of 2017. Because of the fast growth of the IT industry in China, increasing number of entrepreneurs have started business in this specific industry. According to the ITJuzi database, the number of new IT companies established in China between 2012 and 2016 were 4103, 5930, 9262, 9169, and 2053, for each respective year. From this data, the authors observe that the entrepreneur boom peaked during 2014 and 2015; however, the number of entrepreneurs declined in 2016 in China. Although there is no accurate number of business withdrawal in China, the authors speculate that the significant drop in numbers of new companies in 2016 shows that people who intended to start a business recognized the IT industry to be a highly competitive one. Also, they recognized that less people chose to start a business in this industry. Moreover, the investors are more careful when investing on IT companies because it is more difficult for them to recover their investment in 2016. This phenomenon is called “Chinese IT companies’ capital’s winter” (Chenghufen & Dailili, 2017). Although a large number of companies joined the market, few of them were able to succeed in this industry. Chinese IT companies should have a survival strategy during “the IT companies’ winter.” Therefore, researchers should pay more attention to business survival (BS) rather than business success.

There are several IT companies concentrated at specific areas in China, similar to that at Silicon Valley. The authors call this phenomenon of concentration as clusters. Clusters are geographic

DOI: 10.4018/IJSSOE.2018040101

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concentrations of interconnected companies and institutions in a particular field (Porter, 1998). The most representative areas are the Haidian district in Beijing, the Nanshan district in Shenzhen, the Pudong district in Shanghai, and the Binjiang district in Hangzhou. Entrepreneurs conduct business activities in those clusters; however, it is not clear what the situation of BS in these areas really is. In this paper, the authors aim to verify the geographical effects of industrial clusters on BS in four clusters. Specifically, the authors will confirm whether BS inside industrial cluster is different from that of its surrounding area. For instance, the authors will compare the BS of Haidian district with those of other districts in Beijing.

Four Clusters in China

In this study, the authors chose four of the most famous IT clusters in China, namely the Haidian District in Beijing, the Pudong district in Shanghai, the Nanshan District in Shenzhen, and the Binjiang District in Hangzhou. There were several reasons for choosing these four areas. (1) Highly geographical concentration in China. (2) Many big and famous companies are located in these areas. (3) In order to examine the differences in BS between the inside and outside of the clusters, the characteristics of the clusters should be different (The characteristics of these four clusters will be explained in detail in the following part).

The Haidian and 15 other districts in Beijing are shown in Figure 1. Haidian has an area of 430.8 km² and a GDP of about 73.7 billion USD, and its population in 2016 was 3.6 million. There are about 78 universities in this area, many of which are well-known universities, such as Tsinghua University, Beijing University, and Renmin University. There are also many famous giant companies such as search engine company Baidu, and mobile phone company Xiaomi. Thus, the characteristics of the IT industry in the Haidian district include abundant resources of universities, labs, and big companies and a large area.

Figure 1. Haidian and other districts in Beijing (Based on National Bureau of Statistics of China)
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