

# The role of clustering in rural industrialization: A case study of the footwear industry in Wenzhou

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## Abstract

Wenzhou used to be one of the poorest regions in eastern China. With limited arable land, poor road access to major cities, and little support from the upper level governments, this region seemed to lack all the conditions necessary for economic growth. However, over the past several decades Wenzhou has developed the most dynamic private sector in China, and has accordingly achieved one of the fastest growth rates. In particular, the footwear industry in Wenzhou has grown from a negligible market share to the largest in China. Here, we report a survey of 140 Wenzhou-based footwear enterprises of various scales, and use this information to examine the driving forces behind the dramatic rural industrial growth seen in this region. Our results show that clustering deepens the division of labor in the production process and makes it possible for small entrepreneurial firms to enter the industry by focusing on a narrowly defined stage of production. Therefore, Wenzhou represents an example of how clustering plays a significant role in helping fledgling rural industries overcome the growth constraints of capital and technology in the incipient stage of industrialization.

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## 1. Introduction

Located in the mountainous south-eastern part of Zhejiang Province, Wenzhou prefecture has a very limited amount of arable land at 0.52 mu (15 mu=one hectare) per capita, about one-third of the national average (Zhang and Li, 1990). Wenzhou's proximity to Taiwan made it a likely war frontline in the planned economy era from 1949 to the late 1970s, meaning that neither the central or provincial (Zhejiang) governments were inclined to spare their limited resources for Wenzhou's infrastructural and industrial development (Tsai, 2002). From 1949 to 1981, only 655 million yuan of public funds were invested in Wenzhou Prefecture (Zhang and Li, 1990), compared to an investment of 2.8 billion yuan in the neighboring Ningbo prefecture. Wenzhou also suffered from poor transportation, relying upon a

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single narrow mountain road for transportation of people and goods.<sup>1</sup> As a result, prior to reform in the late 1970s, the per capita income in Wenzhou was only 55 yuan, about one third of the provincial average (Zhang and Li, 1990). Wenzhou seemed to lack all the necessary conditions for textbook economic growth. Despite such unfavorable initial conditions, however, Wenzhou has developed the most dynamic private sector in China over the past several decades, with the result that it has shown one of the fastest growth rates in the country.<sup>2</sup> The footwear industry in particular has grown from a negligible input to the largest market share in China, and today forms one of the largest industrial clusters in the country.

How did Wenzhou succeed in overcoming the capital and technical constraints of the industrialization process? What are the major factors that contributed to the formation of rural industrial clusters? Parris (1993) argued that local state corporatism was a major reason for growth in Wenzhou. Whereas Tsai (2002) stressed the importance of informal finance and other institutional innovations, and Zhang and Li (1990) identified a long list of factors contributing to the success of the “Wenzhou Model”. However, it is not possible to single out specific factors as being more important than others. This paper contributes to the literature from a different perspective by arguing that clustering has helped overcome the technical and capital barriers to entry for a large number of entrepreneurs.

Here, we surveyed 140 Wenzhou-based footwear enterprises of various scales, and use the accumulated data to examine the driving forces behind the dramatic rural industrial growth seen in this region over the past few decades. Given that many developing countries and regions face similar pressures of land scarcity and poor infrastructure, the lessons and experiences drawn from the in-depth case study in Wenzhou may contribute to the literature on rural industrialization in other developing countries or regions.

Section 2 briefly reviews the history of the Wenzhou footwear industrial cluster and describes our survey design. Sections 3 to 5 demonstrate how clustering helps overcome the technological, capital and institutional constraints in the process of industrialization. Finally, Section 6 summarizes the major findings and draws some lessons from this case study.

## 2. An overview of the Wenzhou footwear cluster and survey design

The traditional footwear industry has a history of over 500 years in Wenzhou. During the Ming Dynasty (1368–1644), Wenzhou footwear was renowned for its exquisite quality and was produced explicitly for the royal family. At the end of the Qing Dynasty and the beginning of the Republic of China (1911), the Wenzhou footwear industry began to flourish. Fuqian Street, located in the heart of the city, was lined with dozens of footwear stores.

In the 1920s, Shanghai, Xiamen and other cities employed workers from Wenzhou to make shoes. These shoemakers mastered advanced shoemaking processes, which they then brought back to Wenzhou. They became key technicians in the local footwear industry, and exerted a far-reaching influence on the development of the contemporary shoemaking industry in Wenzhou. In 1950, there were 43 family footwear workshops and 103 employees in urban Wenzhou with annual output of 4000 pairs of shoes (Yu and Yu, 1995).<sup>3</sup> Soon after, however, many of the private workshops and factories were nationalized or closed. The private shoemaking was largely depressed in the following three decades. By 1978, there were only 19 footwear factories left, including two state-owned, eight collectively owned and nine privately owned shops, with a combined output of 496,800 pairs of shoes per year.<sup>4</sup> These “seed factories” trained a large number of technical workers, marketing specialists, and management talents, laying the groundwork for the emergence of the Wenzhou shoemaking industry in the subsequent reform era.

After 1978, the Wenzhou private shoemaking business recovered rapidly. As state- and collectively-owned businesses gradually went under, more and more ex-employees set up their own workshops and the local shoemaking business boomed. By the end of 1981, there were 99 shoemaking factories in the Lucheng district of Wenzhou alone (Wenzhou City Annals, 1998). As of 2006, Wenzhou had become the most important footwear production base in China and was nicknamed the “Footwear Capital of China.” As shown in Fig. 1, since the reform in the late 1970s, Wenzhou gradually formed a highly specialized and coordinated industrial cluster consisting of over 4000 shoemaking

<sup>1</sup> Wenzhou Airport and Jin-Wen Railway were not completed until 1990 and 1998, respectively.

<sup>2</sup> Although GDP per capita in Wenzhou was 63% of the Chinese average in 1978, these values equalized in the early 1990s and the GDP per capita in Wenzhou was 78% higher than the national average in 2004 (Wenzhou Statistical Yearbook 2005, and China Statistical Yearbook 2005).

<sup>3</sup> Wenzhou City Annals, Zhang Zhicheng, Wenzhou City Annals Compilation Committee, Beijing, Chunghua Bookstore, 1998.

<sup>4</sup> Wenzhou City Annals, Zhang Zhicheng, Wenzhou City Annals Compilation Committee, Beijing, Chunghua Bookstore, 1998.

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