Restructuring Industrial Districts, Scaling Up Regional Development:

A Study of the Wenzhou Model, China

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ABSTRACT

The Wenzhou Municipality in Zhejiang Province is spearheading China's marketization and development of private enterprises. Its successful development trajectory, centered on family-owned small businesses embedded in thick local institutions, resembles Marshallian industrial districts (MIDs). However, with China's changing institutional environment and intensifying competition, Wenzhou has been facing challenges. Since the late 1980s, Wenzhou has gone through two major rounds of restructuring (from family enterprises to shareholding cooperatives to shareholding enterprises), that have included four major types of strategic response: institutional change, technological upgrading, industrial diversification, and spatial restructuring. Firms in Wenzhou have gone through localization and delocalization, and locational choices reflect the dual destinations of globalizing cities and interior cities. The formation of new firms and clusters has been accompanied by mergers, acquisitions, and the emergence of multiregional enterprises (MREs), some of which have relocated their headquarters and specialized functions to metropolitan areas, especially Shanghai and Hangzhou. More recently, Wenzhou's growth has slowed, leading some to question the sustainability of the Wenzhou model. We argue that Wenzhou's development is in danger of regional lock-ins--relational, intergenerational, and structural. Wenzhou's experience challenges the orthodox concept of MIDs and calls for "scaling up" regional development.

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China's miraculous rise has been spearheaded by selected coastal localities, and the multifaceted development and transition have been driven by interplays of the state, global capital, and localities, empowered by the triple transition of decentralization, marketization, and globalization (Wei 1999, 2000). Three well-known models of industrial districts and regional development--the Sunan model, the Pearl River Delta (PRD) model, and the Wenzhou model--have generated considerable scholarly attention (Fan 1995; Lin 1997; Oi 1999; Marton 2000; Wei 2002; Lu and Wei 2007). This research is consistent with the renewed interest in the causes of uneven development and why localities display different trajectories of development in the context of globalization (Cox 1997; Scott 1998). The Wenzhou model, based on family-owned small businesses, which resembles Marshallian industrial districts (MIDs), drew substantial international attention in the early 1990s (Nolan and Dong 1989; A. P. L. Liu 1992; Y. L. Liu 1992; Parris 1993; Zhang 1994), and interest has been renewed in recent years (Ma and Cui 2002; Ye and Wei 2005).

However, regional development is never a smooth process, and researchers have been intrigued by the restructuring of the development models. Since the late 1980s, Wenzhou's family enterprises have gone through two rounds of restructuring: first to shareholding cooperatives and then to shareholding enterprises with the emergence of multiregional enterprises (MREs).

While scholars have challenged the orthodox notions of the Sunan model and the PRD model (Wei 2002; Lu and Wei 2007), Wenzhou's development and restructuring

have largely escaped international scrutiny. Incidentally, Western literature has also questioned the relevance of the MID conceptualization and empirical validity of the Italian model (Whitford 2001; Hadjimichalis 2006) and has proposed alternative industrial districts and called for "globalizing" regional development (Coe et al. 2004; Yeung 2005). Clearly, the study of Wenzhou has significance both inside and outside China, and the importance of China's development models in the literature has yet to be realized.

Our study has advanced the research on regional development by investigating the restructuring of the Wenzhou Municipality in Zhejiang Province. Known for the Wenzhou model of development, the region has spearheaded the rise of private enterprises in China.[1] We explored economic restructuring and industrial relocation to understand the restructuring process and the role of local institutions in promoting and constraining growth and to challenge the orthodox notions of the Wenzhou model and the MIDs. We asked: Can Wenzhou still be conceptualized as an MID? How is the region being restructured? What are the spatial dimensions of the restructuring? What are the roles of local state institutions? Our research drew on the literature of evolutionary and

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[1] We classify industrial enterprises into four types of ownership forms: state, collective, foreign, and nonstate. Nonstate enterprises refer mainly to private enterprises, including individual enterprises, cooperative enterprises, shareholding enterprises, and limited liability corporations.

institutional economic geography, particularly industrial districts. We used the concept of regional lock-in to analyze the process of restructuring and to demonstrate that Wenzhou has a strong ability to adapt to change. Here, we argue that the Wenzhou case represents a significant pathway to development and that the orthodox notions of MIDs and the Wenzhou model no longer capture the essence of Wenzhou's development since the late 1980s. We show that the restructuring process is led by both local governments and entrepreneurs that are embedded in thick local networks and involves institutional change, upgrading, diversification, and relocation to overcome the limits of family business. The Wenzhou experience challenges the economic geography literature that overly emphasizes small firms and local assets and calls for the "scaling up" of regional development. The results of our study have the potential to enrich the understanding of the restructuring of industrial districts and the role of institutions in regional development.

Theoretical Background: The Restructuring of Industrial Districts

The nature of industrial districts and the impact of globalization have generated considerable scholarly debate. Despite the claims of a borderless world and the hollowing out of nation-states, scholars have argued that the world economy is not a singular global production factory, but a regional world of production contested by regionalization, reterritorialization, and geographic embeddedness (Cox 1997; Scott 1998). This literature

has argued for industrial districts as nodes for globalization/localization and motors for economic development. Industrial districts are characterized by flexible specialization and agglomeration economies, with a synergistic combination of dense local networks, local innovation, and learning, as well as the formation and clustering of small firms (Piore and Sabel 1984; Scott 1988; Staber 2001). The literature on restructuring views regional decline and the emergence of new economic spaces as spatial manifestations of the transformation from Fordist production to flexible production (Scott 1988; Storper and Walker 1989). MIDs therefore emphasize small, locally owned firms, local networks, and the capability of self-sustaining endogenous growth.

Recently, the literature on industrial districts has been questioned and even criticized for its narrow focus on local institutions and networks and for its failure to take into account the effects of globalization and the role of large firms (Coe 2001; Whitford 2001; Hadjimichalis 2006). First, research on industrial districts has concentrated in a few areas in developed countries, and scholars have increasingly recognized varied forms of industrial districts. Markusen (1996) synthesized four prototypes of industrial districts: MIDs, hub-and-spoke districts, satellite platforms, and state-anchored districts. Alternative industrial districts, such as neo-MIDs (Amin and Thrift 1992) and satellite-MIDs (Coe 2001), have also been proposed. Industrial districts in developing countries have structures and development processes that are different from typical MIDs in that they have emphasized the importance of family circles, active local states, frequent informal networks, the cohabitation of small firms and Fordist giants, and a low

degree of specialization (Park and Markusen 1995; Rabellotti 1995; Schmitz 1995; Pietrobelli and Barrera 2002).

Distinct models of industrial districts and regional development have emerged in China, but have largely escaped the attention of the economic geography literature. They have been produced through incentives and constraints that are contained in the institutional frameworks that were present at the beginning of China's reform (Whiting 2001) and through institutional change during the reform (Han and Pannell 1999; Wei 2007). The Sunan model attributes the development of Sunan to the local state-directed township and village enterprises (TVEs), or local state corporatism (Oi 1999), and is viewed as development/urbanization from below (Ma and Fan 1994). The development of the PRD, or the PRD model, is conceptualized as externally driven development and exo-urbanization (Eng 1997; Sit and Yang 1997). The Wenzhou model is known for a development path that is centered on small-scale family enterprises (A. P. L. Liu 1992). However, Sunan has moved beyond the Sunan model with the infusion of global capital (Wei 2002), and the PRD has attempted to "domesticate globalization" by embedding global firms and developing endogenous innovation capacities (Lu and Wei 2007). Since the recent changes in Wenzhou have largely escaped international attention, we wanted to examine the restructuring process and to ask whether Wenzhou still represents an orthodox MID.

Second, a small body of literature has emerged that questions the relevance of the notions of MIDs and the Italian model (Amin 2000; Whitford 2001; Hadjimichalis 2006).

Italian industrial districts, as symbols of successful small-scale flexible capitalism, have been challenged by changing global contexts (Amin and Thrift 1992; Glasmeier 1994). Like the work of geographers in the 1980s, who viewed uneven development and spatial restructuring as a natural logic of capitalism (Storper and Walker 1989), change has been a natural part of the history of industrial districts (Asheim 2000), which are unstable institutions with deep structural instabilities (Harrison 1992). Institutions are in a state of flux, characterized by changes and innovations, as well as inertia, durability, and path dependence. In regions that are dominated by old, heavy, specialized industries, such as Baden-Württemberg, local institutional structures may be much less flexible, with the potential of regional lock-in, a situation in which a local institutional regime gets "stuck in a groove" through a process of rigidification and growing inflexibility (Grabher 1993). Regional lock-in is a multiscaled process that is highly dependent on place (Martin and Sunley 2006), and Grabher (1993) identified three types of lock-ins: functional, cognitive, and political. But the literature is dominated by studies of European countries, and research has hardly begun to look at adjustment (van Grunsven and Smakman 2005). Not only can lock-ins be observed in old industrial areas, they are also partly responsible for the inflexibility of modern industrial districts (Hassink and Shin 2005).

Industrial districts have been undergoing restructuring (Cainelli, Iacobucci, and Morganti 2006; Dunford 2006). Martin and Sunley (2006) summarized five possible scenarios to escape negative regional lock-in: (1) the indigenous creation of new technologies and industries, (2) heterogeneity and diversity, (3) transplantation from

elsewhere, (4) diversification into (technologically) related industries, and (5) upgrading of existing industries. While these scenarios center on technological development and upgrading with little attention to relocation, Schamp (2005) grouped two dominant strategic responses to industrial decline in Germany: firms either stayed in the industry but left the region (relocation) or stayed in the region but left the industry (diversification). Hadjimichalis (2006) highlighted three interrelated restructuring processes in Italy: (1) mergers and acquisitions and the formation of large, vertically integrated, firms and groups; (2) delocalization of production to low-cost regions or countries; and (3) replacement of Italian craft workers by non-European Union immigrants. Eraydin (2001) identified three trajectories of change: losing competitiveness, mergers and integration with global production networks, and innovation. Others have emphasized building local "buzz," "pipelines," and "globalizing" regional development (Bathelt, Malmberg, and Maskell 2004; Coe et al. 2004; Yeung 2005). We argue that industrial districts in China also face problems of growth and the pressures of globalization and competition. We conceptualize the restructuring of the Wenzhou model as a response by local institutions and firms to potential regional lock-in and development problems. In this article, we examine whether Wenzhou firms are undergoing a similar process of restructuring and analyze four major types of strategic response: institutional change, technological upgrading, industrial diversification, and spatial restructuring.

Third, the literature has paid little attention to the relocation of firms and the formation of delocalized groups. On the other hand, research on the relocation of firms

dealt with the characteristics of origins, destinations, driving forces, and effects. It has distinguished between partial relocation and complete or total relocation, as well as between industrial decentralization and suburbanization, and has stressed that the main driving forces are expansion and the need for more suitable premise, cost-saving, and policy incentives (Pellenbarg, van Wissen, and van Dijk 2002; Brouwer, Mariotti, and van Ommeren 2004). While neoclassical theories emphasize the maximization of profits and behavior theories explore the preferences of decision makers, institutional theories are more interested in the process and institutional environments of relocation, especially governments, networks, and land markets (Hayter 1997; Brouwer, Mariotti, and van Ommeren 2004; Mariotti 2005). We hold that spatial expansion of production is not just happening and being led at the global scale by MNEs, but is also occurring within countries, led by local firms going national and even global. Relocation is essential to the restructuring of the Wenzhou model and the formation of Wenzhou's MREs, representing a local approach to the problem of lock-in and the process of economic restructuring. In attempting to fill the gap in the literature, we analyze the relocation of firms and the role of institutions.

Last, the literature on industrial districts has emphasized the significance of local institutions, but has deemphasized the role of the state. The MID literature often ignores the role of the state (Hadjimichalis 2006), and for Martin and Sunley (2006), the key determinants of breaking out of lock-in are large firms, research institutions, and human capital. In East Asia, the market is "governed" (Wade 1990), and the state is heavily

involved in economic and regional development (Park and Markusen 1995). State capacity relies on policy instruments and institutional links with the enterprises. However, the notion of the East Asian development state is static and aspatial. The state is transitional (Wei 2005), and state-society relations change with time and space. Moreover, a strong local institution may insulate firms from competitive pressures and turn obstacles into innovation (Hassink and Shin 2005), and a crucial issue is the precise nature of the institutions and their relationships with economic growth (Henry and Pinch 2001). China's decentralization has empowered local states to participate directly in the development process as planners, reformers, and developers/entrepreneurs, far beyond providing just public goods (Wei 2002). However, the local government is neither a unitary actor pursuing local growth and protectionism nor an independent administrative entity resisting policy mandates from higher administrative levels (Tsai 2002). The Wenzhou government was tolerant of semilegal or illegal practices during earlier years of reforms and has become more active in implementing local policies one step ahead of other places by innovatively labeling privatization as "Socialism with Chinese Characteristics"; however, the process has been fraught with political tension. We demonstrate the strong ability of the region to adapt to change and the important, yet changing, role of local states in restructuring.

Research Setting and Methodology

The Wenzhou model is one of the most successful models of industrialization and

regional development in China. We view industrial districts as hierarchical spatial organizations and treat Wenzhou Municipality as a metropolitan-level industrial district that corresponds with China's administrative system and its distinctive local institutions and characteristics, such as a strong local dialect, locally based networks, local labor markets, and local supply chains. Located in southeastern Zhejiang (see Figure 1), the municipality had a land area of 11,784 square kilometers (about 7,322 square miles) and a population of 7.46 million in 2004, including 1.37 million for the city (or urban district, prefecture level), 1.16 million in Yueqing, 1.13 million in Ruian, and 0.89 million in Yongjia (Wenzhou Statistical Bureau, WSB 2005), a geographic scale comparable to the Emilia-Romagna region of Italy (with a land area of 22,124 square kilometers, or about 13,747 square miles, and a population of 4.2 million in 2006) (see Figure 1).

Our years of experience with Wenzhou and Zhejiang, plus several recent rounds of fieldwork, are essential to understanding the dynamic region. This research was initiated in 1999 through fieldwork consisting of firm surveys and interviews in 2000 and 2001 in Ruian. With funding in place, from 2003 through 2005, we conducted surveys and personal interviews with local companies and governmental officials in Wenzhou City and its counties or cities of Yueqing, Ruian, and Yongjia, the core of Wenzhou and the prototypes of the Wenzhou model, with a focus on Yueqing. Together, we interviewed more than 30 local officials and 50 business owners or managers, mostly business owners, especially of small- and medium-sized firms. Only in some large firms were the interviewees vice general managers or directors who often own minority shares.

Also in 2003, we conducted a survey of firms in four leading towns in Yueqing--Liushi, North Baixiang, Yuecheng, and Hongqiao (see Figure 1)--which are among the 10 most developed towns in Wenzhou and among the 100 most developed towns in Zhejiang. The revenues and population of these towns accounted for 75 percent and 43 percent of the totals in the county, respectively (Wang 2003). The structured questionnaire asked for general information, characteristics of the labor force, relocation, network relations, development problems, and future development, with an emphasis on modes of relocation, investment areas, and locational choice. All the enterprises with outputs of more than 500,000 yuan in 2002 (US$1 was about 8.2 yuan at the time) in the four towns served as the sampling frame (there is no official list for smaller firms). Two hundred survey forms were personally delivered to the randomly selected enterprises and purposely selected large firms (50 for each town) and generated 110 returns (a return rate of 55 percent) and 94 effective returns (an effective return rate of 47 percent), with 30 of them accompanied or followed by in-depth interviews.

The Wenzhou Model and Its Challenges

A Classic MID

The orthodox Wenzhou model resembles the classical MID, a territorial agglomeration of small firms capitalizing on external economies of scale. Known for "petty commodities, large markets," it represents a successful development trajectory that is centered on small-scale, manufacturing-centered, family enterprises that are

characterized by market-oriented flexible production and endogenous development, with locally based distribution networks and grounded on years of local capitalism and thick local institutions. Shi, Jin, Zhao, and Luo (2002) viewed the Wenzhou model as a bottom-up process of the regional industrialization paradigm based on internal markets, internal resources, and traditional manufacturing. A. P. L. Liu (1992) used "three Ms"--mass initiativeness, mobility, and markets--to correspond to the three pillars of Wenzhou's economy--household industries, sales agents, and market towns.

Wenzhou is known historically for its port, commerce, out-migration, and specialized production, such as textiles and clothing, leather and shoes, and paper and printing. During the Maoist era, it struggled because of state policies that prohibited the development of private enterprises and state investment that avoided coastal locations; the self-reliance policy further reduced maritime trade and cut off the lifelines of this port city (Ye and Wei 2005). State investment was only one-seventh of similar cities, which made Wenzhou's economy less oriented to state-owned enterprises (SOEs), providing a convenient environment for marketization.

When the reform was initiated in 1978, there were 2,053 commune enterprises in Wenzhou, with an average of 4.23 enterprises per commune (Zhang 1994). By the mid-1980s, when China was still dominated by SOEs, family enterprises, many with fake red (TVE) hats or *guahu* forms ("hang-on households"),[2] had become the backbones of

[2] A practice allowing private enterprises to become associated with TVEs, paying a fee for

Wenzhou's economy. In 1985, these family enterprises had 300,000 employees and a 1-billion-yuan output, accounting for half of the rural industrial output. From 1983 to 1987, township enterprises mushroomed from 39,908 to 81,026 (WSB 2005). Wenzhou has been subject to a power struggle between reformers and conservatives, and numerous delegations from Beijing investigated the practice of capitalism. The rise of Wenzhou was first reported nationally in the central government's *People's Daily* in 1983, and *Liberation Daily*, another major official newspaper, coined the term Wenzhou model in 1985. Since the 1990s, Wenzhou has shifted from being a target of state suppression to a place of national admiration and emulation. From 1978 to 2004, the per capita gross domestic product (GDP) grew annually by 18.3 percent (WSB 2005), considerably higher than that of China (8.1 percent), making Wenzhou one of the richest regions in China. Enterprises, such as CHINT and Delixi in Liushi Town, have joined the list of the top 50 most competitive nonstate domestic brands, and Aokang of Yongjia was the only shoe manufacturer included on that list (Liu and Xu 2005). Moreover, three of the four shoe manufacturers on the list of the top 100 nonstate brands with the most competitive potential are located in Wenzhou. This miracle took place despite few local natural resources, low levels of technology, and a backward infrastructure (Forster 1998).

The essence of the Wenzhou model is a system of production that is centered on

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the use of their names, stationery, letters of introduction, bank account numbers, and receipt books, as well as taxes.

family enterprises and embedded in thick, historically rooted, local institutions. Small family businesses, rooted in entrepreneurship and rural markets, were the pioneers in transforming Wenzhou to a market economy. Wenzhou's port for access and limited land resources have cultivated the historical tradition of entrepreneurship and networks and connected Wenzhou to the outside world. Unlike those who practice Confucianism, people in Wenzhou emphasize pragmatism and financial achievements, as reflected by the Yongjia school of thought during the Song Dynasty (Zhao, Qian, and Wang 2005). Families typically form the main production units, relying on social networks and sales agents that are integrated into local markets for acquiring capital, raw materials, and information, as well as for flexible production and marketing. Although investment in fixed assets in China's rural enterprises came mainly from bank loans and internal accumulation (Peng 1994), capital in Wenzhou is often provided by extended families, social networks, and "underground" financial institutions (Tsai 2002). A 1993 survey found that 83 percent of the enterprises were family businesses (Hu, Fang, and Liu 2005, 56). Among the 131,950 industrial enterprises, only about 3,000 have annual sales of over 5 million yuan (Hong Kong Trade Development Council, HKTDC 2004). At the time of their establishment, 83 percent of our surveyed firms had investments of less than 1 million yuan, and 84 percent were established in the countryside (see Table 1). Even their products are similar to what Italian industrial districts typically make: footwear (20 percent of China's market value), clothing (10 percent), metal cigarette lighters (90 percent), spectacle frames (80 percent), razors (60 percent), locks (65 percent), plastic

products (56 percent), and package printing (20 percent) (HKTDC 2004).

The broad context is the transitional nature of reform in which Wenzhou enjoys institutional-gap advantages, being one step ahead in reforms. Shaped by local geographies and institutions, local states were sympathetic to the local tradition of capitalism; they were ambivalent toward Mao's leftist campaigns and were tolerant of semilegal or illegal practices during the reform (Y. L. Liu 1992)--practices that were essential to the survival of the underground economy. The local institutions of business creation and networks have led to the strong presence of business people who not only influence public policy, but are often governmental officers themselves. In the 1980s, newly assigned mayors, often at the beginning of their appointments, followed the government's orders closely and discouraged private enterprises. However, faced with local reality and influenced by local institutions, they eventually became protectors of capitalist activities, reflecting the transitional nature of local state institutions. They even accommodated the local push for marketization, although in the 1980s and 1990s, none of the mayors was promoted because of the struggle between socialism and capitalism (Zhang and Li 2001). Such place-based institutions and *guanxi* (relationship) networks are intensely interwoven, bound by trust and culture and maintained by mutual exchanges and power relations.

Regional Lock-ins and Challenges in the Late 1980s

The family-based Wenzhou model faced challenges in the late 1980s, however, and

has been undergoing restructuring. In the early 1980s, when SOEs and TVEs dominated the Chinese economy, Wenzhou's family enterprises enjoyed their niche in competition. With the deepening of reforms, family businesses faced new challenges and the potential for institutional lock-in. We identified three types of regional lock-ins--intergenerational, relational, and structural--that are somewhat different in conceptualization from Grabher's (1993) functional, cognitive, and political lock-ins.

First, Wenzhou's development is locked in a particular path that is centered on family-based, labor-intensive manufacturing and conceptualized as intergenerational lock-in. A similar example is Hudson's (2005) observation of a continuing legacy of recruitment into the "traditional" industries via sons following their fathers (as in North East England), categorized as cognitive lock-in. The problems of classical MIDs (Brusco 1992)--slowly adopting new technologies, lacking financial expertise, and having little know-how for basic research--are also apparent in Wenzhou. The management is family based, and when joined by the second generation, although better educated, some aspects of the Wenzhou spirit, such as entrepreneurship and hard work, have been lost. Shi (2004) conceptualized Wenzhou's problem as "intergenerational lock-in," referring to similar local knowledge, commercial and cultural backgrounds, transaction modes, market networks, and a sectoral focus on labor-intensive industries. The family enterprises with fake red hats, numbering 10,000 in the mid-1980s (Zhang and Li 2001, p. 23), caused serious problems with fuzzy property rights and income distribution. Family businesses facilitated the initial development by being one step ahead of the reforms, but their less

efficient production systems were challenged by MNEs. Intergenerational lock-in is only part of broad regional lock-ins because it emphasizes entrepreneurs/managers, not regions or institutions. Nevertheless, intergenerational lock-in captures an important element of the Wenzhou model.

Second, the thick institutions form a region with strong local networks and culture, preventing people outside Wenzhou from "melting in," thus creating the problem of relational lock-in. Such a form of institutional lock-in is broader than Grabher's (1993) notion of political lock-in. The Wenzhou dialect is one of the strongest in China and can hardly be understood by outsiders. Wenzhounese tend to network among themselves, and their strong sense of ownership facilitates the formation of small enterprises and business groups. The rigid local institutions form a web of interpersonal relations that are centered on kinship and place, with internal codes of conduct and business practices. Even supplier and marketing networks are based on trust, often delivered through telephone calls and without formal contracts in business transactions. The thick local institutions make it difficult for outsiders to embed themselves, a typical limitation of closed networks or redundant ties (Ettlinger 2003). Such strong local networks or place-specific relational assets (Storper 1997), coupled with the lack of R&D and foreign direct investment (FDI), are sources of potential regional lock-in.

Problems of quality and productivity also relate to restless local capitalism and the role of local institutions. The Wenzhounese are known for mercantilism and profit seeking and possess a keen business culture called the Wenzhou spirit. The tolerance of

local institutions and state governments to sustain the Wenzhou model and protect local economies and revenue bases provided the opportunity for inferior or fake production, making the "Made in Wenzhou" label synonymous with inferior products. Wenzhou shoes were once representative of low-quality products that were made by profit-driven heartless capitalists, which would last for only one week ("week shoes") or even one day ("dawn-evening shoes"). Hangzhou confiscated and burned thousands of these shoes in 1987, and in 1990 the State Council directed the cleaning up of unsafe low-voltage electrical products in Yueqing. Local officials often protect local interests and engage in business activities in various capacities, such as moonlighting and "power share." Their pro-business attitude builds upon local capitalism and close ties to state businesses, which, because of lagging political reforms, have also led to local protectionism and rent seeking.

Third, the thick local institutions have been slow to change, creating a potential problem of structural lock-in. External capital and talents can hardly find avenues to embed themselves in local institutions, making Wenzhou less attractive to FDI and educated workers. Because of China's hierarchical allocation of educational and research resources, Wenzhou as a prefectural-level city does not have national-level universities and research centers. The Wenzhounese tend to be business owners or "petty capitalists" (Smart and Smart 2005), while R&D is derived mainly from migrants and external R&D centers. The thick local institutions make it difficult for migrants to melt in, and the firms we interviewed complained about the high mobility of migrant workers. The problem of

local R&D is worsened by the weakness of FDI. Because of political systems that are based on local networks and protectionism, Wenzhou governments are bureaucratic, and strong state-firm networks make Wenzhou less attractive to FDI, a situation that is similar to political lock-in.

Moreover, geographic isolation and limited land have also contributed to the shortage of FDI and the relocation of firms. This spatially scattered distribution and the rural environment, which initially nurtured the Wenzhou model, now limits further development. Wenzhou was poorly connected to the Yangtze Delta and deemphasized by the state in the development of its infrastructure. The railroad was not in operation until 1998 and was funded mainly by nonstate capital, as was the Wenzhou airport. The freeway was built only in recent years, after even major interior cities. As enterprises grew and competition intensified, demands for technological upgrading, business services, and available land grew as well. Structural lock-in made these problems more serious and pushed some enterprises to relocate to places with advantages in resources and services. These problems resemble what Italian industrial districts faced, including rigid production methods and competition from large firms (Whitford 2001).

Restructuring the Wenzhou Model

The inherent problems of the Wenzhou model became serious in the late 1980s, and local business leaders and governments pushed for restructuring. The Wenzhou model and businesses experienced two rounds of institutional restructuring. The first round

focused on the shift from individual enterprises to shareholding cooperatives, and the second round was about quality and the emergence of MREs; both rounds have a spatial dimension.

Round 1: From the Late 1980s to the Mid-1990s

The first round of restructuring was centered on establishing shareholding cooperatives as a response to the need to clarify property rights and to improve scale economies. The focus was first on institutional change and then on the upgrading of production. In 1985, starting with 81 investing households who wanted a form of ownership other than private enterprises (which were prohibited, leaving them in danger of punishment for capitalism) and TVEs (owned collectively and represented by local states), a cooperative enterprise producing beer with a temporary license from the local government (the first in China) was started in Cangnan County. Such a form of ownership quickly spread through the rest of Wenzhou. This is a typical case of institutional innovation one step ahead of reform: initiated by local business people and then quietly accepted by the government, reflecting the passive, accommodating ways in which local states responded to challenges in the earlier years of reform when the boundary between socialism and capitalism was fuzzy.

Pushed by local businesses, the Wenzhou Municipal Government negotiated with the provincial and central governments to establish a Comprehensive Reform Experimental Zone in 1987. This zone focused on the reform of property rights and implemented in late

1987 the first local regulation in China that legalized cooperative enterprises, which became the blueprint for national regulation on shareholding cooperative enterprises in 1992. This regulation, followed by more local regulations during 1987 to 1992 to clarify this new, yet still vague, form of property rights, consequently transformed many family enterprises into cooperative enterprises and enabled them to expand. In 1992, there were 24,153 cooperative enterprises and companies, which accounted for 72.95 percent of township enterprises. These enterprises and companies produced 8.86 billion yuan in industrial output, or 48.4 percent and 82.8 percent of the total municipal and township's outputs, respectively. In 1993, there were more than 40,000 cooperative enterprises with an output of 19.2 billion yuan, accounting for 56.2 percent of the municipality's total (Li, Weng, and Zhu 2004).

More advanced equipment and production systems were also introduced; many, such as shoe and button production lines, were imported from Western countries. Ruian's Rongguang Group imported two modern production lines from Italy and Germany. The reform partly changed the family-based patriarchal management to integrated hierarchical management and shareholding corporation management. Moreover, "seeking markets" through local salespeople was gradually replaced by the development of specialized local markets serving local and outside buyers, numbering 248 in 1998, such as the Low-Voltage Electrical Products Market in Liushi Town, Yueqing, and the Far East Button Market in Qiaotou Town, Yongjia, which had 6,000 sales counters and annual sales of 150 million yuan in 1992 (Zhang 1994).

Round 2: From the Mid-1990s

The first round of restructuring made Wenzhou break away from the potential lock-in of family business and survive against new competition in the early 1990s. Wenzhou's firms had clearer property rights and became better organized, and local governments became more supportive of private enterprises. However, with the broadening of reforms, Wenzhou's advantages in the institutional gap have gradually been lost (Ma 2004). Wenzhou firms faced intense competition from foreign-invested enterprises with better equipment and higher-quality products, as well as private enterprises with improved competitiveness. Most of Wenzhou's enterprises, however, were still locked in the orthodox Wenzhou model, with problems of small size and low quality. Cooperative enterprises and groupings of small plants did not fundamentally change the firms' behaviors.

This round of restructuring mainly refers to the transformation from shareholding cooperatives to shareholding enterprises and limited liability corporations, as well as the emergence of MREs, or delocalized "regionless" groups or conglomerations. It has taken a "high road" strategy, based on efficiency, competitiveness, and innovation, with more active local states and integration with the global economy. There are four major types of strategic response: institutional change, technological upgrading, industrial diversification, and spatial restructuring. Since the mid-1990s, both businesses and local states have made intense efforts to enhance the quality of products. In 1994, the

government implemented "Regulations of Product Quality for the Reputation of Wenzhou," or the 358 Quality System Project, to guide improvement in quality and productivity. In the mid-1990s, some cooperative enterprises were changed to shareholding enterprises and limited liability corporations, and since then, efforts have been made to improve competitiveness through mergers, acquisitions, spatial expansion, and the development of conglomerations and MREs. In 2001, the mayor called for building "trust Wenzhou" with "trust government, trust business, and trust individuals," and in 2004 the city extended these efforts, from improving the quality of products to the building of brands.

A "New" Wenzhou Model?

The restructuring has transformed major enterprises, from individual to cooperative enterprises, to shareholding enterprises, and eventually to MREs with high-quality products. Moreover, industries have been upgraded, diversified, and expanded spatially. The orthodox Wenzhou model has been changed with new content, and called by some the "new" Wenzhou model. Yang (2000) viewed the "capitalism" in rural Wenzhou as the hybridization of different economic forms--indigenous, state socialist, and overseas capitalist elements. First, a group of large firms and MREs with brand-name products has emerged, and their management structure has become more corporationalized, or focused on clear property, clear rights and obligations, separation of government and enterprises and scientific management. By 1998, Wenzhou had established 182 enterprise groups,

and MREs had become the new symbols of "Made in Wenzhou." In 2000, there were 20,864 corporationalized enterprises in Wenzhou, and Yueqing registered 45 industrial conglomerations and 2,897 limited liability corporations (Li, Weng, and Zhu 2004). From 2000 to 2004, industrial output by enterprises that were larger than the designated size increased from 34.6 percent to 62.9 percent, and, more specifically, output by the shareholding enterprises that were larger than the designated size increased from 8.4 percent to 26.7 percent, while that by shareholding cooperatives declined from 40.4 percent to 9.1 percent (WSB 2005). We found a rapid increase in the size of companies in the past 10 years, with 15 percent and 14 percent of the surveyed firms achieving output and sales income of more than 100 million yuan, respectively (see Table 2).

Second, the production processes have been improved and expanded globally. Through the upgrading of equipment, the manufacturing process in large corporations has been changed somewhat from a labor-intensive process to mechanization, automation, and intelligent production. By 2000, more than 500 nonstate enterprises in Wenzhou passed the ISO9000 standard (Li, Weng, and Zhu 2004). Delixi has expanded its business into more than 40 countries, with an R&D center in Frankfurt serving as its technology base. Aokang established an R&D center in Italy for shoes, and Baoxiniao invited an Italian to serve as the chief designer. Restructuring improved the quality of products, with 29 products registered as Zhejiang Province Famous Brands and four at the national level (Li, Weng, and Zhu 2004).

Third, manufacturers have diversified from regional production to the governance of

national or global value chains, logistical processes, and other business services. The marketing approach has changed from external sales agents in the 1980s to place-based network marketing in the late 1980s and mid-1990s and then to a combination of flexible networking and competition among brands. Industrial groups have established multiscalar sales agencies and chain stores with brands as flagship products, including new marketing and service centers in coastal cities and even in developed countries. In 2004, the export of leather and shoes amounted to $1.46 billion and that of garments reached $702.8 million (WSB 2005). CHINT developed from a home workshop to a modern enterprise group with more than 50 holding companies, more than 800 specialized cooperative partners, and a sales network with more than 2,000 agents in China and 8 foreign branches, while Qiaotou, the button capital, now serves mainly as a production site and is no longer packed with sellers and buyers, as it was in the 1990s.

Last, many of Wenzhou's towns or townships, as basic units of industrial districts, engage in specialized production and have been officially named China's "shoe capital," "button capital," "zip capital," electrical product city," and the like, where many of the components and semiproducts can be purchased locally. Our surveyed towns are known for low-voltage electrical products (Liushi), electronic components (Hongqiao), and apparel industries (North Baixiang). The clusters of electrical products in Liushi and buttons in Qiaotou are popularized as accidental historical events, which, ignores their specific local contexts. These districts have been evolving over time, with the growth of leading firms, birth of new firms, and expansion of production networks. Local clustering

is accompanied by spatial expansion, relocation, and the growth of MREs. Spatial restructuring has also led to the formation of new clusters and districts in other cities, such as the Wenzhou Village in Beijing (Ma and Xiang 1998), a phenomenon known as "delocalized urbanization" (Hu 1997).

Spatial Restructuring: Processes and Forms of Relocation

Relocation is a major type of strategic response to regional lock-in and a major component of the restructuring of industrial districts in Italy and Germany (Schamp 2005; Hadjimichalis 2006). Similarly, spatial expansion is a major feature of the changing Wenzhou model to respond more effectively to changes and overcome constraints to development. First, our survey found that industrial land, provided mainly by development zones, was ranked as the most important factor in relocation by 37 firms (see Table 3). Wenzhou's land resources and space are limited: only 17 percent of Wenzhou's territory is plains, and per capita cultivable land is 0.32 mu, or 0.021 hectare (1 hectare = 15 mu) (WSB 2005). In 1999, Yueqing's enterprises requested land supplies of 3,500 mu, far above the official land-use quote of 1,553 mu. The price of industrial land with a well-developed infrastructure in suburban Shanghai's development zones was 80,000 yuan per mu, while in Yueqing, the price for land even without basic infrastructure was 150,000 yuan per mu (Wang 2003). Second, state policy was ranked highly in relocation and underlies the importance of land in relocation. Development zones in cities like Shanghai and Hangzhou have preferential polices to attract external

investment, as well as more transparent governments and professional services. The land problem is also intensified with transitional, often illegal, land markets, with illegal seizures and allocation by officials who exploit the current policy. Those without access to local resources have greater intentions to relocate, although some enterprises use relocation as a strategy to obtain preferential policies, a tactic used in Western countries and by MNEs as well. Third, most local enterprises started as family businesses that were located in isolated rural areas. As a county-level city, Yueqing lacks an R&D infrastructure and has difficulty retaining a high-quality labor force and developing R&D capacities. Last, the Wenzhounese are known for their keen business culture, and it is said that "where there are markets, there are the Wenzhounese."

Figure 2 is a framework for analyzing industrial relocation. Relocation enables Wenzhou firms to benefit from large cities' infrastructure and industrial agglomeration, and the improvement in management, technology, and information makes them more competitive. Our surveyed firms reported 183 instances of spatial expansion; 25 percent of them expanded at the original sites, and the rest relocated elsewhere. These data indicate that most enterprises were not satisfied with in-site restructuring, especially when they became larger and sought new opportunities. It is estimated that of the more than 1,000 enterprises with an certain name recognition that have relocated outside Wenzhou, 250 have relocated entire enterprises.

Relocation is a gradual process that started with in-site restructuring and the relocation of whole enterprises in the 1980s (see Table 4). The scale of relocation has

expanded from within the same county or city to other regions, often accompanied by industrial diversification. The relocation of entire enterprises and manufacturing facilities became the dominant mode in the 1990s, with 43 instances occurring (see Table 4). Since the late 1990s, the relocation of companies' headquarters and service functions, such as R&D and marketing, has intensified.

The relocation of the entire enterprise is the most radical and commonly observed expansion, often pushed by problems in rural locations and policy pulls in destinations. In the survey, 70 (50.7 percent) relocations were in this category (see Table 4). Through relocation, firms can obtain land at prices that are negotiated with local governments as a way to expand their production space and increase their asset value. The relocation often occurs in small- and medium-sized or highly specified enterprises, and 68.6 percent of the surveyed firms that experienced relocation had assets of less than 40 million yuan. Large enterprises seldom consider a complete relocation, given the rapid increase in sunk costs with the size of firms, local networks, and investment in equipment.

The relocation of manufacturing facilities is another common form of spatial expansion, and our survey found that 60 (43.5 percent) relocations were of manufacturing facilities (see Table 4), often determined by the need to expand or upgrade production. The majority of enterprises are small to medium sized and relocate near the suppliers, the market, or labor. Baolong Group opened a television factory in Nanchang's (Jiangxi Province) high-technology park and a cell phone painting factory in Huizhou (Guangdong Province) to provide close supplies to TCL and Bodao (see Figure 3).

Hexing Group, a producer of motorcycles, built a subsidy in Chongqing, a major center of the production of motorcycles.

Yueqing's R&D capacities are extremely limited, because of its lack of a four-year college. The firms relocated R&D facilities near research universities and institutions in metropolitan areas or science parks for such reasons as the spillover of knowledge, the exchange of information, and labor markets. Three surveyed firms, all large (two had assets of about 400 million yuan), indicated that their R&D departments relocated, mainly to Shanghai for its research centers, human resources, market accessibility, and so forth. Delixi moved its headquarters and R&D facilities to Shanghai, and CHINT relocated its R&D departments in Shanghai and the Silicon Valley (see Figure 4). Several other large enterprises we interviewed expressed such an intention.

The relocation of headquarters is not a common form of business practice and is better suited to large enterprises. We found that five enterprises relocated their headquarters, mainly those from within Yueqing: two with total assets in the 40 million to 390 million yuan range and one exceeding 400 million yuan. Since headquarters are corporate command centers, their relocation represents a major step in growth. Many enterprise groups want to relocate their headquarters to metropolitan areas, mainly Shanghai, an emerging globalizing city, and Hangzhou, the capital of Zhejiang, for better access and to coordinate the headquarters and subsidiaries or branches. Yueqing's Baolong and Delixi both relocated their headquarters to Hangzhou and Shanghai, respectively (see Figures 3 and 4). Local networks and institutional support make local

firms resist the relocation of headquarters, and even for those that do relocate, the facilities in Wenzhou remain key nodes of corporate command and control networks.

There are two ways of building new branches. First, the mother company splits existing departments to strengthen specialization and cooperation to maintain competitiveness. For example, CHINT created 13 subsidiary companies from its major departments. Second, the mother company builds new branches through acquisitions, which can cut production costs and increase market shares quickly. Through such efforts, Yueqing Huayi Group controls 11 subsidiary companies and expanded production from low-voltage electrical products to door products, automation, lamps, and real estate. Tianzheng Group was formed through the mergers and acquisitions of more than 50 local enterprises after 1995.

Locational Choice and the Destinations of Relocation

Locational choices reflect the dual destinations of globalizing cities and interior cities and differ from typical decentralization and suburbanization in Western countries (Mariotti 2005). Destinations can also be divided into two categories: relocation within and outside Zhejiang. Initially, spatial restructuring concentrated on expansion at the original sites, constrained by limited production capabilities and ties to local geopolitical relations. As the reform deepened in the mid-1990s, enterprises started the leapfrog mode of spatial expansion to grow more rapidly, and the relocation of firms across the province increased. In the survey, while 78 percent of the relocations occurred within Zhejiang, 70

percent of the firms chose to relocate within Yueqing, indicating that Yueqing, as the base and starting site with spatially clustered industries, remains attractive (see Table 5). We found that among the enterprises with interprovincial relocation, 48.4 percent had assets between 40 million and 390 million yuan, 35.5 percent had assets of less than 40 million yuan, and 16.1 percent had assets of more than 400 million yuan (see Table 6).

In the early 1990s, relocation outside Zhejiang concentrated on movements to coastal globalizing cities, mainly Shanghai and Hangzhou, and was mostly in R&D and manufacturing facilities, for their advantages in location and governmental policy, as well as the global-city functions of Shanghai and, to a lesser extent, Hangzhou, such as educational and research institutions, the labor force, information, and access to markets. Many of the large firms in Yueqing have established R&D departments, sales departments, and investment departments in Shanghai and Hangzhou, followed thereafter by locations in Beijing, Shenzhen, and Guangzhou. As a vice general manager of Ruian's Ruili Group said during an interview in 2004: "Ruian is incomparable with Shanghai's global metropolis advantages in science and technology, talents and information." Relocation fosters the growth of service functions in these cities, an essential process of the formation of global cities, as well as the marketization and globalization of their industrial structures.

Since the late 1990s, the scope of relocation has been expanded to interior cities owing to Western Development Policies that were announced in 1999 and cheaper land and labor resources. Interior expansion diversifies investment to the tertiary sector, such

as services, education, real estate, and transportation. In our survey, the enterprises that relocated beyond Yueqing, 79 percent indicated that they experienced relocations outside Zhejiang during the past decade. Among them, 71 percent of the enterprises had relocated to Shanghai, and 7.9 percent had relocated some of their facilities to western China. We found that some Yueqing firms established branches in the manufacturing sites of Haier, Changhong, and Kangjia to facilitate supplier networks. Huayi Group established joint ventures in Liuan (Anhui Province), Deyang (Sichuan), Xian (Shaanxi), and Taiyuan (Shanxi) (see Figure 4).

Diversification and relocation, two of the major types of restructuring, are intertwined. The relocation of entire enterprises was the most common practice in the 1980s as a choice for initial development and best suits small- and medium-sized enterprises. In the 1990s, competition among mature manufacturing escalated and new investment opportunities in services emerged. We found that large enterprises diversify their investments to profit from new opportunities and reduce the risks of overconcentration in manufacturing. Growth also provided enterprises with the capability for diversification and relocation. Starting with valve and heating products in 1984, Delixi currently produces a variety of products, including electrical cables and instruments, and its investments extend to real estate (the European City in Wenzhou), trade (an import-export cooperation in Wenzhou and a trade center in Hong Kong), finance (investment companies in Shanghai, Beijing, and Hangzhou), and services (a hotel in Xinjiang) (see Figure 4). Huayi extends from its production of high-voltage

electrical products to low-voltage electrical products, door equipment, automation equipment, lamps, and real estate.

Rongguang is a good example of how locational expansion or relocation and business diversification can fully utilize locational advantages and institutional opportunities. Our interviewees described it to us as driving with two wheels: improving the core business (shoe production) and diversifying into services. Our interview in June 2004 found that Rongguang had established a network of production and services, with shoe production as the core business in seven cities (see Figure 3): (1) Ruian's development zone: the headquarters and major production site, which was originally established in 1987 and currently consists of 150 mu; (2) Shangcai County, Henan Province: 200 mu, 6,000 workers, cheap land and labor, established through Ruian's traditional bee production in Henan; (3) suburban Kunming, capital of Yunnan: through the acquisition of a prison factory, discovered accidentally by an acquaintance; (4) Hefei, capital of Anhui: higher-quality labor owing to a local tradition in sewing, introduced by Wenzhou business people there; (5) Kunshan, Jiangsu: known for its easier access to Shanghai and the Yangtze Delta, consisting of 100 mu; (6) Shanghai's Minhang District: logistics and service center, consisting of 30 mu; and (7) Huhehaote (Hohhot), capital of Inner Mongolia: commercial real estate.

Representatives of Nanda Cable explained to us the company's location strategies and destination choices, which also shows the significance of institutional factors in relocation. Nanda has established production facilities in Shanghai and Beijing, as well as

Xuancheng (Anhui) for their markets (see Figure 3). Shanghai has the advantage of access to cable research institutes and high-quality technicians, as well as a strategic location and access to markets. Nanda has had many years of production relations with factories in Shanghai, and the acquired company provides both facilities and land for expansion. Its facilities in Shanghai produce products with higher levels of technology, mainly high-voltage cables. The Beijing facilities serve three institutional and strategic functions. First, the state is the regulator of cable products as well as a major customer; electrical networks are largely owned by the state or state-controlled companies. The establishment of Nanda was supported by the former Ministry of Electronics Industry, and the Beijing location provides access to information and regulation. Second, the Beijing location serves as a base to expand the market in north and northeast China, where state-owned cable factories have been struggling. Third, preparation for the Olympic Games has also provided opportunities.

Relocation involves the processes of both spatial diversification and clustering. While spatially diversifying to multiple locations, industries have also become more clustered locally. Clustering processes occur among interlinked enterprises and specialized markets that provide agglomeration effects for the survival of small firms and enhance regional innovation and competitiveness. In 2000, about 30 towns in Wenzhou had industrial clusters with outputs of over 1 billion yuan. Liushi is known for its low-voltage electrical products cluster led by CHINT and Delixi. Longgang, the largest peasant town in China, has a population of over 100,000 and a newly developed cluster in

printing. However, relocation also leads to the outflow of capital and makes it difficult for Wenzhou to attract high-quality labor and improve local R&D capacities. More than 100 billion yuan of local capital has been invested in the rest of Zhejiang and China since 1995. Because interfirm linkages in Wenzhou are strong, relocation often has a ripple effect on local economies; it impairs rural development and the making of Wenzhou into a globalizing industrial city.

Discussion: Whither the "New" Wenzhou Model?

Wenzhou has come a long way from the Wenzhou model of the 1980s, known for small family firms and flexible production; a group of large firms and MREs has emerged, with their networks extending nationally and globally. However, despite two rounds of restructuring, with rising production costs and increasing competition, profit margins have become thin. In 2002 and 2003, Wenzhou's growth rates in GDP, investment, and exports were lower than the provincial average, causing some to question whether Wenzhou is still competitive. The three types of regional lock-ins--relational, intergenerational, and structural-still challenge Wenzhou's development. First, despite restructuring, Wenzhou's enterprises remain largely under family control and dominated by small firms that tend to be low tech and to lack R&D capacities. In 2002, among Yueqing's 20,611 nonstate industrial enterprises, 20,055, or 97.3 percent, had outputs of less than 5 million yuan (Yueqing Statistical Bureau 2003). In 2004, among 147,115 enterprises in Wenzhou, only 377 were large- and medium-sized enterprises, and their

employees numbered 275,442, only 14.6 percent of the total (WSB 2005). Most enterprises we visited were controlled by families, and even in CHINT, 75 percent of the shares are controlled by family members. The general managers of Zhongrui and Zhongchi Financial Groups, the largest nonstate financial institutions in Wenzhou, resigned within three months of duty because of poor corporate governance (Hu, Fang, and Liu 2005). These problems prompted some shareholding cooperatives to return to family enterprises. However, others have argued that the fluctuation of growth in Wenzhou is normal (Zhang 2004) and that the key issue is not intergenerational lock-in, but the weakening of the "institutional gap" (Ma 2004).

Second, what Wenzhou needs urgently is to upgrade its technology and management skills. The thick local institutions make it difficult for migrants to melt in, and the firms we interviewed often complained about the high mobility of migrant workers. Some migrants complained to us that they had to work 10 to 12 hours a day, 6 days a week, and follow strict rules, with few opportunities for promotion, which prohibits melting in, clearly a dark side of the Wenzhou model. Even some educated Wenzhounese are tired of the local networking and gift culture and are reluctant to return. Moreover, FDI has been limited in Wenzhou. In 2004, FDI in Wenzhou was only $209 million, among the lowest in metropolitan Zhejiang and far behind Ningbo ($2.1 billion) and Hangzhou ($1.4 billion). The effectiveness of recent efforts to attract FDI is yet to be seen.

Third, the progress in improving administrative efficiency and transparency has been slow. Local newspapers exposed the city's bureaucracy, which angered even the mayor.

Some local officials retire early or simply quit to run their own businesses or work for private enterprises as senior managers or directors. Even vice Mayor Wu Minyi resigned in 2003 to become vice general manger of Hongqingting. Some officials help the businesses in various capacities, such as obtaining land, energy, quotes, bank loans, and state projects, and reducing taxes and administrative fees. With lagging political reforms, the fuzzy boundaries and pursuit of profit have led to "black-box" transactions (bureaucracy) and rent seeking (corruption), as evidenced by the tearing down of the tallest "corruptive building" in Zhejiang and the embezzling by a highly-ranked officer of 253 million yuan (about $31 million). Wenzhou launched an "efficiency revolution" in 2003 during which 400 local officials were fired, demoted, warned, or criticized publicly (R. S. Zhang 2004).

Last, the Wenzhou economy is very much a "cellular economy," with segregated local markets. The close social networks facilitate the formation and clustering of businesses, but make it difficult to break the thick local institutions and integrate Wenzhou into the globalizing economy. Semicore areas like Wenzhou are being marginalized in the global circulation of capital, information, and labor. Within Wenzhou, localities operate like cellular economies, with markets and resources protected by local networks, such as the conflict between Longgang and Aojiang representing different local state interests. State-induced regionalism and protectionism are common across China, exemplified by regional "resource wars." Wenzhou is also experiencing rising income and spatial inequalities.

Conclusion

The Wenzhou model is a system of production centered on family enterprises embedded with thick, historically rooted, local institutions and networks. The place-based institutions and networks are intensely interwoven, bounded by trust and culture and maintained by mutual exchanges and power relations. The Wenzhou model differs from the classical MIDs, with differences in geographic setting, historical legacy, institutional environment, and velocity of change. In a span of 20 years, Wenzhou experienced two major rounds of restructuring: from rural family enterprises to cooperative enterprises in the mid- and late 1980s and then to shareholding enterprises and limited liability companies in the early and mid-1990s, including the emergence of large firms and industrial groups. We have analyzed four major types of restructuring in response to potential regional lock-in: institutional change, technological upgrading, industrial diversification, and spatial restructuring. Institutional change is the focus, intertwined with technological upgrading. The Wenzhou experience proves that successful industrial districts are dynamic and have the ability to adapt to change. Similar to what Glaeser (2005) found in his study of Boston, the consistent growth of Wenzhou lies in its successful response to challenges.

The restructuring of the Wenzhou model is generally consistent with the findings on the restructuring of industrial districts in developed countries, such as Italy. The Wenzhou model, centered on small-scale family businesses in rural settings, has been restructured

toward modern corporations and delocalized groups with enhanced management, advanced production, diversified locations, and spatial clustering. The notion of orthodox MIDs no longer best conceptualizes the nature of Wenzhou, which is moving toward a mixed model with renewed institutional support, emerging large firms and industrial groups, and extended external networks. The Wenzhou experiences challenge the economic geography literature's overemphasis on small firms and local assets or institutions. To maintain competitiveness, firms in industrial districts have to "scale up" and simultaneously embed locally and integrate nationally and globally. The notion of the neo-MID may be a better conceptualization of current Wenzhou, given its emphasis on the synergy of local and global forces.

This article has analyzed the relocation process and locational choice of the enterprises and argued for the importance of the relocation of firms in restructuring. Our findings indicate that spatial expansion and relocation are essential components of the restructuring of the orthodox Wenzhou model. Relocation has been driven by changing institutional environments, intertwined with diversification and often pulled by preferential state policies. Such relocation started with nearby sites, such as from rural villages to townships, and gradually expanded in space and scope with dual destinations: coastal globalizing cities, to take advantage of their headquarter functions and R&D and services, and interior cities, with policy preferences and investment opportunities. The relocation has facilitated the development of new industrial clusters and districts, as well as the formation of emerging global cities like Shanghai and globalizing cities like

Hangzhou. Therefore, the process of forming global cities is also a process that is based on the relocation of external firms; it is not simply driven by foreign investment.

Despite the two rounds of restructuring, Wenzhou is facing new challenges that have been conceptualized as regional lock-ins--relational lock-in, intergenerational lock-in, and structural lock-in--that act as push factors underlying the relocation. The strong local institutions have provided an ideal environment for the creation and development of the Wenzhou model. Local states are transitional; their roles in regional development change with changing institutional environments, and they are becoming increasingly involved in the development process. The thick institutions, however, are also sources of regional lock-in. Wenzhou is at the crossroads of another round of restructuring to overcome regional lock-ins and geographic constraints, which will improve the institutional environment for investment and innovation. Its internal dynamics and capabilities may help Wenzhou to overcome the current challenges.

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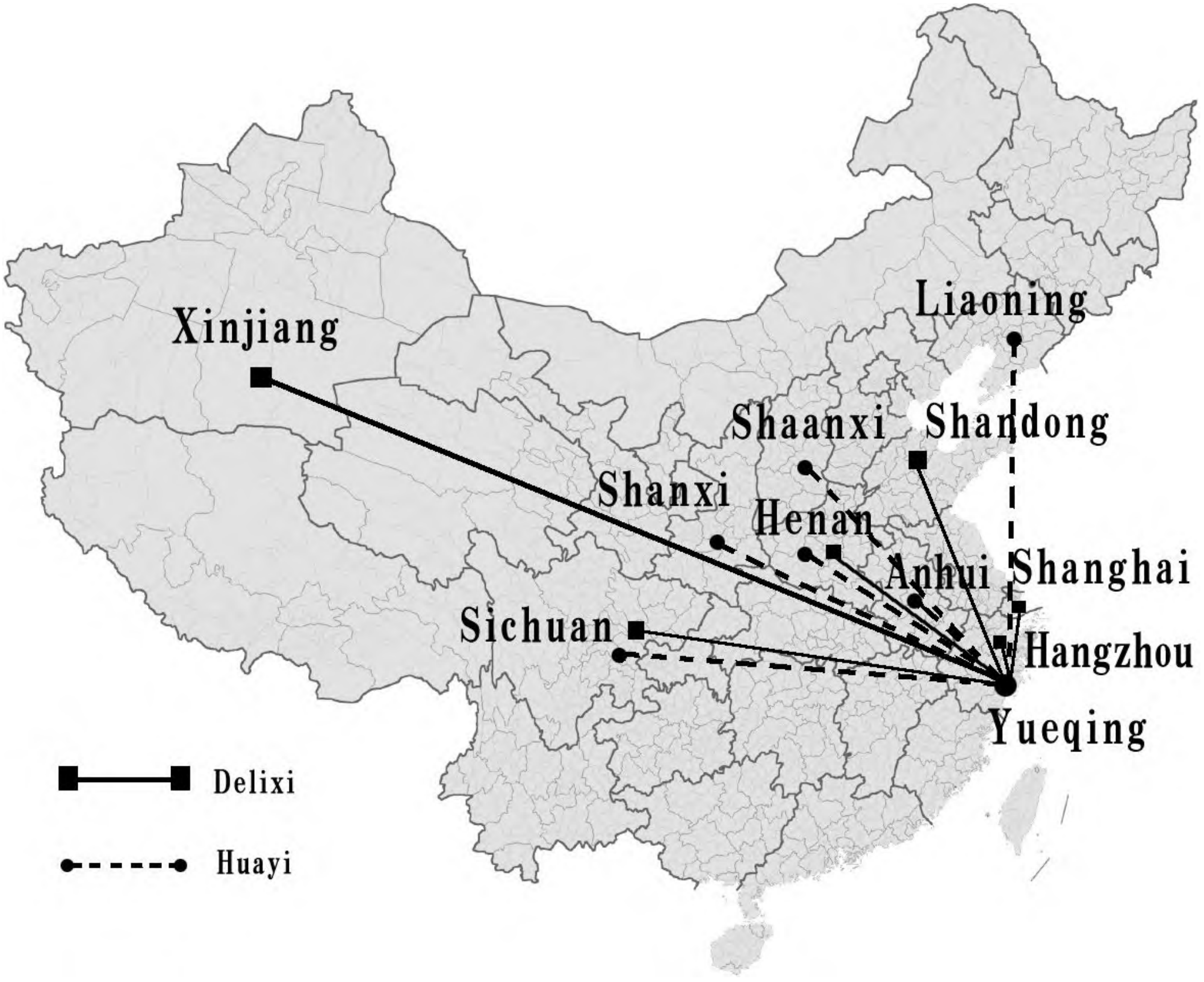
N
Northeast
HuZhou
JiaXin
HangZhou
ZhouShan
ShaoXin
NingBo
JinHua
QuZhou
TaiZhou
LiShui
YueQing
WenZhou
Rui'AN
Southwest
Central Cities
China
Zhejiang
YueQing
Hongqiao
Yuecheng
Liushi
North Baixiang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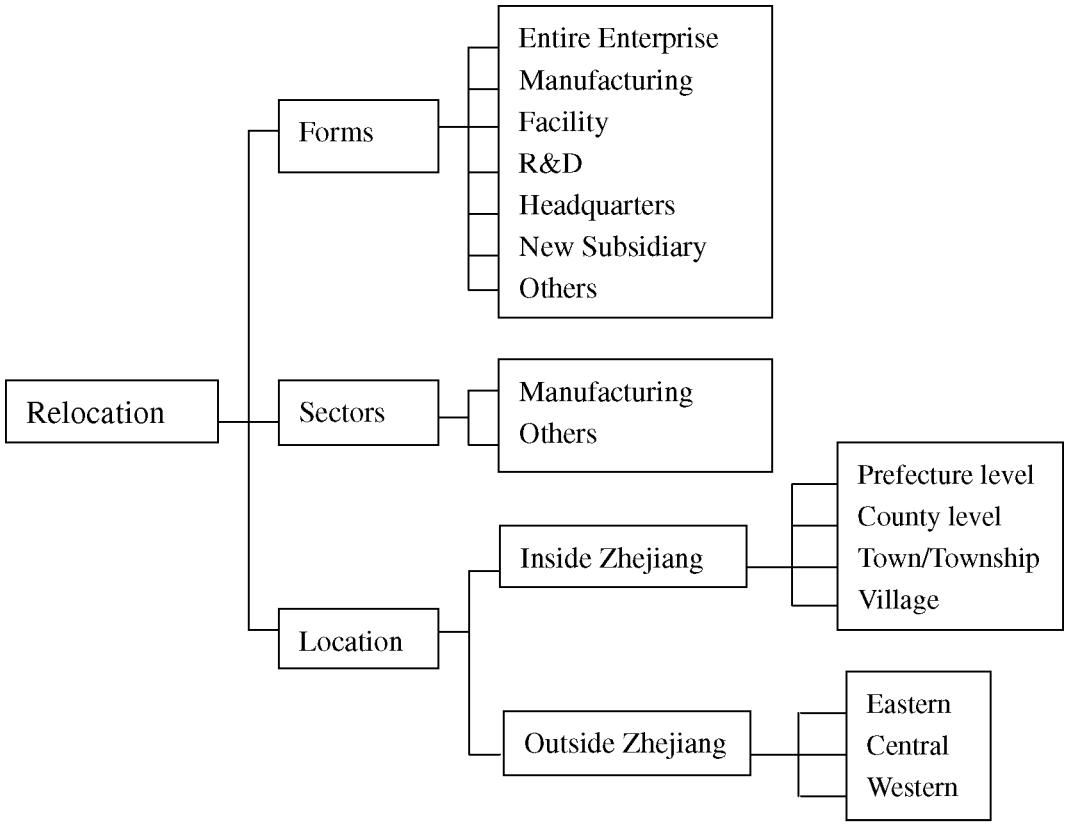
Relocation
Forms
Entire Enterprise
Manufacturing
Facility
R&D
Headquarters
New Subsidiary
Others
Sectors
Manufacturing
Others
Location
Inside Zhejiang
Prefecture level
County level
Town/Township
Village
Outside Zhejiang
Eastern
Central
Western

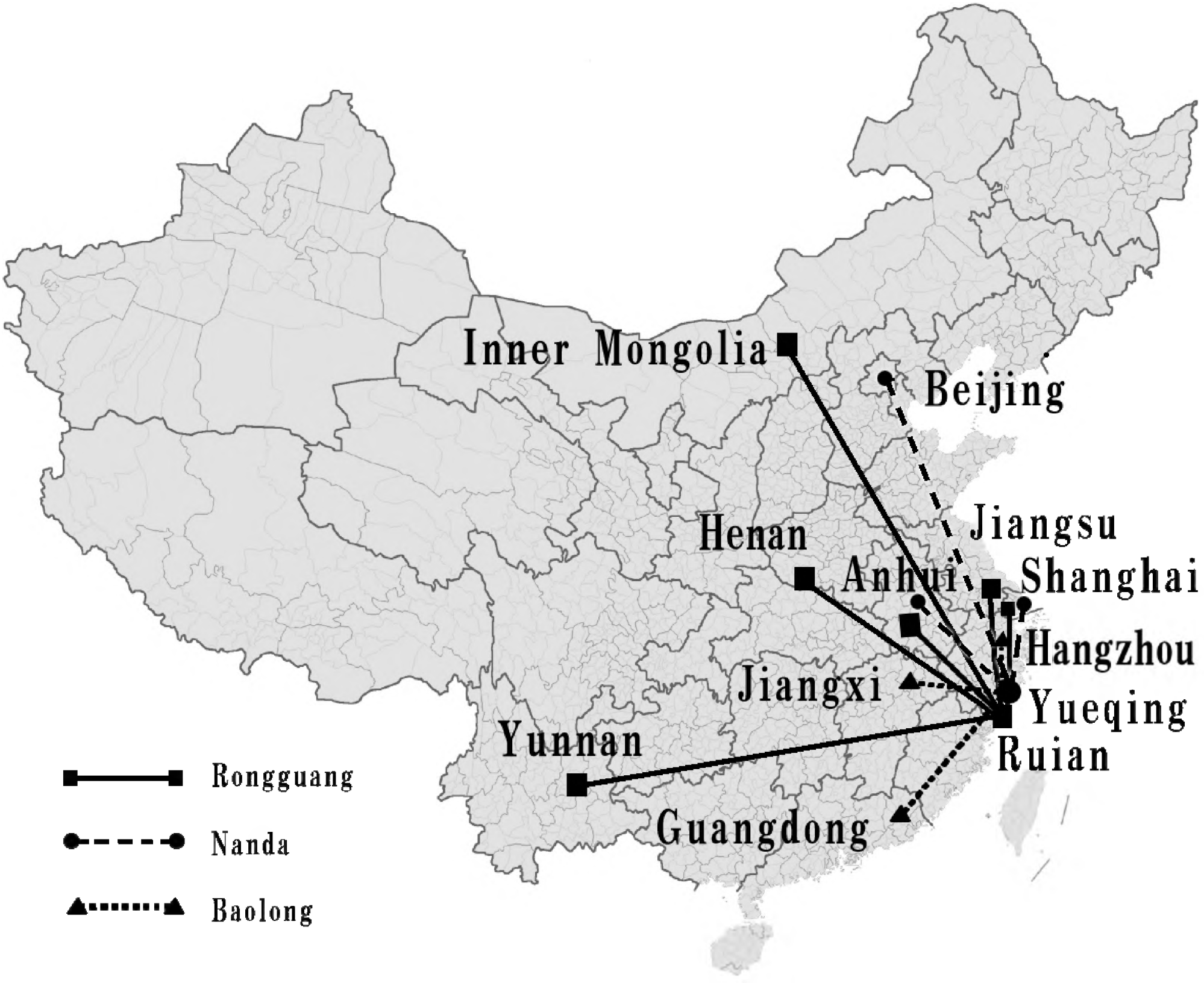
Inner Mongolia
Beijing
Henan
Jiangsu
Anhui
Shanghai
Hangzhou
Jiangxi
Yueqing
Yunnan
Ruian
Guangdong
Rongguang
Nanda
Baolong

Table 1

Profiles of the Surveyed Firms at the Time of Establishment

Items	Number of Enterprises	Shares (Percentage)
Year Decade established		
1980s	41	43
1990s	51	54
2000s	3	3
Investment at time of	55	58
establishment (in million	24	25
yuan)	16	17
< 0.5	15	16
0.5-1.0	77	81
>1.0		
Site of establishment		
County seat	3	3
Township		
Rural village		

Table 2

Profile of Surveyed Firms, 2002

Items (in Million Yuan)	Number of Enterprises	Proportion (Percentage)
Output value		
< 0.5	28	29
0.5-100	53	56
> 100	14	15
Sales income		
< 5	28	29
5-100	54	57
> 100	13	14
Asset value		
< 40	67	71
40-400	21	22
> 400	7	7
Manufacturing sectors		
Electrical equipment and instruments	25	26
Electronics	25	26
Machinery	33	35
Others	12	13

Table 3

Important Factors Influencing Industrial Relocation in Yueqing

Influencing Factors	Most Important	Relatively Important	Important	Somewhat Important
Industrial land	37	17	9	0
Preferential policy	21	15	4	9
Business environment	13	11	5	6
Market information	18	15	9	7
Science, technology, and education	7	7	3	5
Labor force	7	9	16	2
Infrastructure	4	10	11	12
Financial institutions	3	5	7	3
Living environment	5	12	11	7

Table 4

Temporal Trends of Spatial Expansion in Yueqing

Time	In-Site Expansion	Relocation Expansion			
		Entire Enterprise	Manufacturing Facility	R&D	Headquarters
1980s	5	6	-	-	-
1990s	20	43	26	2	3
2000<<nut>>2003	20	21	34	1	2
Total	45	70	60	3	5

Table 5

The Size of Firms and Interprovincial Relocation

Total Assets (in Million Yuan)	< 40	40-390	$\geqslant$ 400
Times	11	15	5
Share (percentage)	35.5	48.4	16.1

Table 6
Forms and Destinations of Relocation

Time, Form/Destination	Town/ Township	County Seat	Wenzhou	Hangzhou	Shanghai	Beijing	Coastal	Interior
Total								
Entire enterprise	68	2	—	—	—	—	—	—
Manufacturing facility	37	2	4	9	20	2	10	3
R&D	1	—	—	—	2	—	—	—
Headquarters	5	—	—	—	—	—	—	—
1980s								
Entire enterprise	6	—	—	—	—	—	—	—
Manufacturing facility	—	—	—	—	—	—	—	—
R&D	—	—	—	—	—	—	—	—
Headquarters	—	—	—	—	—	—	—	—
1990s								
Entire enterprise	42	1	—	—	—	—	—	—
Manufacturing facility	21	—	—	4	8	—	4	—
R&D	1	—	—	—	1	—	—	—
Headquarters	3	—	—	—	—	—	—	—
2000<<nut>>03								
Entire enterprise	20	1	—	—	—	—	—	—
Manufacturing facility	16	2	4	5	12	2	6	3
R&D	—	—	—	—	1	—	—	—
Headquarters	2	—	—	—	—	—	—	—

Note: In relocating manufacturing facilities, each time of relocation may involve multiple destinations, which is the reason why the total number of relocation destinations is larger than the times of relocation (see Table 2).