China's Shoe Manufacturing and the Wenzhou Model: Perspectives on the World's Leading Producer and Exporter of Footwear

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Abstract: A U.S.-based geographer and specialist on China advances his research on industrial districts and regional development by presenting a 2008 study of shoe manufacturing in Wenzhou (a major center in the world's largest footwear producing and exporting country). More specifically, the author examines how the model of economic development pioneered in Wenzhou (the Wenzhou model) has been transformed in an effort to meet the challenges posed by the global economy. He argues that the scaling up of Wenzhou's footwear industry, through the expansion of sales networks and factories across China and abroad, indicates that other adaptable city regions can overcome similar obstacles. The author challenges both the New Regionalism literature focused on local institutions and assets, as well as perspectives that overemphasize the benefits of globalization and global production networks. *Journal of Economic Literature*, Classification Numbers: O100, O140, O180. 2 figures, 3 tables, 60 references. Key words: China, footwear production, footwear exports, globalization, global financial crisis, global production network, industrial district, regional development, Wenzhou Model.

INTRODUCTION

The global map of industrial production is in a state of nearly unprecedented flux, reflecting China's spectacular rise and success in becoming a dominant player in the world economic arena. Although still identified with communist ideology, the country's most dramatic growth in output has occurred in exportable consumer goods such as clothing and footwear. Exports from China have flooded global markets, so that the country has by now earned the well-deserved reputation as the "world's factory." In 2008, its GDP became the world's third-largest, surpassing that of Germany and challenging the leading position of the United States.[2]

How has China achieved its remarkable rise in production, and what roles have its industries and regions played in the process? The country's footwear industry represents a clear

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[2]And, after the first seven months of 2009, China has surpassed Germany (at least temporarily) to become the world's leading exporter (see Barboza, 2009).

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example of China's rise in manufacturing, and thus provides some revealing answers to that question. The limited Western literature posits that China's footwear factories are concentrated in the export-oriented Pearl River Delta (PRD), where growth is driven by foreign investment and external production under a blueprint for development popularly known as the PRD model (e.g., see Scott, 2006). But while this picture reflects the situation in the early 1990s, it needs to be updated, if for no other reason that several major centers of footwear production including Quanzhou (Fujian Province), Chengdu (Sichuan), and Chongqing and Wenzhou (Zhejiang) also have by now been established in China.

This paper attempts to expand our knowledge of industrial and regional development by presenting a study of footwear industry in the Wenzhou Municipality, which could be called China's "capital of local capitalism." The municipality is known for the Wenzhou model of industrial districts and regional development, based on bottom-up development of family-owned small business enterprises embedded in dense local institutions.[3] Wenzhou's districts resemble those of the Marshallian industrial districts (MIDs) more frequently studied and cited in the literature (see A. P. L. Liu, 1992; Y. L. Liu, 1992; Parris, 1993; Ma and Cui, 2002; Sonobe et al., 2004; Ye and Wei, 2005; Walcott, 2007; Wei et al., 2007; Huang et al., 2008). The resemblance, however, tends to fade since the late 1980s, after Wenzhou's family enterprises have undergone two major rounds of institutional change and faced several strategic choices, in conjunction with the emergence of multiregional enterprises (MREs).

In this paper, I will attempt to interpret the development and restructuring of Wenzhou's footwear industry in an effort to provide a clearer picture in the context of China's regional development models (e.g., PRD, Sunan, and Wenzhou). In so doing, I challenge both the New Regionalism literature that focuses on small firms and local assets, as well as perspectives that place undue emphasis on integration with global networks and exogenous factors of development. I will argue that neither approach provides adequate explanations of regional development in China.

OBSERVATIONS ON INDUSTRIAL DISTRICTS AND REGIONAL DEVELOPMENT

The orthodox literature on industrial districts and regional development emphasizes local assets and endogenous capacities. The districts are characterized by flexible specialization and agglomeration economies, featuring a combination of clustered small firms, dense local networks, as well as local innovation and learning (Piore and Sabel, 1984; Scott, 1988; Schmitz, 1995b; Staber, 2001). Recently, that literature has been questioned and even criticized for its narrow focus on local institutions and networks as well as its failure to take into account the effects of globalization and role of large firms (Coe, 2001; Whitford 2001; Hadjimichalis 2006; Wei et al., 2007). The classical MIDs, symbols of successful small-scale flexible capitalism, also have been challenged by globalization and emerging competition.[4]

A so-called "high-road" strategy centered on globalization and innovation is considered central to the restructuring and upgrading of industrial districts in developed countries,

[3]As such the Wenzhou model may be contrasted with the aforementioned PRD model, which relies heavily on FDI and external production inputs.

[4]The main weakness of MIDs is slow adaptation to new technologies and lack of financial expertise and know-how for basic research (Amin and Thrift, 1992; Brusco, 1992; Glasmeier, 1994).

encompassing four broadly defined strategic responses, namely diversification, relocation, innovation and technological upgrading, and vertical integration with global production networks (e.g., see also Eraydin, 2001; Martin and Sunley, 2006).[5]

After having eroded the dominance of developed-country footwear manufacturers during the 1970s and early 1980s, the footwear industries in the newly industrializing countries of Asia (NICs), particularly those of South Korea and Taiwan, have seen their market shares in virtual free fall since the late 1980s (Hsing, 1999; Lowder 1999).[6] As a result, Korean producers embarked on a variety of restructuring strategies, involving automation; relocation overseas or to suburban areas; product diversification; self-initiated reform (e.g., innovative measures in technology, management and marketing); reduction of labor force (e.g., by attrition); exit from the industry; or abandonment of own-brand manufacturing (Lim, 1994). Taiwanese shoe manufacturers largely relocated their production to China, especially to the PRD (Hsing, 1999).

Two strategic choices have greatly facilitated the emergence and rise of developing countries on the arena of global production. The "high-road" strategy noted above which is promoted by the GVC/GCC/GPN perspectives,[7] and the "low road," concentrating on the production and export of inexpensive products based on cheap labor and raw materials, of which the labor-intensive footwear industry is a prime example (Lowder, 1999). The "low-road" strategy receives the most attention in Western characterizations of the spectacular rise of China and other developing countries, and is congruent with the concepts of New Regionalism,[8] which emphasizes the benefits of reducing production costs and increasing efficiency (Schmitz, 1995a).

The GPN perspective, which envisages a cross-border production organization encompassing all sectors and interactions of the value chain (i.e., R&D, product design, manufacturing, distribution, and services), argues that developing countries should improve their positions in the global economy through strategic coupling with leading transnational corporations (TNCs) and thus follow the example of the East Asian NICs (Coe et al., 2004; Yeung, 2005). It views regional development as a trans-local, dynamic process of growth and change, where multiple actors operate at a variety of geographical scales, and attempts to turn away from the focus on endogenous regional assets to pay due attention to the complex

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[5]Hadjimichalis (2006) highlighted three interrelated processes in the restructuring of Italian industrial districts: (a) mergers and acquisitions and formation of large, vertically integrated firms and groups; (b) de-localization of production to low-cost regions and countries; and (c) replacement of Italian craft workers by non-EU immigrants. Schamp (2005) identified two dominant strategic responses to industrial decline in Germany's Permasens district: firms in the footwear industry either stayed in the industry but left the region or stayed in the region but left the industry. Moreover, the German district coped poorly with competition from Italy, China, and Vietnam (Schamp, 2008).

[6]The causes, at least in the Korean context (Pusan district), included currency appreciation, falling demand, wage increases, a tight labor market, and unfavorable economies of scale (Lim, 1994).

[7]The GCC is a network-based, organizational approach to studying and analyzing the dynamics of global industries, with a focus on a full set of firms and relationships in the production and distribution of a particular good or service. The goal is to understand where, how, and by whom value is created and distributed along a commodity chain (Bair, 2005). It devotes special attention to the governance structure (especially of lead firms or drivers in an industry) and argues that development requires integration with producer- and buyer-driven commodity chains. The GVC approach, which emphasizes sector-specific governance, overlaps with and builds on GCC (ibid.; Gereffi et al., 2005).

[8]The New Regionalism literature on industrial clusters/districts emphasizes the role of inter-firm cooperation and local institutions in upgrading opportunities, whereas the GVC/GCC literature focuses on the role of global buyers and chain governance (Humphrey and Schmitz, 2002).

external relationship between globalization and regional change. From that particular perspective (as well as from that of some other sources favoring greater integration within global production networks), the New Regionalism's emphasis on local clustering and endogenous forces can be criticized for ignoring the impacts of globalization and large firms, the role of political and ethnic factors, and the dynamics of regional development.

The dominant literature also has been criticized for finessing the variety of models and trajectories of industrial districts and regional development that have been studied and proffered by groups of investigators, as well as for statism and Eurocentrism. Moreover, the "low-road" strategy and the East Asian globalization model noted above are only two of the many options that developing countries can pursue.[9]

The broad processes that have shaped the commonly cited models of China's regional development have changed, especially after the country launched its radical reforms. The PRD model, for example, has been characterized by rapid industrialization and urbanization driven by inflows of manufacturing investments from Hong Kong and Taiwan. Yet such investments have been reshaped by the distinctive interactions of multinational enterprises with host regions, resulting in divergent modes of capitalism as well as of industrial development (Yang, 2007).[10]

For a country with a large domestic market such as China's, "going national" (and not solely global) is an important strategy for firm growth. The country's domestic footwear market is the largest in the world, and capturing it has strategic significance for Chinese shoe makers. Yet the existing GVC/GCC/GPN literature tends to neglect this dimension in developing countries with a powerful state and large domestic market.[11] I argue here that "going national" is often intertwined with "going global," and that the pathway followed is largely based on a firm's strategy and its regional context. Moreover, the process of going national, a key prerequisite for "scaling-up regional development," is often accompanied by diversification and relocation. While the TNCs expand globally, leading firms in China are going through a similar process of spatial expansion, albeit mainly expanding to other regions of China.

I also argue in this paper that both the "low road" and "high road" are being followed by firms in order to improve competiveness and move up the production chain. Although the "low road" is the starting point for many firms in developing countries, it is not the only strategy. In addition to cheap labor, local institutional support and industrial clustering also are important to regional development. I posit that New Regionalism's emphasis on local institutions and assets is complementary with the GPN perspective, which advocates globalization of regional development. More specifically, without the reform of local institutions and the development of local assets, regions would not possess the means to globalize regional development. Conversely, without reaching out, firms would lack the information

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[9]The "low-road" strategy tends to exaggerate the importance of labor costs in production and discounts the role of institutions and markets, whereas the GVC/GCC/GPN perspectives overemphasize the role of global forces in regional development.

[10]Similarly, the conditions underpinning the Sunan model—which attributes the development of Sunan to local state–directed township and village enterprises (TVEs), local state corporatism, and development with urbanization from below (Ma and Fan, 1994; Oi, 1999)—have changed. The TVEs have lost competitiveness and the region has moved "beyond the Sunan model" by "going global," i.e., attracting global capital to the cities of Suzhou (Pereira, 2003) and Kunshan (Wei, 2004; Chien, 2007; Wei et al., 2009).

[11]Moreover, strategic coupling with large multinational firms (important in East Asian NICs because their domestic markets are small) is rare in many developing countries due to the lack of endogenous firms able to serve as suitable partners (Wei et al., 2009).

and networks required for the upgrading and modernization of production. Thus, global forces and local assets can be matched and integrated in many different ways. Indeed, development is a multi-scalar process that integrates global forces, nation states, and local contexts, which form the essence of China's emphasis on decentralization, marketization, and globalization. Accordingly, I am arguing here in favor of a middle-ground approach or third pathway to regional development, one that moves beyond the divide between the New Regionalism and GVC/GCC/GPN perspectives.

THE GLOBAL FOOTWEAR INDUSTRY

Before setting the stage for Wenzhou, I should like to briefly review the global footwear industry and China's position as the world's largest manufacturer and exporter of that industry's products. The most dramatic shifts in global manufacturing are primarily shaped by dispersion of production and integration of global production networks. Manufacturing in developed countries has been deeply affected by this phenomenon, especially in such traditional sectors as textiles and clothing, leather goods, and footwear (Amighini and Rabellotti, 2006). The footwear industry is labor intensive and has a relatively low barrier to entry, which results in its perpetual restructuring. Mechanization and standardization of the production process have reduced the obstacles for developing countries to enter the industry and engage in mass production of shoes. Improvements in transportation and communication and the global integration of markets also have made production outside the country of origin quite profitable. Thus, the developed countries have outsourced and dispersed low-end production to developing countries, while attempting to maintain their competitiveness in the high-end markets by improving quality and moving up the global value chain at home (Lowder, 1999).[12] Still, developed-country manufacturers' market share in the footwear industry has been eroding over the years, as evidenced by the relatively declining shares of imports from such leading producers as Italy, Spain, and Germany, and the rise from developing countries (Table 1).[13] The dominance of large fashion groups and increasing concentration of distribution facilities also are responsible for change in the organizational structure of footwear industrial districts in the developed countries; these trends tend to reduce the range of key activities such as design, branding, marketing, and sales, that are carried out within these districts (ibid.). Thus, a new global division of labor is emerging: high quality shoes continue to be produced in developed countries (especially in Italy) while low-end shoes have decisively moved to developing countries (especially China and Vietnam).

Among the first competitors to erode the leading role of developed European countries in shoe production were the Asian NICs of Taiwan, South Korea, Thailand, and Indonesia, as well as Brazil. The NICs, in turn, have been eclipsed as leading footwear producers by China and Vietnam.[14] For example, although South Korea's exports by value ranked second in the

[12]Developed countries have attempted to upgrade their production and improve efficiency by focusing on fashion and design innovation, improvements in quality and customization, as well as diversification (Amighini and Rabellotti, 2006; Schamp, 2008). Summarizing the evolution of the Pirmasens shoe district in Germany (a textbook-case industrial district), Schamp (2005) concluded that product upgrading and differentiation and/or relocation became "must" strategies for firms attempting to survive once markets became saturated.

[13]This has contributed to protectionist measures in the home markets of some producing countries, as reflected in the European Commission's proposal (prompted by the global economic recession) to extend anti-dumping duties on Chinese and Vietnamese shoe imports (Barboza, 2009).

[14]In no small measure this reflects outsourcing of NIC production to footwear factories in China, where the quality and scale economies have improved very rapidly (Lim, 1994; Hsing, 1999).

Table 1. Major Footwear-Exporting Countries, 1980–2008

Country	1980		1990		2000		2007		2008
	Bill. \$US[a]	Percent[b]	Bill. \$US[a]	Percent[b]	Bill. \$US[a]	Percent[b]	Bill. \$US[a]	Percent[b]	Bill. \$US[a]
China[c]	0.17	1.8	3.84	16.4	15.60	36.8	31.27	38.5	35.63
Italy[d]	3.62	38.0	6.58	28.0	6.20	14.6	10.51	12.9	11.19
Vietnam	–	–	–	–	2.42	5.7	4.26	5.2	4.77
Germany[e]	0.42	4.4	0.97	4.1	1.11	2.6	3.27	4.0	3.91
Belgium	–	–	–	–	1.37	3.2	3.40	4.2	3.70
Spain	0.56	5.9	1.44	6.1	1.80	4.2	2.63	3.2	2.51
Brazil	0.39	4.1	1.17	5.0	1.56	3.7	2.04	2.5	2.02
Portugal	–	–	1.20	5.1	1.40	3.3	1.76	2.2	1.86
South Korea	0.88	9.2	4.16	17.7	–	–	–	–	0.48
Other[f]	3.49	36.6	4.12	17.5	10.93	25.8	22.08	27.2	n.a.
World	9.53	100.0	23.48	100.0	42.39	100.0	81.22	100.0	n.a.

[a]In current dollars.
[b]Of world's total; totals may not sum to 100 due to rounding errors.
[c]Includes Hong Kong and Hong Kong SAR.
[d]Includes San Marino in 2000.
[e]Federal Republic of Germany in 1980 and 1990.
[f]Residual category; world total minus sum of countries listed in Table 1.
Sources: Compiled and calculated by the author from United Nations, 1981, p. 226; 1992 (Vol. I), p. 178; 2001, p. 424; Sattar Khan, 2009; Spain, 2009; UN Comtrade, 2009.

world as recently as 1990 (Table 1), its share has plummeted since that time. Similarly, Taiwan was the second-largest source of footwear imports by the United States in 1990 (16.1 percent, as measured by value), but by 2008 its share had dropped to 1.1 percent (AAFA, 2006; USITC, 2009; Table 2).

Accompanying the decline in the NIC's market share has been the remarkable rise of China in footwear exports, to become not only the largest footwear producer but also exporter in the world (Table 3). The value of China's footwear exports has remarkably increased from US\$413.1 million in 1985 to \$13.7 billion in 1995 and \$35.6 billion in 2008 (Table 3). Over the same period the country's share of world exports has skyrocketed from 3.7 to 38.5 percent (including Hong Kong) in 2007 (Table 3).[15] China's dominance in the U.S. market is equally impressive, with the country's share of total U.S. imports increasing from 17 percent in 1990 to >74 percent in 2008 (Table 2).

The rise of China in the global footwear industry is intertwined with the emergence of major footwear-producing regions in the country, particularly the PRD, Quanzhou, Chengdu, Chongqing, and Wenzhou. Initially, because of its head start in launching reform and establishing special economic zones (e.g., see Yeung et al., 2009), the PRD was China's largest

[15]China's percentage of the world total in 2008 cannot yet be calculated as not all producing countries have yet reported their output.

Table 2. U.S. Imports of Footwear by Country of Origin, 1990–2008

Import source	1990		1995		2000		2007		2008	
	$ mill.	Percent	$ mill.	Percent	$ mill.	Percent	$ mill.	Percent	$ mill.	Percent
China[a]	1,555	17.0	5,832	50.3	9,165	63.2	13,611	71.9	14,543	74.4
Vietnam	0	0.0	3	0.0	124	0.9	970	5.1	1,213	6.2
Brazil	1,006	11.0	1,115	9.6	1,147	7.9	755	4.0	513	2.6
Indonesia	239	2.6	956	8.2	731	5.0	369	2.0	404	2.1
Italy	964	10.6	1,003	8.7	1,251	8.6	1,192	6.3	1,128	5.8
Thailand	270	3.0	389	3.4	329	2.3	244	1.3	243	1.2
Mexico	114	1.3	170	1.5	283	2.0	200	1.1	255	1.3
India	41	0.4	85	0.7	109	0.8	162	0.9	193	1.0
Taiwan	1,472	16.1	329	2.8	86	0.6	106	0.6	218	1.1
Other	3,459	37.9	1,711	14.8	1,284	8.8	1,317	7.0	835	4.3
Total[b]	9,120	100.0	11,593	100.0	14,509	100.0	18,926	100.0	19,545	100.0

[a]Includes Hong Kong SAR.
[b]Total percentages may not sum to 100 due to rounding errors.
Source: Compiled by author from AAFA, 2006–2008 and USITC, 2009.

Table 3. China's Share of World's Footwear Exports, 1985–2008 (bill. $U.S.)[a]

Year	China	World	China as percent of world
1985	0.41	11.29	3.7
1987	0.82	16.10	5.1
1989	2.25	19.00	11.9
1991	5.98	28.41	21.0
1993	10.82	33.39	32.4
1995	13.67	40.41	33.8
1997	16.15	44.22	36.5
1999	14.18	40.16	35.3
2001	16.00	46.92	34.1
2003	18.70	53.94	34.7
2005	25.20	65.85	38.3
2007	31.27	81.22	38.5
2008	35.63	n.a.	n.a.

[a]In current dollars. Data for China include Hong Kong.
Sources: United Nations, 1987, p. 248; 1990, p. 176; 1991, p. 173; 1992 (Vol. I), p. 178; 1996, p. 215; 2001, p. 424; 2006, p. 474; 2008, p. 475; UN Comtrade, 2009.

shoe-producing region (especially in Guangzhou and Dongguan) where foreign firms dominated production while the domestic manufacturers attempted to catch up. The region is known for fashionable ladies shoes, with higher value-added. Quanzhou is another externally oriented center of footwear manufacturing, mainly producing athletic and casual shoes.

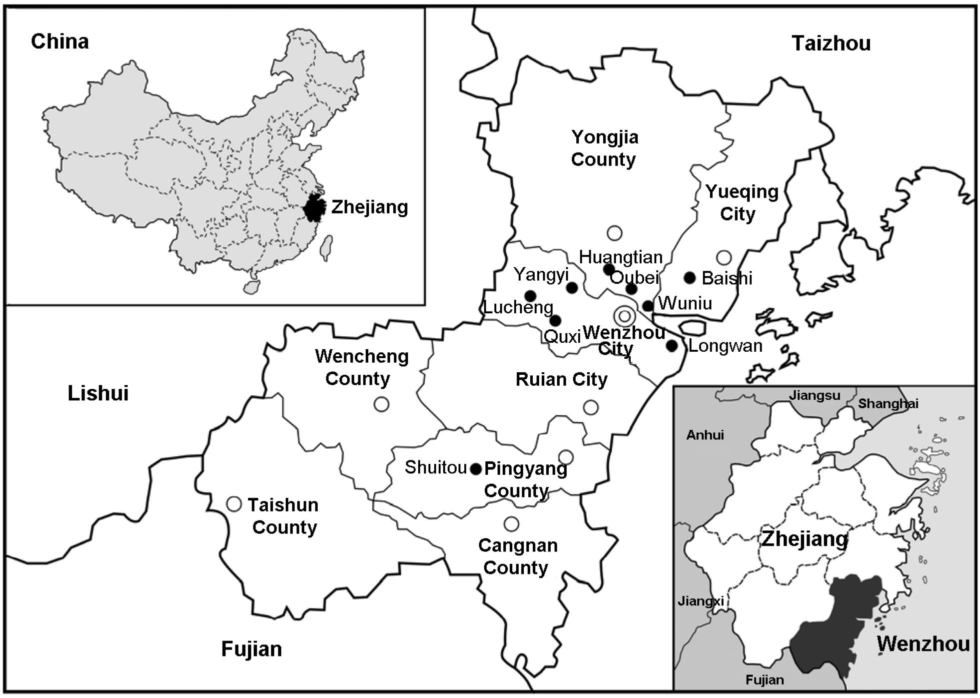

Fig. 1. General location of Wenzhou Municipality and sites of footwear production. *Sources*: WFLIA (2008) and author's field work.

Conversely, shoe manufacturers in interior China have lower production costs and produce a variety of footwear, some supported by subsidies provided by TNCs or coastal Chinese firms.

THE RESEARCH SETTING

My research activities focused on the Municipality of Wenzhou (in southern Zhejiang Province; Fig. 1), which covers an area of 11,784 km^2. Inhabited by an estimated 7.9 million people in 2008, it had a concentration of 1.42 million in its urban district (WSB, 2008). The district (Wenzhou City)[16] formed the traditional economic core of the municipality, which in aggregate accounted for 81.5 percent of its gross regional product (ibid.).

My research on Wenzhou was initiated in the late 1990s, and from 2003 to 2005 involved surveys and personal interviews with local companies and government officials. With renewed funding, we began another round of extensive field research in August 2008 in Wenzhou in collaboration with local researchers affiliated with the Wenzhou Institute of Economic Construction and Planning and a group of faculty and students from the Department of

[16]The core area includes the cities of Wenzhou, Ruian, Yueqing, and Yongjia. In 2003, our team conducted a survey of firms in Yueqing with questions on characteristics of the labor force, relocation, network relations, and future development.

Urban and Regional Economics at East China Normal University. Our team included more than 40 researchers and students from Wenzhou as well as from other cities. Together we interviewed almost all business associations in Wenzhou ($N \geq 20$) as well as more than 100 firms recommended by these associations and representing different sectors and enterprise sizes; many are among the most influential enterprises in the region.

With regard to its footwear industry, we interviewed the two relevant business associations and 15 typical companies, providing a representative sample of the entire shoe manufacturing cluster and production process. Interviews, averaging 1.5 hours, were conducted with business owners, general managers, and other high-level functionaries in charge of production, investment, and public relations of the shoe-making firms. Because our study of Wenzhou is deeply intertwined with the remaking of the Wenzhou model, I will now briefly outline how that model has changed as a consequence of institutional restructuring.

INSTITUTIONAL RESTRUCTURING AND REMAKING OF THE WENZHOU MODEL

The essence of the Wenzhou model is a system of production centered on family enterprises and embedded in thick, historically rooted local institutions. Families typically form the main production units, relying on social networks and sales agents integrated within local markets for production factors and flexible marketing. Broadly speaking, Wenzhou has tended to be ahead of the reform curve (Y. L. Liu, 1992); in the mid-1980s, when China was still dominated by state-owned enterprises (SOEs), family business units, many with “red hats” (fake collective ownership), had become the backbone of Wenzhou’s economy.[17] Shoes from Wenzhou began to penetrate the markets of Chinese cities, which were then still dominated by SOEs and struggling to cope with the deprivations of a shortage economy.

Nonetheless, the unfettered capitalism and protection afforded local firms by the Wenzhou government made the “made in Wenzhou” label synonymous with inferior quality. Wenzhou shoes had the reputation of lasting only for one week (“week shoes”) or even one day (“dawn–evening shoes”). In 1987, the municipal government in Hangzhou, capital of Zhejiang Province and one of the major markets for the shoes, confiscated and burned thousands of pairs. By that time, the inherent problems of the original Wenzhou model had become serious, and local business leaders and governments pushed for change.

The Wenzhou model underwent two rounds of institutional restructuring. The first, launched in the mid-1980s, was a bottom-up process initiated by local business people and supported by the local government. It centered on establishing shareholding cooperatives as a response to the needs to clarify property rights and improve scale economies, and transformed many family enterprises into cooperative ventures. By 1997, 36,000 cooperative enterprises existed in Wenzhou, with a gross output of 90 billion yuan comprising 70 percent of the municipality’s total (Editorial Committee, 2008, p. 206). These firms possessed clearer property rights and became better organized. But in tandem with with the broadening of reforms in China as a whole, Wenzhou firms began to face intense competition from foreign-invested enterprises with better equipment and higher quality products, as well as from pri-

[17]The Wenzhounese have long been known for a mercantilist bent, profit seeking, and a keen business culture (referred to as the “Wenzhou spirit”), a skill set that was not overly popular in the past among the broad Chinese public.

vate enterprises that had improved their competitiveness. And despite the shift of some firms to cooperative forms of ownership, most enterprises in Wenzhou still were locked in the orthodox Wenzhou model, being small in size and producing low-quality merchandise.

The second round of restructuring, initiated in the mid-1990s, was devoted to quality and focused on the transformation from shareholding cooperatives to shareholding enterprises and limited-liability corporations. It resulted in the emergence of multi-regional enterprises, or de-localized "region-less" groups/conglomerates. This round of restructuring was in essence a "high-road" strategy based on efficiency, competitiveness, and innovation, with more local state involvement and integration with the global economy. Both businesses and the local state launched campaigns to enhance the quality of products. Specific local government policies included financial support (and bank loans) to stimulate firm growth, allocation of land to large firms with large size and recognized potential, human resource development (especially worker training), import and export subsidies, and improvements in urban infrastructure.

As a result of these two rounds of restructuring, Wenzhou's industry has been upgraded, diversified, and expanded in spatial terms; some observers now refer to a "new" Wenzhou model. Wenzhou has continued to rise in the Chinese economy, with its footwear industry being one of the most representative sectors. Thus, while traces of the orthodox Wenzhou model can still be observed, a fundamentally new type of industrial district has began to emerge.

THE NEW INDUSTRIAL DISTRICT MODEL[18]

Similarities with the Traditional Model

In the past, when the industrial district functioned under the orthodox Wenzhou model, it in many ways resembled a classical MID—a territorial agglomeration of small firms embedded in thick local institutions.[19] First, Wenzhou has produced footwear for over 500 years, including shoes explicitly for the royal family during the Ming Dynasty. In 1978, when China had just commenced economic reforms, Wenzhou already had 19 footwear factories producing 500,000 pairs of shoes annually (Huang et al., 2008). By August 2008, the number of such factories had climbed to about 2,700 (over 4,000 if informal, individual factories are included), supported by 2,500 related firms specializing in leather, soles, machines, ornamental accessories, design, and other services.[20] In aggregate, the industry employed ca. one million workers producing 1.2 billion pairs of shoes, and accounting for one-fourth of China's total output. In 2008, the value of industrial output derived from shoe production in Wenzhou was 65.2 billion yuan (Fig. 2).

Wenzhou is one of the largest footwear-industry centers in China, commanding 17 percent of the Chinese market in 2007 and gradually evolving into a highly specialized and

[18]This paper views industrial districts as hierarchical spatial organizations and treats the Wenzhou Municipality as a metropolitan-level industrial district, corresponding to its position within China's administrative system and reflecting its distinctive local institutions and characteristics (e.g., strong local dialect, locally based networks, and local labor markets and supply chains).

[19]Even its products, namely footwear, clothing, metal cigarette lighters, spectacle frames, razors, locks, plastic products, and low-voltage electric appliances, resembled those of Italian industrial districts.

[20]Based on author's interview with officials of the Wenzhou Footwear and Leather Industry Association, July 7, 2008.

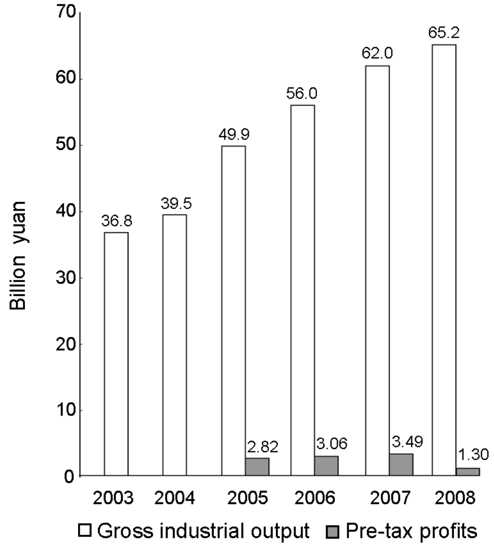

Fig. 2. Value of output and pre-tax profits of Wenzhou's footwear industry, 2003–2008, in current yuan. *Sources*: Based on data from WFLIA (2008) and (Wenzhou, n.d.).

coordinated industrial cluster. The Wenzhou Municipality can obtain most of its needs for components, semi-finished products, and services internally, including pig leather (supplied from Shuitou), man-made leather (from Longwan), buffalo leather (Yangyi), footwear manufacturing machinery (Wuniu), shoe bottoms (Baishi), accessories and ornamental materials (Huangtian), shoe production factories (Lucheng, Oubei, and Ruian), and trading facilities (Quxi) (see Fig. 1). Even half of the equipment needed by the industry can be purchased locally (WFLIA, 2008).[21]

Second, as in the MIDs, small and medium-sized enterprises (SMEs) have traditionally dominated production in Wenzhou.[22] Among the 2,692 shoe enterprises enumerated in 2008, only 753 were classified as "above-designated size" by the State Statistical Bureau. Percentages of SMEs are even larger among companies producing footwear components (e.g., soles, leather, accessories), or engaged in tanning and trading. This phenomenon is somewhat unique to the footwear industry, and reflects the rather insignificant cost savings from increasing scale (Sorenson, 2003). Furthermore, the lack of intellectual property rights also prompts small shoe firms to produce without heavy investment in expensive technological innovation.

Third, the footwear industry is spatially concentrated within the municipality—in Wenzhou, Ruian, Yongjia, and Pingyang—with many towns/townships (the basic units of industrial districts) engaging in specialized production (Fig. 1). Most production and trading

[21]The emergence and maturation of a variety of specialized producer services in Wenzhou also are typical of other districts in the footwear industry, for example those in Brazil (Schmitz, 1995b).

[22]Our investigation found that 83 percent of the surveyed firms had start-up investments of less than one million yuan, a percentage that roughly corresponds with the share of total firms established in the countryside.

centers have close functional ties, built on local tradition and facilitated by local government policies.[23]

And finally, as in the traditional districts, local institutions and *guanxi* (relationship) networks are intensely interwoven, bound by trust and culture, and maintained by mutual exchanges and power relations. In recent years, many business associations have been formed in Wenzhou, responding to the need for networking and trade protection. Of these, the Wenzhou Footwear and Leather Industry Association is one of the largest and most powerful, assisting the industry in negotiating local reforms and resource allocation, as well as in legal proceedings involving international trade barriers and disputes.

Lastly, the crucible of institutional restructuring and creation of new businesses and networks has forged a new group of entrepreneurs and local government officials in Wenzhou with decisive influence on public policy. Newly assigned mayors, who in prior decades often discouraged private enterprises, eventually became protectors of local capitalist activities and even accommodated the local push for marketization; as such they may be increasingly viewed like their counterparts in the MIDs. The significance of the footwear industry also makes it a natural focus of local government policies allocating such sought-after perquisites as additional land resources, bank loans, and tax rebates. In addition, the municipal government has lobbied heavily for local industry, seeking national and provincial recognition as well as government contracts and special economic privileges (e.g., designation of economic zones).

Diversification, Up-scaling, and External Linkages

While resembling the MIDs in ways outlined above, Wenzhou's footwear industry district has managed to change over time. It has become apparent that the industry's rise, rather than being solely based on cheap labor (an assertion disputed by studies such as Lowder, 1999), is also due to important institutional reforms and industrial restructuring. The same can be said more generally about many other regions and economic sectors that have driven China's economic rise to the position of a "global factory." Wenzhou has moved well beyond the orthodox industrial district model, expanding beyond SMEs, local agglomeration, and *guanxi* networks.

As a result of institutional change in the direction of shareholding companies, a group of large firms and MREs producing brand name products has emerged and become active in Wenzhou. Overall, company size in the footwear industry has tended to increase, with sales income exceeding over one billion yuan in eight firms in 2007 (WFLIA, 2008); in the same year, four Wenzhou firms were included in the group of 10 most profitable firms in China's footwear industry. Restructuring also has improved the quality of footwear, with five registered as "famous brands" of China.[24]

Facing intense competition and shrinking profit margins, Wenzhou's shoe makers have attempted to diversify by establishing chain stores and specialized companies providing services such as marketing, advertising, accounting and financing. Large enterprises, in

[23]Wenzhou City's Lucheng District, the oldest production center of shoes, accounts for 40 percent of the total municipal output. The Wenzhou Shoe Capital Industrial District, the official "Footwear Capital of China," is located in this district, where many of the best-known brands are concentrated. Below, toward the South, is Shuitou, referred to as China's "tanning capital," with more than 3,000 tanning firms at the height of its development in 2003.

[24]Three of the four shoe makers on the list of 100 top brands were located in Wenzhou (Liu and Xu, 2005).

particular, diversified their holdings to profit from new opportunities and reduce the risks of excessive concentration in manufacturing.[25]

Diversification and the effort to increase value-added are reflected in scaled-up marketing approaches targeted to customers located well beyond municipal boundaries (moving beyond the predominantly local, endogenous focus of the MIDs). The marketing approach has shifted 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 brand competition through specialized chain store networks within and outside China. For now, Wenzhou's shoe markers have avoided ceding control of product sales to retailers and marketers, unlike the manufacturers in developed countries. Kangnai, for example, has established 2,600 of its own stores across China and more than 100 abroad.

Technological upgrading has improved the production process. Clustering and standardization have weakened technological barriers to entry, which has led to an increase in the number of footwear enterprises over the years and improved the scale of production. More advanced equipment and production systems have been introduced, including entire automated shoe production lines imported from Western countries. Thanks to upgrading of equipment, the reliance on laborers in larger enterprises has been reduced.

Finally, spatial restructuring, mainly relocation and expansion, is a major feature of the evolving Wenzhou model, allowing firms to respond more effectively to changes and overcome constraints to development. Our 2008 interviews with officials of Wenzhou Footwear and Leather Industry Association and firm executives confirm the significance of reduction in labor costs and policy incentives to relocate.[26] Spatial expansion in shoe manufacturing is mainly associated with expanding production and diversification. Unlike the garment and electronics industries,[27] major shoe makers have not relocated their headquarters to leading cities such as Shanghai and Hangzhou. Two major forms of relocation and spatial expansion are in evidence. The first is the establishment of production sites in other locations with cheaper land and labor costs, and potentially new markets, mainly in the less developed areas of Zhejiang Province (e.g., Lishui) and interior China (e.g., Chengdu and Chongqing provinces). Facing shrinking profit margins, some Wenzhou manufacturers are even contemplating outsourcing shoe production to other countries, in particular to Vietnam and Russia.[28] The second is the establishment of marketing, R&D, and information centers in the leading globalizing cities of coastal China, especially Guangzhou and Shenzhen, known for for fashionable ladies shoes and the presence of foreign shoe makers. Offices there primarily collect information on fashion trends and provide sample shoes for factories in Wenzhou.

Rongguang provides a good example of how joint strategies of expansion/relocation and business diversification make it possible to fully utilize locational opportunities and institutional advantages. The company has established a network of production and services, with shoe manufacturing as the core business in four cities. The company's headquarters and major production site are in Ruian (Fig. 1), whereas ancillary production sites

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[25]The strategy is similar to that adopted by firms in Italy and Germany (Schamp, 2005; Amighini and Rabelliotti, 2006). One of Wenzhou's firm named Aokang has aggressively expanded into real estate.

[26]Relocation is a major strategic response to regional lock-in and a major component of restructuring in industrial districts of Italy and Germany (Schamp, 2005; Hadjimichalis, 2006).

[27]For an account of the electronics industry, see Wu et al. (2007).

[28]Kangnai, for example, has expanded its footwear production both to relatively undeveloped Sichuan Province and to Russia.

are located in interior China (in Henan and Yunnan provinces), utilizing cheap labor and land. Finally, additional production sites and services have been established in the Yangtze River Delta (Shanghai's Minhang District), where Rongguang is also active in real estate development.

THE LIMITS OF THE "NEW" WENZHOU MODEL

Wenzhou has come a long way from the orthodox Wenzhou model of the 1980s. A group of large firms and MREs has emerged, with networks extending both nationally and globally. However, despite two rounds of restructuring, rising production costs and increasing competition have resulted in reducing profit margins to near-prohibitive levels. Business leaders are concerned that Wenzhou's footwear industry could lose its competitive edge and decline, following the way of the industries in Taiwan and South Korea.

Production Cost and Profit Margins

Intense competition and thin profit margins are the prime forces that compel the shoe industry of Wenzhou to upgrade its assets and expand. It is increasingly apparent that Wenzhou is facing some of the same problems that had troubled Pusan's shoe industry in Korea in the late 1980s and thereafter. Stricter labor regulations, rising prices of energy and raw materials, appreciation of the yuan, tightening monetary policy, and the reduction of export tax rebates had by 2008 significantly increased production costs for Wenzhou's producers and eroded their profit margins. Thus more than 100 Wenzhou shoe firms were shut down in that year and the industry's pretax profits dropped from $3.49 billion in 2007 to $1.3 billion in 2008 (WFLIA, 2008; Wenzhou, n.d.). The global financial crisis and global overcapacity in shoe production have forced the firms of Wenzhou to relocate, diversify, or simply leave the industry altogether. Original equipment manufacturers and export-oriented producers have been hit hard by the crisis, and have begun to redirect their efforts in order to penetrate China's domestic market.

In further reference to the global financial crisis, the tanning industry has been hit the hardest. Many small firms were closed and most of the surviving have lost money. In Shuitou Town, known as the "leather capital" of China for its once flourishing industry, almost 90 percent of the firms were shuttered by 2008, and revenues from leather production fell from 3.73 billion yuan in 2001 to 1.27 in 2007.[29] However, the main reason for Shitou's decline was not the global crisis but the serious environmental pollution caused by the industry (Tannery, 2009), which made the town known as one of the top 10 illegal polluters of China in 2003.[30] Given the thin profit margins, the inflow of capital available for upgrading the shoe industry has began to diminish. Lastly, because interfirm linkages in Wenzhou are particularly strong, firm closure and relocation often reverberate in a ripple effect on local economies, impeding development and efforts to transform Wenzhou into a globalizing industrial city.

[29]Author's interview with officials of the Wenzhou Footwear and Leather Industry Association, July 7, 2008.

[30]Other factors included the rising cost of raw materials, largely imported from abroad, and the increasing power of sales agents and leather retailers, who diminished the pricing power of the manufacturers.

Brands, Quality, and Quantity

In addition to diversification and relocation, the firms of Wenzhou have also attempted to increase the value-added component of their operations and to improve profitability by increasing volume and outsourcing production. Inasmuch as customers are sensitive to shoe prices while the pricing power of footwear enterprises tends to be limited, a typical strategy for firm growth involves increasing the quantity of output and the size of the firm in order to benefit from economies of scale. This keeps Wenzhou shoes mainly in the low-end part of the world (medium level in the Chinese) market, in contrast to the Italian shoe makers' emphasis on higher quality with a fashion component. The focus on quantity leads firms to produce immense volumes of shoes, without significantly improving their quality. Although shoe manufacturers in Wenzhou believe that they continue to enjoy a competitive advantage in brands and quality (WFLIA, 2008), our interviews indicated that the management is seriously concerned about inadequate local R&D capacity and human resource development facilities.

Wenzhou firms also turn to outside subcontractors in order to increase the volume of production. Outsourcing, however, has introduced new problems in quality control. Firms providing subcontracting services tend to be second- or even third- or fourth-tier companies, which have less modern equipment and qualified labor to secure adequate quality control. Moreover, for the most part Wenzhou's large shoe firms still lack the sophisticated managerial systems to monitor external production. Our interviews revealed that the managers were more concerned that subcontractors might become potential competitors (given low barriers to entry), and therefore were not interested in helping them, with predictable implications for the quality of shoe output.

The interviews further disclosed that quality problems relating to shoes also extended to leather production facilities. Most pigs and water buffalos in China are raised in small-scale family operations that lack modern processing facilities. Therefore, leather made in China tends to be of lower quality than leather made in Italy. Other materials used in shoe manufacture, such as rubber and plastics, also encounter similar problems. Finally, the use of lower-quality materials has an effect not only on durability but on the comfortability of shoes as well, thus exacerbating the problems confronting mass-produced, inexpensive footwear.

Big and Small Government

Wenzhou is known for its entrepreneurial spirit and marketing activities, rather than for any special attributes of the municipal or local governments. Despite many complaints about bureaucracy, progress toward improving administrative efficiency and transparency has been slow. Although Wenzhou launched an "efficiency revolution" in 2003 (during which ca. 400 local officials were fired, demoted, warned, or publicly criticized) the effort has not fundamentally altered the way local governments function. The municipality still is known for its entrenched bureaucracy and *guanxi* networks, and in this sense "big government" continues to prevail.

However, the firm executives interviewed by our team not only advocated reform, but also sought increases in government support. Unlike its competitors Guangzhou, Shenzhen, and Chengdu (all provincial-level cities), Wenzhou is only a prefecture-level city, of marginal importance to the central administration. Although it is a major economic center, the central government's emphasis on funding provincial capitals and strategic projects of interprovincial significance has resulted in the shifting of many financial obligations to the Wenzhou Municipality, which has had to build its own airport, railway, and other elements of urban infrastructure. Consequently, Wenzhou lacks the supporting infrastructure (particularly R&D facilities) required for the development and modernization of its footwear industry.[31] The city's small size and provincial character make it difficult to attract top designers, so that shoe makers are forced to concentrate on men's shoes, which are less fashion oriented and generate lower profit margins. Consequently, the city has not yet been able to transform itself into a bona fide modern metropolis, a prerequisite for attaining a higher stage of industrial development. In this sense, the problem is "small government," which can only provide limited support to the business community.

Intergenerational, Relational, and Structural Lock-Ins

Wenzhou's development is locked in a particular path—centered on family-based, labor-intensive manufacturing. New generations may be better educated, but will tend to retain strong family business ties even while losing some of the positive attributes of the Wenzhou spirit such as entrepreneurship and hard work. Thus despite the restructuring outlined above, many of Wenzhou's footwear enterprises are small firms relying on low-tech production methods, which remain under family control.

The deeply embedded institutions, strong local networks, and a distinctive culture create the problem of relational lock-in. The strong local *guanxi* network (centered on local dialect and culture) has prevented non-Wenzhounese from "fitting in," further complicating the problem of attracting experienced designers and skilled workers to the footwear industry. In an environment of lagging political reforms and unclear legal boundaries, the pursuit of profit leads to "black-box" transactions and corruption.

Strongly entrenched local institutions are by their very nature resistant to change, creating a potential problem of structural lock-in. External capital and skilled labor face difficulties in articulating their requirements and seeking cooperation from local institutions. This is particularly the case with FDI, which has been extremely limited in Wenzhou to date.[32] Thus, the three forms of locally based inertia (intergenerational and structural) have considerably complicated efforts to attract external investment, technological innovation, and experienced technical personnel.

SUMMARY AND CONCLUSION

This paper has analyzed the transformation of the shoe manufacturing industry in Wenzhou, a prime center in the world's largest producer and exporter of footwear. The change has largely occurred alongside the broader restructuring of the Wenzhou model since the mid-1980s. In more general terms, that restructuring can be summarized in a four-point construct, not overly elaborate, namely (1) transition from the "old" to the "new" Wenzhou model; (2) rounds of institutional change (from family enterprises to cooperative enterprises and then to shareholding companies); (3) institutional lock-ins (intergenerational, relational,

[31]Major universities and research institutions in Zhejiang Province are concentrated in Hangzhou.

[32]In 2004, FDI in Wenzhou was as little as $209 million, rising to only $617 million in 2007 even after an intensive campaign to attract more foreign capital (ZSB, 2005, 2008). The amount was among the lowest for Zhejiang's municipalities, trailing far behind Ningbo ($2.1 billion in 2004 and $2.5 billion in 2008) and Hangzhou ($1.4 and $2.8 billion) (ibid., 2005, 2009).

and structural); and (4) major types of strategic responses (institutional change, technological upgrading, industrial diversification, and spatial expansion).

The footwear industry is one of the traditional and leading industries in Wenzhou, with a history spanning over half a millennium and responding to the dramatic growth in tandem with China's economic reforms of the late 1970s. A cluster containing nationally significant enterprises has emerged in Wenzhou, where most shoe-making components can be obtained locally. The industry has scaled-up both nationally and internationally, expanding sales networks and factories across China and abroad. Spatial expansion has entailed dispersion of production to interior China, with the goal of lowering costs, and diversification of firm activities. In the process, Wenzhou itself has changed. The orthodox notions of locally based industrial districts and clusters no longer capture the essence of the new Wenzhou model. The experience of the footwear industry once again indicates that successful industrial districts have the ability to adapt to change, challenging the New Regionalism literature that unduly emphasizes the role of small firms as well as of local assets and institutions. Wenzhou's experience also deviates from the tenets of the GVC/GCC/GPN perspectives, which attach too much importance to strategic coupling with leading global firms and integration with global networks.

China and Wenzhou now confront a new round of economic challenges posed by the problem of declining exports inflicted by the global economic recession. Like most other manufacturing sectors, the footwear industry in Wenzhou experienced a difficult environment in early 2009. During the first half of that year, its output declined by 8.1 percent (WMCDR, 2009). Wenzhou may thus need to revise the old reform blueprints to again modify its local institutions and improve its economy in tandem with the footwear industry. Concrete steps in this direction were taken in 2009, as part of the research and design work on the municipality's Ninth Five-Year plan. While the obstacles appear to be daunting, the region's internal dynamics and capabilities may yet enable it to meet the new challenges.

REFERENCES

AAFA (American Apparel & Footwear Association, *ShoeStats*. Arlington, VA: American Apparel & Footwear Association, annual editions, 2006–2008 [http://www.apparelandfootwear.org/], last accessed September 1, 2009.

Amighini, A. and R. Rabellotti, "How Do Italian Footwear Industrial Districts Face Globalization?," *European Planning Studies*, **14**, 4:485–502, 2006.

Amin, A. and N. Thrift, "Neo-Marshallian Nodes in Global Networks," *International Journal of Urban and Regional Research*, **16**, 4:571–587, 1992.

Bair, J., "Global Capitalism and Commodity Chains: Looking Back, Going Forward," *Competition & Change*, **9**, 2:153–180, 2005.

Barboza, D., "People's Republic of Exports: Slump Is Making China an Even Stronger Trade Presence," *The New York Times*, October 14, 2009, B1, B8.

Brusco, S., "Small Firms and the Provision of Real Services," in F. Pyke and W. Sengenberger, eds., *Industrial Districts and Local Economic Regeneration*. Geneva, Switzerland: International Institute for Labor Studies, 1992, 176–196.

Chien, S. S., "Institutional Innovations, Asymmetric Decentralization, and Local Economic Development: A Case Study of Kunshan, in Post-Mao China," *Environment and Planning C*, **25**, 2:269–290, 2007.

Coe, N. M., "A Hybrid Agglomeration?," *Urban Studies*, **38**, 10:1753–1775, 2001.

Coe, N. M., M. Hess, H. W. Yeung, P. Dicken, and J. Henderson, "'Globalizing' Regional Development," *Transactions of the Institute of British Geographers*, **29**, 4:468–484, 2004.

Editorial Committee, *Wenzhou Minying Jingji de Xingqi yu Fazhan* (*The Emergence and Development of Wenzhou's Minying Economy*). Beijing, China: Wenshi Press, 2008.

Eraydin, A., "New Forms of Local Governance in the Emergence of Industrial Districts," in D. Felsenstein and M. Taylor, eds., *Promoting Local Growth*, Aldershot, UK: Ashgate, 2001, 81–101.

Ernst, D., "Partner of the China Circle? The East Asian Production Network of Japanese Electronics," in B. Naughton, ed., *The China Circle*. Washington, DC: Brookings Institution Press, 1997, 210–253.

Gereffi, G., J. Humphrey, and T. Sturgeon, "The Governance of Global Value Chains," *Review of International Political Economy*, **12**, 1:78–104, 2005.

Glasmeier, A., "Flexible Districts, Flexible Regions?," in A. Amin and N. Thrift, eds., *Globalization, Institutions, and Regional Development in Europe*. Oxford, UK: Oxford University Press, 1994, 118–146.

Hadjimichalis, C., "The End of Third Italy as We Knew It?," *Antipode*, **38**, 1:82–106, 2006.

Hsing, Y., "Trading Companies in Taiwan's Fashion Shoe Networks," *Journal of International Economics*, **48**, 1:101–120, 1999.

Huang, Z. H., X. B. Zhang, and Y. W. Zhu, "The Role of Clustering in Rural Industrialization," *China Economic Review*, **19**, 1:409–420, 2008.

Humphrey, J. and H. Schmitz, "How Does Insertion in Global Value Chains Affect Upgrading in Industrial Clusters?," *Regional Studies*, **36**, 9:1017–1027, 2002.

Lim, J. D., "Restructuring of the Footwear Industry and the Industrial Adjustment of the Pusan Economy," *Environment and Planning A*, **26**, 4:567–581, 1994.

Liu, A. P. L., "The 'Wenzhou Mode' of Development and China's Modernization," *Asian Survey*, **32**, 8: 696–711, 1992.

Liu, Y. L., "Reform from Below," *China Quarterly*, 130:293–316, 1992.

Liu, Y. Q. and Z. X. Xu, eds., *Zhongguo Minyin Qiye Jingzhengli Baogao* (*Report on Chinese Non-State Enterprise Competitiveness*). Beijing, China: Social Sciences Academic Press, 2005 (in Chinese).

Lowder, S., "Globalisation of the Footwear Industry," *Tijdschrift voor Economische en Sociale Geografie*, **90**, 1:47–60, 1999.

Ma, L. J. C. and G. H. Cui, "Economic Transition at the Local Level," *Eurasian Geography and Economics*, **43**, 2:79–103, 2002.

Ma, L. J. C. and M. Fan, "Urbanisation from Below," *Urban Studies*, **31**, 10:1625–1645, 1994.

Martin, R. and P. Sunley, "Path Dependence and Regional Economic Evolution," *Journal of Economic Geography*, **6**, 4:395–437, 2006.

Oi, J., *Rural China Takes Off*. Berkeley, CA: University of California Press, 1999.

Parris, K., "Local Initiative and National Reform," *China Quarterly*, 134:242–263, 1993.

Pereira, A. A., *State Collaboration and Development Strategies in China*. London, UK: Routledge, 2003.

Piore, M. and C. Sabel, *The Second Industrial Divide*. New York, NY: Basic Books, 1984.

Sattar Khan, K. Abdul, Speech at 28th Annual International Footwear Conference, Guangzhou, China, June 1–2, 2009 [http://www.leatherindia.org/pdf/RFI_IFC.pdf], accessed September 18, 2009.

Schamp, E. W., "Decline of the District, Renewal of Firms," *Environment and Planning A*, **37**, 4: 617–634, 2005.

Schamp, E. W., "Making Use of Traditional Knowledge for the Renewal of an Ageing Industrial District: The Case of the World Shoe Center at Pirmasens, Germany." Paper presented at the Conference on the Worlds of New Work? Commission on the Dynamics of Economic Spaces, International Geographical Union, Barcelona, Spain, August 5–8, 2008.

Schmitz, H., "Collective Efficiency: Growth Path for Small-Scale Industry," *Journal of Development Studies*, **31**, 4:529–566, 1995a.

Schmitz, H., “Small Shoemakers and Fordist Giants,” *World Development*, **23**, 1:9–28, 1995b.

Scott, A., *New Industrial Spaces*. London, UK: Pion, 1988.

Scott, A. J., “The Changing Global Geography of Low-Technology, Labor-Intensive Industry,” *World Development*, **34**, 9:1517–1536, 2006.

Sonobe, T., D. Hu, and K. Otsuka, “From Inferior to Superior Products: an Inquiry into the Wenzhou Model of Industrial Development in China,” *Journal of Comparative Economics*, **32**, 3:542–563, 2004.

Sorenson, O., “Social Networks and Industrial Geography,” *Journal of Evolutionary Economics*, **13**, 5: 513–527, 2003.

“Spain: Footwear Exports, 2008,” 2009 [www.fice.es/en-index.php?option=com_docman.pdf], accessed September 18, 2009.

Staber, U., “Spatial Proximity and Firm Survival in a Declining Industrial District,” *Regional Studies*, **35**, 4:329–341, 2001.

“Tannery Pollution Remediation Confronts Wide Range of Tasks,” China Sustainable Industrial Development Network website, March 3, 2009 [http://www.csid.com.cn/NewsInfo.asp?NewsId=101030], last accessed September 28, 2009 (in Chinese).

United Nations, *International Trade Statistics Yearbook*. New York, NY: United Nations, 1981, 1987, 1990, 1992, 1996, 2001, 2006, 2008.

UN Comtrade, United Nations Commodity Trade Statistics database. New York, NY: United Nations [http://unstats.un.org/unsd/comtrade/], 2009, last accessed September 1, 2009.

USITC (U.S. International Trade Commission), “HTS–64: Footwear, Gaiters, and the Like: Parts of Such Articles: General Customs Value for All Countries,” 2009 [http://www.dataweb.usitc.gov/scripts/REPORT.asp], last accessed September 17, 2009.

Walcott, S. M., “Wenzhou and the Third Italy: Entrepreneurial Regions,” *Journal of Asia-Pacific Business*, **8**, 3:23–35, 2007.

Wei, Y. H. D., “Trajectories of Ownership Transformation in China,” *Eurasian Geography and Economics*, **45**, 2:90–113, 2004.

Wei, Y. H. D., W. M. Li, and C. B. Wang, “Restructuring Industrial Districts, Scaling Up Regional Development: A Study of the Wenzhou Model**,** China,” *Economic Geography*, **83**, 4:421–444, 2007.

Wei, Y. H. D., Y. Q. Lu, and W. Chen, “Globalizing Regional Development in Sunan, China,” *Regional Studies*, **43**, 3:409–427, 2009.

“Wenzhou Shoe Industry Association,” n.d. [http://www.shoeschina.net/about.asp?carticleid=10000072], last accessed September 18, 2009.

WFLIA (Wenzhou Footwear and Leather Industry Association), “Profiles of the Footwear and Leather Industry Development in Wenzhou in 2007,” 2008 [http://www.china-leather.com/zhuanti/08df/df56.htm].

Whitford, J., “The Decline of a Model?,” *Economy and Society*, **30**, 1:38–65, 2001.

WMCDR (Wenzhou Municipal Commission of Development and Reform), “Analysis of Wenzhou’s Economic Performance for the First Half,” July 10, 2009 [http://www.wzfgw.gov.cn/art/2009/9/22/art_40_29358.html], last accessed September 28, 2009.

WSB (Wenzhou Statistical Bureau), *Wenzhou Statistical Yearbook*. Beijing, China: China Statistics Press, 2008 (in Chinese).

Wu, Hsiu-Ling, Chien-Hsun Chen, and Li-Ting Chen, “Foreign Trade in China’s Electronics Industry,” *Eurasian Geography and Economics*, **48**, 7:626–642, 2007.

Yang, C., “Divergent Hybrid Capitalisms in China: Hong Kong and Taiwanese Electronics Clusters in Dongguan,” *Economic Geography*, **83**, 4:395–420, 2007.

Ye, X. Y. and Y. H. D. Wei, “Geospatial Analysis of Regional Development in China,” *Eurasian Geography and Economics*, **46**, 6:445–464, 2005.

Yeung, H. W., “Rethinking Relational Economic Geography,” *Transactions of the Institute of British Geographers*, **30**, 1:37–51, 2005.

Yeung, Y. M., J. Lee, and G. Kee, "China's Special Economic Zones at 30," *Eurasian Geography and Economics,* **50**, 2:222–240, 2009.

ZSB (Zhejiang Statistical Bureau), *Zhejiang Statistical Yearbook*. Beijing, China: China Statistics Press, annual (in Chinese).