

INSTITUTIONS, LOCATION, AND NETWORKS OF MULTINATIONAL
ENTERPRISES IN CHINA: A CASE STUDY OF HANGZHOU¹

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Abstract: Based on interviews with local government officials and a survey of 44 foreign-invested enterprises (FIEs), this article examines the significance of local formal institutions for intramunicipal location decisions of multinational enterprises (MNEs) and for network properties of their investments in Hangzhou, China. This study finds that local formal institutions, in terms of municipal district governments and development zone authorities, are a significant force influencing the location decisions of MNEs within Hangzhou. These local entities shape the intramunicipal location decisions of MNEs through three primary vehicles including financial incentives, industrial infrastructures, and attitudes toward foreign investors. The start-up fiscal capability of local formal institutions is therefore central to the foreign investment development efforts. Local formal institutions, however, are a less significant force influencing the network properties of FIEs in Hangzhou. District governments and zone authorities are largely

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confined to measures for co-locating allied foreign supplier investments to promote FIE local linkages. [Key words: institutions, multinational enterprises, foreign investment, Hangzhou, China.]

The increasing power of institutions in articulating the processes of uneven spatial development has been a major subject of academic inquiry in recent years (Cox, 1997; A. Scott, 2001; Sheppard, 2002). This development partly reflects the increasing openness and activism of emerging economies toward global capital over the past two decades. It also reflects the increasing power of places in an era of administrative decentralization, deregulation, and global competition. This body of work generally postulates that, given increased local decision autonomy, places can better exploit their locational and structural advantages for interacting with global capital. Localities, for example, can establish their own range of institutions for attracting foreign investment (Bevan et al., 2004; Marton and Wei, 2006), and they can promote the uniqueness of their places or territories for influencing the decisions of multinational enterprises (MNEs). This line of inquiry complements that of conventional thought, which concerns mainly MNE investment decisions at a national level (Caves, 1996; Kumar et al., 1998; Dicken, 2007). As such, in contrast to the thesis of the hollowing out of the nation-state, an increasing number of local institutions have engaged in vigorous competition for foreign direct investment (FDI) during the past two decades (Phelps and Raines, 2003). The proliferation of local institutions and place identities significantly broadens the facility location and network choices of MNEs. The foreign location and network decisions of MNEs are not only those at a national and a subnational regional (hereafter regional) level, but also those at a municipal and an intramunicipal level (Yeung, 2001).

This recognition of the increasing power of places notwithstanding, the relative significance and the specific roles of local institutions in articulating global capital spatially and structurally, especially at the intramunicipal level, remain to be adequately explored. Existing studies based on developed economies generally indicate the greater importance of economic factors in MNE location and network decisions at the regional level, whereas research based on emerging economies has especially highlighted the significance of institutional factors in influencing such decisions. Differences in political and economic contexts aside, there remains a lack of understanding of the roles of local institutions in MNE decisions in emerging economies at the intramunicipal level. What are the specific roles of local institutions in emerging economies that are significant for MNE intramunicipal location decisions? How significant are local institutions in influencing particularly the spatial properties of foreign-invested-enterprise (FIE) networks? What is the fundamental source of power that enables local institutions to mediate with MNEs in producing specific spatial outcomes at the intramunicipal level?

As one of the largest recipients of FDI in the world, China provides a good opportunity for a detailed understanding of the significance of local institutions in MNE location decisions and in FIE network properties. Nevertheless, existing research on FDI in China is confined mainly to the provincial level (Gong, 1995; Wei et al., 1999; He, 2002) and to Guangdong and Shanghai (Sit and Yang, 1997; Yeung, 2003; Depner and Bathelt, 2005; Wei and Leung, 2005; Lu and Wei, 2007). Research at the intramunicipal level is lacking. Research on FDI in China at the intramunicipal level is necessary because of the large

territorial extent of prefecture-level municipalities such as Hangzhou and the associated administrative hierarchy below the municipal level. As such, based on detailed interviews with local government officials and a survey of 44 FIEs in Hangzhou, we aim to examine the roles of local formal institutions that are significant for MNE intramunicipal location decisions and FIE network properties there. We further examine the bases on which local formal institutions amass their power to articulate the locational and network properties of FDI. Formal institutions are herein defined as legal organizational entities with established authorities, responsibilities, and governance rules (R. Scott, 2001). They include such entities as state agencies, economic associations, and unions. Given the political-economic context of China, the state component of local formal institutions including municipal district governments and development zone authorities is the focus of research in this study.

The following sections first provide the conceptual background and research context of our study, followed by an outline of local state efforts for promoting FDI in Hangzhou. We then analyze the roles of local formal institutions, especially those of municipal district governments and development zone authorities, which are significant for the intramunicipal location decisions of MNEs and the network properties of their investments. As major Chinese municipalities including Hangzhou are transforming territorial structures with constituent rural spaces, we use the term *intramunicipal* instead of *intra-urban* to better reflect the context of this research. The article concludes with a discussion of the fundamental source of power of local formal institutions in China and of the implications of this study for future research.

CONCEPTUAL BACKGROUND

Despite the prominence of FDI research in an era of globalization, investigations of the factors influencing MNE location decisions at a level below that of a municipality are lacking. Existing studies of subnational location decisions of MNEs, which are based mainly on developed economies, are largely confined to the regional or municipal level. They generally emphasize the significance of economic factors such as agglomeration and technological capability as the primary locational determinants of FDI at those levels (Kogut and Chang, 1991; Hill and Munday, 1995; Zeller, 2004). Agglomeration is considered important because of its certainty- or revenue-enhancing property for market-seeking investments, whereas technological capability is important because of the value creation opportunities it affords for asset-seeking investments (Bagchi-Sen, 1991; Cantwell and Piscitello, 2002). These economic factors aside, a number of related studies reveal the influence of formal institutions in the subnational distribution of FDI in developed economies. The range of formal institutional factors includes financial incentives, market access, tax rate, and unionization level, with the first two attracting and the latter two deterring foreign investment (Coughlin et al., 1991; Hill and Munday, 1992; Hines, 1996). Although the extent to which these formal institutional factors are influential locational determinants remains to be adequately explored, evidence generally suggests that their effects on the subnational distribution of FDI in developed economies are mixed (Amin and Thrift, 1994; Bobonis and Shatz, 2007).

By comparison, the effects of formal institutions, especially those of governments, on the subnational distribution of FDI in emerging economies appear more pronounced

(Appelbaum and Henderson, 1992; Wei, 2000). Given significant income effect and technology transfer potential, governments in emerging economies are active in attracting efficiency-seeking foreign investment in manufacturing activities (Wade, 1990; Bishop, 1997). A leading policy approach of governments in emerging economies to attract foreign manufacturing investment is the provision of financial incentives, industrial infrastructures, and an open environment for foreign firms (Pereira, 2003). Such provision is usually considered necessary because it reduces not only investment costs but also investment risks for foreign firms. Because such provision is usually confined to selected locales such as industrial and export processing zones (hereafter development zones or zones) primarily because of domestic resource constraints, the location of zones largely defines the spatial patterns of foreign manufacturing investment in emerging economies (Warr, 1990; Chen and Kwan, 1997). The significance of the location of development zones on the regional distribution of foreign manufacturing investment in emerging economies is highlighted in several studies (MacLachlan and Aguilar, 1998; Graham, 2004).

The fact that formal institutions significantly determine regional patterns of foreign manufacturing investment in emerging economies implies that government entities below the municipal level can be highly influential in MNE industrial location decisions within a municipality when they are given relevant administrative powers and responsibilities. Government entities below the municipal level in emerging economies can vary significantly in their implementation of economic reform mandates from above; they can compete with their intramunicipal peers for foreign manufacturing investment through the provision of additional financial incentives and other benefits for all or selected industries (Oman, 2000; Meyer and Nguyen, 2005). Although detailed studies pertaining to the locational determinants of FDI at the intramunicipal level are essentially nonexistent, certain findings suggest that administrative level and size of development zones positively relate to foreign investment inflow (Woodward and Rolfe, 1993; Wei and Leung, 2005). Zones possessing a national-level status generally have better-quality formal institutions and industrial infrastructures; they can also provide foreign firms with a more stable and cost-effective environment for their investments (Bevan et al., 2004; Amaro and Miles, 2007). On the other hand, larger zones tend to have a wider availability of real estate (Meyer and Nguyen, 2005), and they can also offer foreign firms better access to scarce resources that would otherwise be unavailable in other parts of a municipality. The ways government entities at the intramunicipal level configure zones within their boundaries in relation to their existing spatial-industrial structures as well as those of their neighboring peers, and to the planning and coordination frameworks of their municipal and higher-level authorities, can therefore be highly influential in MNE locational decisions within a municipality.

The configuration of development zones, along with the associated foreign investment strategies of government entities at various administrative levels of a municipality, can further influence the network properties of MNE investments at specific locations within municipalities in emerging economies. Municipal district governments with a dominant pre-existing state or public-enterprise base, for example, are more likely to afford brownfield zones; and they or their higher-level authorities are also more likely to negotiate with foreign investors for joint venture investments given compatible indigenous partners (Pearson, 1991; Sit and Liu, 2000). Such developments primarily utilize foreign investments that seek host network access through local firms upon entry (Pan, 1996).

Brownfield ventures can therefore be structurally more embedded in emerging host economies, and they can have more extensive host sales and purchasing networks through the contacts of their local partners (Belderbos et al., 2001; Chen et al., 2004). These network patterns can be translated to other greenfield locations within the same municipal district when space is available for venture expansion. Greater environmental stability resulting from familiar local government relations facilitates translation of such network patterns among zones within a municipal district. By comparison, municipal district governments without a dominant pre-existing state/public enterprise or a strong industrial base are more likely to establish greenfield zones, but they or their higher-level authorities are likely to impose fewer ownership requirements on foreign investors. These investment conditions generally favor the development of wholly foreign-owned enterprises, with the sales and purchasing networks of these enterprises heavily defined by the spatial reach and the business organization strategies of their parent companies (Bartlett and Ghoshal, 1998; Birkinshaw and Hagstrom, 2000).

In addition to the embedding of joint venture investments in pre-existing state or public enterprise networks, municipal district governments or their higher-level authorities in emerging economies can enhance the host integration of foreign manufacturing investment through local channel decontrol and cluster development strategies. Decontrol of local channels allows foreign firms to establish new host contacts of their own, and facilitates the efforts of foreign firms to explore host markets or supply sources. Cluster development strategies can enhance the host integration of foreign manufacturing investment through existing MNE networks or particular industrial organization practices. A lead venture approach, for example, can foster subsequent networked foreign supplier ventures, whereas a key sector emphasis can promote co-location of allied time- or distance-sensitive investments (Cho, 1997; Rugman and D'Cruz, 2000). The extent of local integration of foreign manufacturing investment at the municipal district or municipal level can be further enhanced by measures that restrict sales or purchasing transactions across municipal or regional boundaries, or that promote collaborations with indigenous enterprises (Huang, 2003). Measures to exploit the strong venture interdependence of specific investor sources can similarly enhance the host integration of foreign manufacturing investment within a municipal district or a municipality (Gao, 2003).

RESEARCH CONTEXT

To explore the significance of local formal institutions in MNE intramunicipal locational decisions and FIE network properties, we selected the municipality of Hangzhou in China's Zhejiang Province as the site of our study. Hangzhou was chosen because of its shadow economic location in the Yangzi Delta relative to Shanghai and Suzhou, which warrants stronger local government actions to attract MNE investments. Its selection was also influenced by its more conservative administrative tradition relative to other municipalities in the Yangzi Delta, which provides a better basis to examine the effects of local formal institutions on MNE intramunicipal locational choice and FIE network properties (Ye and Wei, 2005). And because research on FDI in Hangzhou is almost nonexistent, an investigation here would offer deeper insights to locational decisions and network properties of MNEs in China.

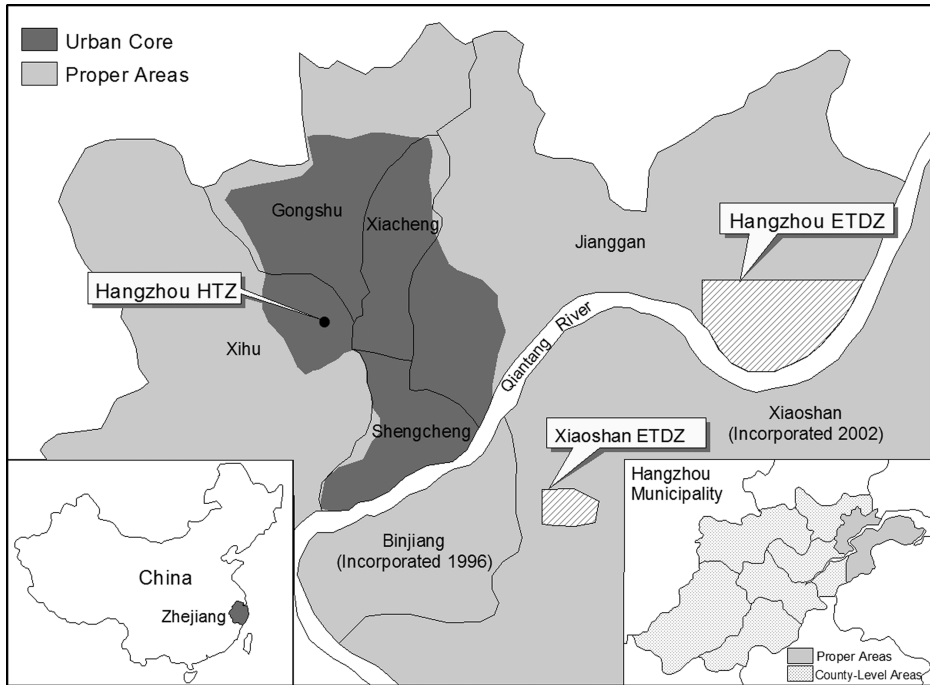


Fig. 1. Hangzhou municipality proper, 2002.

As a prefecture-level municipality, Hangzhou is composed of a municipality proper that contained seven districts and a hinterland with six county-level areas (county-level cities and counties) in the first stages of the study in 2002 (Fig. 1). The municipality proper at that time consisted of two sections—an original area established in 1949 with three inner (Shangcheng, Xiacheng, and Gongshu) and two outer districts (Jianggan and Xihu), and an expanded area established during the 1996–2002 period with two newly incorporated outer districts (Binjiang, originally part of the former county-level city of Xiaoshan, and Xiaoshan, a former county-level city). Associations with Hangzhou and the unabated process of urbanization notwithstanding, the two newly incorporated outer districts largely retain their local governance structures, and in the constituent areas away from the original municipality proper their relatively rural characters. In addition to the county-level areas in the hinterland, the municipality of Hangzhou possesses an administrative hierarchy consisting of formal government entities below the municipal level (district, county, township, and village).

These formal government entities below the municipal level have defined local powers and responsibilities. In the sphere of FDI, they can solicit foreign investments within permitted sector and size limits, and they can regulate the FIEs within their jurisdiction given the directives of the municipal government or higher-level authorities. The ability of local formal government entities to administer development zones can occur across scales. Local governments may establish and manage development zones at a level above

that of theirs in the administrative hierarchy as long as they adhere to the regulatory framework for foreign investment at that level. They can also be granted the authority to solicit and to approve foreign investments in sector and size ranges beyond those defined by their levels in the hierarchy. And local governments can further solicit foreign investments by providing additional preferential treatment beyond the national standard (100% exemption of enterprise income tax for the first two years after a venture becomes profitable, and 50% exemption for the following three years) if they possess such capabilities to do so.

To inquire into the significance and specific roles of local formal institutions in MNE intramunicipal location decisions and FIE network properties, we conducted detailed interviews with government and quasi-government officials in the municipality at all major administrative levels—provincial, municipal, municipal district, and development zone. The government officials we interviewed included those associated with the Zhejiang Provincial Planning and Development Commission, the Zhejiang Territorial and Land Development Department, the Hangzhou Municipal Planning and Development Commission, the Hangzhou Municipal Planning Bureau, and the Binjiang District Government. The development zone personnel we interviewed included those working in the Hangzhou High-Tech Zone (HTZ), the Hangzhou Economic and Technological Development Zone (ETDZ), and the Xiaoshan ETDZ.

We further conducted a postal survey using a sample of 270 major FIEs in the municipality proper provided by Hangzhou's municipal authorities. We delivered a cover letter and a survey questionnaire to a senior manager of each sample firm. We then followed up the first dispatch with a combination of phone calls, emails, and faxes as necessary. The survey was conducted in 2003 and early 2004; it generated a total of 39 usable returns. The effective response rate of the survey is approximately 14.1%, which is comparable to most other similar surveys (Romsa and Blenman, 1998; A. Scott, 2000). We could have secured a higher response rate if we sought the support of local governments, but we decided not to do so because we wanted responding managers to freely express their opinions without unnecessary government-related concerns. To enhance understanding we further interviewed the senior managers of five additional FIEs. The five FIEs included one American (daily chemical), one German (food processing), and three Japanese (household appliances and electronics) companies. We used a semistructured questionnaire for the interviews, and each interview lasted approximately 90 minutes. We obtained collaborative and reliable responses from the senior managers of all five FIEs. Because all surveyed and interviewed FIEs are located within the seven inner and outer districts, this study better reflects the significance of local formal institutions in Hangzhou's municipality proper on MNE location decisions and FIE network properties.

LOCAL STATES AND FDI DEVELOPMENT IN HANGZHOU

With the development emphasis of Beijing in the early stages of the open-door policy in southern China, the inflow of FDI to Hangzhou had been limited in the 1980s (Fig. 2). The first manufacturing FIE in Hangzhou did not emerge until December 1983, and FDI in the form of wholly foreign-owned enterprises was still largely insignificant by the end of that decade (Table 1). It was only after Beijing's action to further open the Yangzi Delta in 1991, through the policy milestone of the Pudong New Area in Shanghai, that most

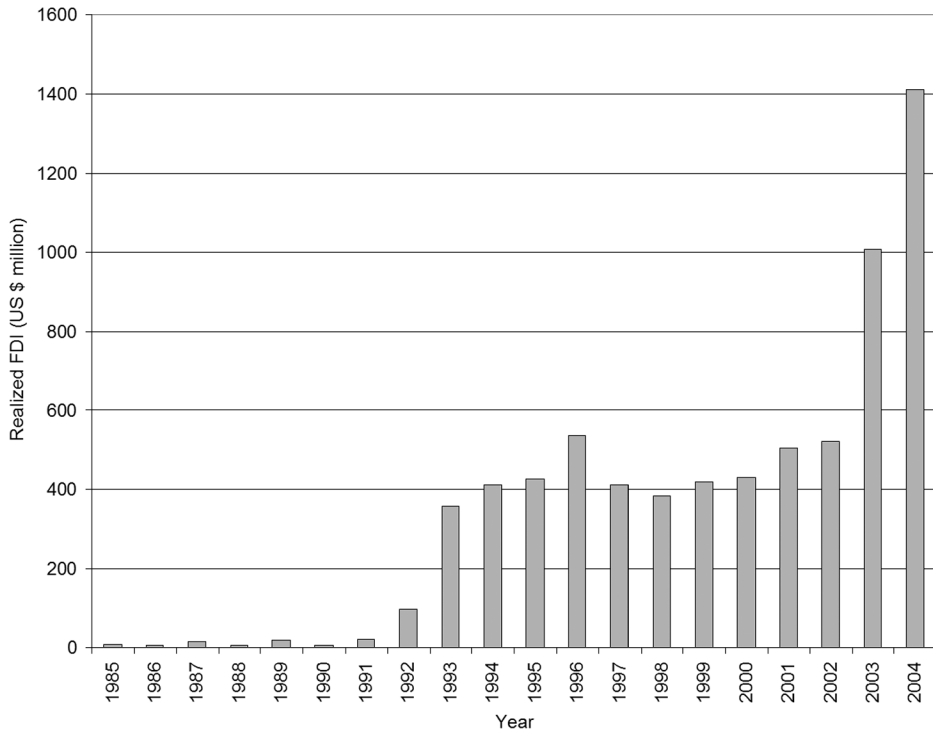


Fig. 2. Amount of realized FDI in Hangzhou, 1985–2004. *Source:* HSB (2005).

municipal governments in the region including Hangzhou were given the power to restructure themselves to attract foreign investment (Wu, 2003; Ma, 2005; Marton and Wei, 2006). Numerous development zones began to emerge in Hangzhou during the 1990s. By the end of that decade, most municipal districts and county-level areas in Hangzhou possessed at least a designated place for foreign investment or industrial development activities (interview with officials of the Foreign Economic Commission of Hangzhou Municipality, 2001).

Of all the development zones in the municipality, the Hangzhou HTZ, the Hangzhou ETDZ, and the Xiaoshan ETDZ were among the first to be established (Fig. 1); they are also among the largest development zones in the municipality (Table 2). The Hangzhou HTZ is a brownfield site in the urban core (the contiguous built-up area before the mid-1990s covering most of the three inner districts and part of the two outer districts in the original municipality proper) near Zhejiang University. It is intended to harbor knowledge- and technology-intensive investments. The zone later extended its jurisdiction by incorporating Binjiang Science and Technology Park, a small municipal-level site in the expanded municipality proper across the Qiantang River. The Hangzhou ETDZ is a greenfield site in Xiasha, a former farming area in eastern Jiangan district in the original municipality proper. The zone contains four parks with pharmaceutical, chemical, machinery and electronics, and textiles industries as the development foci (Management

TABLE 1. DEVELOPMENT OF FDI IN HANGZHOU (US\$ MILLION)^a

	1989		1995		2004	
	Amount	Percent	Amount	Percent	Amount	Percent
Total (realized FDI)	18.6	100	427	100	1,410	100
Total (contractual FDI)	15.7	100	902	100	3,077	100
Form						
Joint ventures	18.1	97.4	274	64.2	n.a.	n.a.
Wholly foreign owned	0.5	2.6	118	27.6	n.a.	n.a.
Others	–	–	35	8.2	n.a.	n.a.
Major source economy						
Hong Kong	8.8	47.3	156	36.5	1,225	39.8
United States	1.7	9.1	30	7.0	296	9.6
Japan	2.9	15.6	79	18.5	286	9.3
Taiwan	0.7	3.8	92	21.5	120	3.9
Singapore	1.1	5.9	6	1.4	103	3.3
Others	3.4	18.3	64	15.0	1,047	34.0

^aAmount of FDI by form and amount of FDI by major source economy for 1989 and 1995 are based on the amount of realized investment. Amount of FDI by major source economy for 2004 is based on the amount of contractual investment. Percent is the percentage of the respective column total. FDI amounts are based on current values. n.a.: not available.

Source: HSB (1990, 1996, 2005).

TABLE 2. MAJOR DEVELOPMENT ZONES IN HANGZHOU, 2004

	Hangzhou ETDZ	Xiaoshan ETDZ	Hangzhou HTZ
Year established	1993	1993	1990
Planned area (km ²)	34	19	23
Of which developed	34	12	13
Infrastructure investment (million <i>yuan</i>)	3,118	927	2,789
Foreign-invested enterprises (FIEs)			
Number of enterprises	371	338	415
Amount of foreign investment (US\$ million)	1,606	798	639
Amount of total investment (US\$ million)	4,350	2,151	1,390
Average investment size (US\$ million)	11.7	6.4	3.3

Source: HSB (2005).

Commission of HETZ, 2001). The zone also has a park for export processing investments. By comparison, the Xiaoshan ETDZ is another greenfield site in the expanded municipality proper. With the development orientation of the local (former county-level city) government, the zone specializes in automotive parts, construction materials, and

other light industries, and also emphasizes export processing investments (interview with officials of the Xiaoshan ETDZ, 2001).

The differing development emphases, which require the provision of additional preferential treatment for foreign investors in the targeted industries, lead to a variation of investment incentives among the three zones. The three zones further vary in formal institutional setting, entry mode orientation, and infrastructure quality and space provision for foreign investors due to their different origin. As a municipal-level zone, the Hangzhou HTZ has an operational environment more influenced by local socioeconomic concerns and political conditions in the original municipality proper. Foreign investors are sometimes asked to partner with state enterprises in the urban core, which form the foundation of the municipality's industrial complex. This action seeks to minimize the possible structural displacement effect on urban state workers. It further seeks to minimize the impact on urban space consumption as the existing facilities of state enterprises usually form the equity basis of Chinese venture parties. The brownfield condition, however, renders unlikely the provision of quality physical infrastructure and space for expansion in the zone. Foreign firms seeking to invest at other urban core locations outside of the Hangzhou HTZ face similar investment and operational constraints; they also were required to pay a higher enterprise income tax (24% versus 15% in development zones) prior to China's accession to the WTO in 2001.

In comparison, the Hangzhou ETDZ is a national-level zone. This zone adheres closely to the national regulatory framework for foreign investment, and has an operational environment more defined by national economic and political conditions. Being the largest greenfield site in the original municipality proper, the zone seeks to attract foreign investors joint venturing with state enterprises who could not be otherwise accommodated in the Hangzhou HTZ or other parts of the urban core. The zone also seeks to attract foreign investors preferring a wholly owned entry mode, quality physical infrastructure, and/or large facilities.

The Xiaoshan ETDZ is also a national-level zone. But unlike the Hangzhou ETDZ and given a county-level area origin, it has a predominantly private-enterprise industrial base and in general has no particular ownership requirements for foreign investors. The Xiaoshan ETDZ also has lower land use and other fees than Hangzhou ETDZ. It further competes with the Hangzhou ETDZ by offering an extended tax holiday for most investments as elaborated in the next section.

The efforts of government entities at various administrative levels in the municipality led to a consistent increase in realized FDI in Hangzhou that reached US\$1.4 billion in 2004 (Table 1). A significant portion of this investment came from Hong Kong, Japan, and the United States, with joint ventures the common mode of entry by foreign investors. This is mirrored in the response sample: the three above-mentioned source economies and the joint venture investment forms account for approximately 57% and 41%, respectively, of the surveyed FIEs (Table 3). With regard to sector composition, the surveyed establishments primarily specialize in electronics, electrical appliances, textiles and garments, chemicals (including pharmaceuticals), and food processing industries. It is important to note that approximately 51% of the surveyed FIEs are medium-sized (US\$1 to 10 million) investments, a situation reflecting the aforementioned shadow economic location of Hangzhou. In addition, the majority (84%) of the surveyed FIEs are the only operation of their foreign owners in China, with most functioning mainly as the continental

TABLE 3. PROFILE OF ALL RESPONDING FIRMS^a

Attribute	Category	Number of cases	Percent
Year established	Before 1992	3	7
	1992–1999	34	81
	After 1999	5	12
	No response	2	n.a.
Form of investment	Joint ventures	18	41
	Wholly foreign-owned	17	39
	Others	9	20
	No response	0	n.a.
Source economy	Japan	11	25
	United States	7	16
	Hong Kong	7	16
	Taiwan	6	14
	Others	13	29
	No response	0	n.a.
Amount of investment	Less than 1 million	13	30
	1 to 10 million	22	51
	Over 10 million	8	19
	No response	1	n.a.
Number of employees	Less than 100 persons	13	34
	100 to 199 persons	11	29
	200 to 500 persons	11	29
	More than 500 persons	3	8
	No response	6	n.a.
Primary functions	China headquarters	3	4
	Asia-Pacific headquarters	1	1
	Production for China market	20	25
	Production for world market	26	33
	Distribution for China market	9	11
	Product development for China market	9	11
	Product development for world market	9	11
	Applied R&D for world market	2	3

^aPercent is percent of total number of responding cases (sum of the number of cases in the constituent categories excluding the no response category; not shown for simplicity reason) in the respective attribute area. n.a.: not applicable. The total number of responses for primary functions exceeds that of responding establishments (N = 44) as more than one primary function can present at a responding FIE.

Source: The survey.

(Asia-Pacific) or global manufacturing node for the MNEs. The effects of medium-sized and sole-operation investment properties on MNE intramunicipal locational decisions and FIE local network properties in Hangzhou will be assessed whenever appropriate in the following sections.

INSTITUTIONS AND MNE INTRAMUNICIPAL LOCATION DECISIONS

To investigate the significance and specific roles of local formal institutions in MNE intramunicipal locational decisions, we asked senior managers of the surveyed FIEs to rank the three most important factors (out of a total of 10 for municipal district or development zone choice, and of 11 for municipality choice) underlying the locational decisions of their overseas parent companies within and in Hangzhou municipality. We identified this set of factors through a survey of relevant literature including studies reviewed in an earlier section of this article. A simple discrete method (1 for the most important, 2 the second-most important, and so forth) served as the basis of these rankings. We then derived the mean rank (total number of times ranked as among the three most important factors divided by the total number of responding firms) for each factor, and created four major factor groups for highlighting the dominant forces influencing locational decisions of MNEs within and in Hangzhou. This mean rank method was deemed appropriate given the relatively random distribution of the rank ordering of the three most important factors given by the respondents. A parallel investigation of location decisions of MNEs within and in Hangzhou was necessary because a comparison of the mean ranks based on similar factor sets, as the following discussion in this section shows, reveals the subtle roles of local formal institutions concerning investments at the district or zone level and their impact on intramunicipal locational decisions of MNEs.

Table 4 shows that local formal institutions, in terms of provision of better financial incentives by government or quasi-government entities at the development zone level, constitute the most important factor influencing locational decisions within Hangzhou. This local institutional role has a significantly higher mean rank than most of other intramunicipal location factors in Table 4. It also has a significantly higher mean rank than its municipality location factor counterpart in Table 5. The primary significance of this institutional role at the zone level indicates the more detailed benefits-seeking behavior of MNEs in intramunicipal locational decisions given a prospective municipality choice. Foreign investors are likely to maximize their additional benefits gains beyond the national standard through parallel negotiations with the authorities of a few selected development zones at their preferred municipal location. Such behavior is more clearly defined than that at the regional or intermunicipal level, and pertains to specific monetary items such as extended tax holidays and various fees that have set measurable limits. Since most district governments and zone authorities generally have a high level of discretion in the provision of such additional benefits, the ability of a development zone to successfully compete against its intramunicipal rivals for foreign investment therefore hinges in large part on its fiscal strength. As such, municipal districts or development zones that are stronger fiscally, especially at the beginning of the foreign investment development process, are more likely to be successful.

Accordingly, the case of Xiaoshan is instructive. As an original county-level city with a strong economic development tradition, Xiaoshan is active in soliciting foreign

TABLE 4. LOCATION DECISION FACTORS OF THE SURVEYED FIEs WITHIN HANGZHOU^a

Factor group/factor	Mean rank	Rank order
Institutions (Development zones/municipal districts)		
Better financial incentives	.80	1
Better industrial infrastructures	.77	2
Better attitudes toward FDI	.57	3
More sophisticated and efficient administration	.23	7
Institutions (Municipal/others)		
Location of Chinese partner(s)	.30	4
Advised or requested by municipal government	.13	10
Land		
Lower land cost or land use fees	.27	5
Better land availability	.23	7
Location		
Closer to downtown Hangzhou	.23	7
Closer to seaports or airports	.18	9

^aMean rank is the total number of times a factor ranked as among the three most important ones divided by the total number of responding firms. The sum of mean ranks equals 3.0 if each responding firm only ranks three factors. The sum of mean ranks in the table exceeds 3.0 (3.71) as the responding firms can give the same rank to more than one factor.

Source: The survey.

investments for its ETDZ, offering an enterprise income tax holiday that can be twice the national standard. FIEs with a registered capital of at least US\$1.5 million can enjoy a 100% reduction of the enterprise income tax for the first five years after they become profitable, and an additional 50% tax reduction for the following five years (interview with officials of the Xiaoshan ETDZ, 2001). Xiaoshan is able to finance this additional incentive because of the revenues from its dynamic, private-enterprise industrial base, which provides the needed start-up fiscal resources for subsidizing the foreign investment development process. This development effort was reinforced by the success of Xiaoshan's government to upgrade the status of its zone from an initial county-level to a national-level zone in 1993, allowing the government to solicit larger investments through a more stable, nationally regulated investment environment and higher FDI approval ceilings. This successful status upgrading was entirely a local effort. Xiaoshan's government organized an internal task force to apply for reclassification as a national-level zone, and dispatched it directly to Beijing to obtain necessary national-level support despite the intention of its home province to establish such a zone elsewhere (interview with officials of the Xiaoshan ETDZ, 2001). This reclassification of the Xiaoshan ETDZ makes Hangzhou one of the few major municipalities in China that contains more than one national-level development zone. The success of Xiaoshan in upgrading its zone amid divergent provincial intents underscores the strong local development tradition in northern Zhejiang Province.

TABLE 5. LOCATION DECISION FACTORS OF THE SURVEYED FIES IN HANGZHOU^a

Factor group/factor	Mean rank	Rank order
Institutions (municipal)		
Better financial incentives	.57	1
Location of Chinese partner(s)	.36	4.5
Better attitudes toward FDI	.34	6
Better industrial infrastructures	.32	7.5
Labor and supplies		
Lower labor cost	.50	2
Better availability of skilled labor	.36	4.5
Better access to material supplies	.27	10
Market and market access		
Better local/regional market potential	.43	3
Closer to major seaports/airports	.32	7.5
Location of major customers	.30	9
Other		
Better urban amenities	.20	11

^aMean rank is the total number of times a factor ranked as among the three most important ones divided by the total number of responding firms. The sum of mean ranks equals 3.0 if each responding firm only ranks three factors. The sum of mean ranks in the table exceeds 3.0 (3.97) as the responding firms can give the same rank to more than one factor.

Source: The survey.

The use of additional financial incentives is deemed necessary by Xiaoshan's government in order to overcome the apparent superiority of the Hangzhou ETDZ in the provision of industrial infrastructures, the local institutional factor that is considered second most important in influencing intramunicipal locational decisions of MNEs (Table 4). As with better financial incentives, the significantly higher mean rank than its municipal location factor counterpart reflects the more focused certainty-seeking behavior of MNEs in intramunicipal locational decisions given a prospective municipal choice. Unlike infrastructures in general terms, those sought at the intramunicipal level include graded land and utilities specific to the construction and operational requirements of individual investor companies. Development zones that possess quality infrastructures are therefore more attractive to major investments even if they are fiscally disadvantaged relative to their intramunicipal rivals in additional incentives provision. The development of the Hangzhou ETDZ follows this trajectory. With its national-level status and a relatively top-down development effort at inception, the Hangzhou ETDZ is more suitable than the Xiaoshan ETDZ for investments that have more stringent construction and operational requirements. However, as a zone in the original municipality proper dominated by financially stricken state enterprises at the beginning of the foreign investment development process, the Hangzhou ETDZ has been limited in providing additional financial incentives beyond the national standard to foreign investors. But it is this original municipality proper location

that has attracted foreign investors to the zone, particularly those associated with state enterprises.

The choice of the Hangzhou ETDZ by the interviewed Sino-Japanese joint venture is a good example. This venture is the third investment of its Japanese parent company in the original municipality proper. Unlike the first two ventures that utilize the existing facilities of the Chinese partners in the urban core, the Japanese MNE decided to locate its third venture here because of the availability of needed space and physical infrastructure. The Japanese MNE confined its site selection process to the original municipality proper so as to maintain well-established local area relations. The location of the venture outside the original municipality proper would imply revenue loss to the area, and would also imply a weakened relationship between the Japanese MNE and the urban core that contains the municipal and higher-level governments.

The intention of the Japanese MNE to maintain good local relations in turn highlights the significance of the positive attitudes of development zone authorities—the third most important local institutional factor for influencing intramunicipal location decisions by foreign investors. The attitudes of zone authorities deemed significant by foreign investors are subtle, and pertain not only to the extent of openness in terms of fewer investment restrictions, but also to the degree of perceived willingness and flexibility in servicing foreign investors before and after the establishment of their ventures. Services the surveyed FIEs considered important include liaison with higher-level government entities, smooth transactions with zone authorities, and assistance for venture operations.

The presence of significant differences in mean ranks among the comparable factors in Tables 4 and 5 indicates the varying effects of those factors on MNE locational decisions between scales. The varying effects can largely be attributed to the degrees of decision relevance of those factors for MNEs at given levels of host governance. Financial incentives, industrial infrastructures, and authority attitudes are factors most relevant to MNE intramunicipal location decisions. Such factors are less relevant at the municipal level because government entities at that level do not directly assume such functions or responsibilities. The nature of those factors at the municipal level is therefore more general and perceived rather than specific and actual. Although the study did not specifically investigate the direction of factor association (or response causality) between the two levels, it is apparent that the financial incentives MNEs received at the intramunicipal level influence the assessed significance of that factor by MNEs at the municipal level. On the other hand, the association of industrial infrastructures between the two levels is bidirectional, as the operations of FIEs are affected not only by the specific infrastructural qualities at the zone or district level, but also by the general infrastructural qualities at the municipal level on which the functioning of its constituent areas depend. There is no association between the two levels with regard to authority attitudes, for in most situations MNEs only need to interact with zone authorities and district governments for their investments.

Given the variations in financial incentives, industrial infrastructures, and authority attitudes among the three zones investigated above, the intramunicipal distribution of FDI in Hangzhou is spatially and structurally differentiated. The emphasis of the Hangzhou ETDZ on machinery and electronics and its superior infrastructures have led to very large investments (average investment size of US\$11.7 million in 2004) by major MNEs including Motorola, Siemens, and Matsushita (interview with officials of the Hangzhou

ETDZ, 2001). By comparison, Xiaoshan ETDZ has attracted mainly large- to medium-sized investments (average investment size of US\$6.4 million) with approximately one-third of the investments coming from Taiwan (interview with officials of the Xiaoshan ETDZ, 2001), whereas the Hangzhou HTZ has attracted medium- to small-sized investments (average investment size of US\$3.3 million) primarily in information technology and related industries. This differentiated pattern of FDI within Hangzhou highlights that medium-sized MNEs, especially those with a single operation in China, give more weight to the financial incentives factor in their intramunicipal locational decisions. Large-sized MNEs are less influenced by this factor because of their capital potency, and generally emphasize the industrial infrastructures and authority attitudes factors. In aggregate, the intramunicipal patterns of FDI are more differentiated than their intermunicipal or regional counterparts because of the smaller number of higher-level (national or provincial) zones within a municipal limit.

INSTITUTIONS AND FIE NETWORK PROPERTIES

With respect to network properties, we focus on the significance of local formal institutions on host sales and purchasing linkages, and whenever appropriate host R&D relations of FIEs. We asked senior managers of the surveyed FIEs about the regional distribution of their annual China sales and purchases. We also asked them how the regional linkages of their establishments were related to relevant local government policies and overseas headquarters strategies.

In host sales the majority of the surveyed FIEs had the Yangzi Delta their focal market. This pattern reflects the general moderate scale of operations of state enterprises in Hangzhou with which most surveyed FIEs embed. This also reflects the general absence of intracorporate networks in China among sole-operating FIEs. A number of the surveyed FIEs are therefore active in developing their host sales channels given their strategic outpost nature and the gradual decontrol of most marketing channels throughout China since the 1990s. As such the interviewed American daily chemical investment has an extensive network of commission-based agents, and the other interviewed German food processing venture has sales outlets in the Yangzi Delta and in other leading Chinese regions. The customers that the surveyed FIEs transact with are of many types, including state enterprises, public shareholding companies, and private firms. In most cases, the spatial structure of the sales networks of the surveyed FIEs in China is partly defined by the nature of their operations. Final-product manufacturers generally have a more diverse spatial reach than intermediate goods producers.

Most of the surveyed FIEs also had the Yangzi Delta as their focal region for host purchases, with about 40% of the surveyed FIEs making the majority of their purchases here. This pattern is attributable not only to the use of the pre-existing purchasing networks of partnered state enterprises among joint venture investments, but also to the ability of indigenous suppliers to cater to the noncore purchasing needs of FIEs. This ability of indigenous enterprises reflects the local development tradition of municipal districts and municipalities in northern Zhejiang Province. Indigenous enterprises have been granted greater autonomy in their business decisions during the post-reform period (interviews with officials of Zhejiang provincial and of Hangzhou municipal authorities, 2001), and are provided with a skilled workforce through the higher education clusters in

the municipality. The ability of indigenous enterprises in servicing FIEs is at a very high level in the textiles and garments industries. The spatial concentration of purchasing linkages of the surveyed FIEs is also a result of the congregation of subsequent allied foreign supplier investments in the municipality and the delta region. This concentration of subsequent allied investments, however, is not associated with specific cluster development strategies of the district governments, but is due mainly to the demand for supplies generated by FIEs not yet captured by the indigenous enterprises in the municipality or the delta region.

Quality and delivery reliability, as indicated by the surveyed FIEs, are two obstacles hindering the development of significant core purchasing relations with indigenous suppliers. As such, the interviewed American daily chemical investment purchased approximately 70%, and the interviewed Japanese electronics investment nearly 100%, of their inputs from other FIEs in the region. Despite the obstacles, foreign investments are likely to increase their future localization levels in the Yangzi Delta. This tendency is highlighted by the interviewed Japanese household appliances venture, which intends to purchase about 95% of its materials and components in the delta region when such supplies become available.

The development of host markets normally necessitates FIEs to perform certain product adaptation or customization activities. Approximately half of the surveyed FIEs with China sales do perform such activities. The surveyed FIEs, however, do not have any significant applied product and process R&D undertakings (Table 3). This situation reflects the absence of sophisticated indigenous technology bases for supporting the R&D activities of FIEs; it also reflects the absence of specific measures by district or municipal governments to facilitate product and process innovations in foreign-invested and indigenous enterprises, and to foster collaborations between the two groups of enterprises (interviews with officials of Hangzhou municipal authorities, 2001). The existing relevant measures are largely confined to financial incentives for promoting investments, both foreign and domestic, in high-technology industries. The general lack of significant R&D activities further reflects the control of MNEs over such activities for asset specificity and for operational management considerations. Most surveyed FIEs therefore had their facility and process layouts transplanted from their foreign parent companies. Although it is likely that FIEs may increase their R&D activities in the municipality as the indigenous technology bases become more sophisticated, specific local institutional measures will be necessary if a certain level of quality R&D activities is to emerge in the municipality.

The intent to increase FIE purchases and R&D network density within the municipality or municipal districts notwithstanding, the policy implications of the regional-linkage reach of firms need to be adequately recognized. Although an assessment of relevant policy implications is beyond the scope of this paper, it can be seen that measures to promote an overall increase in international quality and management practices among indigenous enterprises, while necessary, may not produce significant FIE linkage returns within the municipality or municipal districts in the short to medium run given the presence of more sophisticated and established supplier bases elsewhere in the delta region. Measures to promote a lead-firm cluster approach similarly tend to have limited effects because medium-sized establishments that dominate the foreign investment structure generally lack significant backward linkage potential, and because locational decisions of

subsequent allied foreign supplier investments may be more affected by the wider business opportunities in the region than by the specific relations with established FIEs in the municipality. Locational decisions of such investments may also be influenced by the varied financial incentive structures in the region than by the co-location benefits in the municipality or municipal districts. The regional orientation of firm linkages, along with underlying corporate and business processes, generally renders the actions of municipal and district governments for promoting FIE network density within their jurisdiction a less effective exercise. Nonetheless, the municipal government may be able to increase FIE network density within its jurisdiction through a range of measures including entry mode restrictions and indigenous enterprise development. Local protectionist measures that are industry-specific, such as those associated with the automotive industry in Shanghai, may also be viable when favorable conditions are present (Depner and Bathelt, 2005). In comparison, the measures that municipal district governments can employ are confined mainly to special incentive provisions for co-locating allied foreign supplier investments.

CONCLUSION

Through interviews with local government officials and a survey of FIEs, this study has shown that local formal institutions in terms of municipal district governments and development zone authorities are a significant force influencing the intramunicipal locational decisions of MNEs in Hangzhou. The importance of local formal institutions lies first in modulating MNE risks with financial incentives, second in supporting FIE operations with industrial infrastructures, and third in enhancing investment environments with quality administration. These roles of local formal institutions are especially significant at the development zone level due to the direct administrative relationships between the zone authorities and foreign investors. Because the provision of financial incentives and industrial infrastructures entail substantial monetary resources, the start-up fiscal capability of local formal institutions is central to their initial success in establishing FDI inflow in an era of administrative decentralization (Fu, 2000). The effect of start-up fiscal capability on FDI inflow can be highly cumulative. Local formal institutions can reinvest their revenue gains from initial rounds of foreign investment, including proceeds from land sales and enterprise income tax, for subsequent foreign investment development efforts; they can become financially more potent for strengthening the inflow of global capital. Although the start-up fiscal capability of local formal institutions is partly geographically and historically endowed, it is the specific institutional efforts, as highlighted by those in Xiaoshan, that exploit such advantages and define the realms of competition between places at the intramunicipal level. Specific formal institutional efforts to exploit such advantages similarly define the realms of competition between places at and above the municipal level.

Local formal institutions, however, are a less significant force influencing the network properties of FIEs in Hangzhou. The effect of joint-venture investment requirements on FIE local network density, although viable in the early stages of the open-door policy, gradually diminishes with increasing economic openness over time. The regional orientation of firm linkages, a pattern similarly discerned in other studies (Winder, 1999), further renders the actions of subregional institutions for promoting FIE network

density within their jurisdiction a less effective exercise. The network properties of FIEs, as this study has exemplified, are defined more by the external business opportunities and the internal corporate constraints of establishments. The ready availability of suitable regional supply sources, and the generally explorative functions of medium-sized outposts, can significantly reduce the local networking propensity of foreign investors. A careful examination of regional supply and business conditions, and of establishment functions in relation to the overall configurations of investing foreign firms, are therefore important if effective measures to promote FIE local network density are to be formulated. The examination of establishment functions needs to be comprehensive, embracing not only purchasing but also sales and R&D among other strategic linkages. Studies focusing on a single aspect of establishment operations may not yield appropriate policy recommendations.

The findings that local formal institutions are a significant force influencing the intra-municipal locational decisions of MNEs generally hold for other municipal districts and development zones in China. Regulatory and fiscal empowerment in an era of administrative decentralization is the impetus for articulating global flows by local authorities. Aside from the aforementioned start-up fiscal capability, a fundamental source of power local governments in China have for promoting foreign investment is their ability to acquire large amount of land for developing greenfield zones (Xie et al., 2005; Wei, 2007). This ability rests upon the constitutional right of the state to the land. Local governments can annex agricultural land within their jurisdiction at or below market price for various development purposes. This practice was common in the early stages of the wider open-door policy during the 1990s, and was in most cases accomplished in the context of the master or comprehensive plans of municipalities or municipal districts. However, as social resistance to unjust land acquisition increases and as Beijing implements a land transfer quota system for preserving agricultural land in provinces and municipalities, the ability of local governments to acquire land for urban and industrial development has been reduced (Wei, 2005; Lin, 2007). Re-use of industrial land in existing development zones through gradual displacement of technologically less sophisticated enterprises has become a major means for most municipal and municipal district governments to further their economic development processes.

In addition to the intended objectives, this study has further contributed to an initial understanding of the complex directional relationships of trans-scalar factor associations in the local–global dialogue (Sheppard, 2002). As our findings have shown, in the case of Hangzhou and most likely that of China as a whole, institutionally effected financial incentives as a significant locational determinant of FDI exert most of their influences at the development zone level. The financial incentives MNEs receive from a development zone define the perceived importance of this factor on municipal locational choice by MNEs. On the other hand, functional co-evolution and administrative division of labor render the trans-scalar association of the industrial infrastructures and the authority attitudes factor a bi-directional and an independent one, respectively. By comparison, the effects of formal institutions on network properties of FIEs are most significant at the regional level. Municipal districts and development zones generally have limited ability in promoting FIE network density within their jurisdiction. A deeper understanding of the directional relationships of trans-scalar factor association would facilitate formal institutions at various administrative levels in emerging economies to better articulate global

flows. Studies of the relative significance of locational and network determinants of MNE activities across scales therefore offer a promising direction for future local–global research.

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