

Urban Policies of Some Port-Cities in the Asia-Pacific Region at the Edge of the 21st Century

— With Suggestions for Exchange of Management Knowhows —

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Abstract

This study surveyed the urban policies of twelve port-cities (namely, Hong Kong, Manila, Fukuoka, Osaka, Vancouver, Oakland, Honolulu, Sydney, Dalian, Ningbo, Shanghai and Weihai) in the Asia-Pacific region by mailed questionnaire to mayor's offices or physical/economic planning departments. Emphases within and among the following sectors were studied: housing, economic activity, employment, transportation, urban landscape, ecological development, information and communication, airport, seaport, waterfront, legislative provision, international role, and social welfare. Current trends of urban policies are found out to be as follows: (1) economic activities, linked with employment, (2) environment and ecology, (3) intraurban transportation, (4) housing and urban landscape, (5) social welfare, and information and communication. However, a regional breakdown of them shows that American port-cities tend to put emphases on both employment and economic activities while Asian cities on the latter only. The two Japanese cities have different emphases, being varied on transportation, environment/ecology, economic activities but unified on social welfare. The Southeast Asian port-cities of Hong Kong and Manila put much attention to economic activities, housing, employment and environment/ecology. The four Chinese port-cities also give most of their first concerns to economic activities, but then divided themselves among the sectors of intraurban transportation, information/communication, environment/ecology, or seaport. The Australian port-city Sydney gives emphasis to urban landscape, environment/ecology and strengthening of her international role. Needless to say, variations within the same sector under concern can also be observed according to the economic and infrastructure status or their experiences in urban port-city development. Lastly, comments are given on port functions, world city, hinterland relationship, waterfront revitalization, and ways to finance mega-projects, and suggestion to networking among local authorities themselves.

Keywords: Asia-Pacific, port-city, urban policy, urban development, waterfront revitalization.

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I Framework of Study

1.1 Review of Literature

Geographers, sociologists, economists, planners or engineers working on the Third World urbanization and urban studies are confronted with the reality of these cities. Most of them have always been questioning the truth of theories developed from the western models such as Theory of Population Transition, Urbanization, and determinants for urban growth. Some scholars, however, have shed great lights on the studies of Third World cities, for example, Geertz's [1] concept of agricultural involution, Santos [2] in the two circuits of urban economy, and McGee in his early works on rural-urban migration and informal economy [3], proletarianization [4] and Third World cities as centers of production and at the same time "theatres of accumulation" [5], or Rimmer [6] on the varieties of urban transportation modes and incorporation process in Southeast Asian cities.

Recent contributions include the comprehensive review by Lin [7] on the major features as : role of cities in regional development, dualism, transnational capital, socialism, and extended metropolitan regions, or desakota as coded by McGee [8] for region of intensive urban-rural mixture. Gilbert [9] reviews the changing national settlement system of the Third World, indicating varied urban growth rates for different nations but a general slow-down of growth and emerging polycentric form of metropolitan development, and then he comments that the regional policy has not been ineffective as expected. Richardson [10] concludes in his study on mega-city growth that present declining productivity advantages, and that the actual negative externalities may be more severe than those measurable ones.

Rondinelli [11] criticizes the ineffectiveness of urban containment policies for economic development in the past three decades, and observes changes in urban development policies in the 1990s as follows : "(1) mobilizing financial resources for investments in services and infrastructure, (2) improving the efficiency of metropolitan areas as economic units, (3) investing in secondary cities and towns with growth potential and inte-

grating urban and rural markets, (4) seeking greater participation of the private sector in urban development, and (5) decentralizing more administrative and financial responsibilities to local governments in urban areas.”

Rimmer [12], modifying concepts from Batten [13] and Andersson [14], forecasts that the transport and communications in the Pacific Economic Zone during the early 21st century will be denser and with new infrastructure based on multi-layered links, that will replace the former focus on central place hierarchies of conventional cities and mega-regions to network hubs within development corridors where infrastructure endowment is closely related with knowledge, culture and accessibility. He then outlines six macro-economic development corridors in the Pacific Economic Region.

Moreover, the development dynamics of port-city interface has been studied by Hoyle [15], who observes five stages of development, namely, primitive city-port in the ancient-medieval to 19th century, expanding city-port in the 19th-early 20th century, modern industrial city-port in the mid-20th century, and retreat from the waterfront due to changes in maritime technology in the 1960s-80s, and redevelopment of the waterfront at 1970s-90s. The last stage says that large-scale modern port consumes large areas of land-and water-space, and that renewal of original core takes place. This phenomenon of locational and functional separation of port and urban system is not only experienced by city-ports in industrially advanced nations, but also by city-ports of the less developed world.

This retreat phenomenon has also been reported by a Chinese scholar Yang [16], who ranks and classifies different Chinese city-ports according to its economic importance and then states that redevelopment of the old city core is crucial in improving the spatial configuration of coastal cities. Development issues however include improvement in transport mode and network, industrial restructuring and move-out of polluter industries, decentralization of population, environmental improvement and historical preservation. Besides, Yeung and Hu [17] also state particularly the importance of Chinese coastal cities as catalysts for modernization with the illustration of case-studies and caution possible contradictions between economic development and political reform or administrative inef-

iciency in the process.

Japanese studies have placed importance on the rationales and techniques of revitalizing the waterfront [18, 19]. An integrated study of port-cities is carried out by Kitami [20], covering evolution of the interface between the three components of castle-town-port, culture of port-city, economic revitalization and development policy. Urban planning departments sometimes initiate comparative studies on urban development or policies, for example, the Asian Urban Information Center of Kobe [21] compiled a report on the population dynamics and urban problems in ten Asian port-cities.

A recent contribution on the Asia-Pacific arena is the joint effort by Nijkamp and Vermond [22] on elucidating the role of different nations in setting the scenarios of trade relationships by focusing on container transport in the Asian Pacific rim.

1.2 Objectives and Methodology of Survey

Along these trends of thoughts, Cheung and Hamada have surveyed especially on stage of urbanization, urban problems and policy responses [23] and Cheung on the urban development strategies of cities in the Asia-Pacific [24] and Europe [25]. The present study places focus on port-cities in the Asia-Pacific region with the following objectives :

(1) to find out the population and employment status of port-cities in the Asian-Pacific region and the direction of changes in the last two decades with forecast for the future ;

(2) to elucidate the urban development strategies of surveyed port-cities at the edge of 21st century.

(3) The last two decades witness rapid economic growth of the East Asian countries, and call for greater economic regional cooperation for cities and countries in the Asia-Pacific region. This study attempts to strengthen cooperation at local state level, and aims to identify priority areas for exchange programs.

(4) Port-cities in the industrially advanced countries have evolved through various stages of expansion and containerization, separation of the new port from city core, and the present stage of redevelopment of waterfront. Their experiences are to be channeled to port-cities in devel-

oping countries through publishing the survey findings.

This study has been carried out by mailing structured questionnaire to mayor offices or economic/physical planning departments of forty-six port-cities in 1994 and 1995. However, replies have only been available from twelve cities, namely, Hong Kong, metropolitan Manila, Fukuoka, and Osaka in Asia ; Honolulu and Oakland from USA ; Vancouver from Canada ; Sydney from Australia, and Dalian, Ningbo, Shanghai and Weihai from China (Fig. 1). Five other cities have provided incomplete replies, missing the part on attitudes ; they are Xiamen, Guangzhou, Qingdao, Shenzhen and Yantai from China.

The economic growth of these cities can be reflected from their annual growth rate of its gross domestic product per capita of the nation in the period of 1965-90, being 6.2% for Hong Kong, 4.1% for Japan, 2.7% for Canada, 1.9% for Australia, 1.7% for USA and 1.3% for Philippines. Moreover, the GDP per capita for cities in 1990 varies from three to five digits, ranging from US \$580 for Ningbo, \$590 for Weihai, \$710 for Dalian and \$1,210 for Shanghai, China ; \$1,200 for Manila ; \$12,200 for Hong Kong, \$17,300 for Australia, \$20,500 for Canada, \$24,000 for Honolulu ; \$39,500 for Fukuoka and \$67,500 for Osaka, Japan. Actual figures for cities are much higher than the average for their nations (Fig. 2)

The major items surveyed are eleven as follows and given in 1970, 1980, 1990, and 2000 projected, wherever available : —

- (1) city and metropolitan population ;
- (2) administrative and built-up areas ;
- (3) housing ;
- (4) transport and communication ;
- (5) gross domestic product ;
- (6) employment structure ;
- (7) seaport function and capacity ;
- (8) airport function and capacity ;
- (9) tourism and convention ;
- (10) emphases on urban strategy within and among sectors ;
- (11) priority for exchange programs.

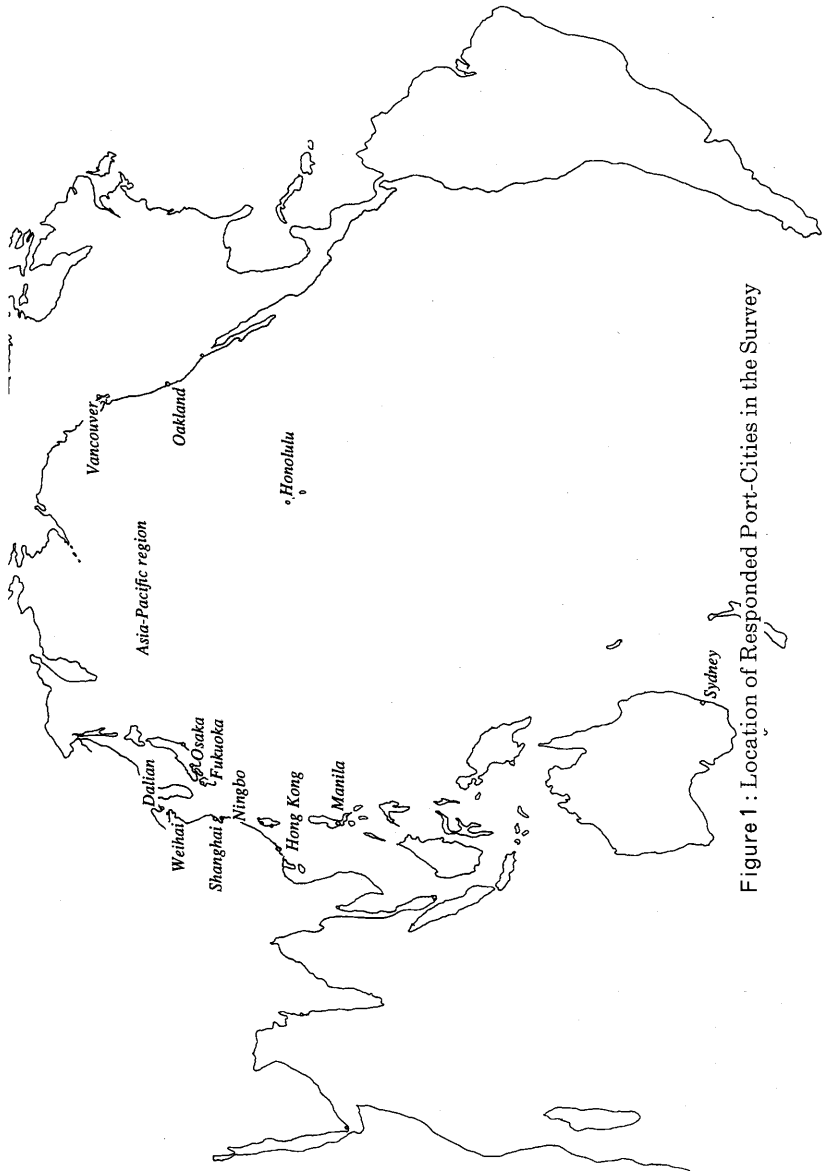


Figure 1 : Location of Responded Port-Cities in the Survey

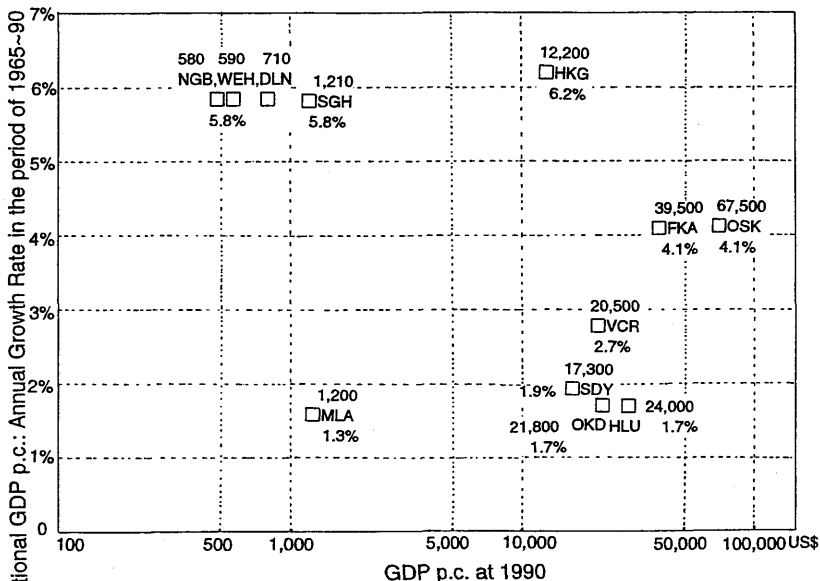


Figure 2 : Annual Growth Rate of National GDP p. c. (1965~90) and Level of GDP p. c. at 1990

Sources : Survey results and World Bank, World Development Report, 1992.

II Results of Survey

Population at the city and metropolitan level are given in Tables 1a and 1b, showing constant increase in cities and metropolitan regions of developing nations and low growth or decrease at central cities of metropolitan regions. Table 2 gives the age structure, for example at the year 1990, eight cities have a senior population (over 65 at age) over 8.5% (Hong Kong, Fukuoka, Osaka, Vancouver, Oakland, Honolulu, Sydney, Shanghai).

The following discussions will highlight the survey results especially on the emphases within and among urban policies, and their priority for exchange programs.

Table 1a : City Population

Cities	City Pop'n 1	City Pop'n 2	City Pop'n 3	City Pop'n 4	City Pop'n 5 pj.	City Pop'n 6 pj.
Hong Kong	3,959,000 1970	5,024,400 1980	5,649,800 1990	5,878,100 1993	6,039,500 2000	6,440,300 2010
Manila	NA	NA	NA	NA	NA	NA
Fukuoka	853,000 1970	1,089,000 1980	1,237,000 1990	1,274,000 1994	1,415,000 2001	NA
Osaka	2,980,489 1970	2,648,180 1980	2,637,434 1990	2,575,000 1994	NA	2,800,000 2005
Vancouver	NA	408,820 1980	459,098 1990	494,487 1993	537,807 2000	562,739 2006
Oakland	362,000 1970	339,000 1980	372,000 1990	NA	NA	NA
Honolulu	NA	NA	NA	NA	NA	NA
Sydney	9,762 1971	9,382 1986	9,300 1990	NA	NA	NA
Dalian	NA	1,629,000 1985	2,396,400 1990	2,449,376 1992	NA	NA
Ningbo	229,090 1970	326,865 1980	1,142,429 1990	1,104,400 1992	1,000,000 2000	NA
Shanghai	5,800,230 1970	6,010,290 1980	7,830,480 1990	7,920,750 1992	NA	NA
Weihai	172,000 1970	201,000 1980	257,000 1990	278,000 1992	350,000 2000	500,000 2010

Table 1b : Metropolitan Population

Cities	Metro Pop'n 1	Metro Pop'n 2	Metro Pop'n 3	Metro Pop'n 4	Metro Pop'n 5 pj.	Metro Pop'n 6 pj.
Hong Kong	NA	NA	NA	NA	NA	NA
Manila	3,900,000 1970	5,900,000 1980	7,900,000 1990	8,500,000 1993	9,800,000 2000	11,480,000 2010
Fukuoka	1,280,000 1970	1,705,000 1980	1,988,000 1990	2,076,000 1994	2,345,000 2000	NA
Osaka	14,538,000 1970	16,145,000 1980	16,532,000 1985	NA	NA	NA
Vancouver	NA	1,243,900 1980	1,534,679 1990	1,713,393 1993	1,950,945 2000	2,113,321 2006
Oakland	4,754,000 1970	5,368,000 1980	6,253,000 1990	6,332,000 1992	NA	NA
Honolulu	630,528 1970	762,565 1980	836,231 1990	836,100 1992	NA	NA
Sydney	NA	3,364,858 1986	3,538,448 1991	NA	NA	NA
Dalian	NA	4,852,600 1985	5,178,000 1990	5,229,038 1992	NA	NA
Ningbo	378,138 1970	924,136 1980	5,090,901 1990	5,167,020 1992	NA	NA
Shanghai	10,720,550 1970	11,460,520 1980	12,830,350 1990	12,890,370 1992	NA	NA
Weihai	2,100,000 1970	2,190,000 1980	2,374,000 1990	2,393,000 1992	2,600,000 2000	3,000,000 2010

Note : Osaka Metropolitan Area consists of Osaka, Hyogo and Kyoto prefectures.

Table 2 : Age Structure

	Age	1970	1980		1990		1993/4	2000	2010
Hong Kong	0-14	37.10	25.50		21.40		19.90	16.50	15.20
	15-64	58.60	68.10		70.10		70.90	72.10	72.80
	>65	4.30	6.40		8.50		9.20	11.40	12.00
Manila	0-14	39.58	34.72		33.51		NA	NA	NA
	15-64	58.44	62.89		64.08		NA	NA	NA
	>65	1.98	2.39		2.41		NA	NA	NA
Fukuoka	0-14	22.60	23.20		18.90		17.5	18.50	NA
	15-64	72.00	70.00		72.00		72.1	68.50	NA
	>65	5.40	9.20		9.20		10.4	13.10	NA
Osaka	0-14	21.70	20.50		18.10		NA	2005)	16.50
	15-64	72.40	70.20		71.50		NA		66.00
	>65	5.90	9.20		10.30		NA		17.50
Vancouver			86) City	CMA	91) City	CMA			NA
	0-14	NA	14.00	18.40	14.20	18.60	NA	NA	NA
	15-64	NA	71.00	69.60	71.80	69.20	NA	NA	NA
	>65	NA	15.00	12.10	14.00	12.20	NA	NA	NA
Oakland	0-14	27.40	24.30		24.90		NA	NA	NA
	15-64	59.40	62.50		64.00		NA	NA	NA
	>65	13.20	13.20		12.00		NA	NA	NA
Honolulu	0-14	30.00	23.00		20.80		NA	NA	NA
	15-64	65.00	69.70		68.20		NA	NA	NA
	>65	5.00	7.30		11.00		NA	NA	NA
Sydney	0-14	11.27	NA		8.01		NA	NA	NA
	15-64	77.08	NA		80.46		NA	NA	NA
	>65	11.65	NA		11.53		NA	NA	NA
Ningbo	0-14	NA	20.5		18.5	21.0	NA	NA	NA
	15-64	NA	72.9		74.5	72.2	NA	NA	NA
	>65	NA	6.6		7.0	6.8	NA	NA	NA
Shanghai	0-14	NA	NA		9.44		9.21	NA	NA
	15-64	NA	NA		81.18		80.27	NA	NA
	>65	NA	NA		9.38		10.52	NA	NA
Weihai	0-14	NA	NA		21.06		NA	NA	NA
	15-64	NA	NA		71.38		NA	NA	NA
	>65	NA	NA		7.54		NA	NA	NA

Note : The data of Dalian are not available.

2.1 Emphases within Each Sector of Urban Development Strategy

Table 3 shows the emphases of eight responded cities within each sector.

Housing sector is one of the key policy areas for decent housing for citizens and their family development. New town development obtains emphasis status from Hkg (Hong Kong), Mla (Manila), Fka (Fukuoka), Hlu (Honolulu), and all the four Chinese responded cities, Dln (Dalian), Ngb (Ningbo), Sgh (Shanghai), and Weh (Weihai), presumably cities of rapid population growth or urban expansion. Seven cities put emphases on improvement of housing quality and environment, namely Mla, Fka, Osk (Osaka), Sdy (Sydney), Dln, Sgh and Weh. Six cities place their emphasis on adequate number of housing units, namely, Hkg, Vcr (Vancouver), Okd (Oakland), Hlu, Ningbo and Sgh. Redevelopment within the city is emphasized by cities of Hkg, Osk, Okd, Sdy, Dln and Ngb. The hypothesis that urban housing policy will first give attention to quantity and then quality is not all true as some American cities say adequate number is more important, maybe this reflects the absolute growth of these city-ports due to foreign and local immigrations, and at the same time, stratification within these cities has been taking place. Developing nations like China are anxious in urban redevelopments to provide more housing space.

In the sector of economic activity, ten cities give strategic importance to high-tech industries (Hkg, Mla, Fka, Osk, Okd, Hlu, Dln, Ngb, Sgh and Weh). Seven vote for development in services (Hkg, Mla, Fka, Osk, Sdy, Dln and Sgh), and similar number for development in financial and real estate services (Hkg, Mla, Fka, Sdy, Dln, Sgh and Weh). Mla, Okd and Weh also favor development in processing industry. Vcr prefers to promote the city as an international, national and regional business center ; however, she comments that most economic activities depend more on the initiatives of the private sector.

In the sector of employment nine cities vote for improvement in general technological level of human capital (Hkg, Mla, Osk, Okd, Hlu, Dln, Ngb, Sgh and Weh), five pay concern to the brain drain of local skillful labor at intra-national or international levels (Hkg, Fka, Osk, Hlu and Dln). Mla, Okd and Sgh will plan against unemployment, Mla adds

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Sectors and Items of Urban Development Strategy	HKG	MLA	FKA	OSK	VCR	OKD	HLU	SDY	DLN	NGB	SGH	WEH
HOUSING SECTOR												
*adequate number of housing units	1				1	1	1			1	1	
*improvement of housing quality and environment		1	1	1				1	1		1	1
*new town development with fine environment	1	1	1				1		1	1	1	1
*redevelopment within the city	1			1		1		1	1	1		
*others			1	1	1			1				
ECONOMIC ACTIVITY SECTOR												
*further development in agriculture										1		
*development of raw material-oriented industry										1		
*development of processing industry		1				1						1
*development of high-tech industry	1	1	1	1		1	1		1	1	1	1
*development of services	1	1	1	1				1	1		1	
*development of financial & real estate services	1	1	1					1	1		1	1
*others				1	1	1	1					
EMPLOYMENT SECTOR												
*strategy for unemployment		1				1					1	
*improving the general technological level of human capital	1	1		1		1	1		1	1	1	1
*training programs for international corporate management		1								1		1
*allowing reasonable intake of foreign labor workers	1											1
*avoiding the brain drain or emigration of local skillful labor	1		1	1			1		1			
*others				1	1							
TRANSPORTATION SECTOR												
*developing the mass transit or subway for metropolitan region	1	1	1	1				1		1	1	
*developing a public bus network within metropolitan region							1	1	1			1
*developing light rail system as major mode of public transport								1				
*planning workplace and home together	1		1	1	1	1	1		1			1
*others			1			1				1		
URBAN LANDSCAPE SECTOR												
*high-rise built-up environment	1	1					1				1	1
*low-rise built-up environment												
*planning the built environment at human scale			1		1	1		1	1		1	1
*planning the built environment at efficient scale	1							1	1			
*historical preservation		1	1			1	1	1	1	1	1	1
*others				1								
ECOLOGICAL DEVELOPMENT SECTOR												
*recycling of resources		1	1	1	1	1		1				
*prevention of industrial pollution	1	1		1	1	1			1	1	1	1
*abundant provision and systematic planning of green space	1	1		1	1		1	1	1	1	1	1
*conservation & monitoring of coastal & port environment	1	1	1				1		1	1		1
*others											1	
INFORMATION AND COMMUNICATION SECTORS												
*Character And Pattern Telephone Access Information Network		1					1		1		1	1
*Local Area Network		1	1						1		1	
*teleport for satellite telecommunication services		1								1	1	1
*advanced cargo handling information system									1			1
*others				1	1	1						

Table 3 (cont.) : Emphases within Various Sectors of the Urban Policy												
Sectors and Items of Urban Development Strategy	HKG	MLA	FKA	OSK	VCR	OKD	HLU	SDY	DLN	NGB	SGH	WEH
AIRPORT SECTOR												
*expansion of international airport and terminal capacity	1	1	1	1	1		1		1		1	1
*expansion of domestic airport and terminal capacity		1			1	1			1	1		1
*aviation town development				1								
*aiming at hub-airport development for international links	1	1		1	1				1		1	
*others						1	1					
SEAPORT SECTOR												
*deeper and additional berth development	1	1	1	1	1	1			1	1	1	1
*container port development	1	1	1		1		1	1	1	1	1	1
*separation of the newly expanded port from the city core	1		1				1					1
*reduction and rationalization in operation scale		1										
*others				1		1		1		1		
WATERFRONT SECTOR												
*import/export facility development	1	1	1			1	1		1		1	
*heavy and chemical industrial development										1		
*marine sports, recreation, and/or themepark development	1	1		1			1				1	1
*sightseeing and shopping facilities		1			1				1			1
*development with housing provision				1	1							1
*artificial island development with multifunctions		1	1	1								
*land reclamation for multifunctional development	1	1	1				1		1		1	
*others					1					1		
LEGISLATIVE PROVISION SECTOR												
*export-processing zone with tariff exemption		1					1				1	
*import commercial zone for domestic market		1		1					1			1
*industrial estate development with tax incentives		1							1		1	1
*enterprise zone development with tax incentives		1										
*legislation preparation for the coastal zone	1	1		1					1			
*others					1							
INTERNATIONAL ROLE SECTOR												
*the city as an international financial center	1	1		1	1			1	1		1	
*the city as an key entropot	1	1			1	1			1	1	1	1
*the city as international cultural/arts/fashion center		1	1	1				1	1			
*the city as international research and innovation center		1										1
*the city as an international convention and messe center		1	1	1			1	1				
*the city as a tourist recreation resort		1			1		1	1				1
*others					1						1	
SOCIAL WELFARE SECTOR												
*strategy for the aging society			1	1	1		1	1			1	1
*strategy for single-parent families					1	1						
*strategy for the handicapped in urban environment		1	1	1	1			1	1			1
*social insurance policy for all residents									1		1	1
*others							1	1			1	

Table 3 (cont.) : Emphases within Various Sectors of the Urban Policy

Abbreviations : HKG for Hong Kong ; MLA Manila (Philippines) ; FKA Fukuoka and OSK Osaka (Japan) ; VCR Vancouver (Canada) ; OKD Oakland and HLU Honolulu (USA) ; SDY Sydney (Australia) ; DLN Dalian, NGB Ningbo, SGH Shanghai & WEH Weihai (China). Altogether 12 cities have responded.

- Notes: 1) HOUSING : Fukuoka, promoting the settling of, especially middle-income families at city center, to achieve proximity between workplace and home; Osaka, promotion of middle-income families and foreign businessmen, artists, youths to settle in the city; Vancouver, affordable housing; Sydney, to develop a "living" city.
- 2) ECONOMIC ACTIVITIES : Osaka, promotion of frontier industries such as bioindustry, environment, information, new materials & etc.; Vancouver, to promote the city as an international, national & regional business center, however, most activities depend on private-sector initiatives; Oakland, to promote development in business that provide stable, well-paying jobs at various skill levels; and Honolulu, tourism.
- 3) EMPLOYMENT : Osaka, securing job provisions and preventing hollowing-out of industries; Vancouver, the city's role is to encourage and assist entrepreneurs, most employment provisions are federal and provincial government responsibilities.
- 4) TRANSPORTATION : Fukuoka, to streamline the transport activities at city center, to promote the urban highway system as the trunk road network, and to strengthen the nodal function at railway stations & etc.; Oakland, to convince people to use existing transit; Ningbo, to develop the land, marine, and air networks with the port as the center.
- 5) URBAN LANDSCAPE : Osaka, promoting efficient utilization of land use to meet the needs of economic activities, and to improve human urban environment and landscape by providing amenities; Vancouver, human scale in the sense of mixture of low/medium/high-rises with parks and other amenities to provide quality living environment.
- 6) ECOLOGICAL DEVELOPMENT : Shanghai, starting the green belt project with a perimeter of 97 kilometers and a width of 500 meters.
- 7) INFORMATION / COMMUNICATION : Osaka, regional informatization; Vancouver, participation of citizens in local government decision-making; Oakland, to develop fiber-optic infrastructure;
- 8) AIRPORT : Oakland, expansion of air cargo facilities; Honolulu, intra-airport people mover systems.
- 9) SEAPORT : Osaka, redevelopment of port area; Oakland, more efficient intermodal rail access; Sydney, move into higher value-added export/import status; Ningbo, to become the deep-sea berth area of the new Shanghai port complex, and as an independent deep-sea port.
- 10) WATERFRONT : Vancouver, expanding cruise/ship facilities; Ningbo, to develop electricity, heavy & chemical, iron & steel, automobile, and construction materials industries, and act as support base for East Sea oil extraction & marine products processing.
- 11) LEGISLATIVE PROVISION : Vancouver, to maintain adequate supply of industrially zoned land in the city;
- 12) INTERNATIONAL ROLE : Vancouver, all of the above, international, national, and regional business center for trade, travel and commerce; Oakland, entrepot means an intermediary center for trade and transshipment; Shanghai, an international economic center.
- 13) SOCIAL WELFARE : Oakland, strategy for low-income/unemployed (education, training, jobs); Sydney, strategies for youth, especially aboriginal and immigrant groups; Shanghai, medical insurance and public provident fund program.

training programs for international corporate management. Hkg and Weh favors a reasonable intake of foreign labor force.

In the sector of transportation, seven cities stress to develop a transport network with mass rapid transit or subway system for the metropolitan region (Hkg, Mla, Fka, Osk, Sdy, Ngb and Sgh). Four cities put their present emphases on developing/improving its bus network (Hlu, Sdy, Dln and Weh), and one city on light rail system (Sdy). Eight out of the twelve responded favor to plan workplaces close to housing.

In the urban landscape sector nine cities vote for historical preservation (Mla, Fka, Okd, Hlu, Sdy, Dln, Ngb, Sgh and Weh). Then seven cities (Fka, Osk, Okd, Sdy, Dln Sgh, and Weh) stress on planning their physical city forms to human scale, while three (Hkg, Sdy, and Dln) on planning their city forms to efficient scale. It seems Sdy and Dalian can find a compromise for its urban landscape between human and efficient scales. Five cities will put continual emphases on high-rise built environment (Hkg, Mla, Hlu, Sgh and Weh).

In the sector of ecological development, ten cities put emphases on abundant provision and systematic planning of green space. Nine cities pay attention to prevention of industrial pollution, including all the four Chinese cities. Recycling of resources have gained six votes. Conservation and monitoring of coastal and port environment has gained seven votes showing recent concerns of policy-makers and planners.

Next, the information and communication sector, building Local Area Network is emphasized in the cities of Mla, Fka, Dln and Sgh. The Character And Pattern Telephone Access Information Network (CAPTAIN) gains emphases in Mla, Hlu, Dln, Sgh and Weh. On the whole, the general picture is a mixed one. Osk mentions its emphasis on regional informatizations, Vcr on participation of citizens in local government decision-making, and Oakland to develop the optic fiber infrastructure for communication.

In the airport sector, nine cities among the twelve responded put emphasis on expansion of international airport and terminal capacity (Hkg, Mla, Fka, Osk, Vcr, Hlu, Dln, Sgh, and Weh). Six cities for expansion of the domestic airport and terminal capacities (Mla, Vcr, Okd, Dln, Ngb, Weh). Six cities aim for hub-airport development for international air-

links (Hkg, Mla, Osk, Vcr, Dln and Sgh). Besides, Osk stresses on aviation town development at the same time. Okd will put emphasis on expansion of air cargo facilities, and Hlu on intra-airport people mover system.

In the seaport sector, ten votes each go for deeper and/or additional berth developments. Four ports face the issue of separation of the newly expanded port from the city core (Hkg, Fka, Hlu and Weh). Mla port faces the issue of reduction/rationalization of the existing port in operation scale. Moreover, Osk has to redevelop its port area for other functions to meet the needs of its population. Okd will develop more efficient intermodal rail access, and Sdy plans to move into higher value-added export and import status in the near future. Ngb adds that it will be combined with the new development of external port complex of Shanghai to provide the needed deep berths.

In the waterfront sector, emphasis on the import-export facility development commands seven votes, namely from Hkg, Mla, Fka, Okd, Hlu, Dln and Sgh. Reflecting the mega-trend of tertiarization, six city-ports claim their emphasis on marine sports, recreation and/or themepark development (Hkg, Mla, Osk, Hlu, Sgh and Weh). Four cities (Mla, Vcr, Dln and Weh) claim for sightseeing and shopping facilities, but no city for heavy and chemical industries. Three cities (Osk, Vcr and Weh) see that (re)development with housing provision at the waterfront is important. Six cities consider seriously of land reclamation for multi-functional development (Hkg, Mla, Fka, Hlu, Dln and Sgh), and three cities for artificial island development with multifunctions (Mla, Fka and Osk).

In the legislative provision sector, four cities now work at legislation preparation for its coastal zone (Hkg, Mla, Osk and Dln). Another four cities are interested at the import commercial zone for domestic market, namely Mla, Osk, Dln and Weh. On the other hand, three cities pay attention to Export-processing zone with tariff exemption, namely, Mla, Hlu, and Sgh. Vcr is concerned with providing adequate industrially zoned land in the city.

In the sector of international role playing, eight votes are given to key entrepot development (Hkg, Mla, Vcr, Okd, Dln, Ngb, Sgh and Weh).

Then, seven votes are bestowed to developing the city as an international financial center (Hkg, Mla, Osk, Vcr, Sdy, Dln and Sgh). An equal number of five votes are given to three separate aspects : promoting the city as an international cultural/arts/fashion center (Mla, Fka, Osk, Sdy and Dln) ; promoting the city as an international convention/messe center (Mla, Fka, Osk, Hlu and Sdy) ; and as tourist recreation resort (Mla, Vcr, Hlu, Sdy and Weh). Two for research and innovation center (Mla and Weh). Mla, in fact indicating her interests in all the possibilities, also prepares to develop the city as an international research and innovation center. Vcr, similarly, states that she means all of the above options.

In the social welfare sector, seven cities each work at strategy for the aging or longevity society (Fka, Osk, Vcr, Hlu, Sdy, Sgh and Weh), and at strategy for families handicapped in urban environment (Mla, Fka, Osk, Vcr, Sdy, Dln and Weh). Then, three Chinese cities (Dln, Sgh and Weh) pay special concern to social insurance policy for all residents, reckoning with recent transformation in its social security system. Two cities (Vcr and Osk) put emphasis on strategy for single-parent families. Okd works at strategy for low-income or unemployed in terms of education, training, and job referral. Sydney works at strategies for the youth, especially for aboriginal and immigrant groups. Shanghai says that she puts emphasis on preparing medical insurance and public provident fund programs under the urban transformation from planned to market economy.

2.2 Strategy Emphasis Among Sectors

Thirteen items from the last question were listed for respondents to rank their importance according to their strategic preference. Items are ranked as first, second, and third. The subtotal scores for each item are obtained by adding up the rankings after transformation into weightings, three marks for the first, two marks for the second and one mark for the third rank.

The greatest score of 22 is obtained by "economic activities", with first-rank votes from Hkg, Mla, Hlu and Dln, and second-rank votes from Osk, Okd, Ngb, Sgh and Weh. The next is "environment and ecology" with 10 marks, from Vcr, Fka, Sdy, Weh and Hkg. Then come "intra-

urban transportation” with 9 marks, where Fka and Vcr rank it as their first, and Sgh as the second strategic sector. “Employment” gets 6 marks, to which Okd claims as its first and Hlu the second importance. Furthermore, in descending order, we find “housing” and “urban landscape” with equally 5 marks ; “information and communication” and “social welfare” with equally 4 marks, and “international role” with 1 mark. Osk adds that development of new culture, environment and international role are its strategic emphases though it is difficult to rank them (Table 4).

Strategy Emphases with Priorities	Rankings given by cities as 1st, 2nd, and 3rd											Weightings (Calculated 1)	Row Rank	
	HKG	MLA	FKA	OSK	VCR	OKD	HLU	SDY	DLN	NGB	SGH			WEH
Housing	2	2					3						5.00	5
Economic activities	1	1		2		2	1		1	2	2	2	22.00	1
Employment		3				1	2						6.00	4
Intraurban transportation			1		1				3		2		9.00	3
Urban landscape							1	2					5.00	5
Environment and ecology	3		2		1		2				2	2	10.00	2
Information and communication											2	2	4.00	7
Airport													0.00	
Seaport										1			3.00	9
Waterfront													0.00	
Legislative provision													0.00	
International role								3					1.00	10
Social welfare			3	2		3							4.00	7
Others 2)				2									—	

Notes : 1) Weight Calculation : it is calculated by assigning three marks to the 1st rank, two marks to 2nd rank, and one mark to the 3rd rank, and the total for each row can thus be obtained by summing up those scores for all responded cities.
 2) Others : Osaka, development of new urban culture ; some other emphases are related to environment & international role.

2.3 Priorities in Urban Management for Exchange

Eleven items of urban management knowhows or technologies for exchange, including to offer and/or to receive, are listed for responded cities to give their priorities. On the side of “to offer”, physical planning or land adjustment techniques are checked by Hkg, Vcr, Hlu and Sdy as their priorities, and on the other side of “to receive” too, Hkg and Sdy show

their priorities with Dln and Weh. Okd, Hlu and Sdy are ready to offer the knowhows in port management, and at the same time Hlu has priority to receive the same knowhow, joint by Ngb and Weh. Moreover, Hlu and Sdy are also happy to offer their expertise in historical preservation and, park and green space planning. Besides, Vcr and Sdy are also ready to offer their knowhows in financial management, Sdy in vehicular transport system, and Hlu especially in tourism. Dln offers housing, industrial development and economic vitalization for exchange.

On the other side of "to receive", four cities (Mla, Okd, Hlu, Sdy, Sgh and Weh) are anxious to receive knowhows in economic vitalization. Four cities including Okd, Hlu, Sdy and Dln have priorities in receiving knowhows in convention and tourist development; then, Mla, Hlu, Sdy and Sgh in housing development; and Vcr, Hlu, Sdy, Dln and Weh in vehicular transport system. Four cities have priorities in receiving technology transfer in mass railway or subway system (Hlu, Sdy, Dln and Sgh), three other cities (Vcr, Hlu and Weh) in historical preservation. Sdy is willing to receive/exchange their knowhows in park and green space planning, and then Hlu, Dln and Sgh to receive in financial management, and Mla to receive in industrial development.

III Concluding Comments

3.1 Current Trends of Urban Development Strategy in Cities in the Asia-Pacific Region

The significance of this study is limited by the number of respondent cities and the results have to be verified in further surveys, but, they show certain trends of urban policy or development strategy in the temporal-spatial context, that is, port-cities in the Asia-Pacific region at the edge of 21st century.

The current trends of urban development strategy in surveyed cities indicate that their priorities are as follows: (1) economic activities, may be linked with employment; (2) environment and ecology; (3) intra-urban transportation; (4) housing and urban landscape; (5) information and communication, and social welfare.

Different priorities have different meanings. The priority given to

Table 5 : Exchange of Urban Management Knowhows and/or Technologies

Items of Priority	To Offer	To Receive
Mass railway/subway system		HLU,SDY,DLN,SGH
Vehicular transport system	SDY	VCR,HLU,SDY,DLN,WEH
Port management	OKD,HLU,SDY	HLU,NGB,WEH
Physical planning/land management	HKG,VCR,HLU,SDY	HKG,SDY,DLN,WEH
Housing development	DLN,NGB	MLA,HLU,SDY,SGH
Industrial development	DLN	MLA
Economic vitalization	DLN	MLA,OKD,HLU,SDY,SGH,WEH
Convention and tourist development		OKD,HLU,SDY,DLN
Historical preservation	HLU,SDY	VCR,HLU,WEH
Park and green space planning	HLU,SDY	SDY,DLN,WEH
Financial management	VCR,SDY	HLU,DLN,SGH
Others : Tourism	HLU	
Abbreviations : DLN Dalian (China), FKA Fukuoka (Japan), HKG Hong Kong, HLU Honolulu (USA), MLA Manila (Philippines), NGB Ningbo (China), OKA Oakland (USA), OSK Osaka (Japan), SDY Sydney (Australia), SGH Shanghai (China), VCR Vancouver (Canada), WEH Weihai (China).		
Note : Fukuoka and Osaka have not indicated any policy consensus for priority yet.		

economic activities reflect the planning and development needs of cities (Honolulu and Oakland) in USA for more better-paid jobs and strategy for the emerging group of urban poor, some unemployed or homeless. They have to enable the economy to grasp opportunities from the expanding flows of trade, capital and people between other places. For Hong Kong, the results reflect her planning needs for its continual development into a regional world city even after the year 1997 when the change of its political status will take place. To Osaka, it means its will to develop into a regional world city with inclination to business, culture, high-tech and bio-industries. To Fukuoka, it also means its intention to play a bigger role in the international arena, and especially more exchange and flows with neighboring Asian nations and cities. For Manila, it means taking a more important role in the Southeast Asian region in various aspects, economic, financial, export, technological and tourism. To Sydney, it means placing emphases on urban landscape, environment and ecology and strengthening its international role in financial, cultural, convention and tourist place.

To Dalian, it means further development in its service economy and high-tech industries, environment and ecology and intraurban transportation. To Ningbo, it means expansion and transformation of its seaport and further development in its economic sector, both in high-tech and raw-material oriented industry, or agriculture. To Shanghai, as a rapidly expanding metropolis, it means pushing further in the service economy, financial and real estate, and high-tech industries, along with building up its infrastructure like intraurban transportation, information and communication sector. To Weihai, it then means development in processing, high-tech and real estate industries, and attention to its environment and promoting development in information and communication sector.

3.2 Ecology and Recycling of Resources

Many local authorities realize that ecological planning go beyond just additional provision of green space, but requires systematic planning and concern for precipitation river flows, landscape, birds and little animals on one hand, and then the human activities on the other. Of course, landscaping under ecological planning attracts tourism, or green tourism. But more important, it is the "living city" for the residents, and promotion for recycling of resources and the deliberate reduction of garbage quantity from every household will help to sustain the environment for future generations. More and more citizens, organized or not, are putting efforts to this concern.

3.3 "Port" Functions, "World City", and Hinterland Relationship

Many local authorities see that infrastructure developed to advanced level and operated at reasonable costs is vital for Friedmann's world city formation [26, 27, 28] under the new international division of labor and competition for advantage. Infrastructure now encompasses container port with berths over fourteen meters in depth, good and efficient intermodal access, and software programs to speed up the import-export customs. It also means for hub-airport with many direct connections to airports overseas and domestic, and with low operating costs. It furthermore means a strengthened "teleport" for serving telecommunications from satellites and optic fiber network to establish a broader wide-area-network for the metropolitan region. World city competition among major city-ports in the Asia-Pacific region necessitates the existing na-

tional policy to give priorities to strengthen selected ports situated at strategic locations with full-set of up-dated facilities, but not for an equitable upgrading for all ports any more. However, it is not possible for all cities to play the role of world cities in Friedmann's terms, cities have to make the best utilization of its resources and be specialized in their functions and specific in their contributing role to its regional setting and at large to the world-system.

On the other hand, new concepts throw light to the relationships between the city-port and its hinterland. The concepts of "localized economic zones", "development corridors", "growth triangles", or "metroplex" extend over national borders and indicate that single or multiple nodal formations are taking place within a networked region. Vision for broader regional planning and development, and competitive strategies will be needed. Major city-ports should serve as the gateway and entrepot to its hinterland which is getting difficult to be demarcated because of borderless activities for international capital and economic integration.

3.4 Waterfront Revitalization

Development of the service economy is the major trend for change of land use at waterfronts. Redundant or vacant spaces due to technological changes are now one by one transformed into shopping, restaurant, museum, amusement, art workshop, music hall, or open and restful space related to the tertiary economy and emerging leisure society. Meanwhile these changes are required to provide more employment for citizens or more opportunities for entrepreneurs to do business. Sometimes, it also necessitates new formation of private-public partnerships, or the "third-sector" organization in Japanese administrative system to arbitrate for different interests involved and to gather the needed capital outlay and personnel to start-off.

3.5 Financing Large Infrastructure Development

Are there any new methods to finance the mega-projects or large infrastructure development in the Asia-Pacific region? Methods vary from mobilizing domestic resources such as public and private partnerships to participation of foreign capital, build-operate-and-transfer (BOT), or setting-up of corporation. The coordination or initiative role

of international agencies with new thinking and methods and genuine participation of involved nations are necessary for big projects of land development encompassing territories of multiple nations such as Tumen River Delta Development Program. However, environment and sustained development, feasibility and impact studies should be the keys in these kinds of international cooperation.

3.6 Networking among Local Authorities and Information Exchange

International agencies such as United Nations Center for Regional Development and United Nations Development Program organize workshops or symposiums at various times to promote transfer of knowhows in building housing, transport, industrial development, urban and regional development, and disaster prevention. Now major cities are also engaged in exchange programs for city government staff of similar departments, setting-up of overseas representative offices, or cooperating in technical workshops, or exchange of urban data for comparative research. Results of this survey suggest many topics for such workshops, to name a few, land use policy and management, economic vitalization, sustainable environment and landscape, amenities and green space planning, tourism and convention, port management and technology, and mass transportation. It is hoped that cities of developed and newly developed nations be more responsive and supportive for such exchange or transfer activities to promote a better and livable world for all.

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Appendix I :

List of Port-Cities in Asia-Pacific Region which have responded to the Survey

Below is the list of city ports to which the questionnaire has been sent in 1995. The twelve cities who have responded to the questionnaire are given in *bold italic*, and five more cities (*italic*) responded incompletely, especially the part on strategies or exchange priorities.

<i>Xiamen (incomplete)</i>	Kaoshiung	<i>Qingdao (incomplete)</i>
Auckland	Kitakyushu	San Francisco
Bangkok	Kobe	Oakland
Bombay	Los Angeles	Seattle
Brisbane	Macau	Shanghai
Calcutta	Madras	<i>Shenzhen (incomplete)</i>
Chittagong	Manila-metropolitan	Singapore

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Colombo	Melbourne	<i>Sydney</i>
<i>Dalian</i>	& Victoria state	& New South Wales State
<i>Fukuoka</i>	Nagoya	Taichung
<i>Guangzhou (incomplete)</i>	Niigata	Tientsin
Hiroshima	<i>Ningbo</i>	Tokyo
<i>Hong Kong</i>	<i>Osaka City</i>	<i>Vancouver</i>
<i>Honolulu</i>	Penang	<i>Weihai</i>
Jeddah	Perth	<i>Yantai (incomplete)</i>
Jakarta	Pusan	Yokohama

Appendix II :

The Responsibilities and Limitations of City Administrations or Responded Organizations

1. Hong Kong (HKG)

Organization : Peggy Chau, for Chief Information Officer, Information & Public Relations Unit, Lands & Works Group of Departments, Hong Kong Government.

2. Manila (MLA)

Organization : Mary Grace B. Ranjo (Director) & Camilo M. Cariso, Planning Support & Research Service, and Edgardo H. Cayton (Deputy General Manager) Office of the Deputy General Manager for Planning, Metropolitan Manila.

3. Fukuoka (FKA)

Organization : Yumi Arigawa, Planning & Research Section, Planning Department, General Affairs Bureau, Fukuoka City Government.

4. Osaka (OSK)

Organization : Masato Nishimoto, Comprehensive Section, Policy Planning Bureau, Mayor's Office, Osaka City Government.

5. Vancouver (VCR)

Organization : Sid Fancy, Director for Economic Development, Vancouver City Administration.

Limitations : (Q10 : on strategic emphases)

- a) economic activity : most of its items are private sector initiatives ;
- b) employment : its items are most responsibilities of federal & provincial government ;
- c) transportation : there are public bus network and light rail system already ;
- d) ecological development : conservation & monitoring of coastal & port environment is the responsibility of federal government ;
- e) seaport : berth and container port developments are responsibilities of federal government corporation.

6. Oakland (OKD)

Organization : Estrellita Boggess, Research Technician, Strategic & Policy Planning, Port of Oakland.

7. Honolulu (HLU)

Organization : Malcolm S. Mcheod, Jr., Department of Transportation, Honolulu City Government.

8. Sydney (SDY)

Organization : John McInerney, Assistant General Manager, & Julie Ambrose, Planning & Building Division, Sydney City Council.

Notes : There is no single metropolitan-wide level of government in Sydney. Administration is shared, at one level by over 40 Councils. "Sydney City Council is responsible for administering the 6. 18 sq. km. comprising the central core and Central Business District of the Sydney metropolitan area (Sydney Statistical Division has an area of 12,407 sq. km.)"

9. Dalian (DLN)

Organization : The first part on municipal data by Yong-Qiang Tang, Director, External Economic Affairs Chamber, Center for Economic Research, Dalian City Government ; and the second part on attitudes and policy emphases by Xing-Kai Zhang, Director of Operation Research Center, Dalian Institute of Light Industries, and also Consultative member for Policy Affairs, Dalian Municipal Government.

10. Ningbo (NGB)

Organization : Center for Economic Research, Ningbo City Government.

11. Shanghai (SGH)

Organization : Center for Economic Research, Shanghai City Government.

12. Weihai (WEH)

Organization : Center for Economic Research, Weihai City Government.

13. Xiamen (XMN)/Amoy

Organization : Center for Economic Research, Xiamen City Government.

14. Guangzhou (GZU)

Organization : Center for Economic Research, Guangzhou City Government.

15. Qingdao (QDO)

Organization : Center for Economic Research, Qingdao City Government.

16. Shenzhen (SZN)

Organization : Center for Economic Research, Shenzhen City Government.

17. Yantai (YNT)

Organization : Center for Economic Research, Yantai City Government.