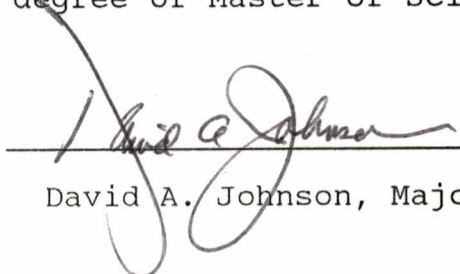


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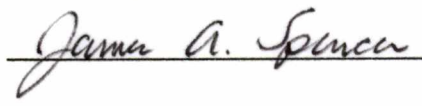
I am submitting herewith a thesis written by Cheng, Ching entitled "Shanghai Pu Dong New Area Development." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science with a major in Planning.



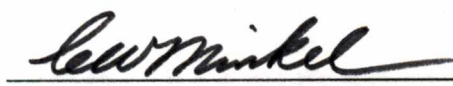
David A. Johnson, Major Professor

We have read this thesis and
recommend its acceptance.





Accepted for the Council



Associate Vice Chancellor
and Dean of The Graduate School

SHANGHAI PU DONG NEW AREA DEVELOPMENT

A Thesis

Presented for the

Master of Science

Degree

The University of Tennessee, Knoxville

Cheng, Ching

May 1992

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ABSTRACT

The Pu Dong new area development is one of the largest projects of China in recent decades. My purpose has been to research the concept plan for Pu Dong such as plan generation, and content. Then, I have evaluated the plan.

This is a case study. I went to China to gather existing statistics, to interview people and to make field investigation in summer, 1991. Most of the data obtained are up-to-date, and come from libraries, government agencies, universities and research institutions.

Shanghai is the largest and most important city of China. Pu Dong, almost as large as the city, is a relatively undeveloped area near Shanghai. The Chinese government intends to develop Pu Dong, expand and modernize Shanghai, in order to facilitate the nation's economy. The Pu Dong project has already been started. But planning should be improved, and requires more research. My thesis is a category of macro-research and emphasizes socio-economic aspects. I described the concept plan comprehensively, associated with the background materials. I used both Chinese macroeconomic theories and Western planning theory to evaluate the plan.

In my opinion, the Pu Dong project could be successful, but should resolve some problems, particularly tight budgets and system conflict. The plan and planning have deficiencies. The comprehensive plan should be completed; the planning organization and process should be improved.

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INTRODUCTION

A. STATEMENT OF THE PROBLEM

The subject of my thesis is the Shanghai Pu Dong new area development. The focus of the study is on the plan and planning of the project. The development has been officially announced. The construction is going on. My research focusses on the following questions: How was the plan generated? What is the content of the plan and existing status of implementation? What is the evaluation of the plan and planning for Pu Dong? What should be done in the future? This thesis tries to answers these questions.

Shanghai is located on the east coast of China with more than twelve million people. It is the most important industrial base, the largest commercial center, and the major hub of water, land, and air transport in China. Shanghai also has a good foundation in education, culture, science and technology, and has a long history in world trade. The Chinese government wants Shanghai to play a leading role in the modernization process of the country, and emerge as a major economic center in the Pacific region. But Shanghai is an old city that has many problems. The most serious problem being the astonishing overcrowding in the urban core. The very high

population density has resulted in serious infrastructure, transportation and housing shortages and degradation.

Shanghai's urban core has another name, "Pu Si". It means the west side of the Huang Pu River. Pu Dong, the east side of the Huang Pu River, is a triangular area with vast flat land. The existing main land use is agriculture in the area. Along the Huang Pu River, about ten percent of the total land was developed with industry and sea ports. Over one million people live in Pu Dong. Separated from Shanghai by a river, the population and building density of Pu Dong are much lower than Pu Si. The Huang Pu River was a major obstacle to the development of Pu Dong. The river, over 500 meters wide, is a major navigation channel with no bridges until 1990.

Although the idea of Pu Dong development came into being in the first quarter of the century, serious discussion began after 1980 under the Economic Reform and opening policy. In 1980, a scholar suggested improvement to the cross river transportation, development of the Pu Dong area, and the combinations of it with the old downtown to form a new urban core. The suggestion initiated extensive discussion and attracted the government's attention. The Shanghai government sponsored conferences, authorized the research and planning that led to proposals for development. The Chinese central government approved the proposal of Shanghai and announced the decision to develop Pu Dong in 1989. The first stage construction began at 1990.

With excellent geographic and economic conditions, and the support of Shanghai, the development of Pu Dong has a bright future. However, even though there are some reforms and some progress, the planning of Pu Dong lags behind the development of the project. The main content of the comprehensive plan, including goals, principles, economic development strategies, physical and economic layouts, major government policies and regulations, is ready. But the Pu Dong plan is incomplete and planning should be continued. There are many deficiencies in plan form, planning process and organization.

I believe that the Pu Dong development can be a successful project, and the planning of Pu Dong can be further improved. The goal of the development is realizable and accepted by the people. The main concepts of the plan are good, and although there are existing and potential problems, the problems are resolvable. The effort should be made to work for this.

In summary, the thesis tries to answer the questions of what the Pu Dong project is and whether the project can reach achievement; what are the plan and the planning process of Pu Dong, and how the planning can be improved.

B. SIGNIFICANCE OF THE STUDY

The Pu Dong new area development is a large scale, long term project. It is the largest and most important project for

China in the decades to come. The goal of the Pu Dong development is not for Pu Dong only, it is for Shanghai, and for the nation. The Pu Dong Development is aimed to shape Shanghai into an international city of the world's first class, and to foster the modernization of the nation. China is a country with a long history, an abundant cultural heritage, and a brilliant past. It should have a bright future. The Pu Dong project is for the bright future, and every Chinese person wants to make some contribution to it.

Shanghai is my home town. I lived there for over 30 years and know its position and problems. I want to see its rejuvenation and modernization. I hope the city will be prosperous and can help the development of the whole nation. I have enthusiasm to do research for it. Furthermore, my personal goal is to be both a teacher and practitioner of planning in Shanghai. It is very possible that I will join the work after I return to China. I would like to know more about it now.

There is much room for research. Successful projects need good planning. Although the development effort has started, China has limited experience in completing such a project. The changing ideology and social structure, and the Economic Reform require a new style of planning. These changes provide planners more chances.

Even though China needs change, the planning cannot ignore the unique Chinese characteristics, particularly the

characteristics of a socialist and developing country. They have significantly influenced the plan and planning of the Pu Dong project. The Chinese economic reform brought about the Pu Dong project, and the Pu Dong development has reflected the Reform. Researches from unique Chinese planning under the Reform may contribute valuable experience to planning theories and practice.

C. METHODOLOGY OF THE STUDY

This thesis is mainly in the form of a case study. Consequently, source materials are very important. Helped by Fu Dan University's associate professor Chen Zhi-rong, who is a native of Pu Dong and has researched the area for several years, I have obtained many important and recent materials.

I used three methods to gather the data and documents:

(1). Gathering existing statistics. The main resources of the existing materials come from libraries and government agencies. I visited the largest library of Shanghai - The Shanghai Library. I also visited the libraries of universities such as Shanghai Administration Institute, Fu Dan University and Tong Ji University. The government agencies I went to are Shanghai Municipal Government, Shanghai Economic Research center and Pu Dong Development Office of Shanghai Municipality.

(2). Interviews. I interviewed the vice president and several division leaders of Pu Dong Development Office of

Shanghai Municipality. I also interviewed a department manager of People's Construction Bank of China, Shanghai Pu Dong Branch. He represents investors. I met a department director of Shanghai Jing Qiao Export Processing Zone Development Company. The company is a developer. In addition, several professors who researched the project granted interviews. A list of the people I have interviewed is in appendix B.

(3). Field investigation. In order to know the latest progress of the project, I went to Pu Dong with associate professor Chen. I investigated the main borders, the main development agencies, several construction sites of the area and took some photographs.

The main materials I obtained are:

(1). Published research papers and a book. The papers were selected by the Pu Dong Development Office of Shanghai Municipality because they had an important influence on the project. The title of the book is The Direction of Pu Dong Development. It is the only book published on the subject by August, 1991. This book was written by the specialists and published by the major planning organization of Shanghai - the Shanghai Planning Institute.

(2). Unpublished government documents and research reports, papers on conferences and international symposium. The Shanghai municipal government authorized the whole project including the planning, and their unpublished documents are important source material. The government documents showed the

project progress, planning process and government decisions. In China, unpublished government documents usually contain more up-to-date, reliable information than published materials.

(3). A map of the concept plan, government-issued policies and regulations, published pamphlets for publicity of the project. These are very important materials for research.

(4). The notes of interviews, photographs.

Most of the materials were written in Chinese. I have translated them into English. Because the Shanghai municipal government is responsible for the research and planning, most of the documents are authoritative.

D. LIMITATIONS OF THE STUDY

The comprehensive plan has not been officially written, but I believe that the plan already exists de facto because the major contents of the plan have been defined. Most of them have become government decisions, and some are in operation. Many materials illustrate and explain the plan. The ideas are the same but their expression often has some difference. I have had to obtain and organize them. This situation may create some limitations.

Furthermore, I feel it is difficult to explain what happens in China to the people who live in the United States because of the difference of the two cultural and socio-economic systems. American people may feel something is

unbelievable that is quite reasonable in China. This creates some limitations.

Another limitation comes from the language translation. It is very hard to translate Chinese into English without some loss or distortion of meaning. Some terminology, particularly some jargon, almost cannot be interpreted accurately because their roots are in Chinese society.

Chinese social economic indexes and their measurement units are different from those of the United States. They are based on socialist theories. Some data I obtained may be inconsistent or exaggerated. The tools of statistics and planning are not very advanced in China. Some government officials intentionally exaggerate the data in order to get the praise of the bosses. Because of the ignorance of the publication law, some books come out with no name of author or publisher, or with a name of a group or organization only.

The Pu Dong new area development is a project now under planning and implementation at the same time. Economic Reform is going on. So, further changes are quite likely.

E. THESIS ORGANIZATION

Mainly, the thesis consists of three chapters. Chapter 1 is under the title "Shanghai, Pu Dong, and Chinese characteristics". Chapter 2 is entitled "The concept plan of Pu Dong development". Chapter 3 is "The evaluation of the plan" . There is an introduction at the beginning of the

thesis and a conclusion at the end.

The first chapter includes general background information about Shanghai, Pu Dong and China. I intend to familiarize the American reader with the area and the country. The extent of the information given is limited to what is essential for the adequate comprehension of the other parts of the thesis. Because the emphasis of the thesis is on the social economic aspects, I have briefly explained the characteristics of the political economic systems of China.

The second chapter deals with the concept plan itself. In section A, I have reviewed the long history of the plan generation and major literatures. Section B, is devoted to the main content of the plan such as goals and principles, physical layout, economic base, transportation, major government policies and regulations. I organized the materials and expressed them in a plan form that Americans are familiar with. In section C, I described the plan implementation stages and current implementation status.

The third chapter focuses on the evaluation. The evaluation is based on the goals and emphasizes social economic aspects. Firstly, I evaluate the goals of the plan. Will Chinese people accept the goals? Are the goals realizable? Secondly, I evaluate the concepts of the plan. As approaches, will these concepts help the goal realization? Thirdly, I evaluate the planning including plan form, planning process and organization. Finally, I present some conclusions.

CHAPTER 1

SHANGHAI, PU DONG AND CHINESE CHARACTERISTICS

A. PROFILE OF SHANGHAI

The Chinese government intends to develop Pu Dong, an area of Shanghai, to promote the modernization of the whole city, to facilitate the prosperity of the whole country, and to strengthen the ability of China to compete in the world economy. Why was Shanghai chosen? Why should Pu Dong be developed? In order to answer these questions, we must know the city - Shanghai.

General Description

Shanghai is the largest city in China. Lying on the eastern fringe of the Yangtze River Delta and in the middle section of China's east coast, it covers an area of 6340.5 square kilometers (see table 1). Bordering on Jiangsu and Zhejiang provinces on the west, Shanghai faces the East Sea on the east with the Yangtze River on the north and Hangzhou Bay on the south. Lying at the mouth of the Yangtze River, it is convenient in communications, wide in hinterland and favorable in geographic location (See Figure 1, p. 12, "The location of Shanghai").

Table 1:
LAND AREA OF SHANGHAI

	Unit:sq.km		
	Total areas	Land area	Water area
Total	6340.50	6218.65	121.85
Urban	748.71	726.04	22.67
Suburban	5591.79	5492.61	99.18

Source: Shanghai Statistics Yearbook 1990.

The topography of Shanghai is flat and the elevation averages about four meters above the sea level. Shanghai has a north subtropical marine monsoon climate, and is warm and moist all year round (Municipal Statistical Bureau of Shanghai, 1990, p. 5).

Shanghai was originally a fishing village. A county in a region, named Huatin was settled in 751 A.D.(in the Tang Dynasty). Shanghai County came into being in 1292 A.D. (in the Yuan Dynasty). By the 16th century, handicraft, textile, and commerce had been extensively developed in Shanghai. By the 17th century, Shanghai had become a major southeastern city with 200,000 people. Later, it gradually grew into a thriving harbor city (Zhao, Xi-lin, 1988, p. 41)

Today, Shanghai is the country's most populous city, claiming a total population of 12.765 million (Municipal Statistical Bureau of Shanghai, 1990, p. 8). Table 2 shows the population size, growth and composition of the city. Shanghai is not only populous for its permanent residents, but also is

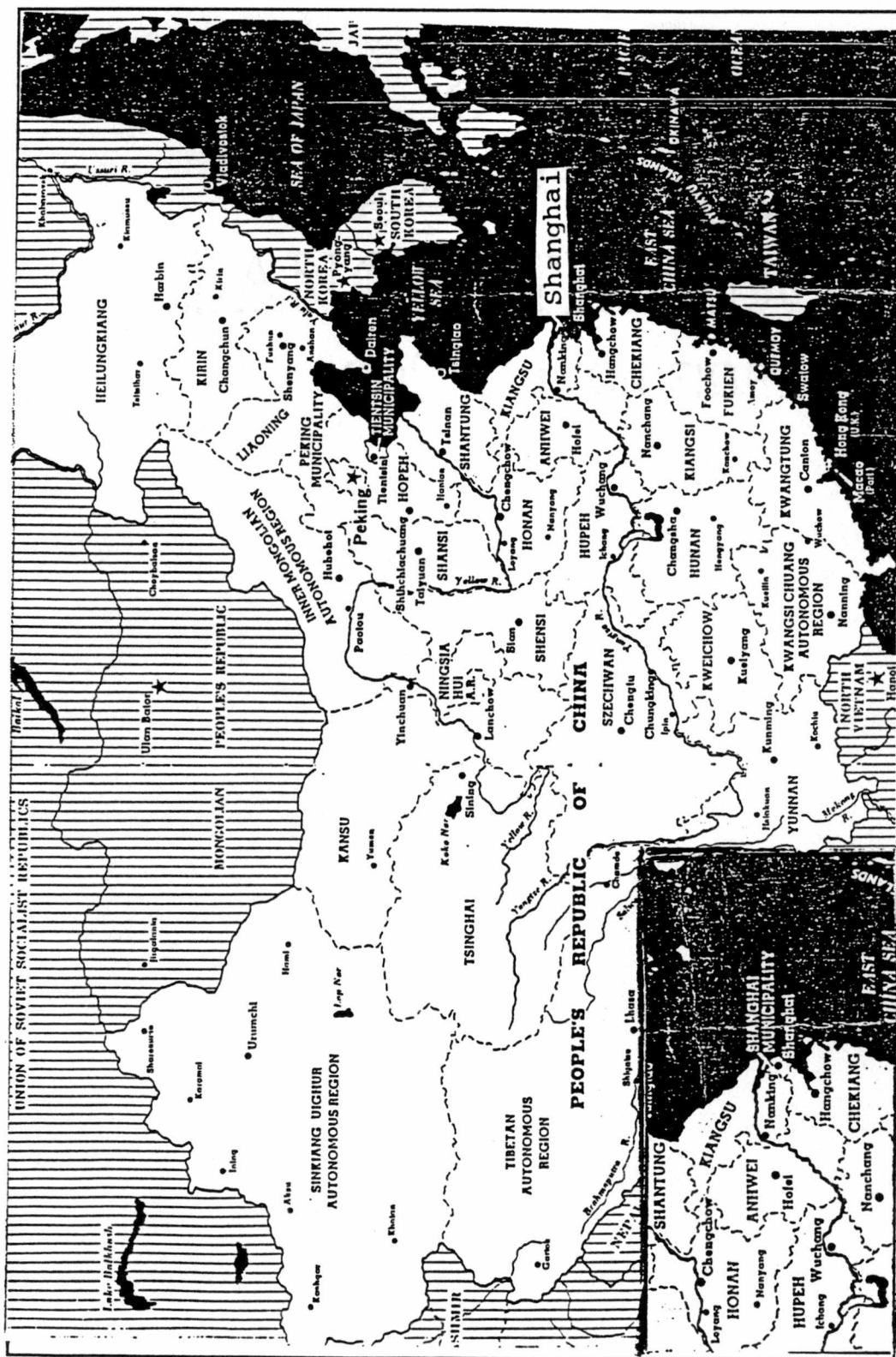


Figure 1: Location of Shanghai. Source by Clubb, Edmond, 1972.

overcrowded by domestic and foreign visitors. Over two million people visit Shanghai everyday for business, conventions, shopping and sightseeing (9.3 Society, 1986, p. 27).

Table 2
POPULATION OF SHANGHAI

Thousand & percentage						
Year	Total	Urban	Suburb	Birth rate	Death rate	Natural growth rate
1952	8505.3	5302.9	3202.4	3.91	0.88	3.03
1965	10095.8	6343.5	3752.3	1.70	0.57	1.13
1978	10982.8	5573.8	5409.0	1.13	0.62	0.51
1980	11465.2	6012.9	5452.3	1.18	0.65	0.53
1985	12166.9	6983.0	5183.9	1.27	0.67	0.60
1989	12764.5	7777.9	4986.6	1.25	0.66	0.59

Source: Shanghai Statistics Yearbook 1990

The average population density of Shanghai is 25,600 person/sq.km (9.3 Society, 1986, p. 31). The nearer the core, the higher the density. In some areas of the central business district (CBD), the population density is over 160,000 person/sq.km (9.3 Society, 1986, p. 31). Figure 2, page 14, shows the population density of Shanghai urban core.

The metropolitan area of Shanghai consists of twelve urban districts and nine suburban counties. Each urban district is divided into several subdistricts.¹ A subdistrict

¹ Shanghai's subdistricts are similar to the United States' communities.

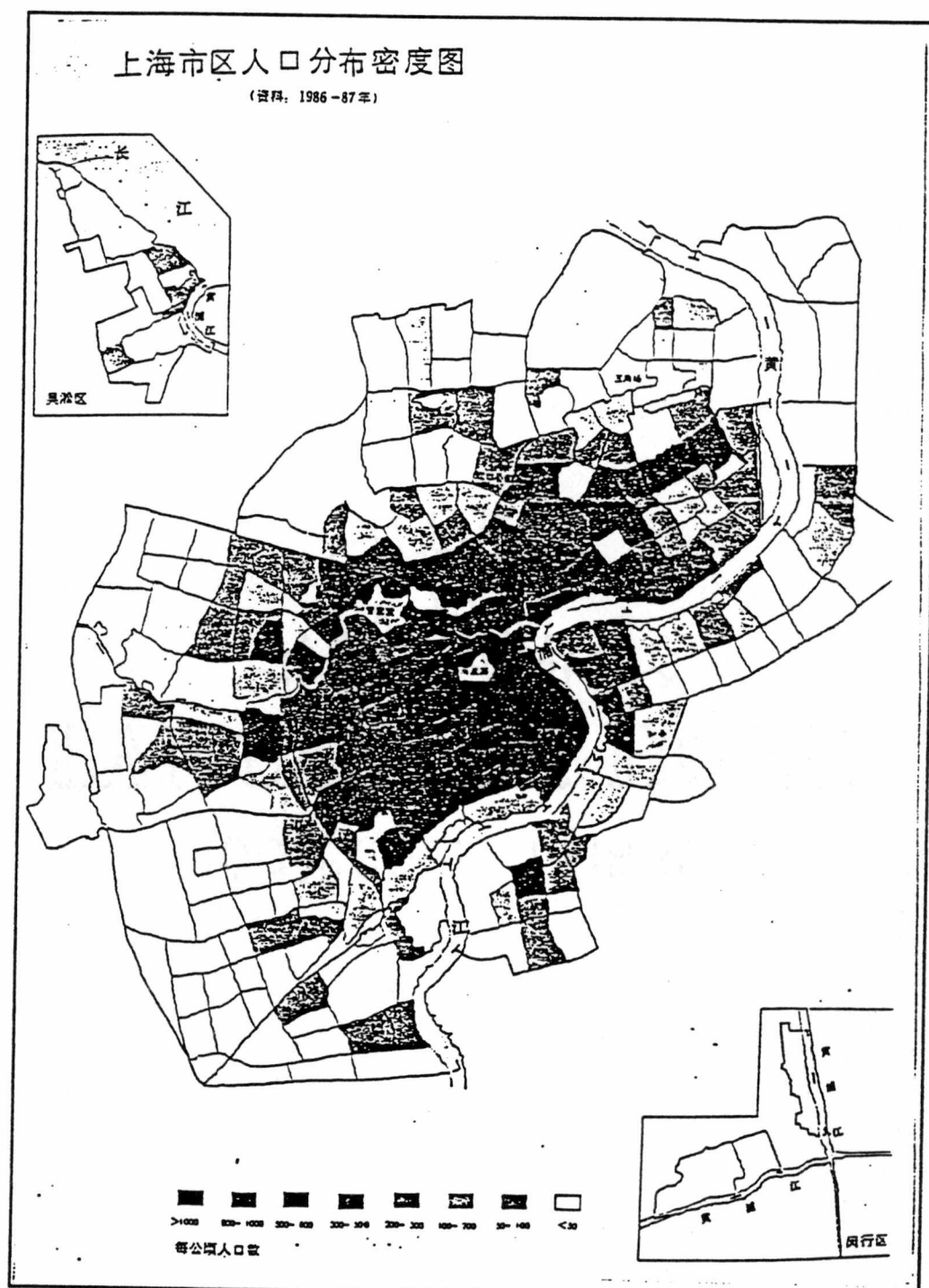


Figure 2. Population Density of Shanghai Urban Core. Source by Shanghai Transportation Research Institute, 1990.

comprises a number of streets². Under a suburban county's jurisdiction, there are townships and villages. Shanghai has a total of 130 subdistricts, 3110 streets, 46 townships and 193 villages (Municipal Statistical Bureau of Shanghai, 1990, p. 7). At every level the local administrative units vary in size.

Position

Although Shanghai has an excellent location and a favorable natural environment, the main factor that sparked the idea of its expansion is the city's important economic position. It is the only Chinese city with a suitable location and economic significance that can play a leading role in the modernization process of the whole country, can compete in the world market, and can be a economic center in the Pacific region.

As a relatively developed area in a developing country, Shanghai has been a long time contributor to the Chinese economy. The importance of Shanghai is illustrated by the following information:

- Total financial revenue is one tenth of the country.
- Total industrial output value is one fourteenth of the country.
- Total cargo handled in Shanghai's ports is one third of

² Shanghai's streets are similar to the United States' neighborhoods.

the country's total.

- Total export of foreign trade is one tenth of the country.

- The Per Capita Gross National Product is RMB 5489 Yuan³. The Per Capita National Income is RMB 4624 Yuan. Both are the highest in the country (Municipal Statistical Bureau of Shanghai, 1990, p. 3). Table 3 on page 17 presents the major economic indicators of Shanghai.

Although industry had been developing for over 140 years, before 1949 the city was well known a major trade center in the Pacific region. After 1949, on the basis of the socialist theories and the national economic development strategy, the Communist Party's government intentionally molded the city into the most important industrial center of the country.

In 1989, there were 13277 industrial enterprises that employed 7,638,000 people. Thirty three major industrial sectors are represented including metallurgy, chemical machinery, shipbuilding, electronics, textiles, pharmaceutical, and handicrafts, etc. During the last decade, new industries such as those producing new metallurgical materials, high polymer compounds, computers, precision instrument, precision-machine-tools and petrochemicals have emerged (Sha, Lin, 1990, p. 4). Shanghai's industry is characterized by comprehensive and diversified development, a skilled and well-educated labor force, relatively advanced

³ About 6 RMB yuan equal to 1 U.S dollar.

Table 3:

THE MAJOR ECONOMIC INDICATORS OF SHANGHAI

	1952	1978	1980	1985	1989
Gross national product (current prices)	3666	27281	31189	46675	69654
million yuan					
National income (current prices)	3345	24551	28242	40973	58684
million yuan					
Freight volume	24200	196460	200370	242430	276610
thousand tons					
Cargo handled in ports	5600	79550	84830	112910	146040
thousand tons					
Total value of retail sales	1979	6081	8861	18316	35279
million yuan					
Total export of foreign trade	119	2893	4266	3361	5032
million U.S. \$					
Total import of foreign trade	6	133	240	1813	2816
million U.S. \$					
Total financial revenue	1930	19067	19885	26386	19693
million yuan					
Local budget revenue	135	16684	17205	18169	15873
million yuan					
Local financial expenditure	210	2601	1918	4607	7331
million yuan					

Source: Shanghai Statistic Yearbook 1990

production technologies and organization, as well as high productivity and better economic results in the country.

Shanghai has become an industrial city. It is also one of the largest commercial and distribution centers in the country. There were over 120,000 shops with a total employment of 670,000, and with total retail sales of RMB 35.279 billion (Sha, Lin, 1990, p. 5). Nanjing Road and its surrounding area is Shanghai's CBD. Nanjing Road, five kilometers in length, is flanked by more than 300 stores providing such an array of commodities that the whole street is described as an exhibition on Chinese economy (Zhao, Xi-lin, 1988, p. 41) (See Figure 3, p. 19, "Nanjing Road"). The financial activities are concentrated on Waitan, a segment of Nanjing Road near Huang Pu River. Shanghai is often considered as the treasury of the Chinese government.

Shanghai emerged as a port city during the early stage of development. Today, Shanghai harbor ranks among the top ten in the world, and handled 146.04 million tons of cargo in 1989 (Sha, Lin, 1990, p. 6). Good geographical location and booming economic activities have helped Shanghai become a major transportation and communication hub. In addition, as a major world trade base of the country, the total value of exports and imports of Shanghai amounted to over \$7.848 billion, of which, exports exceed U.S \$5.032 billion (Municipal Statistical Bureau of Shanghai, 1990, p. 97).

Shanghai is famous for its educational, cultural,

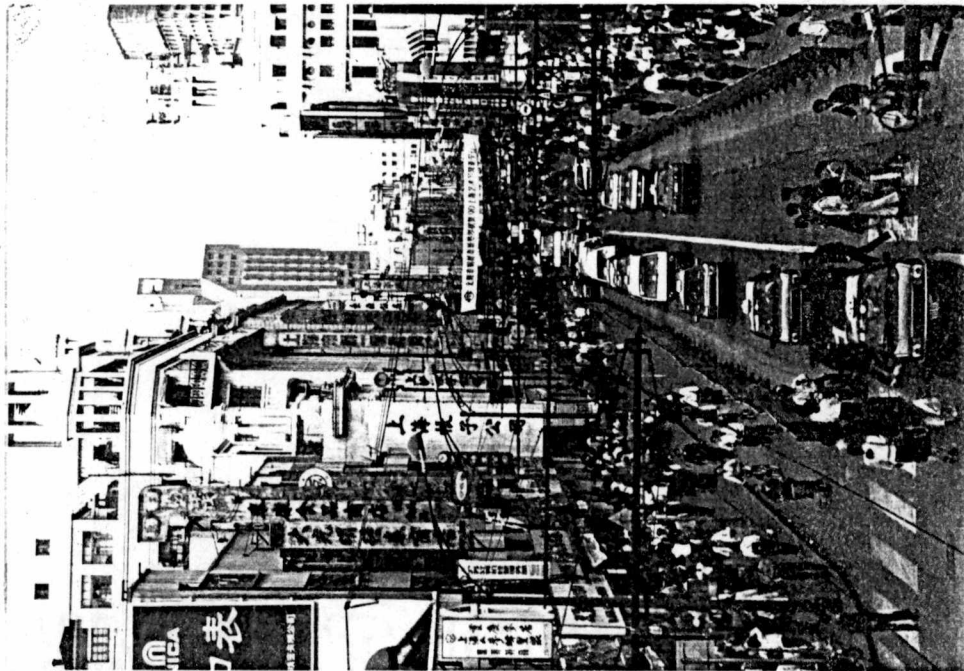
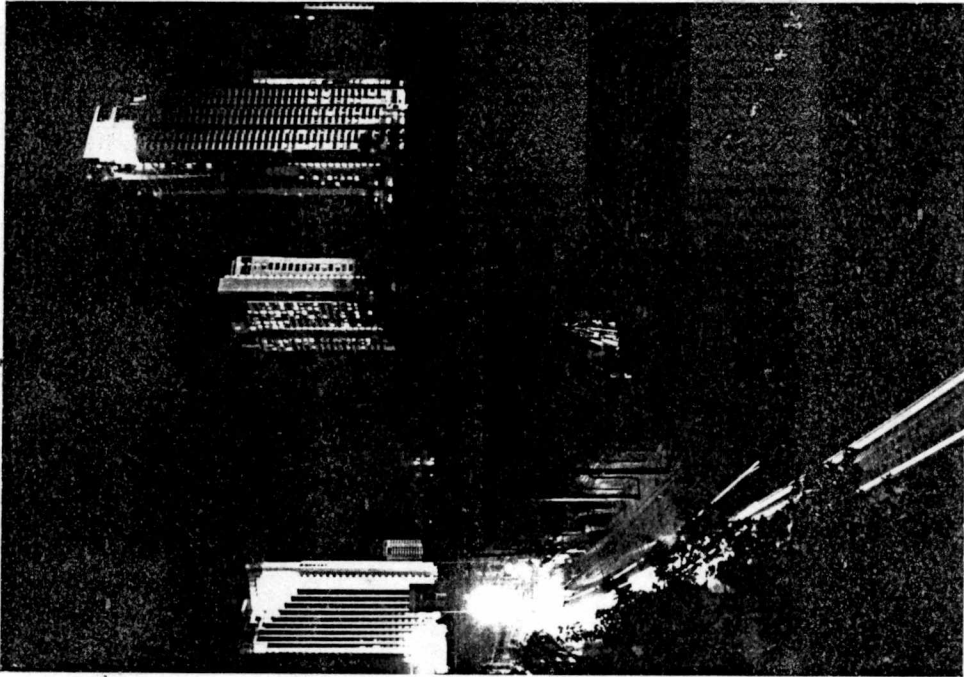


Figure 3: Shanghai Central Business District, Nan Jing Road.

scientific and technological institutions and facilities. There were 51 universities with a total enrollment of 126,100 students and 1100 research institutes with 843,100 researchers in 1989 (Sha, Lin, 1990, p. 5).

Problems

Despite its excellent location, and an important economic position, Shanghai has serious problems. The resolution of these problems may require the planned expansion of the city. Shanghai may have the highest population density in the world. This is responsible for an overcrowd city. The congestion of people and activities in and around the center of Shanghai has been, and still is one of the basic problems of the city. Most human activities such as living, working, shopping, and recreation are concentrated in the urban core. The center of the built-up area is also a poorly arranged mixture of factories, shops, various institutions, and residential housing. Serious overcrowding causes housing, transportation and the other infrastructure shortages and dilapidation, and degrades the quality of living and the environment.

The most obvious and serious problems are those of housing and transportation. High population density results in tight living spaces. The average living space per person is only 4.7 sq.m⁴ (9.3 society, 1986, p. 5). Table 4 shows the percentages of the people whose living space is under four

⁴ 0.836 sq.m = 1 sq.yd

square meters per person. The relation of population density with living space per person also can be seen in this table. Living conditions are even worse for some people. The living space of 44,000 families is under two square meters per person. There are 603,000 households in which three generations live in one room. More than 13 thousand families live in dilapidated houses. Many young people postpone their marriages because housing is not available. Fifty percent of housing stock is dilapidated (9.3 Society, 1986, p. 5)

Table 4:

POPULATION DENSITY VS. LIVING SPACE

Area	Population density 1000 person/sq.km	Living space/person under 4 sq.km (%)
Huang Pu District		
S.Jin Lin Street	166.3	46.7
Guang Dong Street	138.5	43.6
E.Nanjing Street	115.0	44.6
Chang Sha Street	135.4	49.6
Long Meng Street	120.1	43.7
Nan Shi District		
Peng Lai Street	113.7	45.2
Tangjia Wan Street	107.9	50.5
L.Nan Men Street	113.8	44.9
Yu Yuan Street	138.8	47.4
Lushan Yuan Street	152.7	49.0
L. Bei Men Street	154.7	49.8
Lu Wan District		
Ji An Street	160.3	49.0
Sun Chuan Street	100.3	50.2
Ji Nan Street	119.4	51.0
Song San Street	130.4	45.2
Jing An District		
Wu Ding Street	109.0	48.2

Source: The Strategy of Pu Dong New Area Development, 9.3 Society, 1986.

Transportation conditions are no better than housing conditions. Traffic jams occur both day and night, parking space is scarce, public transportation is delayed, sidewalks are congested, and alarmingly high levels of air and noise pollution are characteristics of the urban landscape of downtown Shanghai. The road system built 80 years ago, is completely over capacity. The road surface per person is only two square meters (in Beijing it is 4.1 sq.m, and in Tokyo 9.7 sq.m.) The average vehicle speed is three or four kilometers per hour in rush hours. The main passenger transport mode, buses is so overcrowd that sometimes a dozen people stand on 1 sq.m bus floor (9.3 Society, 1986, p. 3) (See Figure 4, p.23, "Overcrowded houses and buses").

Shanghai needs renovation and modernization. However, it will be very difficult to renew Shanghai without population decentralization.

Chinese government plans to modernize and renovate Shanghai. But, where is the suitable area for Shanghai's planned expansion? The central and Shanghai governments have chosen the area of Pu Dong for this role.

B. PU DONG NEW DEVELOPMENT AREA

General Description

Pu Dong refers to the east side of Huang Pu river. The historical interpretation of Pu Dong has not been very clear. Sometimes it meant a small piece of linear area paralleled



Figure 4: Overcrowded houses and buses of Shanghai.

with the bank of the river; at other times it meant a much larger region. Today, Pu Dong New Development area is a triangular area adjacent to the city proper, stretching to the east of the Huang Pu River, to the southwest of the Yangtze estuary and to the north of the Chuanyang canal (See Figure 5, p. 25, "Location of Pu Dong New Area"). Officially, the area of Pu Dong covers 350 square kilometers, but some reports argue that the accurate figure is 390.8 square kilometers (Shanghai Municipal government, 1988, p. 2). The topography and the climate of Pu Dong are similar to that of the existing Shanghai urban core, However, the population density is much lower. Pu Dong has a population of 1,339,400. The average population density is 2584 person/ sq.km, about one tenth of the urban core. Approximately 39 percent of the population are employed in farm-related work (Li, Mao-lin 1991, p. 11). The average education level of Pu Dong residents is lower than that of the urban core.

Pu Dong is not an administrative unit. It covers most of the Chuansha county, a piece of Shanghai county, part of the Huang pu, Yang Pu and Nan shi urban districts. Shanghai municipal government divided Pu Dong into five subareas to facilitate the development. They are Lu Jia Zui-Huamu (LJZ), Wai Gao Qiao (WGQ), Qingninsi-Jingqiao (QJ), Zhoujiadu-Liuli (ZL) and Beicai-Zhangjiang (BZ) subareas (Zhou, He, 1991, p.52).

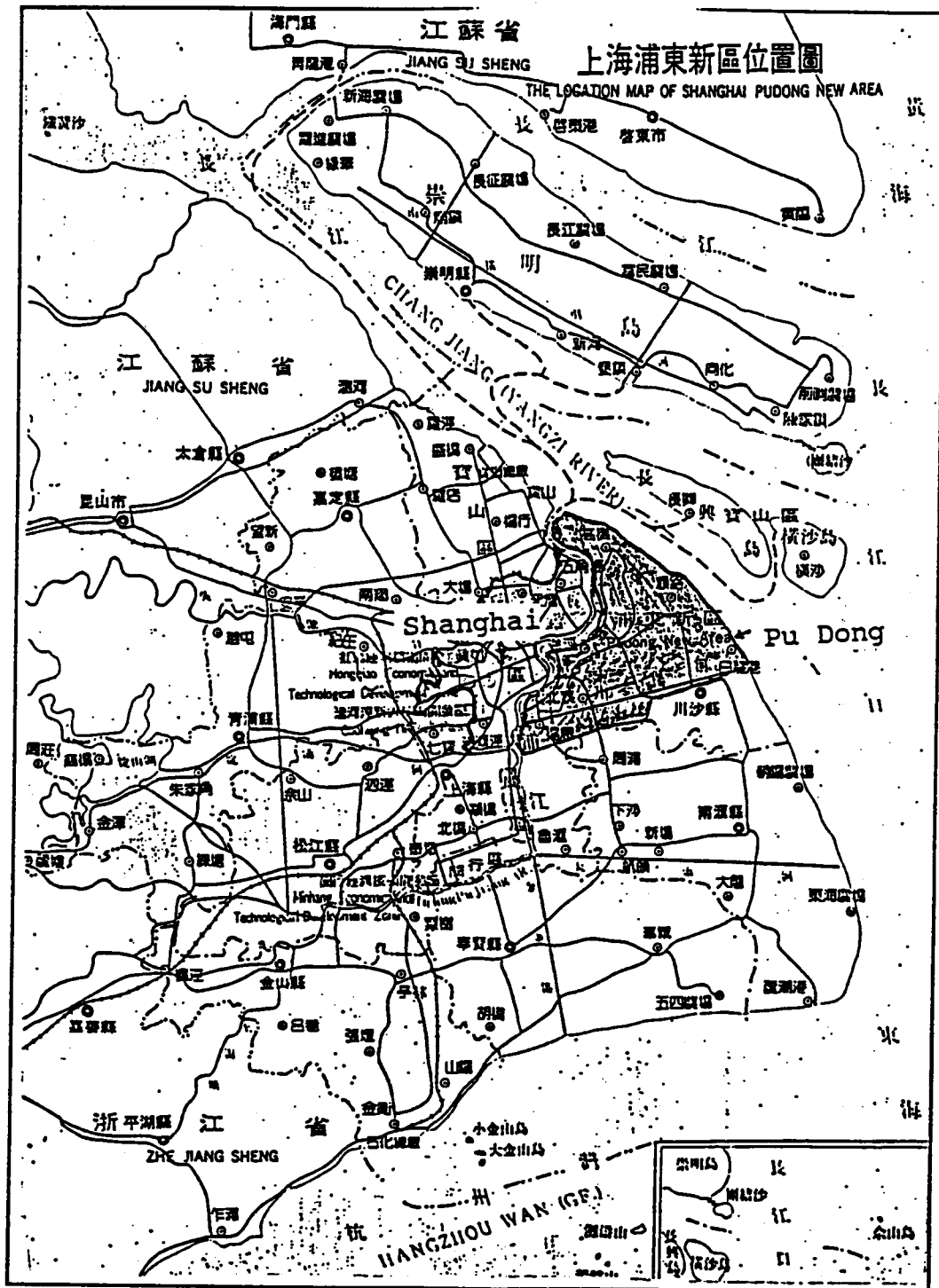


Figure 5: Location of Pu Dong. Source by Shanghai mapping institute 1990.

Economic Base

Although it is named a new area in official documents, Pu Dong is not a virgin land. According to the land use formation, Pu Dong is a suburban agricultural area in China. (See Figure 6, p. 27, "Pu Dong farm land and Chuan Yang Canal") The annual agricultural output value in the area totalled 533 million Yuan, making up eight percent of the total agricultural output value of the whole city. Pu Dong is one of the highest agricultural producing areas in the country. The main products are rice, wheat, rapeseed, cotton, and vegetables. Some famous varieties of farm goods are planted for export. Table 5 provides a description of Pu Dong land use patterns.

Table 5
THE LAND USE PATTERN IN PU DONG 1987

Land use	Area (sq.km)	% in whole area
Agriculture	192.6	49.3
Industry	25.4	6.5
Trade & Commerce	0.8	0.2
Education, recreation and public health	2.6	0.7
Water surface	40.1	10.3
Roads	22.5	5.7
Greenery	2.8	0.7
Towns	14.4	3.7
villages	43.7	11.3
Other	45.9	11.7

Source: The survey of Pu Dong New Area. Shanghai Municipal Government, June 1988. According to this report, the total area of Pu Dong is 390.8 square kilometer.

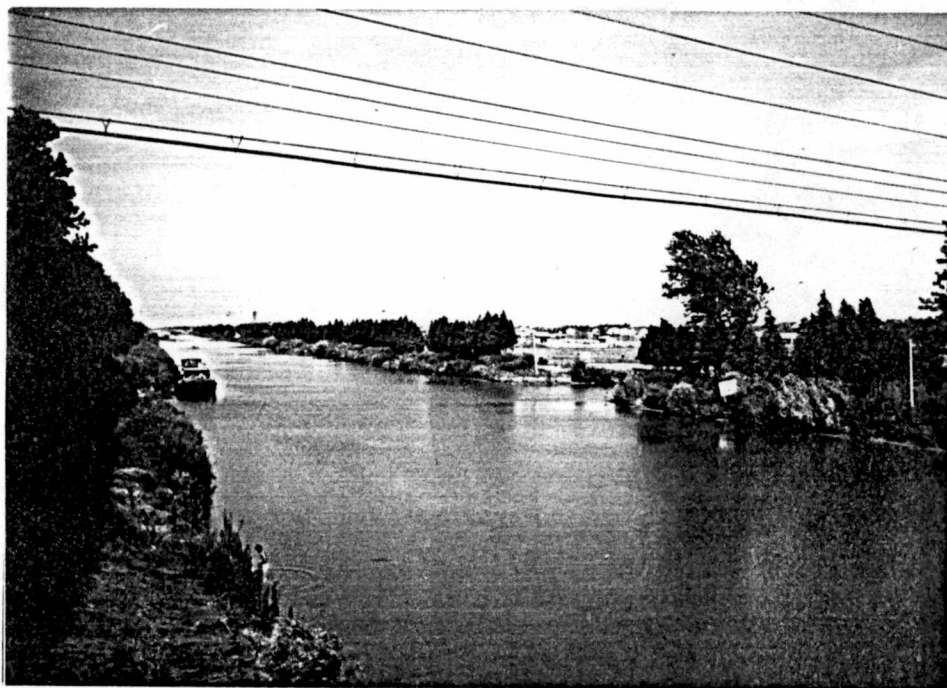
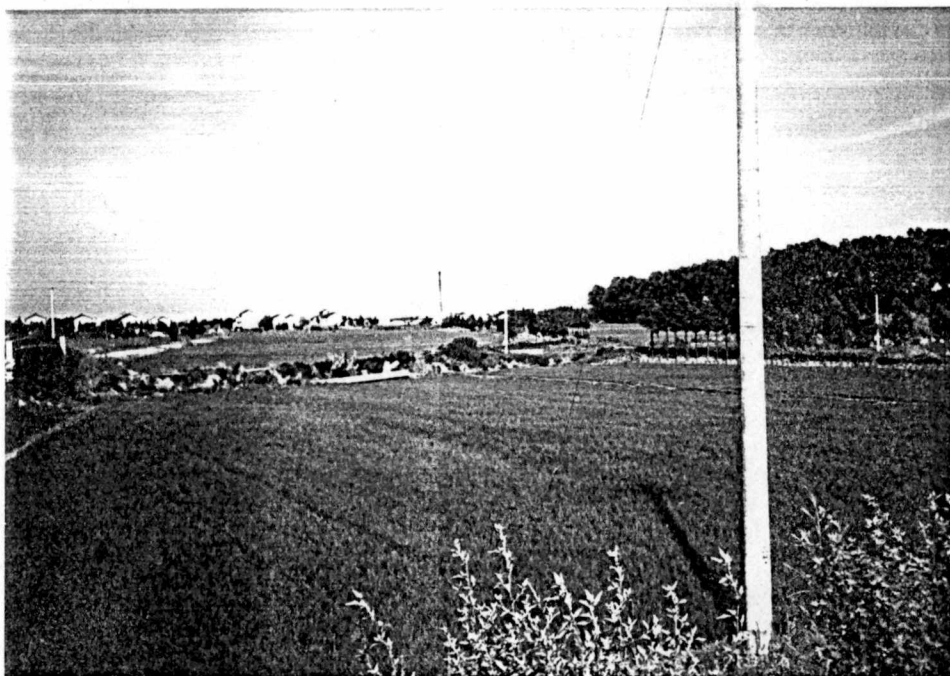


Figure 6: Pu Dong Farm Land and Chuan Yang Canal.

Along the Huang Pu River, thirty two percent of the area has been built up for urban use. Some industry and infrastructure have been established. There are now 1930 industrial enterprises, employing 396,100 people and turning out an annual output value over 10 billion Yuan, roughly 10 percent of the cities' total. The major industries in the area include petrochemicals, ship-building, iron and steel, building materials. The machine manufacturing, textile industries in the area also reached a moderate scale (Sha, Lin, 1990 p. 5).

Huang Pu River is historically a major navigation channel and has 78 berths lined up along its east bank, of which, 32 are the 10,000-ton-class. Cargo handled at the ports of Pu Dong accounts for 48.9 percent of the freight in the whole city. The Huang Pu river is also known for its busy inner river transportation. However, with regards to land transportation, the road network of Pu Dong is not well developed. The total length of existing road is 285 kilometers, of which, 220 kilometers are simply constructed rural roads. Transportation which crosses the river has reached a certain scale but is not advanced. Ferries are the major means to cross the river. This situation existed long period time. In 1989, twenty ferry lines carried a daily volume of 1.1 million passengers and 17,000 motor vehicles. Two river tunnels were added in recent years.

Over the past decade, residential houses have been

increased rapidly in Pu Dong. Apartment buildings are served by nearby commercial, educational, and recreation facilities. But, the area lacks large scale shopping centers. The water, electricity, gas and other utilities meet the current needs. Table 6 on page 30 describes the economic status of Pu Dong.

The Advantages of Pu Dong

Some scholars think Pu Dong is a treasure land with great development potential. Pu Dong is located on the mouth of Yangtze River, and faces East Sea. It has a long coast line with good port sites. The area is suitable for development of an outward-oriented economy. Furthermore, Pu Dong can enjoy the strong support of nearby Shanghai city. Pu Dong is a vast area with a lower population and building density than that of the Shanghai urban core. It has a sizable economic base and infrastructure. American scholar T.Y.Lin⁵ said: "There can be no other area in this world that has such a good position as Pu Dong. If we cannot make good use of this land, we should be ashamed not only for ourselves but also our descendants." Pu Dong also has disadvantages such as high cost of river crossing transportation projects and the sacrifice of high quality farm land.

⁵ According to the speech of Jiang, Ze-min, former Shanghai mayor and current president of China, Dr T.Y.Lin is famous architect and President's Science Prize winner of the United States. Mr Jiang Ze-min spoke at the International Symposium on Pu Dong development, 1988. Dr.T.Y.Lin gave this speech at same symposium.

Table 6

THE MAJOR ECONOMIC INDICATORS OF PU DONG 1990

	Unit	Total	% in whole city
Population (year end)	Thousand	1339.4	10.4
Labor force (year end)	Thousand	396.1	7.8
Gross National Product (current price)	Million Yuan	6024.0	8.1
Social Output value	Million Yuan	20539.0	10.1
National Income (current price)	Million Yuan	5305.0	8.6
Industry output value (current price)	Million Yuan	15517.0	10.2
Agriculture output value (current price)	Million	533.0	7.8
Cargos handled in ports	Thousand ton	68274.0	48.9
Capital investment of state-owned enterprises	Million Yuan	977.0	5.1
Floor area of housing construction	Thousand sq.m	31060.0	34.9
Value of retail sales	Million Yuan	1428.0	4.0

Source: Annual Report of Pu Dong Development. Shanghai Municipal Government 1991.

C. CHINESE CHARACTERISTICS AND ECONOMIC REFORM

China is a developing country with a socialist system. It is hard to understand Chinese urban planning without comprehending these characteristics. The oriental culture, which represents 4000 years of history, also exerts some influences which are not so apparent.

Socialist theories, based on Marxism, were developed by Lenin and first practiced in the former Soviet Union. One popular example which can be used to simply describe the theories is this: The whole society is supposed to be a large publicly-owned factory. Workers obtain assignments, materials and equipments from the society; then, they do their jobs in work units based on centrally made plans, and turn products over to the society. Their payments are based on the quantity of the work done and from the society. The basic principles of socialist theories are public ownership, centrally planed economy, and distribution according to work completed. The government systems of socialist countries are characterized by central control, triune functions (political, economic and administrative) and pyramid organizations. The governments of Communist Party use mandatory overall plans to manage the whole process of production, circulation, distribution and consumption. Classical socialist theories disdain the power of money and commodity market, and try to eliminate them gradually. Socialist theories advocate pluralism and equality, and try to minimize the personal income gaps. The theories

also espouse self-sufficiency and independence of a country.

Although socialist theories have been modified by Chinese reality, basic principles still exist. Public ownership is dominant in China. There are two different types of public ownerships: state ownership and collective ownership. For example, land and capital in urban areas are state-owned, and those in rural areas are collectively-owned. All of the large and most medium-sized enterprises are owned by representative of the country, the government. The government can decide to establish or close down a firm, and where to have what kind of enterprises. In addition, most of the residential housing is constructed, owned and allocated by the government. These factors influence the city planning in China.

As a socialist country, China has a centrally planned economy. The central economic planning committee makes the national plan. Local governments in the hierarchy formulate their own plans based on the plans of higher echelons and national plan. State-owned enterprises, at the bottom level of the government pyramid system, must do the same work. Given their mandatory nature, most plans must be fulfilled. Planning as an economic emphasis, and closely follows economic growth indicators, City planning is regard as an unimportant accessory and generally has been ignored.

With a centrally planned economy, China is not a market oriented country. Before the Economic Reform of 1979, the market of China meant a consumer goods market but with the

prices decided by the central plan. The consumer goods market is characterized by the fact that the demand always exceeds the supply. In fact, shortage always haunts socialist countries. The shortage happens anywhere in everything. In China, land cannot be sold. Capital, labor and investment are distributed by the government, Chinese people really don't know much about labor markets, capital markets, stock markets, real estate markets, etc. This also influences the city planning of China significantly.

Furthermore, because of the nature of central control and the pyramid system, politics play a very important role in China. The Chinese Communist Party controls everything. Speeches of high-ranking officials as well as government actions are decisive. They can initiate, help or kill a project.

Under the socialist system, Chinese cities are different from those of the United States. The main role of Chinese cities is as producer. Cities have to produce products for the country. It is very important for municipal governments to maintain adequate increase rates of GNP, National Income, total financial revenue and other economic indicators. The state-owned enterprises in a city must turn over taxes and a certain percentage of profits to the municipal government. This money becomes the financial revenue of the city government. Then, city governments must turn over the revenue to the central government and negotiate a proportion back.

Chinese socialist system has been in place since 1949. Gradually, the train is losing the power. The system is trapped in formidable troubles and things are getting worse, not better. The main problem is related to momentum. The enterprises lack dynamism because everything is controlled by the governments and plans. Workers will not work more because they cannot earn more under the rule of equality. The central planning process cannot handle complicated economic activities well. Natural economic relations between enterprises and areas are separated by man-made political and administrative demarcation. Corruption become an epidemic disease among government officials because they have too much power. The country has not caught up with the pace of technical progress worldwide and been left out by the world economy.

To cope with economic problems, a large scale Economic Reform began in 1979. The goal of the Reform is to set up a vital and flexible economic system that meets the requirements for developing a commodity economy grounded on the principles of planning and public ownership. Decentralization, open-door policy and promoting commodity economy are main components of the Reform. Chinese government believes that the planning and market mechanisms are compatible. It wants to establish a complete market system including various markets and use the plan to direct those market-based enterprises. The Reform emphasized the economic development and modernization instead of political movement. However, Reform initiators refuse to

change the base of socialism. Pu Dong development project is a product of the Reform. It would have been impossible to have the project without the Reform. Success or failure of the Reform also will decide the success or failure of the Pu Dong project. The Pu Dong project also reflects the progress of the Reform. Later the relationship between Pu Dong development and the Economic Reform will be discussed.

China is not only a socialist country, but also a developing country. Spatial disparities in social and economic development are very obvious. Most of the cities and population situated at the east coast area, the Yangtze River and the Pearl River Valley. The vast west China is underdeveloped. Some areas are virgin land. Coastal China, particularly the Yangtze and Pearl River Deltas have been playing key role in Chinese economy throughout China's long history.

Chinese cities are also similar to cities in other developing countries. For example, the cities have extremely compacted urban cores surrounded by rural suburban area. The major problems of Chinese cities are completely different from those of American cities. There has been no spontaneous suburbanization or urban sprawl or American-style downtown deterioration or urban sprawl. Urban cores are overcrowded instead of deserted.

CHAPTER 2

THE CONCEPT PLAN OF PU DONG DEVELOPMENT

A. THE GENERATION OF THE PLAN

The Chinese government officially announced the decision to develop Pu Dong in 1989. Large scale infrastructure construction has begun. However, does the project have a comprehensive plan? Does it exist? It exists but not in official written form, a situation that is typical in China. The Pu Dong comprehensive plan includes a concept plan with main ideas introduced in a book⁶. Several pamphlets with contents similar to the book have been written. Unpublished government circulars⁷, government-authorized research reports, and high-ranking officials' speeches are also part of the plan. Although the plan has not been officially written, the main concepts are consistent, mature, and broad in scope. The generation of these concepts contains a history of the development process.

⁶ The Direction of Pu Dong Development, The Press of Shanghai Social Science Institute, 1990.

⁷The government circulars carry policies, regulations, orders and instructions of central and local governments. The heading of the circulars are colored red. They must be implemented.

The first one who suggested Pu Dong development was the great Dr Sun Yat-sen⁸, the pioneer of democracy and the father of the republic system of China. His "The Constructive Scheme for Our Country" (1925) is the first comprehensive economic development plan of China. Dr Sun formulated strategies for the establishment of a huge seaport in the Pu Dong area. Dr Sun's ideas were not immediately realized because of conditions which existed at that time.

In the 1940s, some Shanghai city planners developed the ideas of Dr Sun, and made a plan for the area. The plan proposed the construction of several F shape ports along the east bank of Huang Pu River, and a linear urban development, with a width of 4-8 kilometers, paralleling the river.

Under the Communist Party's government, Shanghai planners formulated plans for the Pu Dong in the years of 1950, 1953, 1959, and 1983. These plans share common characteristics which include:

1. The development area is symmetrical with and integrated into the existing urban core.
2. It is a linear development spread along the Huang Pu River.
3. The development area is larger than existing urban core and consists of multiple functions.

(see figure 7, p. 38, "1950, 1953, 1959, 1983 plans")

⁸ Dr Sun Yat-sen is the George Washington of China. He led the Chinese people to finish the feudal society and established the republic system in China in 1911.

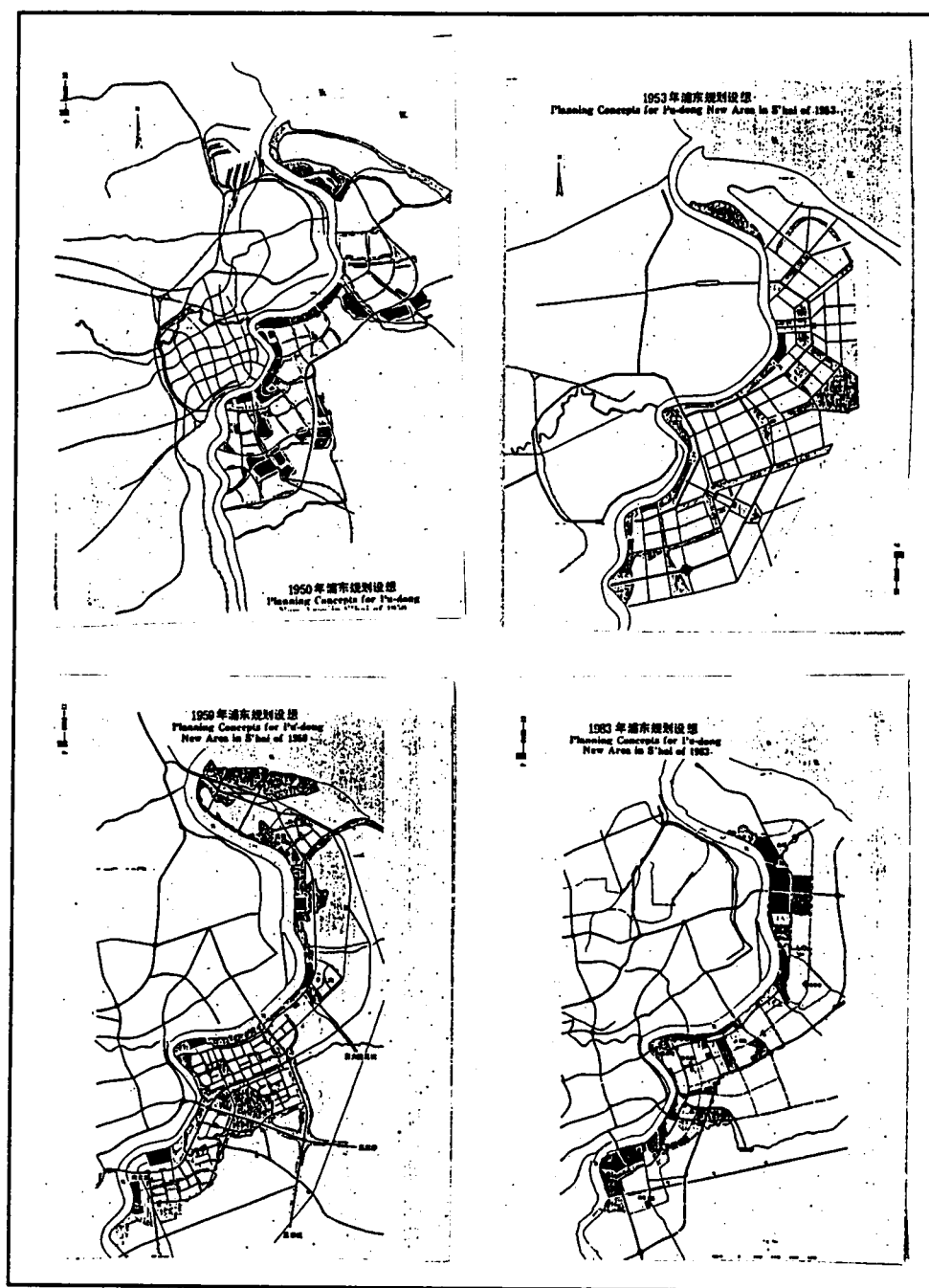


Figure 7: The Plan of 1950, 1953, 1959, 1983 for Pu Dong.
Source by Chen, Zhi-rong, 1990.

The Pu Dong development plans were not treated very seriously until 1980. In the climate of the Economic Reform and the enthusiasm of modernization in 1980, the topic of Pu Dong development was widely discussed within the universities and research institutions of Shanghai. The papers issued from 1980 to 1986 mainly dealt with the necessity and possibility of large scale Pu Dong development. Scholars also argued how to develop Pu Dong and how to resolve the difficult problem of cross-river transportation.

Development to Great Pu Dong Area is the first paper to suggest the project (Chen Kun-rong 1980). In this short essay, the author mentioned the advantages of developing Pu Dong, and the form as well as functions of the proposed new urban core. The author also mentioned various fund raising approaches and proposed several high bridges crossing the Huang Pu River. The paper of Ye and Xin (1981) and another work by Chen Kun-rong (1983) further explained the necessity of Pu Dong development. In their explanation, the new area should consist of a core surrounded by a group of the specialized cities each with its own function. Finance, trade, recreation and administration activities would take place in the core.

A New Canal will Facilitate the Renewal of Shanghai (Wang Gang-huai and others, 1981) is a paper that focuses on the cross river transportation. Unlike other scholars, the authors thought that it was too expensive to build high bridges and long tunnels to cross the broad Huang Pu River. They suggested

to widen an old river bed and use it as a canal to take over the main navigation functions of Huang Pu River. Then, the work would focus on narrowing Huang Pu River, connecting both sides of the river with dozens of beautiful bridges and landscaping the new integrated area. The area will functioned as the new Shanghai CBD.

Where is Shanghai's Manhattan? (Wang and others, 1984) Where is Shanghai's Special Economic Zone? (Wang and others, 1985) and Shanghai should have a Free Trade Zone (Yu Ping-hao, 1986) are the articles that designed the functions of the subareas of Pu Dong. The authors described the definitions, functions, site selection and establishment stages of the "Manhattan" (finance and trade center), the special economic zone and the free trade zone in Pu Dong. They also discussed the related law, policies and fund raising approaches.

Discussions among scholars attracted the attention of the Shanghai municipal government. At the same time, the Chinese central government also intended to expand Shanghai. Pu Dong was not the only choice for development at that time.

To explore which alternative was the best, two conferences on strategies for Shanghai development were held in the city During the spring of 1986. Scholars discussed three alternative physical directions for future Shanghai development: eastbound, northbound and southbound. The eastbound (Pu Dong) development was favored (Figure 8, p. 41, table 7, p. 42, "Directions of Shanghai Expansion").

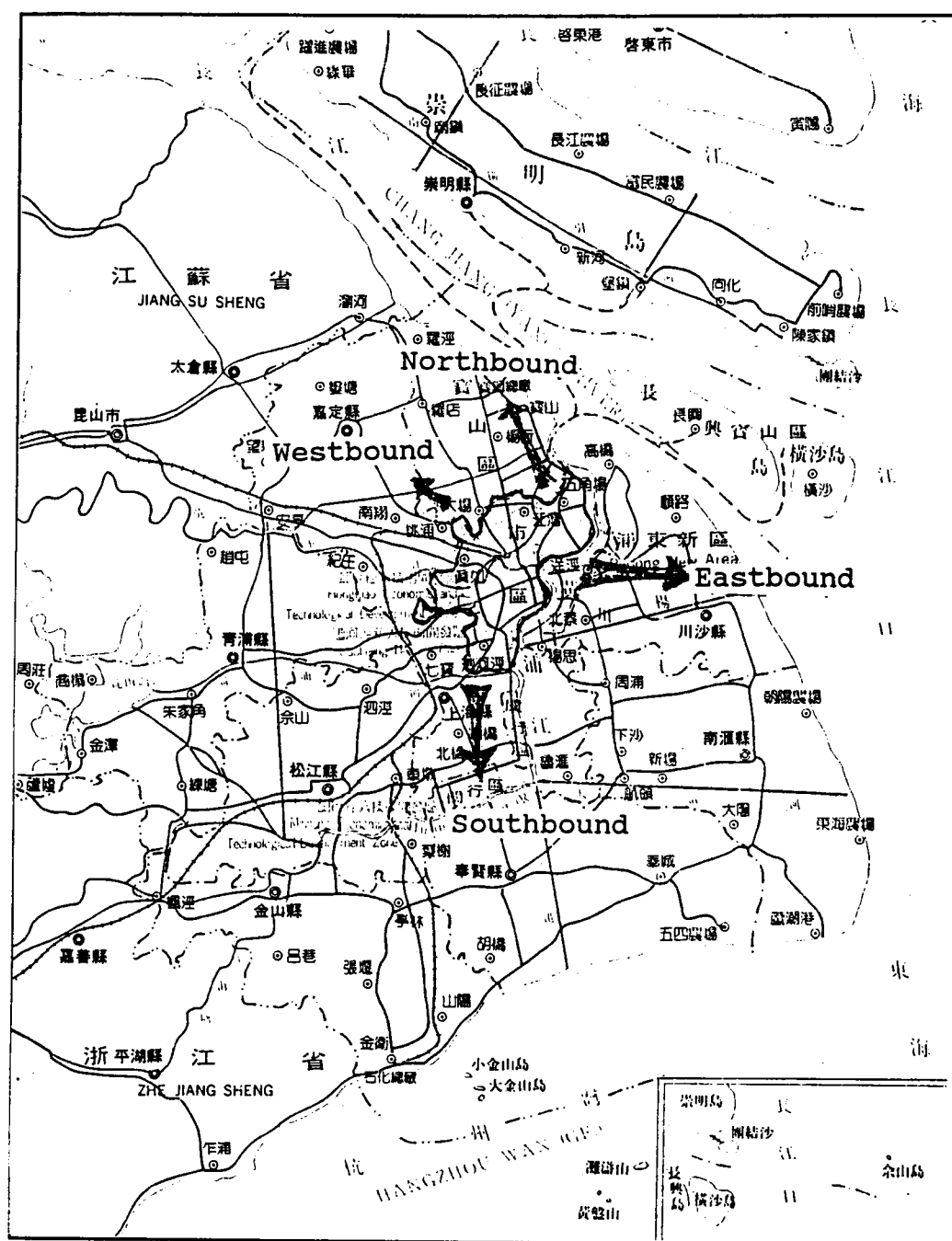


Figure 8: Directions of Shanghai Expansion.
Source: Li, Ying, 1987

TABLE 7

DIRECTIONS OF SHANGHAI EXPANSION

	Eastbound	Southbound	Westbound	Northbound
Environment	excellent	fine	good	fine
Distance to CBD	15 km	15 - 20 km	12 km	10 km
Available land	150 km+	45 km	flexible	8 km
Suitable functions	multiple functions	limited functions	limited functions	limited functions
transportation	land, air	land only	land, air	land, air
Accesses to CBD	water many but cross river	less	less	less
Infrastructure capacity	large scale	sewage problem	sewage problem	mid-scale
Public opinion	favored	not favored	favored	favored
Investment attraction	very attractive	attractive	na	attractive
Influence to CBD	large	smaller	smaller	smaller
Conclusion	Best choice is eastbound development.			

Source: "Pu Dong's position in Shanghai development strategy." Pu Dong Development Office ← of Shanghai Municipality, 1990

After the conferences, the Shanghai municipal government designated and the funded 9.3 Society⁹, Shanghai Economic Research Center and Tong Ji University to further research the Pu Dong development and formulate strategies and tentative plans. The result was three important reports:

The Strategy of Pu Dong New Area Development (9.3 Society, 1987) consists of one general report and eight special reports. The general report outlined the goals, principles, concept plans and the stages of the development. It also gave the views of the administration reform and fund raising approaches. The eight special reports researched different facets of Shanghai and Pu Dong. Some of the topics included: the problems of the Shanghai city; the relations of Pu Dong new area development and old downtown renewal; the functions and layout of Pu Dong; the scenario of the population decentralization; the policies of land and investment.

The Form of the Modern Pu Dong Area Development (Tong Ji University, College of City Planning, 1987) emphasized research of physical aspects. The report illustrated the proposed population scale, land use scale and pattern as well as transportation improvement. The authors presented six land use scenarios and ten transportation improvement alternatives. They recommended one preferred scenario: one financial trade

⁹ This is a democratic party in Chinese style. The participants are famous scholars and specialists in various disciplines.

center is surrounded by three export processing zones.

The Guideline of Social, Culture, Economic and Scientific Development of the Pu Dong New Area (Shanghai Economic Center, 1987) presented its own version of goals, concepts, scales of the development, and the nature and functions of the new area. Points of view are similar to those found in the 9.3 Society's report, however, this report focused on the social economic aspect. The report designed development strategies and policies for industry, agriculture, tertiary industry, science, education, recreation and public health. It also discussed related policies for organizational reforms.

In October 1986, the State Council approved the comprehensive plan of Shanghai. The Plan included the proposal for Pu Dong development. In 1987, a consulting group came into operation for research of Pu Dong. Both Chinese and foreign specialists joined the group. A International Symposium was held in West Suburb Hotel of Shanghai in May, 1988. More than 100 Chinese and foreign scholars, Shanghai mayor and the other high-ranking officials in the central and local governments participated the meeting. The main concerns of the papers presented in the symposium were for fund raising, planning and feasibility research. Some foreign scholars introduced the topics of international experience of large scale development.

Chang Shao-liang, director of the Shanghai Planning Bureau, presented the results of the cooperative research of Chinese and foreign scholars in the Consulting Group led by

the Shanghai municipal government. The content of his speech included goals, strategies, policies and phases of the Pu Dong development.

Lu Guo-xian's paper discussed the favorable conditions which would allow Shanghai to attract international investment and suggested approaches for further improvement. In the article, Fund Raising and Operating for Developing Pu Dong Area, Chen Ze-hao outlined the funds needed for the development and ways of fund raising. Famous American scholar T.Y.Lin thought that Shanghai should be a world class modern city and Pu Dong development needs a progressive organization. He recommended that the Chinese government make a world wide announcement asking for expressions of interest of foreign entities and consortia to serve as co-developer of this project with the Shanghai government, on a 50/50 joint venture arrangement. The joint venture corporation would manage overall planning, fund raising and infrastructure construction. The representatives of the World Bank made a speech about the existing cooperation with Shanghai government and the help that the Bank could give Pu Dong.

Pu Dong Development Needs Good Comprehensive Planning and Timing (John Helbert) is a paper that talked about the content of Comprehensive planning, the necessary alternative plans and flexible timing. Allen Jacobs was concerned with the design of the urban form. In Jacobs' opinion, it is important to consider the livability and prosperity of a city. The

objectives of urban design should coincide with that of social economic development. The urban designer should pay attention to landmark architecture, historical preservation and environmental protection.

Yu Chi-rong, chief planner of Hong Kong's new area development commission, presented the experience of Hong Kong. He described the content of the general plan of Hong Kong and the composition of the planning commission. In his opinion, instead of government officials, planners, engineers and architects should be the main participants of the planning commission. He emphasized transportation planning and recommended limiting the traffic volumes between Pu Dong and old Shanghai downtown to reduce congestion.

The Shanghai government is very interested in the experience of Singapore development. Singapore is controlled by a one party government. Its economy is directed by both national plan and market system. Most of the land and enterprises are owned by the government. Under this kind of political and economic conditions, Singapore has experienced a rapid development and is a prosperous economic center in Southeast Asia. In the symposium, Huang Yan-kang of Singapore introduced development in the Singapore style. The Singapore government played a decisive role in the development of the city acting like a super developer, setting up several organizations in charge of development. These public organizations operated in a business way like limited

corporations, and attracted foreign investment by inviting bids on potentially lucrative investment.

As a participant in many large scale developments, A.Devito of the U.S warned Pu Dong to avoid certain problems in the project. Notably, the problems of excessive pre-development spending, excessive peak negative cash flow and subsequent heavy debt service, lack of means to solve development delay, etc.

After Chinese government announced the Pu Dong new area development, a book titled The Direction of Pu Dong Development was published. (Zhou, He, 1991). The book comprehensively illustrated the concepts of the plan including goals and principles, physical and economic layouts, transportation and public utilities, and suggested implementation stages. The authors of the book are famous specialists of the topic. This book is my major reference for the description of the plan that is being followed in the development of Pu Dong.

Chen Zhi-rong's three papers studied the history, the progress and the future of the Pu Dong new area development (1990). Xu Shuang-rong's report researched the World Fair experience and advocated the use of a World fair to stimulate Pu Dong development (1990). Wang Zhong-gu, a professor of Tong Ji University, formulated the theme, guideline, location, physical layout, transportation pattern and future usage of the proposed world fair (1990). A research group of Fu Dan

University drafted a social economic development plan for Lu Jia Zui subarea of Pu Dong (1991).

All the documents mentioned above significantly contribute to the Pu Dong project. Under the authority of the Shanghai government, the comprehensive concept plan come into being in 1991. The plan is not a final product. The elaborating work is going on.

B. THE CONTENT OF THE PLAN

The Goal and Principals

1. The goal

Almost all of the documents reviewed here express a similar goal for the Pu Dong new area development. Even though the expression has a little difference, the meaning is consistent. According to the speech of Mr Chang Shao-liang¹⁰ in the International Symposium, 1988, Pu Dong development is intended to expand, renovate and modernize Shanghai "to make Shanghai a pivotal, modernized and international city in the world."

According to the speech of Mr Chang, "pivotal" means that the new Shanghai city should be an economic center of the Yangtze Delta, Yangtze Valley and the whole country, should be a pivot of import and export, Chinese market and world market. Pu Dong development should stimulate the modernization of the

¹⁰ Mr Chang Shao-liang is deputy director of the Bureau of Shanghai Urban Planning and Building administration.

nation.

"Modernized" means that Shanghai should become a first-class world city with rational physical layout and economic base, advanced transportation network, capacious public facilities, quick and convenient communication systems, and protected natural environment.

"International" means that Shanghai should be established as one of the important economic centers of the Pacific region, should play a significant role in the world economy, and should join the competition of the world market. Shanghai is also expected to have extensive international relations, and busy international interchanges.

2. The Principles

Based on the book Direction of Pu Dong Development (Zhou He, 1991, pp. 46-47), the Shanghai government also proposed several principles for the Pu Dong new area development. These principles also are goals but are more tangible and practical.

The principles are:

- To develop Pu Dong as a part of new Shanghai Urban core. Pu Dong and Pu Si¹¹ should support each other to obtain overall prosperity.
- To build up Pu Dong as a area with multiple functions, sound economic base and balanced development.
- To improve the investment environment of Shanghai by

¹¹ Pu Si refers to the west side of the Huang Pu River, the location of the existing Shanghai urban core.

well planned land use layout and large scale infrastructure construction.

- To avoid piecemeal development, inflexible and infeasible plans, Pu Dong should have comprehensive, continuous planning and step by step implementation.
- To facilitate and coordinate both urban and rural development, to save and rationally use land for the future.
- To pursue high quality, high standard and advanced technology for the development of export-oriented economy.
- To concentrate limited resources on a small area to make a big difference, in order to obtain "multipliers" effect.
- To pay attention to environmental protection and ecological balance¹².

3. The Bases of the Goal

According to the book, Direction of Pu Dong Development (Zhou, He 1991, pp. 67-69), the goal of the Pu Dong development is based on the basic national strategy. The basic national strategy has been the Economic Reform since 1979. The Pu Dong development is a product of the Economic Reform, and it also can facilitate the development of the Reform. The Reform is aimed at setting up a planned commodity economy

¹² The principles were illustrated in Chinese in the book Direction of Pu Dong Development, (Zhou, He 1991), were translated by Cheng, Ching.

through the establishment of the market mechanism and the development of regional economic specialization in China. If a well developed market mechanism is established and centered in a very important city like Shanghai, it may help the establishment of a market mechanism nationally, and furthermore, may help the establishment of the relation between the Chinese market and the world market. The goal of the Pu Dong new area development reflects the requirements of the Economic Reform.

The Pu Dong development is also based on the open-door policy. Coastal China, particularly the Yangtze and Pearl Valleys, have always played a key role in the Chinese economy. To open the Chinese economy to the world, the export-oriented projects should logically begin at these regions. Before the 1980s, the Chinese government advocated self-sufficiency, and tried to develop the national economy through the development of small and medium-sized cities in the backward hinterland for ideological and military reasons. China also closed the door and was isolated from the world. These development concepts were proven to be wasteful and largely impractical by reality. In the 1980s, the Chinese government changed strategies, opening up fourteen coastal cities for foreign investment and establishing Shen Zhen and three other cities as Special Economic Zones¹³ (SEZ). However, it is impossible

¹³ Appendix E described more about Shen Zhen Special Economic Zone.

to develop fourteen cities simultaneously. The SEZs are too small, too separated, and too weak in original economic bases to bring along the national economy. With excellent geographic location and the support of the country's largest and most important city, Pu Dong is well-suited to be developed as an international city and help the opening and prosperity of the country. The goal of the Pu dong development reflects the requirements of the opening policy.

Pu Dong development grounds on Shanghai's conditions. Shanghai is an important city but with serious troubles. I described the important position and the problems of Shanghai in Chapter 1. As a relatively rich area of the country, why does Shanghai have such serious city development and infrastructure problems? The main cause is that the Shanghai municipal government has to turn over about 75 percent of its revenue to the central government for redistribution nationwide. If this situation does not change, Shanghai will gradually be reduced to backwardness and will lose its position. The central government does not want that to happen. It is quite reasonable to modernize Shanghai.

Most of the documents¹⁴ I reviewed mentioned that the Pu Dong development strategy is a part of the general strategy of Shanghai metropolitan development shown on the comprehensive plan of 1986. The center point of the metropolitan development

¹⁴ The documents include Direction of Pu Dong Development, the research reports of 9.3 society, Shanghai Economic Research Center and Tong Ji University.

strategy of Shanghai is to renovate the center city, develop Pu Dong area, and develop satellite cities, suburban small cities and rural townships, to form a city system with four levels. The Pu Dong new area development is a strategy of center city development. The Shanghai government wants Shanghai metropolitan area to be a city system with a big, highly developed core surrounded by less developed satellite cities, with each satellite city surrounded by small cities and rural towns. It is a typical concentric and radial development pattern.

The Physical Layout

The concept plan with map, the book, Direction of Pu Dong Development (Zhou, He, 1991), and a pamphlet, The Investment Guide in Pu Dong New Area of Shanghai (Sha Lin, 1990) described the physical layout of the Pu Dong project. Several research reports illustrated the alternatives discussed.

In the speech on the International Symposium 1988, Li Jia-neng, the vice president of the Pu Dong Development Office of Shanghai Municipality, pointed out that the physical layout of Pu Dong new area development not only is based on the requirements of future use, but also is based on natural geography, existing economic base, land use, traffic patterns, public utility conditions and historical evolution. According to his speech, five alternative layouts were considered:

- Alternative I: eastbound development from Hong Qiao

Airport to LJZ subarea.

- Alternative II: northbound development along the extended axis of Ning-guo Road Vehicular Tunnel.
- Alternative III: "one center and three areas" development. LJZ subarea was considered as a center surrounded by WGQ subarea, Chuansha city and Zhoupu town.
- Alternative IV: small scale development on the existing Pu Dong built-up area.
- Alternative V: A comprehensive development pattern that derives from four alternatives above. This alternative has been officially adopted in the 1991 concept plan (See Figure 9, p. 55, "The alternatives of Pu Dong physical layout")

The main concepts of the Pu Dong physical layout are: the existing urban core across the river; two ring roads embracing both old and new development and delineating the periphery of urban core as well as the boundary of urbanization. The characteristic of the land use form can be described as "one center and three pieces". Three areas surround a center to form a semi-circle. A eastbound and a northbound linear development intersect on the heart of the area. The eastbound development axis runs from Hongqiao International Airport of existing Shanghai city to the Lu Jia Zhui subarea of Pu Dong. The northbound development axis spread along Yang Gao Road of Pu Dong. (See Figure 10, p. 56, "The general concept plan of Pu Dong.")

When the Pu Dong project is completed, a new pattern of

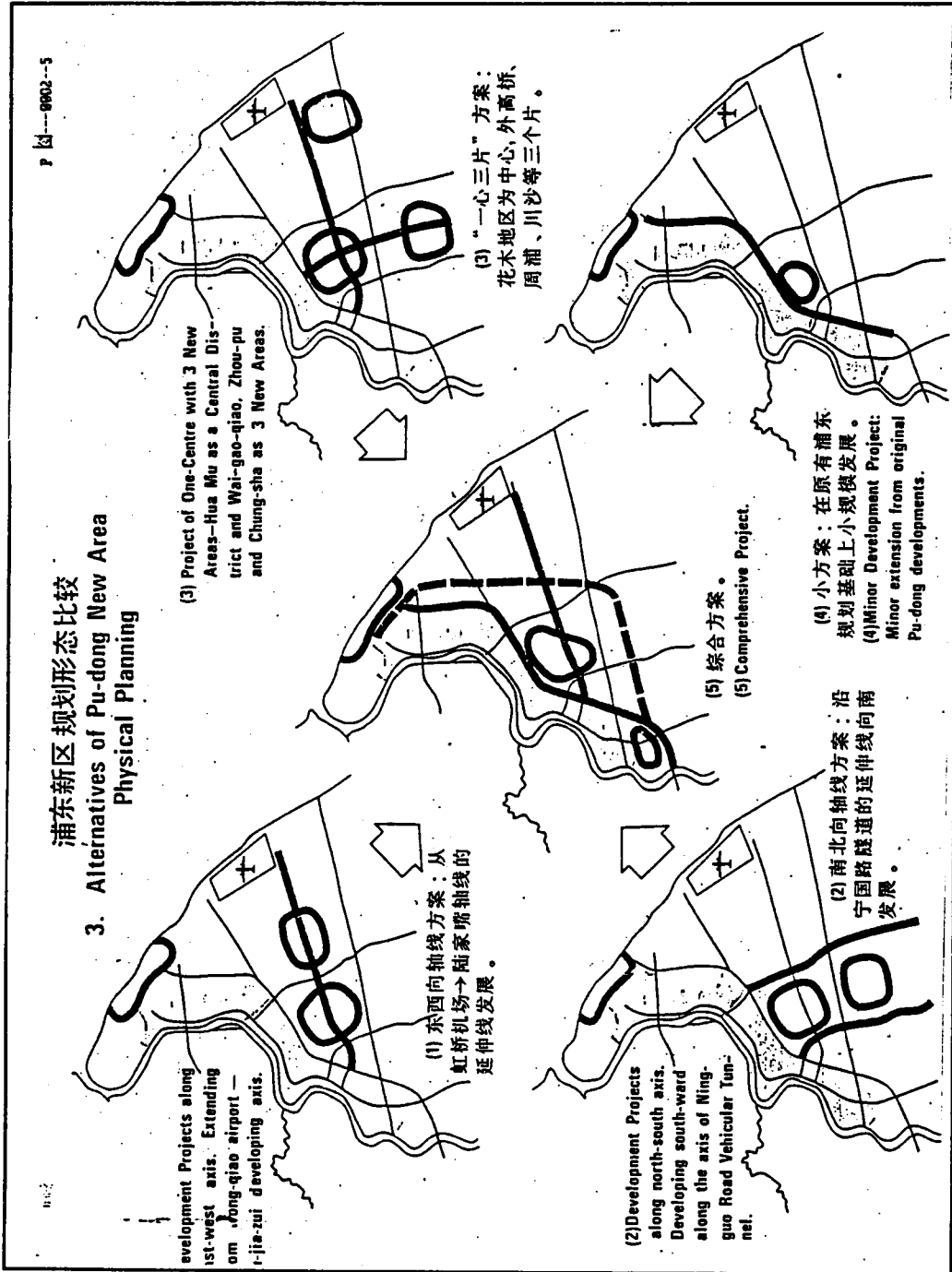


Figure 9: The Alternatives of Pu Dong Physical Layouts, Source by Chen, Zhi-rong, 1990.

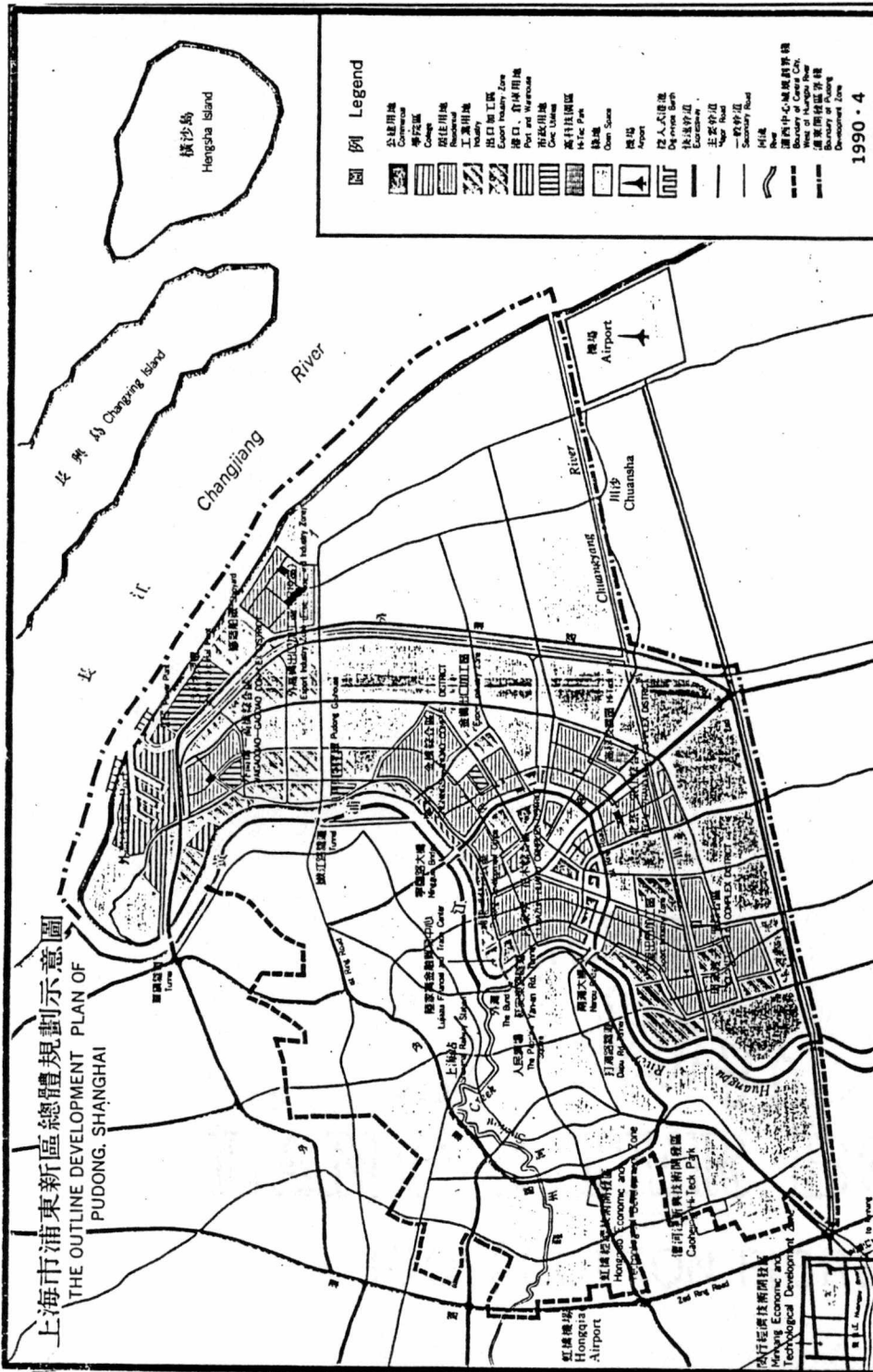


Figure 10: The General Concept Plan of Pu Dong. Source by Bureau of Shanghai Planning and Building Administration, 1990.

the city's urban core will be formed with the Huang Pu River running through the center and with the Pu Dong and Pu Si well integrated. The inner ring road will be 45 kilometers long and the area within the ring will cover 120 square kilometers, of which the Pu Dong part will be 28 square kilometers.

The outer ring road will link up many industrial districts and residential areas and it will also serve as a boundary of urbanization. The 89 kilometer ring road will circle 570 square kilometers including both sides of Huang Pu River. Adding 40 square meter Wai Gao Qiao area, the total area roughly will be the size of Singapore.

The Pu Dong new development area is divided into five subareas that I mentioned at the Chapter 1, section 2 (page 24). The estimated land use scale and population scale of the five subareas are shown on table 8. The estimated total built-up area will cover 177 - 200 square kilometers and total urban population will be 1.7 - 2.0 million when the project is totally completed.

Table 8

THE LAND USE AND POPULATION SCALES OF SUBAREAS

Name of Sub-area	WGQ	QJ	LJZ	ZL	BZ	Total
Area(sq.km)	75	21	28	34	19	177
Population (thousand)	260	340	350	400	350	1700

Source: Sha, Lin, "The investment Guide in Pu Dong New Area of Shanghai, 1990.

What is the basis of the estimation of the future population and land use? According to the research report of Tong Ji University, the population projection is decided by existing and forecasted new employment, existing and forecasted new residents, and the decentralization plan of the old city. Land use requirements are based on population projection, desired land use forms and land use standards of China. The standards of other countries were used as references. Table 9 showed the land use standards of Pu Dong.

Table 9

LAND USE STANDARD FOR PU DONG

Type	General	resi- dential	trans- portation	industry	public facility	greenery
sq.m/ person	107- 144	45- 60	14.5- 18	10- 15	3- 7.2	16- 18

Source: "The Form of the Modern Pu Dong Development." Tong Ji University. 1987.

According to my own experience and the interviews with the officials of Pu Dong Development Office of Shanghai Municipality, it seems unlikely that the professional and non-professional planners have had large scale computer-oriented data base, and have done complicated quantitative analysis and forecasting. Computers are not widespread in the social science research area and government agencies. The professional and non-professional planners did their job based

on their experience, some standards of China and other countries, and some surveys. This approach appears to have created some problems which I will discuss in Chapter 3. In a socialist country like China, the population, employment and economic base of an area are not decided by market mechanisms but by government arrangement. There are complete data files about everything in the government agencies of different levels. It is almost unnecessary to worry about vacancy because demand always exceed the supply. In my opinion, all of these factors make the planner's work of China different from that of the United States, and perhaps easier.

The Economic Base and Layout

What will be the main characteristic of the Pu Dong economy? All of the documents I reviewed pointed out that it will be export-oriented. Furthermore, Pu Dong is planned to have multiply functional economic base and rational structure consisted of primary, secondary and tertiary industries¹⁵. In my understanding, this is planned mixed use development. What will be the leading industries of the Pu Dong? The concept plan reflected a fact that both tertiary and export-oriented industrial production are put in priority. But there are

¹⁵ Primary industry mainly includes agriculture, fishing, forestry and animal husbandry.

Secondary industry mainly includes industrial manufacturing, and transportation.

Tertiary mainly includes whole and retail sale, finance, insurance, real estate, communication, public and personal services and government.

controversies. I will discuss the topic in Chapter 3.

1. Finance and Commerce

According to the research report of the 9.3 Society, Shanghai should be developed as a financial and trade center like Hong Kong. Following New York and London, Hong Kong is ranked third largest financial center¹⁶ in the world. In Hong Kong, there are 150 international banks, 348 insurance companies, four capital markets and numerous financial institutions. The amount of foreign exchange transactions has been over seven billion dollars per day (9.3 society, 1986, p.31). Shanghai was a larger and more important financial center than Hong Kong in the 1930s. After 1949, it lost its position. Now, an effort will be made to get the position back. The opinion of the 9.3 Society has been accepted by the Shanghai municipal government.

Based on Direction of Pu Dong Development, the Shanghai government has decided to establish a large financial and trade center on the waterfront of Huang Pu River in the LJZ subarea of Pu Dong. The new financial center will face the banking street of Waitan across the river. The two centers will be combined to form the "Chinese Manhattan" (Zhou, He 1991, p. 53). Historically, the Chinese Communist government viewed most of the financial activities as capitalist activities and wanted to eliminate them for 40 years. This

¹⁶ 9.3 Society, "The strategy of Pu Dong New Area development" (in Chinese) 1986, page 35.

attitude has been changed. However, a question remains as to what kind of financial institutions will be established in Pu Dong? What kind of financial activities will be allowed within the limits of socialist doctrine? There are many controversies and experiments in response to these questions. The Chinese government has begun banking system reform. The government also has tried to develop non-bank financial institutions such as investment trust corporations, thrift institutions, credit unions, investment consulting firms, etc. Some scholars have suggested the establishment of various large scale security and stock markets, foreign exchange markets, and even gold and hard currency markets¹⁷. Those were prohibited in China for more than 40 years. Although there is some uncertainty in the financial area, it is certain that international banks will be allowed to establish branches in Pu Dong, for the first time since 1949. The policies and regulations that have been issued will be discussed in the following section.

With regard to commercial development, land for commercial use has been zoned in the concept plan. The retail sale network will be established with shopping centers in four levels to serve residential areas: municipality, subareas, subdistricts and streets (9.3 Society, 1986, p. 56). The reports of 9.3 Society, and Shanghai Economic Research Center

¹⁷ For example, The report of Department of World Economy, Fu Dan University hold these points of view. The report is "The Social Economic Development Plan for LJZ Financial and Trade center", 1991.

proposed to establish one of the largest shopping centers of the country in the LJZ subarea¹⁸. Unlike plazas and malls of the United States, the shopping center will be pedestrian-oriented, and specialized. It will cover an area with many streets. The same or similar business will occupy one or several streets. For example, the food street will specially sell food, the book street will sell books and other office needs, and the electric street sell electrical products. As an entirety, the shopping center will exhibit and sell both commodities with famous brands and special local products. Domestic and foreign firms will be welcome to rent the land, build shops and sell commodities in the proposed shopping center. This is also the first time foreign investors are allowed to engage in retail business since the Communist Party took over in 1949.

2. Industry and Agriculture

What should be the main characteristics of the future Pu Dong industry? Almost all the materials mentioned that the main characteristics of Pu Dong industry should be export-oriented and technologically advanced. What are the industrial development strategies for Pu Dong? The favored industries are those which use high and new technologies, require less energy and transportation input, and are pollution free. Furthermore,

¹⁸ 9.3 Society, "The Strategy of Pu Dong New Area Development" 1986, page 16, and Shanghai Economic Research Center, "The Guideline of Social, Cultural, Economic, and Scientific Development of the Pu Dong New Area" 1986, page 21.

the development should fully utilize existing industries, particular the main four: petrochemicals, ship-building, metallurgy and building materials. However, these industries should update their production mode. Will Pu Dong absorb some factories moved from the existing urban core? Yes, it will. But the nuisance emitting factories will be kept out. In the future, the main components of Pu Dong industry will be export processing zones. Four large export processing zones will be located in WGQ, QJ, ZL and BZ subareas, and small ones will be scattered through the whole area.

Pu Dong development means the urbanization and industrialization of the area. But, one of the principles set up by the Shanghai government is to facilitate both urban and rural development. The government wants to keep agriculture alive and promote growth. However, it is inevitable that urbanization will take large amounts of farm land. Pu Dong's agricultural strategies should be adjusted. Future agricultural development should focus on serving the food demands of the Shanghai residents, plus serving the needs for export and for tourists. Pastoral scenes are very attractive to domestic and foreign visitors. The areas planted for rice, wheat, cotton and rapeseeds will be reduced, but the unit amount of production could increase (Shanghai Economic Research Center, 1986, p. 37).

The concept plan has zoned land for agricultural use. The vast southeast plain of Pu Dong is reserved for vegetable and

grain farms. Livestock and aquatic production will be located on the south of the Chuanyang Canal. Beautiful flower gardens, orchards, lawns, and greenhouses will be scattered in the built-up area or periphery (Shanghai Economic Research Center 1986, p. 38).

3. Housing, Recreation, Education and Public Health

Public owned high-rise apartment buildings will be the typical housing of the Pu Dong. By the end of this century, apartment buildings with a total floor space of 15 million sq.m will be completed to locate 1.7 million residents (Sha, Lin, 1990, p. 9) (See Figure 11, p. 65, "Modern high-rise apartment building in Pu Dong"). Because of transportation and income limitations, the neighborhoods of Pu Dong, as of the whole nation, are pedestrian oriented and provide with shopping centers, and recreation facilities within walking distance (See Figure 12, p. 66, "Neighborhood shopping center").

As a Shanghai resident for 30 years, I know that the old compact Shanghai city lacks recreation facilities. The planners and researchers unanimously proposed to have some modern recreation centers in Pu Dong. The elaborated plans have not yet been published, but some scenarios are under consideration. One of the scenarios suggested is to hold a world's fair in Pu Dong in the 1990s. The world's fair site will cover 0.8 sq.km land and be located at a triangle area bounded by Yang Gao Road and Pu Jian Road near Nan Pu Bridge.



Figure 11: High-rise Apartment Building in Pu Dong.



Figure 12: Neighborhood Shopping Center and Restaurant in Pu Dong.

The estimated investment is about 1 billion RMB (Wang Zhonggu, 1990) (See figure 13, p. 68, "The concept plan of the Pu Dong World Fair").

In addition to the world fair, a proposed international sports center will be built meeting Olympic standards. The center will contain a stadium with a seating capacity of 50,000 people, a coliseum with a seating capacity of 15,000 people, five swimming pools, twenty tennis courts, five basketball courts, five volleyball courts and two soccer fields. A recreation and cultural center including libraries, museum, art galleries, theaters and cinemas will also be constructed (9.3 Society, 1986, p. 58).

The proposed recreation and sport facilities are not only for Pu Dong residents, but also for domestic and foreign visitors. Pu Dong is planned to attract and support a flourishing tourism business. Modern hotels will be erected in the business and recreation areas. (9.3 Society 1986, p. 64). A "chinese Disney" was suggested to be built on the coast of the East Sea (Shanghai Economic Research Center, 1986, p. 42).

In the concept plan, colleges will be located at the BZ subarea adjacent to the high technique research and industrial park. The proposed international sport center mentioned above will be built nearby so that the college students can use it. A primary and secondary education system will be established according to Chinese standards: a residential district with 20,000 people will be served by a high school, a middle

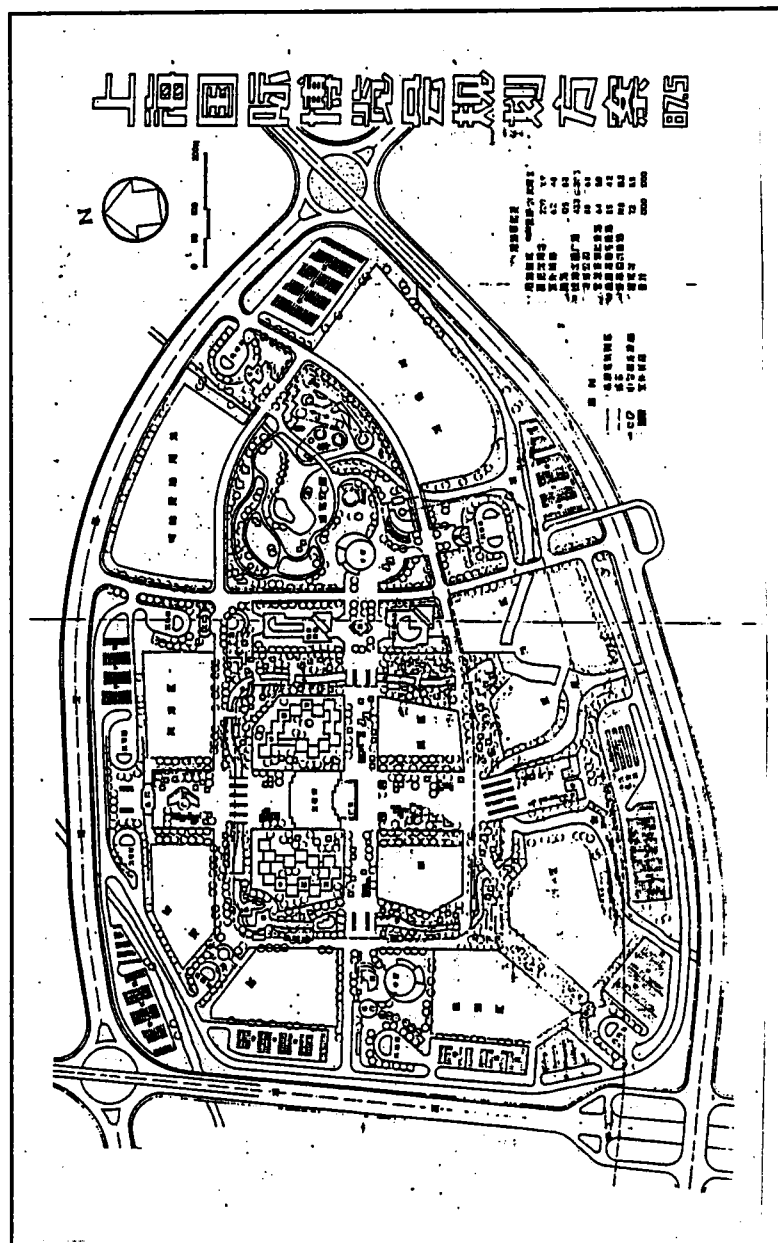


Figure 13: Concept Plan of Proposed World Fair in Pu Dong.
Source by Wang, Zhong-gu, 1990.

school, a primary school, two public kindergartens and three nurseries. A public health system also will be established based on the standards of the Chinese ministry of public health and will provide for 52 hospitals, a medical research center, several medical schools (9.3 Society, 1986, p. 68).

The Layout

Based on Direction of Pu Dong Development (Zhou, He, 1991) and the concept plan, each subarea of Pu Dong is planned for mixed use with a main function. The five subareas each has a different function. The whole Pu Dong area is for multiple functions.

The WGQ subarea will be a free trade seaport. This is the area that will enjoy the very special treatment. A separated free trade zone (bond zone) will be established within the subarea. In the bond zone, foreign investors will be allowed to engage in international trade, port, storage, export processing, transportation, financial service businesses and enjoy customs duty exemption. In addition, the WGQ Power Plant and a new ship-building base will be constructed in this area.

LJZ is the financial and commercial center. It will have a very modern appearance. Behind the greenery and sculpture on the waterfront, high-rise finance, office and hotel buildings and 140 m tall TV tower will shape the skyline of the city. This area also will enjoy very special policies.

QJ and ZL are two industrial zones. Pollution-free industries will be developed. The existing industry bases will be fully

utilized. The existing industries are ship-use facilities, instruments, textiles, electronic and mechanic products, ship and vehicle use materials.

BZ is a planned science and education zone with colleges, international sports center, and a high-tech research and industry park.

Transportation

In the concept plan and Direction of Pu Dong Development (Zhou, He, 1991, pp.55-57), the road network of Pu Dong will be established in the traditional concentric and radial pattern, two ring roads with ten arterials radiate from the core (See Figure 14, p 71, "future transportation of Shanghai city"). The road system of Pu Dong is a part of the whole city's network. So, the construction of the new area will coordinate the improvement of the existing urban core. Yang Gao Road, as a half of an inner ring road, will be a major traffic axis connecting four subareas and two cross river bridges. The roads of Pu Dong will have grade separation and access control. The traffic flows of opposite direction will be kept apart. The exclusive lanes will be set up to separate vehicles in different speed, different type (cargo or passenger), motor and non motor vehicles.

In my opinion, the transportation network design is based on Chinese reality but is not very advanced by American standards. The existing transportation network of Shanghai is

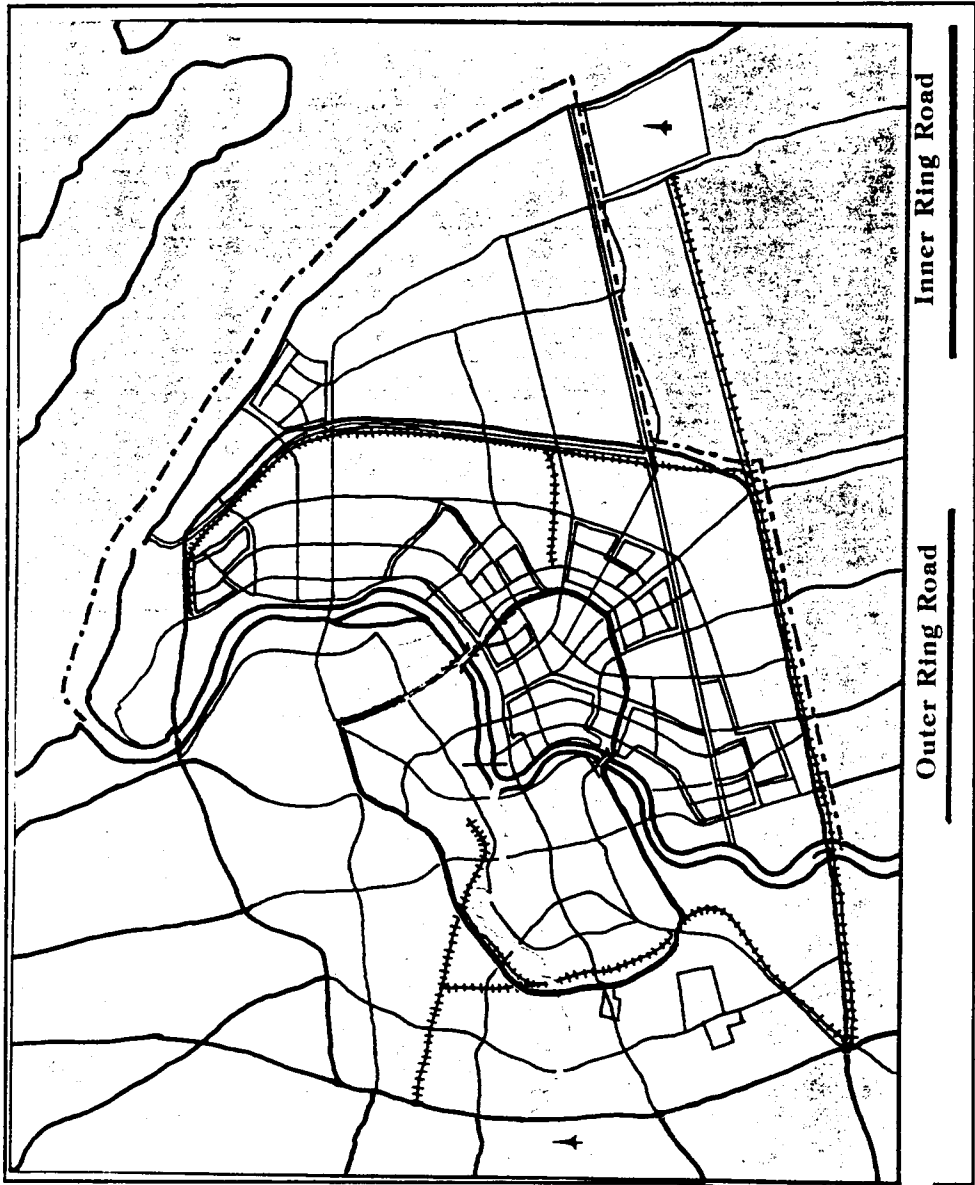


Figure 14: Future Transportation System of Shanghai, Source By Sha, Lin, 1990.

an irregular grid pattern with many dead ends, bottle-necks and no obvious road classification or traffic corridors. Most of the roads in the built-up area are in Class C condition (mixed traffic) with little access control and grade separation. The opposing traffic flows, motor vehicles and non-motor vehicles, and pedestrians mix on the narrow road surface.

There are no highway construction action plans right now. The 89 km outer ring road might be developed as a highway in the future. Controversy exists about the possibility of highway construction in China because of limited land and money. But it is sure that large scale highway construction is unlikely to begin in the near future.

The major passenger travel mode is and still will be public transit because of the population pressures, resource limitations, income levels and life styles. In the current situation, travel by Shanghai residents by walking, bicycles and buses account for 96.5% of total trips. Like other Chinese cities, Shanghai is a bicycle kingdom. The ratio of bus passenger volume to bicycle riders is 59:41 in Shanghai (Shanghai Transportation Research Center, 1990). The Shanghai government wants to build a subway system to absorb some bus and bicycle riders to relieve traffic jams and reduce traffic accidents. Even though it is an extra-large city, Shanghai has no light and rapid rail transit system until now. A planned major subway line along the west-east development corridor

will extend to Pu Dong, run through the heart of the area towards WGQ seaport. Another major subway line in Pu Dong will be constructed along Yang Gao Road connecting the major activity centers and residential areas (Zhou, He, 1991, p. 56)

The key of Pu Dong development is the cross river transportation. According to the concept plan, the future cross river transportation will consist of two or three bridges, five or six tunnels and two dozen ferry lines.

The transportation system of Shanghai is, and still will be three dimensional including land, water and air transportation. In addition to the road system and cross river transportation improvement, WGQ seaport and a new international airport will be built. The east-west Chuanyang Canal and a planned north-south Pu Dong Canal will be the main inland river navigation channels of the area.

The Shanghai government has decided to begin ten large infrastructure projects in 1990. Except for the transportation projects, there are public utility and communication projects. I will discuss that in the third section.

Major governmental policies

In China, government policies are always important. Sometimes they are in fact equal to laws. Sometime they will become laws. Sometimes they weigh more heavily than laws. After the Economic Reform began, the governmental policies have been more significant than before. The government

policies reflect the degree of opening to the world and reform. If we think of the Chinese economy as a human, the old system is the ropes that have tied him up. The degree of opening and reform will reveal how many ropes have been cut and how much the person can move and accomplish something.

The Shanghai government issued, and the state council approved ten preferential policies in May and nine regulations in September 1990. The promulgation at the first stage reflects a fact that the Chinese government learned lessons from the experience of the special economic zones (SEZ). The SEZs were Chinese government's economic reform laboratory. The central and local government work in the way of "Walking in a river by touching river bed under water"¹⁹. The reform in SEZ developed faster than policy making and legislation. This status caused some negative effects.

Ten preferential policies defined the basic approaches to attract investors, particular foreign investors and pointed out what they can and cannot do. The nine regulations elaborated the ten policies and put them in law form. The policies and regulations reflect unprecedented scale of opening and reform. But, the degree of opening and reform are different between foreign and domestic investors, different among five subareas. The foreign investors will obtain more special treatment. WQZ free trade zone and LJZ financial and

¹⁹ This is Deng Shao-ping's words. It means to reform the Chinese economy in tentative and incremental ways.

commercial center are the most open areas²⁰.

The ten preferential policies give the basic principles of tax, investment, import and export, and entry and exit, land, finance, and free trade zone regulation. The policy makers intend to use tax reduction and exemption, as well as the special treatment of import and export, entry and exit to attract overseas investors and to direct investment flows. The policy makers want to use these policies to lure overseas businessmen to establish Chinese-foreign joint ventures, Chinese-foreign cooperative enterprises and wholly-foreign owned enterprises in Pu Dong, and to encourage foreign investment in export-oriented and import-substituted production, energy, transportation, public facilities and other infrastructures. These also are the first policies that lift restrictions and allow overseas businessmen to establish financial institutions and commercial firms in China. The main goal of the policies is to open more investment channels. In my opinion, the policies are very pragmatic, at the edge of the ideological limitations of socialism. (See appendix C: Ten preferential policies)

The nine regulations are laws that elaborate the ten preferential policies. Ten preferential policies define what activities are allowed and the nine regulations show how to regulate them. For example, one of the policies allows the foreign investor to establish financial institutions, followed

²⁰ I will further explain that at Chapter 3.

by a regulation to regulate this kind of financial institution. (See appendix D: The list of nine regulations)

China has a history of ignoring laws as the main approach to regulation of economic activities. The Communist government believed that the main function of laws was crime punishment. The way of thinking has been changed since the Economic Reform began. The promulgation of nine regulations reflects the change. According to the Shanghai mayor, the regulations have some characteristics. "The regulations are authoritative, comprehensive, applicable and suitable for the Pu Dong area. The legislation is based on the requirements of the Pu Dong; The laws were issued by the powerful administration" (Huang, Ju, 1990).

Among these policies and regulations, the most interesting are conceived with land leasing. This is the first policy that allows land leasing in China. Previously, the land leasing was viewed as non-socialistic. The main goal of the ten preferential policies and their related regulations is to open more investment channels for fund raising. The Chinese government wants to "turn earth into gold²¹", to obtain substantial revenue from land use right-granting and land use fee-charging. The ninth preferential policy points out that:

"The policy of the paid-transfer of land use rights will be practiced in the area. The term of the land use rights will be 50-70 years. Overseas businessmen may contract large tracts of land for development."

²¹ Chinese proverb

According to "Provisions of land administration in Shanghai Pu Dong New Area" and other land regulations, the land of Pu Dong is still state-owned. However, under the circumstance of pay consideration, the user can be granted the land use right by signing a contract with Shanghai Municipal Land Administration Bureau. The bureau is a government agency responsible for the land-related business. Furthermore, the investors also can obtain land use rights by public bidding, auction and negotiation. The land lots involved in granting of land use rights can be either land equipped with public utilities or tracts of land pending development. The granted land use right can be legally transferred, leased, secured, inherited, or be used in other economic activities permitted by laws. The maximum terms for land use right-granting are different, based on the different uses, but, the terms can be extended. In order to avoid land speculation, the government has the right as the representative of land owner to revoke the granting if the granted land is not developed within a certain period time.

The regulations also stipulate the procedures of the land use right transaction. the Land Administration Bureau must provide the documents about the characteristics of the land, the requirements and standards about the use of the land, buildings, price, etc. The land users must provide documents describing their qualifications, land development plan and tentative payments.

The state-owned enterprises previously obtained land use right gratis by means of government assignment. Under new regulations, they must pay land use fees. If they want to transfer, lease or secure their land use rights, they must go through the legal process of land use right transfer. Under the new policy, Chinese enterprises are encouraged to use the government assigned land use right as investment for the establishment of joint venture. This kind of land use right will become equity owned by the government, and part of the equity may be assigned to the original land user by the government.

According to the regulations, the revenues from the land use right granting and land uses fee will be earmarked by Shanghai municipal government for the use of Pu Dong development. (Shanghai Municipal Government, 1991)

Another regulation that attracts foreign investors' attention is "Measures on Administration of the Wai Gao Qiao free trade zone of Shanghai". According to this regulation, the free trade zone (bond zone) is an enclosed-type comprehensive opening-up zone. It mainly develops businesses such as foreign trade and entrepot trade, harbor, storage, processing for export and financial service. The free trade zone should be under the administration of the Free Trade Zone Administrative Committee. All products of an export processing enterprise in the zone shall be exported, unless otherwise ratified by the competent administration. Foreign-invested

enterprises in the zone will enjoy more preferential tax treatment than in other areas of Pu Dong. All goods entering the free trade zone from outside China shall be exempted from customs duty and consolidated industrial and commercial tax or product tax. All products shipping outside China also shall be exempted from customs duty and consolidated industrial and commercial tax, or product tax. But when products enter the non-free-trade zone upon approval, customs duty and the other taxes should be levied. Except the additional tax exemption, the foreign investors within the zone will receive additional special treatment of international trade, investment, entry and exit, etc. (Shanghai Municipal Government, 1991).

C. THE IMPLEMENTATION OF PLAN

The Implementation Steps

The Pu Dong development plan is incomplete and the planning is going on. The implementation has already begun. The Shanghai government wants to have a comprehensive concept plan and strategies first. Then, it will elaborate and implement them step by step over long range.

There are three implementation stages over a 25 - 30 year period (Zhou He, 1991, p. 61). What should be done in the first stage is clear but not in the second and third stages.

1. The First stage:

The first stage (1990 - 1995) is a initiating stage which will lay the foundation for further development. The main

objectives in this stage comprise three aspects:

- planning, policy making and legislation.
- investment environment improvement.
- energy production and infrastructure improvement.

Ten major infrastructure projects²² and "three points and one line"²³ development should be completed in the five year stage. The ten projects are able to form the frame of the infrastructure of the Pu Dong area, the "three point and one line" development can create a better investment environment for overseas investment (Zhou, He, 1991, p. 61).

(1). Ten Projects

These are the biggest infrastructure projects in China since 1949. The total investment requires 5 billion RMB and more.

The ten projects are:

- Nan Pu Bridge: The four lane bridge has a capacity of 50,000 motor-vehicles per day with the length of 8 km, the width of 30.5 m and the height of 50 m. The Chinese-designed bridge has one span over 431 m river surface

²² The construction of the ten projects is Shanghai Municipal government's decision. They were described in Direction of Pu Dong Development (ZHou, He, 1991), The Investment Guide in Pu Dong New Area of Shanghai (Sha, Lin, 1990) and other documents.

²³ They are financial and trade center of LJZ area, Jing Qiao Export Processing Zone of QJ area, bond zone of WGQ area, Yang Gao Road. The construction of "three points and one line" is Shanghai Municipal Government's decision. It was described in Li, Jia-nen's speech on International Symposium, 1988, Chen, Mao-di's article "The Great Decision Sparks Next Century", 1991 and Mayor Huang Ju's speech, 1992.

with no piers in the water. The ships of 50,000 ton class can go under the bridge. The bridge requires 0.8 billion RMB investment.

- Yang Pu Bridge: The six lane bridge will have a larger capacity than Nanpu bridge. It will be completed by the year 1993.

- Inner ring road of whole Shanghai city: The major segments of Pu Si are viaducts. The total investment of the whole ring road including both Pu Si and Pu Dong parts is estimated at over 3 billion RMB.

- Yang Gao Road: The 27 km Yang Gao Road will be widened and improved as the main street of the future CBD and major traffic axis of Pu Dong with 100 m right of way (50 m traffic lanes in first stage)

- Four longitudinal ship berths: The berths will be constructed in WGQ new seaport. After the completion of the project, cargo handling capacity will increase substantially.

- Pu Dong Gas Work expansion project: Pu Dong Gas Work expansion project will increase daily output by 1 million m³. Gas is the major fuel for daily cooking use of Shanghai residents.

- WGQ Power Plant and other electric facilities: The planned WGQ Power Plant will generate 3.6 million kw. The first stage of construction should be finished in the five year period. In addition, Gao Qiao Thermal Power

Plant will be expanded. The construction of 500 kv ring-power-grids and transformation stations is also in the plan.

- Water plants: Two water plants are designed to have a capacity of 400,000 tons per day at the first stage, 800,000 tons at the second stage, and 1,200,000 tons when the projects are totally finish.

- Sewage system: The sewage system is planned to be expanded and reach a daily capacity of 1,400,000 tons.

- Telephone lines: The communication network of Pu Dong will be improved by the increase of 100,000 programmed control telephone lines. The communication system of Shanghai is really out of date. The popularization rate²⁴ of telephone is 3.6 percent and the connected rate is 50 percent only. A popularization rate of 25 percent for telephone lines and 50 percent for telephone sets are planned for Pu Dong year 2000.

In addition to ten projects, a tallest TV tower in Asia will be erected on the waterfront of the LJZ subarea, and the development of East Sea natural gas field is under research.

(2). "Three Points and One Line"

The comprehensive development is arranged to start at "three points and one line." The three points are: the financial and commercial center on the waterfront of the LJZ

²⁴ The popularization rate of telephone indicates percentage of people who have telephone sets.

subarea, the Jing Qiao Export Processing Zone of QJ subarea and the bonded zone in the WGQ subarea. The one line is Yang Gao Road. The development of "three points and one line" also will proceed step by step. Based on the speech of Mayor Huang Ju (1992), in the first stage, the development of LJZ financial and commercial center will cover 1.51 sq.km (total 5.47 sq.km), Jing Qiao Export Processing Zone will cover 4 sq.km (total 8.9 sq.km), and WGQ bonded area will occupy 4 sq.km (total 10 sq.km).

The ten projects and "three points and one line" development have been proposed by the Shanghai municipal government. The reports of 9.3 Society and Tong Ji University also suggested undertaking a world fair in Pu Dong to foster the development in the first stage. The report of 9.3 Society also proposed to begin the construction of an international sport center and a specialized shopping center in the first five year period.

2. The Second and Third stages:

The Shanghai municipal government views the second stage as a key of the development. In this five year stage (1995 - 2000), Mayor Huang Ju said that the transportation network and other infrastructure of modern Pu Dong should be formed. The projects of cross river transportation system, two ring roads, major subway lines and a new International Airport should be finished. The "three points and one line" should be developed and play a role in Pu Dong's economy (Zhou, He, 1991, p. 62).

In the third stage (10 - 20 year after 2000), according to Mayor Huang Ju's speech, the Pu Dong development as a whole should be completed. There are no elaborated plan for this period now. (Zhou, He, 1991, p. 63)

The Status of Implementation in 1990s

1.The investment

The banks have mushroomed in Pu Dong during 1990 and 1991. The Shanghai government has approved the establishment of twenty domestic and overseas financial institutions. A new financial center and a reformed monetary circulation system are taking shape.

All the major banks²⁵ of China have entered and played an important role in Pu Dong. The Pu Dong branch of the People's Construction Bank of China (PCBC) opened at September 7, 1990. The major business of PCBC is new project funding, particularly new infrastructure construction funding. Supported by the headquarter, the Pu Dong branch of PCBC has raised 200 million RMB for the new TV tower, and will be responsible for the investment of Yang Gao Bridge, inner ring road Pu Dong Segment and Yang Gao Road projects. The branch of the Industrial and Commercial Bank of China (ICBC) also opened

²⁵ The major banks of China include the nation's central bank, The People's Bank of China, and several business banks such as The People's Construction Bank, The Industrial and Commercial Bank of China, The Agricultural Bank of China, Bank of Communication and Bank of China. All the headquarters of these banks are in Beijing.

in 1990. The ICBC agreed to raise 5 billion RMB funds for the industrial and commercial development of Pu Dong. The major business activities of the Bank of China are foreign exchange transaction, international deposit, credit and accounting. It will be in charge of the foreign currencies needed by Pu Dong for import materials. The Bank of China has agreed to supply Pu Dong \$100 million every year. Furthermore, it will help Pu Dong to establish joint venture business and development corporations. The Bank of Communication, the first comprehensive bank in Ltd form, and the Agriculture Bank of China also opened their branches in Pu Dong and will expand their business in the area. In addition, the first Chinese security exchange market has become registered and the People's Insurance Company has began its business (Chen, Zhi-rong, 1990, p. 21).

Following the Chinese banks, two American²⁶, two French and two Japanese²⁷ international banks have established branches in Pu Dong. More than two dozens are applying. fourteen of them are Japanese banks (Chen, Zhi-rong, 1990, p.22).

Before the beginning of the Pu Dong development, Shanghai already has the experience to attract and utilize foreign investment. From 1979 to 1989, Shanghai utilized \$3.69 billion

²⁶ the Citybank and First American Bank.

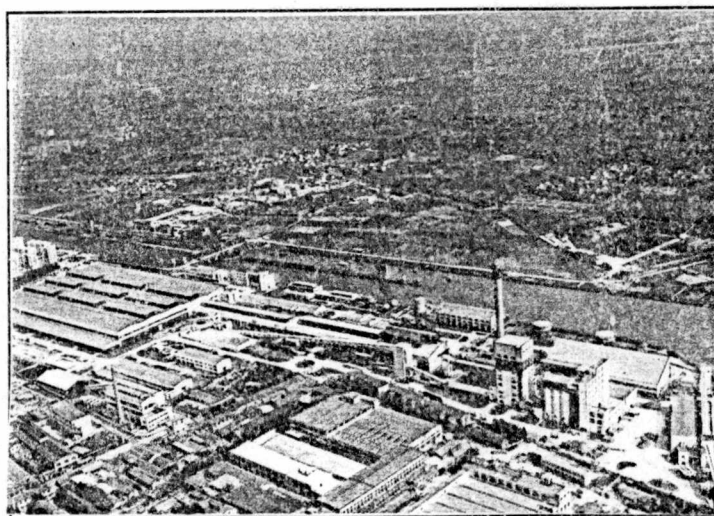
²⁷ One of them is the Bank of Daiichi Kangyo, the biggest bank of Japan.

foreign investment²⁸, and established 709 joint venture, cooperative and wholly foreign-owned enterprises (Municipal Statistical Bureau of Shanghai, 1990, p. 105) (See Figure 15, p .87, "The joint venture enterprise"). The announcement of the Pu Dong development has further stimulated the investment. From May 1990 to June 1991, The contracts are signed to establish 98 new enterprises in Pu Dong. After the completion of these projects, Pu Dong will have 135 foreign-invested enterprises, and the total foreign investment of Pu Dong will reach \$420 million. In addition, about \$3.6 billion of foreign investments are being discussed in trade talks (Shao, Yi-dong and Bai, Guo-liang, 1991). It seems that the prospect is bright, but, most of the investments are of small scale and investors are waiting and observing.

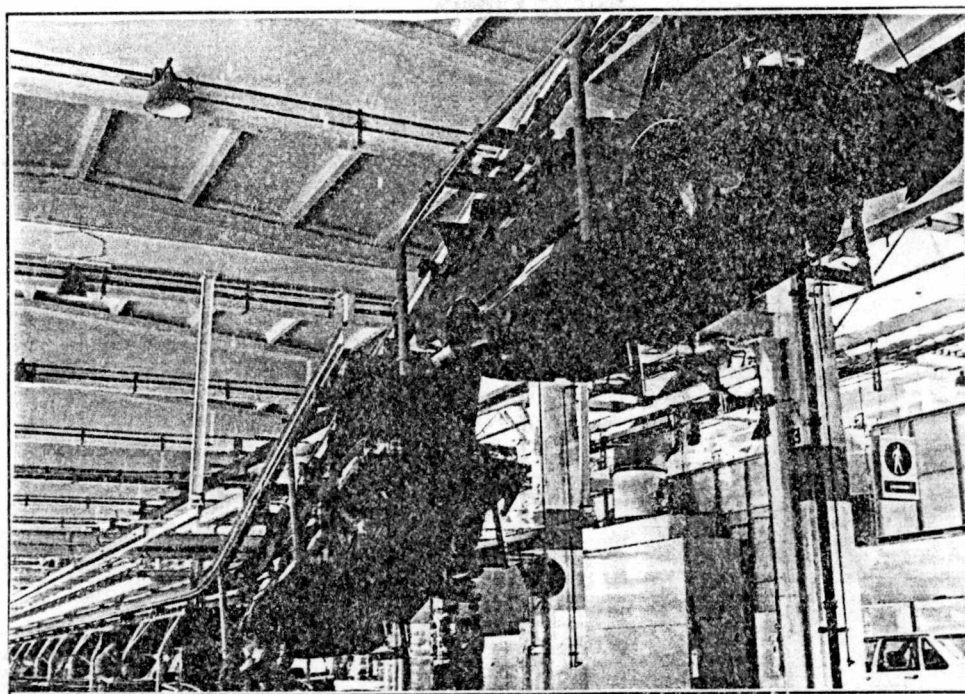
Because of its excellent geographic location and economic position, Shanghai has always been attractive for domestic investors²⁹, particularly the investors of Yangtze valley. Since 1990, dozens of governors of provinces and mayors of municipalities have visited Pu Dong with the delegation of business leaders and investment specialists. They look for investment opportunities. In the eight months of 1991, thirty two domestically-invested enterprises were newly founded in Pu Dong. Adding the old domestically-invested firms, the total

²⁸ the number includes the investment of Hong Kong, Macao, and Taiwan.

²⁹ Mainly, they are local governments in different levels and public-owned local enterprises, but few private investors.



Yaohua-Pilkington Grass Making Corp.Ltd. Sino-British Joint Venture.



Shanghai Volkswagen Automobile Co. a Sino-German Joint Venture.

Figure 15: Joint Venture Enterprises. Source by Sha, Lin, 1990.

number of the category reached 117 and the total investment amounted to 240 million RMB in 1991 (Lu, Guo-yuan and Chang, Wei-di, 1991). The enterprises of Shanghai are also interested in the Pu Dong investment although the money in their hands is limited³⁰. In July, 1991, Shanghai Pu Dong Commercial Development Corporation was established for the project of Zhang Yang Commercial and Recreation Center. More than 70 Shanghai firms wanted to invest and join the business negotiation (Chen, Zhi-rong 1991, p. 21). The businessmen of Hong Kong, Macao and Taiwan have enthusiasm for the Pu Dong project. Some of them only want to "dig gold the mine", but others also want to help the prosperity of the motherland. More than one thousand groups visited Pu Dong in 1990. (Chen, Zhi-rong, 1991, p. 24).

2. The organization

What is the organizational structure of Pu Dong in the 1990s? Who makes the decisions? Who executes the decisions? Who coordinates the work?

The Pu Dong Development Leading Board of Shanghai Municipality makes the decisions. The organization was established in October, 1988. The chairman of the board is Shanghai mayor Huang Ju. Two vice chairmen are vice mayors Gu Chuan-xun and Ni Tian-zeng (Sha, Lin 1991, p. 2).

Pu Dong Development Office of Shanghai Municipality

³⁰ The Shanghai enterprises are under the tight control of the government.

coordinates the work. The office also is able to research, propose, and inspect but has little decision making power and no direct executive body.

In the office, there are seven divisions: office of administration, division of policy research, division of comprehensive development, division of urban planning and construction, division of investment and project, division of development and management, division of information and liaison. The president of the office Yang Chang-ji, vice president Sha Lin, Huang Qi-fan and Li Jia-neng are high-ranking officials of the Shanghai municipal government (See Figure 16)



Figure 16 The Pu Dong Development office of Shanghai Municipality, 1991.

The existing Shanghai government body executes decisions. The Shanghai government body has a pyramid structure with four main levels: level of the municipality, level of urban district and suburban county, level of urban subdistrict and suburban township, level of urban street and rural village. In each level, functioning agencies (departments, offices, commissions, bureaus) cooperate with each other to execute the decisions of the government of the same level as well as that of above levels. For example, a county economic development commission will execute not only the county government's decision, but also the municipal government's decision delivered by the municipal economic commission.

In fact, the existing government body does not work well. If the municipal government has a decision, it moves through several lower government levels and requires many functioning agencies' coordination. The result is usually extra manpower costs, time consuming, interest conflict (the interest of entirety vs the interest of the parts) and involvement in bureaucracy and corruption. The Pu Dong new area is under the jurisdiction of three urban districts and two suburban counties. The implementation of the decision of the municipal government needs the coordination of three lower level governments and many functioning agencies. Problems are already occurring. The deficiency of the socialist government system, the trinity of politics, economics and administration, further worsens the situation.

Foreseeing this kind of circumstance, some researchers³¹ proposed to establish Pu Dong district directly under the jurisdiction of the Shanghai municipal government. Others³² wanted to create a new administration system for Pu Dong. Finally, the Singapore experience was favored. Following the example of Jurong Town Corporation (JTC) of Singapore, three development companies were established in Pu Dong in September 1990. The three corporations are: Shanghai Jing Qiao Export Processing Zone Development Company (JQDC), Shanghai Lu Jia Zui Financial and Trade Zone Development Company (LJZDC) and Shanghai Wai Gao Qiao Bonded Zone Development Company (WGQDC). Organized, authorized and funded by the Shanghai municipal government, the three companies are the economic entities responsible for the development of large tracts of land and management in the three zones. Each company has registered capital 100 million RMB. The companies can be the sole investor, and also can cooperate with foreign and domestic investors by accepting capital and land use right granting (Chen, Shao-neng, 1990, pp. 311-316).

For example, the business scope³³ of JQDC is:

"- Land development and management including the transfer

³¹ For example, the report of Shanghai Economic Research Center hold this kind of opinion.

³² For example, Dr T.Y.Lin hold this kind of opinion.

³³ The source come from JQDC's pamphlet for foreign investors. The thesis author obtained the pamphlet in the interview with Zhang, Zhi-ren, deputy director of project dept, JQDC.

of land use right and sublease.

- The development of infrastructure and public utilities in the zone.
- The real estate business: constructing, selling, leasing of various buildings, such as standard plants, residential housing, office buildings and warehouses.
- The design, prospecting, contracting, and construction of public utilities, building material supply, equipment installation, old plant improvement, interior decoration and other engineering projects.
- The participating in project investment, establishing various enterprises, commercial centers and trade organizations.
- The development and operation of tertiary business such as tourism, advertisement, hotels, restaurants, department stores and transportation.
- Connecting cooperative partners, arranging investment negotiation and consulting.
- Import and export business."

The business scope of the LJZDC and WGQDC are similar to that of JQDC. The three companies are directly under the leadership of the Commission of City Construction, a functioning agency of municipal level and the Pu Dong Development Leading Group of Shanghai Municipality.

3. The construction

In the first two years of 1990s, the horn of Pu Dong development blew, and the ten large infrastructure projects are under construction. The highest priority projects are cross river transportation. Nan Pu Bridge was completed in September 1991. The ribbon cutting opening ceremony was held in the colorful fall season. The Chinese-designed bridge is magnificent and looks like the Golden Gate Bridge of San

Francisco. The bridge not only connects both sides of the Huang Pu River, it will contribute to economic development and convenience of the Shanghai people, and has become a landmark of the city, increasing the charm of the scenery.

The construction of Yang Pu Bridge, a sister bridge of Nan Pu Bridge and another key project of the cross river transportation system of Pu Dong, has already started at the end of 1991. The project is planned to be completed in three years. Furthermore, another East Yan Road Cross River Tunnel will start soon. The project is in preparation stage now. After the construction, this tunnel and the existing East Yan Road Tunnel will become two one-way lines in opposite directions (Chen, Zhi-rong, 1991, p. 21).

In addition to the cross river transportation projects, the inner road system improvement of Pu Dong is underway. The main south-north traffic and development axis Yang Gao Road is being widened. (See Figure 17, p. 94, "Nan Pu Bridge and Yang Gao Road Project") Two arterials³⁴ paralleling the Huang Pu River, South Pu Dong Road and Pu Dong Boulevard, are being improved. Wen Deng Road will be extended to connect the approach of the Nan Pu Bridge. Moreover, the east-west arterial Tang Chuan Road improvement project was completed in October, 1990. The total investment of the Tang Chuan Road project reached 120 million RMB (Chen, Zhi-rong, 1991 p. 21).

³⁴ China has no highway system and obvious road classification like that of the United States. The "arterial" means major traffic corridor.

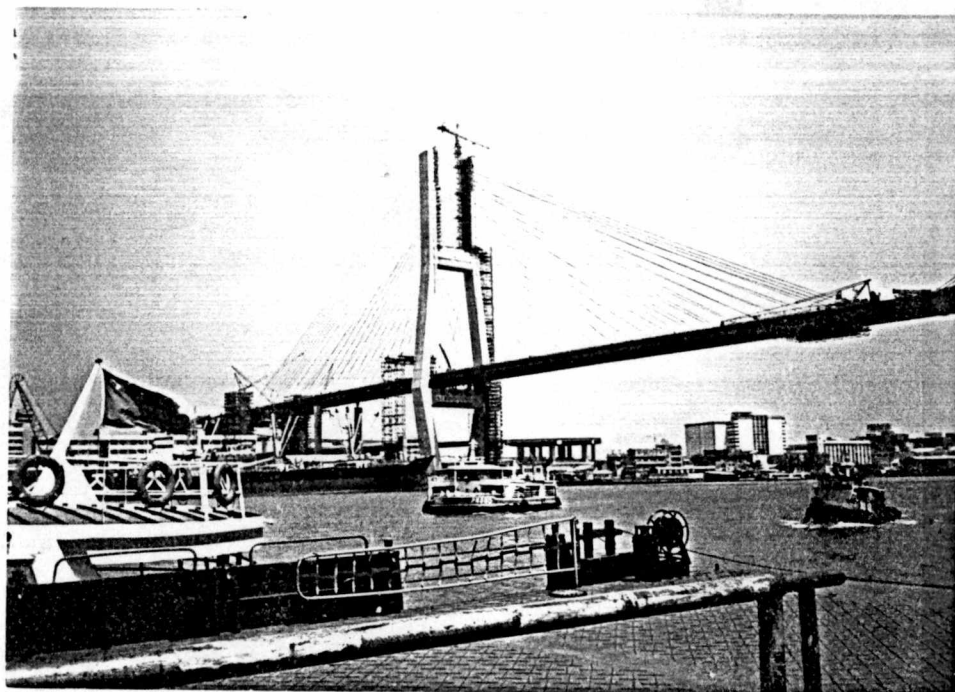


Figure 17: The Construction Sites of Nan Pu Bridge and Yang Gao Road.

Besides the cross-river transportation and inner road system improvement, the WGQ seaport project started in 1990 and the site selection work for new international airport was finished in 1991. The new inner river navigation projects also have entered the preparation stage. (Shao, Yi-dong and Bai, Guo-liang, 1991).

With regard to the public utility projects, Ju Jia Qiao Water Plant was built in 1989 and Lin Qiao Water Plant is under construction in 1991. The Lin Qiao Water Plant is a large scale project because the water resource comes from less-polluted segment of Yangtze River outside of Shanghai's boundary. Moreover, the survey of Pu Dong ground water is already finished. The survey concluded that the ground water of Pu Dong is enough for drinking and daily use of Pu Dong residents but is not enough for intense industrial development use. Like the water supply system, the sewage system of Pu Dong also is under construction and will double existing capacity.

With regard to the energy projects, the first stage construction of WGQ Power Plant and the second stage construction of Pu Dong Gas Works started in 1990. The power transmission network improvement projects are already completed and could help Pu Dong obtain more electricity generated by the neighboring provinces (Shao, Yi-dong and Bai, Guo-liang, 1991).

Except for the infrastructure construction, the housing component of Pu Dong is developing rapidly. Fifteen large scale residential districts covering 35 sq.km are under construction between the Huang Pu River and Yang Gao Road, some of which have already been completed (Sha, Lin, 1991).

4. The latest development

In October 1991, an International Symposium on the Pu Dong development was held in Shanghai. Shanghai mayors, the representatives of the State Council, Chinese and overseas scholars came from sixteen countries attended the conference.

On his speech of March 16, 1992, Shanghai Mayor Huang Ju further defined the current objectives of the development of three points: LJZ Financial and Commercial center, JQ Export Processing Zone and WGQ Bonded Zone.

The focus points of LJZ development are on the waterfront of the Huang Pu River and Yang Gao, Weng Deng and Zhang Yang Roads. The construction of the TV Tower, the skyscrapers of Shanghai Navigation Center, Shanghai Customs, and several banks will start at the waterfront in 1992. The construction of Yu An, Qi Ru, Zhao Sang as well as the other commercial and office high-rise buildings also will begin along Yang Gao, Weng Deng Zhang Yang Road in this year. (Figure 18, p. 97, "The development of the Waterfront of Pu Dong")

The development of JQ Export Processing Zone will start at the south side of Shang Chuan Road in 1992. From south to north along both sides of Shang Chuan Road, the buildings of

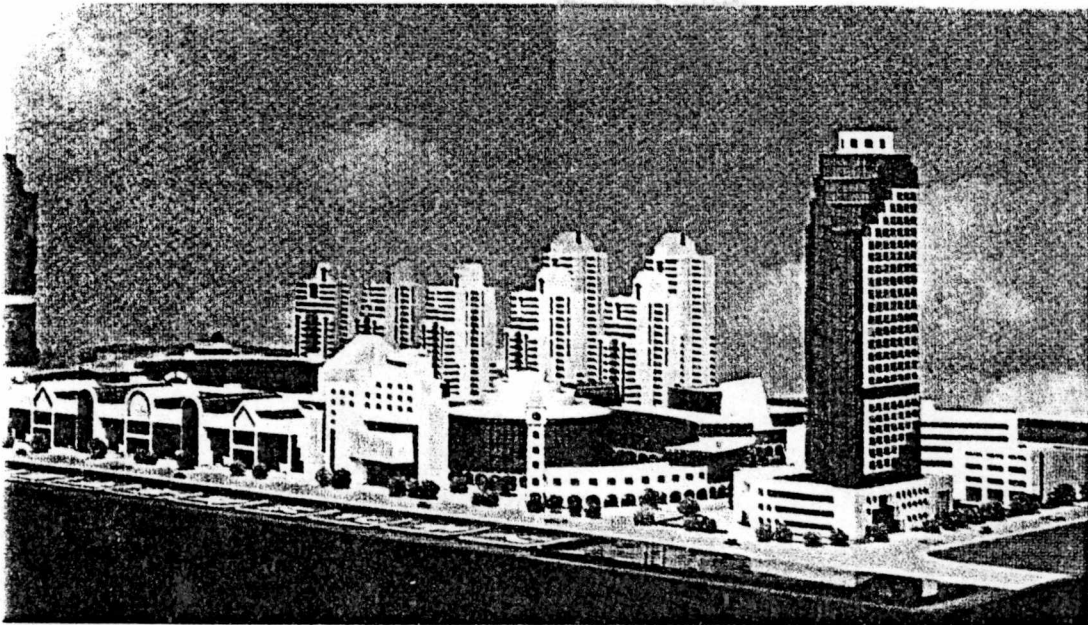
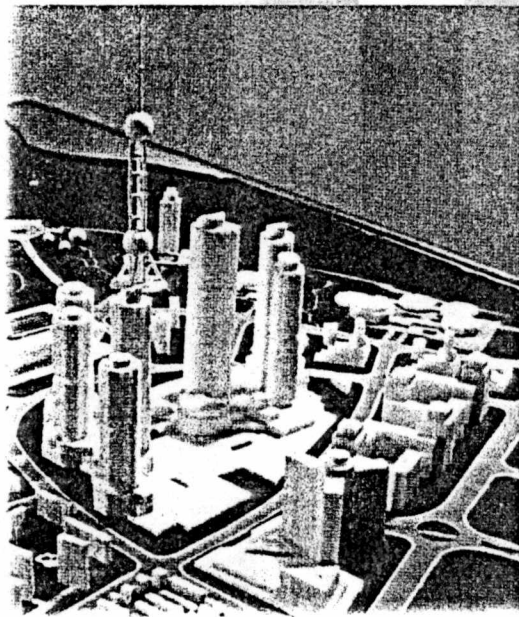


Figure 18: The Water Front Development of Pu Dong, Source by Sha, Lin, 1990.

factories, offices, warehouses and residential housing associated with shopping centers and other public facilities will form the frame of 3 sq.km zone in three years.

The construction of 400,000 sq.m floor space will begin at WGQ Bonded Zone in 1992. Half of them should be finished in the same year. Fifteen projects will be located at the zone and start operation. The total investment will amount to 120 million U.S dollars. Beginning at the administration building in the middle of the zone, the development will stretch out in both south and north directions to form a 2.sq.km free trade zone in three years. The zone is planned to contain buildings totalling 400,000 sq.m floor space, and served by roads of 20 km length. The zone will absorb 60 projects with 400 million U.S.dollars investment.

CHAPTER 3

THE EVALUATION OF THE PLAN

What are the criteria and the process of my evaluation? I intend to evaluate the goals of the plan first. Are the goals reasonable, realizable and acceptable by Chinese people? At the next step, I will evaluate the concepts of the plan. Can these concepts help goal realization ? Then, I will evaluate the planning. Is the planning adequate enough to realize the goals? Are there shortcomings in the planning? Can these shortcomings be overcome? What are my recommendations? Finally, I will offer a conclusion. The evaluation starts and develops around the goal, and the emphasis is put on the social economic aspects.

What is the basis of my evaluation? Mainly, the basis is on Chinese reality, on the experience and the knowledge of the country. As a native Chinese who taught political economics at the college level, I have confidence that I know the country well. The evaluation of planning is based on not only Chinese reality, but also on Western planning theories. I try to use both what I learned in China and what I learned in the United States to evaluate the plan and planning of the Shanghai Pu Dong new area development.

A. GOAL EVALUATION

The Acceptability

The goals of Pu Dong development are to make Shanghai a pivotal, modernized and international city, and to foster the modernization of the national economy of China. Do these goals conform to the wish of the Chinese people, particularly the wish of Shanghai people? I think the answer is positive.

The proposed modernization is not only the ambition of the Chinese government, but also the aspiration of the Chinese people. Chinese people want to have a strong motherland and to catch up with the developed countries. Shanghai people want the city's problems to be resolved. Day after day, year after year, Shanghai people have complained about the heavy financial burden of the city, the overcrowded buses and houses, the over-capacity public utilities and degrading living conditions. They welcome the city's renovation and modernization. Furthermore, the Pu Dong project gives the best chance to Shanghai people to develop themselves and earn more money. Shanghai people have the reputation of astuteness and skill. They can do very well to make money under the conditions of more opportunities and looser political and economic control.

The bases of the goals are the Economic Reform and the open-door policies. These policies are also welcomed by Chinese people. More and more the Chinese people realize that

the old political and economic systems are the obstacles of modernization. More and more the Chinese people want changes. They know that the changes can produce dynamics for a society; they know change can bring with it hope.

The Realizability

Pu Dong development is intended to shape Shanghai into an international city of world first class like Paris, New York or London, and the nation's economic center. This goal is rather lofty. However, is it a Utopian image? Is it realistic? The goal is accepted by the people, but acceptability is not equal to realizability.

How do we judge the realism of the goal? Firstly, are there major obstacles to the goal realization? Based on interviews with professors, specialists, and officials³⁵ responsible for the project, my conclusion is that there might be no big threats. Geographically, Pu Dong is in an excellent position. The natural environment of Pu Dong is suitable for large scale development. The topographic, hydrologic, geologic and climate conditions are excellent, as well as the size of the area. The Huang Pu River was a obstacle of development in history. Technically, there are no big problems to link both sides of the river now. The bridges and tunnels have been built or are being built. The ground water is not sufficient enough to support intensive industrial development. The

³⁵ The people interviewed are listed in Appendix B.

alternative is to obtain water from the Yangtze River. This may be economically expensive, but is not technically impossible.

Are there problems that may threaten the goal realization in social economic aspects? In my opinion, maybe there are. The problems may cause some difficulties and uncertainties. But they may be resolvable and may not totally kill the projects.

The first problem is related to money. Based on the experience of China itself and other countries, the special economic zones or special economic development areas usually are not bigger than the size of several square miles. As a developing country with a tight budget, how does China raise enough funds to complete such a huge project and reach such a ambitious goal?

How much money will the Pu Dong project cost? There are no published materials to show the budget of the comprehensive development of Pu Dong based on carefully quantitative research. I also have not found the government documents that particularly illustrated the budgets. I doubt the existence of this kind of budgets. The 9.3 Society³⁶ estimated that one square kilometer development of Pu Dong requires 200 million³⁷

³⁶ 9.3 Society, "The Strategy of Pu Dong New Area Development", 1986.

³⁷ This is average cost including infrastructure and any development on the land surface.

RMB. Chen Zhe-hao³⁸ estimated the cost will be 100 million U.S dollars (about 600 million RMB) per square kilometer. Yang Chang-ji, the president of Pu Dong Development Office of Shanghai Municipality, said that the estimated investment of Pu Dong is 200 million U.S dollars (1200 million RMB) per square kilometer³⁹. Anyway, it is sure that the 350 sq.km development requires a huge investment.

What are the main resources of Pu Dong investment? Investment by the Chinese central government is one important resource. The central government has agreed that it will invest 6.5 billion RMB in Pu Dong (Zhou, He, 1991, p. 78). However, the amount is not large enough compared to the need of the project. The central government has no intention to put all its money on one basket. It will and has to take care of the whole country, particularly the backward areas.

The investment of the Shanghai local government is another resource. But Shanghai has had to carry a heavy financial burden in recent decades. A new contract between the central government and Shanghai local government is under negotiation in 1992. In the old contract, Shanghai local government had to turn over 76 percent of its financial revenue to the central government every year. The more

³⁸ Chen Zhe-hao is chairman of the Shanghai Bureau of Finance. He is a specialist of finance. The estimation comes from his speech at the International Symposium, 1988.

³⁹ Yang Chang-ji spoke on the meeting in the Shanghai Administration Institute, April 1991.

financial revenue is produced, the more money must be turned over. Under the new contract, Shanghai government must turn over a fixed number of 10.5 billion RMB financial revenue annually; the revenue over 10.5 billion will remain as local use. (Zhou, He, 1991, p. 79). The financial revenue of Shanghai was 15.9 billion RMB in 1989, and the annual increase rate is about 5 percent (Municipal Statistical Bureau of Shanghai, 1990, p. 23). This new contract may let Shanghai municipal government have more money to invest in Pu Dong. But the amount of money is still too small to support the project.

As a developing country, China can obtain some money from the international organizations such as the United Nations, the World Bank and the Asian Bank. In fact, Shanghai has got funds from the Asian Bank for the construction of Nan Pu and Yang Pu bridges and from the World Bank for the improvement of sewage system (Yang, Chang-ji, 1991). However, the help of the international organizations is limited and cannot be the main resource of the Pu Dong development. The Chinese central government and Shanghai local government want to get government loans from developed countries. But this kind of money is very sensitive to the changeable political and economic situations of China and the world. The international capital markets are channels of the investment. The problems are that the Chinese government has no experience to be active there and the cost of this kind of loan may be high.

Hopes are focussed on the governmental policies. The

Chinese government believes that its policies can produce an income stream, particularly the preferential policies and land leasing policy. They have successful experience of Shen Zhen SEZ in this aspect. A modern industrial city emerged on a site of fishing village in six years under the special policies⁴⁰ of SEZ. The industrial output value of Shen Zhen increased 46 times with few governmental investments during the period of time (United Nations, 1989, p. 105). The question is, can Pu Dong emulated Shen Zhen? I think Pu Dong is different from Shen Zhen. The scale of the development of Shen Zhen⁴¹ is much smaller than that of Pu Dong, and Shen Zhen is financially burden-free. Is it assured that the preferential policies and land leasing policy will create major funding channels for Pu Dong? In my opinion, it is not assured. There are problems and potential problems now. The policies are swords with two edges. They can help and also may hurt the development to some extent. I will discuss these in detail in the next section.

In summary, I think the funding is a problem that may hinder the goal realization of Pu Dong. If the money is insufficient, the development may become smaller, and at lower quality.

In addition to the funding problem, another threat of goal realization may come from system conflicts. Pu Dong

⁴⁰ See Appendix E.

⁴¹ The development of Shen Zhen SEZ began at 4 sq.km, it covers 48 sq.km now.

development is a product of the economic reform and opening policy. The Chinese government wants to use Pu Dong development as a laboratory for further reform and opening. However, it is possible that the reform and opening processes out of the control of the Chinese government. It is likely that the new system established in Pu Dong will conflict with the old system operating in existing Shanghai city and in the whole country. This potential conflict may influence the success of the Pu Dong project. More significant, it may threaten the doctrines of socialism. The Chinese Communist government wants modernization, but does not want to lose power nor to change the nature of the social economic system. If they feel threatened, setbacks may happen. This situation may also influence realization of the goal of the Pu Dong development.

B. CONCEPT EVALUATION

The concepts of the plan were designed to realize the goals. Are these approaches applicable? Will they work well? In my opinion, the majority of the concepts are good and suitable for Chinese reality. However, some approaches may have negative side-effects.

The Good Ideas

Firstly, I think that the construction of ten large infrastructure projects will lay a solid foundation for the Pu

Dong development. This status showed a very good beginning. The Chinese government has always emphasized infrastructure construction in speech, but not always in the practice. All the governments in the pyramid system love quick success and instant benefits. They preferred manufacturing projects to infrastructure construction because infrastructure constructions usually are time consuming, high in cost, and slow in capital circulation and repayment. In recent years, the government has gradually come to understand that quick success and instant benefit will not be sustained without improvement of the infrastructure. Long-term economic development requires advanced infrastructure. The construction of the ten projects reflects changes in the government's way of thinking. The ten projects not only will help the success of the Pu Dong project, but also will benefit Shanghai people for centuries.

Secondly, the establishment of an export-oriented, technically advanced and multi-functional Pu Dong economy may help Shanghai become an important economic center of the country and a prosperous international city. In order to reach the goal of the development, the economic base of Pu Dong has to be export-oriented. The historical experience of China has taught the government the lesson that the isolated, completely self-reliant and self-sufficient development is destined to failure and cannot modernize. Shanghai wants to be a world city, thus it must connect to the world market and join the

competition. Furthermore, in order to achieve the goals for the development, the economic base of Pu Dong should be multi-functional. The historical experience of Shanghai itself also has taught the government the lessons that one-dimensional industrial development diminishes the economic central position of the city. In order to reach the goal of the development, the economic base of Pu Dong must be technically advanced. The government of Shen Zhen SEZ wanted to establish a technically advanced economy. It failed. In fact the economic base of Shen Zhen SEZ is export-oriented but labor-intensive. The city is prosperous. However, it has not raised the technical level of the region and has had little influence so far on the national economy. Supported by Shanghai, Pu Dong has a better chance to successfully establish a technically advanced economy and facilitate the technical renovation of the national economy.

Thirdly, the proposed leading industries may facilitate the booming of the Pu Dong area. What should be the leading industry of Pu Dong? There were many controversies. Some researcher urged tertiary industries to be the focus of the Pu Dong project. In their opinion, it is very reasonable to emphasize the tertiary industry because the goal of the Pu Dong development is to make Shanghai a financial and trade center of the country, and of the Pacific Region. Moreover, flourishing tertiary development also can improve the image of the city. The financial and commercial skyscrapers will give

the city a modern appearance, the city's modern appearance may further attract investment, and stimulating the development of other industries. Other scholars do not agree with this point of view. Their reasons are based on socialist theories. In socialist theories, the tertiary activities such as finance, commerce, and service cannot produce products and increase the wealth of the whole society. The main function of the tertiary industry is wealth redistribution. So Pu Dong should put industrial production at the highest priority to help the capital accumulation and reinvestment. The controversy is still going on. But, a compromise has been reached and both tertiary and export-oriented production are regarded as leading industries. (Zhou, He, 1991, p. 50)

I favor this compromise. But, I think it is important for Shanghai government to take three additional steps to ensure its success:

(1). adopt policies to encourage local reinvestment in order to create a multiplier effect.

(2). adopt policies to encourage the establishment of conglomerates to foster comprehensive development, to make tertiary profit comparable to industrial investment.

(3). focus on strategy research for export. It is not easy for a developing country to open markets abroad. China should learn from the experience of Japan.

Fourthly, in my point of view, the legislation and policy making that has occurred may help goal realization.

Preferential policies created favorable conditions for the stimulation of foreign investment. The rapid increase of foreign investment from May 1990 to June 1991 is a good sign. The regulations that have been adopted not only affirmed the policies, but also have helped overseas investors to do business in China. The regulations help them to know what can be done, what cannot be done, and how to operate in the country. As an Asian nation, China traditionally has had strong human relations and weak laws. The "relation" has special meaning in China. Foreign businessmen, particularly westerners, often feel confused and frustrated when they do business in China. They have to develop relations with the government officials, make friends in the interested area, figure out the decisions they can make under these uncertain and unclear conditions. The situation has been improved in Pudong now.

Finally, I like the idea that the concept plan has been formulated comprehensively but implemented step by step. Pudong development is a comprehensive, large scale and long term project. It is important to have a comprehensive plan to make goals and strategies clear, to give the Chinese people a bright perspective, and to avoid piecemeal development. However, while the Reform is going on, the political and economic situation is uncertain. Resources are limited. The project is enormous. It is impossible to complete the project in one step. The staged implementation of the plan will

increase the realizability of the goals.

The Existing and Potential Problems

1. Policy and money

The Chinese government hopes that its preferential policies will bring in money. The increase of foreign investment from May 1990 to June 1991 showed some good signs. But, will overseas investments flow in under the preferential policies? The situation is still unclear. According to the speech of Yang Chang-ji (1991), most of the investors have tended to make small amounts of tentative investment. They are waiting and observing.

Why do they wait and observe? They are considering. They will consider not only policy factors, but also other factors, such as the development of the Chinese market. With large population and territory, China potentially has a huge market. But, how much domestic market will the Chinese government allow foreign businessmen to occupy? The Chinese government wants to export Chinese products and occupy a portion of the world market. The foreign investors want to enter China to occupy the Chinese market. A conflict may exist and compromise is needed. In my opinion, the China government has to make further concession and open more domestic markets. It may be an acceptable compromise to establish more import-substitute business in early stages of the development.

Apart from the market, foreign businessmen may also be

considering the political environment of China. After June 4, 1989, the image of the Chinese government is not very good. China has a changeable political climate sometimes. Businessmen may worry about the changes of the policies and the setbacks of the Economic Reform. In order to increase confidence of foreign investors, the Chinese government must push forward the Economic Reform and stick to the opening policy. It is also important to change its anti-democratic image.

In addition, foreign investors may compare the investment environment of China with that of Southeast Asia and the former Eastern Bloc countries. There are a lot of opportunities in these countries. Southeast Asian countries have had experience to attract international investment. They have had market-oriented economies and developed rapidly in recent years. After the collapse of the Eastern Bloc and the Soviet Union, the Eastern European countries changed their political and economic systems and created new opportunities for international investment. Chinese government should probably pay more attention to these competitors. Preferential policies should be made based on the comparison of the investment environment of competitive countries.

Furthermore, in order to formulate more practical preferential policies, policy makers should know potential investors better. The potential investors, the economic laws, particularly the laws of investment and taxation of developed

countries should be researched.

There is another question about the policy and money. Could the earth of Pu Dong touched by the land leasing policy turn into gold? Singapore did very well to obtain development funds from land leasing. What about China? Could China succeed? I have two major concerns. One is about rent levels. Rent should not be very high in relation to international markets. The rent partially is decided by the cost. What about the cost? The majority of the land and the property under or on the land in Pu Dong is collectively-owned. The owners are villages or townships. The farmers' houses are privately-owned. The Shanghai government must negotiate with the owners, and pay compensation for the properties and for costs of moving. According to my interview with Zhang Jia-reng (1991) of JQDC, the compensation is the highest in the country because of high agricultural input, well developed township industries and well-off farmers. The highest cost inevitably created the highest rent in the nation.

Shanghai government has offered a set of rents based on the costs. What is the comparison with the rent or land price of the other countries? What is the response of the overseas investors? The responses are different among the businessmen coming from different countries or regions. The Japanese and Taiwanese think that the rent is compatible. Hong Kong businessmen think that it is acceptable, but, the Americans and Canadians feel that the rent is very high (Yang, Chang-ji,

1991).

The other concern I have is about the land use fee and land use right-granting fee paid by domestic investors. The domestic investors usually are local governments and local-owned enterprises of the twenty-nine provinces and two municipalities⁴². If they invest in Pu Dong, they must pay these fees. However, they pay nothing if the investments go elsewhere now. Of course, Shanghai and surrounding areas are always attractive to them. Is it possible that the other coastal cities will challenge and compete with Pu Dong? Land leasing policies should go into effect in other coastal cities soon.

2. Pu Dong and Pu Si

Pu Dong development is supposed to foster Pu Si's renovation and modernization. Is it certain that Pu Dong will bring along Pu Si? Perhaps it is uncertain. Policy differentiation could cause some problems. The preferential policies give different treatments between foreign-invested enterprises and domestic enterprises, Pu Dong and Pu Si, Shanghai and the other areas of the country. Foreign-investment enterprises obtain more privileges and domestic enterprises get less. Pu Dong obtains more and Pu Si gets less.

In my opinion, the policy differentiation is a sword with

⁴² China has 29 provinces and three municipalities directly under the jurisdiction of the central government. The three municipalities are Beijing, Shanghai, and Tianjing.

two edges. It is an approach to attract and direct investment, but also may create unfair competition, put Chinese enterprises, particularly the Chinese enterprises in Pu Si, under unfavorable conditions. It may hurt these enterprises and draw Pu Si economy into recession to some extent. How can the Shanghai government minimize the side-effects of policy differentiation and create a relatively fair competitive environment? I think several approaches should be adopted. The government should consider ways to:

(1). encourage more Chinese enterprises to cooperate or joint-venture with foreign investors.

(2). give more preferential conditions to the Chinese enterprises in Pu Si and minimize the gap between the foreign investors and domestic enterprises.

(3). give more decision-making power to enterprises of Pu Si and loosen the economic and administrative control, let Chinese enterprises of Pu Si invest in Pu Dong.

The third approach is potentially the most effective one. It is impossible for every enterprise of Shanghai become joint-venture or cooperative entity. The Chinese central government may be reluctant to give more favorable conditions such as tax reductions or exemptions to domestic firms because it does not want to unload the financial burden of Shanghai.

Not only policy differentiation, but also system conflict may cause problems. The newly established, more market-oriented economic system of Pu Dong may conflict with the

relatively old, more centrally-controlled economic system of Pu Si. It was suggested earlier system conflict may hinder the goal realization of the Pu Dong project. The system conflict may cause chaos. For example, the price and wage systems of Pu Dong and Pu Si have differences because of the different degrees of reform and opening. Normally, the more market determined-prices and wages of Pu Dong will be higher than those of Pu Si. If Pu Dong people swarm to Pu Si to shop because of lower prices, and Pu Si people swarm to Pu Dong for higher pay, chaos may occur.

I think the Shanghai government has two choices to deal with this kind of potential chaos. One is to separate Pu Dong from Pu Si, and strictly control the movement of the people and market as it did before. The another choice is to push forward the reform and opening of Pu Si, speeding up system transition. I think the second choice is the only one that can help the success of Pu Dong and goal realization.

Physically, Pu Dong development will be integrated with Pu Si to form a large urban core. The development is in a traditional radial concentric pattern. Is this pattern compatible to resolve the problem of overcrowding? Probably not. In site planning theory, the focus of the concentric development is on the urban core. The city center is still the focal point of traffic and human activities (Lynch, Kevin, 1988, p. 196). The new development will expand the coverage of the urban core but also increase the activities. Probably this

kind of development pattern will not work well to reduce the density and relieve the overcrowding. Dong Jian-hong's paper (1983) warned of this potential problem, but it did not attract enough attention.

3. Comprehensive and piecemeal planning

The planners of Pu Dong aimed to plan comprehensively and avoid piecemeal development. This is a good idea, but the tendency of piecemeal development still exists according to my interview with the specialists of the Pu Dong Development Office of Shanghai Municipality. They named it "sparrow" development. Sparrow means that it is small but complete, and self-reliant. Pu Dong development begins in small areas on small scale and hopes to have a "snowball" effect. If the snowball effect does not come into existence, the sparrows appear. Sometimes, the municipal government has obtained land but has not raised enough funds for large-scale planned development, It has to be agreeable to the original owners, the villages and townships, continue and develop small businesses on the land.

In my opinion, the elaborated action plans should be made to create the snowball effect. Sometimes, the snowball effect will appear spontaneously, sometimes it will not. In order to fully use the land resource, the municipal government should allow the existence of the local small businesses before large-scale development take place. But, policies should be made to regulate them and define the responsibility of

removal.

C. PLANNING EVALUATION

The plan of Pu Dong reflects the Economic Reform, opening and the development of Chinese planning. Furthermore, it is the first time that the Chinese governments in the hierarchy attach so much importance to city planning. Usually the governments pay more attention to the national economic growth indicators, national plans and their fulfillment⁴³. However, although progress has been made, the planning of Pu Dong is still weak. It lags behind the development of the project.

The Plan Form

This is a concept plan with map, published or unpublished government documents and research reports. It has not yet been officially completed for Pu Dong. It is time to complete this plan. The goals and principles have been decided, the major policies and regulations have been issued, the main physical and economic strategies and layouts have been defined, the construction has began, and the development is making progress.

The long-term Pu Dong development plan have been divided into successive planning. This is not a bad idea, but also needed a set of plans including a one-year action plan, a

⁴³ Thomas Lyons's Economic Integration and Planning in Maoist China described the characteristics of Chinese planning. New York, Columbia University Press, 1987

five-year short-term plan, a ten-year mid-term plan and a 25 year long-range plan. The shorter the term, the more detailed the content.

The concept plan has already set the goals, principles, and some action policies. However, the relations among them are unclear. According to western planning theories, the comprehensive plan should have a set of goals, objectives, policies. " Goals are ends towards which the advance planning effort is directed, they are usually general in form and express ideas. Objectives are intermediate milestones on the way toward a goal. they are expressed in a form that is measurable and achievable." (Chapin and Kaiser, 1985, p. 333) The policies are elaborated and practical form of the objectives. I think the plan of Pu Dong should be formulated in this way, The method may help the plan come down to earth and goal realization.

The comprehensive plan should include both physical, social and economic parts. It should consist of land use, transportation and public utilities, and economic development plans and policies. Environmental protection, and resource reservation also should be important components. It seems that the existing concept plan has ignored them. In the United States, the comprehensive plan usually have two important contents: budgeting and zoning. I think the Pu Dong plan also should have them. The zoning ordinance is a new concept to Chinese planners. But it is necessary to have zoning to

regulate existing and future land use. It is also important to have careful budgeting, and cost-benefit analysis. This kind of policy analysis is rather weak in Chinese planning.

The Planning Organization

Who makes the concept plan of Pu Dong development? It is the Shanghai municipal government. The Shanghai municipal government made the decisions, defined the goals and principles, proposed major strategies, and issued economic policies and regulations. The Pu Dong Development Leading Board of Shanghai Municipality is directly responsible for the project. The mayor has the largest decision making power.

The Shanghai municipal government also authorizes the researches and planning process. I think this is one of the most democratic and open-minded planning processes in modern China. Chinese and foreign scholars of various disciplines have taken part in the planning process. Many of their ideas influenced the government's decisions and the plan. In this project, planning is not only planner's work. The planners of government planning agencies have been deeply involved, but are not the only participants in the planning. A number of famous natural scientists of the 9.3 Society have been involved in. The Pu Dong Development Office of Shanghai Municipality coordinates the planning work.

Technically, the Bureau of Shanghai Urban Planning and Building as well as Shanghai Planning Institute are

responsible for the comprehensive plan. The plan has to be approved by the Shanghai Mayor, the municipal government and the people's congress. The different functional agencies of Shanghai government elaborate and implement different parts of the comprehensive plan. For example, the Bureau of Transportation elaborates and implement the transportation plan, The Bureau of Public Utility for public utility plan.

Because of the deficiency of the planning organization, the synthesis of the plan and the coordination of the planning are serious problems. Shanghai mayors and the leading board have power, but it is impossible to do synthetic and coordinate work directly. The Pu Dong Development Office is responsible for the work, but it has insufficient authority for coordination. The functional agencies elaborate the comprehensive plan and make their own action plans independently. They do not communicate and cooperate well. Sometimes the Bureau of Transportation had finished a road improvement. Immediately afterward the Bureau of Public Utility excavated that to lay water or gas pipes.

I suggest the establishment a special planning commission for Pu Dong. The main participants of the planning commission should be planners, architects and civil engineers. Under the leading board and mayor, the commission should be fully responsible for the whole planning process. It should have sufficient power and should directly engage in planning practice.

The Planning Process

Planning is a process. Plan-making should encompass the phases such as data base building, problem and goal specification, plan formulation, elaboration, evaluation, implementation and refinement. Planning is cyclical and requires feedbacks for further progress.

The data inventory building, and analysis and forecasting are rather weak in China. Chinese government officials, planners and social science researchers, particularly at the senior level, lack training in quantitative analysis. Computers are not popular in Chinese planning agencies.

Previously, I said that the work of Chinese planner might be easier than that of American counterparts. The economy is controlled by government rather than market mechanism. Files of people and organizations are kept in government agencies⁴⁴. Vacancy might not be a serious problem because demand almost always exceeds supply. But, this status does not mean that the data analysis and forecasting are unimportant in the country.

Without enough data analysis and forecasting, under socialist system, the government mandatory plan can create a economic base but not economic efficiency. The planners are worried about incremental and repeat construction instead of

⁴⁴ The Chinese government emphasizes pluralism instead of privacy. It has right to know everything of a person. The government also has right to know everything of a enterprise because enterprises are on the bottom level of administrative pyramid.

vacancy. The repeat construction⁴⁵ has resulted in the fact that new construction cannot satisfy large demand and must be repeated. The economic data of the government files usually are out-of-date, distorted and not uniform. Chinese planning needs much more quantitative analysis and projection.

Planning for Pu Dong began on the basis of survey and the analysis of Shanghai's conditions and problems. There are some feasibility studies made by Chinese and foreign researchers. This is progress. However, in my opinion, the quality and quantity are far less than enough. The data inventory and analysis need improvement. I suggest the establishment of an information research center in Pu Dong. Furthermore, I think the Shanghai government should not monopolize the planning and research. It should allow the existence of private and collectively owned research institutions, and let them work for Pu Dong. Previously, there had been a self-organized research institution whose researchers were professors at universities. It was dismissed because of the pressure of the government.

In addition, I advocate that college students take part in planning, particularly data gathering and research work. In the United States, college planning students, particularly graduate students, frequently do research projects for local governments. The projects help the government work, and also

⁴⁵ The repeat construction is a serious problem of China. It wastes time and resources.

train the students. In China, commonly, it is hard for college graduates to put what they have learned into practice. It also is hard for agencies and companies to get competent personnel. These status should be changed.

In plan formulation, alternatives should be made. The alternatives can be open-minded, display the advantages and disadvantages of different choices, and help the authorities to make the right decision. In China, plans usually have been unitary and officially formulated. The planning of Pu Dong has demonstrated some progress. Alternatives were put forward for physical development in the early stages. But, in my opinion, the alternatives were not elaborated, discussed and publicized enough. I said that the planning of Pu Dong was the most democratic and open one in China. It does not mean that it is democratic and open enough.

There are no published elaborated comprehensive plans. Plan elaboration is at the beginning stage. It is not very clear who is in charge of the work. The work already done lacks coordination. As I said before, it is necessary to have an organization responsible for elaboration and other activities of planning process.

Even though there have been some democratic and opening characteristics in plan formulation of Pu Dong, they are not highly evident in plan evaluation. I have not seen any criteria used to evaluate the plan. The Shanghai government makes decisions and a functional agency in municipality level,

the Commission of Construction, does the job. Theoretically, the People's Congress represents the citizen evaluation of the plan when it is officially written. But generally this has not worked well. More and better organized citizen participation is needed.

CONCLUSION

The Pu Dong development is one of the most important projects in contemporary China. It has a great chance to be successful under the Economic Reform, but needs to overcome some shortcomings and resolve some problems. In particular, the planning process should be improved.

Shanghai is the biggest and most important city of China based on its population and economic position. The goal of the Pu Dong project is to expand and modernize Shanghai, foster the national economy, and develop international relations with the world economy. The basis of the goal is the Chinese Economic Reform and opening policy. These are the basic strategy of the nation.

The concept plan not only defined the goal of the development, but also formulated the physical and economic layouts, the economic base and development strategies. The basic physical layout is a radial concentric pattern with the Huang Pu River run through the urban heart and two ring roads delineating the boundaries of urbanization.

The Pu Dong project is a planned mixed-use development. Each of five subareas has its own major function. LJZ will be a financial and trade center. WGQ will be free trade zone with a new seaport. QJ and Z1 are two industrial zones. BZ is

planned to be high-tech research and industrial park with colleges. The five functions of the five subareas will work together to form a multi-functional, export-oriented, technically-advanced economic base. The leading industries will be both tertiary and industrial production.

Ten preferential policies and nine regulations were issued in 1990. Government policies are always important in China, and they have become more important under the Economic Reform. The ten preferential policies are the major means to attract and direct foreign and domestic investments. They are also the main fund raising approaches. The nine regulations are laws that elaborated the ten preferential policies. The land leasing policy and regulation are very special and are expected to open financial channels for Pu Dong. The policies and regulations have broken some ideological limitations. They are very open-minded, and pragmatic. They are products of the Reform and reflect the progress of the Reform.

The long-term comprehensive plan of Pu Dong will be implemented stage by stage. The focus of the first stage (1990-1995) is on policy-making, legislation and infrastructure improvement. The skeleton of the development should take shape at the second stage (1995-2000), and the whole project should be completed within the 20 years after 2000. In the 1990s, the foreign investment has increased rapidly, the organization reforms are going on, and the ten major infrastructure construction projects are underway.

I have evaluated the concept plan based on my knowledge of Chinese history and reality, Chinese political economic theories and Western planning theories. The core of the evaluation is the goal of the plan, the goal itself, the approaches to reach the goal and the planning for the goal.

Chinese people will accept the goal because they also want the modernization of the city and the development of the country. The physical conditions of Pu Dong are excellent for development, however, possible funding and system conflicts may become problems of goal realization. The Pu Dong development requires huge investments, but China is a developing country with a tight budget.

The Chinese central government and the Shanghai municipal government will invest in Pu Dong. However, it is unlikely that the central government will empty its wallet on one project. Shanghai is a relatively rich area but the municipal government has to turn over three-fourths of its revenue to the national Ministry of Finance. The help of international institutions and foreign governments is limited and uncertain. The preferential policies will open more channels for fund raising, but the policies should be improved, and the effect of the policies should be proven.

The capital shortage may influence the quality of the project. Further efforts should be made for fund raising. The new contract between the central and the local government may keep more money in Shanghai, strengthen the municipality's

financial ability and increase government investment. Pu Dong needs more creativity and less ideological restriction to attract investment.

The Chinese government has put into practice the Reform and opening policy in the Pu Dong. The conflicts may occur between the newly established, more market-oriented system in Pu Dong and the relatively old, more centrally-controlled system in Pu Si. The reform and opening may violate some doctrines of socialism and cause the opposition of the senior Communist Party leaders, causing the setback of the project. The destiny of the Pu Dong project has been closely tied to the Reform and opening. The success of the project relies on the progress of the Reform and opening.

Basically, the concepts of the plan are sound and appropriate. Large scale infrastructure improvements ground the Pu Dong project on a solid base. Learning from the historical lessons and considering the current needs, the Chinese governments and planners designed a multi-functional, technically-advanced and export-oriented economic base for Pu Dong. Both tertiary and industrial production can bring along the Pu Dong economy. However, an effort should be made to stimulate the growth of reinvestment and multi-industry companies, to research market and export strategies, and to create multiplier effects. The policy making employed and legislation enacted have created a attractive investment environment, staging implementation will make the plan more

practical.

However, some planning approaches should be improved. The ten preferential policies are attractive, but many overseas investors are hesitant. They will consider the market, the political environment of China, compare the benefit and cost of Pu Dong to that of Southeast Asian and Eastern European countries. The policy maker should research more about the laws and policies of the countries as investors and competitors. The land leasing policies can be successful, but the rents should be made more competitive internationally.

Pu Dong development is supposed to facilitate Pu Si modernization. However, the policy differentiation may create unfair competition and negatively influence the Pu Si economy. The Chinese enterprises of Pu Si should obtain more decision-making power and invest more in Pu Dong to change their relatively unfavorable conditions. Possible system conflict may cause chaos. The only way to resolve this problem is to accelerate the reform of Pu Si.

Compared to the past, the planning of Pu Dong reflects real reform, but it still cannot meet the requirements of the project. The comprehensive plan should be completed as soon as possible. It should include short-term, mid-term and long term plans. The goal of the plan should become practical and measurable through objective policy formulation. The content of the comprehensive plan should comprise both physical and socio-economic parts, including careful zoning, budgeting,

environmental protection and resource management.

The existing planning organization of Pu Dong has problems of planning coordination and plan synthesis. Decision making, execution and coordination are functions of different government bodies now. It is necessary to establish a special planning commission fully responsible for the whole planning process and having adequate powers of implementation.

The planning process also has deficiencies. The work of data inventory, analysis and forecasting are very weak. Universities and non-official agencies should be allowed to contribute to the work. In plan formulation, more alternatives are required. In plan elaboration, cooperation should be emphasized. Plan evaluation should include publicized criteria and a more democratic process. Plan implementation and refinement requires both stronger leadership and citizen participation.

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APPENDICES

APPENDIX A

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Zhang, Jia-wei: Manager of Investment Service Department, The People's Construction Bank of China, Shanghai Pu Dong Branch.

⁴⁶ The thesis author interviewed the specialists and professors on this list in Shanghai, August, 1991.

APPENDIX C

TEN PREFERENTIAL POLICIES FOR PU DONG⁴⁷

1) The income tax of Chinese-foreign joint ventures, Chinese-foreign cooperative enterprises and wholly-foreign owned enterprises engaged in production and operation in the area shall be charged at a reduced tax rate of 15 percent. The foreign-funded enterprises scheduled to operate for a period for ten years or more shall be exempted from income tax in the first two profit-making years and allowed a 50 % reduction in the next three years.

2) The equipment, vehicles and building materials imported necessarily for construction in the area should be exempted from custom duties and the consolidated industrial and commercial tax. The equipment, raw and auxiliary materials and vehicles imported by foreign-funded enterprises operating in the area for production purposes, articles for the use of their offices and necessary articles for setting up a new home and vehicles brought in by investors for private use shall be exempted from custom duties and the consolidated industrial and commercial tax. Products exported by foreign-funded enterprises in line with the state regulations shall be exempted from export duties and the consolidated industrial and commercial tax.

3) The production invested by foreign businessmen in the

⁴⁷ The ten preferential policies were approved by the State Council and issued by Shanghai Municipal Government in May, 1990.

area should be mainly export-oriented. Upon approval by the departments in charge, a portion of import substitutes produced by them may be sold on China's domestic markets after custom duties and consolidated industrial and commercial tax are paid.

4) Overseas businessmen will be allowed to invest in the construction of airports, ports, railways, highways and power stations and other energy and transportation projects in the area. They shall be exempted from income tax from the first five profit-making years and allowed a 50 % reduction in income tax for the next five years.

5) Overseas businessmen will be allowed to run tertiary industries in the area. Upon approval, financial, commodity retail sale business and other trades in which investment by foreign businessmen are either not allowed or restricted by the existing regulations shall be allowed to open in the Pu Dong New Area on a trial basis.

6) Overseas businessmen will be allowed to open foreign bank branches in Shanghai, including in the Pu Dong New Area. Financial corporations shall be allowed to be established first and then in accordance with the actual needs of Pu Dong development, several foreign banks will be allowed to open branches. At the same time, the existing income tax rate for foreign banks will be appropriately lowered and differential tax rate will be adopted for different businesses. To ensure the normal operation of foreign banks in the city, Shanghai

will promulgate relevant laws and regulation as soon as possible.

7) In the free trade zone of the Pu Dong New Area, trade agencies owned by foreign businessmen will be allowed to engage in export trade, imports of raw materials and spare parts for foreign-funded enterprises in the area for production purposes as well as exports of their products. Multiple entry and exit visas will be issued to the principal managerial personnel working in the zone and entry and exit conveniences will be provided to them.

8) For enterprises in the area with Chinese investment, including enterprises invested by other Chinese regions, differential policies shall be adopted in line with industrial policies of the Pu Dong New Area. For those enterprises in conformity with the industrial policies and beneficial to the Pu Dong development and opening, appropriated preferential treatment in terms of income tax reduction will be given.

9) the policy of the paid-transfer of land use rights will be practiced in the area. The term of the land use rights will be 50-70 years. Overseas businessmen may contract large tracts of land for development.

10) In order to speed up the construction of Pu Dong New Area and to offer necessary infrastructure facilities for development and investment, the new added financial revenues in the Pu Dong New Area shall be used for its further development.

APPENDIX D

THE LIST OF NINE REGULATIONS⁴⁸

- 1) Regulations for administration of financial with foreign capital and financial institutions with Chinese and foreign joint capital in Shanghai.
- 2) Regulations on reduction and exemption of enterprise income tax and industrial and commercial consolidated tax to encourage foreign investment in Shanghai Pu Dong new area.
- 3) Customs regulations of the People's Republic of China concerning control over the goods, means of transport and personal articles entering or leaving the Wai Gao Qiao Free Trade Zone of Shanghai.
- 4) Regulations of the Shanghai Municipality for the encouragement of foreign investment in the Pu Dong New Area.
- 5) Measures on administration of the Wai Gao Qiao Free Trade Zone of Shanghai.
- 6) Provisions of land administration in Shanghai Pu Dong new area.
- 7) Provisional measures on administration of planning and construction in Shanghai Pu Dong new area.
- 8) Examination and approval measures for foreign-invested enterprises in Shanghai Pu Dong new area.
- 9) Guidelines of industries and investment of Shanghai Pu Dong new area.

⁴⁸ The nine regulations were approved by the State Council and issued by the Shanghai Municipal Government in September, 1990.

APPENDIX E

SHEN ZHEN SPECIAL ECONOMIC ZONE⁴⁹ (SEZ)

The Shen Zhen SEZ was established in 1980. The special economic zone is one product of China's policy of opening to the outside world and stimulative the economy at home.

According to the Chinese Communist Party Central Committee and the State council, the strategic tasks of Shen Zhen are:

- 1). As a bridge for expanding economic relations with foreign countries.
- 2). As an experiment laboratory for new management systems.
- 3). As a base for training professional personnel.

Shen Zhen SEZ covers 48 sq.km. It has three characteristics. It is adjacent to Hong Kong, but it did not have a strong industrial base prior to development. The substantial amount of capital needed for the fast development of advanced industry in Shen Zhen largely has depended on SEZ itself. What the central government was given is not money but policies. The major special policies in practice today include:

- 1). Tax reduction and exemption.
- 2). Income tax on foreign capital levied at a

⁴⁹ Source: United Nations, China's Experience in Economic Development and Reforms, United Nation Publication, Bangkok, 1989.

preferential rate of 15 percent.

3). Wages of workers in foreign-invested enterprises higher than in the hinterland and lower than in Hong Kong.

4). The land use fee in the SEZ lower than that in Hong Kong. The prices of public utilities also are cheaper.

5). Preference and cooperation given to the foreign exchange balances of enterprises with foreign investment.

6). Procedures for entry and departure for foreign businessmen simplified to facilitate their business activities.

These policies have shaped Shen Zhen's economic base. In Shen Zhen, Chinese-foreign cooperative enterprises and wholly-owned foreign enterprises are dominant. The products of the SEZ's are mainly for export. The SEZ's economy is mainly a market economy.

In the past six years since the SEZ was set up and guided by the policies of the central government, a relatively good level of investment has been realized. As a result, Shen Zhen's industry has kept the momentum of high speed development.

Before the SEZ was set up, the total industrial output value per annum of Shen Zhen was only 60 million RMB. In 1985, the figure reached 2.67 billion, 43 times more than in 1979. In attracting foreign investment and foreign economic and technological cooperation, a total of 4,290 contracts were signed with foreign companies between the end of 1979 and the

end of 1985. Three thousand are contracts for industrial projects. A total of 622 projects work with direct foreign investment in the form of joint ventures, cooperative ventures and wholly owned foreign ventures. The total investment-per-contracts-signed is 8.27 billion Hong Kong dollars, of which 2.96 billion has already been put to use.

VITA

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