March 1995 Occasional Paper No. 42

Development Corridor in Fujian

Fuzhou to Zhangzhou

香港亞太研究所

Yue-man Yeung
David K. Y. Chu

Hong Kong Institute of Asia-Pacific Studies
The Chinese University of Hong Kong
Shatin, New Territories
Hong Kong

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Director : Yeung Yue-man, PhD(*Chic.*), Professor of Geography
Associate Director : Lau Siu-kai, PhD(*Minn.*), Professor of Sociology

HK$30.00
ISBN 962-441-042-9

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Hong Kong Institute of Asia-Pacific Studies
The Chinese University of Hong Kong
Shatin, New Territories
Hong Kong

About the authors

Yue-man Yeung is Professor of Geography and Director of the Hong Kong Institute of Asia-Pacific Studies at The Chinese University of Hong Kong.

Dr. David K.Y. Chu is Senior Lecturer in Geography at the same University.

Acknowledgements

This paper constitutes part of the ongoing research on Fujian at the Institute's Urban and Regional Development in Pacific Asia Programme which is supported by the Lippo Urban Research Fund. The authors' field reconnaissance in Fujian in December 1993 was supported by the Fund. Lui Siu-yun provided able research assistance.

ISBN 962-441-042-9

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Abstract

As a province that has undergone modernization and rapid development under China's open policy since 1978, Fujian is examined in its experience in economic reforms, comparatively with Guangdong, and in its economic and social restructuring. Five models of development in the coastal corridor between Fuzhou and Zhangzhou have been identified. They represent different ways of maximizing local factor endowments and foreign investment to accelerate economic development. One of these models is centred around Meizhou Bay which has the potential of developing that part of the province into a deep-water port complex with complementary heavy industry. The paper concludes with a discussion of the major problems and achievements of Fujian in its economic reforms and prospects.

Introduction

Together with Guangdong, Fujian was designated one of two provinces to spearhead modernization and development in 1978 after China boldly broke with its past and adopted an open policy. The economic reforms that flowed from this watershed policy change have ushered in a period of rapid economic development and social transformation that has powerfully carried China towards the 21st century. For the first time in the past two to three centuries, China is apparently on its way to playing a political and economic role in world affairs becoming of its size and history.

This paper is divided into four main parts. First, it reviews the progress of economic reforms in Fujian since 1978 to date, comparing its position relative to the nation and the neighbouring Guangdong province. Particular emphasis is being placed on its economic and social restructuring as a result of the open policy.

Secondly, it is pointed out that the role of cities is of special importance in accelerating development and foreign investment. An emerging development corridor stretching between Fuzhou and Zhangzhou is fast taking shape along the coast and the cities within it are becoming change agents in modernization. Models of development within the corridor are identified. Thirdly, lying almost midway along this coastal belt is a region centred around Meizhou Bay that is blessed with unrivalled geographical advantages in developing into a strategic deep-water port complex, with ancillary industrial, energy-based and service investment. The development plans for this area are realistically reviewed against constraints and potential difficulties. The final section will appraise the success and failure of Fujian's reform experience and, with the benefit of hindsight as well as considering competing plans from other parts of China in their headlong rush towards openness and development, the prospects of the pace and direction of continued economic development in that province.

Economic Reforms in Fujian

Overview

Fujian is a relatively isolated province on the western side of the Taiwan Strait. Surrounded by mountainous terrain on three sides — the north, the west and the south — and facing nationalist Taiwan on the other side of the Strait, Fujian had been considered as part of the frontier to be guarded against foreign invasion since 1949. Consequently, it was not an ideal region for industrial development, especially key industrial projects. Not surprisingly, Fujian did not experience any remarkable economic growth in the thirty years from 1949 to 1978. The infrastructure was exceedingly poor when it was chosen, alongside Guangdong, as one of two provinces to experiment with measures of economic reforms and opening to the world.

Fujian is a small province of 12 million sq km with a population of 30.99 million in 1993. Relative isolation from the central government, physical ruggedness, a traditional maritime outlook and population pressure have made it for centuries an important origin of outward migration to Taiwan and overseas destinations, notably the Philippines, Malaysia and Indonesia. Its inclusion as a province for reform experiments in opening to the world has much to do with its close connections with overseas Chinese in Southeast Asia, which, according to Nyew, amount to 23 million, or 5.26% of the region's populations.[1] About 6 million of these 23 million originated from Fujian.[2]

The opportunity granted to Fujian by the central government to conduct economic reforms in accordance with the open policy did not have any significant impact on the province before 1988. Between 1979 and 1988, Fujian suffered from a relatively slow growth, related to its poor physical infrastructure not capable of creating an attractive investment environment. Howell also attributed Fujian's slow development to leadership struggles at the provincial government, which were more protracted and took longer to resolve than at the national level. As with China as a whole, economic reforms in Fujian went through a cycle of decentralization and recentralization, described as the open policy spiral.[3]

With these inadequacies, Table 1 shows that Fujian was way below the national average in most of the socio-economic indicators before 1978. With all the policy advantages, Fujian could at least make itself move close to national averages after the ten years' effort — an achievement in its own right. However, if it is compared with Guangdong, the sharp contrasts immediately dwarf Fujian's hard won progress. Indeed, Fujian's real growth has only been witnessed after 1988 when Taiwan gradually relaxed its policy against its residents visiting their families in the mainland and indirect trading with China via a third country. Indirect trade between Taiwan and the mainland came to US$5.79 million by mid-1991, a 40% increase over the same period in 1990. Over 337,400 tourists, mainly Taiwanese, visited Xiamen in the

same year, over twice the number in 1988. Of the 600 foreign-invested enterprises in Xiamen, Taiwan accounted for the bulk, 417 ventures, involving an investment of US$1 million.[4]

Table 1 Main Economic and Social Indicators for Comparison

	China	Guangdong	Fujian
GNP per capita (RMB)			
1978	375.00	367.00	273.00
1984	671.00	774.00	568.00
1988	1,277.00	1,864.00	1,254.00
1993	2,663.00	4,938.00	3,364.00
National income per capita (RMB)			
1978	315.00	319.00	236.00
1985	668.00	830.00	612.00
1988	1,066.00	1,518.00	1,090.00
1992	1,703.00	2,795.00	1,923.00
1993	2,111.00	3,939.00	–
Total output value of society (million RMB)			
1978	684,600.00	35,031.00	12,258.00
1984	1,317,100.00	79,875.00	26,740.00
1988	2,980,700.00	228,751.00	70,243.00
1992	5,584,200.00	534,043.00	150,462.00
1993	–	788,888.00	–
Realized foreign investment (million US$)			
1980		208.57	9.18
1984	2,750.00	653.75	61.68
1988	10,226.00	2,439.65	288.92
1993	38,960.00	9,652.00	2,905.99

Table 1 (Continued)

			Fujian figure in FEC
Tourism (million US$)			
1978	263.00		
1984	1,131.00		63.63
1988	2,247.00		284.76
1993	4,152.69	1,111.00	910.04
Import (million US$)			
1978	10,890.00	203.90	12.46
1984	27,410.00	1,210.00	270.09
1988	55,280.00	5,110.18	789.52
1993	1,039,500.00	19,899.00	4,041.87
Export (million US$)			
1978	9,750.00	1,387.55	190.14
1984	26,140.00	2,515.00	423.72
1988	47,520.00	7,483.83	1,405.74
1993	917,600.00	27,027.00	5,825.50
Labour in state-owned unit/Total labour force (%)			
1978	18.56	16.21	16.18
1984	17.92	17.36	16.60
1988	18.38	16.80	16.47
1993	18.13	16.41	14.40
Average annual wage (RMB)			
1978	615.00	615.00	567.00
1984	974.00	1,153.00	921.00
1988	1,747.00	2,232.00	1,644.00
1993	3,371.00	5,327.00	3,480.00
Population in cities and towns/Total population (%)			
1978	17.92	16.25*	19.10**
1984	23.01	21.18*(1985)	37.30**
1988	25.81	23.65*(1990)	50.10**
1993	28.14	27.47*	81.30**

Table 1 (Continued)

Student enrolled/School-aged children (%)			
1980	93.90	96.22	94.60
1985	96.00	98.07	97.30
1990	97.80	99.29	99.10
1993	97.70	99.46	99.60
Primary school student entering higher level school (%)			
1980	75.90	73.28	67.50
1985	68.40	65.91	60.90
1990	74.60	87.56	65.00
1993	81.80	88.38	80.70

Notes: * Non-agricultural population.
** Cities and towns defined differently.
Sources: *China Statistical Yearbook 1994*;
Guangdong Statistical Yearbook 1986, 1989, 1994;
Fujian Statistical Yearbook 1994.

Indeed, if GNP per capita is taken as an indicator of the level of economic development, Fujian was only 72.8% of the national average in 1978, but it grew to 84.6% in 1984 and 98.2% in 1988, respectively. Over the same period, Guangdong's performance was more impressive: it was 97.9% in 1978, but it surpassed the national average by 1984 and exceeded the national average by almost half in 1988. Other measures of economic development, like national income and social product, indicate similar discrepancies of performance. The discrepancies are more emphatic if the population size is taken into account — Guangdong had 66 million people versus Fujian's 30 million in 1993. Socially, both provinces have recorded a less-than-average labour force engaged in state-owned enterprises. While the figures on urbanization are difficult to compare, it is fair to say that Fujian has experienced a higher rate of urbanization than Guangdong and the PRC in general. The relative proportion of the population living in towns and cities in Fujian is very high. With respect to education, Fujian has

once again under-performed both Guangdong and China in general. In the first ten years after 1978, although the enrolment rate of school-aged children is very similar, the success rate in entering secondary schools is very low in Fujian — on average Fujian is ten percentage points lower than the national average. The social indicators quoted above not only have revealed the social dimensions of the Fujian society but also pointed to significant implications in the long-term economic development of the province.

All said, Fujian's economy has at last got out of the slow growth of the early ten years of the open policy, partly because of the new geopolitical situation and partly because of the momentum gradually built up in the period 1978-87. In 1993, Fujian's GNP per capita was 26.3% higher than the national average, and other economic indicators also showed signs of sound improvement. In addition, since 1988, the Fujian economy has not just grown in size as indicated by GNP per capita but has been undergoing a process of rigorous restructuring and substantial change. Consequently, the province has become an outward-looking and much urbanized economy although there are still signs of underdevelopment and many problems and areas await solutions and careful planning.

Economic and Social Restructuring

Adopted at the Third Plenum of the Eleventh Party Committee held in late 1978, the open policy allowed Fujian to set up its own special economic zone in order to attract foreign investment and introduce advanced technical and managerial know-how. In October 1980, the State Council designated the 2.5 sq km Huli district of northwestern Xiamen a special economic zone (SEZ). In March 1984, the zone was extended to cover the entire Xiamen Island and the nearby Gulangyu,[5] while in the same year Fuzhou was designated as one of fourteen open coastal cities, so that it could set up its economic and technological development zone (ETDZ).[6] In these areas, preferential treatments and special concessions, such

as tax holidays, the reduction of tariffs, the remittance of earned profits and so on were allowed, in order to encourage the setting up of joint ventures. As also shown in Table 1, foreign investment started flowing into Fujian from only US$9 million in 1980 to US$62 million in 1984 and US$289 million in 1988. It then soared to US$2,906 million in 1993. The inflow of investment in the last five years has thus been vastly higher than the previous ten years, although compared with Guangdong, the scale of foreign investment has been relatively small.

An analysis of the national income of Fujian by sectors (see Table 2) shows that industry did not grow faster than agriculture in the 1980s, but it has been growing very fast since 1990. Commerce and transport have become more and more important, contributing one-sixth of the national income in 1992 while they accounted for only one-tenth in 1978. These figures indicate that the economy is at a stage of industrialization and is becoming less dependent on agriculture. The growth in the transport and tertiary sectors is corresponding to the needs of industrialization, imports and exports.

Table 2 Composition of National Income of Fujian, 1952-92 (selective years)

(100 million RMB)

	1952	1978	1980	1985	1990	1992
National income	11.97	57.40	72.87	164.97	388.77	590.02
Agriculture	8.31	23.69	31.63	67.49	149.39	197.41
Industry	2.18	23.00	29.05	60.18	156.33	248.21
Construction	0.25	4.19	6.03	13.07	24.24	49.81
Transport	0.22	2.74	3.23	7.30	20.14	32.37
Commerce	1.01	3.78	2.93	16.93	38.67	62.22

Source: *Fujian's Statistical Yearbook 1993*, p. 33.

The attractions of Fujian as a low-cost production centre to labour-intensive industries can be exemplified by a comparison of

factor costs of producing footwear in Fujian and Taiwan (see Table 3). Taiwan was the world's largest footwear producer in the 1980s, but its exports suffered a great deal from the appreciation of the NTW dollar against the US dollar in the late 1980s and the rising costs of land and labour domestically. Difficulties to survive forced these labour-intensive industries in Taiwan to look for sites for relocation during this period. When Taiwan relaxed its restrictive practices of forbidding its citizens to visit the mainland and engage in indirect trade, Fujian became a suitable candidate for industrial relocation. First, because of the fact that many Taiwanese came from southern Fujian, investing in and bringing prosperity to their home town was part of a good Chinese tradition, especially for overseas Chinese. The investors or donors would be honoured by their fellow folks in one way or another. Besides, their home town offered an environment that facilitated relocation, such as communication in the same dialect, convenience that outsiders usually could not enjoy and flexibility viewed sometimes as close to bending regulations and laws. Red tapes that outsiders found very annoying could be circumscribed by appealing to kinship and small favours if they invested in their home town. In addition, under the open policy and the goal of promoting a unified China, some privileges were legitimately accorded to visitors and investors from Taiwan in Fujian but not offered to overseas Chinese from anywhere else. For example, some development zones were designated for Taiwanese industrialists. Fishermen were allowed to conduct "small" scale exchanges and trading with Taiwanese fishermen. If arriving in fishing boats, Taiwanese could land and worship the Goddess of the Sea on Meizhou Island without a visa.[7] Given the present situation without direct shipping and civil aviation between China and Taiwan, Guangdong is more direct to the Taiwanese and beckons as a low-cost production region. However, Fujian has been very competitive to the Taiwanese, especially as they believe that direct trade, shipping and aviation to be a matter of time and they will not have to wait very long. Indeed, since 1988, the Taiwan factor has become increasingly critical for the further development of

southern Fujian, including Xiamen. Further reform and opening is heavily dependent on relevant policy measures taken by Taiwan.[8]

Table 3 A Comparison of Factor Costs between Taiwan and China in Shoemaking

Items	Taiwan	Mainland
Material cost	50-60% of total production cost. Material cost is comparatively lower in making high-quality shoes	60-70% of total production cost. Material cost is comparatively higher in making lower-quality shoes
Depreciation of factory facilities	Depreciation of factory facilities not included in total production cost after basic write off	Slightly higher than Taiwan
Utility charges and management fee	Similar	Similar
Transportation cost	2% of total production cost	8% of total production cost
Interest paid for working capital	No warehouse stock, no extra interest	Warehouse stock causing extra interest for 2-3 months, 3% increase in total production cost
Prices as affected by place of origin	10-15% higher in price than similar mainland-made products	10-15% lower in price than similar Taiwan-made products
Wages	35-40% of total production cost	7% of total production cost
Conclusion	Loss	Above 10% sales profit

Source: Translated from the *Hong Kong Economic Times*, 19 February 1991.

Poverty and Inadequate Infrastructure

Although Fujian as a whole is not a particularly poor province, spatially, some eleven counties have been identified as "with chronic poverty," and at least twenty-three more counties had occasionally suffered from a distributed collective income per capita of less than RMB50 in the late 1970s and early 1980s. According to Lyons, many of them were not located in the more remote and mountainous prefectures of the interior but proximate to large cities like Fuzhou and Quanzhou.[9] The reasons for poverty in Fujian can thus be attributed more to inadequate social overhead capital — poor transportation and communications, weak health ... and deficient economic institutions — than to deficient natural resources like low land-labour ratio, mountainous terrain, etc. The solution in Fujian in general and the chronically poor counties in particular, is not to encourage migration to overseas as in the past, but rather to address the problem through appropriate policy changes, systemic reforms and structural adjustments.

Before 1984, Huli near Xiamen had been the only area designated a SEZ. Although some joint ventures could be allowed to run with terms similar to those in the SEZ, they had to prove themselves with advanced technology and be within Xiamen municipality. Huli, a newly reclaimed industrial zone, was relatively empty and the airport and seaport on Xiamen Island were completed but of low usage. Tourism was not well developed and hotels were marginally successful. Urban infrastructure was old and very inadequate because of insufficient funding. Outside Xiamen, Fujian was basically under the same system as before 1978.[10] The trading scene was worsening because Fujian did not have much to export but had and was allowed to import in order to support the SEZ. A trade deficit was recorded in 1985.[11] Shortage of foreign currencies and capital limited infrastructural development. Only RMB50 million had been provided by the provincial government in 1981 for Xiamen SEZ, and the SEZs were supposed to be self-financing. Xiamen had to find its own sources of fund-

ing; indeed Fujian was the first to issue overseas bonds, and its Xiamen airport was built with foreign loans.[12] Competition between Xiamen and Fuzhou for open policy treatments, loans and favours was intensified by their differences in dialects, regional interest, and will to develop. This fuelled the rivalry between the leaders at the provincial capital and the SEZ in the early 1980s, as exemplified in the early slow pace of implementing the special policies and the role and functions of Xiamen SEZ. The change of leadership in October 1981, when Xiang Nan replaced Ma Xingyuan, paved the way for the real period of infrastructural construction of Fujian.[13]

The reform programme was further hampered by the anti-spiritual pollution and combating economic crime campaigns in which smuggling in Fujian was one of the main targets. The campaigns were in full swing in 1982 and 1983. This was dampened by Zhao Ziyang's visit in October 1983, followed by Deng's tour in February 1984. The latter led to the opening of the fourteen coastal cities through which Fuzhou at last acquired its open policy status. Further on in March 1985, the Golden Triangle Concept was approved under the name of Xiamen-Zhangzhou-Quanzhou Open Region, so that the scope of the open policy could be extended to Quanzhou and Zhangzhou.[14] The call for the more rapid and improved development of Xiamen SEZ also resulted in the extension of the SEZ from the 2.5 sq km at Huli to the whole Xiamen Island of 131 sq km. The expansion of the zone in March 1984 as well as the granting of special privileges to Fuzhou symbolized the official endorsement of the open policy and their role as pioneers in domestic economic reforms. In March 1984, a provincial party committee and government work group visited Xiamen SEZ and examined its law, planning, foreign trade, tourism, transport resources and finance. In July 1984, Fujian People's Congress Standing Committee issued six new regulations concerning entry formalities, land use fees, technology introduction and intra-regional links.[15] In December 1984, further measures to improve the foreign investment climate, such as taxation, domestic sales and enterprise management policies were formulated. Although two years later than Guangdong and far from completion, Fujian at last got its own set of open policy regulations to follow and pursued its own style of development.

With foreign loans and the issuing of bonds in the overseas capital market, Fujian launched its programme of infrastructure. Xiamen completed its new airport and seaport in the early 1980s, while Fuzhou upgraded its airport and seaport in the mid-1980s. The road between Fuzhou and Xiamen was straightened and upgraded. In the early 1990s, this road was undergoing further improving and many sections of it were reported to be of superhighway standards.[16] Plans to construct a direct fast-speed train comparable to the bullet train have been tabled for discussion. These grandiose plans of transportation have been accompanied by equally grandiose plans for city expansion and industrial estates for small and large cities alike.[17] The real question behind these conceptual plans lies in their realism, their practicalities and the setting of a timeframe for implementation. Some of these will be taken up in the following sections of this paper.

The Development Corridor

As mentioned earlier, the beneficiaries of the open policy of China since 1978 have mainly been its coastal provinces. Thus, in Fujian the coastal belt has developed much faster than the inland cities and counties. Through their initiatives and taking advantage of the new opportunities offered by the open policy, various cities and rural towns have adopted different strategies so that their ultimate development paths have been different. Five models of development, all city-centred, can be identified along the coastal development corridor of Fujian, each with distinctive characteristics and a mixture of development factors. These are the SEZ model of Xiamen, the open coastal city model of Fuzhou, the rural township enterprise model of Shishi, Jinjiang, and to a certain extent Quanzhou, the comprehensive development model of

Zhangzhou, and the Meizhou Bay model. This section will briefly outline the elements of the first four, leaving the last one to the next section because the Meizhou Bay model is largely a planning concept in the process of being implemented.

The SEZ Model of Xiamen

The Xiamen SEZ was designated in October 1980 as the only SEZ in Fujian in contrast to three in Guangdong. It was extremely small in the beginning with an area of 2.5 sq km at Huli on the west side of Xiamen Island. It was first conceptualized as an export processing industrial zone with SEZ preferential policies, so that Fujian could experiment with its domestic reforms and opening up to the world by attracting foreign investment and by introducing advanced technical and managerial knowhow. Yet between 1980 and 1983, foreign investment attracted was primarily on an experimental basis. There was a total of seventeen projects with a planned investment amounting to US$91.78 million, of which about one-third was foreign funded.[18] This was not surprising because at that time Xiamen infrastructure was poor. The port at Dongdu and the airport at Gaoqiao were under construction with loans raised from outside. Indeed, in the period 1980-85, some RMB1,780 million were invested in infrastructural construction — 2.7 times the total completed in the thirty years prior to the establishment of the SEZ zone.[19] In 1984, the entire island was put under the SEZ and foreign investment increased drastically. By 1988, the total number of investment items and the sum of capital outlay involving foreign capital had reached a total of 485 items and US$1.6 billion respectively.[20] Before 1988, most of the foreign capital was attributable to Hong Kong, although Singapore was also a major source. Since 1987, the Taiwanese government has relaxed its policy resulting in a surge of Taiwanese investments.[21] With the injection of an annual amount of around US$150-200 million foreign investment from 1988 to 1991 and a continuous improvement in infrastructure, the industrial output of manufacturing industries has gradrupled in six years from RMB2.3 billion

in 1986 to RMB9.55 billion in 1991 (Table 4). Besides, the service sector has revived and can be illustrated by the establishment of hotels, shopping arcades, joint ventured banks and so on. The first phase of Huli was then completed, and the second phase was about to begin. In this phase, notable advancement was seen in the retooling of the existing enterprises, the flourishing Taiwanese investment in joint ventures and wholly owned enterprises and linked industries between the SEZ and inland provinces.[22]

Starting from 1988, rapid growth was recorded in Xiamen. The annual injection of actualized foreign investment was six times that of 1988 in 1993, while the annual gross industrial output soared to RMB18 billion. The overspilling of manufacturing industries to Haicang and Xinglin, both of which have been designated as Investment Districts for Taiwanese merchants since 1988, became inevitable because the island of Xiamen, an area of only 131 sq km, was becoming saturated. Eventually, similar projects would probably spread out to other parts of Xiamen Municipality like Tong'an *xian*, which has already been classified under the Minnan Triangular Open Region as having a similar status as the Zhujiang Delta Open Region of Guangdong.

One unique characteristic of the SEZ model in Xiamen is the dominance of wholly-owned foreign direct invested factories and enterprises.[23] Another characteristic is the relatively high technological level and high initial investment. Those in Huli and the originally conceived Haicang petro-chemical plant are good examples. Last but not least, the significance of the SEZ model can also be reflected in the service industry component stretching beyond the SEZ, like the Xiamen Airline Co.[24] and the export of labour services to overseas countries. Also, in comparison with the other models of the Fujian corridor, real estate development, mainly high-class residential, multi-storey blocks, makes up a significant component in the SEZ model. In regard to *chengpian kaifa* (whole-plot land development), the Xiamen model is mainly characterized by the undertaking of the SEZ authorities or other government institutions rather than by the relying on foreign investors or overseas Chinese.

Table 4 Economic Indicators of Fujian Coastal Development Corridor, 1986-93

	1986	1988	1990	1991	1992	1993
Total population (thousand)						
Fuzhou	1,205.00	1,251.30	1,292.40	1,307.90	1,321.40	1,338.00
Fuqing	978.70	1,023.70	1,065.80	1,077.60	1,084.70	1,100.60
Putian	272.30	285.00	304.90	310.60	315.20	322.30
Quanzhou	444.10	461.50	485.50	492.40	499.60	509.50
Jinjiang	1,054.60	846.70	N	934.10	941.20	951.90
Shishi	J	246.80	261.80	265.60	270.20	276.60
Xiamen	558.40	579.50	603.10	613.80	626.30	640.90
Zhangzhou	318.20	328.60	340.90	344.80	349.00	353.20
Provincial	27,493.00	28,452.50	29,998.20	30,390.90	30,668.50	30,991.70
Non-agricultural population (%)						
Fuzhou	66.85	67.63	67.69	68.14	68.80	69.26
Fuqing	6.42	7.75	3.04	7.84	8.50	51.51
Putian	26.77	29.09	29.58	30.26	31.09	32.67
Quanzhou	36.34	37.31	38.15	38.65	39.31	40.29
Jinjiang	10.31	10.20	N	9.93	10.15	10.33
Shishi	J	26.94	27.31	27.60	27.54	28.05
Xiamen	62.88	63.87	64.14	64.86	65.59	66.51
Zhangzhou	51.95	52.95	53.21	53.42	54.24	54.98
Provincial	14.39	16.75	16.68	16.79	17.14	18.09

Table 4 (Continued)

No. of individual workers in cities and towns (thousand)						
Fuzhou	13	N	17	19	38	40
Fuqing	N	N	17	16	25	30
Putian	4	N	11	13	11	20
Quanzhou	4	N	6	6	7	10
Jinjiang	N	N	N	N	34	20
Shishi	N	N	2	6	6	10
Xiamen	7	N	15	10	12	20
Zhangzhou	8	N	9	9	6	10
Provincial	158	226	253	378	375	466
GNP (million RMB)						
Fuzhou	N	3,653.36	4,837.00	5,687.00	7,151.00	10,513.00
Fuqing	N	1,210.49	2,031.00	2,361.00	3,196.00	5,342.00
Putian	N	574.43	573.00	761.00	954.00	1,793.00
Quanzhou	N	879.32	1,132.00	1,353.00	2,071.00	3,937.00
Jinjiang	N	994.53	1,371.00	1,926.00	3,498.00	6,568.00
Shishi	N	396.20	572.00	877.00	1,742.00	3,151.00
Xiamen	N	2,880.91	4,154.00	5,143.00	6,522.00	8,723.00
Zhangzhou	N	716.93	873.00	1,027.00	1,385.00	1,880.00
Provincial	21,212.00	35,409.00	46,584.00	55,782.00	70,520.00	104,474.00
GNP per capita (RMB)						
Fuzhou	N	N	3,777.00	4,327.00	5,367.00	7,798.00
Fuqing	N	N	1,937.00	2,177.00	2,935.00	4,831.00

Table 4 (Continued)

Putian	N	N	1,735.00	2,185.00	2,688.00	4,954.00
Quanzhou	N	N	2,380.00	2,767.00	4,168.00	7,789.00
Jinjiang	N	N	1,541.00	2,069.00	3,695.00	6,874.00
Shishi	N	N	2,185.00	3,302.00	6,491.00	11,603.00
Xiamen	N	N	6,817.00	8,222.00	10,070.00	12,947.00
Zhangzhou	N	N	2,589.00	2,985.00	3,980.00	5,339.00
Provincial	777.00	1,254.00	1,582.00	1,847.00	2,298.00	3,364.00
Gross output value of industry (million RMB)						
Fuzhou	3,762.35	7,436.00	9,233.00	10,956.00	14,265.00	19,242.22
Fuqing	269.42	N	949.00	1,426.00	2,258.00	5,610.51
Putian	211.51	618.00	529.00	901.00	1,134.00	2,014.60
Quanzhou	680.37	1,213.00	1,803.00	2,109.00	3,077.00	5,158.10
Jinjiang	921.86	N	1,822.00	2,798.00	5,723.00	11,244.83
Shishi	J	336.00	557.00	900.00	1,990.00	4,151.91
Xiamen	2,342.59	4,927.00	7,350.00	9,551.00	12,218.00	18,237.28
Zhangzhou	686.03	1,537.00	1,645.00	2,146.00	2,843.00	3,839.68
Provincial	19,072.00	38,885.00	53,149.00	65,886.00	91,551.00	154,778.21
Foreign investment actually used (million US$)						
Fuzhou	N	25.01	65.25	167.34	168.27	486.14
Fuqing	N	N	19.68	49.50	97.08	83.56
Putian	N	5.97	22.72	19.32	55.02	76.78
Quanzhou	N	9.58	16.52	26.67	47.55	102.17
Jinjiang	N	N	N	N	134.73	206.14

Table 4 (Continued)

Shishi	N	0.19	21.92	26.03	77.46	153.45
Xiamen	N	164.09	173.07	182.85	605.09	1,037.00*
Zhangzhou	N	0.04	11.89	13.92	24.77	45.39
Provincial	166.60	288.92	379.68	723.75	1,465.60	2,905.99
Investment in capital construction (million RMB)						
Fuzhou	N	1,431.45	1,272.27	1,584.68	1,995.35	2,380.03
Fuqing	N	66.19	25.76	22.97	217.80	152.41
Putian	N	41.14	48.67	63.63	63.71	168.03
Quanzhou	N	144.35	106.97	69.02	199.98	471.14
Jinjiang	N	8.47	5.47	13.65	30.89	104.98
Shishi	N	2.18	38.34	48.33	31.54	79.02
Xiamen	N	594.92	685.91	860.25	1,373.99	3,120.43
Zhangzhou	N	85.54	68.85	116.69	155.19	193.66
Provincial	2,907.80	6,727.94	3,817.57	4,819.48	7,085.53	11,824.54

Notes: *: Xiamen SEZ only.
J: Shishi data included in Jinjiang.
N: Data not available.

Sources: *Fujian Statistical Yearbook*, various years.

The Open City Model of Fuzhou

Being the capital city of the province, Fuzhou was not granted the open city status until 1984. Its bureauracy, its own dialect (which is different from the Minnan dialect spoken by 80% of the Taiwanese), its geopolitical position and so on made it less favourable to attracting foreign investment in comparison with Xiamen. Though without the special economic status, joint venture with Hitachi of Japan in the production of television sets started in Fuzhou as early as 1981.[25] This joint venture soon became engulfed in controversy in the early 1980s because its component parts at that time were mostly imported, incurring therefore losses of foreign exchange. With great efforts and much publicity, the Fujian Hitachi Television Co. Ltd. eventually succeeded in increasing indigenization of its component parts and balancing its foreign currency problems by exporting overseas. It remains a text-book case of China and foreign investors reforming and retooling old Chinese state enterprises. The granting of the open city status enabled Fuzhou to develop the Fuzhou Economic and Technological Development Zone at Mawei with public funds and to make extensive improvement in infrastructure.[26] Two other industrial estates were established according to the same format with the objective of encouraging industrial enterprises of a relatively higher technological level to come.

An industrial estate of 4 sq km was developed from 1987 in Fuqing basically by overseas Chinese, and only minimal state investment was involved. This proved to be a big success because overseas Chinese could shoulder the responsibility of both land development and the introduction of investors, whereas the SEZ model could consume plenty of state investment without knowing when the foreign investors would take up the land. Fuqing being the ancestral home of the premier Indonesia overseas Chinese tycoon, Mr. Lin Shao Liang, he undertook to develop a plot of land as large as 50 sq km with the consent of the Fuzhou authorities (No. 6 in Fig. 1).[27] Through his connections, a number of industrial estates were established in Fuqing of Fuzhou Municipality, which explains the emergence of the industrial centre of Fuqing from almost absolute obscurity. Its gross industrial output grew more than twenty times from 1986 to 1993. A similar huge plot of land of 15 sq km was allocated to a joint venture with Igawa Co. in the north of Fuzhou Municipality in the hope it could revive the Japanese investments in Fuzhou (No. 1 in Fig. 1).[28]

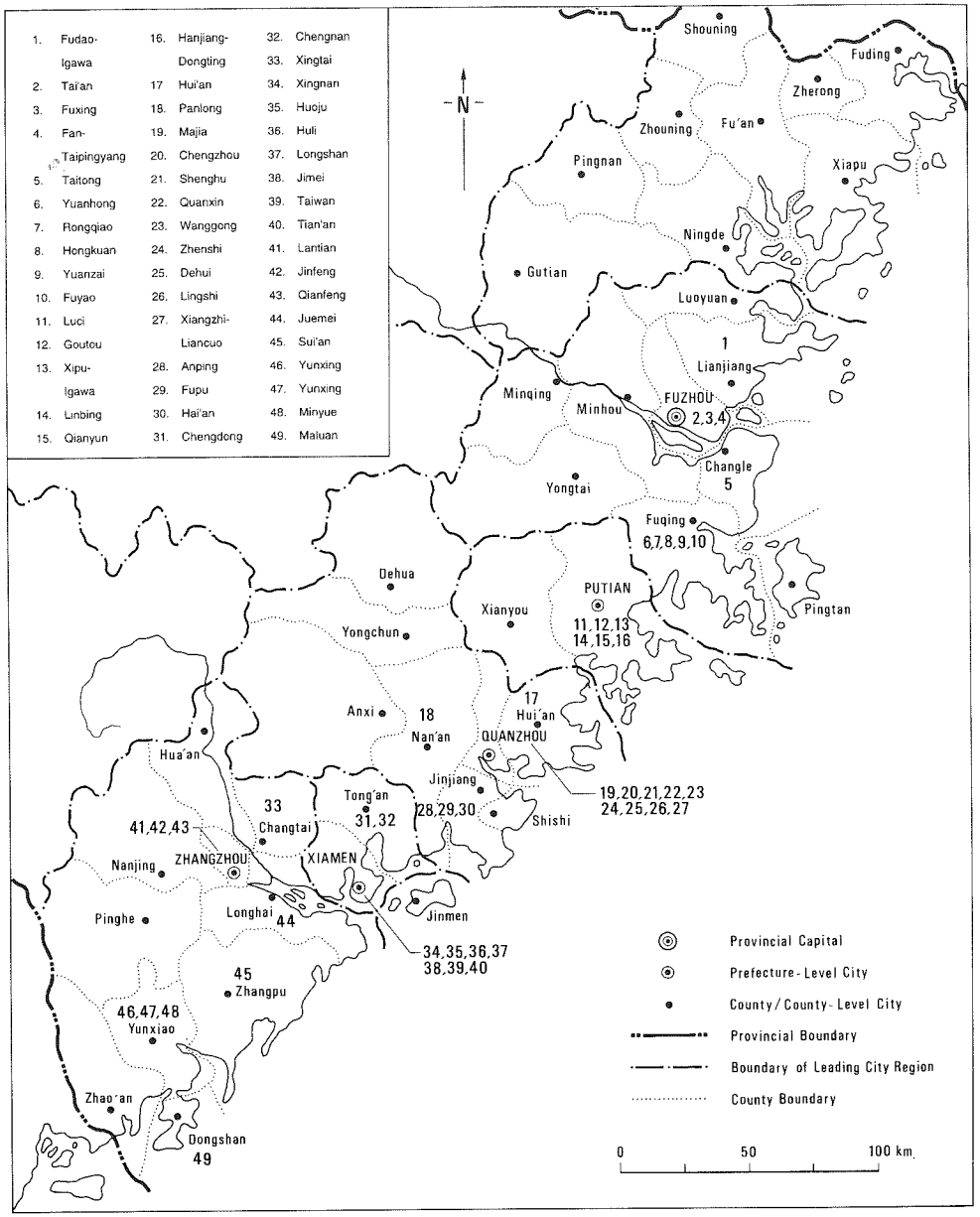
Besides, Fuzhou was also the first in granting a plot of land to the rural *xiang* and *cun* (big and small villages) collectives to invest and develop an industrial estate for attracting foreign manufacturers. It was located in the urban district of Fuzhou near Gushan with an area of 2 sq km. Called Fuxing Investment District (No. 3 in Fig. 1), it attracted between 1990 and 1992 forty-three joint ventures with a total foreign investment amounting to US$112 million.[29]

In sum, the Fuzhou model is characterized by *chengpian kaifa* from funds of various sources and of various formats. It could be an undertaking of an overseas Chinese, a joint venture between the Chinese and a foreign investor, or a collective of farmers and rural authorities.[30] The outcome has been quite remarkable although the rate of improvement still falls behind the SEZ model.

The Shishi and Jinjiang Model

Shishi, formerly a rural town of Jinjiang *xian* of the Quanzhou Municipality, is located along the very coast of the Minnan Triangular Open Region established since 1985. Initially, it had a population of 51,000, 80% of them having connections with overseas Chinese. Over 550,000 overseas Chinese and Taiwanese regarded Shishi as their place of origin.[31] Before 1987, Shishi was well-known for trading and marketing in consumer goods and small items of manufacturing. From trading, the rural township enterprises started developing the production of these items. On that basis, they began to improve the design. In December 1987, Shishi was upgraded to a city and was regarded as the experimental district model of "comprehensive reform" and a window for opening to the world.[32] It started moving from self-sufficiency to

Fig. 1 The Distribution of Industrial Districts Along the Development Corridor, Fujian



Source: Yao Shimou and Liu Ta (1994), p.117.

an export-oriented economy. A great proportion (about 58.7% in 1990) of its enterprises belonged to share-holding collective enterprises initiated by rural farmers pooling their resources, specializing in clothes, food, footwear, and handicraft.[33] In 1978, only 15.6% of its rural labour force was non-agricultural. However, in 1989, as much as 45.6% of its rural labour force was employed by rural township enterprises. This is partly because in Shishi rural township enterprises soon started transforming themselves into joint-ventures as overseas Chinese connections were readily available. Consequently, some of these enterprises further enlarged and grew into corporations by accepting partnership of state enterprises of the central government ministries.[34] The current size of these enterprises is of a moderate scale. Yet the standard of living of the Shishi residents has improved so much that, in 1993, the GNP per capita of Shishi was almost at par with Xiamen and has been growing at double digits in recent years (see Table 4).

Shishi is not an isolated case. Jinjiang, for example, also started with rural township enterprises, intermediate processing-joint ventures and of late *chengpian kaifa*. In March 1991, it was upgraded to city status. In 1991, there were 18,000 rural enterprises with 195,000 workers in the area producing over 10,000 types of commodities. The output of these amounted to RMB2.6 billion.[35] Its economy has been graded as the 55th strongest among all the *xian* and cities of China.[36] The scene of endless chimneys along the two sides of the trunk road across Jinjiang between Fuzhou and Xiamen could be the best physical manifestation of the productivity and vibrancy of the city and the strength of its economy. At the same time, the emissions from the chimneys clearly showed the environmental costs of the development of Jinjiang rural township enterprises under this model.[37]

Close to Shishi and Jinjiang is the Licheng district, the administrative centre of Quanzhou.[38] Instead of calling themselves rural township industries, they are called street and road enterprises. They are similar to each other and so is their path of development. Outside Licheng, rural towns and villages of the whole Quanzhou

city-region display similar characteristics in different ways.[39] This model, therefore, is sometimes called the Quanzhou model.

Zhangzhou Model

Being the weakest in industrial strength but relatively strong in agricultural resources, Zhangzhou has become the area that is a major point for cooperation between Taiwanese investment and Fujian land and labour. By 1992, six of these agricultural economic and technological districts had been established.[40] The potential of Zhangzhou would be in terms of comprehensive agricultural and industrial development. Worth mentioning is the joint ventures of quick freezing plants for vegetables and fruits and food processing plants at Longhai. By 1992, fourteen of these plants were introduced funded by Taiwanese investment. That further generated more commercial agriculture. Indeed, in 1989, the ratio of crops and other produce (forestry, fishery, animal husbandry, etc.) was 63:37, but by 1991 it had advanced to a ratio of 50:50.[41] In fact, Zhangzhou topped the list in the number of joint ventures in agriculture in Fujian and second in the size of foreign investment involved (Table 5). The outcome of this can be witnessed by the rapid growth of the high-value added items among the cropping sector of Zhangzhou (Table 6). They are now growing at a double digit rate annually while the traditional items of the sector are growing at 4.56% p.a. In 1991, high-value added items made up one quarter of the value of the total output of crops in Zhangzhou, signifying the outstanding feature of the Zhangzhou model.

Despite the latest development, Zhangzhou was not satisfied with its role in promoting agricultural development. It aspired to jumping onto the bandwagon of industrialization.[42] However, the path that Zhangzhou proposed differed from those analyzed previously. In short, it wants to be the Shekou of Fujian. Following the Shekou experience of the Shenzhen SEZ, an area of 18 sq km was designated, with an initial phase of 4 sq km to be developed first. The industrial district is called China Merchants-cum-Bank of China Zhangzhou Economic Development Zone. There are

Table 5 Joint Ventures in Agriculture in Fujian's Coastal Zone, 1990

	Fuzhou	Ningde	Putian	Quanzhou	Xiamen	Zhangzhou	Total
No. of enterprises	47	11	21	18	22	54	173
Agro-husbandry	3	–	–	2	1	7	13
Quick-freezing	1	–	1	–	2	1	5
Aquaculture and fishery	15	5	11	7	11	19	68
Seedling	2	–	–	–	1	–	3
Mushroom	1	4	–	–	1	1	7
Fodder	6	–	3	3	–	2	14
Bamboo	15	2	5	4	4	13	43
Fruits and vegetables	4	–	–	–	–	10	14
Livestock	–	–	1	1	1	1	4
Tea leaves	–	–	–	1	1	–	2
Registered capital (US$10,000)	4,247.2	467.4	976.2	1,110.0	1,300.7	2,532.6	10,643.1

Source: Yao Shimou and Liu Ta (1994), p. 62.

seven major investors including the Hong Kong China Merchants and Bank of China Group. Other Hong Kong Chinese state commercial interests, such as China Travels and China Resources are also involved. In 1993 and 1994, massive capital was injected to undertake the construction of the seaport and the land along the waterfront. Development of the zone was modelled on Shekou and planned to take 12-13 years to fully occupy the 18 sq km.[43]

Table 6 The Growth of High-value Added Items in the Crops Grown in Zhangzhou, 1978-91

	1978	1984	1991	Annual Growth Rate (%)	
Total value of crops	**144,070**	**182,465**	**257,252**		**4.56**
Frozen and dehydrated vegetable	442	507	30,846	38.62	
Asparagus	–	208	12,728	79.99	
Mushroom	1,314	14,388	19,281	22.95	31.83
Rose	22	104	1,200	36.02	
Daffodil	–	240	500	11.05	

Source: Yao Shimou and Liu Ta (1994), p. 63.

Meizhou Bay as a Growth Centre

Physical and Strategic Considerations

Geographically, Fujian possesses the second longest and the most winding coastline of all provinces in China and thus has a great potential for harnessing its marine location and resources to buttress its reform programmes. Midway along the development corridor that was identified earlier is the area around Meizhou Bay that was identified as a project of national priority for developing as a large port at the turn of this century. However, for various reasons, this proposal never saw the light of day. It was not until the mid-1980s that Meizhou Bay was once again identified as a potential growth centre that would likely propel Fujian's development efforts forcefully forward. Indeed, the development of Meizhou Bay goes beyond the acceleration of economic development in coastal Fujian; its catchment area extends to a wide region within China. Developing Meizhou Bay is therefore an issue of provincial as well as national significance.

Meizhou Bay is strategically situated midway along Fujian's coast, almost equidistant to Fuzhou (132 nautical miles) and Xiamen (96 nautical miles). Its proximity to Taiwan, with Jilong and Gaoxiong respectively only 178 and 194 nautical miles away, is a most favourable factor, given of late the increasing indirect trade and cultural exchanges between the mainland and Taiwan.

Physically speaking, Meizhou Bay is unusually well endowed for developing into a deep-water port complex (Fig. 2). Horseshoe shaped, Meizhou Bay is situated in a well-sheltered area, protected on three sides on the east, north and west by rolling hills and the southeast by a number of islands, shielding it from the rough waters of the Taiwan Strait. No river of any size empties into the Bay and, as a result, silting is not a problem. Moreover, the sub-tropical climate which Fujian enjoys frees the Bay area from climatic extremes. Meizhou Bay has a water area of 516 sq km, of which more than 100 sq km is deeper than 10 m. Its lengthy coastline of 289 km has more than 30 km suitable for docking facilities for ocean-going vessels. This represents approximately 45% of the total deep-water port potential along the China coast and hence a great natural asset.

The immediate area around Meizhou Bay consists of the counties of Putian and Xianyou under the administrative jurisdiction of Putian City and the county of Hui'an under the administration of Quanzhou City. This area covers 4,700 sq km, with 45 villages and 14 towns and has a population of 350,000. It is also the area for which development plans for Meizhou Bay have been drawn up to the next century.

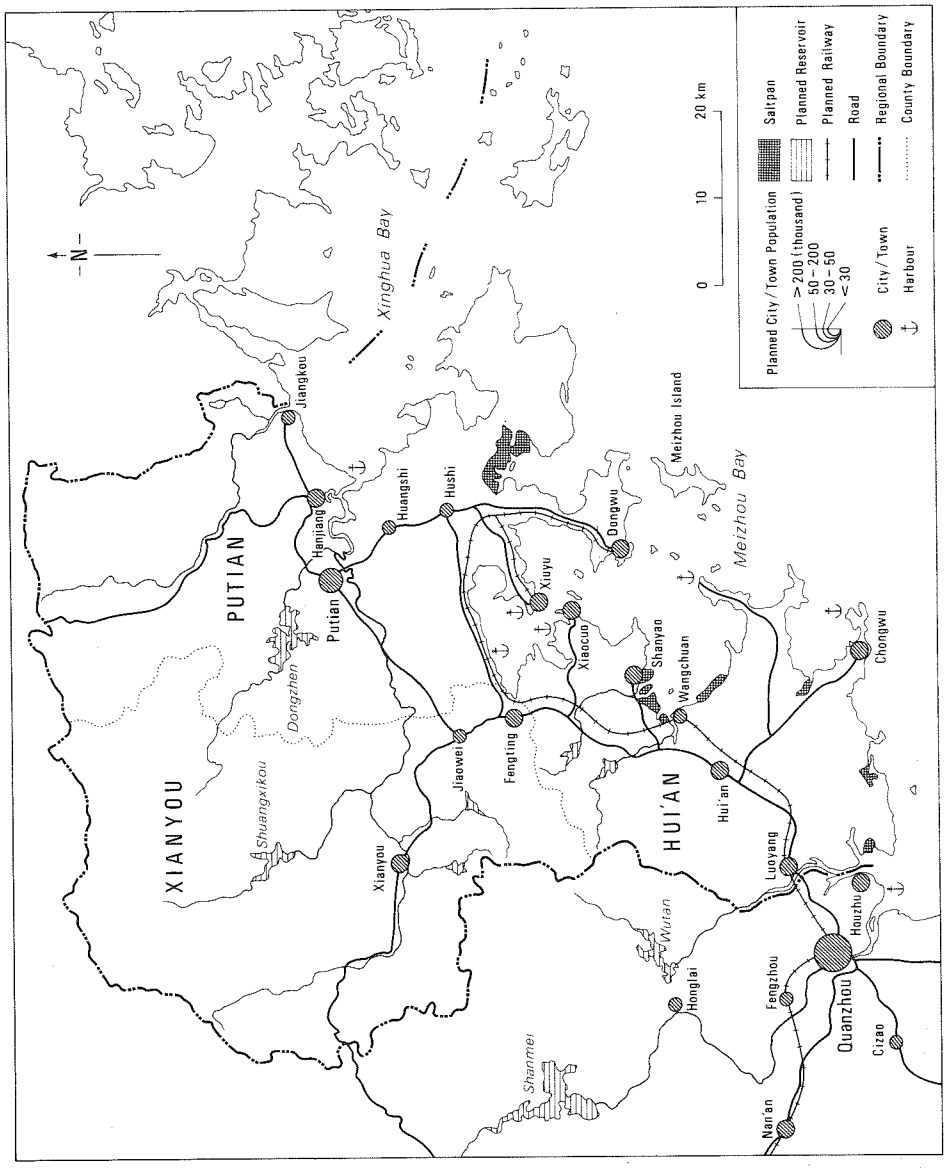


Fig. 2 Regional Development for Meizhou Bay, C. 2000

Socio-economic Setting

As the first section of the paper has made plain, Fujian had suffered from sluggish economic development since 1949, with the national preoccupation of concentrating resources in the inland region. The open policy since 1978 has had the effect of refocusing development energies along the coastal region whose comparative advantage has been allowed to take precedence. Consequently, Meizhou Bay was included in 1983 in the Sixth Plan Period (1981-85) by the State Planning Commission as a national priority project. In 1984, it was formally listed as one of twenty-seven national pilot areas, and a provincial planning committee was established to initiate and coordinate its development.

The development of Meizhou Bay should be viewed in the context of socio-economic development of Fujian. To date, economic development of Fujian has been constrained by several factors. First, the role and importance of industry in the provincial economy has not been prominent enough. In 1983, industry occupied 60.7% of the total industry-agriculture product. With agriculture facing obstacles for rapid expansion, industry has been viewed as a potentially important sector to generate growth. Secondly, the energy and raw material industrial base has been weak. Over the years, Fujian has not received national investment in developing these industries, especially since the province suffers from a relative lack of key mineral resources, such as iron ore and coal. Between 1950 and 1986, industrial basic construction for the entire province amounted to RMB980.63 million, representing a mere 1.6% of the national total. This accounted for Fujian being one of the least developed areas among the coastal provinces, cities and autonomous regions in 1988.[44] Thirdly, the reliance on agro-industry has been unduly large. In 1983, 69% of the light industries was related to agricultural products. Fourthly, in the overall industrial enterprise structure, large-scale and key plants have been very few. In 1983, only 6.2% of the enterprises was considered large, 18.8% medium-sized. Finally, the spatial industrial structure has called for a basic restructuring. For decades

since 1949, the spatial structure of industrial development in Fujian had been centred on "two points" (Fuzhou and Xiamen) and "one line" (Nanping-Zhangping-Longyan). Industrial investment in the interior "one line" places at the expense of coastal areas had been economically inefficient and had led to a host of transport, environmental and land use problems in the former. Redirection of investment to the coastal region is necessary, as recent trends have already followed the economic logic.[45]

In view of the present deficiencies in spatial structure, Fujian needs restructuring along three directions. First, it needs to establish an industrial production base on which to construct large-scale raw material and energy industries. It has to break free from the hitherto dependence on the provincial supply of raw materials. Rather, it has to import coal, oil, minerals and semi-finished products; establish oil-refining, petro-chemical, ocean chemical, ship-building, iron and steel, and power generating industries. Secondly, Fujian has to adjust its "one line, two points" industrial spatial structure by massively developing the coastal zone between Fuzhou and Zhangzhou into a new industrial nexus with an accent on enhanced foreign and domestic articulation. This will give rise to a new, almost continuous urban-industrial belt, or development corridor, of over 300 km, giving new impetus to Fuzhou and Xiamen in their development of new industries in machinery, electronics, petro-chemical industries, with high technology and an assurance of raw materials. Thirdly, in order to achieve the previous two objectives, the coastal region requires large-scale infrastructure investments to improve transport, communication facilities and port installations. In all these, Meizhou Bay has a critical role to play in transforming Fujian's spatial structure, which Fuzhou and Xiamen cannot on their own deliver. The Meizhou Bay development can provide a new driving force in Fujian's reform programme.[46]

In fact, from the viewpoint of port development in a national context, Meizhou Bay stands out as an eminent candidate. The present port development in China is still backward, with a serious shortage of deep-water port facilities. Port circulation is often

clogged, with deleterious effect on the import and export of goods. Most of the deep-water ports capable of handling 10,000 dwt vessels are concentrated along the Chinese coast north of Shanghai. Yet between Shanghai and Guangzhou is half of China's coastline, which is served by Ningbo, Wenzhou, Xiamen, Shantou, etc. unevenly distributed in size and capacity. Thus, there is an urgent need to develop new deep-water port facilities south of Shanghai and it is therefore of no surprise that Meizhou Bay has been designated as one of four large bays in China for development. When developed, Meizhou Bay will serve a large hinterland comprising Jiangxi and southern Zhejiang, Anhui and eastern Guangdong, Hunan and Hubei. Fujian will be able to import a range of raw materials from these provinces and provide relief to the existing congested ports south of Shanghai.[47]

The need for developing new port facilities in Meizhou Bay is made explicit by the fact that every year more than half of the urgently required goods cannot be imported, and a large proportion of the domestic products cannot be exported. Surface transport is poorly developed and a new door must be made to the sea.[48] Despite its inadequacy, surface transport still makes up the bulk of goods movements in Fujian. In 1985, railways accounted for 65.7% and roads for 11.3% in the movement of goods, whereas roads were responsible for 89.3% versus 6.5% for railways in the movement of people. In the same year, the relative importance of roads in moving people and their turnaround time exceeded the national average, whereas railways and shipping were loaded below the national average.[49]

Notwithstanding steady progress made since 1978, the economy in the Meizhou Bay area is below the provincial average. Its per capita industrial/agricultural output reached RMB428 in 1984. The economy was still dominated by agriculture, which accounted for 64% of the income. The population was largely rural, with only 9.6% classified as urban (compared with 13.4% for Fujian), making Meizhou Bay one of the least urbanized areas. The unfavourable labour-land ratio has left many people without jobs. There is surplus labour which awaits to be tapped for industrial

and other developments. At present, industrial production is heavily linked to agricultural production and processing, characterized by its small scale and low technology.[50]

One factor that favours Meizhou Bay for development is its close linguistic and ethnic affinity to Taiwan. People from both lands speak the same Minnan tongue, as many residents in Fujian fled and settled down in Taiwan before 1949. County Putian alone has 31,600 overseas Chinese. In addition, there is an additional bond between the people in Meizhou Bay and Taiwan in their common religious faith in the Goddess of the Sea (Tianhou). The Tianhou Temple on Meizhou Island, dating back to AD 987 in the Song dynasty, has become not only a place of worship but almost a destination for pilgrimage for Taiwanese. In 1990, one million Taiwanese, or one in five Taiwanese visiting China that year, visited the temple on the island.[51] If development unfolds in the Meizhou Bay area, it is in an advantageous position to attract Taiwanese investment.

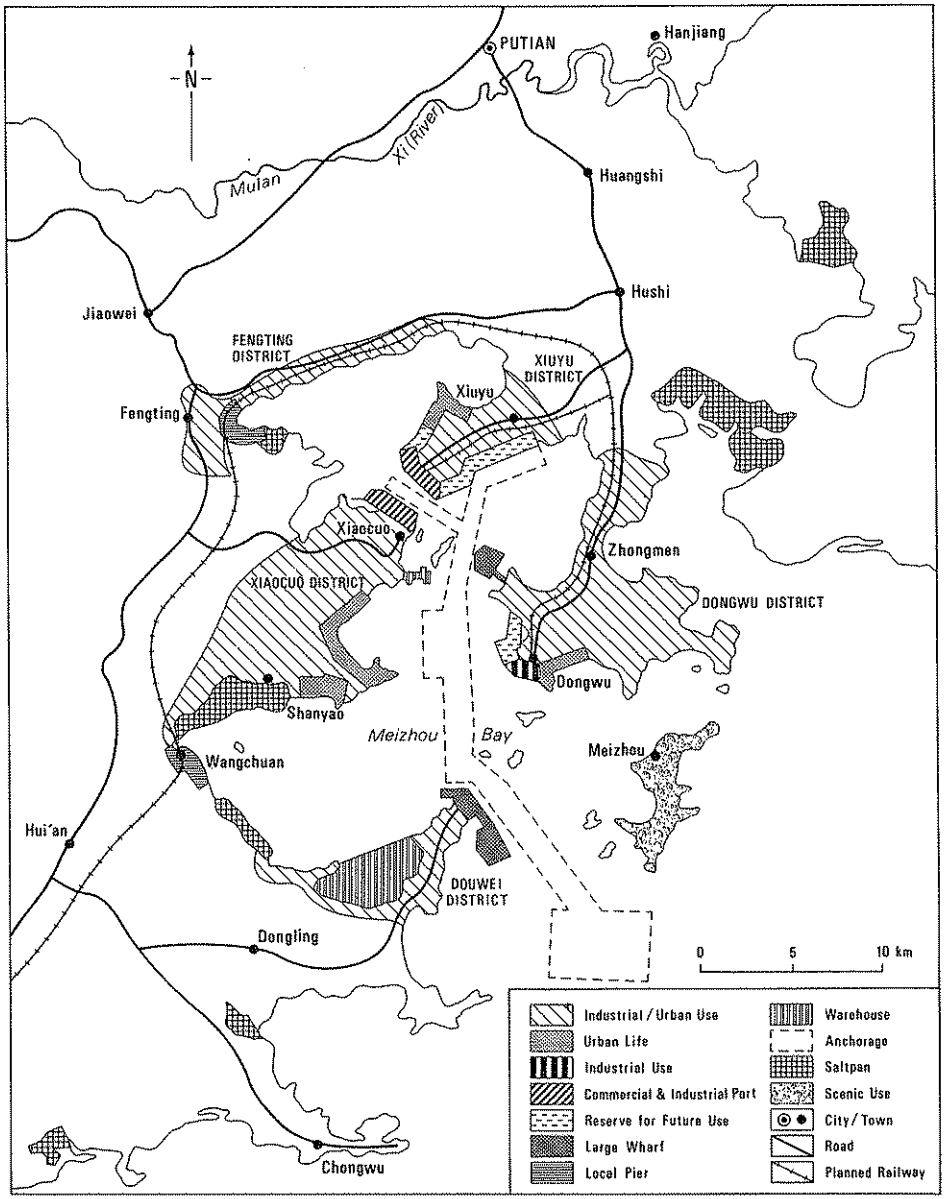
Development Plans[52]

With a view to harnessing the development potential of Meizhou Bay, a provincial planning committee was constituted in 1984. It produced an integrated land-use development plan for the Meizhou Bay region in 1988, with a time frame to year 2000. A revised and more detailed plan, taking into account updated developments, was again prepared in 1991. These plans were subjected to separate evaluation, particularly from an environmental standpoint.[53]

Development plans for Meizhou Bay cover the bay region as well as its surrounding land area (Fig. 3). A central thrust of development for the region consists of the construction of three port-cities which are multi-functional and integrated, erected in three interlocking peninsulas with deep-water frontage. The proposed port-cities are envisaged as follows (Fig. 3):

Xiuyu District Located in the northeastern part of the bay, this district has a developable area of some 30 sq km with 14

Fig. 3 Planned Shoreline Land Use in Meizhou Bay



villages and a population of 25,000. The proposed land use has industries and the port located in the south, whereas residential use and a civic centre are located in the northeast. The economic mainstay will centre on industries in iron and steel, machinery, food processing, electronics, building materials, grain and cargo handling. In the long run, it should develop high-tech industries.

Xiaocuo District Located on the western side of the bay, it has an extensive area of 60 sq km capable of being developed into urban-industrial uses. Its present population of 23,000 is largely concentrated in four villages. This district has been proposed to be developed along lines of petro-chemical, ocean chemical, oil and cargo transshipment industries.

Dongwu District This peninsula district is located in the southeast astride the other two districts described above. Its population of 40,000 is spread in three villages. It is the farthest from the existing infrastructure and water supply. Plans have called for the development of a power station, ship breaking and building industries, coal transfer and ocean engineering industries.

Apart from these three port-cities, other districts have also been mentioned for suitable development. The 1991 development plan identified Hongbu District, lying between Xiuyu District and Dongwu District. It is to be developed into a commercial and administrative centre for the entire bay area, with only light industries, such as electronics, textiles and ocean engineering industries. Other districts have also been recommended. For example, Meizhou Island with its Tianhou Temple as a great asset has been seen as capable of developing into a major tourist destination, complemented by value-added food industries. Fengting, located off the extreme northwest of the bay, has been identified as port-industrial city, with an emphasis on administrative management and cultural education. Finally, Dongling, by virtue of its southwesternly location in the bay close to the open sea, has been viewed to be suitable for polluting industries. A designated investment zone for Taiwanese and foreign interests has been proposed.[54]

As the present level of development in Meizhou Bay is modest, the realization of the development plans is dependent on sustained investment in infrastructure which would, in turn, attract foreign investment. In terms of transport needs, external links are envisaged to be through the air and the sea. Its deep-water coastline offers much potential for development into a major port complex, whose strategic importance has been previously described. Two nearby airports in Hui'an and Fuqing can meet short-term demand, but an airport located to the south of Xiuyu has been earmarked. In order to facilitate the hinterland connections of Meizhou Bay, road and rail transport will be improved. Because of Fujian's mountainous terrain in reaching the interior, road transport is probably more cost efficient. The planned north-south highway between Fuzhou and Xiamen will branch off to the three port-cities referred to earlier. An east-west highway, linking Meizhou Bay to Sanming and beyond will be constructed. Where there is no railway reaching the bay area, a new rail link will be provided by the construction of a new Zhang-Quan-Mei line, originating from Zhangping to Quanzhou, via Hui'an to Meizhou Bay, then going north to Putian and eventually to Fuzhou. The existing rail system is limited in volume as well as in speed, although Fujian has big plans to improve its coverage and technology. New railways have been planned to connect the province with Zhejiang, Jiangxi and Guangdong.[55]

Power supply to Meizhou Bay will be drawn from the provincial grid that is primarily water-generated. One 200 kw transformer plant has been constructed in Hushi, and two more will be built in Jingshan and Hanjiang in future. In the long run, power generation from hydroelectricity will not able to match escalating demands from the bay area and, indeed, Fujian. Coal-fired generating plants appear to be an efficient solution, and in this respect Meizhou Bay has much to offer by importing coal through its ports and generating energy by building power plants in it. Potentially, it can be a power generation centre for Fujian. However, in order to preserve the relatively unpolluted environment in the bay area, extreme care must be given to the location of polluting

industries. Heavy polluting industries should be located on the leeward side (Dongwu and Dongling) and chimneys should be built to 50 m and above. In fact, water pollution poses a greater problem than air pollution, as the self-cleansing capability in the bay is reportedly limited despite its relatively large tidal range. Thus strict regulation to control soil and waste water discharge into the bay should be legislated.[56]

A constraint in developing Meizhou Bay is, ironically for a sub-tropical area, its relative lack of water supply. There is no river of any size that flows into the bay and underground water resources are limited. Consequently, water has to be supplied from the surrounding areas. The existing and proposed water works in the region can supply 200 million cubic metres of water per year to the bay area in year 2000, which is short of the projected requirement at 350,000 to 400,000 million cubic metres at that time. Proposals for directing water from the region have been drawn up for both the northern and southern parts of the bay area.

Feasibility Evaluation

The development of Meizhou Bay along lines proposed in the Development Plans may be evaluated from various perspectives. In general, the bay area has many favourable factors for developing into a deep-water port complex, with petro-chemical, power generating and other heavy industries to support it.

The most suitable physical properties of the bay for port and industrial use have been described before and will not be repeated here. What is more, the shoreland around the bay is amenable to supporting heavy industries, as land is relatively flat and rather sparsely populated. This will therefore not require the relocation of population of any sizeable scale. Another positive factor is the relatively good road network converging on the bay. The existing Fuzhou-Xiamen second class highway skirts the western part of the bay area, soon to be upgraded in size and quality. Putian and Hui'an have roads that lead to the proposed building districts in

the bay. Still another supporting factor is the relative abundance of raw materials produced in the area. The area produces many subtropical agricultural products which are supportive of food-processing and light industries. Shanyao being the largest saltpan in Fujian can support chemical industry. The region also produces large quantities of quartz, granite and sand — valuable building materials.

However, the favourable factors can prevail only when the drawbacks are successfully overcome. The first drawback is related to the weak industrial base in Meizhou Bay. During the construction period drawn by the Development Plans, steel, cement, machinery and construction labour will have to be imported from other parts of Fujian and, indeed, the nation that are far away. During the production stage, a critical problem will be one of supporting industries. Many of the raw or semi-finished materials will not be available locally and will have to be imported. There is thus a heavy external dependence over a long period of time, making investment and construction less cost effective. Secondly, flowing from the last factor, investment will be expensive. Not counting the investment in Fu-Xia railway and Fu-Xia highway, just branch railway and highway could cost RMB450 million. In addition, the four piers for the iron and steel mill and power plants, transport investment will amount to RMB600 to 650 million. Water diversion scheme, with the necessary engineering works for both the northern and southern areas will cost RMB150 million. The external engineering works for the oil refining plant in Xiaocuo has been estimated to cost RMB200 million, representing 20% to 30% of the total investment, which is considered excessively high. Thirdly, above all, the most difficult problem to overcome concerns the different administrative jurisdictions that the three counties in the bay area are under. As a consequence, there are separate planning and implementing units for the northern and southern parts of the bay. The lack of coordination is clearly a practical and administrative problem. Planning for the whole bay area as one unit under one administrative unit

is an urgent administrative reform even before any actual construction proceeds.[57]

In terms of the Development Plans, while evaluation studies generally support the main thrusts of development, many express doubts about some details. For example, the suitability of iron and steel being proposed for Xiuyu District is seriously questioned, because, firstly, of its location opposite Xiaocuo and hence its negative environmental influence on the latter and, secondly, because of its relative limited capacity to deal with polluting industries. Dongwu, on the other hand, has a higher carrying capacity for polluting industries. Apart from power stations being proposed, iron and steel industry can be considered. The best location for polluting industries, nonetheless, can be identified to be at Dongling, which can be reserved for Taiwanese and Hong Kong investment.[58]

The translation of development plans into reality is a daunting and challenging task, requiring first and foremost massive infusion of capital. Many channels for raising funds must be developed. Three stages of development for Meizhou Bay have been proposed and are generally viewed as realistic. The first stage, being the early phase, covers the Eighth Plan Period (1991-95), in which attention will be given to basic infrastructure, partial industrial and medium-sized commercial port installations. Development of Meizhou Bay at this stage depends critically on Putian and Quanzhou, and beyond on Fujian and China. The second stage extends to year 2000, when intensive industrial and port construction will take place. Oil-refining, petro-chemical and power plants will be constructed. The port-cities in the bay area will have acquired medium size. The third stage covers the period to year 2020, during which urban development will intensify. With the completion of deep-water port facilities and related rail and road links, the hinterland of the bay will have stretched to southern Jiangxi, eastern Hunan, etc.[59]

It should be clear from the foregoing paragraphs that Meizhou Bay is a virgin territory situated in a strategic part of Fujian and China's coastal region well suited to accelerate economic reforms in the province and the nation. The emphasis on Meizhou Bay as an integral part of Fujian's continuing open policy, given the increasing saliency of the Taiwan factor, was underlined in a speech by Fujian's Governor Jia Qinglin at the Fujian Provincial People's Congress in 1993.[60] The regional importance of Meizhou Bay development is threefold. First, its industries, based on raw material processing and low technology in the initial stages, will complement Fuzhou and Xiamen. With its later development in heavy industries and port facilities, it will support development in these major and other cities in Fujian and beyond. Secondly, the deep-water port facilities developed in the bay area will provide a significant provincial and national asset in shipping along the Chinese coast, providing welcome relief to the existing port congestion. Meizhou Bay will become a major conduit for the import of coal from northern China and a supplier of electricity through its power plants. Finally, its physical proximity and cultural/linguistic affinity to Taiwan will make Meizhou Bay a location of growing importance as political tension between the mainland and Taiwan continues to improve and as economic cooperation further intensifies.

Discussion

The reform experience in Fujian since 1978 is not an isolated one. It mirrors the zig-zag policy shifts and the lack of a clear model of development, the result to a degree of the constant struggle between the reformers and the conservatives at both the central and provincial levels. As White notes, at any time "reforms were to involve a constantly moving interaction between ideas, policies and practical results in a context of changing political alignments."[61] The main problem that the reform movement has led to in Fujian, as elsewhere in China, is that it has broken the integrity of the old system without yet putting into place a new one. Consequently, it has given rise to a whole set of contradictions to which

all possible resolutions are costly. Reform has brought China to the point at which the interests of some large constituencies must be threatened.[62]

Economic reforms in China as well as in Fujian have had their share of difficulties, particularly in the early years. Some scholars have attributed this to the coexistence of the old and new systems. Government administrative function is mixed up with its managerial function. The socialist government is both the organ of state power and representative of people. The two functions have been confused. With a high degree of centralization this system maintains a semblance of order, even inefficient at that, but when power is divided the result is chaos.[63] Ishihawa even maintains that, because of the economic underdevelopment of China, there remained a large area in which the market mechanism did not work well, especially in the period prior to the mid-1980s. Reform was guided by "trial and error at the margin."[64]

The absence of a development model to chart economic reform has bedevilled some of the best intentions. Although "socialism with Chinese characteristics" has been touted by the Chinese leadership, what it is likely to come to as a practical outcome is a sort of "bureaucratic market muddle."[65] In terms of countrywide development, it is common to perceive rapid economic growth in the coastal region as "engines of growth" and "catalysts for modernization," assuming later diffusion in a "ladder-step" model of development.[66] The conceptual underpinning of this model is an emphasis on comparative advantage and the espousal of unbalanced or uneven development. One result of coastal economic resurgence is that regional inequality has widened. The central government in China, argues Ferdinand, is now financially weaker than at any time since 1949, while the local authorities, especially at the provincial level, have become more assertive.[67] In this respect, Fujian has consistently tried to shake off the constraints of state control and favour decentralization, as it has been singularly successful in attracting foreign investment. Between 1979 and 1987, Fujian was the second ranking province after

Guangdong accounting for 1,023 cases of foreign investment, representing 9.58% of China's total.[68]

Notwithstanding the lack of a model to guide development, particularly in the early period of economic reform, the paper has distinguished five development models which have taken time and experience to evolve. They are successful in their own ways in accelerating development along the coastal development corridor. However, their demonstration effect is clearly being watched by other parts of Fujian and indeed China, Taiwan and other foreign investors.

Whatever the ups and downs of economic reforms in Fujian, its positive gains should be viewed against the background of significant improvements in China in the 1980s. Few nations, let alone those of China's size, have experienced improvement in living standards in such a short period of time. China data, for instance, show a doubling of average real material consumption per person between 1978 and 1987. For centuries China's average daily calorie intake per person had fluctuated around 2,000 calories; in the mid-1980s it soared to 2,700.[69] These spectacular achievements should be kept in mind when the poverty problem in Fujian, referred to in the first section of this paper, is evaluated. Despite its breathtaking economic growth over the past few years, uneven growth and localized poverty are also problems to be faced within the province.

However, Fujian has made significant progress in infrastructure development in recent years, in particular along the eastern and southern coastal region. The main investment has focused on new and expanded airports in Fuzhou and Xiamen; port development in Fuzhou, Xiamen and Meizhou Bay; Fu-Ma and Fu-Xia highways; Wei-Fu, Ying-Xia and Zhang-Quan railways; advanced telephone installations in Fuzhou, Xiamen, Zhangzhou and Quanzhou; a coal-fired power plant under construction in Fuzhou and an hydroelectric power station in Shuikou. These major developments have significantly improved transport and communication links and alleviated the power shortage, resulting in a more attractive investment environment.[70]

The above infrastructure investments have certainly played a key role in Fujian's ever-broadening scope of economic reforms over the past fifteen years. In 1992, the provincial government announced plans to open a special port for Taiwanese trade on Meizhou Island, opened its fifth coastal port to foreign ships and granted inland mountain areas similar rights in opening up as the coastal cities. In July 1992, Xiamen city government boldly announced its plans to catch up with the "four little dragons" of Asia and to hasten the implementation of its free-trade zone policies.[71] Indeed, Chinese scholars have advocated a more pro-active approach to intensify trade with and attract investment from Taiwan. Apart from special investment zones already designated for Taiwanese in Fuzhou and Xiamen, Meizhou Island, Dongshan Island, Pingtan Island, Xiapu and Sansha are places stretching the entire Fujian coast that have been identified for more explicit Taiwanese investment.[72] Although Chinese leaders, particularly those in Fujian, appear to favour a more speedy and official opening with Taiwan on all fronts, the key to further progress in this direction is firmly in Taiwan's hands.[73] Even under the present arrangement of indirect trade, Taiwan will continue to be a critical factor in Fujian's reform programme. Fujian has come a long way in its reform experience, with solid gains in many respects. As recent statistics and trends suggest, it has everything positive and challenging to look forward to. It will most likely continue to make significant contributions to China's modernization and development efforts, even as the spark of economic reforms has already reached more regions of the country which appears set on a national course of growth and development.

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Appendix Cited Place Names in Fujian Province

Anxi	安溪	Huli	湖里
Changle	長樂	Hushi	笏石
Changtai	長泰	Jiangkou	江口
Chongwu	崇武	Jiaowei	郊尾
Cizao	磁灶	Jingshan	井山
Dehua	德化	Jinjiang	晉江
Dongdu	東渡	Jinmen	金門
Dongling	東嶺	Lianjiang	連江
Dongshan	東山	Licheng	鯉城
Dongwu	東吳	Longhai	龍海
Dongzhen	東圳	Longyan	龍岩
Douwei	斗尾	Luoyang	洛陽
Fengting	楓亭	Luoyuan	羅源
Fengzhou	豐州	Mawei	馬尾
Fu'an	福安	Meizhou	湄州
Fuding	福鼎	Minhou	閩侯
Fuqing	福清	Minqing	閩清
Fuzhou	福州	Nan'an	南安
Gaoqiao	高橋	Nanjing	南靖
Gulangyu	鼓浪嶼	Nanping	南平
Gushan	鼓山	Ningde	寧德
Gutian	古田	Pinghe	平和
Haicang	海滄	Pingnan	屏南
Hanjiang	涵江	Pingtan	平潭
Hongbu	紅埔	Putian	莆田
Honglai	洪瀨	Quanzhou	泉州
Houzhu	后渚	Sanming	三明
Hua'an	華安	Sansha	三沙
Huangshi	黃石	Shanmei	山美
Hui'an	惠安	Shanyao	山腰

Shishi	石獅	Xiuyu	秀嶼
Shouning	壽寧	Yongchun	永春
Shuangxikou	雙溪口	Yongtai	永泰
Shuikou	水口	Yunxiao	雲霄
Tong'an	同安	Zhangping	漳平
Wangchuan	輞川	Zhangpu	漳浦
Wutan	烏潭	Zhangzhou	漳州
Xiamen	廈門	Zhao'an	詔安
Xianyou	仙游	Zherong	柘榮
Xiaocuo	蕭厝	Zhongmen	忠門
Xiapu	霞浦	Zhouning	周寧
Xinglin	杏林		

福建省的發展走廊

福州至漳州

楊汝萬　朱劍如

（中文摘要）

中國從一九七八年開始推行的開放政策，爲福建帶來迅速的發展和現代化。本文先對福建和廣東兩省的社會經濟調整作出比較，從而透視福建經濟改革的深度和廣度。接著，按福州至漳州沿海走廊地帶的發展特徵，歸納爲五個發展模式，每一模式都具有典型意義，代表著如何充份發揮當地資源優勢和海外投資，以加速經濟發展。五者之中包括以湄州灣畔爲中心，擁有深水港和具備臨港重工業潛力的湄州灣模式。本文結論部份集中討論福建經濟改革的問題、成就和前景。