

Urban Agglomerations in Southern Fujian Province of China A Comparison with San Francisco Bay Area

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Abstract

In recent years, accelerated China's urbanization is approaching the turning point from the conventional urbanization to neo-urbanization. At this critical stage, it has become more necessary to focus on the regional growth collectively, in the form of regional integration. However, in the case of the Southern Fujian Province, the population is to a large extent concentrated in a few large cities, not evenly distributed. This paper would explore the theory of two stage urbanization and then compare this region with San Francisco Bay Area which exemplifies the general track of metropolitanization. Both regions show similarity geographically but different in many other aspects, especially the degree of economic integration among its various parts. Therefore, reform in the local government system for Southern Fujian area is strongly needed, especially the system of city-leading-county. In doing so, Xiamen needs to reform its economic structure in the entire metropolitan area, instead of confining the reform to the city proper.

Keywords: Southern Fujian Province, San Francisco Bay Area, Xiamen, metropolitanization

1. Introduction: the rationale for choosing San Francisco as a model to compare

1.1 San Francisco exemplifies the process of metropolitanization in the United States

The urbanization of the United States can be divided into two very different but often overlapping periods: The first stage, which can be defined as a monocentric model and lasted from the colonial period to 1920, witnessed the rapid growth of cities and towns as a result of the movement of population from rural areas to urban areas. During this "conventional urbanization" stage, most developments occurred in urban areas, rather than in suburban areas, which depended on the former for their growth. So this stage is characterized by urban expansion through the consolidation of urban cores.

The second stage began in 1920. In that year, urban population finally surpassed the rural population. Since then, widespread suburbanization became the dominant factor in regional development. In this phase, entire urbanized areas, rather than only cities themselves, expanded continuously. As a result, the metropolitan areas, characterized by the integration of

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several adjacent urban areas and suburbs, became the major form of urban developments. We can define this stage as "metropolitanization", a process that corresponded to the transformation of the United States from an industrial and urbanized society to a post-industrial and "metropolitanized" society.

In 1940, almost half of the US population lived in the metropolitan areas, which indicates that the US had become a metropolitan nation. Furthermore, in 1990, more than half of the US population lived in metropolitan areas with over one million people, which suggests that megapolitan areas had become the dominant form of metropolitanization.

This stage, the redevelopment based on the "conventional urbanization" but with its distinctive characteristics, can also be described as Neo-urbanization. We can summarize these characteristics as follows: (1). Evolution of cities to metropolitan areas; (2). Transformation of monocentric model to multi-polar or polycentric structure; (3). Rapid development of suburbs and further integration of suburbs into central cities. Such phenomenon also happened in other economically advanced countries since the mid-20th century. Throughout Western Europe, North America and beyond, metropolitan regions are becoming the predominant mode of human settlement.

In the US, the San Francisco Bay Area, like the regions of Los Angeles, Phoenix and Houston, is commonly portrayed as one of America's most pronounced polycentric metropolitan regions. So it can be regarded as an excellent case for comparative regional studies.

1.2 Similarities between San Francisco and Xiamen invite comparisons

On China side, one of the most ideal regions for comparative studies with the Bay Area is Southern Fujian Province along China's southeast coast (also called Minnan Golden Triangle Region or Minnan Delta area). Both areas show potentially significant value for research because of their similarities in a number of aspects. These similarities can be summarized as follows:

Table 1: General comparison between SF Bay Area and Southern Fujian Area

	SF Bay Area (CMSA)	Southern Fujian area
Topography	Port, mountain, valley, natural beauty	Port, mountain, plain, natural beauty
Population	7.06 million	16.77 million
Location	American Pacific coastal area, moderate distances between LA and Seattle	Southeast Coast of China, moderate distances between Yantze River Delta and Pearl River Delta
Size	7,179 mi ² (18,670 km ²)	9,713 mi ² (25,300 km ²)
Central cities	SF 0.74 million (Metropolitan area 1.87million) San Jose 0.90 million (Metropolitan area 1.68 million) Oakland 0.40 million (Metropolitan area 2.39 million)	Xiamen 3.67million (Administrative area 3.67million) Quanzhou 0.93million (Administrative area 8.29million) Zhangzhou 0.51million (Administrative area 4.81million)

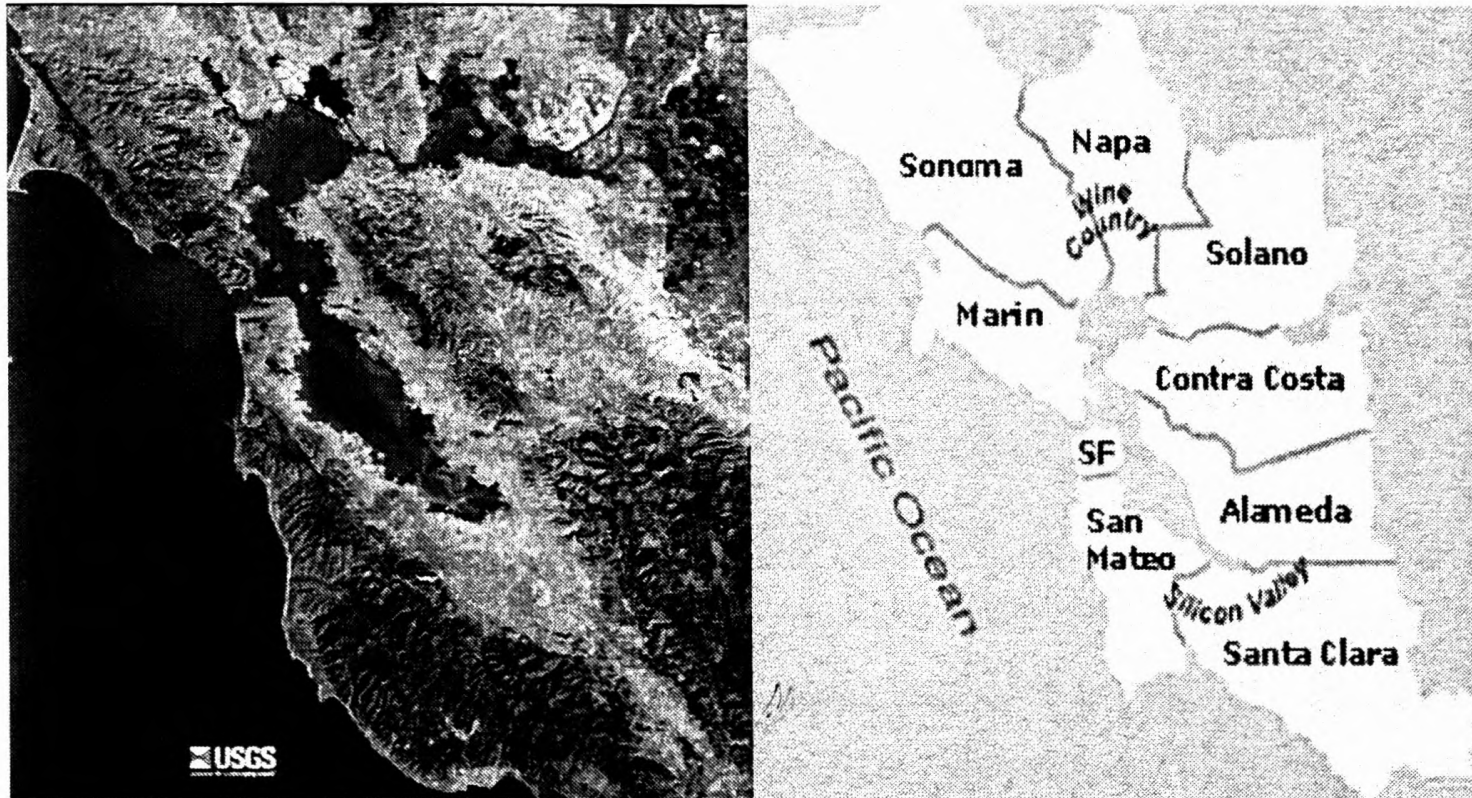


Fig.1: Basic information of San Francisco Bay Area
 Source: author

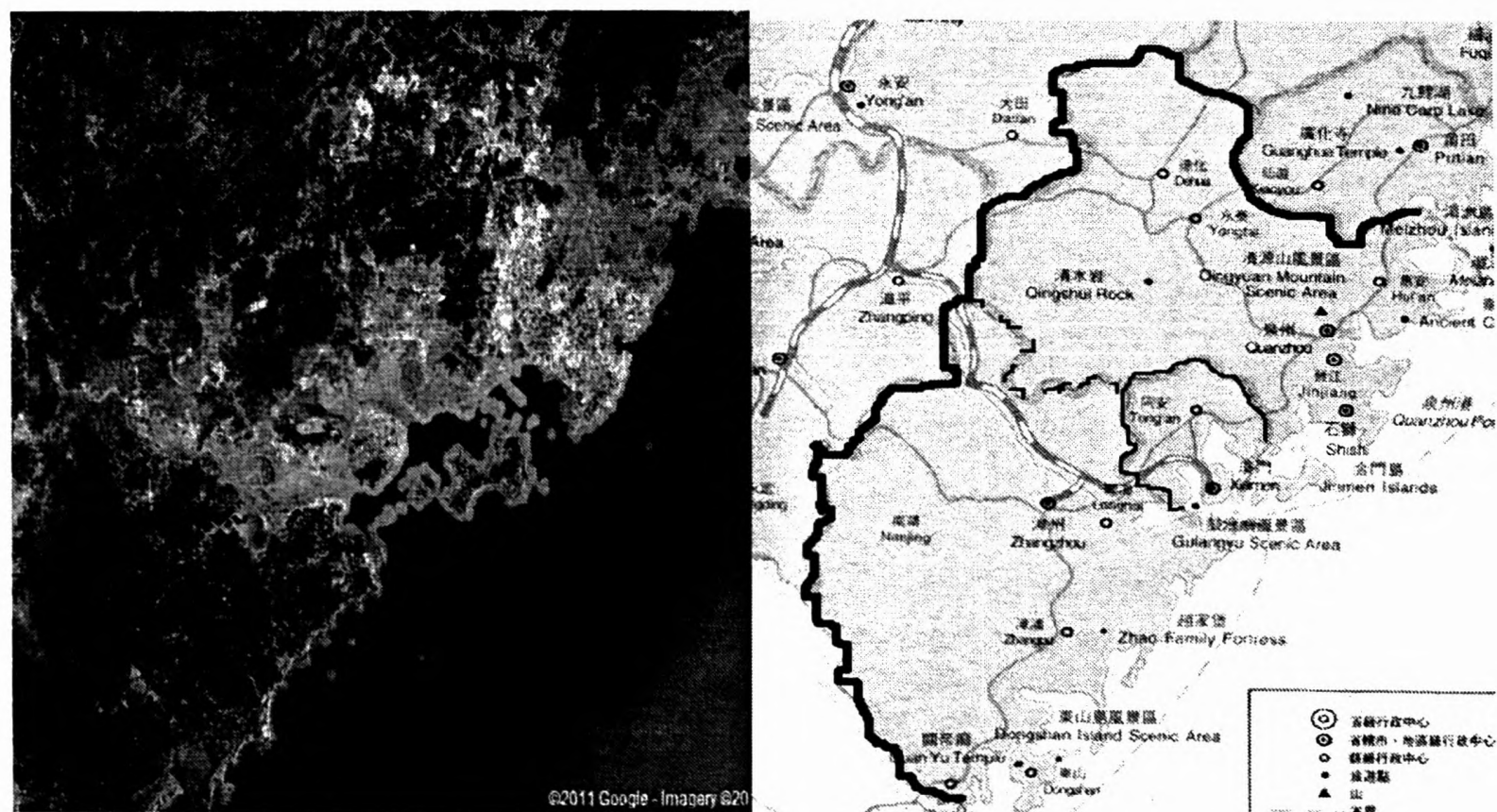


Fig.2: Basic information of Southern Fujian area
 Source: author

From above comparison, we can see that the Bay Area and Southern Fujian area have many similarities: (1) their natural beauty and relative plentiful natural resources; (2) their ideal locations to develop metropolitan areas in respective countries; (3) their spatial structures with multiple centers, typically led by three central cities in each case.

The Bay Area is renowned for its natural beauty, liberal politics, affluence, diversity, and new age reputation. Like the Bay Area, Southern Fujian has also many natural and situational assets. The area is the most urbanized area in Fujian Province, and almost ready for metropolitan development. Both cities and regions have the same locational advantages: While the Bay Area is located along the Pacific coast, between Los Angeles and Pacific Northwest, Southern

Fujian is situated between Yangtze River Delta and Pearl River Delta. Such locations are ideal to develop metropolitan areas or urban agglomerations according to the "central place" theory.

To be sure, in terms of economy, urbanization level and international reputation, the Southern Fujian area is far behind the Bay Area. However, the similarities described above can provide us some valuable bases for comparative studies. Since the Bay Area has been fully developed and entered a mature stage of metropolitanization, its experiences can provide Southern Fujian with valuable lessons. This invites comparative studies of the Bay Area and the Southern Fujian area with a focus on the spatial structure of the regions under scrutiny.

1.3 Expected Questions from this comparative study

Four questions are relevant and even essential for analyzing metropolitanization in the Bay Area and its implication for Southern Fujian area:

- (1) What is the spatial structure in the Bay Area like? Does Southern Fujian area display a similar spatial pattern or structure?
- (2) What are the major advantages of multi-polar structure? What is the reasonable hierarchy of cities among such port cities as the Bay Area and what constitutes the best percentage of leading cities in the area?
- (3) How does San Francisco strengthen its primate position facing the challenge from San Jose? What are Xiamen's major shortcomings in this regard?
- (4) How should we solve above problem: regional planning or urban planning? How should we identify the specialty of each central city in Southern Fujian area?

2. Similarities and differences of the cities and regions

2.1 Comparison of the regions

In this paper, we will focus on comparing cities and metropolitan regions in both cases. The definitions of these concepts are, however, by no means unambiguous. The China Bureau of Statistics employed a system of city-leading-counties to define the so-called urban areas covering a number of highly interrelated municipalities and rural areas. According to this system, cities are divided into two categories: (1) sub-provincial level city or prefecture-level city and (2) county-level city. The spatial boundary of a sub-provincial level city or prefecture-level city includes its city districts, and a number of counties and county-level cities. In this case we call them administrative areas, which seem like metropolitan areas in the US but those administrative areas do not necessarily correspond to the functional metropolitan areas in the US. Under this system, suburbs are usually rural settlements, with nodes or population clusters composed of some county-level cities and small towns in which county governments are seated. Generally, the higher level a city is, the greater its population, administrative power, political clout, and economic development.

Spatial differences between San Francisco Bay Area and Southern Fujian area can be summarized as follows:

The Bay Area, formally termed San Francisco-Oakland-San Jose CMSA by the US Bureau of the Census, houses about 7.06 million people within 9 counties. They live in a large number of mainly medium size cities and an even larger number of smaller towns and villages. At 2010,

the region included 12 suburban cities with more than 100,000 inhabitants; 81 suburban cities in the range 10,000-100,000; The most populous cities are San Jose (964,695), San Francisco (815,358), the Oakland (409,184), they were identified by the Census as central cities in the Bay Area CMSA. Distance between them is moderate: 11.5 miles (18.4 km) between San Francisco and Oakland; 48 miles (76.8 km) between San Francisco and San Jose. The co-presence of three central cities and some sub-centers and smaller centers gives the Bay Area its typical polycentric appearance. The whole area is connected by a massive network of roads, highways, rail, and commuter rail, including Bay Area Rapid Transit system (BART).

In the Southern Fujian area there are very fertile land and rich natural resources, so it is entitled as "Golden Triangle Region". As one of the fastest growing urban regions in China with a total population of 16.77 million, the Southern Fujian area includes the jurisdictions of 3 leading cities(functioning like the central cities in the US) and 3 county-level cities and 19 statutory towns in the range 10,000-100,000; The leading cities are Xiamen (sub-provincial-level), Quanzhou(prefecture-level), the Zhangzhou(prefecture-level), which form the "Big Three" in the region and they share something in common both historically and culturally, which is called "Minnan Culture". Its influence even extended to Taiwan, for most of Taiwanese speak the Minnan dialect. These leading urban centers are relative close spatially to one another: 38 miles (60.8 km) between Xiamen and Zhangzhou, 63 miles (100.8km) between Xiamen and Quanzhou. Southern Fujian area is 695 nautical miles (1112.0 km) south of Shanghai, 287 nautical miles (459.2 km) north of Hong Kong.

The region is integrated geographically which theoretically will lead eventually to economic integration. Unfortunately regional disparities are evident. The population density of 600 inh./km² in this area is well above Bay Area (312 inh./km²). In such a densely populated society, the development of major urban centers and the surrounding municipalities should be highly interdependent, just like the Bay Area, but the opposite is true in reality. As a consequence of its size and relatively large population, the Southern Fujian area's population is to a large extent concentrated in a few urban agglomerations, not evenly among its cities and towns. Besides, the rural communities in the Southern Fujian area lagged far behind compared to that of the Bay Area.

2.2 Comparison of the cities: Xiamen's situation and shortcomings

Xiamen, also known as Amoy among westerners, is a coastal city in southeastern China. It is administered as a sub-provincial city under Fujian province. Xiamen covers an area of 1,565 km² with a total population of 3.67million. Xiamen has a subtropical oceanic monsoon climate, which is temperate, neither severely cold in winter nor intensely hot in summer. It has been ranked as China's second "most suitable city for living", and was recently voted China's cleanest city. Xiamen and its surrounding countryside provide spectacular scenery and pleasant tree-lined beaches, which are attractive to the tourist.

Xiamen was founded in the third century AD and has longstanding ties to Taiwan. The city was also an unofficial trading depot, conducting a thriving under-the-counter business in silks with the Portuguese, Spanish and Dutch, until the conclusion of the first Opium War in 1841 and opened it up as a full Treaty Port. Since 1949, the city has been important for coastal defense because it faces Taiwan across the Taiwan Strait. Xiamen's economy took off in 1981 when it became one of China's earliest Special Economic Zones. From 1981 onward, as an economic powerhouse of the region, the city entered the fastest period of development in its history, increasing its population in an extraordinary way during the 1990s and 2000s.

In recent years, Xiamen has usually ranked among the top ten Chinese cities in relation to comprehensive strengths with its GDP increasing by an average of over 15% annually. In 2010, the city's GDP amounted to 205 billion Yuan, an increase of 15.1% over the previous year, and the per-capita GDP was 80,392 Yuan (US\$11,822). The major industries include electronics, pharmaceuticals, chemical industries, telecommunications and financial services. Xiamen harbor is naturally deep, giving it an edge in foreign trade. Finally, Xiamen is the host of the China International Fair for Investment and Trade held annually in early September to attract foreign direct investment into the Chinese mainland.

2.3 Comparison of the cities: SF's competitiveness and references for Xiamen

San Francisco is relatively small, too, smaller than San Jose in terms of total population. However, San Francisco's primate position in the metropolitan area is solid and will not be replaced by the latter in the near future. As the only consolidated city-county in California, it encompasses a land area of 46.7 mi² (121km²) on the northern end of the San Francisco Peninsula, giving it a density of 17,323 people/mi² (6,688 people/km²). It is the second-most densely populated large city in the United States.

The legacy of the California Gold Rush turned San Francisco into the principal banking and finance center of the West Coast in the early twentieth century. In ensuing years of the Second World War, the city solidified its standing as a financial capital. Urban planning projects in the 1950s and 1960s involved widespread destruction and redevelopment of west side neighborhoods and the construction of new freeways. In the 1980s the Manhattanization of San Francisco saw extensive high-rise development downtown. Port activity moved to Oakland, the city began to lose industrial jobs, and San Francisco began to turn to tourism as the most important segment of its economy. San Francisco attracts the third-highest number of foreign tourists of any city in the U.S. and is also among the top-ten North American destinations for conventions and conferences.

During the dot-com boom of the late 1990s, startup companies invigorated the economy. Large numbers of entrepreneurs and computer application developers moved into the city. High technology and entrepreneurship became mainstays of the San Francisco economy. With over 30 international financial institutions, seven Fortune 500 companies, and a large support infrastructure of professional services also with significant presence in the city. Besides as the financial, cultural, and transportation center of the Bay Area, San Francisco has also been positioning itself as a biotechnology and biomedical hub and research center. As of 2010, there were 1,800 full-time biochemists and biophysicists employed in San Francisco. San Francisco is at the cutting edge of global technology, and is a leader in many key indicators of regional, global and national competitiveness. One study predicts that "if the nine-county Bay Area were a country, its \$437 billion economy would be the world's 10th largest, behind Canada but ahead of Brazil."

The city of San Francisco is currently home to less than 11 percent of the Bay region's 7.06 million people. The Bay Area today is really composed of several different areas, each with its own character. The East Bay is the most varied, with a mix of college students, large tracts occupied by middle-class residents, and most of the port facilities and heavy industry of the region. The San Jose-South Bay area is upper middle class, with new houses, fine yards, and major regional shopping centers. Along the Bay north of San Jose is the world-famous Silicon Valley. North of the Golden Gate Bridge, the cities are smaller, there is little manufacturing. The city of San Francisco itself maintains a special appeal. Unlike Los Angeles, the existence of a major urban center in the Bay Area is not surprising. Its excellent harbor and good climate are

important site factors. By volume, it is the major Pacific port in North America.

Generally speaking, the position of primate city will be downgraded due to the quicker growth of the metropolitan area. Indeed, since the 1950s the suburbs experienced rapid growth, and San Francisco underwent significant demographic change, as large segments of the white population left the city, supplanted by an increasing wave of immigration from Asia and Latin America. More challenges came from the emergence of Oakland and San Jose. In 1950s, Oakland worked out an aggressive Urban Renewal Plan, aiming to replace San Francisco as the biggest and primate city in northern California. Then, by taking the advantages of high-tech revolution initiated at the Silicon Valley, San Jose became a real challenger, since its land area enlarged from small piece to 355 km², and population 7.0 million in 1980, and in 1990, 7.8 million, surpassed San Francisco, became the 11th biggest cities in the US. Then, about 9.0 million residents were counted in the 2000 census. Its position in Silicon Valley triggered more economic and population growth. As the largest city in the valley in terms of both land area and population, San Jose has billed itself "the capital of Silicon Valley."

The Bay Area, based on San Francisco metropolitan area, experienced continuous metropolitanization. At the end of WWII, its population was 2.68 million, then the metropolitan area expanded to include Oakland during a high-tech revolution in 1960s. Again, in 1980, San Jose metropolitan was taken as part of the Bay Area Consolidated Metropolitan Statistical Area, which contained population of 5.36 million, and approached 7.09 million in 2000. The Bay Area is anchored by three major cities in a smooth way. San Francisco is the cultural and financial center of the metropolitan area and Northern California. Oakland, the third most populous city, is a central hub for the East Bay, major industrial center and contains the Port of Oakland, the fifth busiest container port in the United States. Nonetheless, the primacy position of San Francisco is stable, coexisted with San Jose and Oakland which play supportive roles in the economy of the Bay Area.

Although San Francisco can keep its primate position in the Bay Area in terms of economy and city hierarchy, it faces other challenges. First of all, hemmed into its small peninsula, the city does not have more space to develop. The current San Francisco population is almost the same as 1950s, half a century ago while the entire urban area grows. It seems that the population will be stable within a certain range, once the city's economy enters a period of mature growth. For example, only for a decade during 1990-2000, the Bay Area saw population growth rate of 12.6%, from 6.25 million to 7.04million.

Another problem San Francisco has to deal with is political fragmentation. The Bay Area is presently divided between about 101 municipalities and 9 counties. Call for the establishment of a fully-fledged metropolitan authority for the Bay Area has been on several occasions. However, such a large-scale reconstruction has proved impossible and probably will continue to be so for a while. Fragmentation is therefore still the key word in describing the administrative landscape of the Bay Area, although local and regional actors increasingly seem to open up to different forms of cooperation in order to get things done—or at least discussed. One of the most promising organizations is the Association of Bay Area Governments (ABAG), founded in 1961. ABAG continued for some years to lobby without success for bills that would give it statutory authority in an incremental fashion. The organization was, nevertheless, shaping regional development by initiating some regional plans and getting federal assistance. This organization is still the largest one in the Bay Area today. The great challenge to the Bay Area has been to move beyond separate area wide agencies and a voluntary council of governments to some coherent way of addressing regional issues and problems, which become increasingly interrelated and suggestive of coordinated resolution.

3. Discussion

3.1 In recent years, China's urbanization accelerated, the annual growth rate even as high as 1.36% since 2000. In 2012, urbanization rate reached 52.6%, with urban population of 711.8 million, approaching the turning point from the first stage to second stage, the metropolitanization. The urbanization rates for Xiamen, Quanzhou and Zhangzhou are 80.7%, 60.4% and 51.2% respectively. Taken as a whole, this area are well qualified for entering the new stage. At this critical stage, it has become more necessary to obtain some frame of reference from other advanced countries. Unlike the situation of the Bay Area where there are various size of cities coexisted and contributing to the regional growth collectively, in the case of Southern Fujian, people continue to concentrate much more in and around leading cities or jurisdiction of the cities and less in outer or rural areas, and suburbs still means rural areas, not any middle or small-sized cities. As a result, there are marked differences between central cities and suburbs in terms of population distribution and regional growth speed in Southern Fujian and the Bay Area.

In fact, in the Southern Fujian area, there are many advantages for urban development, such as: (1) the existence of three leading cities, which, as multiple polar, provide an ideal base for relatively easy transition from traditional urbanization to metropolitanization,. The condition we find in the Southern Fujian area is far better than the monopolar region like Fuzhou for purpose of metropolitanization. (2) The population density has been 600/km²(in the Bay Area,312/km²), which make the shaping of concentration as cities or towns more necessary, and relatively easier.

3.2 Compared with San Francisco and based on its unique advantages, Xiamen can certainly be defined as the primate city for the Southern Fujian area. But how should we strengthen Xiamen's position as the primate city has been a difficult issue for Xiamen to solve. While as a sub-provincial city, Xiamen has a smaller population available to fully form an agglomeration economy than any of the other regional centers in China. The most serious challenge to Xiamen's status comes from Quanzhou, which does not want to be second or remain as one part of the proposed Xiamen Metro forever. It claims itself as an independent metropolitan area in many occasions, and plan to establish such metro within half an hour driving distance. Quanzhou acted so aggressively is that, as we previously noted in table 1, the three leading cities differ considerable in size.

Quanzhou's administrative area contains two county-level cities and six counties, with an area of 11,000 km² and a population of 8.29 million, while Xiamen administrative area is only 1,565 km² with population of 3.67 million, without any affiliated county (only 1 county had affiliated to Xiamen but was merged by it in 1997). The third-largest economy among cities at the prefecture level in Fujian, Quanzhou city has focused on how to raise its economic profile and enhance its role in forming the Southern Fujian Golden Triangle. It intends to create a "half-hour urban ring". that is, an area within a half hour's drive from the center of the city. Even Zhangzhou, the third leading city, contains an area of 12,600 km² and populations of 4.81 million, much larger than Xiamen, too. It plans to urbanize by creating a "half-hour ecological ring". Neither city, however, seems to have devised strategies to reform their policies on population mobility or to create nonfarm jobs for city-bound farmers. With limited spaces and narrow hinterland, it is hard for Xiamen to seek further expansion.

Quanzhou is reluctant to cooperate with Xiamen on many issues, including metropolitan development. Consequently, there are duplication of the economic sectors and infrastructures, such as airports and port facilities, among the three cities. Competition comes not only from

Quanzhou, but also from Fuzhou, the capital city of Fujian Province. Some scholars even claim that there should be three urban agglomerations in Fujian Province: Fuzhou, Quanzhou and Xiamen, if putting into practice, the result will be more divided metropolitan areas.

Recently, there appeared Three City Alliance initiated by Xiamen municipal government, based on common needs and interests, which can be regarded a kind of cooperation, rather than structural reorganization. However, this has not resulted in anything like a consensus or not has it received any positive responses from the concerned governments. The idea of a Three City Alliance applies only to the three cities, not the whole region in which the cities find themselves. Each leading city has devoted too much effort in developing its own master plan, rather than formulating a comprehensive plan for the entire region, in which Xiamen is only a part. The regional development planners are seeking to form a greater metropolitan area. In July of 2010, the provincial government issue Urban Agglomerations of West Coast of Taiwan Strait(2008-2020). This scheme is another example of China's move toward regional development based on comparative advantages and agglomerations. To date, however, the formation of the Golden Triangle has hardly begun and little physical coordination has taken place among the three cities. Cities tend to take a wait-and-see approach, letting others make the first move in the game of maximizing their own benefit.

A healthy and vibrant city should have a variety of economic activities. Such diversity allows a city to adapt to new circumstances created by shifting economic trends and cycles. A diverse economy provides businesses and residents with the goods and services they need to thrive. Unfortunately, challenges come not only from outside but from within. Xiamen is ill-equipped to deal with regional and growth problems, mainly because its economy relies too much on manufacturing. Since the adoption of the Open Door in the late 1970s, the importance of manufacturing has been emphasized repeatedly as the key sector for GDP growth. From table 4 we can see that since 1990s, secondary industry (mainly manufacturing) accounts for around 50% of the economy, which makes up less than half in tertiary industry. So it is our judgment that Xiamen has not developed a sound economic structure to qualify the city of Xiamen as a primate city. By contrast, though its importance as a shipping and manufacturing center has declined, San Francisco has remained a leading financial and business center. By the 1990s the largest proportion of the city's workforce was classified as service sector, accounting for 88.5 percent of the total and embracing a wide variety of occupations.

Table 2: Xiamen's economic structure

	Primary industry	Secondary industry	Tertiary industry
1991	9.0%	46.4%	44.6%
1995	6.3%	52.2%	41.6%
2000	4.2%	52.8%	43.0%
2004	2.3%	59.3%	38.4%
2010	1.1%	50.0%	48.9%

Resources: Xiamen Municipal Statistic Bureau, *Bulletin of Economic and Social Development Statistics of Xiamen in 1992,1996,2005,2010* respectively, 2011-03-24, <http://www.tjcn.org/tjgb/201103/18847.html>. The population density in Xiamen has become pretty high. The major part of Xiamen is an island of 133 km², with a population of 1.93 million and a population density of 14761/km²,¹³⁶ compared with San Francisco 6,688/km². San Francisco has not grown since it reached this

¹³⁶ Xiamen's population reach 3.67million, higher density than Hang Kong and Singapore, http://news.xmnn.cn/a/xmxw/201306/t20130607_3359605.htm.

density in 1950s, which can be regarded as its peak point. So Xiamen really does not have much space to grow, outward development is an inevitable trend at this moment. Many Chinese scholars claim that it is necessary for China to develop compact cities, with density of 10,000/km, measured by this standard, Xiamen has been too crowded.

3.3 The existence of a dual system between urban and rural areas has resulted in the former taking advantages of the latter in the process of urbanization once conflict emerges in regional development, leading to the continued presence of the urban-rural development gap in Southern Fujian area. It is still a common phenomenon in China today. One basic reason for the continued presence of the urban-rural development gap in Southern Fujian area is the concentration of administrative power and authority in the central cities, under the system of city-leading-counties, ignoring the need of counties affiliated with nearby cities and municipalities. Leading cities treat the led counties as their backyards and intervene in their planning, production, circulation, and consumption activities. The leading city government utilizes the power and authority invested in it by the regional administrative system to impose its own interests on others within its spatial boundaries. The Chinese phrase "city-extorting-counties" (shiguanxian) aptly captures the essence of the system of city-leading-counties.

Such a phenomenon clearly reveals the continued application of the prevailing administrative practices in China, which has given rise to further spatial fragmentation among prefecture-level cities. Although roads and other physical connections in Southern Fujian area have been established, economic interactions and connections between three leading cities are constrained by administrative parameters.

3.4 The comparison between the spatial settlements of the Southern Fujian and the Bay Area illustrates differences in the spatial integration. The Southern Fujian's pattern of multi-polar structure and political fragmentation share common characteristics with Bay Area but with different causes and consequences. In the Bay area, three main poles – San Francisco, San Jose and Oakland – are tightly linked by a network of bridges and highways. By contrast, in the Southern Fujian area the three main poles-Xiamen, Quanzhou and Zhangzhou- are loosely connected, even separated. And compared to Bay Area, the density of Southern Fujian's central cities is overall much higher, and the administrative sphere is much larger relative to their counterparts in the Bay Area.

. Conclusion

Since Southern Fujian area has approached the stage of metropolitanization, we can expect important changes to occur in the near future.

4.1 For a city like Xiamen, one that is ready for the stage of metropolitanization, a new definition for metropolitan area or some other term should be worked out to identify the new urbanized area and provide more accurate description for policy decision.

4.2 A governance structure that would integrate the needs of the city and the region, i.e., regional government instead of the separate municipalities that we now possess, will be necessary and feasible. The structure of two tiers seems more practical both in the US and China. Urban alliance tried in Southern Fujian area only concern with some special or temporary issues, not enough to solve such problems. Given its position at the beginning of the metropolitanization stage, the Southern Fujian area needs to strengthen the economic integration between its various parts, especially among its three leading cities.

4.3 In China, initial efforts have recently been made to replace the city-leading-county system with province-leading-county system. The proposed province-leading-county system is designed to avoid the adverse consequence of the city-leading-county system, achieved balanced growth between cities and affiliated counties, and ultimately result in the development of more urban agglomerations. We believe that it is important to adjust the relationship of three leading cities, by reforming local governments system, especially the relationship between counties and municipalities. One of the main challenges in governing such area is the achievement of a high degree of coordination among these multiple jurisdictions.

4.4 The position of Xiamen as a primate city in the area should be recognized and strengthened accordingly. At present, Xiamen needs to reform its economic structure, raising the proportion of tertiary sector (especially the FIRE) and reducing the proportion of the manufacturing sector. Moreover, Xiamen needs to reform its economic structure in the entire metropolitan area, instead of confining the reform to the city proper.

4.5 We need to develop some kind of strategic plan or blueprint for the development of suburban areas, which is inevitable in the near future. In fact, the development of suburban areas will necessitate regional planning as a function of regional government. We should pay more attention to the creation of the metropolitan interlocking regions, in the form of some activities nodes.

It should be noted that today's condition for Xiamen is much advanced than that of San Francisco at similar developing stage. There have been substantial improvement and modernization in basic economic infrastructure, communication, and transportation, which manifest themselves in the network of expressways, high-speed railroads, as well as internet connections among the cities and hinterlands. Therefore, we can expect to see the acceleration of the pace of metropolitanization in the case of Xiamen and the Southern Fujian area. We may want be mentally prepared for this accelerated pace of growth.

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