Creation of the Regional Growth Strategies based on the International Benchmarking: A Case Study on Fukuoka as a Regional Hub City in Japan

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Abstract

Japan has been struggling with extreme population and economic concentration to Tokyo, the capital city of Japan. This phenomenon is not only unique to Japan but also to the emerging Asian countries, causing serious social issues. Meanwhile, regional parts of Japan are facing aging and population decrease. Regions are situated to create strategies to enhance their function as regional hubs to attract talents as well as investments from global point of view. International benchmarking could be a useful method to implement the regional strategy. Fukuoka, as one of the Japanese regional hub cities, is not eligible to benchmark top-class world cities such as Tokyo, New York, and London. Population of Fukuoka City Region is only 2.5 million while Tokyo Metropolitan

Region is populated over 35 million as the largest urban area in the world. Fukuoka is not a capital city either. Fukuoka should benchmark cities recognized as world cities which are similar in scale and properties with Fukuoka. Comparative analysis of Fukuoka with non-capital cities around the world such as Seattle, Vancouver, Melbourne, Munich, and Barcelona has been conducted in this research. 64 performance indicators composing the Quality of Life and the Urban Growth of each city have been compared and converted into scores. The scores reveal that Fukuoka has a similar performance to other benchmark cities in the Quality of Life, although it has a certain amount of shortage in the Urban Growth. Based on the score analysis, indicators showing Fukuoka' s weaknesses have been specified. Policies to promote the weak indicators would be the effective strategies to sustainably enhance Fukuoka' s growth, based on the international benchmarking.
Keywords: Regional Growth Strategy, International Benchmarking, Japanese Regional Hub City, Fukuoka, Performance Indicator

Introduction

According to the national census in 2015, the population of Fukuoka city recorded the largest increase of 74,767 people among ordinance-designated cities. The population growth rate in 5 years is 5.1%, also exceeding 3.7% in 23 wards of Tokyo. During this time, the number of foreign residents in Fukuoka city has increased by 5,167 people. 7% of population growth is attributed to foreigners. The population of Fukuoka city has been increasing for some time, but until FY2010, the ecomomic growth rate in Fukuoka city was less than the ecomomic growth rate of the whole country. However, since FY2011, the ecomomic growth rate in Fukuoka city has become higher than the national growth rate. Real GDP in Fukuoka city increased by 7.2% from FY2010 to

FY2012, both increase and increase rate being the second largest among the ordinance-designated cities.

Among the major cities in Japan, there is no doubt that Fukuoka city has an advantage. On the other hand, when seeing Fukuoka city from a global perspective, its advantage is not certain. In Japan, since the 1980s, emphasis has been placed on the global city strategy of the capital Tokyo by benchmarking New York and London, through national-led economic policies and infrastructure development.[1] Meanwhile, local cities have only been positioned and rolled in the domestic or regional areas. Therefore, Japanese regional cities have been left behind from the global inter-city competition.

According to the United Nations, the world population will continue to increase, and in Asia it is projected to increase by 700 million by 2040. With the expansion of the world market and the economic development in Asia, further increases in labor force, financial capital, and information flow across the border are inevitable. The wave of globalization that will push Fukuoka located in the forefront of Asia in Japan will be particularly high. The rapid increase in the number of calls by cruise ships at Hakata Port can be read as its precursor phenomenon.

Even in cities in rural areas of Japan, measures must be taken to sustainably develop the whole region while incorporating global vitality. In this paper, Fukuoka city and metropolitan area will be observed from a global perspective, and policy issues will be studied while clarifying Fukuoka' s global position.[2]

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1) Economic Planning Agency Integrated Planning Bureau " Wold City Tokyo and Revitalization of the Region" Ministry of Finance Printing Bureau, 1989 etc.

1. From specific world cities to diverse global cities

Since the 1980s, the global space with the borderless flow of human beings, goods, money, and information across national borders has expanded, and the global expansion of multinational corporations has greatly advanced. In certain cities where the head offices and branches of these companies concentrate, economic accumulation and infrastructure development had accelerated, and the position has emerged as a global city in the global space. Friedmann defined Tokyo as Primary World City with New York and London in the World City Hypothesis[3], and demonstrated the hierarchy between global cities in global space. Since then, empirical research has advanced on corporate concentration in global cities, networks with other cities, internal structure of cities, social problems, and so on. However, cities in Japan other than Tokyo have hardly been subjected to global city research.

After the so-called bubble period in the late 1980s to the early 1990s, the global city strategy of Tokyo has been suspended. However, in the 2000s the strategy breathed out with the goal of improving international competitiveness of Tokyo under the key world of "Toshisaisei = urban revitalization" of the city center. Since then, as a tool to benchmark the global position of Tokyo, the national government and the Tokyo metropolitan government have made use of the global city index that evaluates cities around the world.[4]

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[2] This paper is based on the research results of Fukuoka Asian Urban Research Center FY2014 comprehensive research "Research on international competitiveness of Fukuoka ~ Comparative analysis of 6 non-capital cities participating in IRBC ~". Data and sources are cited from the research report "Cities on the "Third Axis".

[3] Friedmann, J. 'The World City Hypothesis,' Development and Change, Vol.17, pp.69-83, 1986.

Many of the global city indices have been created by agencies based on private enterprises, and there are strong aspects of evaluating cities from the business point of view. They are evaluating cities by adopting various indicators that are derived from multinational enterprises and advanced service industries that have been heavily adopted in hierarchical analysis of "world cities". However, besides these, city indices are characterized by adopting items such as quality of life, culture, and innovation, enhancing the diversity of the evaluation index. In such circumstances, cities that have not been evaluated as global cities until now have also appeared in the global city rankings. Fukuoka is also one of these cities.

2. Position of Fukuoka city and metropolitan area as a global city[5)]

Currently, there are more than 100 indices in the world evaluating the cities and countries. However, among these, there are a few that rank the global cities by evaluating indicators in diverse fields. The reason is that acquisition and analysis of various types of index data in global cities across multinational cities is extremely difficult. In this paper, about 100 cities are selected as "Cities that have been evaluated as global cities" in Figure 1 that are rated at a certain rank or higher in the four global city indices circulating around the world.[6)]

Half of these cities are occupied by the capitals. In addition, there are old

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4) For example, in the Ministry of Land, Infrastructure and Transport Government National Land Policy Review Committee (December 2010), PricewaterhouseCoopers "Cities of Opportunity" and Mori Memorial Foundation Institute for Urban Strategies "Global Power City Index" are used as study materials to create the "Metropolitan Area Srategy."

5) Global Cities used in this paper indicate cities that are listed as Global City in the world's city rankings and are essentially different from the Global City defined by Saskia Sassen.

6) Cities that are ranked in Global Power City Index 2013, Global Cities Survey 2013, Global Cities Index 2014, Global Cities Competitiveness Index 2012 (Top 2/3 cities).

capital cities which relocated only political function to other cities and remaining their function as economic capitals. It is a natural result that these cities, in which the main central functions of the country concentrate and the highest priority in urban development is set, have certain advantages as global cities

Meanwhile, the remaining 37 cities are not the capital city or the economic capital but they are gaining recognition as global cities Among these cities, there is a strong presence of so-called mega-cities. Mega-city means a giant city with a population concentration of over 10 million, mainly in emerging countries in addition to Los Angeles and Chicago in the US. According to the "world city theory," many of the mega-cities have been formed triggered by the concentration of the branches and factories of the multinational companies, therefore, many of them have gained a certain evaluation as global city. Based on this, in this paper, cities are categorized into the capital cities and the economic capitals, cities with populated over 5 million approaching the mega-city, and the rest of the cities. As a result, 16 cities including Fukuoka proved to have close attributes. These cities are cities recognized as global cities although they are cities that do not receive priority investment as the capital and economic capital of the nation and are low in economic merit of the mega-cities. It is possible to create a ranking limited to these cities with the same attribute and explore Fukuoka's position. However, it is not necessarily appropriate to discuss the superiorities of cities in ranking order.[7] In this paper, attributes will be narrow down with Fukuoka for more effective benchmarking.

"Advanced global cities" with certain advanced international functions are

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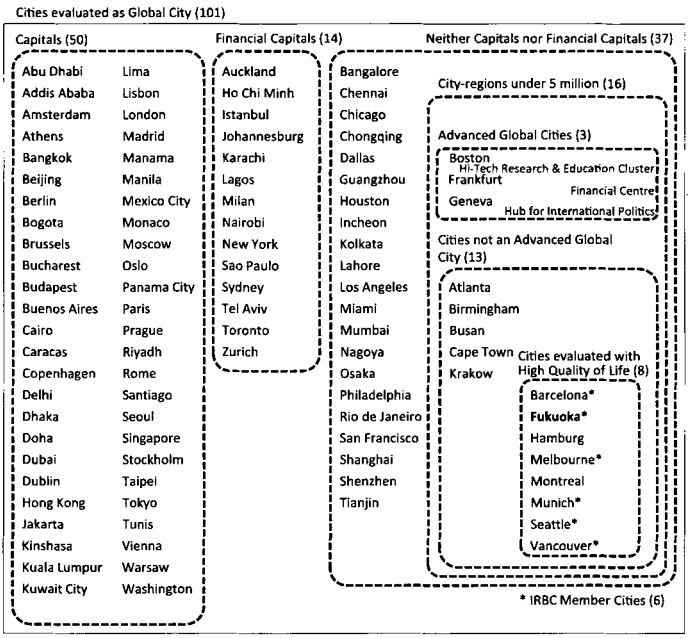
[7] While there are cases where many cities are ranked by a slight score difference, the score may be far apart in some cases even if there is one rank difference.

excluded from the 16 cities. Furthermore, cities with high international evaluation of Quality of Life are selected from the remaining cities. Finally, Barcelona, Hamburg, Melbourne, Montreal, Munich, Seattle, and Vancouver have been listed with Fukuoka.[8)]

In this paper, 6 cities participating the IRBC (International Regions Benchmarking Consortium) together with Fukuoka City will be targeted as similar global cities among these 8 cities. In addition, these cities are selected

Figure 1. Cities evaluated as Global City



Source: Fukuoka Asian Urban Research Center (2015) *Cities on the "Third Axis"*, p.11.

8) The Fukuoka Asian Urban Research Center defines these cities on the "third axis," global cities that are neither capital city nor mega-city.

neither Primary World City nor Secondary World City in Friedmann's "World City Hypothesis."[9)]

3. Population size of 6 cities

In the previous chapter, the similarities of the six cities had been discussed. Here, the population size of the six cities are compared in Figure 2. All these six cities constitute a metropolitan area surrounding the central city. The population size of the central city varies by several times depending on the city, however it can be seen that the population size of the metropolitan area is close to each other. In addition, there are large variations in the area of the metropolitan area, but factors such as the difference in delineation of the boundary line are large. For example, vast natural greenery is included in the Seattle metropolitan area.

In the city indices that have been given in the previous chapter, comparative evaluation has been conducted with cities of different sizes of population mixed. A city with a large population size has a large economic scale. Therefore, the size of the population/economy scale is included in the evaluation factor of the indices. From the viewpoint of ranking cities, it may not be wrong. However, in creating urban policies from the results of the ranking, the disparity in the size of the city is an unlikely factor. In this paper, from the viewpoint of creating urban policies, it is meaningful to compare and evaluate cities of similar population size at the metropolitan area level.

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9) According to Friedmann, J. 'Where we stand: a decade of world city research.' In *World Cities in a World System*, pp. 21 - 47, 1995, Seattle, Vancouver, Barcelona, and Munich are listed on the fourth layer of the World Cities as "Subnational / regional articulations."

Figure 2. Comparison of the 6 cities

Source: Fukuoka Asian Urban Research Center (2015) *Cities on the "Third Axis"*, p.14.

4. Evaluation indicator setting and evaluation method

Friedmann set the hierarchy of world cities as "hypothesis" by evaluating the degree of the integration of the head offices and branches of multinational companies as an indicator. In fact, along with the accumulation of affiliated companies and labor force linked to the entry of multinational corporations, infrastructure development such as international airports, highways, and railroad networks has progressed in a way that satisfies the needs of multinational corporations. This is a substantial evaluation factor for all of the existing global city indices as they are all using these factors as evaluation indicators. In this paper as well, from the viewpoint of city evaluation in global network, indicators related to Friedmann's "Hypothesis" will be applied as a factor that urges the Urban Growth.

Meanwhile, the negative aspects of lowering the Quality of Life due to income disparity, rise in prices, traffic congestion, environmental pollution, etc. have also been emphasized in world cities due to their excessive population and economic concentration. Many global cities of the capital cities and mega-cities may be disbursing the disadvantage of compromising in the Quality of Life as a compensation for Urban Growth as merit of accumulation.

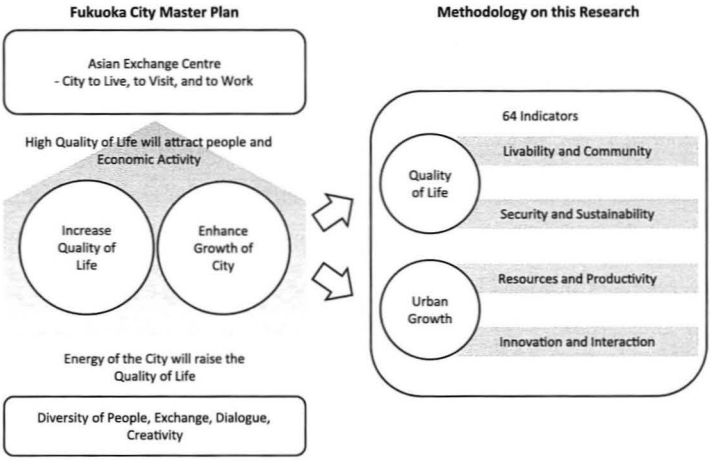
As a primary philosophy, Fukuoka city has the goal of developing urban

areas through the synergistic effect of improving the Quality of Life and promoting the Urban Growth shown in Figure 3. Fukuoka city has a different stance from the Tokyo metropolitan government that has promoted the global city strategy which have been implemented so far. To measure the effect of the policy of Fukuoka city, two main evaluation axes of the Quality of Life and the Urban Growth in this paper is set. These two axes are divided into four themes, set by 32 evaluation items with a total of 64 indicators for evaluating the cities by numerical values (Tablel 1.).

For the six cities, 64 indicator data is acquired and assembled. To convert the row date to index data, the aggregation method similar to the creation of the city indices is applied. The ratio between the index data of each city is calculated based on the proportion of the numerical value of each city using the following formula.

< When the evaluation of the largest numerical value is the highest index point >

Figure 3. Methodology of Evaluation



Source: Fukuoka Asian Urban Research Center (2015) *Cities on the "Third Axis"*, p.31.

Score = Numerical value of each city ÷ Maximum numerical value of the cities × 100 (The largest numerical value gets 100 point)

< When the evaluation of the smallest numerical value is the highest index point >

Score = Minimum numerical value of the cities ÷ Numerical value of each city × 100 (The smallest numerical value gets 100 point)

After calculating all indices, average values of the index scores are calculated for each evaluation item, and tabulated for each city.

Table 1. 32 Evaluation Criteria and 64 Evaluation Indicators

Quality of Life

1. Livability / Community

Evaluation Items		Indicators
A.	Demographic Composition	Median Age
		Elderly Population Ratio
B.	Demographic Dynamics	Population Growth Rate
		Fertility Rate
C.	Work-Life Balance	Annual Working Hours
D.	Wealth of Life	Household Disposable Income per Capita
		GDP per Capita
E.	Ease of Life	House Rent Level
		Grocery Price Level
		Restaurant Price Level
F.	Mutual Support by Donations	Donations as a Percentage of GDP

2. Security / Sustainability

Evaluation Items		Indicators
A.	Crime Rate	Number of Murders
B.	Hazard Frequency	Earthquake Frequency
		Flood Frequency
		Cyclone Frequency
C.	Wellbeing	Number of Physicians
		Life Expectancy at Birth
D.	Level of Pollution	CO2 Emissions per Capita
		Average Level of PM2.5
E.	Climate	Number of Comfortable Months
		Annual Average Rainy Days
F.	Nature	Occupancy of Green in Central Area
		Occupancy of Water in Central Area
G.	Compactness of City	City Area Density
		Metropolitan Area Density
H.	Public Transportation	Number of Stations (Trams excluded)

Urban Growth

3. Resources / Productivity

Evaluation Items		Indicators
A.	Tourism Resources	World Heritage Sites within 100 km
		Cultural and Historical
		Landmarks
		Outdoors
B.	Accommodations	Hotels
C.	Accessibility to Art	Museums
		Theaters
D.	Satisfaction of Dining	Restaurants
E.	Accessibility to Sports Facilities	Stadiums (more than 10,000 seats)
		Olympic Games Experience
F.	Local Branding Power	Google Keyword Search Hits
G.	Richness of Human Resources	Labour Force Growth Rate
		Ratio of Labour Force in Population
		Labour Force w/ Upper Secondary Education
H.	Corporate Revenues	Fortune Global 500 HQ
		Highest Revenue of the Top Company
I.	Economic Power	GDP per Employee (Productivity)
		GDP Growth Rate

4. Innovation / Interaction

Evaluation Items		Indicators
A.	Patent Applications	Number of Patent Applications (PCT)
B.	Startup Activities	Annual Business Startup Rate
C.	Business Tax	Effective Corporate Tax Rate
D.	Global Evaluation of Universities	QS World Universities
		Rank of the Top University on QS
E.	Ratio of Overseas Human Resources	Foreign Born Residents
		International Students in Top University
F.	Number of Visitors	Domestic Visitors
		International Visitors
G.	Major International Conferences	Annual International Conferences (ICCA)
H.	International Airport Function	Domestic Passengers
		International Passengers
		Domestic Direct Flight Destinations
		Continental Direct Flight Destinations
		Inter Continental Direct Flight Destinations
		Runways at the Major Airport
		Access Time to the Major Airport
I.	International Seaport Function	International Container TEU
		Domestic Container TEU
		Cruise Passengers

Source: Fukuoka Asian Urban Research Center (2015) *Cities on the "Third Axis"*, p.33.

5. Evaluation results and policy issues

Figure 4 is the result of aggregating the scores for each evaluation item of each city into two axes of the Quality of Life and the Urban Growth. Fukuoka has a score comparable to that of other cities in the Quality of Life however, a large difference with other cities is recognized in the Urban Growth

As evident from this analysis, Fukuoka's policy issue from an international benchmarking is to sustainably carry out the Urban Growth while maintaining the Quality of Life as high as the benchmark cities.

Next, the score of the 32 evaluation items constituting the two axes of the Quality of Life and the Urban Growth is sought comparing 6 cities item by item. The strengths and weaknesses of Fukuoka is observed to clarify the policy issues.

Quality of Life

First, in the evaluation items classified by the theme of the Livability / Community in Figure 5, the score of 1-A. Demographic Composition, 1-B. Demographic Dynamics, and 1-D. Wealth of Life of Fukuoka are the lowest. Even in Fukuoka, which is dominant in local cities in Japan for youth population, population growth rate, and citizen income, these scorers are lower than benchmark cities here. While the population of Fukuoka city is increasing, the population of production age is expected to decrease in the future, so that policies to improve productivity while securing labor should be implemented.

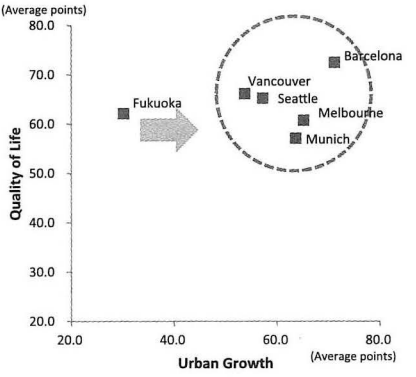
Fukuoka's score is the highest in 1-E. Ease of Life. Although it is an item of superiority in the domestic market, it should lead to attract human resources by further appealing to overseas market.

In the Security / Sustainability in the Figure 6, Fukuoka's overall

evaluation is high. The high evaluation in the 2-A. Crime Rate will be a great appealing factor for overseas market. On the other hand, Fukuoka's score is the lowest for 2-B. Hazard Frequency. Due to the small frequency of earthquake occurrence and the damage history, Fukuoka has been strongly recognized as a relatively safe area in Japan. However, due to the Kumamoto earthquake that occurred in April, 2016, the safety myths against the earthquake in the Kyushu region collapsed, and perceptions in Japan and abroad have changed. Based on this issue, further actively to strengthen the robustness of disasters in Fukuoka should be promoted as well as distributing information on countermeasures for disasters destined to overseas market.

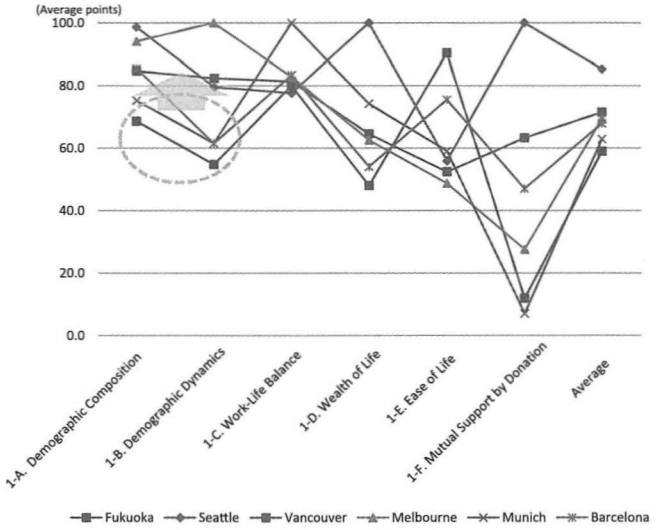
Fukuoka's score in 2-F. Nature, 2-G. Compactness of City, and 2-H. Public Transportation is high among the benchmark cities. The results of policy of Fukuoka city, which has been promoting urbanization area control and compact city development, has emerged as an advantage in global comparison. Figure 7 shows the distribution of the green spaces and the water surface spaces with the railway stations within the radius of 10 km from the city center of the 6

Figure 4. Overall Evaluation



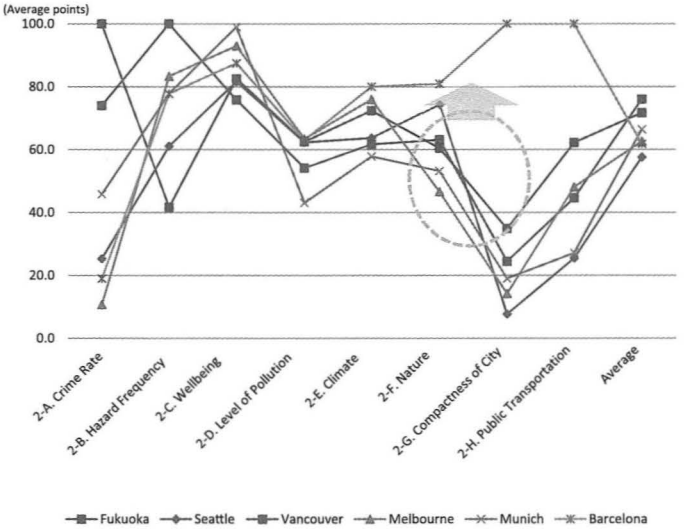
Source: Fukuoka Asian Urban Research Center (2015) *Cities on the "Third Axis"*, p.85.

Figure 5. Evaluation on the Livability / Community



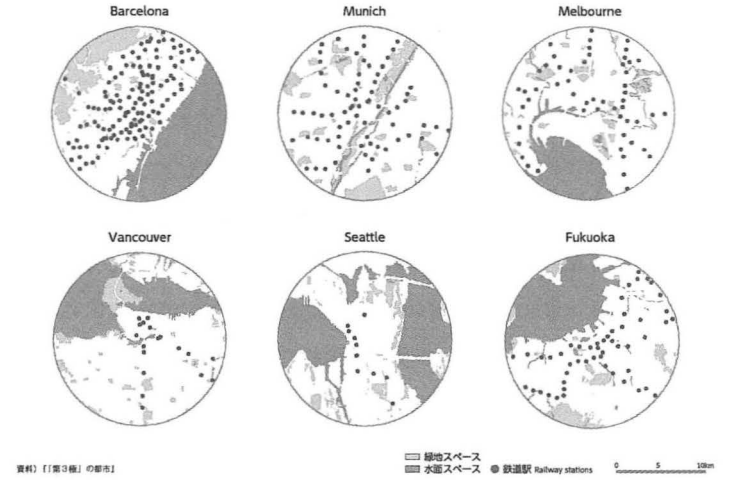
Source: Fukuoka Asian Urban Research Center (2015) *Cities on the "Third Axis"*, p.86.

Figure 6. Evaluation on the Security / Sustainability



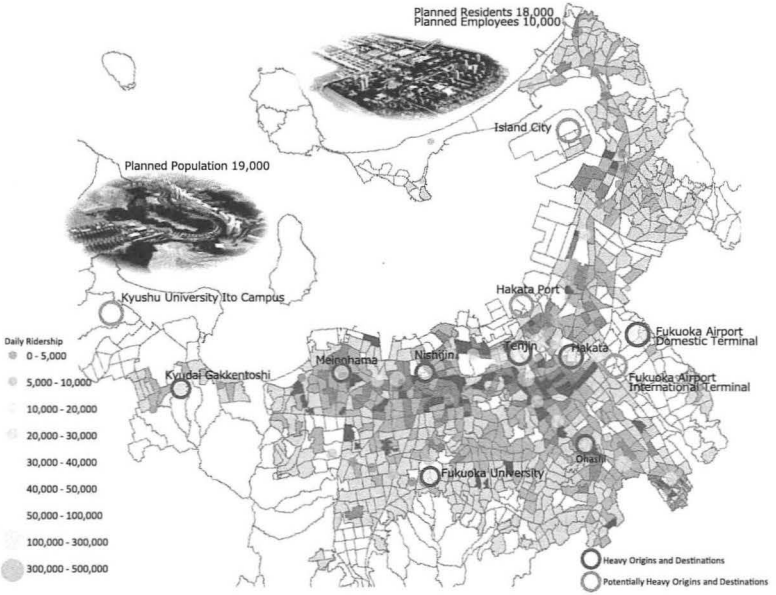
Source: Fukuoka Asian Urban Research Center (2015) *Cities on the "Third Axis"*, p.87.

Figure 7. Geographical Comparison on the Green and Water Space



Source: Fukuoka Asian Urban Research Center (2015) *Cities on the "Third Axis"*. p.53.

Figure 8. Networks between the Hubs



Source: Fukuoka Asian Urban Research Center (2016) *Prospering city / Waning city*, p.126.

cities in the same scale. The richness of the natural environment in the central part of Fukuoka can be seen relative to the other cities. The number of the railway stations in Fukuoka is among the highest.

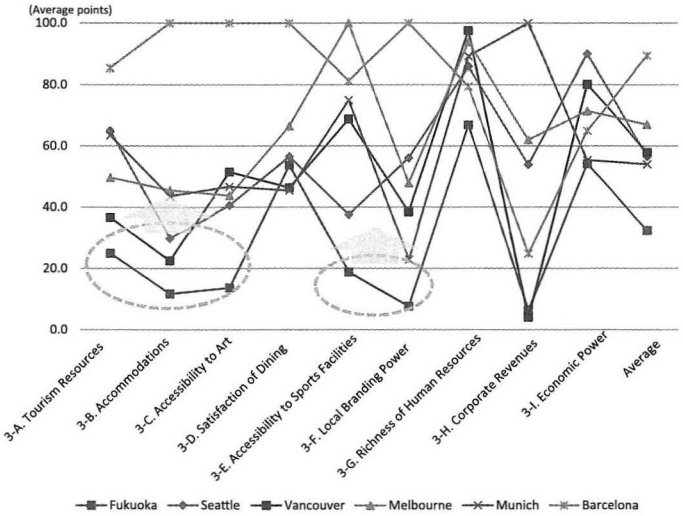
Figure 8 shows the population density in Fukuoka city, the location of the railway station and the number of the passengers getting on and off. The larger dark circles are showing the stations with particularly large number of passengers. In the future process of the Urban Growth, the concentration of personnel at points not connected by railroads, such as the points marked with larger light circles (Hakata Port, Fukuoka Airport International Terminal, Island City, Kyushu University Ito Campus) will dramatically increase. The incorporation of these points, such as the global gateways and the innovation hubs, into the public transportation system is a critical policy issue to be addressed in order to improve Fukuoka's global position.

Urban Growth

Fukuoka's score is generally low in evaluation items on the Resources / Productivity and the Innovation / Interaction that constitute the Urban Growth as shown in Figure 9 and Figure 10.

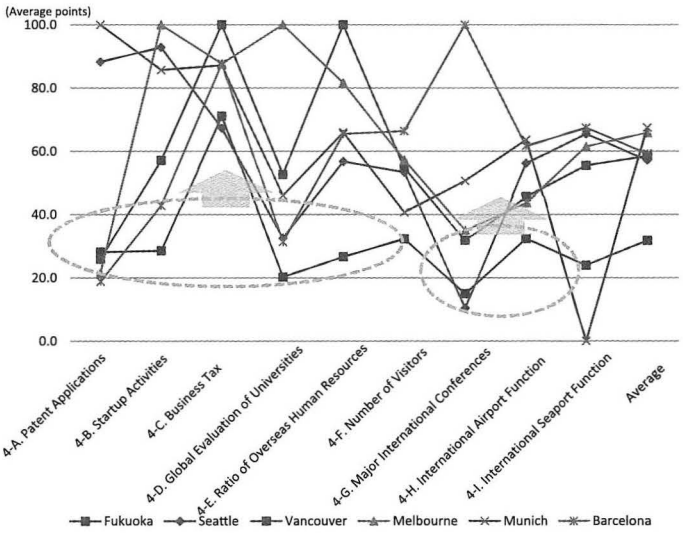
First of all, the score of Fukuoka's 3-A. Tourism Resources, 3-B. Accommodations, 3-C. Accessibility to Art, and 4-F. Number of Visitors are low in general. Figure 11 is a distribution of tourist spots in 6 cities posted on tripadvisor.com by type. Compared to the accumulation of the sightseeing spots in Fukuoka, other cities are diffusing to the wider area. The difference between Fukuoka and other cities is also remarkable for the hotel assemblies as seen in Figure 12. Meanwhile, the difference between Fukuoka and other cities is small in 3-D. Satisfaction of Dining based on the accumulation of restaurants listed in the tripadvisor.com page shown in Figure 13. The "Gourmet" in Fukuoka is

Figure 9. Evaluation on the Resources / Productivity



Source: Fukuoka Asian Urban Research Center (2015) *Cities on the "Third Axis"*, p.88.

Figure 10. Evaluation on the Innovation / Interaction



Source: Fukuoka Asian Urban Research Center (2015) *Cities on the "Third Axis"*, p.89.

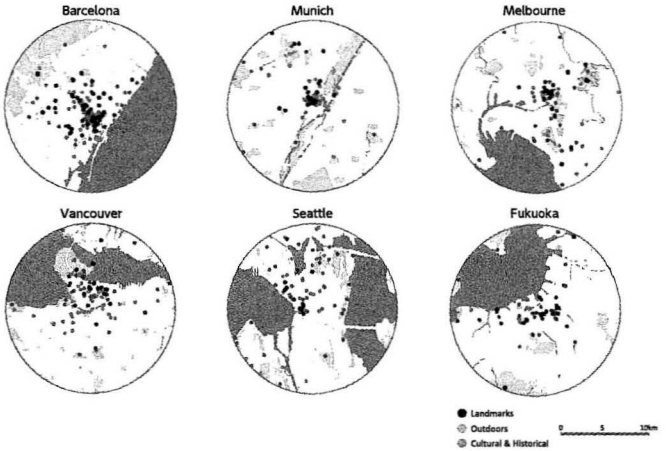
already globally considered by the "Reviews" on the SNS.

The recent surge of the inbound tourism has led to the development of the new tourism resources by foreigners' diverse values. In Fukuoka, information dissemination of the city in multiple languages through various media should be the most effective effort. This will sustainably improve 3-F. Local Branding Power.

Although the number of the international conferences held in Fukuoka is the second largest in Japan, Fukuoka is evaluated low in comparison with the benchmark cities in "4-G. Major International Conferences. In the cities with a large number of the international conferences, there are also a large number of tourism resources being evaluated. So, it can be said that the "Meetings" and the "Incentives" are creating synergies composing the MICE strategy. Fukuoka City is strategically promoting the MICE. While Fukuoka is competing with the domestic cities on the MICE, Fukuoka should ambitiously benchmark the city compared here. As an infrastructure of the MICE, the capacity expansion of the accommodation facilities with the development of the sharing system of the private households is an urgent issue.

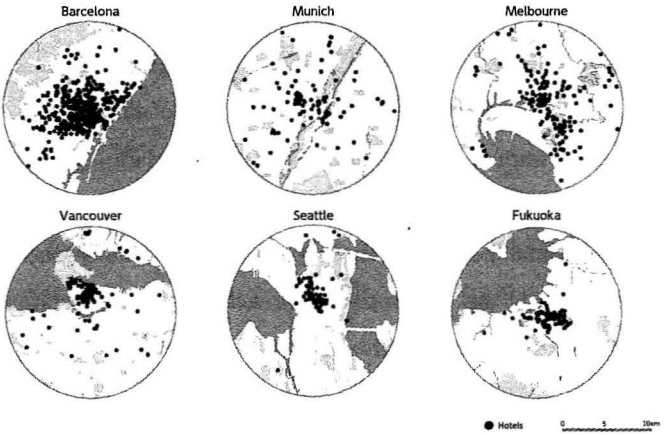
Next, Fukuoka's 4-B. Startup Activities, 4-D. Global Evaluation of Universities, and 4-E. Ratio of Overseas Human Resources show lower scores than the benchmark cities. Fukuoka city's start-up rate is the highest in the domestic large cities with 7.0%. However, for the benchmark cities, although the data is by country, they are even higher with around 10%. In order to catch up the benchmark cities, Fukuoka should aim for more innovative urban environment, promoting the globalization of the local universities and attracting the talented people from around the world. It is well-known that Fukuoka city is promoting priority emphasis on the start-up as the "Global Entrepreneurship and Employment Creation Special Zone." Establishing a start-up cafe where a

Figure 11. Geographical Comparison on the Tourism Resources



Source: Fukuoka Asian Urban Research Center (2015) *Cities on the "Third Axis"*, p.55.

Figure 12. Geographical Comparison on the Hotels



Source: Fukuoka Asian Urban Research Center (2015) *Cities on the "Third Axis"*, p.57.

special concierge resides and attracting foreign start-ups by creating start-up VISAs are pinpoint responses to these tasks. As a remaining task, promoting globalization of universities and vocational schools in Fukuoka should be implemented as a part of the national special zone policy. Practically, increase of the foreign faculties, promotion of overseas study by the domestic students, increase of the international students, support for employment for the international students after their graduation, etc. should be implemented.

Finally, the low score of 4-H. International Airport Function in Fukuoka is a detrimental issue. As discussed at the beginning of this paper, policies of the cities in the rural areas of Japan had not been created from the perspective of improving the global competitiveness by the national government. The absence of the name of the "international airport" at the airport in the regional area of Japan symbolizes this matter.[10] Comparing Fukuoka airport and major airports in the benchmark cities, the disparity as a facility is clear as seen in Figure 14. While it is impossible to provide the same function as the benchmark cities' airports under the current location of Fukuoka Airport, accessibility from the city center is one of the best levels in the world. First of all, the current Fukuoka airport should be improved as soon as possible, installing the second parallel runway, extending the operation time, and connecting the subway to the international terminal. Furthermore, cooperation with Kitakyushu Airport and Saga Airport should be promoted, approaching the international airport functions equivalent to the benchmark cities.

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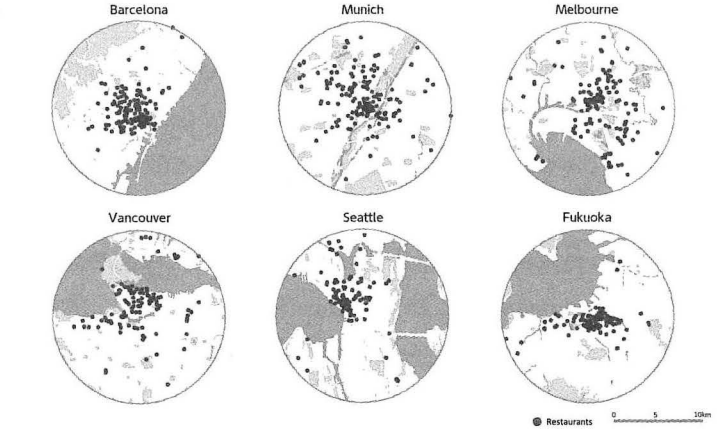
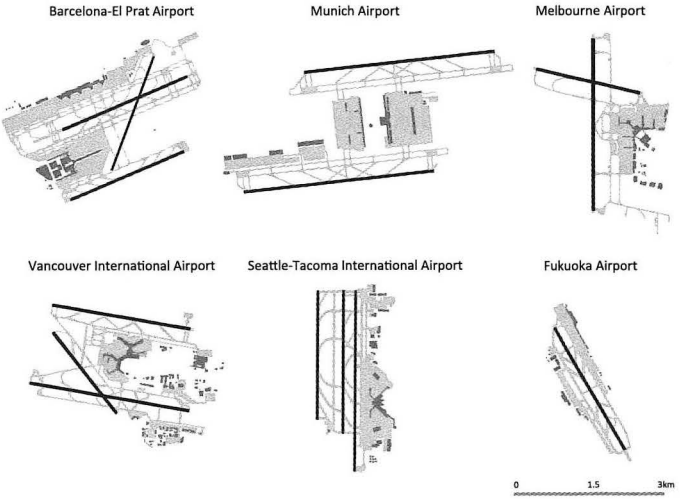
[10] The examination to set up "Kyushu International Airport" in Kyushu has been promoted since around 1990, but the feasibility is said to be low.

Figure 13. Geographical Comparison on the Restaurants



Source: Fukuoka Asian Urban Research Center (2015) *Cities on the "Third Axis"*, p.61.

Figure 14. Comparison on the Main Airports



Source: Fukuoka Asian Urban Research Center (2015) *Cities on the "Third Axis"*, p.79.

Conclusion

In Fukuoka city and its metropolitan area, like the cities in other regions in Japan, the global city strategy like in Tokyo was not taken. Fukuoka was not incorporated into the world city system nor was exposed to the dynamics in the global system. However, due to the progress of the globalization in recent years and the diversification of globalization, Fukuoka has also been incorporated into the global system and appeared on the global city indices.

In this paper, five cities similar to Fukuoka were selected worldwide and compared and evaluated by benchmarking. As a result, on the evaluation axis of the Quality of Life, Fukuoka and the benchmark cities were evaluated as equal, however, great disparity in the evaluation axis of the Urban Growth was sought. Similar to Fukuoka, the benchmarked five cities were initially not clearly positioned as "world cities," but these cities were transferred into the global system[11] at a faster pace than Fukuoka. The disparity in the Urban Growth seems to be caused by the state of the transfer to the global system, that is, the difference in the number, capacity, and diversity of the global network of cities. The more the world city-ness, the more the hinterland of the city expands globally. The benchmark five cities have the similar population size as Fukuoka, however, the size of the global hinterland must be different.

For instance, the more globalized cities exchange more human resources as well as goods and capitals in the global system. This means the substantial

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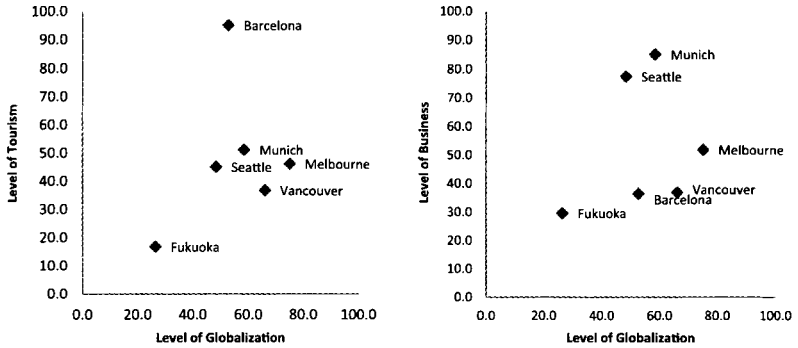
[11] For example, globalization of Vancouver due to the rapid increase in immigration triggered by the return of Hong Kong to China in 1997; globalization of Seattle with the rapid global market development of the Seattle IT industry with the global spread of Microsoft Windows 95 in 1995; globalization of Munich and Barcelona under the Schengen Agreement in 2002 by introducing the Euro currency and borderless economy etc.

Figure 15. Comparison between the Level of Globalization and the Level of Growth Factors



Source: Fukuoka Asian Urban Research Center (2017) *The Global Networks of Fukuoka*, p.13.

expansion of the hinterland of the city, practically supplying the human resources to the city and expanding the market outside the city.

Three evaluation items of 4-D. Global Evaluation of Universities, 4-E. Ratio of Overseas Human Resources, and 4-H. International Airport Function can represent the level of the globalization of the city. 3-A. Tourism Resources, 3-B. Accommodations, and 3-C. Accessibility to Art can represent the level of the tourism of the city. Figure 15 plots each city with the average scores of each item. In addition, average score value of 3-H. Corporate Revenues, 3-I. Economic Power, and 4-A. Patent Applications representing the level of business are calculated and cities are tabulated in the same manner in Figure 15. While Barcelona is specialized in tourism, Seattle and Munich are specialized in business, suggesting that Urban Growth indicators will improve if globalization of the city progresses. It can be said that the globalization of the city in Fukuoka is a city's most effective growth strategy.

Fukuoka city has formulated an "Internationalization promotion plan" ahead of other Japanese cities in 2003, and has promoted its own internationa-

lization policy aiming for "Asian exchange hub city." With this policy, as a city in a rural area in Japan, Fukuoka has approached the global system one step. Fukuoka has also initiated the formation of the hinterland in Asia in the global system, but its level had yet been low compared with the benchmark cities.

In cities benchmarked in this paper, for example in Seattle and Munich are soaring land price in the city center, emerging the area that ordinary people cannot live in. Melbourne shows the possibility that the metropolitan area population will increase to 7.7 million in 2051. In these cities, maintenance of the Quality of Life is an important policy task, beside the high Urban Growth.

Fukuoka should set up and enhance the globalization of the city further as a major policy subject for the immediate future for the realization of the Urban Growth comparable to the benchmark cities. From the conventional "Promotion of internationalization," it is the time to proceed to the stage of the "Promotion of Globalization" on a global scale beyond the framework of the natiomal gouernment.

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