The Discordance between Master Plan and Detailed Plan in China-Case Study of Dalian

中国における都市計画マスタープランと詳細計画の不一致に関する研究―大連市的事例研究

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I. Research objectives and Problems Involved

1-1 Background

Urban master planning is an important means to guide urban development by deciding urban blueprint. In China, with the rapid development of economy and population, cities have to face the high-speed urbanization stage. In such cities, it is more difficult to complete the implementation of urban master planning, and the discordance between urban master planning and actual construction is inevitable and indeed occurs frequently. This phenomenon is caused by two reasons: First, urban master planning has a long planning period, which is easy to fall behind actual construction during the rapid urbanization. Second, in order to pursue more economic benefits, the actual construction doesn’t always follow the master planning.

In the rapidly developing cities, the discordance between urban master planning and actual construction may be natural and unavoidable. However, if we let it as it is, the discordance may bring urban issues. Therefore, finding the way of restricting discordance within a reasonable range, which does not affect healthy development of city, is a very urgent and important issue.

This study is aiming to grasp the actual conditions of discordance and discuss the better ways to improve China’s urban planning.

1-2 Literature Review

In past studies, urban planning system during the rapid urbanization of China was generally discussed (Hao, 2005). In some articles (Sun, 2003), the issue of discordance between urban planning and actual construction was also mentioned. However, the actual conditions of the discordance have not been reported. This paper will provide the detailed survey of the discordance, and discuss how to improve urban planning based on the survey results.

1-3 Research Contents

The second chapter explains the China’s urban planning system and tries to find out which step causes the discordance. The following Chapter 3 is an introduction to Case City – Dalian, including master plan of Dalian. Chapter 4 analyzes the distribution and characteristics of discordance. Chapter 5 interviews relevant personnel about their reasons for determining to allow the discordance. Conclusions are summarized in Chapter6.

II. China’s Urban Planning System

In urban planning system of China, master planning does not directly guide the actual construction. There are other steps between them. One question is that, which step causes the discordance? The second chapter will describe the China’s urban planning system and try to find out the inconsistent step.

Table1. Definitions and Process of Urban Planning in China

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<th>Urban System Planning</th>
<th>Master Planning</th>
<th>Regulatory Detailed Planning</th>
<th>Constructive Detailed Planning</th>
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2-1 Planning System

Urban planning system (Table1) consists of urban system planning, urban master planning and detailed planning. Urban
master planning is more holistic, but needs long period for preparation and planning. A decade is usually a planning period. Detailed planning is more specific for each site, including the regulatory detailed planning, constructive detailed planning.

2-2 Planning Process

Planning process of urban master planning and detailed planning are specifically shown in the table 1. Master planning organized by city office needs to be examined and approved by State Council. Regulatory Planning is also organized by city office, but only in special areas, such as historic area. Usually, the most areas only have the guidance of mater planning and constructive detailed planning. Constructive detailed planning is organized by the developer, examined and approved by city office. Before the implementation of any new construction, constructive detailed planning needs to be approved.

2-3 The legal System and The Legal Effect

Based on Republic of China urban planning Law, urban planning legal system includes the supporting law (Urban Planning Approaches, etc.) and the related laws (Land Management Law, etc.) Urban planning needs to comply with legal requirements, and the result of urban planning also has certain legal effects. In the master planning, urbanization control area, urban build-up area, urban infrastructure and so forth, as the mandatory clauses must be strictly enforced. Land use planned by master plan is considered as a guideline, rather than mandatory clauses. The mandatory clauses of detailed planning are more specific, which can directly be controlled by figures, thus detailed planning and the actual construction are same. In other word, the discordance between urban master planning and actual construction is the discordance between urban master planning and detailed planning.

III. Case City - Dalian

Dalian is an important center of China's northern coastal cities, owning the land area of 12574 square kilometers and the registered population of 5.9 million (including non-agricultural population of 3.71millions). It is a comprehensive open city that is famous of its environment, harbor, industry, trade and tourism.

Dalian has the higher level of urbanization with rapid development among cities in China. During the process of Dalian’s urbanization, because of the high land utilization ratio, the discordance between master planning and detailed planning is significant.

Moreover, according to National urban plan system, different from the 5 special national central cities such as Beijing and Shanghai, there are 31 regional central cities with the similar size and financial level with Dalian. Thus, the research results can be consulted by Dalian or other similar-sized cities.

3-1 Urban Development Process in Dalian

Since 2001, with the urban population and economic growth, urban construction area has increased but at the relatively slow speed. However, since the implementation of new urban master planning the construction of subway system in 2010, urban construction growth has entered a new stage (Chart1). The real estate development and construction area is 50,605,000 square meters, which is 133.2% of the previous year.

About industry, the high-tech industry has increased at an average annual growth rate of 29.33%, and the industrial structure of Dalian has been changing. Dalian, which used to focus on heavy industry and port, has gradually transformed into the comprehensive development involving commerce, tourism, finance and information electronic industry.

3-2 Invalid Master Plan during Urbanization

In the end of 2007, the construction goals in the earlier master plan, Urban Master Plan 2000-2020, have been completed. Population growth exceeded prediction, which led to the lack of building land area. About land use, the industrial land located in the city center lost driving force of development, and was discarded and transformed into residential land due to the adjustment of industrial structure.

3-3 Study Objects

3-3-1 Urban Master Plan 2009-2020

In the end of 2008, Dalian city office started to make a new city master plan – Urban master Plan 2009 to 2020 (Figure1). The plan was examined and approved by State Council and public in 2010, and became the latest and highest guidance of urban development in Dalian. Master Plan 2009 to 2020 consists of urban spatial structure plan, comprehensive transportation plan, planning area, planning land use, public facilities plan, residential plan, green space and historic buildings (Table2).

Regional characteristics epitomized in urban master Plan 2009-2020
a) Dalian is surrounded by sea and mountains, thus urban master Plan 2009-2020 insists that urban development should take the protection of urban environment as a precondition.
b) Livable feature is one of Dalian's Regional characteristics.
c) It pays high attention to Dalian's historic and cultural heritage.

3-3-2 Regulatory Detailed Plans in Dalian

Regulatory Detailed plans have three types; one is for the protection of historic buildings, parks, and so on. These plans do not conflict with Master Plan. The second type is to plan the sites that are not included in master plan, thus it has discordance with master plan and is consistent with constructive detailed plan. The third type, which is similar to type 2, changes master plan. Only five constructive detailed plans, which have discordance, were consid-
ered in regulatory detailed plan.

3-3-3 Constructive Detailed Plans in Dalian

Land use of 137 constructive detailed plans is shown in the table3. Most of constructive detailed plans are for urban renewal. It is clear that residential use is city’s largest demand. It may be caused by the relatively low development risk of residential area and quick return comparing with commercial area. Thus, developers are more willing to develop residential area.

IV. Discordance between Master Plans and Detailed Plans

4-1 Definitions of Different Regions

In this paper, the urban land of Dalian is divided into three regions by developing maturity.

City center (都市中心部) means the central part of Dalian, which is the main business and commercial area and part of high-cost residential area, including 2 CBDs.

Existing developed region (都市既存開発地区), is neighboring to city center, usually already developed into low-cost or intermediate-cost residential zone for decades. 54 constructive detailed plans are located in this region, more than other regions.

Developing region (新規開発地区), refers suburbs. This region is neighboring to existing developed region, normally urbanizing from vacant land.

4-2 Types of Discordance and Spatial Distributions

40% detailed plans changed in different levels, which can be divided into 5 types. The definitions of 5 types are shown in the table5. The types of discordance in each region will be discussed.

Table5. Spatial Distributions of Discordance Types

<table>
<thead>
<tr>
<th>Type</th>
<th>Site Changes</th>
<th>Road System Changes</th>
<th>Land Use Changes</th>
<th>Changes into Other Land Use</th>
<th>Unplanned</th>
<th>Total</th>
<th>Maps with Discordance in All Maps</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Center</td>
<td>1</td>
<td>1</td>
<td>11</td>
<td>0</td>
<td>19</td>
<td>0.44</td>
<td></td>
</tr>
<tr>
<td>Existing Developed Region</td>
<td>6</td>
<td>1</td>
<td>12</td>
<td>0</td>
<td>19</td>
<td>0.35</td>
<td></td>
</tr>
<tr>
<td>Developing Region</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>9</td>
<td>0.48</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>7</td>
<td>25</td>
<td>9</td>
<td>55</td>
<td>0.4</td>
<td></td>
</tr>
</tbody>
</table>

4-2-1 City Center

City center is high urbanization area, thus all the detailed plans are for urban renewal and redevelopment. Also, road system in city center has been well planned and constructed. Therefore, type2 and type5 are seldom found in this region. Type3 -land use changes moderately and type4 -changes into other land use completely happen in this region.

In case of type3: The commercial area of old CBD in master plan changes into complex area consists of commercial and residential use. In case of type4: The residential area near new CBD in master plan is changed to commercial area.

4-2-2 Existing Developed Region

Existing Developed Region is intermediate urbanization area. This region faces more traffic problems during redevelopment, because road system is not mature. Almost all the type2-road system changes happen in this region.

Type4 is located in this region, including almost all types of land uses changing. Commercial use, Green land and other use are changed into residential use.

Figure2. Spatial Distributions of Discordance Types

4-2-3 Developing Region

Road system in developing region is easier to construct according to master plan from vacant land. Thus, type2 don’t happen in this region.

Type5-Unplanned sites are located on this region, such as mountain land and urban edge. The urban development in such area is beyond the anticipation of master plan to some extent.

4-3 Other Characters

Area and FAR: Comparing the maps with discordance and the maps without discordance, it is clear that maps with discordance have smaller area and higher FAR (Chart2). 35% detailed plans with discordance are located in city center, which have high FAR and limited site area.

Examined years: It seems that the earlier examined (earlier planned) plans are closer to master plan. Site changes and road system changes happen earlier than other types of discordance.

Site conditions: Surrounding land use of type2, are mainly low-price residential areas and wasteland. Traffic environment is the worst and the most immature. Traffic of type5 is better than type2. The majority of sites are adjacent to secondary roads. In case of type3 and type4, plans, in which land use changed from residential to commercial, have the most convenient traffic environment, surrounded by commercial and residential areas.

V. Interviews

When constructive detailed plan is different from urban master plan, a very important issue for this paper is that who decide to allow the discordance and why. Therefore, relevant personnel including developers, designers, evaluation experts, and government officials will be questioned aiming to find out the reason of discordance appearing.
5-1 Questionnaire Survey

17 respondents of the questionnaire survey participated in the step of design, expert evaluation and government examination during urban planning in Dalian (Chart3). The result of survey shows:

a) Respondents, who participated in the step of design, took master plan just as reference when they are involved in the constructive detailed planning. Thus, the possibility of discordance between master plan and detailed plan is provided in the step of design.

b) Almost all the respondents had the experience of discordance between constructive detailed plan and master plan.

c) When the discordance occurs, 65% of respondents made decisions based on the specific situation rather than consulting master plan.

5-2 Interviews

In order to gain more specific information, 4 respondents are interviewed about how they determine to keep the discordance, and their opinions and evaluations on the discordance through internet calls or instant messaging in the period of 3rd Jan to 24th Jan 2014.

5-2-1 Reasons for Approved Discordance

According to interview, the reasons why discordance is approved are summarized.

a) The demand of urbanization: during the process of urbanization, discordance meets the need of urban development objectively.

b) Pursuit of interests: constructive detailed plans often depend on the results of multi-stakeholder consultative game between government, developers and planners. Developers tend to pursue high interests and try to avoid the low risk of development. Especially in the development of new zones, the residential areas will be developed before commercial areas due to the developing risk.

c) Affected by the opinions of the government in a certain extent: in many occasions, we can still find governmental leaders decide the constructive detailed plans. Each Leader wants to manifest his ideas and achievements in the urban planning. Thus, adjustment of urban planning becomes very common.

5-2-2 Current Problems of China’s Urban Planning Process

Apart from the demand of rapid urbanization, the discordance between master plans and detailed plans is caused by defective execution of urban planning system. Problems include:

a) Executive consciousness of the leader is quite strong: Influence of relevant personnel such as major leader on the objectivity of urban planning should be avoided.

b) Execution of expert evaluation system is defective: The intention to set up an expert evaluation system is to establish reasonable and legitimate planning process, however, it generated a lot of problems: First, the choice of experts is one way, thus relatively strict and critical experts are often neglected by the market. Eventually, expert evaluation tends to reflect government intentions. Second, the lack of feedback cause those experts pay little attention about their advice.

c) Public participation is not enough: Public opinions are seldom surveyed during planning according to the respondents. Extensive social participation should be enhanced to participate and supervise constructive detailed planning.

d) Effectiveness is not sufficient: China’s urban planning, particularly the preparation and approval cycle of urban master planning is too long, with complex procedures. It greatly affects the effectiveness of urban planning.

5-3 Evaluations

Combining the characters of discordance and the results of interview, evaluation of discordance will be discussed. The suggested evaluation standards include, 1) if it complies with the concepts of urban master planning or not, 2) if it considers the impact on the environment or not, 3) if it simply pursues high FAR or not, 4) if it brings positive influence to the surroundings or not. Acceptable and unacceptable discordance of each type are summarized in the table.

50% of plans containing discordance are acceptable, which can be considered as the inevitable and natural results of urban development. Other 50% of plans are unacceptable, which are caused by defective process of China’s urban planning.

VI. Conclusions

In case of acceptable discordance, master plan should be modified with more flexibility. If constructive detailed plans comply with the concepts of urban master planning to develop in a healthy way, master plan should give more flexibility to detailed plans.

In case of unacceptable discordance, regulatory detailed plans as the link between master plans and constructive detailed plans should be enhanced to avoid unacceptable discordance in future planning. Especially those sites are changed only pursuing high FAR or influencing the environment. Discordance accumulation may lead to urban problems, such as environmental issues, irrational land use and so forth.

In China, there is a need of creating the environment to encourage the citizens to participate in urban planning and reduce the involvement and influence of government and developers.

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