Research on high-quality development countermeasures of modern metropolitan area

——Take the Changsha-Zhuzhou-Xiangtan metropolitan area as an example

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Abstract. By February 2022, the Changsha-Zhuzhou-Xiangtan (Chang-Zhu-Tan) urban circle has become the fourth national urban circle approved to be established in the central region of China. However, the development has been slow, the allocation of resources among the cities is unbalanced, the economic aggregate and industrial development are very different, and the process of urbanization still needs to be improved urgently, although the integration development of Chang-Zhu-Tan region has been going on for more than 30 years. In this study, I am going to make the use of desk research method to collect and analyze data concerning the development of the Chang-Zhu-Tan urban circle and development experience of other metropolitan areas at home and abroad. The objective of the study is to find some existing problems and barriers of high-quality development of modern metropolitan areas and then propose countermeasures to these problems. Thus the Chang-Zhu-Tan metropolitan area can be built into a unique and attractive modern metropolitan area, which will better promote the high-quality development of the Yangtze River Economic Belt and the central region.

Keywords: modernization; Chang-Zhu-Tan metropolitan area; high-quality development

1   Introduction

"In March 2022, the Hunan Provincial Government announced the 'Changsha-Zhuzhou-Xiangtan Metropolitan Area Development Plan' (hereinafter referred to as the 'Planning'), which is the fourth metropolitan area plan approved by the National Development and Reform Commission, and also guides the high-quality urbanization of the Chang-Zhu-Tan Metropolitan Area." [1] This paper will analyze its background, status and existing problems according to the promulgated plan and its development history, and put forward corresponding suggestions for improvement, so as to speed up the coordinated development of the regional integration of the Chang-Zhu-Tan metropolitan area.

I use desk research in the early of the study, searching for some information through computers, magazines, books, documents etc., to conduct analysis and research on the topic of regional development integration, which is a method of directly analyzing and researching existing second-hand materials. The data collection of this paper is mainly through industrial data analysis, planning policy analysis and literature reading analysis for an in-depth understanding of the development of Chang-Zhu-Tan area. Besides, when I figure that it is essential to dig deeper in the face of the status quo, I would stop and return to the desk research to capture more supporting data.

2   The background, goal and development status of the Chang-Zhu-Tan metropolitan area

2.1   Background and Objectives

In the 1980s, a plan for the construction of the Chang-Zhu-Tan Economic Zone was put forward; in 1997, the integrated development strategy of Chang-Zhu-Tan was formally implemented; The establishment of the two-type office of the Governor means that a formal coordination organization has been established in the Changsha, Zhuzhou and Xiangtan region to promote the implementation of the integration strategy. The Chang-Zhu-Tan region has been under construction for more than 30 years, and in terms of synergy and maturity, it has good conditions to promote high-quality intra-city development. Given the slow progress in the past, the effect has not yet reached the ideal state. In the "14th Five-Year Plan" outline, it has been proposed to "speed up the construction of the Chang-Zhu-Tan metropolitan area to promote the coordinated development of the urban agglomeration in the middle reaches of the Yangtze River" [2], which undoubtedly ushered in a " new life " for the Chang-Zhu-Tan metropolitan area.

Planning states, "By 2025, the competitiveness and radiation driving ability of the Changsha-Zhuzhou-Xiangtan metropolitan area will be significantly enhanced, the high-level infrastructure, modern public services, social security and other fields will make great progress in the urbanization, and the integrated development pattern of the city and the city will be basically formed, becoming a a benchmark for high-quality development, high-level governance, and high-quality life in the whole province ; by 2035, the development pattern of Chang-Zhu-Tan urbanization will be fully formed, the development gap between urban and rural areas and the gap in living standards of residents will be significantly narrowed, basic public services will be equalized, and infrastructure connectivity will be comprehensive. People 's lives are more prosperous, the modern social governance pattern is basically formed, the radiation and leading power are greatly improved, and it will become a unique and attractive modern metropolitan area." [3]
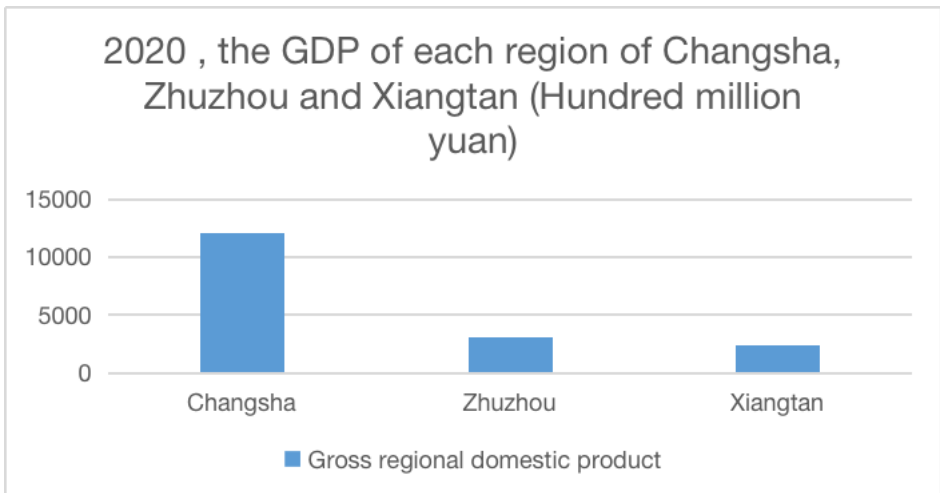
2.2   Development status

2.2.1 The overall development status of Chang-Zhu-Tan.

   Plan clarifies that "the Changsha-Zhuzhou-Xiangtan metropolitan area covers the entire area of Changsha City, the central urban area of Zhuzhou and Liling City, the central urban area of Xiangtan, Shaoshan City and Xiangtan County, covering an area of 18,900 square kilometers. In 2021, the regional GDP will reach 1,789.3billion yuan, accounting for 38.8% of the province. The resident population reached 14.84 million, and the urbanization rate reached 80.9%, which was 21.2 percentage points higher than the provincial average" [4].

2.2.2 Comparison of development status of various regions in Chang-Zhu-Tan.

   From the perspective of economic aggregate, the results obtained from Figure 1 and Figure 2 demonstrated that Changsha's GDP and per capita GDP in 2020 are much higher than those of Zhuzhou and Xiangtan; from the perspective of industrial structure, based on the data on Figure 3, Changsha is dominated by the tertiary industry, while Zhuzhou and Xiangtan are dominated by the secondary industry. In terms of the proportion of the tertiary industry, the results highlight the difference between Changsha and the latter two, since the proportion of tertiary sector of Changsha city is more than 10% higher than the other two cities.

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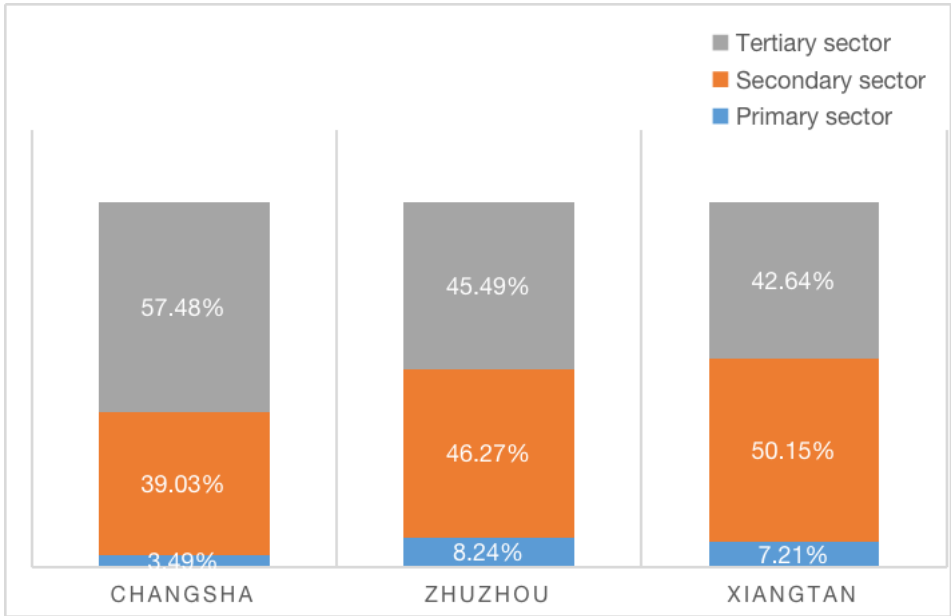**Fig. 1.** The GDP of Changsha, Zhuzhou and Xiangtan in 2020

Data source: Compiled by the author based on the statistical yearbook of each city (2021)

Chang-Zhu-Tan GDP per capita in 2020 (yuan)

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Fig. 2. The per capita GDP of each region in Changsha, Zhuzhou and Tan in 2020

Data source: Compiled by the author based on the statistical yearbook of each city (2021)

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Fig. 3. Industrial structure distribution of Changsha, Zhuzhou and Xiangtan in 2020

Data source: Compiled by the author based on the statistical yearbook of each city (2021)

3 Problems existing in the coordinated development of the Chang-Zhu-Tan metropolitan area

3.1 Industrial structure level: pillar industries still have homogeneous competition

According to the data disclosed by the Hunan Provincial Bureau of Statistics, the industrial output value and the construction industry output value all account for a large proportion of the GDP in Changsha, Zhuzhou and Xiangtan and industrial enterprises mainly focus on heavy industry, meaning that the dominant industrial structures of the three cities of Changsha, Zhuzhou and Xiangtan are very similar. In the primary industry, the agricultural products, forest products and agricultural and livestock products in the three cities are mainly rice, tea seed oil and pork. [5] From the perspective of the secondary industry, Changsha is mainly technology-intensive, while Zhuzhou is mainly capital-intensive, and Xiangtan has certain advantages in both technology-intensive and capital-intensive industries, and the current metropolitan area has not yet formed a high degree of inter-city relationship between industrial network [6].

3.2   Resource allocation level: uneven distribution of high-quality resources

From the perspective of economic development, the spatial differentiation in the Chang-Zhu-Tan metropolitan area is obvious at present, and there is an increasing trend. As mentioned above, the GDP of the Changsha-Zhuzhou-Xiangtan metropolitan area in 2020 is about 1,214.2 billion yuan in Changsha, about 300.5 billion yuan in Zhuzhou, and about 234.3 billion yuan in Xiangtan. The sum of Zhuzhou and Xiangtan is not half that of Changsha. Due to the "siphon effect" of the central city, high-quality resources from both Zhuzhou and Xiangtan, and even the whole of Hunan Province, are concentrated in Changsha. Changsha's "dominance" is not conducive to the establishment of regional cooperation. The accumulation of production factors to the economic highland in the long run will make the funnel area of economic development face the dilemma of the loss of production factors. [7]

3.3   Central city effect level: the development level of central city Changsha still needs to be improved
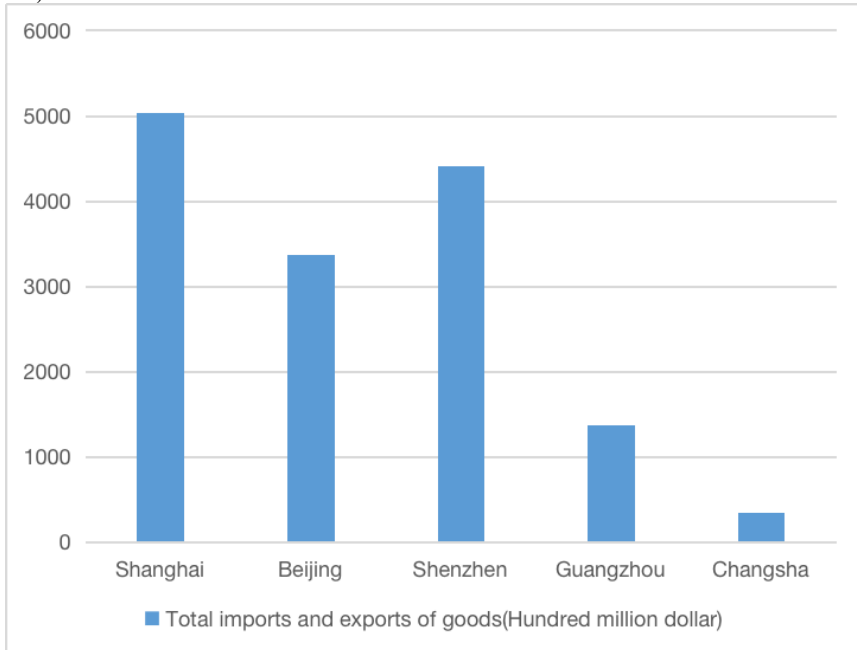
Although Changsha is the central city of the Changsha-Zhuzhou-Xiangtan metropolitan area, the metropolitan area is still in the growth stage. Compared with cities such as Beijing, Shanghai and Guangzhou, which are at the core of regional integration in the mature stage, as shown in Figure 4 and Figure 5, there is still a big gap in terms of economic aggregate, market size and degree of opening to the outside world, and Changsha will also have insufficient driving force to drive the development of the entire Changsha-Zhuzhou-Xiangtan metropolitan area.

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Fig. 4. GDP and total retail sales of consumer goods among major cities

Data source: Compiled by the author based on the statistical yearbook of each city (2021)

Made by author

Fig. 5. Total imports and exports of goods among major cities

Data source: Compiled by the author based on the statistical yearbook of each city (2021)

4 Suggestions on improving the high-quality development of the Chang-Zhu-Tan metropolitan area

Generally, high-quality modern metropolitan area should be with the advantages of the central city's economy, technology, capital, and talents, driving the common development of surrounding small and medium-sized cities. Moreover, the area should eliminate low-level vicious competition between regions to form a coordinated industrial system. And this area ought to promote the division of labor and cooperation in the fields of public services, social security, education and health, social security, legal system, environmental protection, etc., especially in the field of infrastructure construction, as one market.

Nowadays, Changsha's development is far ahead of the other two cities, so it has the certain economic strength to drive the development of surrounding areas. But it is still a question of whether this momentum is sufficient. After years of integrated de-

velopment, the Chang-Zhu-Tan area has become very convenient for intra-regional transportation, and the flow of people between cities is also very frequent. However, it is just that Changsha has close connections with the other two cities, and the connection between Zhuzhou and Xiangtan is not so close.

Therefore, Chang-Zhu-Tan metropolitan area should vigorously develop its own regional characteristics, jointly strengthen the advanced manufacturing industry cluster through adjustment and upgrading, promote the development of industrial differentiation, and achieve specific goals such as resource allocation optimization.

4.1 Optimizing the industrial layout, avoiding homogeneous competition, and improving the rationalization of the industrial structure

The first is to determine the industrial layout of the three core cities of Changsha, Zhuzhou and Xiangtan, and then drive the development of the surrounding areas to form a radiation circle, realize the rationalization of the industrial structure distribution, and strengthen the correlation of the industrial network between cities. For Changsha, the focus should be on the development of emerging industries and high-tech, and at the same time use the regional cultural background of Hunan to create a distinctive Hunan cultural and tourism industry. At that time, it is also necessary to speed up the development of supporting industries such as information and finance; Zhuzhou should give full play to its traditional location advantages in industry and transportation, and focus on promoting the development of manufacturing and food processing industries. As an old industrial city, Xiangtan's current priority is to accelerate new industrialization. [8] In addition, it must strive to develop cutting-edge technology industries and create a number of high-quality brands in order to narrow the economic development gap with Changsha and Zhuzhou.

4.2 Change the development strategy of excessively concentrating resources on central cities, and advocate the sharing of high-quality resources

By learning from the policy experience of regional integration in other mature areas, it is an important guarantee to promote the high-quality development of metropolitan circles that suitable local coordination and governance institutions and their designed development mechanisms. Therefore, relevant government agencies should make concerted efforts to give full play to the overall function of the Changsha-Zhuzhou-Xiangtan metropolitan area, implement and continuously optimize the existing cooperation mechanism, promote the flow and sharing of resources such as talents, technology and capital, and strengthen the multi-faceted cooperation between the three cities, to create a high-quality development environment for a modern metropolitan area.

4.3   Enhancing the space for opening to the outside world and promoting "exogenous" development

Compared with the coastal cities, the Chang-Zhu-Tan Metropolitan Area located in the central part has a smaller frequency of external exchanges and a smaller scale of trade, and the introduction of technology or capital through foreign capital is not enough, so there is a lot of room for growth in the degree of opening up. Therefore, opening to the outside world is essential in the plan for the high-quality development of the Chang-Zhu-Tan metropolitan area. The Chang-Zhu-Tan metropolitan area can not only directly introduce foreign capital, but also strengthen the connection with mature urban agglomerations such as the Yangtze River Delta and the Guang-dong-Hong Kong-Macao Greater Bay Area, which will help to realize the internal and external circulation of the metropolitan area, especially the exogenous circulation, to inject fresh vitality into the high-quality development.

5   Conclusions

Focusing on the high-quality development countermeasures of modern metropolitan area and taking Chang-Zhu-Tan metropolitan area as an instance, this study has mainly analyzed the status and existing problems to prevent the integrated development and then propose some measures to solve them. Drawing on the desk research method, the data captured almost through the officially published documents and statistics. This paper has addressed three different levels of questions, including industrial structure level, resource allocation level and central city effect level. And I have examined the possible solutions in comparison of other mature integrated areas.

This study has several limitations, including the methodological limitations that the information is not directly obtained through independent research. Thus there is a certain lag in timeliness, such as I can not obtain the year book of 2021 from the government websites. Although my study has provided some suggestions for the development of Chang-Zhu-Tan metropolitan area, more empirical studies or considerations may be needed to be conducted to further test and refine these suggestions.

By way of closure to this study, I would like to make the following recommendations for further research. What comes top of the list is that we can concentrate on a certain level to deepen the analysis and put forward more specific countermeasures for this area. Besides, focus more on the leverage effect of the Chinese government policies on economic development, particularly in the directions of the integrated projects among cities among Hunan province.

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