DEVELOPMENT MECHANISM ON CHINA'S INDUSTRIAL DESIGN PARKS THEMED DESIGN ENTREPRENEURSHIP

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ABSTRACT

China has been dedicated to carrying out the innovation-driven social development policy and boosting economic restructuring in the past decade. Design has become a highlight in the context of this policy. China has witnessed the rapid growth of the number of design innovation parks mainly driven by independent innovation, and the gradual improvement of innovation activities and abilities thanks to regional advantages and a good industrial environment. Through a survey of Chinese design innovation parks in the Circum-Bohai-Sea, the Yangtze River Delta and the Pearl River Delta regions, we found out that a hybrid venture & investment operation mechanism capable of incubation and cultivation is the most dynamic development mechanism in the future. Through a survey of the development situation of typical parks in various regions, data gathering and field interviews, this article analyzed and compared different types of park operation mechanisms, and proposed a new mechanism that views design parks as the subject of entrepreneurship and offers venture incubation and industrial supporting services. This new development mechanism on design parks is aimed at guiding local policies and inspiring the design innovation strengths based on regional industrial ecologies. This new type of parks start to get rid of the conventional economic model depending on the rent and policy support, regard venture incubation as development potential, and actively serve as an important hub of social industries. Despite the lack of supporting and integrated in-depth information about the industry chain, these parks have already become a new engine that drives economic transformation and industrial upgrading based on national conditions.

Keywords: Industrial design, design innovation, sustainable economy, design industrial parks

1. INTRODUCTION

China's reform and opening-up policy since the 1980s has changed the production mode and economic structure of the entire society. Notably, the forms of social production based on industrial production have been increasingly enriched. Guided by national strategies, China has constantly explored how to adjust the organizational forms of social production under different conditions, making it a secret weapon that has enabled the whole society to continuously gain new growth momentum and development strengths. By means of such an intrinsic opening mechanism, China has created its status as "the world's factory".

In the Chinese society today, enterprise innovation is no longer a concept based on a production organization. Enterprise innovation contains a concept of high-tech entrepreneurship, involving how to integrate regional advantages to obtain the innovation in forms of social organizations, and how to utilize scientific and technological achievements to form emerging industries with entrepreneurs at the core.

Among them, design industrial parks, one of the forms of social organizations, have developed rapidly in many regions over the past decade. How to obtain entrepreneurship and innovation capabilities has become the main problem that these parks are urgently seeking and actively exploring.

2. BODY

2.1 Design Park Development Process In China

Design innovation parks are a new form of business that has gradually emerged in China's coastal areas with relatively developed industrial production since the early 21st century.

The first phase dated from 2000 to 2006, when major cities such as Beijing, Shanghai, Guangzhou and Shenzhen and several typical cities in coastal regions with rapid economic development built a few "base-type" design parks or centers. These design parks or centers, relying on the background of strong manufacturing, were created with the investment or policy support of the government. Then, the business form of design talents in Beijing, Shanghai, Shenzhen, Guangzhou and other major cities was effectively activated, and a large number of well-known parks, such as the TIT Creative Industry Park in Guangzhou, the Beijing Industrial Design Center, the national design innovation park in Wuxi and the Hefeng Creative Square in Ningbo, sprung up. These parks are very active even today.

The second phase roughly started from 2006 to 2011. In this phase, local governmental departments responsible for economy and science & technology started to value the organic combination between industrial design and local industries, so as to vigorously promote the landing industrial design parks in these regions. At that time, industrial design parks presented features of the service industry, enabling design firms to be associated with the innovation upgrading of local industries and enterprises. Besides, the construction path, approach, policy support and orientation were all centered on design service resources they have received. Some superior design companies, design entrepreneurship programs and platforms, and design education resources got together and played a big role in promoting regional industrial upgrading and transformation. In the late days of this phase, industrial design parks mainly had two features: First, the promotion and display of design resources, as a new driving force for the development of local enterprises, were highly valued by local governments, so that design companies and local enterprises successively established joint development programs; second, local areas started to vigorously dig urban industrial heritage as the physical basis of design parks, and integrate the functions of design culture with those of urban culture, so as to build more comprehensive cluster platforms under the background of urbanization functions, and create a park environment with a thick creative design atmosphere in local cities.

The third phase basically lasted from 2012 to now. At this stage, industrial design parks started to expand their extensions, with functions such as design & culture, design & entrepreneurship and design & talent conversion massively integrated. Driven by local economic and information technology commissions and cultural industry authorities, many cities also started to integrate local economic development goals into the functions of industrial parks. With the investment of high-tech industries and new urban functions, industrial design parks started to combine the connotations such as culture, entrepreneurship and innovation, thus forming new opportunities for policies.

2.2 Industrialization Development Layout In China

The Circum-Bohai-Sea region is a key economic area that has focused on the functions of Beijing, the capital of China, linked northeast China and north China, and covered the Jiaodong Peninsula in the past decade. As a whole, major industrial design parks in this region have developed rapidly.

An obvious feature is the collaborative relationship between a highly active capital and a few platforms in some cities. Beijing has almost outshone other cities with regard to the development of industrial design parks, and led the surrounding cities. The turning point that broke the state of quietness in the surrounding areas was the issuance of the post 2015 Beijing-Tianjin-Hebei joint development policy, when innovation-driven enterprises and start-ups in this region witnessed rapid growth, leading to the association between design resources and the functions of various cities. In this regard, the policy is the key to substantially promoting the development of industrial design parks in this region.

The Yangtze River Delta is the earliest region that developed China's industrial design parks. Due to the huge energy of industrial production, urban agglomerations with Jiangsu, Zhejiang and Shanghai at the core have all built

similar design parks to different degrees. The most obvious feature is that local industrial design parks are highly integrated with the forms of those cities. Industrial design parks in this region concentrate on resources in major cities, such as Shanghai, Suzhou, Wuxi, Nanjing, Hangzhou and Ningbo, and are not subject to the limitations of local industries in terms of the association between design and industry. Building parks as new functional areas or cultural landmarks of a city is the highlight of the construction of industrial design parks in this region. The policy plays a role of auxiliary promotion.

Major industrial design parks in China's central and western regions emerged around 2010. A few major cities along the economic corridor of southwest China, such as Changsha, Wuhan, Chongqing and Chengdu, successively set up parks which were dominated by private investors and supported by local governments. With the proposal of China's Belt and Road Initiative, another important development factor has also been injected into the vision of industrial design parks. Between 2013 and 2017, industrial design parks further drew high attention from all walks of the society, which had broken the relatively lagging look and pattern of China's central and western region. Steadily connecting industrial design parks with urban and industrial functional positioning is the main trend for the development of industrial design parks in this region in the future.

The Pearl River Delta region is also the earliest economic belt since China's reform and opening-up. The construction of industrial design parks in major cities and regions such as Shenzhen, Guangzhou, Foshan and Shunde has been speeding up. Particularly, Shenzhen has integrated urban functions, innovation and entrepreneurship functions and cultural functions, and converted design innovation talents into local industry talents. This city has imported diverse art, cultural and design resources to comprehensively serve regional economic construction. Taking towns and neighborhoods as the unit as well as districts as the basis of construction planning is a highlight of the development of industrial design parks in regions such as Shunde and Dongguan. These industrial design parks have deeply associated with regional industrial development, and highly satisfied the innovation needs of local enterprises and gained the vitality from it. Besides, they suit local conditions and have pragmatic scales. By combining specialties, sectors and industries, they are good at forming industrial design landmarks in local areas, and teaming up local industries to achieve collaborative development. From the perspective of the overall development mechanism in the past decade, the injection of design innovation function into traditional production enterprises still has profound impacts on industrial upgrading and enterprise innovation in Guangdong province.

2.3 Problems for Design Park

Industrial design parks are currently facing some problems in development mechanisms. Firstly, the in-depth development of industrial design parks is not consistent with the policy. Through the survey, we found out that industrial design parks in various regions have already entered the in-depth development stage, which means they have accomplished the gathering of basic factors and the construction of infrastructure, and started to step into a phase of how to form the "self-hematopoietic function".

The development mode that fully depends on subsidy policies has been increasingly questioned, and the development of parks is facing transformation because the initial government-dominated construction has been completed. Due to the over-reliance on governmental support, some parks have already lost their actual radiation energy, and become an empty shell. Other parks are actively exploring further development, and in terms of policy appeal, they prefer to obtain energy and space for the effective expansion of design undertakings from the society. These energy and space will effectively promote ecological development and construction of parks. So far, targeting this appeal, there are few subsidies and support policies capable of improving their information activity. In recent years, policies have become more segmented, but few of them can guide parks to get rid of the subsidy-based economic mode, and encourage them to actively dock with local industries.

Besides, local policies today are still extensive and of the subsidy nature. For instance, a latest policy that financial rewards will be granted as long as parks win world-renowned design awards has sparked heated discussions, which explicitly criticized policy flexibility and guidance issues, as the policy has objectively led to the design indexing. This goes against the objective of improving the ability of design to serve local industries. Furthermore, some incentive policies for design talents issued by local governments only support design talents and their undertakings after they settle down in these regions. This has significantly weakened design parks as a value and role of importing design talents and combining and transferring design resources. The localization of industrial design parks as well as the role of guiding them to be associated with local pillar industries are more important than attracting one or two designers. In addition, a good community life is as equally important as urban space, and should adapt to policies allocated by these cities. But for design parks, these requirements tend to be complicated, and they face different rules of survival in different regions. The promotion will and construction consciousness of policies should be highly consistent with the economically sustainable function of industrial design parks, which is the best choice. This is a key difficulty for the time being.

Secondly, the collaboration between industrial design parks and regional development requirements needs to be enhanced. China's industrial design parks are of strong social construction values and serve as a key task of the government. Having experienced two development phases and entered the third phase, industrial design parks today start to seek separate operations as an economy. To gather the comprehensive capacity and the effectiveness of major construction subjects, industrial design parks must closely combine local development strategies without losing the design innovation consciousness of the whole society as well as the energy of key tasks implemented by policies. A

more flexible intermediate conversion mechanism with powerful convergence is very necessary.

Under the guidance of policies, the key is to promote the formation of organizations in multiple channels, or allow local industrial design parks to convert into such functions. The collaborative development between local development requirements and design parks will facilitate the convergence of design innovation capabilities in local areas in the long run. If design policies are focused on pushing forward the undertakings of such nature, it will cater to the strategic requirements that integrate design into overall regional development.

Finally, the industrial synergy mechanism between industrial design parks and advanced manufacturing is a blind spot of the policy today. If industrial design separates itself from the mode of production, the core of the age, its significance and value will be marginalized. Currently, most policies supporting the construction of industrial design parks are concentrated on attracting excellent design enterprises, and introducing entrepreneurship and innovation programs and subsidies, but few are designed to achieve collaborative development of future industrial architecture of advanced manufacturing. The value of industrial design parks is not simply to serve local areas and promote the upgrading and transformation of traditional enterprises. They should also serve as a pioneer of strategic expansion in face of advanced production requirements and development in the future. The key task is to drive industries with advanced manufacturing and the information industry at the core to form aggregation with design, so as to embrace the future, and promote the development of emerging industries in local areas.

By combining design with advanced manufacturing and their enterprise-oriented development, China's industrial design parks will become a new development model that is able to lead development goals of the age and make them excel in design circles worldwide.

5. CONCLUSIONS

The number of enterprises landing in national industrial design parks tended to get saturated around 2015, when the earliest enterprises basically finished infrastructure building, and economically a few parks had preliminarily explored a new mode of growth featuring design-based enterprise incubation.

Thanks to a good park environment, these enterprises in industrial design parks have witnessed excellent development. In turn, these enterprises have also advocated the reputation and role of parks. Thus, social construction and design culture have obtained a win-win effect. This symbiotic effect should be further deepened. As time went by, these enterprises raised more requirements to physical space. The space of parks is limited, so supportive elements for a virtuous cycle and deep development of these enterprises are new energy for future development. To gain the energy in this sector, they still need to rely on external forces. This is exactly a new opportunity for the development of industrial design parks. They should work together with settled enterprises to become better no matter in mechanism or philosophy. The design energy used in industries will be amplified at geometry levels.

Design Studies is a major humanities discipline in today's society, and its meaning and value are more concentrated on defining and creating the way of living and the quality of survival in the future. This requires talents studying in this discipline to possess profound quality, character and abilities. To achieve this objective, China's education mode cannot simply rely on degree-level education. A long-term and socialized lifelong learning mechanism is the best answer. An operation system that is highly collaborative with innovative talents is a new tendency of modern information functions. A relay-type industrial design talent cultivation park that can meet more requirements from institutions of higher learning and social requirements will become an important weapon that supports China to become an innovation power. Utilizing urban functions, combining industrial needs and integrating talent cultivation will become very explicit characteristics and requirements for the development of industrial design parks in the future. They will form a new platform for shared development. Industrial design parks should regard new design talents as the incubation object of innovation undertakings, attract design talents to serve industries, and promote the adjustment of regional industries as well as the emergence of new forces for industrial innovation. In this way, they can play a role in talent running on such a newborn mechanism.

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