

Chapter 10

The Advantages of Innovation and the Innovative Development of the Special Economic Zones of Guangdong in the New Era



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Abstract In the past 40 years of China's reform and opening-up, with the strong support from the CPC Central Committee, the State Council, the Provincial Party Committee and the Provincial Government, the special economic zones of Guangdong carried out the reform with determination, dared to confront the toughest issues, and through continuous innovation and bold exploration, made great contributions to the reform and opening-up of the country and the socialist construction. In 2018, the CPC Central Committee with Comrade Xi Jinping as the core put forward new requirements for Guangdong and required Guangdong to be "at the forefront of the country in building the institutional mechanisms to promote high-quality economic development, developing a modernized economic system, forming a new pattern of all-around opening-up and creating a model of social governance based on collaboration, participation and common interests". The requirements of "taking four forefronts in the country" are not only the new expectations of General Secretary Xi Jinping for Guangdong, but also the goals of the special economic zones of Guangdong in the new era. These special economic zones should never forget why they started, they should remember their missions, take innovation as the foremost driving force, plan for and advance the construction of special economic zones in the new era and at new starting points and become the pacemakers for realizing the aforesaid requirements in Guangdong Province.

Keywords Special economic zones of Guangdong · Innovation advantage · Innovative development

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1 Challenges and Opportunities for the Innovative Development of the Special Economic Zones of Guangdong in the New Era

In recent years, confronted with the challenges such as a complicated global economic environment, increasingly fierce regional competition and more and more severe constraints on resources and environment, the traditional competitive advantages for the development of the special economic zones of Guangdong have been weakened. Meanwhile, against the background of a new round of scientific and technological revolution and industrial transformation and the development of an economy of innovations all over the world and the comprehensive reform and opening-up in China, the future development of the special economic zones of Guangdong are faced with important opportunities.

(I) Challenges faced by the innovative development of the special economic zones of Guangdong in the new era

1. The complicated global economic environment

After the global financial crisis, the US economy recovered steadily, the economic adjustment of Europe and Japan was slow, the emerging economies were severely divided, the Chinese economy changed from high-speed growth to high-quality development, and the world economy entered a period of low-speed development with in-depth adjustments. In recent years, the competition of the international economic order has become increasingly fierce, the reconstruction of the international trade rule system has been accelerated, the trend of counter-globalization has emerged, geopolitical conflicts have intensified, and the big countries are ideologically competing with each other. In the complicated global economic environment, it is more difficult for the special economic zones of Guangdong to realize a comprehensive opening-up. Uncertainties in the export-oriented development of the special economic zones of Guangdong have increased as China has opened its door wider and wider, with increasing influence on the international economy, constant adjustment of the economic structure, backflow of manufacturing to developed countries, low-cost competition of developing countries' industries, and escalating trade frictions between China and the United States of America. Under such circumstances, if the export-oriented economy is developed based on the traditional industrial structure, it is not only difficult to further expand the developmental space, but may even face considerable risks of being suppressed. The task of transformation and upgrading of the real economy is still very arduous.

2. Increasingly fierce regional competition

With the acceleration of the pace of reform, more coastal open cities (1984), coastal economic open areas (1985), and national new areas (1992) joined the ranks of those opening up. Especially after China's accession to the WTO (2001) and the "income tax integration" (2008), special economic zones no longer exclusively enjoyed the

preferential treatment in reduced tax rates and simplified procedures of approval. More and more cities and regions were conferred with independent legislative power. In March 2015, with the amendment of the *Legislation Law*, the legislative power at the municipal level was expanded from the original 49 large cities to all 284 district-based cities. This meant that the 49 large cities that originally exclusively enjoyed the legislative privilege would gradually lose the dividends of the municipal-level legislative power. In the new era, China launched many regional developmental strategies, such as the Strategy for the Development of the Yangtze River Economic Belt, the Strategy for Beijing-Tianjin-Hebei Integration, the Strategy for the Rise of Central China, the Western Development Strategy, the Strategy for Cross-Strait Economic Cooperation, and the Northeast Revitalization Strategy. Hence, the “test fields” for the opening of the economic system reform were formed from coast to inland and from eastern to central and western regions. On April 13, 2018, General Secretary Xi Jinping announced in the speech at the 30th anniversary of the establishment of the provincial special economic zone in Hainan that the CPC Central Committee decided to support the construction of the pilot free trade zone on Hainan Island, and support Hainan in gradually exploring and steadily boosting the construction of a free trade port with Chinese characteristics. The increasingly fierce regional competition put the special economic zones of Guangdong under the unprecedented pressure of innovative development.

3. More and more severe problems of resources and environment

After nearly 40 years of rapid development, the special economic zones of Guangdong are being confronted with increasingly serious problems regarding land, energy, the environment and the population. It is urgent to solve the problem of redevelopment under the constraints of resources and environment. There are too many people with few lands and the pollution is too serious to continue; the land and space are too limited to be sustainable; the shortage of energy and water resources is very severe and the environmental carrying capacity is overly used. A lot of “hard constraints” can determine the “success or failure” of the special economic zones. Taking Shenzhen as an example, with the continuous reduction of land for development and utilization, the investment cost per unit area of land-based development continues to rise, which has constituted a certain obstacle to attracting large domestic and foreign enterprises to settle in. It is difficult to meet the needs of domestic and foreign investors, and the space for industrial development is largely restricted. Due to the rapid rise in housing prices and the high cost of living, it is difficult for the special economic zones of Guangdong to attract and retain high-level innovative talents. The insufficiency of high-quality, high-level and innovative talents restricts the innovative development of the special economic zones of Guangdong. Against the background of economic development entering a new era, the traditional industries of the special economic zones of Guangdong, especially the manufacturing sector, are faced with the double squeeze of pacemakers in front and chasers behind them. Developed countries accelerate the return of the manufacturing sector, while more developing countries attract the industrial transfer by lower costs. With the disappearance of demographic dividends, rising factor costs, and increasing land and environmental constraints, some

comparative advantages in the past are no longer obvious, and a more advanced modern industrial system needs to be built.

(II) Opportunities for the innovative development of the special economic zones of Guangdong in the new era

1. A new round of scientific and technological revolution and industrial transformation are about to set sail

The next 5 to 10 years is a crucial period for the new round of global technological revolution and industrial transformation from setting sail to springing up like mushrooms. The technologies such as IoT, cloud computing, big data and artificial intelligence will be widely infiltrated into various economic and social fields, and important breakthroughs will be made in 3D printing, robotics and intelligent manufacturing, metamaterials and nanomaterials. The new bio-economy is expected to bring human production and life to a new world, the new energy revolution is changing the existing international landscape of resources and energy, and the creative economy is emerging as a new model of development. The mass technological revolution characterized by intelligence and greenness will lead to major adjustments in the international industrial division of labor. The scientific and technological revolution represented by information technology and “Internet+” gives birth to the new economic model and relations in production organizations, and will effectively promote the accelerated transformation and upgrading of the special economic zones of Guangdong. They are faced with both a rare historical opportunity for catching up and surpassing and a severe challenge of the widening gap. Only by gaining a strong foothold in the tide of scientific and technological innovation can we act on our initiative for development.

2. The country's strategies for regional development overlap and converge

The special economic zones of Guangdong are situated at the intersection of China's strategies for regional development such as the “Belt and Road”, the Guangdong-Hong Kong-Macao Greater Bay Area, the pilot free trade zone and independent innovation demonstration zone. Their strategic position in building the highlands for reform and opening-up becomes increasingly prominent due to the convergence of multiple preferential national policies. The special economic zones of Guangdong are faced with not only the country's historical opportunity to construct the “Belt and Road” and being important hub cities of the Guangdong-Hong Kong-Macao Greater Bay Area, but also the country's developmental opportunity to vigorously promote the development of pilot free trade zones and independent innovation demonstration zones. These opportunities have provided important conditions for the accelerated innovative development of special economic zones. As significant strategic hubs for the construction of the “Belt and Road” and key windows for China to participate in economic globalization and opening-up to the outside world, the special economic zones of Guangdong in the new era have become important components of the national regional developmental strategies and crucial regional fulcrums for Guangdong to construct the bidirectional platforms for “going global” and “bringing

in”. The national deployment of constructing key platforms such as a pilot free trade zone and a national independent innovation demonstration zone in the Pearl River Delta, promoting institutional innovation and accelerating the reform experiment of all-around innovation is conducive to the accelerated transformation of the economic developmental model, the realization of industrial upgrading and innovative development, and the fostering of new growth engines by the special economic zones of Guangdong.

3. The national strategy of innovation-driven development is fully advanced

Being innovation-driven means that innovation becomes the primary driving force for development. This is a major national strategy of development established by the central government at the new stage of development according to the overall situation, facing the world, focusing on the key and driving the whole. At present, China’s economic development has entered a new normal, the traditional momentum of development is being continuously weakened, and the extensive growth model is difficult to sustain. The innovation must be relied on to drive development forward and foster new economic growth poles. For one thing, China’s innovation-driven development has already laid the foundation for acceleration. There is considerable room for innovation by the combination of the large size of the market, the well-developed industrial system, a diversified consumer demand and improvement in the efficiency of innovation in the Internet era. For another, many industries in China are still at the low-end of the global value chain. Some core technologies of vital importance are controlled by other countries. Developed countries still occupy the leading edge in science and high-tech fields. China’s science and technology reserves that support industrial upgrading and lead future development need to be strengthened. The special economic zones of Guangdong should continue to “blaze a trail” and work hard to explore new paths for innovative development in the new era, and construct new economic growth poles for Guangdong in the next decade or in a longer period of time.

2 The Advantages of Innovation of the Special Economic Zones of Guangdong in the New Era

After nearly 40 years of unremitting efforts and bold exploration, the special economic zones of Guangdong have gained their own innovative advantages in early and pilot implementation, market orientation, industrial innovation, coordinated opening-up and innovation fault tolerance, thus laying a solid foundation for restoring the glory of the special economic zones of Guangdong in the new era.

(I) The advantage of early and pilot implementation

Early and pilot implementation refers to allowing some regions to gradually accumulate the experience of reform by legal innovation within the framework of the existing

legal system. Early and pilot legislation is the biggest institutional advantage of the special economic zones of Guangdong. Especially when it is necessary to make breakthroughs and innovative reforms in some fields, the legislative power of the special economic zones can be flexibly applied to transform the institutional advantages of legislation into the driving force of development and facilitate the comprehensive deepening of the reform. Unlike that of district-based cities, the legislative power of special economic zones belongs to a complete legislative power that does not need to be reported to the provincial people's congress for approval. As long as it conforms to the Constitution and the basic principles of laws and administrative regulations, the specific provisions of relevant legislation may be amended and those amendments can be reported to the Standing Committee of the National People's Congress, the State Council and the Standing Committee of the Provincial People's Congress on record.

Taking the Shenzhen Special Economic Zone as an example, one of the original intentions of the Standing Committee of the National People's Congress is to authorize the city to take a step forward in legislation and explore and provide experience for the national legislation. In the 25 years of legislative practice, a large number of regulations of the special economic zones were enacted by the Shenzhen Municipal People's Congress and its Standing Committee by learning from the successful experience of Hong Kong and foreign countries in the absence of legislative precedents in China. Among the 220 regulations that have been issued, 105 belong to the category of early and pilot implementation and 57 belong to the category of innovation and change. In the category of early and pilot implementation, 41 regulations were issued earlier than the promulgation of the national laws and administrative regulations, so they have provided valuable experience that can be replicated and expanded to the country's enactment of relevant regulations. The remaining 64 regulations never overlap with any national laws and administrative regulations, thus not only filling gaps at the national legislative level, but also providing an effective reference for the local legislation of brother provinces and cities. Under the guidance of regulations, the Shenzhen Special Economic Zone has created more than 1,000 "tops in China" and has become a well-deserved "test field" for institutional reforms.

At the early stage of the construction of the special economic zones, the central government gave many preferential policies to Guangdong, which played a critical role in boosting the development of the special economic zones. With the continuous deepening of the country's reform and opening-up, these special preferential policies have become universal policies, and the legislative power of the special economic zones has become a major institutional advantage now. Although the national legislation is gradually improving, the status and role of the legislation by the special economic zones remain unchanged and this mission continues. Of course, as the reform deepens in the new era, the difficulty of passing legislation and the quality requirements for the legislation of the special economic zones will become greater and greater. As far as the establishment of the institutional mechanisms for high-quality development is concerned, the task of institutional innovation is still arduous, and there is ample room for the legislation of the special economic zones in the future development. The special economic zones of Guangdong should continue to dare to

take risks, pioneering and enterprising, take advantage of the early and pilot implementation of the special economic zones in the new era, focus on institutional innovations, make good use of the legislative power of the special economic zones, explore and build institutional mechanisms conducive to high-quality economic development, and advance the reform and innovation of the special economic zones to a new level.

(II) The advantage of market orientation

The special economic zones of Guangdong are the pacemakers, pioneering places and experimental areas of the reform and opening-up, with their active market economy, abundant private capital and superior environment for entrepreneurship and innovation. Guangdong is one of the regions that reach the highest degree of marketization in China and have a relatively complete market system and basis for the allocation of resources by the market. At present, open innovation is an important trend in the context of economic globalization and innovation networking. As the cross-border movement of information, technology, knowledge and talents becomes increasingly active, various factors and resources for innovation are accelerated to become freely allocated on a global scale. Especially against the background of a new round of scientific and technological revolution and quickened industrial transformation, high-end innovation factors and resources will flow faster and more directional throughout the world. Where the environment is good, the innovation factors flow there. The special economic zones of Guangdong have entered a new stage of innovative development. The acquisition of innovation factors begins to change from introduction to cross-border movement of “bringing-in” and “going global”. Open innovation is conducive to the absorption and integration of the world’s resources for innovation by the special economic zones. In the new era, the special economic zones of Guangdong should adhere to the market orientation, give play to the market-based advantage of special economic zones, grasp the market rules of technological innovation, and let the market be an important means of optimizing the allocation of innovation resources, so that enterprises become the primary force of technological innovation. Meanwhile, the government’s role in macroscopic guidance can be effective, the institutional mechanism can be improved for the allocation of scientific and technological resources for innovation by the market and the cross-border movement of factors of innovation can be encouraged. Thus, the special economic zones can be actively integrated into the global innovation network and make full use of the domestic and international resources and market for innovation to accelerate the innovation-driven development.

(III) The advantage of industrial innovation

At the initial stage of the special economic zones of Guangdong, enterprises were run in the form of “processing with supplied materials, assembly with supplied parts, processing with supplied samples, and compensation trade”. Many of them gradually developed into the “three types of foreign-funded enterprises” with self-made products. Taking the Shenzhen Special Economic Zone as an example, from processed

in Shenzhen to made in Shenzhen and then to created in Shenzhen, the economy of Shenzhen began with the “processing with supplied materials, assembly with supplied parts, processing with supplied samples, and compensation trade” at the lowest end of the manufacturing sector, then it went through the labor-intensive original equipment manufacturing process and became one of the cities in China with the most successful industrial upgrading and the most effective high-tech development. In 2017, Shenzhen’s total R&D investment accounted for 4.13% of its GDP, close to the highest level in the world, such as that of South Korea and Israel; its PCT international patents reached 20,400 pieces, accounting for 43.1% of the national total and ranking first for 14 consecutive years. In addition, Shenzhen surpassed Germany (18,900 pieces) and South Korea (15,700 pieces) by only one city and was about four times that of Beijing, which ranked second in China (5,100 pieces). Innovation had already become an important support for Shenzhen’s development. During the development of high-technology in Shenzhen, the successful holding of the China High-Tech Fair since 1999 has played an extremely important role in the links from product R&D to rapid marketization. Of course, the reason why Shenzhen could enter the virtuous circle of industrial innovation and become a city in China with the most intensive scientific and technological innovations was also inseparable from the complete industrial chain in the Pearl River Delta region, the correct guidance and encouragement of the Shenzhen government, and active enterprise R&D. The US sanctions against ZTE in 2018 proved that the core technology had become the biggest hazard to industrial development of China. The developmental history of China in the past few decades has demonstrated that the core technology could neither be exchanged by the market, nor bought even with money. More importance should be attached to basic scientific research, thus filling the gap in the ability for innovation. Therefore, the special economic zones of Guangdong in the new era should give play to their advantages in industrial innovation represented by the Shenzhen Special Economic Zone, with scientific and technological innovation as the strategic support, advance the development of innovation and clustering, accelerate industrial transformation and upgrading, build a high-quality and efficient modern industrial system, and realize better benefits of economic development.

(IV) The advantage of coordinated opening-up

Adjacent to Hong Kong and Macao and facing the South China Sea, the special economic zones of Guangdong are important strategic hubs for the construction of the “Belt and Road” and the Guangdong-Hong Kong-Macao Greater Bay Area, core areas for China to participate in economic globalization and important windows of opening-up to the outside world, thus enjoying an extremely important strategic position. At the initial stage of the establishment of the special economic zones in Guangdong, they took advantage of the geographical location neighbouring Hong Kong and Macao, rapidly obtained external capital, advanced technology and management expertise through external introduction and internal linkage, and made important contributions to exploring the construction of the socialist market economy and forming the economic pattern of all-around opening-up. In the new era, the special economic zones of Guangdong should not only continue their traditional advantages

of opening up to the outside world and carry out the reform with the courage and spirit of “blazing a trail”, but also seize the historical opportunity of the convergence of regional developmental strategies such as the “Belt and Road”, the Guangdong-Hong Kong-Macao Greater Bay Area, the National Independent Innovation Demonstration Zone in the Pearl River Delta Region and the Comprehensive Development Plan for the Coastal Economic Belt in Guangdong Province, give play to its advantage of coordinated opening-up, enhance the open cooperation among the special economic zones of Guangdong, among the pilot free trade areas of Guangdong and with Hong Kong and Macao, accelerate the development of a higher level of an open economy and build a new pattern of comprehensive opening-up.

(V) **The advantage of fault tolerance for innovation**

The market-based competition in the 40 years of reform and opening-up leads to the formation of an innovation culture in the special economic zones of Guangdong. The open, diversified and inclusive innovation culture has a great advantage of fault tolerance. It is the unique innovation culture that respects all of the aspirations of innovation that are conducive to social progress in the special economic zones, encourages activities of innovation, brings innovative abilities into play, recognizes achievements in innovation, and thus creates a good atmosphere of “encouraging innovation and tolerating failure”. Looking back, at the initial stage of the special economic zones of Guangdong, virtually every reform was carried out by violating “regulations”, “laws” and even “the Constitution”. At present, the sharing economy is growing rapidly across the world, entrepreneurship and innovation based on the Internet are booming, new models and new business patterns are emerging and the organizational structure of entrepreneurship and innovation are enriched. Advancing the program of “Mass Entrepreneurship and Innovation” is an important path to enhancing new growth drivers and improving the quality and efficiency of development. In the new era, the special economic zones of Guangdong should continue to give full play to the advantage of innovation fault tolerance, optimize the entrepreneurial and innovative ecology with a more inclusive attitude and more active policies, accelerate the creation of a platform for mass entrepreneurship and innovation, and provide new room for entrepreneurship and innovation.

3 Policy Suggestions for Accelerating the Innovative Development of the Special Economic Zones of Guangdong

Faced with new opportunities and challenges brought by the new round of scientific and technological revolution and industrial transformation in the world, the more and more numerous constraints on resources and environment and the increasingly fierce regional competition under the situation of economic new normal, as well as the historical task and requirements for “taking four forefronts in the country”, in the

new era, the special economic zones of Guangdong should stand at a higher starting point, seize opportunities, overcome difficulties, keep pace with the times and gain new advantages, strive to make new breakthroughs in innovative development, and carry out new explorations for innovation in the reform and opening-up of the country and even the province.

(I) Enhance the advantage of early and pilot implementation and build the institutional mechanisms to boost high-quality economic development

First, the special economic zones of Guangdong should take the lead in creating a market-oriented international and legalized business environment. They should apply the legislative power of special economic zones well and adequately, and clean up, abolish and amend the laws of market entities incompatible with the development of a market economy, as well as the laws and administrative regulations that hinder the development of the factor market for labor, capital, land, property rights and technology. The reform of institutional mechanisms should be pushed through, such as the reform of the pilot free trade zone, the customs clearance reform, the reform of the commercial system, and “delegating power, streamlining administration and optimizing government services”, and the relatively mature and effective reform measures should be upgraded to the regulations of the special economic zones. They should actively strive for state support and explore the construction of free trade ports in Guangdong. In pursuance of the market rules and the principle of not doing anything not authorized by law, they should benchmark with developed countries and regions such as Singapore and Hong Kong, regulate the open and transparent operation of administrative power and confine the exercise of power within an institutional cage. Second, the special economic zones of Guangdong should take the lead in creating a fairly competitive environment that stimulates innovation. They should break through unreasonable access barriers restricting the development of new technologies, new products and new business models, formulate and implement the negative list of industry access, and support and encourage the development of new business patterns and models. They should also carry out the reform of comprehensive intellectual property management, accelerate the construction of the working mechanism for intellectual property protection, trade secret protection and trial of intellectual property rights and the legal system on investigating infringements of intellectual property rights, improve intellectual property incentive policies, and increase the proportion of the transformation of researchers’ achievements. The intellectual property system should become the basic guarantee for stimulating innovation. Innovative development in the new era is changing with each passing day. New technologies, new products, and new things are emerging one after another. The legislation on innovation must be predictive and inclusive. In the process of law enforcement, the content of relevant legal provisions should be continuously enriched and improved, thus creating conditions for innovation to drive high-quality economic development. Third, the special economic zones of Guangdong should take the lead in creating an environment for high-quality and efficient green low-carbon development. They should adhere to the green and low-carbon development, improve the plans for ecological construction, the system of an ecological civilization

and a carbon trading system, formulate a negative list of environmental protection access, impose stricter responsibilities on polluters, and establish the sound mechanisms for environmental credit system, mandatory disclosure of information and severe punishments. They should also improve the third-party environmental protection system, realize the modernization of the governance system and governance capacity of the ecological environment, and accelerate the construction of a system for the governance of the ecological environment dominated by the government, with enterprises as the main entities and the joint participation of social organizations and the public.

(II) Create a new advantage of market orientation and absorb and integrate domestic and international resources for innovation

First, the special economic zones of Guangdong should perfect the technological innovation system dominated by enterprises, oriented by the market, with the deep integration of government, industry, universities and research institutions. Enterprises should truly become the mainstay of decisions on technological innovation, R&D investment, organization of scientific research and the transformation of achievements, so as to avoid the over-administration of scientific and technological resources. The special economic zones should give play to the guiding role of the market in the R&D direction and technical route of competitive industries and in the allocation of various resources for innovation. A sharing and interactive innovation network must be built to enhance the collaborative innovation ability of the government, industry, universities and research institutions. Second, the spirit of entrepreneurship must be stimulated and carried forward. They should protect the legitimate rights and interests of entrepreneurs, such as property rights, innovation rights and independent operation rights, cultivate excellent entrepreneurs with a global vision and innovative lines of thought, and give full play to the role of entrepreneurs in the allocation and integration of resources for innovation. Third, they should improve the mechanism of the market determining the factor prices, urge enterprises to transform from reliance on excessive consumption of resources and energy and low-cost competition to reliance on innovation and differentiated competition, thus breaking through the constraints of resources and the environment. Fourth, the special economic zones of Guangdong should build a higher-level open innovation platform. They should actively strive for the support from the central government to embed the key projects of open innovation into the overall national strategy of opening up to the outside world, or strive for the early and pilot implementation of important projects of the national science and technology opening-up. The friendship channels of high-level visits, official diplomacy and friendly exchanges should be utilized to raise the level of the open innovation of the special economic zones from the perspective of national diplomacy. Moreover, open innovation should be advanced through strengthening the economic and trade cooperation with international friendship cities, and enterprises in the special economic zones should be encouraged to allocate international resources for innovation and expand overseas business through international friendship cities.

(III) **Increase new advantages in industrial innovation and construct a more advanced modern industrial system**

First, an international scientific and technological industrial innovation center should be built with high standards. Aiming at the forefront of international science and technology, the special economic zones of Guangdong should focus on the major needs of national development, accelerate the construction of innovative platforms such as important scientific and technological infrastructures, basic research institutions and manufacturing innovation centers, and upgrade their capacity for innovation and fill the gaps in original innovation capabilities through the introduction of new research institutions. The links, exchanges and cooperation with international high-quality higher education resources must be enhanced, such as universities in Hong Kong and Macao. The high-quality higher education resources at home and abroad should be vigorously introduced to improve the capabilities of original innovation and integration of important technical systems. With the Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone and the Guangzhou-Shenzhen Science and Technology Innovation Corridor as the core areas, they should strive to achieve a number of advanced original innovations and build a powerful engine for global technological and industrial innovation. Second, the level of the development of modern industrial sectors should be exalted. Centering on the modern industrial innovation clusters with strategic emerging industries, modern service sectors and advanced manufacturing as the core, the special economic zones of Guangdong should accelerate their transformation from industrial clustering and production bases to bases for talent attraction and innovation. The land supply policies must be formulated and improved to guarantee land use by modern industries. The large project-driven and chain expansion actions should be taken to accelerate the settlement of key projects. The traditional advantageous industries should be developed towards the high-end, considerable efforts should be devoted to the development of high-end manufacturing, intelligent manufacturing and green manufacturing, and the advanced manufacturing clusters such as the electronic information industry and the new energy and biological industry should be incubated to lay a solid foundation for the real economy. Intelligent manufacturing should be taken as the core and main direction for boosting the transformation and upgrading of manufacturing. With the support of building broadband-secure Internet infrastructures, the “Internet+ manufacturing” is actively advanced to expedite the transformation and upgrading of manufacturing. Policies and measures should be issued to support the development of innovation talents in modern industrial sectors, and public services for talents such as housing, education and medical care should be perfected, so that more competitive talent-oriented special zones will be constructed. Third, the financial support for technological innovation must be effective. The special economic zones should quickly implement the funding plans for integrating science and technology with finance, vigorously develop the technology finance, promote the deep integration of the Internet, big data, artificial intelligence and the real economy, build financial holding platforms, broaden the financing channels for innovative enterprises, and improve the effectiveness of finance serving the real economy. Diversified means of

investment are encouraged, the government investment model should be optimized and the support of science and technology funding should focus on the weaknesses in the innovation chain instead of general project support. Green finance should be actively developed, and green credit should be provided for projects such as energy conservation and emission reduction, clean production and circular economy, so as to support green development.

(IV) Build the advantage of coordinated opening-up and accelerate the formation of a new pattern of comprehensive opening-up

First, an open economy of a higher level must be expedited by coordination with Hong Kong and Macao. Taking the opportunity of the developmental plans of the Guangdong-Hong Kong-Macao Greater Bay Area, the special economic zones of Guangdong should strive to incorporate more projects in the special implementation plans for scientific and technological innovation and infrastructure. They should take systematic docking and institutional innovation as the core, and vigorously propel the coordinated opening-up and complementary development with Hong Kong and Macao in key cooperation fields. To be specific, the Shenzhen Special Economic Zone should work with Hong Kong to boost the development of the Lok Ma Chau Loop, speed up the construction of the Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone, drive the financial innovation of Qianhai, and actively strengthen the docking with Hong Kong in financial talents, financial rules and regulatory mechanisms. The Zhuhai Special Economic Zone must seize the opportunity of Hong Kong-Zhuhai-Macao Bridge open to traffic to promote the construction of the Zhuhai-Hong Kong-Macao Logistics Cooperation Park, build the bridge economic zone and create the Hengqin International Leisure Tourism Island. Second, the developmental plans of the China (Guangdong) Pilot Free Trade Zone should be optimized at a high level. Sticking to the direction of “pressing home advantages, serving the country and facing the world”, the special economic zones of Guangdong should expedite the construction of the pilot free trade areas in Shenzhen Qianhai, Zhuhai Hengqin and Guangzhou Nansha, incubate and expand new business patterns and models such as cross-border e-commerce and trade in services, enhance the overall, systematic and coordinated opening-up of the China (Guangdong) Pilot Free Trade Zone, and support Shenzhen in exploring the construction of a free trade port. The pioneering area for the coordinated reform of the pilot free trade zone in Guangdong should be explored. National development zones and industrial cooperation parks with institutional advantages and advantageous platform functions in Guangdong should be selected to participate in the coordinated reform of the China (Guangdong) Pilot Free Trade Zone. Shantou should be encouraged to make use of its advantages of characteristic overseas Chinese pilot zone and bonded areas, and strive to join the pilot free trade zone as soon as possible. Third, the level of external connectivity must be strengthened. Taking the opportunity of advancing the “Belt and Road” and constructing important hub cities in the Guangdong-Hong Kong-Macao Greater Bay Area, the special economic zones of Guangdong should strengthen their open cooperation with surrounding areas and with a focus on infrastructure connectivity and industrial cooperation, jointly improve

the level of external connectivity. Shenzhen should take the initiative in cooperating open-mindedly with neighbouring cities, such as Hong Kong, Guangzhou, Dongguan, Huizhou and Shanwei, build the Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone and the Guangzhou-Shenzhen Science and Technology Innovation Corridor as first-class innovation belts to promote the deep integration and development of the “3 + 2” economic circle of Shenzhen, Dongguan and Huizhou, and construct the Shenzhen-Shanwei Special Cooperation Zone from a high starting point. Zhuhai should deepen its cooperation with Zhongshan, Jiangmen and Yangjiang, speed up the improvement of the supporting facilities of the Hong Kong-Zhuhai-Macao Bridge and connected road network, actively advance the connection with the Shenzhen-Zhongshan Expressway by the northern extension section of the Jinqin Express Route, assist the preliminary work on the Zhuhai-Jiangmen-Zhaoqing High Speed Railway and strive for including the Shenzhen-Zhuhai High Speed Railway in the related national and provincial plans. Shantou should propel the integration of Shantou, Chaozhou and Jieyang, accelerate the construction of the Shantou-Chaozhou-Jieyang Harbour Air-Railway Economic Cooperation Zone, and build a characteristic city cluster with integrated development.

(V) Gain the new advantage of innovation fault tolerance and optimize the ecological environment for entrepreneurship and innovation

First, the cultural and social atmosphere of being bold to explore, encouraging innovation and tolerating failure should be advocated. The special economic zones of Guangdong should continue to emancipate the mind, remove unreasonable constraints on entrepreneurship and innovation according to the principle of doing anything that is not prohibited by the law, clean up and abolish the rules and regulations that hinder entrepreneurship and development, and create a relaxed and convenient access environment. Second, more efficient, transparent and high-quality public services should be provided for entrepreneurship and innovation. Following the new trend of entrepreneurship and innovation in the age of the Internet, the special economic zones of Guangdong should strengthen the integration of advanced technologies such as Internet and big data, and develop a comprehensive service platform for open innovation and entrepreneurship. They should innovate the financial input methods, make full use of the guiding function and leverage effect of financial funds, and stimulate the input of various factors and resources to entrepreneurship and innovation, such as banks, insurance, securities and equity funds. The public service platforms and entrepreneurship bases for small and micro enterprises should be vigorously advanced and the government procurement of services should be increased. Third, makerspace platforms should be developed. The coordinated development of makerspaces and emerging industries should be taken as a foothold for boosting the construction of makerspaces. Emphasis should be laid on the support for various new types of specialized makerspaces in strategic emerging industries, modern service sectors and technological finance, thus leading to the positive interaction between makerspaces and emerging industries. The layout of makerspaces should be optimized to construct makerspaces with distinctive characteristics. Based on the effective integration of existing factors and resources, a batch of makerspaces should be

built at low cost, with convenience, total factors, diversification and opening, as well as with distinctive features. Disorderly introduction and homogenized construction should be avoided in the same region. Leading and backbone enterprises in different industries and eligible research institutes should be encouraged to build makerspaces around their orientation of industrial development and create open platforms for innovation and entrepreneurship.