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THE PROMOTION OF SCIENCE AND TECHNOLOGY INNOVATION FOR MODERN SOCIO-ECONOMIC DEVELOPMENT

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A country's science and technology innovation capability and its economic development are mutually reinforcing, as innovation in science and technology will drive rapid economic development, and the economy can provide strong support for science and technology innovation. In recent years, China has attached great importance to the great impetus of science and technology innovation to economic development, and proposed the "innovation-driven economic and social development strategy," which has been repeatedly emphasized in China's government work reports. This paper intends to analyze China's national conditions, further point out the importance of science and technology innovation to strengthen comprehensive national power, and elaborate the main problems facing science and technology innovation in China at present, and finally propose specific measures to facilitate the development of science and technology innovation.

Keywords: science and technology innovation; drive; development

The productivity of a country is a measure of its economic growth potential. And the quantity and quality of labor and capital, as well as the level of science and technology and the ability to apply science and technology determine the level of productivity. The realization of productivity is dependent on factor inputs, and the quantity and the quality and efficiency of various factor inputs combined with each other determine the economic growth. We should also see that the increase of factor inputs can certainly bring economic growth, but the resources of production factors are limited, and it is difficult to achieve sustainable economic growth simply by relying on factor inputs. The development of the economy through factor inputs often leads to two problems: one is the diminishing returns of factors of production, if the factors of production input after the diminishing returns of factors, then economic development will also stop; second is the scarcity of resources constraints, economic development must be a factor or resource shortage, economic development is therefore faced with bottlenecks. How to solve the two problems? The Theory of Economic Development states that development is a change in the trajectory of the economic cycle, and that "change" is innovation. Michael Porter According to Michael Porter's "Theory of National Competitive Advantage", there are four stages of national economic development: production-driven,

investment-driven, innovation-driven and wealth-driven, with innovation-driven being the more advanced stage of development.

From the empirical research, the United States and Germany in the 1950s increased the proportion of science and technology factors in the factors of production, it greatly improved the country's comprehensive national power. Facts have proved that the direction and speed of scientific and technological innovation directly affects the level of profitability of the output after the factor input. In line with the development of the times and the economy, China has proposed in the plan to "promote economic development to rely more on science and technology innovation-driven", which is based on the need to take major science and technology as a breakthrough and accelerate the establishment of a science and technology innovation system with enterprises as the mainstay. Science and technology innovation is a strategic support to improve social productivity and comprehensive national power, and must be placed at the core of the overall national development.

Implementing innovation-driven development. Since the 1950s, countries around the world have explored the path of industrialization and modernization. Some countries mainly rely on the advantages of natural resources to increase national wealth, such as the Middle East oil resources powerhouse long-term reliance on non-renewable energy to develop their economies: some countries are mainly dependent on the capital, markets and technology of developed countries, to be the processing base of developed countries, such as some Latin American countries, this development model of relying on others has led to the "middle-income trap" However, there are also countries that take science and technology innovation as their basic strategy to form increasingly strong national competitive advantages and international discourse, which are internationally known as innovative countries. For example, relying on frontier science and technology strategies developed at different times (nuclear energy program in the 1950s, Apollo program in the 1960s, Star Wars program in the 1980s, Information Superhighway program in the 1990s, etc.), the U.S. has become the ruler in each round of frontier technological change. China lags behind the United States, Europe and other developed countries and regions in terms of science and technology innovation.

The lack of scientific and technological innovation has led to many restrictions on the development of China's three major industries. For example, "the weak foundation of agriculture is related to the backwardness of China's agricultural productivity and low level of science and technology. China's agricultural labor productivity is only 1% of that of the United States, which means that the productivity of a hundred Chinese laborers is only equivalent to that of one American. The core technology of agricultural development is still restricted by others. China is still acting as the world's factory in industrial production, a pattern that makes it vulnerable to international competition.

The three bottlenecks facing the construction of science and technology innovation system. China's rapid economic development after the reform and opening up relies on low cost, low technology, low price, low profit and low-end market, and has paid a heavy price of high energy consumption, high material consumption, high emission and high pollution. With the disappearance of the demographic dividend, land finance crisis, natural resource scarcity, factor-driven development model is unsustainable. If we do not rely on science and technology innovation to drive economic development, China will not be able to get out of the middle-income trap. But at the same time, we should also see that there are still many defects in the construction of science and technology innovation system.

China's science and technology foundation is weak, and the investment in science and technology is low. At present, there are about 20 innovative countries recognized in the world, they invest more than 2% of GDP in R&D, contribute more than 70% to economic growth in science and technology, and have less than 30% of foreign science and technology dependence. Compared with the United States and Germany, from the overall R&D investment as a proportion of GDP, since 2000, the proportion of R&D expenditure in the United States rose from 2.71% of GDP to 2.79% in 2008, and Germany rose from 2.45% to 2.82% in 2009, while China's national R&D in science and technology accounted for 0.02% of national income in 2014, 0.02% in 2013 and 0.019% in 2012, the investment in R&D is far lower than that of developed countries.

The motivation and ability of enterprise independent innovation is obviously insufficient. The most fundamental motivation for innovation comes from the pursuit of profit. Large Chinese state-owned enterprises tend to easily obtain various preferences including policies and funds from the state, leading them to often pay insufficient attention to the market and lack the motivation to innovate. Private enterprises, on the other hand, despite their complete dependence on the market for survival, have weak industry regulation, and shortcomings in industry quasi-human, financial, and national policy support, leading to a lack of motivation or ability to innovate.

Scientific research results are idle and wasteful. According to the 2012 China Enterprise Innovation Evaluation Report, 70% of China's scientific research efforts are outside the enterprises, and the scientific achievements are idle and wasteful, which greatly hinders the innovation development of the industry. Zhang Xiaoqiang, deputy director of the National Development and Reform Commission, revealed at the China Economic Conference (2013-2014) that the conversion rate of China's scientific and technological achievements is only 10% on the right, far below the level of 40% in developed countries. 2011, China has surpassed the United States and Japan to become the world's most patent-applying countries, but the phenomenon of idle scientific and technological achievements and waste of scientific and technological resources is serious. The industrialization rate is less than 15%. Science and technology and the economy" two problems have been plaguing us for a long time."

The main reason is that China's science and technology evaluation and award system is dominated by the government. Science and technology evaluation and award action is a baton for many scientific and technological personnel, and this baton directly determines the behavior orientation of scientific and technological personnel. China's science and technology awards move to emphasize papers over practicality, quantity over quality, and awards move over transformation as a result, resulting in scientific researchers focusing on the number of papers and patents, award ranking; focusing on awards move and personal title evaluation, job promotion, salary treatment, academician selection, etc., while not paying much attention to the transformation and application of innovation results, resulting in many scientific research results won the award and that's the end of it. Contrary to the advanced science and technology and economically developed countries, China lacks an independent third-party institution for science and technology evaluation. The lack of corresponding legal regulations for science and technology evaluation, especially the lack of severe supervision and disciplinary mechanisms.

Specific initiatives of science and technology innovation. Science and technology innovation-driven development is to create "first mover advantage" development, the rapid development of the "Four Little Dragons of Asia" in the last world is a successful case, their development speed has surprised the world. With the obvious acceleration of global knowledge creation and technological innovation, the deep integration of science and technology innovation and industrial change, and the more intense international competition with science and technology innovation as the core, taking the innovation-driven development path has become the common choice of all countries. In the cooperation, the main position of enterprises is vigorously promoted. From the international perspective, to improve the comprehensive national power of a country, it is necessary to vigorously develop the economy. The development of economy must vigorously improve the innovation ability of enterprises and the main position of innovation. Enterprises are the most sensitive to the market by directly participating in competition, and are the most effective in effectively combining scientific research with the market. The stronger the innovation capacity of enterprises in a country, the more developed the industrial clusters are, and the more prosperous and stable the society is. Therefore, Chinese enterprises should seize the highest point of scientific and technological innovation in order to leapfrog in the economic field.

Government help for entrepreneurs. The more innovative an enterprise is, the more the entrepreneur is often the soul of that enterprise. Therefore, it can be said that innovation-driven development is more mainly entrepreneur-driven development. The growth of entrepreneurs has its own factors, but the government's action has a very important role in the growth of entrepreneurs. For the government, protecting entrepreneurs is to protect innovation, and promoting the growth of

entrepreneurs is to promote the development of innovation. Therefore, we should grasp the law of entrepreneurial growth, strive to create a market environment, policy environment and social environment conducive to their growth, form a good atmosphere of respect for entrepreneurs in the whole society, and build a policy system with entrepreneurs as the service target, so that the team of entrepreneurs with strong innovative power can grow stronger and stronger. The government should affirm the overall social value of entrepreneurs. Entrepreneurs, the integrators of innovation elements and the discoverers of innovation directions, are the most core and valuable resources in innovation. Entrepreneurs not only influence society in terms of material wealth and industrial development, but also have a great impact on society in terms of spiritual culture and behavioral style. The government should build various platforms for entrepreneurs to have opportunities to exchange and learn from experts and outstanding entrepreneurs in related fields across the country and the world. For example, it can organize entrepreneurs to study in developed countries, famous enterprises, famous schools and other places; it can promote the establishment of a variety of entrepreneur associations, chambers of commerce, etc., to improve the quality of entrepreneurs this bird through a variety of ways. The government should make great efforts to introduce excellent enterprises and entrepreneurs through the method of attracting investment, strengthen the team of entrepreneurs, introduce competition and realize the virtuous cycle of complementing each other's strengths and weaknesses among entrepreneurs.

Reforming the science and technology award system with market orientation. The administrative-led science and technology award system should be weakened, and industry and social awards should be steadily promoted to replace government awards, focusing on the quality of science and technology innovation and its actual contribution to the economy and society. The system of multi-level and diversified science and technology evaluation awards should be set with the goal of meeting market demand, otherwise scientific research cannot play a driving role in the economy, and it will not be possible to achieve China's economic transformation and development. Establishing multi-level and diversified awards for the private sector and industry under the initiative of the government. The government should promote the construction of various highly specialized science and technology innovation service exchange platforms to promote the rapid transformation of patents to the market, while strengthening the benefits of scientific researchers and research institutions through the legal system. It should dilute the association of science and technology evaluation awards with additional functions, actively explore the establishment of independent third-party evaluation agencies, and strengthen the assessment of major projects as well as the accountability and punishment.

Government creates a political and economic environment suitable for innovation. A favorable entrepreneurial and innovation ecosystem can make Israel, with a population of 7 million, the "startup nation," with more startups listed on Nasdaq than all of Europe combined. It can also make China, with its 1.3 billion people, a giant of innovation. Summing up the Silicon Valley experience, Sachsenin argues that Silicon Valley was able to resist Japanese competition in the 1980s because it had a good environment for competition and cooperation. Therefore, the government should provide a political environment to stimulate innovation for enterprise development mainly in the following aspects: First, increase the investment in innovation. The proportion of R&D in science and technology in Western developed countries is about 2% to 3% of national income, and the financial investment is more than 100 times that of China. Therefore, the first step is to increase financial investment in key areas such as "green energy", "digital manufacturing", and "smart earth", which are the core drivers of innovation-driven development. "These three aspects of scientific research projects should ensure that these aspects of scientific research projects are not forced to shelve due to the lack of funds. Second, increase the financial and taxation reform. The market application of new technology and new products is the biggest motivation. Even if the new products are not perfect, but without market-based feedback, there is no motivation for continuous improvement of new products. Therefore, the Chinese government should encourage enterprises to increase their R&D efforts through tax breaks for innovative enterprises, while governments at all levels develop various innovative procurement programs as part of the government's economic strategy, and

the government promotes enterprise innovation through the procurement of innovative products. Third, improve corporate financing channels. The success of Silicon Valley is not only because of the first-class technology, but also because of the first-class technology-capital docking mechanism. Large-scale venture capital and angel investment have become the biggest driving force to stimulate the dream of innovation in Silicon Valley. At present, Chinese enterprises obtain funds mainly from banks, and the single once financing cost is very high risk. This requires the government to reform the financial system, improve relevant regulation, expand the private financing system, broaden corporate financing channels, and create a political and social environment suitable for innovation. Fourth, actively create a level playing field and improve the intellectual property trading market. Accelerate legislation and strengthen law enforcement to protect intellectual property rights, safeguard the interests of innovative enterprises, and create a fair and just environment for enterprises to start their businesses. Fifth, promote education reform and cultivate innovative talents. The key to enhancing national and corporate innovation is talent, which is the key to the U.S. government's lucrative rewards for being the leader in each technological innovation.

Therefore, the Chinese government should vigorously promote educational equity and ensure that the most basic compulsory education is available to all. Innovate the mechanism of cultivating talents in colleges and universities, so that the cultivation of colleges and universities can meet the individual needs of students, fully develop students are potential, but also closely integrate with the needs of society. Accelerate the development of vocational colleges, deepen school-enterprise cooperation, and cultivate high-quality skilled talents in response to the real needs of the market and enterprises.

If China wants to sustain its economic development, it must lead from technological innovation to find new economic growth points. Make full use of the logical relationship between technological innovation and economic development to drive the economy with technology and help China's economy to smoothly pass the "new normal". To adapt to the international economic and social development trends and challenges, to meet China's future economic and social development trends and its scientific and technological needs, to build a strong science and technology, digital China, healthy China, beautiful China, happy China, safe China, etc., we must take science and technology innovation as a major national strategy to implement, to plan and promote science and technology innovation with a global perspective. A complete science and technology innovation system must be formed in terms of strategic planning, science and technology layout, field selection, talent training, innovation environment, and system construction to meet the demand for science and technology in economic and social development, and must not leave its scientific and technological fate in the hands of other countries.

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ЭКОНОМИКА РИСКОВ КАК НОВЫЙ ЭТАП ЭВОЛЮЦИИ ГЛОБАЛЬНОЙ СИСТЕМЫ ХОЗЯЙСТВОВАНИЯ

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Показан объективный характер перехода глобальной хозяйственной системы к экономике рисков. Раскрыты феноменологические характеристики последней.

Ключевые слова: *политическая экономия, экономическая система общества, экономика рисков, экономический кризис, интересы.*

RISK ECONOMY AS A NEW STAGE IN THE EVOLUTION OF THE GLOBAL ECONOMIC SYSTEM

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The objective nature of the transition of the global economic system to the risk economy is shown. The phenomenological characteristics of the latter are revealed.

Keywords: political economy, economic system of society, risk economy, economic crisis, interests.

Введение. Сегодня правомерно говорить о гносеологической катастрофе Экономической науки, которая оказалась неспособной содержательно ответить на два главных фундаментальных вопроса политической экономии: в какой экономической системе человечество сегодня живет и какие интересы ее детерминируют? Названная работы показать, что человечество сегодня перешло к принципиально новому этапу своего развития – к экономике рисков.

Результаты и их обсуждение. Экономика рисков – это экономика высокотехнических и наукоемких производств, характеризующаяся высочайшей степенью политико-экономических, технологических, финансовых и экологических неопределенностей и рисков. В отличие от традиционных экономических рисков как возможности потерь хозяйствующими субъектами вследствие рыночной неопределенности или вмешательства государства в экономическую деятельность, являющихся атрибутивными признаками рыночной эконо-