Sustainable Development of the Innovative Economy of Russia and China in the Conditions of Global Socio-Economic Transformations

On June 22, 2021, the International Roundtable on "Sustainable Development of the Innovative Economy of Russia and China in the Conditions of Global Socio-Economic Transformations" co-hosted by Peking University (PKU) and Moscow State University (MSU) was held successfully with a combination of online and offline. Wang Bo, vice president of PKU, and Y. Mazei, vice rector of MSU, attended the opening ceremony and delivered speeches. The International Roundtable was divided in two sessions. A total of 16 experts and scholars from China and Russia conducted wonderful discussions and communications on the two themes of "Sino-Russian Roles in the Conditions of Global Economic and Trade Transformations" and "Constructing a New China-Russia Development Pattern: An Innovation, Green and Digital Economy." Yu Miaojie, Cheung-Kong scholar, Boya Chair professor and deputy dean of PKU's National School of Development; Zhang Haibin, deputy dean of PKU's School of International Studies; V. Nikonov, dean of the School of Public Administration of MSU; M. Kudina, associate dean for research at the School of Public Administration of MSU, and other scholars and experts from both universities attended the event and made presentations.

V. Nikonov gave a speech on “Russia and China: Partnership in Global Politics and Economy.” He reviewed the history of Sino-Russian relations and pointed out that China and Russia have been partners fighting side by side in many periods in history. According to his experiences of visiting China, V. Nikonov realized that China has demonstrated enormous progress in recent decades. China has showed the world a great example of fighting diseases and resuming economic growth. At the same time, Russia is also experiencing a renaissance. V. Nikonov deeply agreed Chinese President Xi Jinping’s evaluation of Sino-Russian relations, which contains that China and Russia are back-to-back partners and our cooperation is at a high level at present.

V. Nikonov said that Western countries are constructing a new cold war coalition against China and Biden tried to convince Putin that Sino-Russian friendship is gone for Russia. But he believed that America cannot interrupt the close strategic partnership between China and Russia in that China and Russia have a broad foreign policy agenda based on the principles of the United Nations and a broad multilateral agenda based on the principles of Shanghai Cooperation Organization. We also have many economic and technological collaborations such as oil and gas trade, atomic energy, space exploration, jumbo jet, and so on. Moreover, specific to the School of Public Administration at MSU, V. Nikonov mentioned that they have taken many

measures to promote Sino-Russian cultural and educational cooperation, such as language teaching and book publishing.

Most importantly, he believed the stable partnership between China and Russia is based on common values, which include admitting the supremacy of international law, not interfering in domestic affairs of each other, respecting each unique cultural political system and avoiding power politics. At last, V. Nikonov congratulates the 100th anniversary of the Communist Party of China (CPC) and wished a bright future for Sino-Russian partnership.

Yu Miaojie gave a presentation on "China's Dual Circulation in the New Development Paradigm." As a macro background, the Fifth Plenary Session of 19th CPC Central Committee announced that China is already in the new economic development stage, will follow new economic ideas and accommodate to new economic paradigm by dual circulation. Yu Miaojie pointed out new economic development stage means that Chinese economy is already in the stage with high quality, which includes five key features:

1. Incremental value-added of products. Low value-added processing trade accounted for more than 50 percent of China's total trade in the 1990s, but it declines to about 1/3 nowadays, which serves as an indirect evidence of incremental value-added of products in China.

2. Quality upgrading of exportable goods. The quality of

Chinese exportable goods had increased about 30 percent from 2001 to 2012, and the evidence will be more pronounced in recent years.

3. Firm total factor productivity. When accessing to WTO, China's total factor productivity was about 30 percent of the US, but it increased to 45 percent in 2014.

4. Industrial cluster. Nowadays, China exports 10,851 products at the HS 8-digit level and has many industrial cities. Each industrial city has its advantage industry, for instance, Shenzhen mostly focuses on the electrical machinery and Xingtai is concentrated on cashmere.

5. Economic transformation. China is experiencing the economic transformation. However, the service industry has surpassed the secondary industry, and the secondary industry's proportion of GDP is still more than 37 percent. China is still the world factory today.

Yu Miaojie also introduced five ideas of new development.

1. Innovation. Innovation consists of two things -- the process R&D and the product R&D. According to the plan of Chinese government, the R&D over GDP intensity will reach 3 percent and the basic research over the R&D ratio must reach 7 percent. Furthermore, Yu Miaojie thought that rules innovation is also important, which includes establishing 21 Free Trade Zones and establishing Hainan Free Trade port.

2. Green. China will reach the peak of the carbon emission

in 2030 and will reach the carbon neutrality in 2060.

3. Harmony. China is focusing on the regional harmonized development and promoting urbanization. There are five megacity urbanization areas including Greater Bay Area, Yangzi River Delta Area, Capital Area, Western Area and Central Yangzi River Area.

4. Co-sharing. After achieving the poverty reduction, China will move to the second stage, the rural development stage. The processing industry and the capital-intensive industry in the coastal cities will move to the inland cities.

5. Opening-up. In the next few years, China will keep trade volume stable, welcome inward FDI, promote the Belt and Road and foster regional trade integration.

In order to accommodate to the paradigm of new development, China will rely on the dual circulation. The domestic consumption will be boosted to promote the domestic circulation in recent years and China will have the further opening-up to impulse the foreign circulation.

Chinese government adopts the prudent monetary policy and the proactive fiscal policy to facilitate the dual circulation. Focusing on the proactive fiscal policy, Yu Miaojie mentioned that there were 24 trillion yuan in budget fund in 2020 and a large amount of money has been used for new infrastructure construction, new urbanization and important transport and water projects. At the level of the external foreign circulation,

China is paying more attention to the regional trade integration, such as the Belt and Road, RCEP, China-EU Comprehensive Agreement of Investment and CPTPP.

Yu Miaojie summed up three perspectives of his presentation. First, China has recovered from the pandemic and becomes locomotive of world economic development. Second, China is switching to the new development stage. Third, guided by the ideas of new development, dual circulation strategy plays a key role for contemporary Chinese economy.

M. Kudina gave a speech on “Transformation of Social and Labor Relations and Human Capital in the Era of Digitalization.” M. Kudina pointed out that humanity is facing revolutionary changes in the era of digitalization. Information explosion requires human to foster systematic thinking, developed intuition and ability to see contradictions, understand motives and make effective decisions. In the era of digitalization, a continuity of learning and constant change will be the main characteristic of human’s life, so human must be ready to accept the changes, rally resources to solve new problems. Owing to the development of information science, virtual habitat designer, robotics lawyer, and digital culture will be in top demand of the labor market in the next 5 to 10 years, and professional competition will become more diversified. Cognitive competencies, such as research competencies, instrumental literacy and non-cognitive competencies like extroversion,

benevolence will be the key competencies in the future.

The change of technological orders will be a challenge of the times. The new technological orders require the attraction of significant investment in innovative business for fundamental research and development. The long-term venture investments, demand for high-tech industrial products, and highly organized financial capital will be new trends of world markets. Specific to the labor market, the digitalization of all aspects of life and the development of new social networks will cause new impacts on employment. Higher education, creative skills, self-realization and other new requirements for human capital will be valued more in China, India, Japan and other core countries after the formation of a new integral world economic order.

As for Russia, the significant gap between the research and commercialization, lack of industry sensitivity to non-technology development and unsound financial strategies are the main problems in the economic area. M. Kudina mentioned three major strategies for Russian digital development in the future. First, leadership strategy where Russia has competitive advantages. Second, catch-up development strategy in areas where there is some lagging. Third, a strategy of advanced commercialization of results in areas where competitive advantages are not obvious.

As to Russia's potential, M. Kudina mentioned the innovative scenario, experienced scientific personnel and the

strategy of advanced commercialization of fundamental discoveries. At last, she emphasized the importance of Sino-Russian cooperation.

Prof. Liu Minquan from the School of Economics, gave his speech on “Global Supply Chains, Decoupling, and the Eurasian Rail Bridge.” Liu Minquan firstly introduced the basic information of the Eurasian Rail Bridge. The rail bridge was a bottom-up thing, initiated 10 years ago by some multinational firms seeking support from rail authorities and Chinese local governments. By 2020, a total of 70 routes were opened, 10 of which provided regular services with 12,400 train journeys transporting 1.14 million standard containers a year, linking several dozen European cities with 71 Chinese cities.

From Liu Minquan’s perspective, a shortening of duration of cargo transport and a more reliable delivery time are the advantages with the rail bridge. But there are also disadvantages including higher cost comparing with sea transport and most of 20th century facilities with limited capacity for traffic. Liu Minquan thought the COVID-19 pandemic has led to two important changes in respect of the rail bridge. One is a rise in the number of train journeys and containers in 2020 over 2019. The other is a rise in the transport cost per container, but with a reversal of the cost disadvantage as compared with the sea route. However, rail transport is still much more costly than sea transport, thence it has been predicted that the use of the rail

bridge has reached its maximum and will only fall after the pandemic.

Besides the economic aspect, Liu Minquan mentioned the strategic significance of Eurasian rail bridge for China and Russia. For China, it can help contribute to the development of China's vast hinterlands in central and western regions, linking them more closely to the expanding global supply chains. It can also provide an effective and efficient transport route for the expanding volumes of Euro-Asian trade. With the threat of "decoupling" from US, the Eurasian rail bridge can provide China with a supply chain linking with Europe and a strategic backup route. As for Russia, it can help contribute to the development of its various land-locked central Asian and East European parts.

In the light of its promised potentials, participating countries should invest the infrastructure and make more political commitments for the Eurasian rail bridge jointly. At last, according to Chinese blueprint, a high-speed rail bridge may be possible in the future.

A. Livshin, professor of School of Public Administration and Associate Dean of International Cooperation for School of Public Administration at MSU, made a presentation on "Social Innovation and Social Startup: Management Features." In Livshin's opinion, social innovation is a major transformative tool for any society and there are three dimensions of social

innovation. First, social innovations are new combinations of existing approaches and techniques in most cases. Second, the implementation of social innovation requires breaking down organizational, sectoral, disciplinary and psychological barriers. Third, the introduction of social innovation creates new social connections, new clusters of social capital and the spread of innovative practices.

A. Livshin mentioned some examples of areas of social innovations' diffusion, such as social entrepreneurship, inclusive education, hospices and so on. Social innovations are generally created in the third sector. And nonprofit organizations are leading innovative force in solving social problems because of the competitive pressure and the development of social entrepreneurship. There are many obstacles for social innovations developing in the third sector. For instance, the lack of resources can severely limit the experiment and put brakes on willingness to innovate. And innovation in the nonprofit sector is hampered by the necessity to meet the needs of different types of clients-beneficiaries and donors.

A. Livshin also viewed social innovation as a combination of three basic elements: beneficiary value, growth and social efficiency. Those three elements often contradict each other and have discrepancies between goals and objectives. In order to get out of the "scaling without efficiency" trap, it is necessary to move from linear development to numerous and non-standard

options for financing the program, its cloning and scaling. And the options include market-based business model, impact philanthropy, cross-subsidizing, cloning/social franchising, commoditization and government funding. When measuring the effectiveness of an innovative social organization, A. Livshin thought attention should be paid to its short-term results, such as the number of participating people and beneficiaries, and its long-term results, such as the change of people's lives and the use of new knowledge and opportunities.

At last, A. Livishin mentioned the criteria of measuring social startup's success, relating to the roles of leaders and managers like establishing internal rules for testing ideas, testing its products with end users and so on.

Xi Tianyang, the tenure associate professor of PKU's National School of Development, made a presentation titled "Governance Mechanisms and Economic Development in China." Xi Tianyang thought there are four features of governance in the "Socialism with Chinese Characteristics."

1. Strong political leadership. The leadership of CPC is the political foundation of the country. Over 90 million Chinese citizens are the CPC members. Thence the CPC represents not a particular political force, but the overlapping interests of people across all regions, industries and social groups. In the Chinese context, the CPC plays a decisive role in consensus building on development and policy making.

2. Development state. For Chinese people, development is a key to promote social welfare and solve domestic issues. Chinese government is an important player in enhancing investments and trade, facilitating markets and supporting R&D activities. Chinese government also coordinates infrastructure investment, which has important economic spillovers to the less developed regions.

3. Political meritocracy. Chinese personnel management system provides proper incentives and selection of capable and loyal cadres. The performance of officials is subject to routine evaluation and the personnel system evaluates officials on the basis of multiple dimensions including essentially, loyalty, capability, diligence, performance and integrity.

4. Bottom-up innovation and policy diffusion. Chinese central government encourages bottom-up innovation and policy diffusion among local governments. Local experimentation of policies is widely adopted in areas such as land rights transfers, e-commerce and digital government. Bottom-up innovation and policy diffusion help central policy makers improve policy efficiency and reduce policy risk.

In recent years, China has been undertaking a governance transformation toward a more sustainable development paradigm. For instance, the digital government platforms increase the responsiveness and the convenience for ordinary people accessing to public service. And Chinese government has

also made massive investment in poverty reduction and environmental protection. At the international level, Chinese government actively promotes the Belt and Road Initiative and South-South Cooperation. China is playing an increasingly important role in international cooperation and development.

I. Leksin, associate dean of Department of Legal Foundations for Public Administration at MSU, gave his presentation on “Coming Socio-Economic Transformations as a Challenge to the Traditional Vision of Sustainable Economic Development.” I. Leksin mentioned several features of the digital economy.

1. No need for sizeable labor resources. Compared with past centuries, the economic order developing now does not need the growth of labor resources, which will not encourage the reproduction of labor power. I. Leksin thought the government’s reduction of demand for labor force can be rapid and universal. Different from ordinary unemployment we are acquainted with, the new situation is about irrelevance of billions of habitants. Those non-occupied people can become excessive consumers of resources and goods in a feasible future. The national markets will be with the issue of getting rid of employment, which can be a serious challenge to sustainable development for national governments all over the world.

2. The support of revolutionary technological development will eventually come into conflict with the interests of national

governments. As far as the national governments are obviously dependent on the population, they will continue generating new jobs to maintain social stability, while the economic order will demand the opposite. Some compromise will likely be found. And despite the digital economy can provide for multiple business opportunities, it likely implies the abridgment of economic rights and social guarantees.

3. The digital economy could be threats to the concept of human rights and freedoms. The constitutional foundations of Western countries will be challenged within several decades. However, Eastern civilization less dependent on the concept will go much better with the challenge. Therefore, the digital economic development has more chances to be sustainable in China and ASEAN countries, while Europe and the US will likely face dramatic social upheaval.

4. The digitalization is likely to weaken the national states in a long period. The digitalization can reinforce the transnational business and other non-governmental structures, which can cause challenge for most national governments. I. Leksin thought only China has the economic potential to meet the challenge and succeed in the future.

Huang Yiping, deputy dean of PKU's National School of Development and the Jing Guang Chair Professor in Economics, gave his speech on "Financial opening policy in China." Huang Yiping pointed out that Chinese current financial system is quite

different from the incipient system when China started economic reform 43 years ago. Although the financial system has become gigantic, China still maintains quite much governmental intervention in credit allocation, in setting of the interest rate and in the exchange rate and so on. The reason of maintaining governmental intervention is that China adopted dual track liberalization approach, retaining plan channels in the process of developing market economy. However, the dual track liberalization approach has its own problem. Its strength of financial support to economic growth was weakening, which demands for reformation.

Thanks to the opening policy, Chinese economy has integrated into the rest of the world and achieved during the reform and opening-up period. At the early stage, China's integration was mainly dependent on massive exports of labor-intensive products and huge amount of foreign direct investment. Nevertheless, the Chinese financial system remained relatively closed for the most part of last 40 years. But the situation is going to be changed, according to the 14th Five-Year Plan.

In Huang Yiping's opinion, the first change is the significant opening of financial service sector, which started three years ago. China has opened many foreign financial institutions such as rating agencies, investment banks, commercial banks and so on in the last three years. The second

one is the capital account liberalization, including the opening of the equity market and debt market. The last one is the internationalization of RMB. China is going to focus more on the investment vehicle function of the currency in the coming years, which will certainly be an important policy drive. And it will also need to be supported by the opening of the financial service sector and the capital account.

In conclusion, Huang Yiping thought that Chinese financial sector's opening has lagged significantly behind the real sector during the last 40 years. But the situation is going to be changed in the next 5 to 10 years, which will integrate China into the global financial market deeply.

Zhang Shiqiu, a professor from PKU's College of Environmental Sciences and Engineering, made a presentation titled "Green transition and carbon neutrality: Efforts for and issues in responding to global and national environmental changes in China." Her speech focused on the green transition and carbon neutrality in China. She believed that China did not reach a tipping point, but moved to a turning point. The most important policy issue from now on, as the environmental situation has been improved, is how to integrate environmental issues, resources, and ecological concerns into the overall policy-making and decision-making process, which focus on addressing the local, regional and global problems under the overall umbrella of sustainable development. Therefore, China

needs to improve its governance to address the issues on the environment, effectiveness, efficiency, and equity.

Then she moved on to explain the reason the Chinese government took on a strategy of economic development first and environmental protection follows. Chinese government realized the importance of introducing ecological civilization to its citizens and has since shifted its development mode because air pollution and water pollution also jeopardize the health of Chinese people. Since the year of 2014, China has started an anti-pollution war, and it not only dealt with domestic pollution in recent years but also had a set of policies and national goals proposed to respond to climate change.

Great success in reducing pollution has been made. The percentage of coal use dropped from 70 percent to less than 60 percent of the overall energy structure. The accumulation of concentration of PM 2.5 in the air decreased at an unprecedented speed. However, although significant progress has been made, China still has a long way to go. By the year 2017, only 1/3 of the urban population in China live in enjoyable air quality.

Among all worries, the problems that lied in the way of green transition and carbon neutralization are the ones to ponder upon as they are more than mere environmental issues. Other factors need to be considered, such as social equality, economic development, and environmental amenities.

Prof. Zhang Shiqiu was positive as she believed there were

ways to keep on marching toward the final goal. First, strong political will is very important and fundamental. Second, a large amount of investment and a strong emphasis on green development are also favorable and have been concretely interpreted as the concrete development goals and targets in the five-year plan. Finally, revisions in environmental legislation could also be of great help.

The speech of Prof. Zaitseva from MSU's School of Public Administration emphasized four sections, the theory, pros and cons of emerging technologies, a short case and how technologies influence jobs today.

She first gave a brief introduction to four theories on new information technologies and digitalization. They respectively are sustaining technology, desktop computing, disruptive technologies, and ubiquitous computing. An outline of the four stages in the development of information and communication technologies was illustrated. It began with enterprise computing when development in technologies was made on mainframe computers. Then came the stage of end-user computing when personal computers appeared and were used in the workplace. The third stage was strategic computing. The global network of networks and communication technologies were introduced in all the fields of strategic development of organizations. Today people live in an era of ubiquitous computing, meaning that people don't have any areas of our life that are not influenced by

computers.

Then she summarized five main technologies that are fundamentally transforming the world. They are cloud and mobile computing, big data and machine learning, sensors and intelligent manufacturing, advanced robotics and drones, and clean energy technologies. When discussing the positive and negative effects, she offered five aspects where emerging technologies affected organizations, work, and employees. They were the convenience of communicating everywhere and remote work, the availability of shared information and knowledge between employees and companies; the ambiguity caused by massive information to choose, the inability of machines to motivate and stimulate people, the data overload, the "always-on" phenomenon (meaning that people with the use of these computers, they are always online), and cognitive scarcity.

Finally, Prof. Zaitseva discussed one very short case of electronic monitoring systems in Russian organizations to illustrate how job design is changing with the use of ubiquitous computing technologies, and how they influence other factors. A conclusion was given at the end. Intelligent digital technologies will argue humans, not replace them. The use of digital computers and new information technologies increases the ethical responsibility of organizations. People can observe these transaction-based versus relationship-based approaches to employee management. Connectivity –workplace productivity

tools look more like social networks where employees can post pictures, create groups, and communicate within teams.

Prof. Xu Jintao, deputy dean of PKU's National School of Development, began his speech by outlining China's commitments to protecting the global environment, with one being reaching a carbon peak before the year 2030, and the other being reaching carbon neutral around 2060. He said most models indicated that by the year 2030, China's annual emission will be around 1 billion to 1.2 billion from fossil fuel burning and industrial activity. The emission will decline after 2030, all the way to midcentury down to around 2 billion tons a year or 1.5 billion tons a year. The remaining emission will be offset or removed by carbon removal technology, including CCUS, ecosystem sequestration, and carbon sink.

Prof. Xu Jintao believed, if used correctly and scientifically, forest carbon can contribute greatly to carbon neutrality in Chinese national climate action. China has the world's largest plantation of forests. Solely from the incremental growth of carbon sink, carbon sequestration, from the plantation of forests, the intensity of carbon emission per unit of GDP would be reduced by 5 percent. He also thought there was still huge potential to achieve in combating climate change. The potential comes from three aspects. The intensive margin, the extensive margin, and also the market development. To achieve the potential of Chinese forestry, forest coverage could be expanded,

forest quality could be improved, and reform in the forest sector should be conducted, for example, the government could release the total logging ban policy. Currently, the Chinese government owned 40 percent of natural forests, and the state sector remained old-fashioned and the efficiency is low. This sector had a long history of deforestation and forest degradation. To achieve greater achievement from forest carbon sequestration, China needs to unbundle the potential from State-owned natural forests. Many natural forests in China are somehow degraded and depleted, according to Prof. Xu Jintao. They might have been net carbon emitters instead of carbon sequesters. If China releases the total logging ban and continues to have market-based reforms in State-owned forest areas, the results will probably be positive as degraded natural forests will transform into actively growing plantation forests, and China's forest quality will, in turn, reach the world average, thus making a greater contribution to carbon neutrality in mid-century.

Terentyeva, an associate professor from the Department of Economics and Innovative Development, had her presentation devoted to innovative technologies in education. New situations forced teachers to modernize teaching methods. Terentyeva went on to explain several techniques and methods that pose a huge impact on teaching.

The first technology was paperless textbooks. Digital devices, for example, tablets were slowly replacing heavy

textbooks, and the cost was highlighted. In the long run, the cost of purchasing digital devices would be much affordable. School and university authorities could easily upload the study materials every term or every year on the same devices.

The second innovative technology in education was artificial intelligence. Teachers could make use of the possibilities of artificial intelligence to speed up the grading or other daily chores and could utilize the saved time for quality teaching. For students, it acted as a personalized learning companion to meet a variety of student needs and helped teachers to act as learning motivators.

The third technology was virtual reality (or augmented reality). The virtual field trip was one of the most effective benefits of virtual reality in the classroom. This helped students go deeper in various subjects and at the comfort of their classroom. Moreover, this technology had enhanced creativity among students through their imaginative way, through their thinking.

The fourth technology was online courses and learning. This trend was particularly evident during the pandemic. Students were utilizing the possibilities of online courses to study their preferred fields of interest and research on their favorite subject areas. Students also utilized similar online courses to have additional education support on subjects they found difficult.

The fifth technology was gamification and gamified learning. Understanding the importance of games to engage students, many schools worldwide had shifted their strategy to gamification and gamified learning in classrooms. This not only improved the interest of students by learning, but also instilled a friendly competitive mindset, and invoked their creative thought process to win some situations.

The sixth technology was flipped learning. In this teaching strategy, students could have a look at lessons beforehand. They could go through tutorials or videos to study the lessons at home and could utilize the classroom time to do some kind of assignment for discussion of the problem or the theme. They could work out problems under the supervision of teachers and clarify their doubts if there are any.

Finally, Terentyeva emphasized that innovative strategies in education were especially beneficial for students with special needs. For example, these innovative technologies would make it easier for foreign students in Russian schools and universities to understand the material. Also, they are very helpful for disabled students.

The speech of Prof. Huang Zhuo, deputy director of PKU's Institute of Digital Finance, had a theme of the development and innovations of digital finance in China. To illustrate the status and achievements of China's digital finance, Prof. Huang Zhuo presented two figures. The first showed that there were three

Chinese fintech firms in the top ten fintech firm list in 2019. The second was that there were five Chinese cities in the list of the world's top ten fintech centers. China is now taking the leading position in the world's digital finance industry, especially in the fields of digital payments and big tech lending.

China's digital finance started in the year 2004, when the online payment tool, Alipay was launched by Alibaba to facilitate their online shopping business. An important innovation was the QR code mobile payments in 2010. By scanning the QR codes presented by the shops, the consumers can easily pay offline transactions with an online payment tool. Since then, the Chinese people have entered a cashless society. Prof. Huang Zhuo thought Alipay was not only a payment tool but an entrance to the financial ecosystem where digital financial services, including credit, investment and insurance, daily life services, mobility services, local services, and municipal services were provided by all kinds of third-party institutions. Another important innovation of China's digital finance is big tech lending. Big tech lending offered large technology platforms, such as Ant Financial group, which provide lending services to small and micro businesses and individual consumers. This is important for China's financial inclusion, as it's difficult for small and micro businesses to get loans from commercial banks.

Prof. Huang Zhuo thought there were failures and lessons

from China's digital finance development as well. One example was P2P lending. These platforms enabled individuals to obtain loans directly from other individuals without the involvement of financial institutions. The fundamental problem with this was the inadequate risk control, because of the immature digital infrastructure, such as the personal credit scoring system, non-sustainable business model, and also inadequate regulatory strategy. Regulations on digital finance also worth mentioning. Before 2015, the focus of the regulator was how to promote the development of digital finance. After 2015, the focus has changed. It has shifted toward how to prevent financial and social risk by digital finance.

Looking forward, Prof. Huang Zhuo believed further development and new innovations in China's digital finance industry would be expected. There were three most promising innovations. The first will be China's DCEP – digital currency electronic payment. The second ongoing development will be the digitalization of commercial banks. The third ongoing business will be the development of wealth management technology.

Insolvency and bankruptcy regulation is a complex and interdisciplinary sphere that plays a more important role during the financial crisis. Prof. Olga Lvova, an associate professor from MSU's Department of Financial Management, School of Public Administration, laid emphasis on the main topic in the

sphere of innovations in the development of the insolvency institute of Russia while covering three perspectives, the past, today's situation, and some suggestions on how to improve the situation tomorrow. Prof. Olga Lvova first gave a brief process of evolution of insolvency institute in Russia. The modern insolvency institute appeared in 1992. Between 1992 and 2002, the second law was adopted, and it introduced the new concept of illiquidity. The last and effective law on insolvency bankruptcy was adopted in 2002. However, in almost 20 years since 2002, more than 100 new versions of the law on insolvency bankruptcy were introduced. They included more than 1,500 changes, and the size of the law increased up to 500 articles.

Unfortunately, these laws and regulations were not effective in Russia. On the whole, the development of Russian law was not systemic, but mosaic and piecewise in nature. Many changes were not explained by objective reasons but were the result of lobbying the interests of certain commercial and state structures. The main problem of Russian law was the insolvency institute, and the system as a whole remains the same. There was low insolvency culture, inefficient administration of proceedings, declaratory simulation of insolvency prevention without any economic mechanisms, and the general absence of intonational insolvency regulation for corporate groups, which did not comply with international practices.

Prof. Olga Lvova also highlighted the law performance of the insolvency system in Russia. Typical proceedings normally could combine the main general procedures of supervision and liquidation. Together, they would last on average two or even three years, and this period of bankruptcy of a typical company would include three or four steps of the auction, of bidding procedures, just to sell the bankrupt assets. Such periods seemed very long and would decrease the value of creditor claims. Russian insolvency institute also would not protect the interests of creditors and doesn't fulfill its basic economic functions. Russian insolvency institute has poor economic effect for all the involved parties. One of their basic economic function is to provide adequate financial debt return for creditors and to contain a mechanism for rehabilitation of viable indebted companies. But in Russia, this didn't work until recently.

Finally, she suggested introducing the practice of pre-packed and pre-arranged bankruptcies as it was done in the US and other countries. It meant that the specific economic and financial tools should be elaborated and presented as a canvas for some typical situations that can really help.

Prof. Wang Xi, an assistant professor from PKU's School of Economics, shared some cases from Japan that could be of great use to China and Russia. The economics of climate change has already been a hot topic, and most of the research investigated the cross-sectional relationship between per capita

GDP and the per capita emission of carbon. Prof. Wang Xi said there was a positive correlation between the GDP per capita and the carbon emission. The good news was that there was an inverse U shape, which means that as the GDP per capita became high enough, the carbon emission was reduced.

However, most of the economic literature only utilized the first stage of this regression, namely, the positive correlation between carbon emission and economic growth, and when researchers sought cases from developing countries, the relationship was still positive. If looking into the figures from Japan, people would find the overall trend illustrated a positive correlation when the GDP per capita data stopped in 1960. However, after the burst of housing bubble in Japan in the 1990s, the GDP per capita kept growing, so did the carbon emission per capita. This trend continued until the financial crisis in 2012. Only after 2012, there was a cross trend between GDP per capita and carbon emission, which meant that the GDP per capita in Japan keeps growing while the carbon emission drops.

To explain the case of Japan, Prof. Wang Xi decomposed the carbon emission into four factors, which were population, GDP per capita, energy-consuming coefficient (which meant how much energy people would need to maintain current production), and the carbon coefficient (which meant how many carbon emission people would need to produce a given amount of energy). For the last, the carbon emission coefficient, people

could reduce it by using carbon-efficient technology, or renewable energy sources. For the second last component, the energy coefficient, people could reduce it by using more energy-efficient production technology. For the population and GDP per capita, people and the government would have nothing to do. Growth theory would take care of them.

If people just viewed the whole first part of the figures of the carbon emission, there was indeed a positive contribution by GDP per capita as the GDP per capita increased in Japan. However, how did the carbon emission got reduced in Japan after the period of 1990s-2012? One was that Japan used more renewable energy, another was that they had more carbon-efficient power technology. The third would be the production technology become more energy efficient.

What could other countries learn from Japan's example? First, the most important lesson was that more cooperation between Russia and China should be encouraged. Both of the countries could incentivize more research and development to the implementation of renewable energies offshoring. The second was that the two countries could do more to relocate the power usage, for example, the use of more renewable energy, as the peak of the demand did not coincide with the peak of supply, which means the two countries had to use some energy storage technology. The two countries could utilize their extra supply of power or energy. When Russia had extra supply, Russia could

transmit it into China and China could do the reverse, as the professor said. The third was that the two countries should have more energy-efficient semi-conductors, 5G, or smart transportation. And as other speakers have already said, the two countries should implement more technology of machine learning. For the last, to reduce carbon emissions, the two countries could do more about carbon recycling, which meant that the two countries could have some technology to store the carbon and transfer them in the end.

Prof. Artyom Gavrilyuk from MSU's Department of Economics of Innovative Development, focused on the platforms and management of intellectual property. These platforms could help users to post requests, exchange information, and search for experts and technology partners and strategic investors. The platforms accumulated data on the technological resources of intellectual property and provided high tech development, while influencing material or knowledge recipients in purchasing innovative solutions. For the management of intellectual property, for example, the leading universities in the UK were actively using the digital platform E-LUCID. The E-LUCID platform was adapted to the needs of science and business and was designed for exclusive license of intellectual property, generating income from the commercialization of the results of intellectual activity and directing the effects of the implementation through innovative

projects. Digital technologies opened new opportunities for manufacturing companies to rapidly change themselves to adapt to market conditions and to produce high-quality manufactured products. Advantages of intellectual property management based on digital technological solutions allowed organization to involve enterprise into ongoing exchange process, improved the ability to innovate in digital transformations, model management systems, in performing virtual commissioning of the inventions, as well as in generating mesh data as it could be used to optimize production.

The conference provided a platform for experts and professionals from both countries to share in-sight thoughts on issues that were profoundly changing the two countries as well as the world. The speeches deepened the understandings of the audience and opened new visions for those who were interested in the field.