China-CEE Institute
中国—中东欧研究院

December 2022
ISSN: 2560-1628
2022 No. 8

WORKING PAPER

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Jelica Gordanić

Kiadó: Kína-KKE Intézet Nonprofit Kft.

Szerkesztésért felelős személy: Chen Xin

Kiadásért felelős személy: Feng Zhongping

China-CEE Institute
中国—中东欧研究院

1052 Budapest Petőfi Sándor utca 11.
+36 1 5858 690
office@china-cee.eu
china-cee.eu

Post-Pandemic Cooperation between China and Serbia: Innovative Technologies and Medicine

Jelica Gordanić[1]

Abstract

Due to the Covid-19 vaccines and generous medical donations, the influence and reputation of China in the CEE exceeded the other global actors, primarily the European Union and the US. The Republic of Serbia gives great significance to cooperation and partnership with China. Cooperation between the two countries has been evidenced before the pandemic by numerous projects in the fields of trade, infrastructure and energy. The reputation of China has grown significantly in Serbia during the pandemic, which makes excellent preconditions for successful post-epidemic cooperation. The paper examines the possibilities and perspectives of the post-epidemic cooperation of Serbia and China in two spheres: innovative, modern technologies and medical cooperation. The necessity and potential of cooperation between two countries on robotics and artificial intelligence have been emphasized at the meeting between Serbian President Aleksandar Vučić and Chinese Minister of Foreign Affairs Wang Yi in October 2021 in Belgrade. Opportunities for medical cooperation between Serbia and China exist in the testing of natural medicines and food safety, scientific research and development of new medicines, as well as the area of military medicine and telemedicine. The paper concludes that cooperation in these fields might be beneficial for both parties. For China, cooperation with Serbia can have a positive spillover on other countries in the Balkan region. On the other side, with the support of China, Serbia can learn about new technologies and strengthen its reputation and position in Europe.

Keywords: *China, Serbia, cooperation, innovative technologies, robotics, medicine, military medicine, telemedicine.*

[1] Research Fellow, Institute of International Politics and Econmics, Belgrade. E-mail: jelica@diplomacy.bg.ac.rs

Introduction

The quality of bilateral relations usually is conditioned by territorial closeness, common history, belonging to the same civilization, or similarities in the size of territory and population. In practice, some different examples might be found. That is the case of the People's Republic of China and the Republic of Serbia. Yugoslavia, as one of the leaders of the Non-Alignment Movement, during the Brioni islands meeting, initiated a declaration aimed to support China's application to join the Organization of the United Nations. China and Serbia, as a successor of Yugoslavia, shared principles of international law and peaceful coexistence which makes an excellent basis for political relations at the highest level (Lađevac, 2020, p. 273-274).

Bilateral relations between China and Serbia were highlighted by the signing of the Agreement on Comprehensive Strategic Partnership in 2009. The President of the People's Republic of China Xi Jinping visited the Republic of Serbia on 17-19 June 2016. This was the first visit of a Chinese President to Serbia after 30 years. On this occasion, the Joint Declaration on the Establishment of the Comprehensive Strategic Partnership between the People's Republic of China and the Republic of Serbia was signed. China and Serbia have agreed on infrastructure projects worth more than $7,5 billion since 2009. China become Serbia's largest single-country investor in 2021, investing more than 700 million euros (Vladisavljev, 2022).

In the period before the Covid-19 pandemic, China and Serbia realized very good project cooperation in the field of infrastructure and energy. Some of the most important projects were Pupin's Bridge (Zemun-Borča), the construction of the Miloš Veliki highway sections, reconstruction of the Kostolac Thermal Power Plant. It is important to emphasize the largest Chinese investors- Zijin Company which invested in the RTB Bor in 2018 and the Hestil Company which acquired the Ironworks Smederevo in 2016. In November 2019, the Chinese factory for the production of components for car interiors Yanfeng Automotive Interiors was opened in Kragujevac. Within the mechanism of cooperation between China and the countries of Central and Eastern Europe, the realization of the trilateral Project of modernization and reconstruction of the railway track Belgrade - Budapest is underway (Republic of Serbia Ministry of Foreign Affairs, 2022).

The Covid-19 pandemic hit the world unexpectedly. It affected all countries and international organizations. Except for a health crisis, the pandemic has also caused many social, political, economic, and strategic implications. The US "has failed to protect its people, leaving

them with illness and financial ruin. It has lost its status as a global leader" (Yong, 2020, 34). The Covid-19 crisis was not only a public health crisis for the EU. It was also a crisis of European integration, European identity, and European unity (Gordanić, 2021, p. 59). On the other side, the influence and the reputation of China had grown during Covid-19. The development of the vaccine and medical donations worldwide during all phases of the pandemic has proven China as a potential global leader number one.

The reputation of China has grown significantly in Serbia during the pandemic. China has been the biggest donor of Serbia during the Covid-19 pandemic. It provided medical supplies, experts and vaccines. Polls show that 83% of Serbian citizens see China as a friendly country and 77% view its impact on Serbia as positive (CeSID, 2021). 54,6% consider that China helped Serbia the most during the pandemic, which is much higher than the EU 17%, Russia 10,3%, and the US 0,2% (Institut za evropske poslove, 2021).

These data make excellent preconditions for further development of cooperation between China and Serbia. The author considers that the post-epidemic period is a great opportunity for the development of new areas of cooperation between the two countries. The paper examines the possibilities and perspectives of the cooperation between Serbia and China in two challenging areas: innovative, modern technologies and medical cooperation. What can Serbia learn from China regarding robotic and artificial intelligence? Can Chinese innovative solutions be applicable in Serbian cities? Is there a relationship between medicine and innovative technologies? Can Serbia and China improve their medical cooperation in the area of telemedicine? What are the perspectives of traditional Chinese medicine in Serbia and military medicine? Are there some obstacles standing on the way of the cooperation between China and Serbia? These are some of the questions important for the post-pandemic cooperation between the two countries that require answers.

Innovative Technologies- Perspectives For Cooperation Between China And Serbia

The IT (information technology) sector is in the phase of expansion in Serbia. In 2016, 19,000 people were employed in this sector. Today, it has 43,500 employees. It is estimated that, by 2025, the number of employees in the IT industry in Serbia could grow to 120,000 employees. During the first ten months of 2021, the worth of IT export in Serbia has been 1.5 billion euros. This is one of the fastest-growing sectors in Serbia. IT sector has a larger share of GDP than the sector of construction. (Avakumović, 2022).

Out of six Western Balkan countries, Serbia is the focal point of the Digital Silk Road and the most prominent partner of China in the region. Thanks to its geographical position, Serbia is a center of regional internet traffic. It is a neighbor to four EU member states- Croatia, Romania, Bulgaria, and Hungary. That is more than any non-EU country. Also, Serbia is part of the 5G Public Private Partnership (5G PPP), a joint initiative of the European Commission and private European companies promoting next-generation communication solutions across Europe (Vuksanovic, 2021, p. 11).

Different forms of cooperation on innovative technologies between Serbia and China took place before the pandemic. In 2019, Serbia signed an agreement with a Chinese e-commerce company, Alibaba, to promote Serbia as a tourist destination through its online travel agency platform, Fliggy. Similar arrangements exist with Weibo and WeChat. Serbia's most important partner in the area of innovative technologies has been Huawei. Serbia has raised relations with Huawei to a strategic level. Numerous projects regarding innovative technologies have been led by Huawei in the period before the pandemic. In April 2019, this company launched the One Thousand Dreams project with the aim to train 1,000 young talents from Central and Eastern Europe, including Serbia, in Information and Communications. The same year Huawei and the Serbian Ministry of Interior had a partnership agreement for the introduction of Huawei's "eLTE" wireless broadband technologies. Huawei has plans to develop a regional data center for South and South-Eastern Europe in Kragujevac. This would be Hauwei's third regional data center in Europe after the ones built in Germany and Netherlands. (Vuksanović, 2021, p. 11).

The cooperation between Serbia and China on innovative technologies continued during the pandemic. Following the closure of public schools in response to Covid-19, the Serbian Ministry of Education turned to a company NetDragon to provide remote learning platforms for students.

NetDragon introduced a Serbian version of Edmodo, a world-leading online learning platform, and provided free services to Serbian teachers and students (NetDragon, 2020.

With the help of NetDragon Serbia established the Center for Robotics and Artificial Intelligence in Education (CRAIE) in June 2020. The NetDragon will provide diversified functionalities for the CRAIE, such as education content production, education technology development, and teacher training, in order to promote the information exchange and knowledge sharing in Serbia and to elevate Serbia's nationwide education level with the concept of smart education. The Government of Serbia supported this project with a lot of enthusiasm. Aleksandar Vučić, the President of Serbia, emphasized that "robotics and innovative technologies are the way to the future, and that is the most important thing for our country. Today we can see that this is possible in Serbia as well (…) China is the world's leading country in artificial intelligence and robotics, and I am happy we could learn a lot" (NetDragon, 2020).

The cooperation with Huawei has been successful during the pandemic. In September 2020, Huawei opened its Innovations and Development Center in Belgrade. The Center is focused on identifying new talent- individuals, startups, or local companies with interesting ideas, and helping them to develop. The opening of this kind of center will help Serbia to boost its position as one of the world's leading IT players. Huawei's Regional Director, Li Mengqun, pointed out that Serbia has a remarkable system for nurturing talent and innovation. Together with local partners, Huawei wants "to create a digital eco-system and help achieve Serbia's digital transformation goals" (Milenković, 2020). Serbian Prime Minister, Ana Brnabić, emphasized that the center will help Serbia further accelerate its digital transformation and boost innovation and creativity in the Serbian economy. She also highlighted the three main aspects of Serbia's cooperation with Huawei- the introduction of artificial intelligence, the digitalization of education, and the introduction of smart cities across Serbia (Xinhua, 2020).

The development of cooperation on innovative technologies had been highlighted in a meeting between President Vučić and Chinese Foreign Minister Wang Yi in October 2021 in Belgrade. In addressing the media after the meeting, president Vučić emphasized that he was positively surprised by the point Minister Wang Yi brought up: The necessity for collaboration between Serbia and China in the area of robotics and artificial intelligence (Milenković, 2021). With the help of China, Serbia can move ahead together with the most prosperous world nations. This meeting pointed out the determination and necessity regarding new areas of cooperation

between China and Serbia during the post epidemic period. China is among the global leaders when it comes to artificial intelligence and smart and safe cities. Also, for a long period of time China is using innovative technologies in the area of agriculture. These two areas of innovative technology can be a good starting point regarding post-pandemic cooperation between Serbia and China.

Smart cities

One of the Chinese most successful application of artificial intelligence technology is the improvement of urban infrastructure management in smart cities. The concept of smart cities refers to "initiatives that use digital and ICT-based innovation to improve the efficiency of urban services and generate new economic opportunities in cities" (OECD, 2020, p. 8). Digitalization is used as a mechanism to "boost citizen well-being and deliver more efficient, sustainable and inclusive urban services and environments as part of a collaborative, multi-stakeholder process" (OECD, 2020, p. 8).

Serbia has a necessity for smart cities for numerous reasons. 56,2% of the population in Serbia is urban (Wordometers, 2022). Also, in Serbia exist a trend of migrations from villages to cities. Some Serbian cities have become overpopulated. This causes a lot of practical problems regarding public transportation, parking, industrial transformation, and providing of services. Serbian cities need sensors that guide drivers to the parking spot, digital monitoring of waste containers that shows when they are full, remote detection of malfunctions in the water supply system, etc. These problems might be solved by smart city mechanisms.

The concept of smart cities is not very well known in Serbia. Besides the Smart City festival and regional conference Smart City SEE19, there are not many well-organized projects on this topic. So far, the main characteristics of smart cities in Serbia are displays showing the number of free places in some public garages, certain aspects of e-government, and a system for measuring air quality (Prigota, Bogavac and Čekerevac, 2022, p. 74-75). On the other side, China is a leader in smart cities. At present, more than 800 cities in China are promoting the planning and construction of smart cities, which is the largest scale in the world. The current investment scale of smart city construction in China is more than $ 25.9 billion, of which IT investment from 2011 to 2018 was more than $ 300 billion. It is estimated that the investment scale will exceed $40 billion in 2023 (Huang, K., Luo, W., Zhang, W., Li, J. 2021, p. 1409).

Chinese tech companies have signed have strategic cooperation framework agreements with more than 300 cities (Huang, K., Luo, W., Zhang, W., Li, J. 2021, p. 1409). Smart city development in China can already rely on a network of advanced sensors, complete wireless connectivity, facial recognition system, AI camera, gig data analysis, significant cloud-based software services, and the experience of smartphone/electronic payments (Ekman, 2019, p. 17).

The Serbian Government is focused on innovation and digitalization. It is interested to start development of smart cities concept. This can be a good starting point for cooperation with Chinese companies such as such as Huawei, Alibaba, or Tencent.

The Government of Serbia and Huawei signed a Memorandum of Cooperation on the development of smart cities in April 2019. Memorandum is positioning Huawei as a strategic partner of the Serbian Government for the development of smart cities strategy in Belgrade, Niš, Novi Sad, as also the other local self-governments. The city of Niš is the first local self-government in Serbia in which a smart city project should be implemented. Within the smart cities project, Niš is focused on four priorities: parking, environmental protection, traffic regulation, and public lighting (Smartlife, 2021).

One of the smart city solutions that might be interesting for Serbia is the City Brain, project developed by Alibaba. The City Brain instruments aim to optimize the flow of vehicles and traffic signals by calculating the time taken to reach intersections. It also connects various urban management systems including emergency dispatch, ambulance calls, traffic command, and traffic light control. The final goal of the City Brain is to optimize urban traffic flow (Zhang, Hua et al. 2019, p. 29). So far, this technology had given very good results. The platform is used in the Chinese city Hangzhou, a metropolis of 7 million people. Before the use of City Brain, Hangzhou once ranked fifth among China's most congested cities. Since the City Brain started, Hangzhou has dropped to 57th on the list (Toh & Erasmus, 2019). So far, City Brain is used successfully in Asia. When Alibaba decides to expand the City Brain in Europe, the Government of Serbia should show initiative for cooperation. This kind of technology would be beneficial for the capital of Serbia, Belgrade, and large cities like Novi Sad and Niš, which are faced with traffic gridlocks on a daily basis.

Agriculture and Innovative technologies

Serbia has the potential and desires to progress technologically. It has the will to use digitalization and to make the daily life of people and the production processes more efficient. Digitalization and the use of technology have serious potential in the area of agriculture. Perhaps 30 years ago, technology, digitalization, and agriculture could not be connected. Nowadays, time is changing and digitalization is entering almost all aspects of life. Digital technology and services offer new opportunities for the transformation of the agricultural sector. The Internet of Things (IoT), digital technologies, and cloud computing have been increasingly integrated into all aspects of agricultural development as a focus of future technological development that can improve efficiency. Digital technology has possibilities to reduce environmental pollution and ensure the safety of agricultural products. Some integrated systems include satellites, sensors, drones with spectral images possibility, agro-meteorological stations, etc. Digital agricultural transformation exists in many countries of the world- the US, UK, India, the EU countries, etc.

Agricultural informatization started in China in the 1990s. It has seen rapid development of information technologies such as mobile internet, cloud computing, big data, and the internet of things. The use of digitalization in China gave very good results which provide a good foundation and realistic conditions for the development of digital technology and services in agriculture. China's digital technology facilities are at a rapid stage of development, with provinces and cities setting up information platforms for farmers to connect farmers, farmer organizations, enterprises, consumers, and government departments through an online platform and offline outlets (Qin, T., Wang, L. et al.,2022, p. 5)

Serbia produces various agricultural products, mostly grains, fruits, and vegetables which constitute a significant part of its exports. Agriculture is an important sector of the Economy of Serbia comprising 6,8% of the GDP (RZS, 2021). Serbia established the Center for Digital Agriculture at the BioSense Institute in October 2017. The opening of the Centre shows the determination of Serbia towards introducing innovative solutions based on information technologies, whose aim is to boost competitiveness and efficiency of agriculture (University of Novi Sad, 2017).

On the other side, innovation capacities in Serbia have many weaknesses. The possibility of technological penetration of China into Serbia through the transfer of new technologies to the area of agriculture is something that should be considered in post-epidemic period. China is dominant

partner when it comes to IT. On the other side, Serbia has good capacities in the area of biotechnology. Having in mind statistics of Serbia regarding IT growth, this country has the potential to become a serious IT actor. So far, the IT sector in Serbia has significant development capacity, but its achievements in the area of agriculture are not at a high level yet. China, with its experience regarding IT, digitalization, and agriculture, would be an important partner in this process.

Projects and cooperation between Serbia and China regarding IT in agriculture could be beneficial to both sides. China`s investment in the form of technology transfer would have simulative effects on the Serbian agricultural sector in terms of productivity, product quality, and sustainability of agricultural production. On the other side, for China, this is an easy and convenient way to more intensive technological penetration into the CEE region (China CEE Institute 2020, p. 4).

China has a goal to establish a modern agricultural science and technology innovation system by 2025, according to a development guideline of the Chinese Academy of Agricultural Sciences (CAAS) for the 14th Five-Year Plan (2021-2025). The guideline focuses on numerous fields such as seeds, cultivated land, agricultural machinery, and bio-safety. It also calls for the construction of new key laboratories, a grain crop science center, a molecular design breeding center, a national crop germplasm resource bank, a livestock and poultry bank and an agricultural microorganism bank (CGTN, 2022). These tendencies open the potential for scientific cooperation in the area of agriculture between Serbia and China. Serbia has a long agricultural scientific tradition and a few respectable Institutes of agriculture. The exchange of researchers, good practices, organizing projects, and lectures in the area of agriculture can also be a good opportunity for further development of cooperation between China and Serbia in the post-pandemic period.

China and Serbia: Perspectives of Medical Cooperation

Another interesting area for post-epidemic cooperation between Serbia and China can be the area of medicine. During the Covid-19 pandemic, Serbia received masks, vaccines, experts, and medical supplies from China. The pandemic had strengthened relations between the two countries. The area of medical cooperation between Serbia and China has not been very much discussed. The focus of cooperation before the pandemic has been trade, energy, or infrastructure. The health crisis caused by the pandemic pointed out the shortcomings of health systems worldwide and open

a question about the improvement of national health systems and the importance of medical cooperation.

The public healthcare network in Serbia includes a total of 350 healthcare institutions, including 158 primary healthcare entities, 128 secondary-level institutions (40 general hospitals and 34 special hospitals and rehabilitation centers), 4 clinical centers, and 4 military healthcare institutions. The total number of beds in state hospitals stood at 41 654 at the end of 2017. The Serbian health system currently employs more than 100 000 people (OECD, 2020a, p. 1). The Government of Serbia has a goal to modernize the healthcare system and to establish cooperation with other countries regarding the most important aspects of health. Some basis for medical cooperation between Serbia and China has been established before the Covid-19 pandemic. The pandemic pointed out some new areas and perspectives regarding medical cooperation between Serbia and China.

Military medical cooperation

Serbia and China have a tradition of military medical cooperation. The roots of cooperation in the area of military medicine have been established in 2007 when doctors from China, during their study tour of the Military Medical Academy (MMA) in Belgrade, had an opportunity to learn about the experiences and work of the experts from the MMA Clinic for Orthopedics and Traumatology. The MMA experts paid return visits to the military medical centers in the People's Republic of China. Exchange of visits during the years offered training opportunities in the field of plastic surgery and burns, as well as on some management and organizational principles of military medical institutions (The Military Medical Academy, 2008).

Perspectives of military medical cooperation have deepened during the visit of Mr. Zhang Youxia, Chinese Central Military Commission Vice Chairman, to Belgrade in September 2019. General Zhang met with president Vučić and Aleksandar Vulin, Serbian Defense Minister. The two sides signed a memorandum of understanding on co-opening the traditional Chinese medicine center at the Serbian military medical college, within the Clinics for physical medicine and rehabilitation (Ministry of National Defense of the People's Republic of China, 2019). It was announced that the new center will be managed by Serbian specialists who have been trained to practice traditional Chinese medicine in the past few years while Chinese medical professionals will monitor their work. The head of Serbian MMA, colonel dr Miroslav Vukosavljević,

emphasized that the Center will have, among others, a new multifunctional operating theatre, mainly for ophthalmology purposes. Tenders have also been completed for the procurement of equipment and the restoration of the intensive care unit (Bjelotomić, 2019). Unfortunately, the opening of the traditional Chinese medicine center has been postponed due to the Covid-19 pandemic.

This project should not be forgotten for numerous reasons. The Clinic for physical medicine and rehabilitation of Serbian MMA has experts specialized in traditional Chinese medicine. Doctors from this Clinic attended the international symposium in Qingdao on military acupuncture as well as various forms of acupuncture and traditional Chinese medicine- moxibustion, cupping, Chinese massage, Chinese exercises, herbal therapy, and aromatherapy (Paunović, 2020). Traditional Chinese Medicine (TCM) is safe, accessible, effective, and affordable which is important for the mid-income countries like Serbia. The benefits from treatment are numerous including pain and stress reduction, increased immunity, increased fertility, reduced anxiety and depression, good muscle strength, balance, and flexibility (Zhu, Arsovska and Kozovska, 2018, p. 80). When it comes to viruses, traditional Chinese medicine has the potential to suppress virus entry, replication, and transcription, and reduce the immune disorders and cytokine storm caused by viral infection (Kang, X., Jin, D., Jiang, L. et al., 2022, p. 1).

The opening of the Traditional Chinese medical center on MMA in Belgrade would have numerous positive effects on the Serbian health system. It would help preventing of many diseases and, having in mind its affordability, it would help and improve the treatment of existing diseases at reasonable costs. Serbian Military Medical Academy is one of the most respected hospitals in the Balkan region. It is known for its innovations. The establishment of the traditional Chinese medicine center would have the capacity to improve the efficiency of the MMA and to develop further prospects of medical cooperation between China and Serbia.

Testing of natural products for new medicines

An important step towards post-pandemic medical cooperation between Serbian and Chinese institutions is an agreement to establish a joint laboratory in Serbia with the aim to test natural products for new medicines and enable Serbian researchers to study this field in China. A memorandum of understanding on this issue was signed on June 14th, 2022, by Branko Ružić, then first deputy prime minister of Serbia, and a representative of the Shanghai Institute of Materia

Medica of Chinese Academy of Sciences (SIMM). Ružić expressed his satisfaction saying that "signing of this memorandum creates excellent conditions for cooperation" (…) "and it is extremely important for both Serbia and the Western Balkans region, and it is a big step in strengthening the cooperation between Serbia and China" (Xinhua, 2021). The Memorandum relates to the testing of natural medicines and food safety, the exchange of researchers, and cooperation in the field of scientific research and new medicines. The Memorandum also encourages enrollment programs for Serbian students at SIMM and envisages the organization of summer camps for students from China and Serbia, training and exchange programs for students and researchers, as well as other forms of cooperation in the field of higher education and science.

The concept of establishing a joint laboratory includes combining research capacities for the development of natural products in various spheres, primarily in the discovery of new drugs and medical products based on natural resources while preserving biological diversity and ensuring sustainable development. Besides the optimal use of scientific research staff, the work of the Laboratory would also ensure the improvement of research infrastructure. The formation of this type of laboratory is an important step forward in strengthening medical cooperation between China and Serbia.

It is important to emphasize that the formation of a joint laboratory is based on the existing long-term cooperation of the Institute for Biological Research „Siniša Stanković" from Belgrade and the Shanghai Institute Materia Medica, Chinese Academy of Science. Cooperation between these two institutions has been intensified after the signing of the Memorandum of Mutual Cooperation between scientific institutes and faculties of China and Serbia, in Belgrade on 11th April 2019. As a product of the Memorandum, the PANDA association (Pan-Balkan Alliance of Natural Products and Drug Discovery Associations) was formed. PANDA is a non-governmental, non-profit, open and international scientific alliance. It counts representatives from China and 13 Pan-Balkan countries. PANDA is one of the members of the ANSO (Association of National Scientific Organization) and is the only professional association that focuses on new research and drug development within the ANSO Association (Institute for Biological Research Siniša Stanković, 21 May 2021).

Telemedicine

One of the future-oriented areas of medical cooperation between Serbia and China can be telemedicine. It is an interesting area of medicine, or, maybe better said, an area where medicine meets innovative technology. Telemedicine changes conventional medical practice and enables patients to access medical services via telecommunication. It uses modern communication technology, electronic technology, and multimedia computer technology to realize the remote collection, transmission, processing, storage, and inquiry of medical information and to further provide the examination, surveillance, and diagnosis of disease, remote education, and information management. The common types of telemedicine services include teleconsultation, telediagnosis, and remote surgery teaching (Cui, F., Ma, Q. et al. 2020, p. 2). Telemedicine applications have been used in almost every field of medicine, including psychiatry, surgery, dermatology, radiology, pathology, neurology, cardiology, etc. It is beneficial for patients living in rural areas, where the healthcare system is less developed.

The use of telemedicine in China started in mid-1980s which means that China has more than four decades of experience regarding it. The use of digital health technologies in China has grown significantly during the pandemic. Medical consultations provided through haodf.com, one of China's largest internet health platforms, increased by 75% between January and March 2020. China recognized the benefits of digital technologies in the area of health. Chinese investments in the internet health market stood at 37.9 billion RMB (US$5.7 billion) in 2019. That is almost nine times more, compared to 4.5 billion RMB (US$675 million) in 2013 (Cheng, 2022). The Covid-19 pandemic emphasized the fragility of the traditional medicine and pointed out the necessity of innovations in the medical area.

The practice of telemedicine in Serbia is relatively modest. Two radiotherapy departments, the Military Medical Academy, Belgrade, and the Institute of Oncology, Sremska Kamenica, established a connection that might be considered telemedicine in the mid-1990s. Also, Military Medical Academy formed the first telemicroscope network with users in 1997 (Striber Devaja, Zdravković & Baltić, 2001). Telemedicine in Serbia has been studied as a part of mandatory and elective courses at Faculties of Medicine, as well as the Faculty of Technical Sciences and Faculty of Electrical Engineering at the University of Belgrade and the University of Novi Sad.

Serbia has a necessity for telemedicine. The Serbian healthcare system is overburdened and telemedicine has the potential to reduce unnecessary visits to the hospital, save time and money,

and reduce absence from work for medical reasons. China has three major telemedicine networks- the Golden Health Network (GHN), the International MedioNet of China (IMNC) network, and the People's Liberation Army (PLA) telemedicine network. Serbia can show an initiative to establish cooperation and projects with Chinese telemedicine networks. For example, as a part of Belt and Road, China established a telemedicine cooperation center in Benin. A China-Benin telemedicine cooperation center has been jointly launched by a hospital in China and a hospital in Benin with an aim to provide China's online medical services to medical institutions in this country (Xinhua, 2019). A similar model can be developed in Serbia as well.

Telemedicine and modern technologies have the potential to make closer connections and cooperation between Serbian and Chinese doctors on the issues such as diagnostic, surgery guidance or patient management services. Having in mind that Serbia has no experience regarding telemedicine, modern technologies also might be used as a form of exchanging experience or education from Chinese medical institutions regarding telemedicine.

In the area of medicine and innovative technologies, there is a lot of space for cooperation regarding the development of health apps in Serbia. The use of health apps in China is at high stage of development. As of February 2021, the most popular medical app in China was Ping an Good Doctor with almost 76,2 million monthly active users (PAGD, 2021). The mobile apps in China provide real-time medical consultations, on line appointment booking, as well as a health-related discussion forum. Serbia has a few medical applications. Some of the most popular are Izabrani doctor, eZdravlje RS, Zdravstveno Osiguranje, GDC visit me. In practice, these apps often lack some options which cause dissatisfaction among the patients. The possibility for cooperation between Serbia and China exists in this area. Telemedicine is an area that closely connects innovative technologies and medicine. Within Digital Silk Road and Health Silk Road, Serbia and China have a lot of potential regarding projects on telemedicine and mobile health apps.

Conclusion

In 2016, China upgraded its relations with Serbia from a strategic partnership to a comprehensive strategic partnership. Besides geographical distance, relations between China and Serbia have been characterized as "brotherhood" and "steel friendship" (Vladisavljev, 2022). Friendship between the two countries grew stronger during the pandemic. Through medical donations, vaccines, and overall support China had proven to be true friend to Serbia in moments of emergency and health crisis. Before the Covid-19 pandemic, the cooperation between the two counties have been focused mostly on infrastructure, trade, and energy. The pandemic opened a question regarding some new areas of cooperation. There are a lot of possibilities of cooperation between China and Serbia regarding medicine, innovative technologies, and the areas that are connected to both medicine and innovative technologies such as health apps, telemedicine, and digitalization in agriculture. The basis for cooperation in these areas has been established before the pandemic, but its realization can reach the highlight in the post-pandemic period.

Cooperation in the areas of medicine and innovative technologies might be beneficial for both sides. Serbia is a country of much potential, especially when it comes to IT. With the support of China, Serbia can learn a lot about new technologies. Technologies from China can help Serbia to improve the functioning of its cities, develop the area of agriculture, improve the health system, and develop new areas of medicine such as telemedicine and health apps. In this way, Serbia could improve its role and position not only in the Balkan region but also in Europe. For China, cooperation with Serbia can have a positive effect when it comes to cooperation with other countries of the Balkan region. Serbia is recognized as a leader among the Balkan countries. Its leadership role has been highlighted during the Covid-19 pandemic, when it provided vaccines not only for its own citizens, but also for the citizens from the other Balkan countries- North Macedonia, Bosnia and Herzegovina, Albania, and Montenegro. Many citizens of these countries received vaccine against Covid-19 in Serbia. A successful model of cooperation with Serbia can be used as an example of cooperation with the other countries of the region. For China, the benefits of cooperation with Serbia can have a spillover to other countries in the Balkan region. Serbia is also important for China because it is located on important land and river routes that enable it to communicate not only in the East-West direction but also in the North-South direction, as well as for the integration into important regional organizations such as the European Union for whose market is interested itself (Dimitrijević, 2018, p. 52).

Serbia and China share the same values, respect the principles of international law, and the principles of the United Nations. Its friendship is proven through history as well as emergencies such as the Covid-19 pandemic. The relations between Serbia and China are characterized by mutual understanding and trust. Both countries are open to different forms of political, economic, scientific, cultural, and technological cooperation. Serbian stakeholders should bear in mind that Chinese partners are "receptive to exceptional business ideas" (Lađevac, 2020, p. 282). Possibilities for future projects and cooperation in the areas of innovative technologies and medicine are numerous and beneficial for both sides.

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