

# Analysis on BRICS Cybersecurity, New E-Commerce Platforms, and Digital Sovereignty: A Case Study of China and Pakistan

Lingbin Zhou\*

School of Hotel and Tourism Management, Macau University of Science and Technology, Macau 999078, China

*\*Author to whom correspondence should be addressed.*

**Copyright:** © 2025 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

**Abstract:** Taking the cooperation between China and Pakistan as an example, this paper expounds on the current situation, governance concept, obstacles to cooperation, and differentiated policies of Western countries in the areas of cybersecurity, the role of new e-commerce platforms, and digital sovereignty of BRICS countries. It aims to promote inter-governmental cooperation through civil dialogue and lead information technology cooperation among developing countries through the BRICS mechanism, as well as to collaborate to establish guidelines for global cybersecurity, new e-commerce platforms, and digital sovereignty.

**Keywords:** BRICS; Cybersecurity; New e-commerce platform; Digital sovereignty

**Online publication:** October 17, 2025

## 1. Introduction

As a force representing emerging economies, the BRICS countries have gradually expanded their international influence in non-traditional security fields such as cybersecurity, new e-commerce platforms, and digital sovereignty, and actively promoted the formulation of relevant international rules. Issues of cybersecurity, new e-commerce platforms, and digital sovereignty that the BRICS countries share provide a strategic basis for their cooperation. The BRICS Working Group on cybersecurity, new e-commerce platforms, and digital sovereignty and the Working Group of experts on the use of ICT security are also being set up to deepen cooperation mechanisms on cybersecurity, new e-commerce platforms, and digital sovereignty<sup>[1]</sup>. BRICS cooperation on cybersecurity, new e-commerce platforms, and digital sovereignty faces many challenges: different governance concepts on cybersecurity, new e-commerce platforms, and digital sovereignty, constraints on cooperation, and differentiated policies of Western countries<sup>[2]</sup>. Taking the cooperation between China and Pakistan in cybersecurity, new e-commerce platforms, and digital sovereignty as examples, this paper discusses how to improve the cooperation

platform of BRICS countries to cope with threats of cybersecurity, new e-commerce platforms, and digital sovereignty, promote inter-governmental cooperation through people-to-people dialogue, and use the BRICS mechanism to lead information technology cooperation among developing countries, as well as to collaborate to establish guidelines for global cybersecurity, new e-commerce platforms, and digital sovereignty.

## **2. Discussion on cybersecurity among BRICS countries**

### **2.1. Background and significance of BRICS cybersecurity cooperation**

With the rapid development of information technology, network security has become the focus of global attention. As representatives of emerging economies, BRICS countries face common challenges and opportunities in the field of cybersecurity. As important members of BRICS, China and Pakistan share broad common interests and a cooperation basis in cybersecurity cooperation<sup>[3]</sup>. BRICS cooperation on cybersecurity will help us jointly respond to cybersecurity threats and enhance our cybersecurity defense capabilities. Through cooperation, BRICS countries can jointly promote the improvement of the global cyberspace governance system and maintain peace and security in cyberspace. BRICS cybersecurity cooperation can also promote exchanges and cooperation among countries in the field of information technology and promote the development and innovation of the digital economy. Within the framework of BRICS cooperation, cybersecurity is a key area to safeguard the digital sovereignty and economic security of all countries<sup>[4]</sup>. With the vigorous development of the digital economy, cybersecurity threats are becoming increasingly serious, including cyber attacks, data leaks, and digital platform technology monopoly, which may pose challenges to national economic security, social stability, and even national sovereignty.

### **2.2. Status quo and challenges of BRICS cybersecurity cooperation**

The BRICS countries have realized the importance of cybersecurity cooperation and have carried out practical cooperation in a number of areas. For example, the BRICS countries have established a cybersecurity working group that meets regularly to share cybersecurity information and experience. The BRICS countries have also actively promoted research, development, and innovation in cybersecurity technologies and strengthened cooperation in cybersecurity personnel training, policy formulation, and legal framework building. BRICS countries still face some challenges in cybersecurity cooperation, such as different conceptions of cyberspace governance, constraints on cybersecurity cooperation, and divergent policies of Western countries. In addition, there are differences in the level of cybersecurity technology and industrial development among BRICS countries, which also bring certain difficulties to cooperation. The BRICS countries not only share a common development vision and security aspirations in the field of cybersecurity, but as rapidly rising emerging economies, they are also deeply aware of the key role of safeguarding cybersecurity in safeguarding national sovereignty, promoting economic independence, and consolidating social solidarity. These countries are united in their desire to build a peaceful, stable, open, and inclusive international cyberspace order as an important cornerstone for promoting global economic integration and prosperity in the digital age<sup>[5]</sup>.

In pursuing this goal, the BRICS countries face a number of pressing and complex challenges. Firstly, the relative weakness of information infrastructure limits their ability to defend against cybersecurity, making these countries particularly vulnerable to advanced cyber attacks. Secondly, the rampant cybercrime not only threatens personal information security and property security, but also poses a severe challenge to national economic security, such as financial fraud, data theft, and other behaviors that occur frequently, seriously interfering with

normal economic activities. Thirdly, the rise of cyber terrorism, through the dissemination of false information, inciting ethnic hatred, or carrying out cyber attacks, has further intensified regional and even global security risks.

It is these common threats and challenges that have laid a solid strategic foundation for BRICS cooperation in the field of cybersecurity. The BRICS countries are aware that only by strengthening international cooperation, sharing security technology and intelligence information, and improving their respective and overall cybersecurity defense capabilities can they effectively address these complex cross-border and cross-cutting issues. Therefore, BRICS cooperation in the field of cybersecurity is not only related to their respective national interests but also contributes to and complements the global cybersecurity governance system, aiming to jointly build a more secure, reliable, and prosperous digital future <sup>[6]</sup>.

### **2.3. Roles and contributions of China and Pakistan in BRICS cybersecurity cooperation**

China is one of the important promoters of BRICS cybersecurity cooperation. China has taken an active part in the activities of the BRICS Cybersecurity Working Group, sharing cybersecurity technologies and experience. China has also strengthened cooperation with other BRICS countries in cybersecurity personnel training and policy research through the establishment of a cybersecurity academy and the holding of a cybersecurity forum. China has also made remarkable achievements in cybersecurity technology research and development and innovation, providing strong support for BRICS cybersecurity cooperation. As a member of BRICS, Pakistan is also actively involved in cybersecurity cooperation. Pakistan has conducted extensive exchanges and cooperation with China and other BRICS countries in the field of cybersecurity. Pakistan has also enhanced its cybersecurity defense capabilities by strengthening domestic cybersecurity regulations and personnel training <sup>[7]</sup>. In the BRICS cooperation on cybersecurity, Pakistan has actively contributed its share and pushed for more substantive results.

Both China and Pakistan, as important members of BRICS, are facing major challenges in cybersecurity. To address these challenges, the two countries need to strengthen cooperation in the field of cybersecurity and jointly improve cybersecurity protection capabilities. For example, research and development of cybersecurity technologies can be strengthened to enhance cybersecurity monitoring and early warning capabilities. Strengthen the construction of cybersecurity regulations and improve the legal system of cybersecurity; Strengthen the training of network security personnel and improve the quality of network security professional teams. The BRICS cybersecurity research is a topic with broad prospects and great significance. Countries should strengthen cooperation and exchanges, jointly cope with cybersecurity threats and challenges, and promote the improvement and development of the global cyberspace governance system <sup>[8]</sup>.

### **2.4. Future prospects and suggestions for BRICS cybersecurity**

With the deepening of BRICS cooperation on cybersecurity, the cooperation among BRICS countries in the field of cybersecurity will become closer and more pragmatic. The BRICS countries will jointly promote the improvement of the global cyberspace governance system and make a greater contribution to the maintenance of peace and security in cyberspace. In the context of the rapid development of the digital economy, BRICS cybersecurity cooperation will also promote exchanges and cooperation among countries in the field of information technology, and promote the development and innovation of the digital economy. The BRICS countries should continue to strengthen the establishment and operation of the working group on cybersecurity and enhance the efficiency and level of cooperation. Countries should strengthen cooperation in the research, development, and innovation of cybersecurity technologies and jointly deal with cybersecurity threats <sup>[9]</sup>. The BRICS countries should also

strengthen exchanges and cooperation in the cultivation of cybersecurity personnel, policy formulation, and legal framework building, so as to push for more substantive results of cooperation. At the same time, all countries should actively promote the improvement of the global cyberspace governance system and make a greater contribution to the maintenance of peace and security in cyberspace.

The BRICS countries not only share a common development vision and security aspirations in the field of cybersecurity, but as rapidly rising emerging economies, they are also deeply aware of the key role of safeguarding cybersecurity in safeguarding national sovereignty, promoting economic independence, and consolidating social solidarity. These countries are united in their desire to build a peaceful, stable, open, and inclusive international cyberspace order as an important cornerstone for promoting global economic integration and prosperity in the digital age.

In pursuing this goal, the BRICS countries face a number of pressing and complex challenges. Firstly, the relative weakness of information infrastructure limits their ability to defend against cybersecurity, making these countries particularly vulnerable to advanced cyber attacks. Secondly, the rampant cybercrime not only threatens personal information security and property security, but also poses a severe challenge to national economic security, such as financial fraud, data theft, and other behaviors that occur frequently, seriously interfering with normal economic activities. Thirdly, the rise of cyber terrorism, through the dissemination of false information, inciting ethnic hatred, or carrying out cyber attacks, has further intensified regional and even global security risks.

It is these common threats and challenges that have laid a solid strategic foundation for BRICS cooperation in the field of cybersecurity. They realize that only by strengthening international cooperation, sharing security technology and intelligence information, and improving their respective and overall cybersecurity defense capabilities can they effectively deal with these cross-border and cross-domain complex issues. Therefore, BRICS cooperation in the field of cybersecurity is not only related to their respective national interests, but also contributes to and complements the global cybersecurity governance system, aiming to jointly build a more secure, reliable, and prosperous digital future <sup>[10]</sup>.

### **3. Establishment of new e-commerce platforms in BRICS countries**

#### **3.1. Roles of new e-commerce platforms in BRICS countries**

New e-commerce platforms play an important role in today's economic development. By building a new e-commerce platform for cooperation, the BRICS countries have and will play the role of the new e-commerce platform. Firstly, promote the circulation of commodities. E-commerce platforms have broken geographical restrictions, making it easier for goods to flow between BRICS countries. Consumers can buy high-quality goods from other BRICS countries through the e-commerce platform, thus enriching their consumption choices. Secondly, reduce transaction costs. E-commerce platforms reduce transaction costs in traditional trade through digital means. For example, by means of online payment and electronic contract, the circulation of paper documents and labor costs are reduced, and the transaction efficiency is improved. Thirdly, improve trade efficiency. E-commerce platforms enhance the transparency and efficiency of trade through logistics tracking, intelligent matching, and other functions. Consumers and merchants can know the logistics information of orders in real time, so as to better arrange production and consumption plans. Finally, we need to promote financial cooperation. The development of e-commerce platforms has also promoted financial cooperation among BRICS countries. For example, through online payment platforms, convenient exchange and settlement between



currencies of different countries can be achieved, thus reducing exchange rate risks and transaction costs.

### **3.2. Challenges and opportunities for new e-commerce platforms in BRICS countries**

With the development of new global e-commerce platforms, the new e-commerce platforms of BRICS countries face many challenges, but also encounter rare development opportunities. In terms of challenges, the amount of cross-border e-commerce trade payment is relatively large, and the global trade of goods is close, which leads to the buyers and sellers involved in cross-border transactions questioning cross-border payment. In addition, laws and regulations between different countries, trade barriers, etc., may also pose obstacles to the development of e-commerce platforms. In terms of opportunities encountered, with the continuous deepening and expansion of trade cooperation among BRICS countries, e-commerce platforms will usher in broader prospects for development. At the same time, with the continuous development and application of digital technology, e-commerce platforms will continue to innovate and upgrade to provide consumers with a more convenient and efficient shopping experience.

### **3.3. The special status of China and Pakistan in the new BRICS e-commerce platform**

The cooperation and development between China and Pakistan in the new e-commerce platform has injected a lot of experience into the BRICS countries and has a special position in the new e-commerce platform of the BRICS countries. Firstly, China and Pakistan have the basis for cooperation. As all-weather strategic cooperative partners, China and Pakistan have continuously deepened cooperation in the economic and trade fields. The two countries have signed a memorandum of understanding on e-commerce cooperation, established an e-commerce cooperation mechanism, and provided policy guarantees for the development of e-commerce platforms. Secondly, the Chinese market has huge potential. Both China and Pakistan are important members of the BRICS countries with huge consumer groups and vast market space. As an important part of the emerging market, the e-commerce platform has great development potential between the two countries. Thirdly, China and Pakistan can complement each other's advantages: China and Pakistan have complementary advantages in commodity types, industrial structure, and other aspects. Through the e-commerce platform, the two countries can achieve closer industrial cooperation and trade exchanges, and jointly promote the prosperity and development of the BRICS e-commerce platform<sup>[11]</sup>.

In China, the new e-commerce platforms represented by Alibaba and JD.com have become an important engine for the development of the digital economy. Through advanced technologies such as big data and cloud computing, these platforms have realized functions such as precision marketing and intelligent logistics, which have greatly improved transaction efficiency and user experience. At the same time, the new e-commerce platform has also promoted the development of innovative businesses such as digital payment and digital finance, injecting new vitality into the digital economy.

In Pakistan, new e-commerce platforms are also playing an important role. For example, Pakistan's Dalaz e-commerce platform has achieved rapid business growth through strategic cooperation with Alibaba, supported by the world's top e-commerce technology. These new e-commerce platforms not only provide Pakistani consumers with a more diverse selection of goods but also promote the digital transformation and development of local middle and small-sized enterprises.

To sum up, China and Pakistan have a special position and role in the new BRICS e-commerce platform. By strengthening cooperation, leveraging complementary advantages, addressing challenges, and seizing opportunities, the two countries can jointly promote the prosperous development of BRICS e-commerce platforms

and inject new impetus into trade exchanges and economic growth among BRICS countries.

## **4. Analysis on the digital sovereignty of BRICS countries**

### **4.1. Current status and challenges of digital sovereignty in BRICS countries**

The BRICS countries (Brazil, Russia, India, China, and South Africa) have made significant progress in the field of digitalization, especially in e-commerce platforms, digital payments, artificial intelligence, and more. These countries recognize the importance of digital technologies and digital governance and are committed to promoting the prosperity of the digital economy. The uneven level of technology among the BRICS countries may lead to some obstacles to cooperation on digital sovereignty. Reliance on existing Western technology, especially in the field of semiconductors, has limited the advancement of digital sovereignty to some extent <sup>[12]</sup>. The United States and other Western countries may try to influence the BRICS countries and interfere with their cooperation, which will cause differences and divisions within the BRICS countries.

### **4.2. The status and role of China and Pakistan in BRICS digital sovereignty**

China is an important member of the BRICS, with a large digital economy and a broad Internet user base. China has made remarkable achievements in digital technology and digital governance, such as 5G networks, digital payments, e-commerce, etc. China has actively promoted digital cooperation among BRICS countries and is committed to building a community of shared future in cyberspace. As a BRICS observer, Pakistan has also made considerable progress in the digital sector. Pakistan and China have close cooperation in the field of digital economy, and the two countries have jointly promoted the innovation and application of digital technologies. Pakistan faces some challenges in asserting its own digital sovereignty, but is also actively seeking solutions <sup>[13]</sup>.

### **4.3. Future vision of digital sovereignty in BRICS countries**

In future economic development, the BRICS countries should continue to explore on the basis of the existing, in order to strengthen the construction of digital sovereignty on a global scale. Firstly, strengthen cooperation. BRICS countries should strengthen cooperation in digital technology and digital governance to jointly promote the prosperity and development of the digital economy. By sharing experience, technology, and resources, the BRICS countries can work together to address the challenges of digital sovereignty. Secondly, promote innovation. BRICS countries should encourage innovation and the application of digital technologies, especially in areas such as artificial intelligence, big data, and blockchain. Through technological innovation, BRICS countries can enhance their digital competitiveness and better safeguard national digital sovereignty <sup>[14]</sup>. Thirdly, improve laws and regulations. The BRICS countries should improve their legal and regulatory systems in the digital field to provide a strong legal guarantee for the development of digital technologies. By strengthening regulations, BRICS countries can regulate the order of the digital market and protect consumer rights and national security. Finally, promote openness. BRICS countries should actively promote open cooperation in the digital field and promote data flow and information sharing. Through openness and cooperation, BRICS countries can jointly address the challenges of global digital governance and promote the building of a more equitable, open, and inclusive digital governance system.

Both China and Pakistan have important interests in digital sovereignty. As a leading country in the digital economy, China has actively safeguarded its rights and interests in the digital space and promoted the healthy development of the digital economy. Pakistan hopes to enhance its competitiveness in the digital economy by

strengthening the construction of digital sovereignty <sup>[15]</sup>.

In terms of safeguarding digital sovereignty, China and Pakistan can take the following measures: first, strengthen the construction of digital infrastructure and enhance the independent research and development and application capacity of digital technologies. Second, improve the digital laws and regulations system to ensure the legal and compliant development of the digital economy. Third, strengthen international cooperation and exchanges to jointly address security challenges and governance issues in the digital space.

## 5. Conclusion

To sum up, BRICS countries have a broad basis for cooperation and common aspirations in cybersecurity, the role of new e-commerce platforms, and digital sovereignty. Taking China and Pakistan as an opportunity, by strengthening cooperation and jointly addressing challenges, the BRICS countries can promote innovative development of the digital economy, improve trade facilitation, and safeguard their sovereign rights and interests in cyberspace.

## Disclosure statement

The author declares no conflict of interest.

## References

- [1] Forward-Looking Threat Research Team, 2015, *Ascending the Ranks: The Brazilian Cybercriminal Underground in 2015*, A TrendLabs Research Paper, 12, <https://documents.trendmicro.com/assets/wp/wp-ascending-the-ranks.pdf>
- [2] Symantec, 2016, *Internet Security Threat Report*, Vol. 21, 56.
- [3] Cyber-Security and the BRICS, n.d., *The Global Initiative against Transnational Organized Crime*.
- [4] Institute for Economics & Peace, 2016, *Global Terrorism Index 2016*, IEP Report 43, 10–11.
- [5] Sixth BRICS Summit – Fortaleza Declaration, 2014, Indian Ministry of External Affairs, <http://mea.gov.in/bilateral-documents.htm?dtl/23635/Sixth+BRICS+Summit++Fortaleza+Declaration>
- [6] Goa Declaration at 8th BRICS Summit, 2016, Indian Ministry of External Affairs, <http://www.mea.gov.in/bilateral-documents.htm?dtl/27491/Goa+Declaration+at+8th+BRICS+Summit>
- [7] Meng L, 2025, *The Dissemination and Response of False Information in Cyberspace from the Perspective of National Security*. *News Enthusiast*, (08): 90–92.
- [8] Yi X, Xie C, 2025, *Discussion on the Optimization of National Cybersecurity Education for College Students*. *Journal of Hunan University of Humanities, Science and Technology*, 42(04): 20–26.
- [9] Wang B, 2022, *Research on the Governance of Online Ideology in Colleges and Universities from the Perspective of the Overall National Security Outlook*. *Research on the Discipline of Marxist Theory*, 8(10): 93–101.
- [10] Fan W, Xu H, 2025, *Strengthening the Cybersecurity Defense Line to Jointly Safeguard National Security in the Digital Intelligence Era*. *New Security*, (06): 21–24.
- [11] Wu J, Zou H, Zhang F, et al., 2023, *Research on Several Issues of Digital Sovereignty and National Security*. *National Security Research*, (03): 74–90 + 161.
- [12] Wu M, Wu W, Yu N, 2025, *Practicing the Overall National Security Outlook and Comprehensively Enhancing Cybersecurity Awareness*. *China Information Security*, (04): 17–21.

- [13] Zheng X, He X, Li W, et al., 2024, Construction of National Cybersecurity System and Capacity by Systematic Approach. *China Information Security*, (10): 72–76.
- [14] Wu J, 2024, All Citizens Join Hands to Build a Cybersecurity Defense Line, *Jiujiang Daily*, September 25, 2024, (002).
- [15] Liu F, 2024, Working Together to Build a Cybersecurity Barrier, *Jiangxi Daily*, September 16, 2024, (002).

**Publisher's note**

Bio-Byword Scientific Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.