

CHINA AND DIGITAL TRANSFORMATION OF SOUTHEAST ASIAN CITIES

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SUMMARY

The brief takes a closer look at cooperation between China and Southeast Asian countries in the field of advanced technologies. Particular emphasis has been placed on the development of smart/safe city platforms, which play a key role in the face of current and future challenges for urban agglomerations in this region. The analysis shows that the scale of cooperation in this area is insignificant between China and Vietnam. On the flip side, China and the Philippines have established several projects aimed at improving digital infrastructure and advanced platforms such as a safe city. Although the European Union has started some initiatives to increase the participation of European nation in the technological development of Southeast Asian countries, China plays a decisive role at this stage. Nonetheless, the example of Vietnam proves that this trend can be reversed. However, it is necessary to intensify multilevel activities, taking into account the strengthening of relations at the level of local governments.

RECOMMENDATIONS

1. The European Union should actively participate in the international forum to discuss standards for developing and implementing cutting-edge technologies in cyber governance.
2. In the field of normative rivalry, the European Union should present an alternative to Chinese solutions that will encourage developing countries to enhance technological developments while cultivating liberal values.
3. European companies must increase their competitiveness in the international market by reducing the costs of their own systems or by proposing attractive forms of financing. It is also necessary to prepare a comprehensive offer containing at least a few complementary solutions to transform municipalities into smart/safe cities.
4. The European Union should deepen and extend the programs that have been implemented so far, such as Smart Green ASEAN Cities, Regional ASEAN Forest Governance, and Supreme Audit Institutions. Nevertheless, this will entail increasing financial outlays to increase its competitiveness against China and the United States.

INTRODUCTION

According to data from the United Nations, the population of Southeast Asian countries will increase to over 740 million by 2025. With the growing population and rapid urbanization in Southeast Asia, more and more people are moving to urban agglomerations. According to some estimates, from 2015 to 2030, more than 100 million people will move from the countryside to cities in ASEAN member countries. With the influx of people, the number of challenges that cities will have to deal with will increase, especially in the area of safety and security. These will be already-recognised threats related to traffic congestion or crime as well as new challenges such as the epidemiological threat that we have been experiencing since 2020 or the increasing (both in terms of scale and intensity) natural disasters as a result of climate change. In order to meet these threats and challenges, it will be essential to implement advanced

technologies that will enable the transformation of metropolises into smart and safe cities.

CHINA-ASEAN COOPERATION

To begin with, it is worth considering which Southeast Asian countries China cooperates with most in developing smart cities, and with which it collaborates the least. To answer this question, a detailed analysis of the cooperation of all ten ASEAN member states with Chinese companies that have solutions that make up the components of the smart/safe city platform was carried out. Later on, this section and the next one present some examples of the most and least fruitful cooperation in this area. It is worth underscoring that this is not a straightforward task because it is difficult to clearly identify which projects are implemented as part of the transformation of a given agglomeration and which are independent solutions that will not be supplemented with further elements of the smart city platform.

China's cooperation with ASEAN in the field of advanced technologies is being enhanced on several levels. For instance, the ASEAN – China Strategic Partnership Vision 2030 was adopted in November 2018. In addition, China has committed to supporting ASEAN's technological transformation, including the ASEAN ICT Master Plan 2020 and the ASEAN Smart City Network (the network encompasses 26 pilot cities). Moreover, ASEAN and China established an initiative for innovation-driven development in smart cities in 2019. This is not dictated by Beijing's disinterested attitude but by the prospect of real gains, as the digital market in Southeast Asia has almost doubled between 2011 and 2019, with an estimated value of \$200 billion by 2025.

The construction of the smart city platform is very complicated because it requires the implementation of several advanced technological solutions that make up the smart city platform. These solutions include surveillance (CCTV, facial recognition), network infrastructure (5G, Wi-Fi), big data (cloud networks, data centers, servers), fintech, energy, integrated platforms (such as a safe city), and a vast range of municipal services. In the case of integrated platforms, the main providers of such solutions are Chinese companies such as Huawei, ZTE, Dahua, Alibaba, Kedacom, Shenzhen ZNV.

At this point it should be emphasized that without the development of individual components at an appropriate level, such as relevant network infrastructure, surveillance, or servers, it is not possible to efficiently operate integrated safe city platforms.

The individual components constitute a system of interconnected vessels. Without the appropriate foundations consisting of technologically advanced infrastructure, it will not be possible to develop fully integrated platforms that adequately fulfil their role.

THE CASE OF VIETNAM

Given China's cooperation with Southeast Asian countries, the least progress in the collaboration on the safe city platform can be seen in Vietnam. The main reason for such a situation is the extremely high social reluctance towards Chinese investments in this country.

Additionally, the Vietnamese government fears undesirable access by China to its sensitive data. These concerns are perfectly evidenced by Hanoi's unwillingness to implement 5G infrastructure by Huawei. Vietnam's largest mobile carrier, owned by the Defense Ministry - Viettel Group, decided to use equipment from such companies as Ericsson, Nokia, and Qualcomm Inc. The company is also working on developing its own solutions to enable the development of fifth-generation Internet in the country.

Despite Vietnam's clear distrust of Beijing to build a comprehensive 5G infrastructure, we have examples of cooperation in certain areas. For instance, Zhejiang Uniview Technologies supplies surveillance equipment. It is very likely that we will witness further examples of collaboration with Chinese technology companies as they offer advanced solutions at an affordable price. Nonetheless, it is much less likely that the government in Hanoi will agree to China building a comprehensive smart city infrastructure in Vietnam. The Vietnamese government will strive to develop its own solutions in close cooperation with European countries and the United States, as their offer is more transparent and guarantees greater control over sensitive data. Although, in order not to deepen the antagonism with China, some cooperation in the area of advanced technologies must be maintained, it will be seen in sectors with less strategic sensitivity,

in case of an uncontrolled data leak (taken over by China). Vietnam has adopted a similar strategy for the coronavirus vaccination program. The priority was to develop their own vaccine while learning from Western pharmaceutical companies that provided access to their vaccines. After a few months, when the epidemiological situation worsened, Chinese vaccines were approved for emergency use on the country's territory. It is notable, however, that they were mainly distributed to people of Chinese origin and residents of the border areas with China.

THE CASE OF THE PHILIPPINES

The Philippines are an example of relatively high intensity of technological cooperation with China, especially when it comes to smart/safe city platforms. This case is extremely interesting because, despite the territorial dispute in the South China Sea with China and a long-term alliance with the United States, they cooperate closely with Chinese tech companies.

One of the main reasons for this is the pro-China foreign policy of President Rodrigo Duterte, who won the 2016 elections.

To begin with, the New Manila Bay project under the Belt and Road Initiative was inaugurated in February 2017. Located in the Philippine capital's central district, the 407-hectare New Manila Bay City of Pearl is expected to be completed in seven phases over 20 years, and the total cost of this investment is estimated to be around \$867.8 million. Most importantly, it will include many smart city components, with carbon positivity as the long-term goal. Considering the fact that Hong Kong-based Ho & Partners Architects Engineers & Development Consultants Ltd is responsible for the architectural planning and project management, it can be assumed that the project will involve Chinese companies offering solutions that fit the definition of a smart city, especially since the kick-off capital was provided by China Development Bank (CDB) and UAA Kinming, a consortium of Filipino-Chinese developers.

During the visit of the President of the PRC, Xi Jinping, to the Philippines in November 2018, 29 bilateral agreements were signed. Among them was a contract for the construction of an industrial park project with China Construction Engineering

Corporation in New Clark City for the amount of USD 2 billion. New Clark City is to be the first complementary smart city project.

Another result of the Chinese President's visit to the Philippines is the Safe Philippines Project Phase I, implemented by China International Telecommunication and Construction Corporation (CITCC), worth approximately USD 380 million. According to the contract, the project is to be carried out thanks to a Chinese loan from the Export-Import Bank of China, where the Philippines Government is required to pay 20% of the costs. The Department of the Interior and Local Government (DILG) of the Philippines partnered with a China Telecom affiliate and Huawei for this project, which aims to reduce crime by 15% and improve response time by 25%. The Safe Philippines Project involves the construction of an integrated command center for the 911 public safety answering point, 18 city-level command centers in Metro Manila and Davao, a CCTV surveillance system linked via a dedicated communications infrastructure, and a data center with a remote data backup center. Cooperation with China on this project raised many concerns, an example of which was the call of Senate President Pro Tempore Ralph Recto to initiate an internal inquiry in January 2019. In turn, in March of the same year, Secretary of National Defense Delfin Lorenzana assured the public that there is no cause for concern on Chinese tech companies' involvement in the country while mentioning American warnings about the possibility of espionage from companies such as Huawei. A similar position on this matter was taken a month later by Secretary of Trade and Industry Ramon Lopez. The Philippine National Police also joined the exclusion of any concerns, stating in May 2019 that the preliminary investigation into the alleged Chinese espionage activity did not confirm the American warnings in this regard. According to the latest reports by the Philippine government in June 2021, the first phase of the project is to be completed next year.

In addition to the safe city agreement, the Philippines is working closely with China in the field of telecommunications, especially regarding the development of the fifth-generation Internet network, which is very important to facilitate safe city implementation. Let's start with the fact that, in February 2017, Philippine telecommunications provider PLDT signed a memorandum of understanding (MOU) with Huawei to establish a 5G network in the

Philippines by 2020. As of May 2021, PLDTs' wireless arm Smart Communications launched more than 3,000 5G sites across the country.

CONCLUSIONS

The Southeast Asia region has witnessed a significant increase in Chinese investment in built-from-scratch smart city development. The Philippines are in the foreground in this respect.

While China's Digital Silk Road (DSR) has the potential to enhance digital connectivity in Southeast Asia and other countries in the global south, it also comes with a risk of enhancement of authoritarian governments, curtailment of democracy, and degradation of human rights.

This is all the more dangerous as China is working to establish its ideal international digital environment through digital diplomacy and multilateral governance. Beijing uses its influence to establish technical standards related to telecommunications infrastructure. The Chinese establishment refers to specific data, which shows that the solutions offered by Chinese technology companies will effectively increase the efficiency of city management and improve the safety of their residents.

According to a report prepared by the Center for Strategic and International Studies in 2019, Huawei in its presentations refers to one of its safe city projects, which recorded a 15% reduction in violent crime, a 45% increase in its case clearance rate, and reduction in emergency response times from 10 minutes to 4.5 minutes, and a citizen satisfaction increase from 60.2% to 98.3%.

One of the main challenges that the European Union has to face is those of a normative nature. China realizes that after World War II, it was the United States and some European countries that were the main architects of the international order, thus imposing its own standards favoring the interests of these countries. Therefore, over the past few years, Beijing has gradually expanded its sphere of influence in international organizations and has created its forums for multilateral cooperation. This is also visible in the area of advanced technology, where China creates and promotes its global tech standards. PRC

regularly sends representatives to international organizations responsible for setting standards, such as the International Telecommunication Union (ITU) and the 3rd Generation Partnership Project (3GPP). Chinese policymakers have realized that the technology race offers the perfect opportunity to take the lead in international discourse. That is why the Chinese Communist Party establishes a set of rules that are later supported, implemented, and most importantly, promoted by members of the government, academics, and the business world in internal and external forums. Chinese elites are convinced that the model of cyberspace governance used in China has the potential to be adopted by other countries. The European Union should oppose these actions, the more so because it has its own solutions, as in the case of 5G infrastructure. However, the price differences should be reduced because the equipment necessary to build a 5G network offered by the Chinese company Huawei is on average 30% cheaper than European counterparts such as Nokia or Ericsson.

On the example of both the smart city index and the level of urbanization of cities in Southeast Asia, it is clearly visible that this is a region with a very high need for development. However, in order to correctly identify specific areas, it is necessary to know the needs of individual cities. Consequently, the European Union should contribute to the intensification of cooperation at the level of local authorities, for example, by establishing twin-city and sister-cities partnerships. Thanks to the exchange of experiences at the city level, it would be possible to more effectively promote technological solutions already used in European smart cities, facilitating the implementation of the Western cyber governance model in the cities of ASEAN member states.

At present, EU countries have only 31 sister-cities agreements with Southeast Asian countries. For comparison, China has 88 such agreements.

One of the arguments about the effectiveness of this strategy may be the case of Vietnam because it is the only ASEAN country having more twin-city partnership agreements with EU countries than with China. The government of Vietnam, despite a one-party system led by the Communist Party of Vietnam, is more interested in cooperation with European

companies than with the Chinese, despite the geographical proximity and political system similarities.

Despite the coronavirus pandemic, the European Union launched three programs in 2020 with a total value of €13 million: Smart Green ASEAN Cities, Regional ASEAN Forest Governance, and Supreme Audit Institutions. Particularly noteworthy is Smart Green ASEAN Cities 2021-2024, which focuses on sustainable urbanization, supporting smart solutions enabled by digitalization and the use of technologies. In line with this initiative, the European Union, like China, expressed its support for the ASEAN Smart Cities Network. However, it is worth considering whether €5 million is a sufficient amount, taking into account both the timeframe and the scale of the needs of individual ASEAN countries. Such initiatives are badly needed, but they are centralized in nature and suffer from numerous difficulties due to an extensive bureaucratic apparatus, both on the side of ASEAN and the EU. Therefore, it should be highlighted that actions at lower levels of government should support such undertakings, either directly between countries or between specific cities. Although China also creates mechanisms for multilateral cooperation, the vast majority of activities are bilateral, which allows for faster addressing of specific problems and more efficient implementation of projects.

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