The Effects of Chinese Investments in Digital Infrastructures on Data Policies and Regulations in Host Countries: A Case Study on New Clark City, Philippines

Timothy Joseph Henares [1, *] and Masaru Yarime [1, 2]

[1]*Division of Environment and Sustainability, The Hong Kong University of Science and Technology, Hong Kong SAR, China*
[2]*Division of Public Policy, The Hong Kong University of Science and Technology, Hong Kong SAR, China*
**Corresponding author: tjghenares@connect.ust.hk*

Abstract

China's Digital Silk Road is a strategy guide for Chinese technology companies to invest in digital infrastructures in Belt and Road Initiative signatory countries. There is, however, little research about the effects of Chinese-funded digital infrastructures in these countries. This paper examines the impact of Chinese investments in digital infrastructures in smart cities in Southeast Asia on data policies and regulations in host countries. We use New Clark City as a case study. Previously the site of an American airbase in the Philippines, New Clark City is anticipated to be the country's first smart city with Chinese support. Data analysis is made by examining key informant interviews and reviewing policy documents and articles to determine (1) Chinese push and pull factors in transnational data governance, (2) the scale of Chinese-funded digital infrastructures, and (3) the perceptions of Philippine state and non-state actors. We make two implications. First, the transnational flow of ideas, expertise, capital, and technologies involving data provided by Chinese technology companies influenced the Philippines to adopt Chinese data policies and regulations. Second, the same transfer of digital infrastructures also affects the host country to adopt Chinese environmental and energy standards. All these could mean that Southeast Asian smart cities receiving Chinese investments in digital infrastructures, including New Clark City, have their data policies and regulations contain Chinese characteristics.

Keywords **–** Digital Silk Road; digital infrastructure; smart city; Beijing Effect; data governance

1 Introduction

The Digital Silk Road (DSR), part of China's Belt and Road Initiative (BRI), is a strategy guide for Chinese technology companies to invest in digital infrastructures in BRI signatory countries. Launched in 2015, the DSR is reminiscent of the ancient Silk Road, with trade routes connecting Asia to Europe. Today, the same idea applies; instead, this time, digital infrastructures connect these continents – "solar panels and smartphones have replaced silk, and trains and aeroplanes have superseded camels" (Huadong, 2018, p. 25). In 2019, according to RWR Advisory Group, Chinese investments in digital infrastructures amounted to US$ 79 billion globally (Prasso, 2019). These investments include e-commerce, fiber-optic cables, telecom equipment, internet-capable appliances, and surveillance systems. Most, if not all these investments, assist China in developing smart cities overseas.

In this study, we look at the effects of Chinese investments in digital infrastructures on data policies and regulations in host countries. The results will increase our understanding on Chinese-funded digital infrastructures in Southeast Asian smart cities and how these Chinese investments, under the DSR, influence data policies and regulations in host countries. We investigate a smart city in the Philippines called New Clark City. New Clark City is perceived to be the "first smart, resilient, and green metropolis" (Global Future Cities Programme, n.d.) Previously the site of an American airbase, New Clark City will be a residential-industrial hub that will host 1.2 million residents, including a variety of light industries and technology companies (Muggah & Khanna, 2018; Siu, 2018). At the same time, the city will be equipped with green building standards and Internet of Things technology. The smart city is also viewed to offload the population-dense Metro Manila.

Our paper starts by providing a literature review on two independent yet intersecting themes, specifically China's overseas investments in digital infrastructures, focusing on smart cities, and how data policies and regulations fit into the narrative of these modern cityscapes (section 2). We

then present in our methodology how our data was collected and analyzed (section 3). After which, we dive into our case study on New Clark City (section 4). We conclude our paper by discussing the case study, knowledge gaps, and potential ways forward in this field of study (section 5).

2 Literature Review

We examine the previous research in two areas with a focus on China. First, we present an overview of existing studies on Chinese investments in digital infrastructures focusing on smart cities. We also highlight two examples of these investments in the Philippines. Second, we present a snapshot of data policies and regulations. We end section 2 on what gaps our paper will fill.

2.1. China's overseas digital investments

China's Belt and Road Initiative has received significant attention since President Xi Jinping's announcement in 2013. However, there is a dearth of research on its Digital Silk Road and the overseas digital investments that come with it (Vila Seoane, 2020). Launched in 2015 as the "Information Silk Road," China aims to connect the world with not only bridges and railways but also with fiber-optic and submarine cables (National Development and Reform Commission of the People's Republic of China et al., 2015). This huge ambition is thanks to China's digital economic transformation in the previous decades. Hillman (2021, p. 15) wrote, "Chinese firms imported Western technology, partnered with Western firms through joint ventures in China, adopted their management practices, and hired their brightest minds." Today, from a developing country to a nation that uses cashless payment systems and 5G networks sought out by developed countries, China provides a new digital development model for the Global South (Vila Seoane, 2020).

The DSR would not have been possible without the use of data. Pundits and scholars believe data to be the "new oil" (Arthur, 2013), usurping oil as the "most valuable resource" (The Economist, 2017). The DSR's use of big data is supporting countries in areas such as environmental monitoring (Huadong, 2018, p. 26), global digital trade (Liu, 2021, p. 48; Ly, 2020; Vila Seoane, 2020), and the United Nation's (UN) 2030 Sustainable Development Goals (Huadong, 2018, p. 27). Emerging economies such as those in Southeast Asia are learning from China's successful adoption of digital platforms such as e-commerce and financial technology to bolster their economic agendas (Wong & Wihardja, 2022).

Year	Chinese Company	Sector	Amount in US$ Million	Country
2015	Nantong Fujitsu	Technology	370	Malaysia
	Alibaba	Logistics	150	Singapore
	Didi Chuxing, China Investment Co.	Transport	100	Singapore
	Jiangsu Changjiang, Semiconductor Manufacturing International Co., IC Fund	Technology	1,660	Singapore
2016	Alibaba	Consumer	1,000	Singapore
	China Aerospace Science and Technology	Technology	210	Thailand
2017	Alibaba	Consumer	190	Philippines
	Tencent	Transport	150	Indonesia
	JD.com	Transport	100	Indonesia
	JD.com	Consumer	230	Thailand
	Alibaba	Consumer	500	Indonesia
	Alibaba	Consumer	1,000	Singapore
	Didi Chuxing	Transport	500	Singapore
	Tencent	Entertainment	470	Singapore
2018	Alibaba	Consumer	320	Thailand
	Alibaba	Consumer	2,000	Singapore
	YY	Entertainment	370	Singapore
	Sinomach, Shanghai Electric	Technology	380	Vietnam
	Tianshui Huatian	Technology	440	Malaysia
2019	China Telecom	Technology	760	Philippines
	YY	Entertainment	1,080	Singapore
	China Mobile	Technology	120	Singapore
	GoerTek	Technology	260	Vietnam
	Tencent, JD.com	Transport	340	Indonesia
2020	Alibaba	Real Estate	600	Singapore
	Huawei Technologies	Technology	190	Philippines
2021	Alibaba	Logistics	200	Singapore
	Alibaba	Consumer	210	Vietnam
	Tencent-led consortium	Technology	140	Singapore
	Tencent, Primavera Capital	Consumer	100	Indonesia

Table 1. List of Chinese overseas investments related to digital infrastructures in Southeast Asia between 2015 and 2021. Source: American Enterprise Institute's China Global Investment Tracker.

Smart cities are perceived as essential structures to achieve economic growth and sustainable development in urban areas (Thuzar, 2011, p. 96). The significance of smart cities comes at a time when a UN (2018) report stated that by 2050, two out of three people worldwide will live in cities. In the same year, 507 million people will live in cities located in the Association of Southeast Asian Nations (ASEAN), making the regional bloc "one of the world's largest middle-income emerging markets after China and India" (United Nations, 2018). However, rapid urbanization

brought them the consequence of unlivable cityscapes. Smart cities are seen to remedy these modern urban issues. For the case of ASEAN, transforming cities to include "smart" capabilities are vital in achieving full economic integration (Thuzar, 2011, pp. 99–100). When it comes to smart cities, Chinese President Xi Jinping (2017) refers to it, including several other digital infrastructures, in his speech at the first Belt and Road Forum:

> We should pursue innovation-driven development and intensify cooperation in frontier areas such as digital economy, artificial intelligence, nanotechnology and quantum computing, and advance the development of big data, cloud computing and **smart cities** so as to turn them into a digital silk road of the 21st century (emphasis added).

ASEAN member states look to countries such as China in filling this gap.

According to the data gathered between 2015 and 2021 (see Table 1), numerous Chinese companies investing in digital infrastructures in Southeast Asia totaled more than US$ 14 billion since the inception of the Digital Silk Road. Investments in these sectors are not limited to direct technology but include other areas: consumer goods, transportation, entertainment, and real estate. There is, however, limited information on which investments made their way into smart city development. The only example we have so far in smart cities is Malaysia's Forest City. With investments up to US$ 100 billion and whose majority owner is Chinese property company Country Garden Holdings, Forest City is facing a slowdown in terms of the number of residents, businesses, and urban development due to the Covid-19 pandemic (Kumar & Kawase, 2022).

Other than that, there are criticisms towards the DSR. Liu (2021, p. 48) echoes the issue of Chinese influence, saying that the DSR "further strengthen[s] China's technology power and influence." Data privacy concerns exist when acquiring such services (Liu, 2021; Ly, 2020, p. 15). Another scholar opines that using Chinese-funded digital technologies "might entrap partner countries in new types of problematic digital dependence" (Vila Seoane, 2020). In Zambia, for example, Prasso (2019) explains that despite the development opportunities provided by China, Zambia's democratic values are moving in the direction of "a Chinese model of repression" due to Chinese technology transfer. Furthermore, Erie and Streinz (2022, p. 7) claim that the developing digital landscape in the Global South allows Chinese technology companies to make a more profound impact than in the Global North.

In the Philippines, there are two cases that provide an overview of China's involvement regarding digital infrastructures.

2.2.1. Safe Philippines Project

The Philippine and Chinese governments established the Safe Philippines Project in the Philippines, budgeted at PHP 20 billion (US$ 394 million).[1] Launched in 2019, the Safe Philippines Project aimed to improve public order, safety and security by putting up 12,000 closed-circuit television (CCTV) cameras around the country with Phase 1 beginning in Metro Manila and Davao City (Caliwan, 2019). According to Eduardo Año, then-Secretary of the Department of Interior and Local Government, the project "can reduce crime by 15 percent and improve response time by 25 percent" (Caliwan, 2019). China International Telecommunications and Construction Corporation was to install the surveillance system, while Huawei Technologies Co. Ltd would supply high-definition CCTV cameras capable of facial and vehicle plate recognition. In less than three years, however, the project was scrapped due to funding delays and passed on to the Marcos administration for vetting (Tupas, 2022). Before the project's scrapping, concerns were already raised by the Philippine Senate on national security and public safety regarding data collection and usage (Cervantes, 2019).

What worked with Huawei, however, was with private partnerships. There are two cases. First is Bonifacio Global City (BGC). What used to be an American fort is now a livable financial and residential district in Taguig, Metro Manila. Credit for this development is given to the Bases Conversion Development Authority (BCDA), a Philippine agency in charge of turning former American facilities into livable cities. Working with BGC Estate Association since 2014 (O'Rourke & Choy, 2019), Huawei supplied and installed Internet protocol-based cameras "across major grids of the city and connected [them] to a command center, complete with video analytics" (Huawei, n.d.). BGC is Huawei's first successful Safe City project in the country, with a planned expansion to reach 100 percent of the city, including office spaces, closed parking, and shopping areas. Critics, however, have voiced their concerns about privacy, mass surveillance, and the possibility the data can be requested at any time by the Chinese government (O'Rourke & Choy, 2019). According to Huawei:

> We do not run the technology in BGC. Technology upgrades and maintenance are provided by local ICT [information and communications technology] service companies, which are accredited as Huawei partners. All operations and maintenance are handled

[1] For a detailed analysis of the Safe Philippines Project, see Stratbase ADR Institute for Strategic and International Studies (2021).

by the customer themselves, with technical support and troubleshooting conducted locally (O'Rourke & Choy, 2019).

The cheapness and advanced equipment make Huawei and other Chinese companies supply digital technologies. At the same time, the host country's private sector is also willing to provide the bidding to the cheapest buyer.

2.2.2. Globe Telecom and Huawei Technologies

Another case where Huawei was successful was with Globe Telecom. Globe is a telecommunications company owned by the Philippine conglomerate Ayala Corporation. Globe maintains good relations with Huawei. In 2015, Globe adopted Huawei's SingleSON (self-organizing network), which allows Globe to oversee the performance, operation and maintenance (O&M) of its mobile data services, becoming the first company in the world (ABS-CBN News, 2015; Huawei, 2015).

In 2019, Globe launched the Philippines' first wireless 5G broadband service for households and offices (Globe, 2019; Morales, 2019).This came at a time that Huawei's 5G equipment was believed to be taken advantage of by China through spying, according to Western countries such as the United States. The Internet plan, dubbed 'Globe At Home Air Fiber 5G,' made "the Philippines … the first country in Southeast Asia and [just] second in Asia (after South Korea)" (Globe, 2019). However, the US-China rivalry, including the Philippines' historical bilateral relations with the United States, has pressured Globe into switching from Huawei to a Western brand of telecommunications equipment (Hallare, 2020). At a Senate hearing, Globe admitted that Huawei has "the most advanced 5G technology" and that the Chinese company supplies "80 percent of Globe's equipment … while the remaining 20 percent is from … Ericsson and Nokia" (Hallare, 2020).

Despite the aforementioned, Globe announced that it is working with Huawei in developing off-grid green network technologies at the Mobile World Congress 2022 in Barcelona, Spain (Abadilla, 2022). The Philippines' underdeveloped islands and far-flung areas would benefit from these green network technologies. Huawei, moreover, is "transform[ing] Globe's cell sites, hubs, corporate offices, and data centers into low greenhouse gas (GHG) emission facilities" (Abadilla, 2022).

2.2. Data Policies and Regulations

Shen and He (2022) explain that Chinese digital platforms such as Baidu, Tencent, Alibaba, and ByteDance have been 'infrastructuralized.' Infrastructuralize is defined as online platforms being 'robust, widely shared, widely accessible, and essential. Any breakdown in … [the platform's] services would substantially disrupt daily life and work' (Plantin et al., 2018, p. 3). Shen and He (2022, p. 13) make a case that there are "uneven power relations" between the country provider of digital infrastructures and the host country as the former controls the data policies and regulations, even if these online or offline services are outside the country provider's national scope. Traditional infrastructures (e.g., power grids and railways) differ from the former as they follow a set of standards negotiated among stakeholders. This means that all types of data – from phone calls on the mobile, to emails on Microsoft Outlook, to a user's locations on Hong Kong's 'LeaveHomeSafe' contact tracing application – can be extracted, collated, and analyzed to be used by governments, third-party companies, or foreign entities for their interests. In the case of China, the state dominates the technology companies ensuring that economic growth comes with surveillance to ensure the nation's long-term security and stability.

Globally, a lot of people use Chinese digital platforms. These platforms, however, face scrutiny from Western countries such as the United States under the credence that China is a threat to national security. One example is on Alibaba's failure to purchase MoneyGram (Shen & He, 2022). This comes at a time that the US is applying a policy of 'technological containment,' or containing the spread of technologies that would benefit the target country economically and militarily (Brands, 2022). The approach is geared towards China from accessing semiconductors and semiconductor manufacturing equipment.

There was a case where a foreign country converted a host country's policies and regulations into the former country's standards by force. During the Russian invasion of Ukraine (2022-present), Ukraine's Zaporizhzhia Nuclear Power Station, the largest nuclear power plant in Europe, was reported to have its nuclear fuel storage system manually transfigured to follow Russian standards (Knight, 2022; Tyshchenko, 2022).

Still, studies have focused on how Chinese digital platforms have a global impact, such as the case of Chinese e-commerce company Alibaba (Shen & He, 2022) or how the Digital Silk Road has impacted Pakistan (Erie & Streinz, 2022) This research, however, is the first to examine the impact of Chinese-funded digital infrastructures in smart cities on the data policies and regulations in host countries. This comes at a time when emerging economies are prioritizing digital infrastructures for their smart city initiatives (Kim, 2022, p. 8). With that said, the value of studying the DSR in the local context of host countries, such as Malaysia's Forest City and, the focus of this paper, the Philippines' New Clark City, cannot be left out.

3 Methodology

We apply a mixed methods approach to data collection. Primary data will be collected through at least ten key informant interviews from November 2022 to February 2023. Each interview is expected to last an hour. Key informants will include state and non-state actors, including representatives from the Philippine government, non-government organizations, civil society groups, technology companies, think tanks, and academia. The criteria for choosing key informants will begin with a purposive sampling approach by utilizing known contacts, followed by a snowball sampling method where we ask our interviewees for suggestions or recommendations on individuals who could be valuable resource persons for our research. After transcribing the interviews, we will code and analyze the data using MAXQDA. The interviews aim to gather information not publicly available. The secondary data source used in this study consists of policy documents, government websites, media reports, and company project profiles and reports.

We will also utilize the "Beijing Effect" theory. Coined by Erie and Streinz (2022), the theory states that China's increasing influence in transnational data governance is due to a collection of "push" and "pull" factors that convince host countries to gravitate to Chinese technical standards. The Beijing Effect can be seen in the light of China exporting digital infrastructures to assist emerging economies in building their smart cities. China relies on its companies to provide physical components such as telecommunication devices, data centers, and cell towers. As smart cities of host countries utilize Chinese digital infrastructures, this technology transfer, in turn, makes the host countries adopt Chinese data policies and regulations, affecting how host countries would govern their data.

4 Case Study

4.1. Background

New Clark City is in Capas and Bamban, Tarlac, part of the Clark Freeport and Special Economic Zone (CFEZ) (see Figure 1). The 9,500-hectare smart city is sliced into different zones for companies to participate in the city's development. The stakeholders are many (see Table 1), with the Bases Conversion Development Authority (BCDA) representing the Philippine government. With talks to develop CFEZ dating back to 2011 (BCDA, 2017, p. 53), the smart city is expected to be the "first smart, resilient, and green metropolis" (Global Future Cities Programme, n.d.). Launched in 2016 as Clark Green City during the Aquino administration (2010-2016), it was renamed New Clark City at the start of the Duterte administration (2016-2022) under its 'Build, Build, Build' program (BCDA, 2017, p. 55).

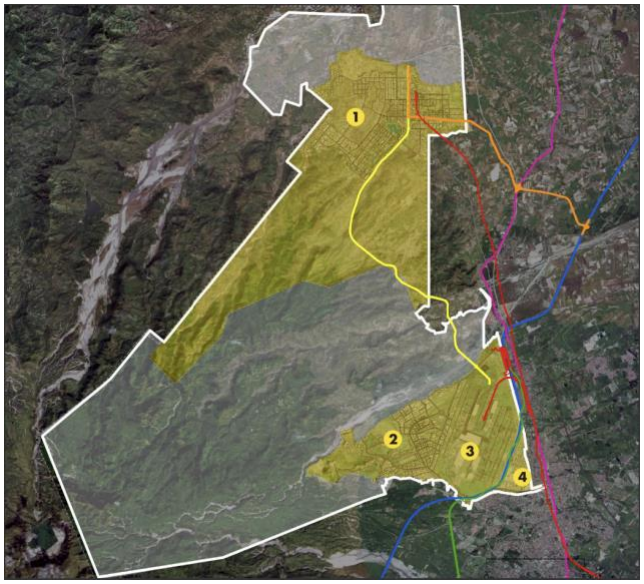

Figure 1. Map of the Clark Special Economic Zone. The numbers refer to its four districts: (1) New Clark City, (2) Clark Freeport Zone, (3) Clark International Airport, and (4) Clark Global City. The focus of this study is New Clark City. Figure is taken from BCDA (2021b, pp. 2–3).

4.2. China and New Clark City

Former BCDA President and CEO Vivencio Dizon stated that "China is an integral partner in our infrastructure build-up" (Xinhua, 2019). Chinese companies have been involved in several of the Philippines' infrastructure projects, including the Metro Manila Bus Rapid Transit-EDSA and Subic-Clark Railway projects, despite being "discredited by the World Bank for alleged fraudulent practices" (Dizon, 2016).

In the case of New Clark City, the construction and engineering company China Gezhouba Group Company Limited (CGGC) invested $2 billion in the smart city project, making it one of China's most significant investments in the Philippines (Ramos and Reed, 2018). In Phase 1 of New Clark City, which includes the National Government Administrative Center (NGAC) and the 288-hectare Filinvest Innovation Park, an industrial lot by Filinvest Land, Inc. (Filinvest Development Corporation, n.d.), China's main involvement is in the 500-hectare mixed-used industrial park through CGGC (Xinhua, 2019) (see Figure 2).

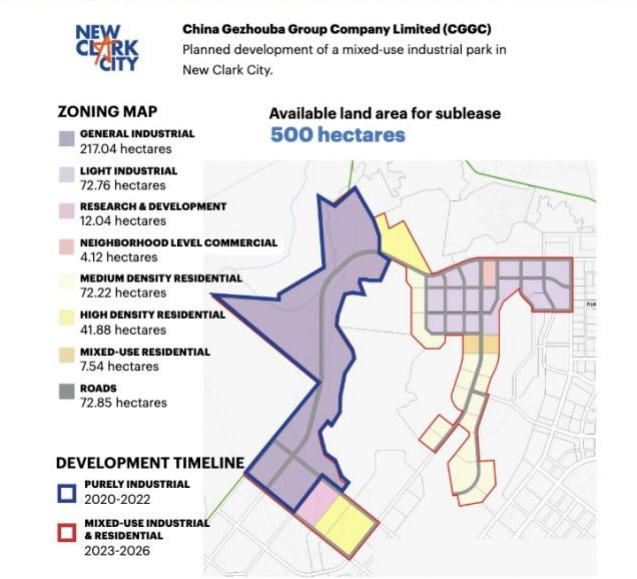

Figure 2. Zoning Map and Development Timeline of CGGC in New Clark City in building a mixed-used industrial park. Figure is taken from BCDA's 2021 Primer (2021b, p. 8).

However, in the 2022 primer, the name CGGC is no longer seen (BCDA, 2022b). Moreover, there is no mention of CGGC's involvement in New Clark City in the BCDA's annual reports from the start of China's DSR in 2015 to 2021 (BCDA, 2015, 2016, 2017, 2018a, 2019, 2020, 2021a). The rest of the Chinese investments in the smart city are, first, the Subic-Clark Cargo Railway Project under China Communication Construction Co. Ltd, which was postponed (BCDA, 2016, p. 24; Pitlo, 2022). The railway project is envisioned to transform Central Luzon – the location of New Clark City – into a total logistics hub. There are talks about having the project revived. The second is Huawei's Safe City Solutions project, which BCDA has no longer mentioned since the 2017 annual report (BCDA, 2016, p. 25, 2017, p. 55).

Also, in 2018, China Development Bank (CDB) and BCDA signed an MOU "to determine the most cost effective and efficient financing option for BCDA's projects in Clark and Metro Manila" (BCDA, 2018b). However, the agreement was said to last until 2022; there are no reports or news regarding Chinese-funded digital infrastructure involvement, excluding Dito Telecommunity.

The only Chinese company named in New Clark City's 2022 primer is the local telecommunications company Dito Telecommunity Corporation (Dito). Dito is a joint venture between China Telecom Corporation and Dito Holdings Corporation (under the parent company Udenna Corporation) at 40 percent and 60 percent, respectively (Udenna Group, 2020). The telecom company holds 80,000 sqm in an area where a mixed-used industrial park is envisioned to stand (BCDA, 2022a, p. 11).

Year	Country	Company	Memorandum of Understanding (MOU)
2015	Singapore	AECOM-Singapore	Master plan
	Japan	Nippon Koei Co. Ltd.	Master plan
	Japan	Japan Overseas Infrastructure Investment Corporation for Transport and Development (JOIN)	Master plan
	Japan	Mitsubishi Heavy Industries	Feasibility studies on power distribution and renewable energy
	Sweden	IVL Swedish Environmental Research Institute	Sustainability education
	Sweden	Xeric AB	Sustainability education
	United Arab Emirates	Al Ahli Holding Group	Tourism; Family entertainment; Meetings, incentives, conferences, and exhibitions
2016	China	China Communication Construction Co. Ltd.	Subic-Clark Cargo Railway project
	China	Huawei Technologies	Safe City Solutions project
	Singapore	CFLD (Singapore) Investment Pte. Ltd.	Real estate development plan
	Japan	JOIN	Development management framework
	Japan	Hitachi Asia Ltd.	Energy-related systems (i.e., energy management, district cooling, energy network, energy storage, etc.)
	Japan	The Power Grid Solution Ltd.	Energy-related systems (i.e., energy management, district cooling, energy network, energy storage, etc.)
	Turkey	Vendeka Bilgi Teknolojileri Ticaret Ltd. Sti.	Reconstruction, operation and maintenance of 3-MW Camp John Hay Mini-Hydro Power Plant
2017	United States	Level Agency for Infrastructure	Review master plan; River study

	The Netherlands	One Architecture	Review master plan; River study
	China	China Development Bank	Financing cooperation
	China	China Gezhouba Group Co. Ltd.	Construction of a mixed-used industrial park (500 hectares)
	Singapore	Surbana Jurong	Draft development management framework, and guidelines on design standards and the environment
2018	Malaysia	MTD Capital Berhad	EPC of the NGAC and Sports Hub
	Israel	TAHAL Group	Water utilities
2019	Japan	Nippon Koei Co. Ltd.	Infrastructure design (approx. 3,600 hectares)
	Japan	Marubeni Corporation	Smart grid business; Power distribution utilities
	Japan	Kansai Electric Power Company (KEPCO)	Smart grid business; Power distribution utilities
	Japan	Chubu Electric Power Company	Smart grid business; Power distribution utilities
2022	Singapore	Enterprise Singapore	Business opportunities

Table 2. List of foreign companies involved in the development of New Clark City, as of 31 October 2022. Data was collated from multiple sources.

5 Discussion and Conclusion

Our preliminary results show that it takes the world to build a smart city, as multiple foreign stakeholders are involved. Smart cities need expertise, integration, and a lot of capital where, in the case of New Clark City, one country alone cannot afford nor perform the whole project from planning to implementation.

This scenario raises two questions regarding data governance. First, which country's data policies and regulations come first, given that several stakeholders from different countries have a stake in New Clark City? Countries such as Japan (found to oversee the smart grid and power distribution utilities) and China (found to oversee telecommunications) deal with interconnected digital infrastructures. The data from smart grids and telecommunication devices must answer to a specific source of policies and regulations on how the data collected will be kept, processed, and utilized. Second, concerning the first question, are we seeing one set of data policies and regulations of a specific country or a group of countries pooling and combining their data standards? For example, an energy project, such as a coal-fired power plant, has four reactors divided among China, Japan, France, and the United States. These reactors can still function in silos. A smart city, however, lives on integrated network systems for it to thrive.

The preliminary results also put forth two knowledge gaps. First is the extent of Chinese investments in digital infrastructures in New Clark City. We are unsure as to what scale and depth the Dito Telecommunity, a local telecom company with China Telecom having a 40 percent stake, has a role in shaping the data policies and regulations of New Clark City. Moreover, we are interested to know if Chinese companies previously listed in building New Clark City – namely China Gezhouba Group Company Limited, Huawei Technologies, and China Development Bank – still play a role. Second, given Japan's deep involvement in the smart city project within the same space as China, is there competition, cooperation, or a mix of both between the two investors? As this is the first paper on the topic, the answers to these questions are in doubt. We believe the key informant interviews to be conducted will aid us in answering these questions.

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