Cities in Asia

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CITIES IN ASIA

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Foreword

Cities in Asia have experienced an unprecedented growth and development in the last decades. Many large cities became global financial, technological, and trade centers, global city networks became more balanced. Asian cities' emerging international role contributed to economic, technological, and social development at both municipal, national, and regional levels. However, disparities in national and regional city networks remained. In contrary to fast-growing city centers, distant areas have fallen behind in development. Various approaches of governments and city leaderships contributed to global integration at different levels. The main goal of publishing the present book of studies as the newest issue of OBIC Book Series was to present several characteristic examples from Asia with the view of broaden the Readers' scope about the challenges of cities in Asia by providing up-to-date information and analysis focusing on their changing international role, internal structure, economic development, technological innovations, and social changes. Our authors pursued their research not only by focusing on the regional and spatial aspects of urbanization process, but they extended their work to the connected fields of economy, business, administration, regional and social sciences as well.

Therefore, our starting point was a kind of multidisciplinary approach, in which all the six studies were developed.

The biggest country of the ASEAN region with its nearly 300 million people also faces problems with its uneven density of population, while there are still vast territories rarely populated, it cannot be said about the most central island Java, where the capital city, Jakarta is located. Muhamad Iksan and his co-authors in their study *Jakarta in a Time of Political and Economic Change: Capital Transformation, City Resilience, and Collaborative Governance* cover three main related topics. One of them is the government's intention to relocate the central administration establishing a new capital city, Nusantara. The second depicts challenges for Jakarta deriving from environmental and human-made problems, while the third topic suggests a collaboration among key stakeholders.

Tomasz Kamiński and his co-author focused their research on Seoul, the capital city of one of the Newly Industrialized Asian economies, the Republic of Korea. In their study *City Networks as Tools of City Diplomacy – the Case of Seoul* they specify that Seoul (and even other South Korean cities) successfully use it as an instrument of public diplomacy. Seoul is a member of 25 different city networks, two of which: CityNet and World Smart Sustainable Cities Organization (WeGO), have their headquarters in the South Korean capital city.

Paolo Pizzolo also published his research results about another developed Asian country, Japan. In his study, *The Future of Japanese Urbanization: Technological Wonderland or Robotized Dystopia?* he investigated the expected impacts of technological development on future Japanese urbanization, assuming whether robotics would have the capacity to tackle Japanese demographic decline without leading towards substantial social changes. He pointed out the risks of the ageing Japanese society and a negative scenario of Japanese cities would be transformed into dystopic post-human artifacts.

As another prominent example, the Reader can get a thorough insight into the acute challenges of the capital city of the Philippines, Manila in terms of a very typical global problem in local context: the scarcity of the available water resources from the study of Jose Aims R. Rocina *Issues and Perspectives on the Water Crisis of Metro Manila Cities, Philippines*. He provides a deep perspective on the different issues involved: the history of the problem, the underlying issues, the root causes and also the proposed alternatives for solutions. He pointed out also the urgency of the problem as the time-factor his of crucial importance.

India has recently surpassed China in terms of population and became the most populous country in the world with its nearly 1.5 billion people. So, this gives a special prospective to Amandeep Singh's study *The Smart City Concept and its Challenges in India* who claims that the growth rate of the urban population is increasing very fast due to better living standards and higher employment opportunities in urban areas. Therefore, India must properly restructure its cities, and the construction of new cities needs cutting-edge technologies.

At last, another study of Tran Anh Tuan focuses on city-diplomacy. The *Exploring the Diplomatic Role of Ho Chi Minh City in Comprehensive International Integration. The Implication of City Diplomacy for Vietnam* Ho Chi Minh City (also known by its old name Saigon) is Vietnam's biggest city, located in the southern part, while the capital city, Hanoi is in the North. The long, but narrow

country shows significant economic, climatic, and social differences. Ho Chi Minh City is a rapidly developing city. The city leaders implement action plans to develop it as regional and international financial hub in the Mekong region in the future.

I am confident that these studies will not only be interesting, but also give ideas for professionals and scholars for future research or practical implementation.

I wish to express my gratitude for the financial and moral support received from Budapest Business School, University of Applied Sciences (BBS) without which the present book of studies could not be published.

Budapest, July 2023

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Jakarta in a Time of Political and Economic Change: Capital Transformation, City Resilience, and Collaborative Governance

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Abstract: This paper explores three main topics pertinent to a better description of Jakarta in the time of economic and political changes. The first topic illustrates how the Indonesian central government gradually conducts the capital transformation to Nusantara. The second depicts challenges for the city of Jakarta involving acute environmental and human-made problems: floods, sea level rise with severe land subsidence and traffic congestions. The third topic suggests a collaboration among key stakeholders. The central government emphasizes main resources to foster a joint action among ministries and agencies in the newly established city authority agency and coordination with international communities, donors, and investors, for successful capital development. The Jakarta local government coordinates the public and private sources to revitalize the city under the urban regeneration vision of 2030. The orchestrated efforts for constructive cooperation between central and local government culminates in the main argument of this paper which discusses collaborative governance with starting conditions as an important factor.

Keywords: Jakarta city, Nusantara new capital, capital transformation, collaborative governance, and management-administration-policy issues
JEL: H54, H61, H83, O18, O53

1. Introduction

The capital city and mega-urban development was a landmark to one nation's progress. There are no developed countries whose capital city and mega cities are not thriving and growing as a resilient city. Japan has Tokyo, United States has New York and Washington DC, Germany has Bonn and Berlin and so on[1]. The list goes on and on. However, for a developing country such as Indonesia, its current experiences, the relocation of the capital city including a physical move of the central state apparatus from one location to another, is labelled by capital transformation, requires huge efforts, timely planning, as well as execution. At the same time, previous capital needs to be supported so that the capital transformation does not turn into economic and political shocks (Glaeser, 2022) and may function properly as an instrument for the nation and state building (Schatz, 2003). In addition, the loss of capital city status can enormously harm the urban area, e.g., Jakarta, as political shifts could result in businesses and the wealthy leaving urban areas (Glaeser, 2022, p. 3).

Relocating Indonesia's capital from Jakarta to Nusantara was a momentous political and administrative choice made by the current government. President Widodo had decided to make the historic political and administrative decision by relocating the capital city of Indonesia, from Jakarta, located in Java (*Jawa*) island to Nusantara. The new capital city will build a novel city of Nusantara in Borneo (*Kalimantan*) island. Up to the present, Borneo Island was renowned for vast tropical forests. Building an infrastructure, support system, and connectivity development project with two other established cities will develop gradually from this year and will be expected to be finished by 2045.

On Borneo Island, the novel city of Nusantara, the new capital, will be constructed. The infrastructure, urban support, and livelihood development projects begin to take shape this year and are anticipated to be completed when the country will celebrate the centennial of its independence. On the one hand, there is the approach taken by the majority of political parties in the parliaments, according to which any presidential decision must receive the support of the majority of lawmakers.

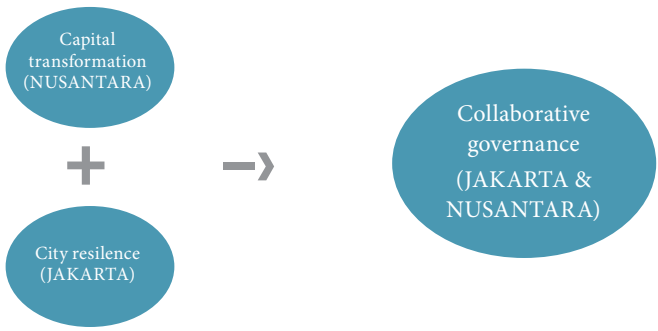
1 In the old Japan emporium (794–1868), Kyoto was the capital city. After 1868, the government moved to Edo and renamed it Tokyo. Whereas the first capital of the USA was New York when George Washington was the first President and moved to Philadelphia in 1792, and eventually Washington DC was the US capital since 1800 under President Adam. Germany relocated its capital from Bonn to Berlin following the unification of West and East German in 1990.

On the other hand, Jakarta's local government has maintained earlier local government aspirations for making the city a megapolitan with a vision for the hub commercial epicenter, a global 21st century city with digital transformation as its primary drivers. Jakarta, along with the neighboring urban enclave including Bogor, Depok, Tangerang, Bekasi, Puncak, and Cianjur (abbreviation: *Jabodetabekpunjur*), is even already a part of the national strategic area as mandated by government regulation issued in 2017 (Hartono, 2022).

There is no doubt that moving the capital city is expensive, taking a huge amount of the nation's resources and will face uncertainties while the process phase takes place. However, this plan has an advantage over upgrading Jakarta through urban regeneration or most likely retrofitting vast green infrastructures. The plan involves significant expenditure where the goal is to establish a habitable urban environment to relocate the central government and other branches of government (legislative and judicative). Building a city from the ground up gives you the freedom to highlight creative urban design which, with the right urban planning and administration, can be economically, socially, and environmentally sustainable.

Figure 1 below illustrates how we analyze and discuss the main topics within our paper: capital transformation, city resilience, and collaborative governance. Capital transformation focuses on Nusantara, while city resilience emphasizes Jakarta, and collaborative governance draw its attention to both, Jakarta and Nusantara.

Figure 1. Framework of Analysis made by authors (2023)



Source: compiled by the authors.

There is numerous previous literature and studies either conceptually or empirically on collaborative governance. In particular, Rich and Stoker (2014) document an effort for urban revitalization taking several cases of US cities' empowerment zones with collaborative governance, defined as "the process that develops local plans and programs to complement market-oriented policies". Broadly speaking, collaborative governance involves both political actors from non-government and non-traditional stakeholders in the policy making process. A satisfactory definition that we propose is from Ansell and Gash[2] (2007, p. 544):

> A governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets.

In order to comprehend, we must look toward other developed regions, for example, in Europe's case, Haughton and Allmendinger (2015) propose a framework to analyze new planning and regeneration spaces. Their suggestion pointed out that we have to move forward on relational and territorial geographies, not to abandon spatial imaginaries, and establish novel regional identities as governance objects. Based on three cases of city regions in England, London-Thames Gateway, Atlantic Gateway which include Mersey Belt (Manchester and Liverpool) and Hull-and-the Humber ports, we may learn more deep and insightful concepts on evolving estuarial city-regional space. Moreover, recent governance of European experiences is documented in *the Soft Spaces in Europe* (2015), an edited book of which Allmendinger and his colleagues shared their thoughts and findings comparatively.

Our article aims to fill in the lacuna for larger audiences and academics interested in the politics of the biggest nation in the Southeast Asia. Furthermore, our humble expectation is to provide general audiences with three closely jointed themes in one chapter about cities in Asia. Several key questions that this study proposes: *first*, how the capital transformation may benefit particularly for Jakarta

2 One important feature, Ansell and Gash stressed (2007, p. 544–545) six important criteria *with regards to definition collective governance (italic added by authors)*: (1) the forum is initiated by public agencies or institutions, (2) participants in the forum include non-state actors, (3) participants engage directly in decision making and not merely "consulted" by public agencies, (4) the forum is formally organized and meets collectively, (5) the forum aims to make decisions by consensus (even if consensus is not achieved in practice), and (6) the focus of collaboration is on public policy or public management.

and the national budget burden for development including near term impact and foreseeable long-term effects. *Thus*, this study illustrates how the Jakarta local government recognizes the city of Jakarta, now and then, from the point of view of city resilience. And *finally*, our article's goal is to discuss and suggest a starting condition for collaborative governance and how social capital may contribute progressively toward a soft space for future planning and development, harnessing Ansell and Gash's model, and thoughts from Allmendinger and colleagues with importance over social capital concept, as the Nusantara development is progressing.

2. Jakarta to Nusantara: Capital Transformation

Indonesia has tremendous potential to be a developed nation and become a major economic powerhouse in the region. The most influential era for Indonesia's sustained economic growth and political stability happened when General Soeharto, *primus inter-pares* the New Order regime was in power. At that time, Indonesia could gain a timely momentum from developing the nation's potential. However, the Asian economic crisis broke down the autocratic regime into disarray. Despite the regime's major deficiencies, economic performance in terms of higher economic growth, political stability and level of inequality, the New Order administration (1966–1998) could achieve a level that the current administration (2014–present) could not even gain. Additionally, Indonesia has to fight its longstanding reputation as an economic underperformer. Despite having an abundance of coal, metals, palm oil, and rubber, the Southeast Asian country has lagged behind its neighbors, Vietnam and The Philippines, in terms of its growth rate, averaging 4.3 percent[3] over the past 10 years (Mokhtar, 2022).

The main *raison d'etre* for pursuing national resources for building Nusantara is precisely the economic motive. It is to accommodate a tangible and future stream of economic benefits. In the long term, Nusantara is expected to become an economic super-hub driving the national economy. Looking at the pandemic situation, the capital project is planned as being among the strategies for economic

3 Economist Fadil Hasan presented that Indonesian economic growth had ended their high growth era, he recalled 1976–1981 before the oil crisis, when economic growth could achieve an average of 8 percent per year. In the period from 1988 to 1996, economic growth could achieve 7 percent per year. However, economic growth during the 10 years of the SBY administration *only* achieved 6 percent per year. Current administration economic growth is below these three previous eras with 5 percent per year.

recovery because, broadly speaking, the project development estimates to support Indonesia to achieve its Gross Domestic Product (GDP) target of US$180 billion and will create 4,811,000 jobs in 2045 (Nugroho and Adrianto, 2022). On top of that, it is anticipated that the new capital city will promote equitable development. Development must be Indonesia-centric, or equitable across all of Indonesia[4], as promised by President Widodo during election in 2019, so that nobody is left behind or stigmatized because of their location. This can be achieved by establishing an additional center of economic expansion outside Java.

Indeed, it is the rational decision for a country to decide on the relocation of its capital city. The Indonesian case has not been the first experience. Yet, it would not be the last example. Edward Schatz (2003) documented that there were 13 cases of capital relocation during the 20th century, starting with Brazil (1956) from former capital, Rio de Janeiro, to the new capital at Brasilia. Then, Indonesia's neighbor Malaysia followed other countries' footsteps, e.g., Mauritania, Pakistan, Botswana, Libya, Malawi, Belize, Tanzania, Nigeria, Ivory Coast, Germany, and Kazakhstan, relocating from Kuala Lumpur to Putrajaya. The new capital location of Putrajaya can be considered to be accessible, because it is located within 20 kilometers from Kuala Lumpur International Airport (KLIA) and 25 kilometers from the old capital, Kuala Lumpur (Rachmawati et al., 2021).

There are two broad considerations to understand capital relocation: *the first* is the urban planning discipline which focuses on the requirement of a new capital city's novel urban development strategy or NUDP (Novel Urban Development Project). In essence, NUDP elaborates urban development aims for integration infrastructure via three mechanisms: one is encouraging harmonious policy and institution in the city development agenda; two is increasing integrated planning for city investment based on spatial planning framework; and three is formulating criteria and mechanism to prioritize investment, funding gaps, and enhance the local government's financial management capacity. *The second* is the political science discipline that builds the arguments that capital relocation is creating nations and a sense of national identity. Capital relocation is considerably more likely to appeal to elites in post-colonial contexts, when strong state bureaucracies and widespread national loyalty are lacking (Schatz, 2003). As a result, there is a strong link between efforts to form state-and-nation and the relocation of capital.

4 Term of equitability throughout Indonesia, see for instance: Menggeber janji kampanye Jokowi wujudkan Indonesia sentris - ANTARA News

Taking Kazakhstan as an example, Schatz (2003, p. 2) states two arguments: *firstly*, in comparison to other post-Soviet states (none of which moved their capital cities), Kazakhstan faced particularly severe state- and nation-building challenges in the early 1990s that had the potential to be extremely destabilizing; the move to Astana was intended to address these challenges. *Secondly*, many of these issues were crucially similar to those that many states in post-colonial Africa were dealing with.

Our analysis combines several issues around this decision from historical and political contexts of capital transformation, including presenting the public's attitude for capital transformation, and includes the elite stance for capital transformation. Technical issues include funding estimation and possible scenarios for an execution plan, while future populations and land requirement are needed for each possible scenario. The concept of moving the capital is not new. Properly implementing the plan and making it a reality may be the largest government effort in Indonesian history, both technologically and politically (Nugroho and Adrianto, 2022). Nugroho and Adrianto document a historical capital relocation plan from Soekarto to Jokowi. In the past, Palangkraya in Southern Kalimantan was firmly regarded as the capital by the country's first president, Soekarno, in 1957. Then, in reference to the center of the government, President Suharto issued Presidential Decree No. 1/1997 on the Coordination of Development of Jonggol area as an Independent City.

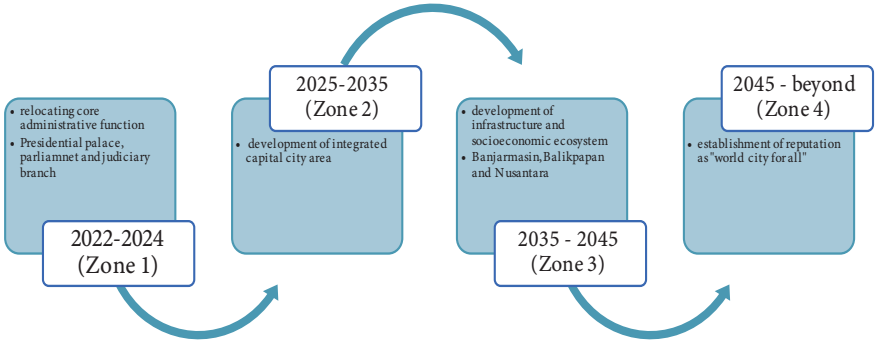
Following Reformasi 1998, this concept reappeared in 2013 during the Susilo Bambang Yudhoyono's presidency, who provided two options: either keep the capital in Jakarta while allowing for planned and appropriate development or relocate the government's core outside of Jakarta. And it appears that Jokowi now wants to see the concept of capital relocation come to execution; not only finishing with planning.

The name for the future capital, which will be called "Nusantara", reflects the aspirations for its construction: locally integrated, globally connected, and universally inspired. In addition to serving as a marker of national identity and the future engine of Indonesia's economy, Nusantara strives to be the world's most sustainable metropolis[5]. Additionally, the move of the capital is an important part of the nation's structural transformation of Indonesia[6]. The relocation of the capital is

5 For further information, please visit: https://ikn.go.id
6 Jokowi: Pemindahan Ibu Kota Bagian Transformasi Indonesia - Medcom.id

a long-term and multi-year project that is bureaucratically and technically complex. According to the blueprint created by the Ministry of National Development Planning (Bappenas)[7], there will be four steps to establish the Nusantara new capital as depicted below in Figure 2:

Figure 2. Establishing Nusantara. Source Nugroho and Adrianto (2022), illustrated by the authors (2023)



Source: compiled by the authors.

The anticipated cost of the Nusantara project is 466 trillion Indonesian rupiah (US$30 billion)[8], of which 110 trillion Indonesian rupiah would be needed for the first phase between 2022 and 2024. Although the government has repeatedly asserted that the development of Nusantara would not place an undue burden on the state budget because there are numerous financing options (the state budget, foreign loans, private investment, and public-private partnerships), this is a sizable state commitment that comes with a lot of missed opportunities. However, there is a skeptical view that policy agendas may be overlooked in the midst of responding to pandemic emergencies and long-term development planning. At the moment, Indonesia is dealing with significant public debt, a national budget deficit of more than 3 percent annually, and a reduction in state revenues. This has the natural effect of shifting the government's priority from pandemic recovery

7 Tahapan Perpindahan Ibu Kota Indonesia – DW – 29.01.2022

8 Quote report of Bappenas (2019), Hasan (2022) presents two scenarios over the Nusantara funding scheme: The first scenario has 40,000 hectares for land requirement, a five-year period of implementation, a population target of 1.5 million and an estimated cost of approximately US$33 billion equal to 466 trillion Rupiahs. The second scenario has lesser land requirements, 30,000 hectares, a ten-year period of implementation, a lesser population target of 870 thousand and an estimated cost of approximately US$23 billion equal to 323 trillion Rupiahs.

to a development agenda. The effects of the impending war between Russia and Ukraine must also be taken into account. According to forecasts, the global GDP will typically decrease by 1 percent while inflation would rise by 3 percent. Decisions made on investments and businesses will be directly impacted by this. Besides hard budget constraint, there is also concern over social disparities, rapid urbanization, and social conflict[9]. It is feared that moving the capital would lead to fresh inequalities and social unrest rather than promoting equitable employment opportunities and economic redistribution.

Bappenas estimates that Nusantara would be home to 127,000 civil servants. The plan for relocating civil servants will be materialized gradually up to 2027, excluding their immediate families and any connected service sector enterprises (Nugroho and Adrianto, 2022). Assuming one civil servant will bring at the minimum four family members, then Nusantara will be occupied by approximately 508,000 inhabitants, as a core of the new capital. The majority of this population will be upper middle class, and they will have to live side by side with lower middle-class residents of the current, primarily rural towns, as well as migrant workers from other parts of the country.

The elite support for the Nusantara project differs with societal response. In our study, the elite refers to the politicians along with those embedded with political decision making. New capital legislation unfortunately does not suffer from the hasty nature of the legislative process and the low level of public involvement. IKN (refers to *Ibu Kota Negara*) law was first discussed in the House on December 7, 2021; it was enacted into law on January 18, 2022, just 42 days later. Even for a strategic decision like this, the development process was far too rapid, and there was no public input during the hearing process. Therefore, IKN Law potentially breaches statutory restrictions and is unconstitutional, particularly those related to the formulation of laws based on the 1945 Constitution and mandated by previous Law No. 12/2011 on the Formation of Legislation (*Pembentukan Peraturan Perundang Undangan*). Any law is mandated for public consultations and meaningful participation with relevant stakeholders. Consequently, new law would require additional time for deliberation so that numerous civil society organizations and activists can give critical comments and input for refinement and substance of the law. In the case of the law, a civil society organization has currently

9 Public Administration expert from University of Indonesia Eko Prasojo argues that socio-cultural change will happen very quickly in the new capital which already has a potential for conflict (inews.id, 23/17/2019).

filed official litigation against IKN Law with the Constitutional Court. There is seen to be a serious flaw in the legislative process, which is why this lawsuit was brought.

In fact, it is an astonishing fact that private companies in the mining, forestry, and agriculture sectors, many of which have connections to eminent politicians and their relatives, already own the majority of the land in the Nusantara region. Additionally, there are overlaps between the mining and forestry zones in these concessions. There are 149 ex-mining pits (abandoned mining sites), 92 of which are located inside the administrative capital region, according to the Mining Advocacy Network (*Jaringan Advokasi Tambang*, Jatam) (Nugroho and Adrianto, 2022).

Indigenous communities that date back many generations may be displaced by Nusantara, as stated by the local tribal chief of the Indigenous Balik people, constituted by Sibukdin[10]. In Borneo, thousands of members of the Balik tribe depend on the forest to provide for their daily necessities. Since the 1970s, more than 90 percent of forest that the tribe needs for hunting and foraging has already been destroyed by commercial activities. Since the announcement of the capital's site, illegal encroachments have increased at an orangutan sanctuary that is home to some 120 apes and is located on territory designated for Nusantara's future expansion. The chief executive of the Borneo Orangutan Survival Foundation, Jamartin Sihite, stated that "mines and land speculators encroach on our place."[11] Based on previous evidence, the Indonesian central government has to involve broader key stakeholders from civil society representatives concerning the environment, local tribes, and animal preserving organizations. We focus the discussion over managing different interests in part 4 of this article, Collaborative governance.

Our argument for capital relocation could not substantiate the usual moving of state apparatus and building of new buildings for government officials. Rather, the capital transformation, from Jakarta to Nusantara, has to somehow function to nurture space and livelihood. Glaeser (2022) succinctly put an interesting observation: "Space is shaped by politics, and this was undoubtedly true during the time of the Caesars. One primate city—typically the national capital—dominates the urban systems of many developing-world nations." In the case of Nusantara,

10 Detailed story from Garbiano and Sagita (2023), see New Indonesia capital imperils ancient Eden with 'ecological disaster' (phys.org)
11 Ibid.

the main driver for making it happen is surely the nation political actor decision. It is probably odd to Americans or Germans of the 21st century to understand that such supremacy may be a significant factor. It was the standard for a large portion of urban history, when the population followed power. Today's supremacy of Jakarta inside Indonesia is comparable to Edo within the seventeenth-century Japan or Baghdad within the Abbasid Caliphate in the 8th century (Glaeser, 2022).

3. City Resilience: Jakarta Overcoming Main Problems

Jakarta Mega Urban Region (MUR) has grown to be one of the biggest mega-urban zones in the world between 2000 and 2010. The story of population growth and redistribution in the MUR is similar to that of many MURs in Asia, with the urban core hollowing out like a doughnut and the surrounding ring experiencing rapid expansion (Jones and Douglass, 2008). An acronym for *Jabodetabek* is frequently used to refer to Jakarta MUR. The *Bodetabek* region of the Jakarta MUR now includes five municipalities (city of *Bogor, Depok, Tangerang, Tangerang Selatan*, and *Bekasi*) and three regencies (regency of *Bogor, Tangerang*, and *Bekasi*) dispersed over the neighboring provinces of West Java and Banten, with the province of Special Administrative Region or *Daerah Khusus Ibukota* (DKI) Jakarta[12] serving as its core.

The spatial boundary of *Jabodetabekpunjur* was indeed an extension over *Jabodetabek,* whereas there are two additional regions, namely Puncak and Cianjur. These regions are a part of a national strategic area as mandated by the government regulation issued in 2017. While the population of *Jabodetabek* as a whole, expanded from 17.1 million in 1990 to 27.9 million in 2010, the population of the Jakarta increased from 8.2 million in 1990 to 9.6 million in 2010, an increase of only 17 percent in two decades. Bodetabek's population doubled in 20 years, from 8.9 million in 1990 to 18.3 million in 2010. Population increase is an early indicator for the city attracting human capital and agglomeration activities that might occurs, as based on other global cities stories (Glaeser, 2011). Vice versa, population decrease may serve as rapid proxy for a city's decline.

Additionally, by 2010, just over 90 percent of the MUR population was classified as urban, with the remaining 2 million rural residents being largely concentrated

12 Status of Special Administrative Region or *Daerah Khusus Ibukota* is no longer valid for Jakarta, after the Law on IKN was passed by the Parliament from the initiative from the President.

in the regency of Tangerang, Bekasi, and Bogor. The socio-demographic disparities between the MUR's core and outside regions are certain to shift as a result of this rapid expansion (Jones et al., 2016).

Jakarta is susceptible to man-made disasters like pollution and excessive groundwater extraction as well as natural disasters like floods, rising sea levels, and other disasters. The city has a total land area of 662 square kilometers, 9.6 million residents, and an additional 2.5 million daily commuters from nearby locations (Firman et al., 2011). As a result, Jakarta serves as a draw for migrants—mostly impoverished migrants—looking for improved living conditions. Jakarta has experienced numerous climate-related disasters, most notably more frequent heavy rain floods, both in the upper region of the Jakarta Metropolitan Area and in the city itself, and tidal floods, despite the lack of conclusive evidence linking climate change or global warming to the city's heavy rain and sea level rise (Firman et al., 2011).

As OECD (2012) defines: a "resilient city is a city with the ability to absorb, recover and prepare for future shocks, coming from economic, environmental, social as well as institutional." In addition, it promotes sustainable development, well-being, and inclusive growth. Our study benefits from harnessing previous studies to assess Jakarta's current condition over several natural disasters including floods, sea level rise, rapid urban development, and negative spillover in the form of traffic congestions (Firman et al., 2011; Padawangi and Douglass, 2015; Gaduh et al., 2021; Takagi et al., 2016).

The main objective for assessing these types of vulnerabilities is to explain how the Jakarta city resilience may evolve and this assessment gives an elementary reason for capital relocation to Nusantara. Indeed, the former capital city has a tiny percentage of Indonesia's total population which Jakarta contributes, only 3.89 percent of the country's total population, with six municipalities: Thousand islands, North Jakarta, South Jakarta, East Jakarta, West Jakarta, and Central Jakarta.

Floods

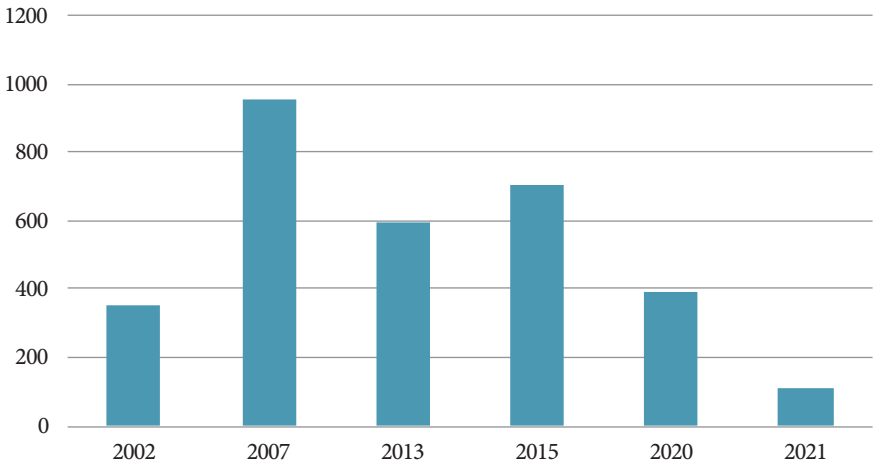
An examination of persistent floods in Jakarta, Indonesia's largest urban area, highlights the connections between natural ecologies and urban development, which inherently includes political and economic policy decision that blend with social and cultural values (Padawangi and Douglass, 2015). Both Kalibaru

Kelurahan (Sub-district) in the Cilincing Sub-district and Penjaringan Kelurahan in the Penjaringan Sub-district, which is one of the localities in North Jakarta, experienced the worst flooding in 2007 and subsequent flooding due to the rise in sea water. North Jakarta district is also burdened with the highest concentration of poor households (Susandi, 2009).

The number of floods in Jakarta that have been documented varies, although these days practically every heavy downpour result in flooding in at least some area. In its most immediate form, flooding either results from torrential rains that cannot be directed into the city's drainage system or from floodwaters that overflow from the Ciliwung River's upstream districts. When the population was low, the city would occasionally be completely shut down by a single severe flood, as happened in 2002, 2007, and again in 2013 (Padawangi and Douglass, 2015). A record number of 430,000 people was forced to leave their homes during the 2007 floods in Jakarta, which cost the city's infrastructure and other assets more than US$900 million in direct damages (*Global Facility for Disaster Risk Reduction*, 2011; Steinberg, 2007).

To partially overcome the flooding issues, both central and local government had taken several measures. For example, a document from the government's National Action Plan for Disaster Risk Reduction 2010–2012 (NAPDRR) identified inadequate storm water drainage systems as the primary contributor to the recurrent floods in cities across the country (Bappenas, 2010). Therefore, the government proposed several initiatives to partially overcome the flooding such as the building of the East Flood Canal that lies from Eastern part of Jakarta to Bogor, the building of the West Flood Canal that lies from Western to Northeast part of Jakarta, while other flood management facilities have been the subject of the subsequent policy and action initiatives in Jakarta (Haryanto, 2009). Beside flood management, there were additional initiatives such as the Jakarta Comprehensive Flood Management (JCFM), Jakarta Urgent Flood Mitigation Project/Jakarta Emergency Dredging Initiative (JUFMP/JEDI) (World Bank, 2014), and the coastal defense management plan assisted by the Dutch government, with a proposed gigantic sea wall in the coastal seas of Jakarta (Brinkman, 2012). All of these are yet to yield success in overcoming the Jakarta floods, partially solving them but not making the city and its citizen adapt to floods. Figure 3 depicts the number of flood-affected areas in Jakarta based on major flooding for selected years.

Figure 3. Total Flooded Hamlets by Year (in km^2)



Source: Floods in number (*Banjir Jakarta Dalam Angka*[13], 2021).

The most severe floods occurred back in 2007 and 2015 based on the above figure. Recently, there are increasing concerns about floods in Jakarta growing as a result of climate variability generating extreme weather conditions, such as unusually torrential rains. Firman and his colleagues (2011, p. 372, p. 375) conclude that the government of Jakarta's capital city lacked a climate change-specific policy. In general, the Jakarta City Government currently lacks a program or policy for climate change adaptation.

Jakarta city officials are also aware of the effects of climate change, but they still need to learn more about how to adapt to it. By equipping students with the technical abilities required to evaluate the susceptibility and risk of climate change, their understanding of climate hazards, vulnerabilities, risks, and resilience would be improved. After which, what the World Bank and foreign media refers to as "sinking Jakarta" is almost entirely caused by land subsidence. Sea level rise and the issue of land subsidence is discussed in the next part.

13 https://www.instagram.com/p/CLmUnpMgHjZ/?igshid=Yzg5MTU1MDY (Accessed: 22 January 2023).

Sea level rise and land subsidence

Jakarta's other environmental problem is sea level rise and land subsidence. This exponentially growing urbanization causes some environmental issues. One of these is the subsidence of land. Subsequently, the process and strategy for urban growth will be impacted by the resulting land subsidence (Abidin et al., 2011). For many years, there have been reports that different areas of Jakarta are sinking at different speeds. Several measurements, e.g., InSAR measurements, Global Positioning System (GPS) survey techniques, and leveling surveys (Abidin et al., 2011), have all been employed to create a study to examine ground subsidence in Jakarta between 1982 and 2010. In general, it was discovered that the pace of land subsidence varies both spatially and temporally, at roughly 1 to 15 cm each year. Some areas may have subsidence rates of up to 20–28 cm per year (Abidin et al., 2011).

Land subsidence resulting as side effects of urban development has also been reported for several cities, such as Bangkok (Phien-wej et al., 2006), Calcutta (Chatterjeea et al., 2006), Taipei (Chen et al., 2007), Shanghai (Xue et al., 2005), and other cities in Indonesia such as Semarang and Bandung. However, compared to the previous sequence of cities in the area, which have all significantly slowed down recently, Jakarta's present subsidence rate looks to be the fastest (Takagi et al., 2016). A study comparing Jakarta's deteriorated land area, in the form of subsidence, was taken in several big Asian cities from Tokyo, Osaka, Taipei, Bangkok, Manila, and Jakarta.

Experts propose four causes, including the weight of structures and constructions, the natural consolidation of alluvium soil, and tectonic activity, which can all contribute to land subsidence in Jakarta. There is currently no information available regarding the geographic (contribution) variation of each factor's contribution to subsidence at each location. The tectonic activity appears to be the least significant factor affecting Jakarta, but excessive groundwater extraction is one of the major factors. The over-extraction of groundwater and the rise in skyscrapers, according to studies (World Health Organization, 2007), are the main causes of Jakarta's submergence. The increase in sea level in Jakarta Bay between 1925 and 2000 was measured at 0.57 cm per year (Padawangi and Douglass, 2015), however it has since been shown that this pace is now rising by at least 1 cm per year. Consequently, some 40 percent of Jakarta was already below high tide by the year 2007 (World Health Organization, 2009).

Traffic congestions

With a population of more than 31 million in 2015 (Gaduh et al., 2021), Jakarta MUR is one of the largest urban areas in the developing world. Due to fast motorization and poor urban planning, Jakarta, like many other rapidly expanding cities in Lower Middle-Income Countries (LMICs), experienced increasing traffic congestion. Similar to other cities in developing nations, buses are also often used in Jakarta; a BRT system would be a cost-effective enhancement that would increase mobility.

Bus Rapid Transit (BRT) systems that are less expensive and of inferior quality may be more appealing to LMIC cities with limited resources. A study by Gaduh and associates (2021) illustrates the risks associated with people's day-to-day decisions, including how poorly designed urban transportation infrastructure may fail to slow the growth of the automobile and instead exacerbate traffic congestion. Various traffic congestion indices compiled from GPS data have ranked Jakarta's traffic as the worst (or second worst) among the world's major cities (Castrol, 2015; Waze, 2016). In 2016, INRIX Global Traffic Scorecard ranked Jakarta 22nd out of 1064 cities in terms of peak hours spent in congestion, with 22 percent of overall driving time spent in congestion (INRIX, 2016).

Chronic traffic in Jakarta is a result of Jakarta's rapid growth and poor urban planning. Demand for private vehicles has increased as a result of income development, which is sometimes viewed as a sign of social status (Susilo and Joewono, 2017). The use of private vehicles has also increased as a result of national fuel subsidies and road development initiatives (Savatic, 2016; Hook and Replogle, 1996). Additionally, Jakarta's organizations in charge of land use and urban planning have typically failed to address the city's growing motorization (Susantono, 1998; Goldblum and Wong, 2000).

Despite being larger than other transportation means, Trans-Jakarta as a BRT operator uses less than 3 percent of the total road length in DKI Jakarta. Its corridors do not link employees residing in outlying municipalities to jobs in the city because they solely serve the DKI Jakarta area. Essentially, BRT systems have the advantage of being easier to expand and more affordable to build than other public transportation options like light rail or subways.

Trans-Jakarta experienced numerous service quality issues during the first few years of existence, which slowed down operations and lengthened wait times.

Firstly, BRT buses had a single front passenger door, which slowed the pace of boarding and disembarking passengers (Institute for Transportation and Development Policy, 2017). Secondly, Trans-Jakarta had a lot of issues coordinating the departure and arrival of buses at stations, which led to confusion and delays (Radford, 2016). Last but not least, Trans-Jakarta frequently neglected to implement bus lane segregation, especially outside of Corridor 1.

According to the study by Gaduh and associates (2021), Jakarta's BRT system had only minor effects on transit ridership while having little effect on the city's motorization incentives. Additionally, they demonstrate that the system did not enhance commuter flow. As the system grew, designers turned mixed-use lanes into BRT, which, in their opinion, increased rather than decreased congestion along service corridors. These three latent Jakarta's problems, human-made or climate-related, could be seen as the main reason and justification for capital transformation. Needless to say, the central government's promises that Jakarta would not be abandoned and left on its own will be kept. These promises reflect previous Jakarta's local government programs for overcoming floods, land subsidence, slowing sea level rise, and taming traffic congestions for tolerable condition, and central governance attentions are definitely directed to progress in Nusantara. Hence it is urgent for starting conditions to materialize in the collaboration between governments and other key stakeholders.

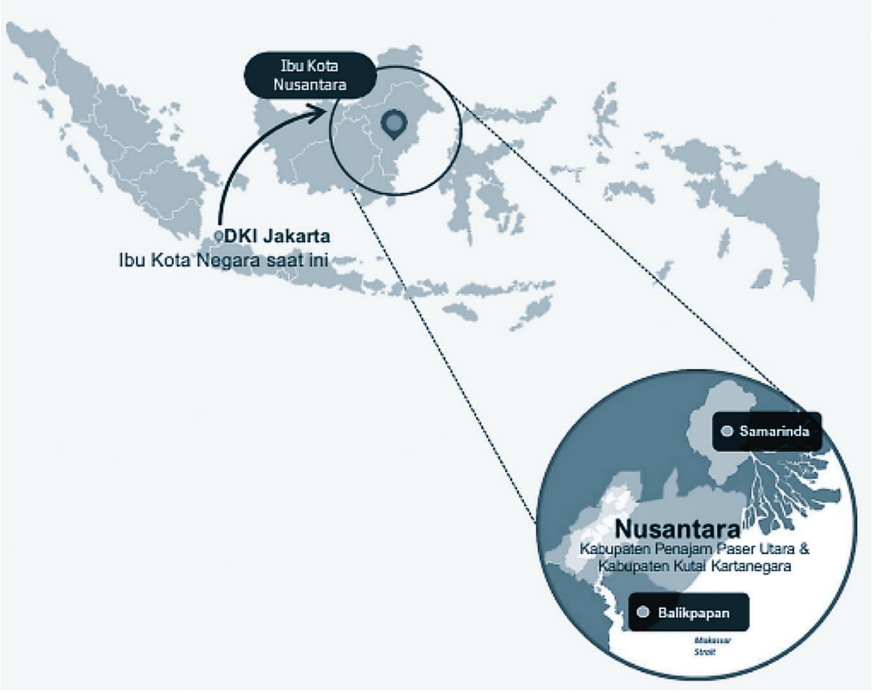
4. Collaborative Governance: The Importance of Starting Conditions

Our paper elaborates on collaborative governance in practice and theory. With three main urban problems, natural and man-made, e.g., heavy congestion, sea level rise, land subsidence and perpetual floods, the previous Jakarta local administration under Mayor Anies Baswedan (2017–2022) had launched and executed government policies and collaborated with other Jakarta stakeholders (Djohan, 2022). Under the Gubernatorial Decree number 24 in the Year 2020, collaborative governance has been a crucial framework, with a key instrument being the Jakarta Development Collaborative Network (JDCN). The JDCN acknowledges the importance of collaboration and at the time set, it tries to optimize five key stakeholders (*the pentahelix*): central government, local government, international developmental partners, the business sector, and society represented by the local civil society.

JDCN has introduced its visionary Jakarta Urban Regeneration 2030 with two fundamental policy transformations (Daud, 2019): The first, a transformational

vision and action from car-oriented development to transit. To foster this first transformation, the local government with central government support has anchored expansion and integration of rapid public transportation systems including Mass Rapid Transit (MRT, subway train), Light Rapid Transit (LRT, light train), and electric Bus Rapid Transit (e-BRT, electric busway). The second, a transformational policy from under-investment in basic services to rapid investment, a collaborative effort among businesses, international developmental partners, and local society to improve and achieve 60 priorities and accelerated programs such as: provision of affordable housing, collaborative green open space, universal access to clean water, and sustainable growth center. For the latter accelerated program, the Jakarta local government and national government have built an outer-loop line to connect Jakarta with 20 new sustainable growth centers, such as Dukuh Atas (international gateway), Lebak Bulus (transit village), Blok M (creative district), Manggarai (new interchange), Kanal Banjir Timur (riverfront city), and Jakarta International Stadium (sports and entertainment hub).

Figure 4. Nusantara location



Source: Tri Mulyani Sunarharum (2022).

It is promising that JDCN would continue local government priority programs in the future. Jakarta currently experienced a transitional leadership from 2022 to 2024, under the Acting Governor who is a direct representative of the central government. Jakarta would become a center for the nation, an economic center of gravity[14], although Nusantara has become the capital of Indonesia and is in the process of building and capital transformation. Prior to the continuation of Nusantara from a collaborative governance perspective, Figure 4 illustrates Nusantara, an aim to provide readers with a sense of future site plan development and its location. Nusantara is located between two municipalities: Penajam Paser Utara and Kutai Kertanegara, between two developed cities: Samarinda (capital of East Kalimantan) and Balikpapan (East Kalimantan economic center).

In East Kalimantan, the Nusantara first phase development anticipates far more drastic effects. It is reasonable that the proposal of a new capital city is already causing developers to rush to grab land in East Kalimantan given the current situation, where chances of profit in Jakarta are slowing down (Bloomberg, 2019). Private sector development is promising. For example, PP Properti, a state-owned enterprise, stated that it was looking to develop about 500 hectares, while Wijaya Karya Persero, another state-owned specialized infrastructure and building, stated that it was prepared to take the lead in building everything from roads to power, gas, and water networks (Bloomberg, 2019). Agung Podomoro Land, a major private enterprise, is already advertising residential and commercial projects in Balikpapan.

It is obvious from the literature that pre-existing circumstances can encourage or discourage cooperation between agencies and stakeholders as well as among stakeholders. The crucial starting conditions may be summarized into three major factors: one is imbalances in the resources or power of various stakeholders, a second relates to the incentives for collaboration among stakeholders, and a third is the prior patterns of cooperation or conflict among stakeholders (Ansell and Gash, 2007). Our paper focuses on the starting conditions based on our understanding of two main facts. Firstly, the Jakarta local government had practiced a collaborative network in their government operation. Secondly, Nusantara itself is still in an early phase of its development. Then, we argue for the importance of starting conditions for Nusantara. Essentially, effective collaborative governance needs a commitment to a constructive approach of empowerment and

14 See for example, news: Anies: Jakarta Tetap Jadi Pusat Ekonomi Meski Tak Jadi IKN (idntimes.com)

representation of weaker or disadvantaged stakeholders, if there are severe power/resource disparities amongst stakeholders, such that important stakeholders can not engage in a meaningful way.

The capital transformation has to be a national priority among government, both central and local representatives, business entities, and the local community, without sidelining any parties' interests and concerns. The central government has to intensify constructive communication particularly within the local community and environment-based local civil society organizations. From our second part narratives, there is still divergence in opinion with regards to Nusantara development between preserving Borneo's forest and opening the new capital.

Therefore, it is crucial for government to engage with civil society organizations. Theoretically, there are two components for making it an incentive to participate in the process: 1) collaborative governance will only be successful if stakeholders believe they are very interdependent, even if there are other venues where they can pursue their objectives unilaterally; 2) sponsors have to be prepared to put in the effort necessary to convince alternative forums (courts, lawmakers, and executives) to respect and honor the outcomes of collaborative procedures if interdependence depends on the collaborative forum serving as an exclusive venue.

The central government has made a tremendous effort inviting foreign investment from the private sector to invest in the Nusantara development. However, the investor requires political support from the government. Accordingly, the 2024 national election result will not alter the Indonesian government's commitment for capital relocation. A lesson learned from England's case studies, Haughton and Allmendinger (2015) uncovered the complex relationships formed and reformed over time between relational and territorial forms of thinking and policy, as well as how these are used to build alternative spatial imaginaries with varying power to move hearts and minds. By starting to unpick the variety of discursive and material practices involved in attempting to translate them into strategies, institutions, and policies, the presented case study helps us understand how some imaginaries seemed to work better than others.

Thus, the third factor associates with the prehistory of antagonism and cooperation following the fundamental principle that collaborative governance is unlikely to succeed if there is a prehistory of animosity among stakeholders unless a) there is a high level of interdependence among stakeholders or b) proactive measures are taken to address the low levels of trust and social capital among the

stakeholders. To put it another way, a long history of war breeds mistrust, suspicion, and stereotyping. On the other hand, a track record of prior collaboration that was successful can generate social capital and high levels of trust that result in a fruitful cycle of cooperation.

Consistent with social capital concept, the spirit of active cooperation and participatory decision-making involving key-stakeholders can be regarded as a collective resource because increases in social capital can benefit all members of the community (Bourdieu, 1985; Portes, 1998). Alternatively, because of the individual benefits that can be obtained from group involvement, social capital can be viewed as an individual's resource (Fukuyama, 1995; Putnam, 1995). Eventually, development of the Nusantara capital transformation and 2030 Jakarta Urban regeneration would position Indonesia as a milestone of cooperation between government, societal, and business entities.

5. Conclusions

Previous studies on Indonesian capital relocation in the context of politics and public administration are rare. Our present study bridges this gap in the literature by suggesting three main conclusions. This article considers ongoing development and fact descriptions. Current conditions for Jakarta and future strategies of developing Nusantara have to be understood for a win-win situation, instead of two other evitable situations lose-win or lose-lose, as our article argues. Therefore, the government, as the main actor of economic and political changes, has to deliver promises for Nusantara and Jakarta into sound policies so that it can be conveyed into tangible and realistic outcomes.

Firstly, our study describes the capital transformation in that we argue capital transformation is beneficial for the distribution of economic dividend. Despite tangible development motives, there is growing substantial concerns over environment and possible local ethnicity. These problems have to be tackled seriously from the beginning phase. Moreover, our analysis combines a number of issues related to this choice from the historical and political context of capital transformation, presenting how the public sees and attitudes toward capital transformation, without forgetting the elite stances with regard to capital transformation.

Secondly, our study utilizes prior solid and various research, both academic or applied, in order to evaluate the current state of Jakarta in relation to a number of

natural calamities, such as floods, sea level rise, and negative urban growth spillovers including traffic congestion. Our primary goal in evaluating this kind of risk is to clarify how Nusantara's capital move and Jakarta's resilience are related. The Jakarta Development Collaborative Network recognizes the value of cooperation and works to maximize the interests of five important stakeholders: the central government, local government, developmental international partners, the private sectors, and the local civil society.

Thirdly, three major factors can be used to demonstrate the important initial condition for developing collaborative governance: the first is disparities in the resources or power of different stakeholders; the second is the motivation for cooperation among stakeholders; and the third is the history of cooperation or conflict among stakeholders. Without ignoring the interests or concerns of any party, the capital transformation must be a national priority for all levels of government, including central and local representatives, businesses, and the local community. With the local community and environmental-based civil society organizations in particular, the central government has urgently begun a more positive dialogue. According to our second-part analysis, there is still a disagreement about whether Borneo's forest should be preserved or the new capital city opened when it comes to the development of Nusantara. Jakarta's future as a city will never be the same once Nusantara eventually presents and makes its impact.

Table 1. Summary of conclusions

Capital transformation	City resilence	Collaborative governance
• It is beneficial for distributing economic dividend, with major concerns acknowledged and solved • Environmental issues and potental local ethnicity problem need to be addressed for future Nusantara success	• Jakarta has to overcome 3 perpetual problems simulatenously: floods, sea level rise and land subsidence, and traffic congestion • Continuing development of collaborative network and full support from central government	• Starting condiations are crucial for success • Previous works acknowledged power-resource knowledge of asymetrics, prehistory of cooperation or conflict as initial trust level, and incentives for and constraints to participate

Source: compiled by the authors.

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City Networks as Tools of City Diplomacy – the Case of Seoul

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Abstract: Confronting global challenges and wanting to make profits out of globalization, cities are becoming more active in global politics. They conduct city diplomacy, establishing bilateral connections with "sister cities" or through transnational city networks. In this context, the behavior of so-called global cities is fascinating because they have enough resources to be very influential on the world stage. The capital city of South Korea is one of these global cities. Seoul positions itself as a global player that is actively involved in many regions around the world. The Seoul Metropolitan Government aims to enhance its status in the international community as a global city by engaging in city networks, hosting its headquarters, and trying to influence other members of organizations. The phenomenon of using a city network as an instrument in the city public diplomacy toolbox has never been described within literature.

This paper's main aim is to conceptualize the instrumental use of a city network by a global city to promote its interests. We will analyze the case of Seoul, a member of 25 different city networks. Two of them, CityNet and World Smart Sustainable Cities Organization (WeGO), have headquarters in the South Korean capital city and are used as tools in Seoul's public diplomacy. Based on interviews with city officials and networks officers, we will try to reconstruct the model of dependencies between the city and the networks it hosts. It will lead to answering the question of how the global city can use the network as a tool of its diplomacy. This paper will contribute to the academic discussion on city diplomacy instruments and help understand the internal policy-making process inside city networks that determine their actions in international relations.

Keywords: Seoul, city networks, CityNet, WeGO, city diplomacy
JEL: F50, F59, R11, R50, Q01

1. Introduction

City diplomacy is a term used to describe the diplomatic initiatives and efforts undertaken by cities, either individually or in collaboration with other cities, to enhance their international relations and reputation (see e.g., Acuto, 2013; Curtis and Acuto, 2018; Grandi, 2020; Leffel, 2021). Cities participate in international organizations and forums, host international events and conferences, establish sister-city partnerships, promote cultural exchange programs, and engage in different forms of collaboration with other cities worldwide.

Cities conduct city diplomacy to foster cooperation with other cities, support the city's economic growth and competitiveness and improve a city's image and reputation on the global stage. Many cities participate in transnational cities networks (TCNs), cooperating with other cities, sharing knowledge, and even trying to influence global governance in areas such as global climate policy (Kamiński, 2023). By participating in international networks, cities can showcase their achievements and innovations, share their experiences and best practices with other cities, and build their global reputation. In other words, they can conduct public diplomacy, defined as "the act of communication that expands an organization with international or global political interests, to further the understanding of external audiences about the values and principles which inspire and influence the direction of its objectives" (La Porte, 2013, p. 86).

In this chapter, we wish to explore the link between city diplomacy and public diplomacy, showing how cities may instrumentally use TCNs to promote their interests. This phenomenon has been understudied in the literature. We will analyze the case of Seoul, which is one of the global (Sassen, 1995) or "superstars" cities (Koelemaij, Taveirne and Derudder, 2023). It is a member of 25 different city networks, and two of them, CityNet and World Smart Sustainable Cities Organization (WeGO), have their headquarters in Seoul. Based on desk research and two interviews[1] with networks officers, we will reconstruct the model of dependencies between the city and the networks it hosts. We conducted talks with representatives of the networks to obtain direct information about the city networks' activities, the role which the Seoul Metropolitan Government (SMG) plays in them, and the benefits and drawbacks of collaboration between the TCNs and the Seoul authorities.

1 The first was conducted online, in the form of semi-structured interview. The second had structured, written form. Both took place in January 2023.

This chapter will lead to answering the question of how the global city can use networks as tools of its public diplomacy. This paper will contribute to the academic discussion about city diplomacy instruments and help understand the internal policy-making process inside city networks that determine their actions in international relations. The chapter is organized as follows. In the first part, we will explain the link between city diplomacy, public diplomacy and TCNs. In the second part, we will present Seoul city diplomacy and the role of city networks within it. In the next section, we will show case studies of the CityNet and WeGO as networks used by Seoul to enhance its reputation by collaborating and sharing resources with other cities worldwide.

2. City Diplomacy as a Way to Build the International Reputation of Cities

City diplomacy refers to the diplomatic relations and activities between cities rather than states. It is part of the much larger phenomenon of paradiplomacy (Tavares, 2016; Cornago, 2018; Pietrasiak et al., 2018), understood as international relations conducted by subnational governments independently to promote their interests. City diplomacy has its roots in medieval times when cities were often autonomous entities with their governance structures, economies, and cultural identities. During this period, cities frequently engaged in diplomatic exchanges and treaties with other cities and states to promote trade, secure alliances, and resolve conflicts. These early forms of city diplomacy laid the foundation for the development of modern city diplomacy and the recognition of cities as essential actors in international relations. This impact is reflected in the current discussion about "neo-medievalism" (Spalińska, 2022), showing city diplomacy as one of the manifestations of this "simultaneous processes of fragmentation and integration associated with globalization" (Duran, 2019). The development of modern city diplomacy can be traced back to the late 19th and early 20th centuries when cities started to expand beyond their national borders through trade and cultural exchanges. With globalization, interdependence, and urbanization in the late 20th century, city diplomacy gained more prominence as cities saw the need to address global challenges such as climate change, migration or organized crime (Grandi, 2020). This has led to the creation of international networks of cities, which allow cities to exchange ideas, experiences and best practices, and collaborate on global issues (Acuto and Rayner, 2016; Lee and Jung, 2018). There are currently a few hundred networks, but it is difficult to determine the exact number of TCNs worldwide as new networks are continually being formed, and some may no longer be active. Nevertheless, there are many well-established international

networks of cities, such as the United Cities and Local Governments (UCLG), Local Governments for Sustainability (ICLEI) or C40. In addition to these more extensive networks, numerous regional and thematic networks bring together cities from specific regions or with a common interest (Kamiński, 2023). Based on a hierarchical analysis of 256 cities in 118 countries, Lee (2012) suggested that the degree of cities' globalization is positively associated with the cities' membership in the global networks. In other words, so-called "global cities" are particularly set to participate in the networks. These cities are characterized by their economic importance and centrality, political influence, cultural diversity and international appeal and are centers of connectivity, advanced infrastructure and technological innovation (Sassen, 1995; How megacities are changing the map of the world, 2016; Bertelli, 2021). Seoul is considered a global city or "superstar city" (Koelemaij, Taveirne and Derudder, 2023) because it meets all key characteristics of these terms. It is a significant economic hub for East Asia, with a strong presence in the technology, finance, and tourism industries. Moreover, Seoul is the capital of South Korea and a key player in regional and international diplomacy, with a rich cultural heritage and serving as the region's transportation hub. Moreover, it is known for its modern and technologically advanced infrastructure (see e.g., Shin and Timberlake, 2020). The city is also an actor in Korean public diplomacy, which uses various cultural, educational, and informational activities to communicate with foreign audiences and gain support for a nation's policies, values, and culture. Although this term is ambiguous in Korean academic discourse (Ayhan, 2020), the current official definition stresses the importance of cooperation with local governments: "diplomatic activities through which the State promotes foreign nationals' understanding of and enhance confidence in the Republic of Korea directly or in cooperation with local governments or the private sector based on culture, knowledge, policies, etc." ('Public Diplomacy Act', 2016).

The role of cities as public diplomacy actors has not yet been fully conceptualized in academic literature. However, it is of little controversy to argue that cities which have a great potential to contribute to a country's public diplomacy goals also advance their specific interests (Amiri and Grandi, 2021, p. 156). Cities can engage in public diplomacy in various ways to promote themselves and foster relationships with the foreign public. Firstly, they can organize big sports or cultural events to promote the city brand and attract public attention. Secondly, they can develop sister city relationships, including cultural, educational, and commercial exchanges that foster people-to-people exchanges. Thirdly, cities can conduct digital diplomacy. Using digital tools, such as social media campaigns, they can

engage with other cities and promote globally. Finally, they can participate in international events, forums, and networks, such as TCNs, to exchange ideas and best practices with other cities and promote their city on the global stage.

All these methods enumerated above aim at improving the city's image and reputation in the eyes of the foreign public. In the rest of the chapter, we will focus on TCNs used by cities to conduct public diplomacy. Analyzing the case of Seoul and two networks that the SMG hosts, we will show how the global city can use networks to enhance its reputation by collaborating and sharing resources with other cities worldwide.

3. Seoul City Diplomacy and the Role of City Networks

In the 1960s, Seoul initiated its first activities in the field of city diplomacy—the South Korean capital established a sister relationship with Taipei. Nonetheless, until the beginning of the 1990s and the democratization process in the Republic of Korea (ROK), Seoul's international activity was severely limited. The reason was the internal situation within South Korea. The authoritarian government imposed a centralized system, strengthened the presidency, and limited the autonomy of local governments (Cho, 2015, pp. 210–211). In this situation, sisterhood ties and international exchanges in Seoul could only be realized to the extent permitted by the state. The collapse of the Cold War regime also opened up new opportunities for city diplomacy. South Korean cities began to expand exchanges with cities in countries that were considered earlier as hostiles (Kim, 2020, p. 6). Seoul began establishing new relationships with cities around the world. SMG also joined several transnational city networks; prior to democratization, it was only a member of one of them, Metropolis (SMG, 2023).

Seoul's city diplomacy evolution after South Korea's democratization can be divided into three stages. The first, from the late 1990s to the early 2000s, can be described as a period of building the foundation for city diplomacy. At that time, the emphasis was on establishing new international relations through sister-city agreements, and business exchanges with overseas cities were promoted. During the second stage, from the mid-2000s to the late 2000s, SMG focused on strengthening urban competitiveness and capabilities to improve the investment environment of foreign companies, as well as making efforts overseas to promote the image of Seoul (Ko, 2017, pp. 33–34).

Since the early 2010s, the intensive development and promotion of Seoul's city diplomacy have begun. New units subordinated to the SMG were established. In 2012, the City Diplomacy Research Center (CDRC) was created at the Seoul Institute[2]. In addition, the SMG established Global Urban Partnership Division in 2014 to export its policy solutions to cities in other countries (Yi and Song, 2019). In the third stage, Seoul has been striving to create and influence transnational city networks and international organizations as a global city and has been actively promoting policy exchange projects for the joint development of global cities (Ko, 2017, p. 34).

Moreover, at the same time, the potential of city diplomacy was recognized at the national level in South Korea. In December 2013, South Korean Ministry of Foreign Affairs and the SMG signed a cooperation memorandum to promote city and public diplomacy. The aim was to strengthen cooperation and assistance. The Ministry of Foreign Affairs (MFA) covenanted to support city authorities in promoting Seoul's policies and best practices, and SMG, in turn, in attracting foreign investments to South Korea (Ministry of Foreign Affairs of the Republic of Korea, 2013). As the capital city, Seoul is officially recognized as a Special Metropolitan City, giving it considerable scope for autonomous politics and organization. At the same time, under South Korean law, Seoul "shall be under the direct control of the government" (Local Autonomy Act, 2021). The law, therefore, necessitates close collaboration between the government and SMG. It is different from many other global cities that are also national capitals.

Sharing knowledge and experience has been one of Seoul's priorities for many years. For over a dozen years, SMG has been running a special program—Seoul Policy Sharing Initiative, related to sharing knowledge, experience and innovations, ranging from urban planning, environmental protection, to developing e-government. Since 2006, Seoul has implemented almost 100 projects in 65 cities in 38 countries—in sister cities, friendship cities, and cities which are members of city networks where Seoul plays a leading role. Most have been conducted under the Seoul Policy Sharing Initiative (Seoul Solution, 2020). SMG does not do it selflessly. South Korean companies are involved in projects in overseas cities, which means benefits through public-private partnerships (PPP). Successful invest-

2 The Seoul Institute (SI), formerly known as Seoul Development Institute, is an urban institution established by SMG to conduct research for the city's administration on a variety of policy issues and support the policy-making processes.

ments strengthen Seoul's position and provide, among others, an opportunity to strengthen relations and future joint projects.

Importantly, Seoul is authentic in its policy-sharing strategy and can be considered a role model for cities in developing countries. It is a direct result of the history of the capital of South Korea itself. After the Korean War (1950–1953), Seoul was a dilapidated and underdeveloped city. Then, the decades of intensive development began, establishing Seoul in the 21st century as a developed, globalized city that introduces smart and sustainable solutions. Nevertheless, Seoul faced many urban problems and challenges during its development, such as environmental pollution, traffic congestion, the formation of illegal settlement areas, and housing shortages due to the extensive population inflow (Seoul Solution, 2015). By promoting its history and experiences, Seoul becomes a reliable partner, especially for cities from developing countries.

In 2021, the Seoul authorities adopted a new city development and activities strategy. "Seoul Vision 2030" presents ambitious plans in many different areas, including city diplomacy and Seoul's position in the world. The position of a global city has been recognized as insufficient. Seoul is set to be among the top five cities in the Global Cities Index (GCI), a comprehensive ranking of the leading global cities published annually by Kearney). The strategy recognized that goal as one of the most important priorities (SMG, 2021, p. 6). In 2021, Seoul was ranked 17th in GCI, which means that SMG's goal is to advance by at least 12 positions in 9 years. One year later, Seoul took a step closer to achieving this goal—in 2022, it was ranked 13th (Kearney, 2022).

Interestingly, when the GCI ranking was first published in 2012, Seoul was ranked eighth. However, in the following years, it fell in the ranking. There are some reasons because the GCI is based on a specific methodology. The ranking is created by calculating values within five components: business activity, human capital, information exchange, cultural experience, and political engagement. Seoul scores excellently on most components, although it struggles in "human capital" due to its small foreign-born population and the low number of international schools (Kearney, 2014, p. 6). The South Korean capital also performs poorly in the "political engagement" component, which is based, among others, on the number of embassies, headquarters and branches of international organizations and local institutions with a global reach.

The strategy's specific objectives include turning South Korea's capital into an Asian economic hub (SMG, 2021, pp. 13–14). To implement this plan, active participation in city networks is essential. The Seoul "ambassador of international relations", Paik Ji-ah, emphasized this essence, pointing to the role of CityNet and WeGO (Bahk, 2021). Not only involvement, but also being the host of TCNs and international organizations will bring Seoul closer to being among the top 5 cities in Global Cities Index by strengthening its capabilities in the "political engagement" component. Seoul must compete with other cities for its global position, including attracting investment and international market share, in order to become one of the world's most important cities. The greater the city's integration into global networks, the more opportunities and benefits it gains. Thus, the global city strengthens its position in this competition through integration and cooperation.

Seoul is a global city, which requires establishing bilateral partnerships or sister relationships with other cities and engaging in international initiatives associating local governments and other entities worldwide. Through city networks, SMG can share its innovative policies, strengthen global networks, and export urban solutions to other cities (Yi and Song, 2019). It is a more effective way than sharing policy and practices in bilateral relations. It also requires less financial and time outlays (e.g., organizing a summit with the participation of representatives of the city network members instead of organizing several dozen separate bilateral meetings). Moreover, as Acuto and Leffel (2021, p. 1762) point out, city networks are not just connections but actual producers of a wide variety of policy outputs and knowledge mobilization mechanisms. Furthermore, for global cities (such as Seoul), being active in or sometimes even leading city networks is an opportunity to strengthen their position in the world and benefit from it.

As of January 2023, Seoul was a member of 25 transnational city networks or international organizations. These were networks and organizations of various types, ranging from health care, culture and tourism, environmental and climate protection, to urban policies. The table below shows the list of institutions to which Seoul belongs and the South Korean capital city's role in them.

Table 1. Seoul in city networks and organizations

City network or organization	Year of the establishment	Year of Seoul's membership	The role of Seoul
Alliance for Healthy Cities (AFHC)	2003	2004	Member
Botanic Gardens Conservation International (BGCI)	1987	2017	Member
C40 Cities Climate Leadership Group	2005	2006	Member
CityNet	1987	1989	President, Secretariat
Council for Promotion of Tourism in Asia (CPTA)	2000	2006	Member
Crisis Management Center (CMC)	2002	2003	Member
Global Covenant of Mayors for Climate & Energy (GcoM)	2014	2014	Member
Global Resilient City Network (GRCN)	2013	2016	Member
Global Social Economy Forum (GSEF)	2014	2014	Member
Global Urban Air Pollution Observatory (GUAPO)	2017	2018	Director
ICLEI – Local Governments for Sustainability	1990	1999	Executive Committee Member
International Association of Public Transport (UITP)	1885	2005	Member
International Council of Museums (ICOM)	1946	2019	Member
International Ombudsman Institute (IOI)	1978	2020	Member
Lighting Urban Community International (LUCI)	2002	2007	Vice President
Metropolis	1985	1987	Regional Vice-president
Open Government Partnership (OGP)	2011	2016	Member
Pacific Asia Travel Association (PATA)	1951	1970	Member
UNESCO Creative Cities Network (UCCN)	2004	2010	Member
Union of International Associations (UIA)	1907	2012	Member
United Cities and Local Governments (UCLG)	1913[3]	1998	Executive Committee Member
World Cities Culture Forum (WCCF)	2012	2013	Member
World Smart Sustainable Cities Organization (WeGO)	2010	2010	Founder, President, Secretariat
World Tourism Cities Federation (WTCF)	2012	2012	Vice Chairman
World Union of Olympic Cities (WUOC)	2002	2019	Member

Source: own research based on the information from the SMG website; compiled by the authors.

Moreover, Seoul seeks to strengthen its diplomacy and status in the international community as a global city by hosting local offices of city networks and various international organizations. There are 22 of them in total. The first was Metropolis Women International Network Seoul Office, which opened in 2009. Seoul hosts the regional offices of UN agencies—UNHCR, UNICEF, FAO, and the WHO Asia-Pacific Center for Environment and Health (ACE). The South Korean

3 UCLG's origins go back to 1913, when the UIV (Union Internationale des Villes) was established.

capital city is also home to the local offices of several city networks, including, as previously mentioned, Metropolis (SMG, 2023). The most important, however, is hosting the secretariats of two city networks: CityNet and WeGO. In both networks, Seoul has a presidential status. Additionally, both organizations are headquartered in the same building—Seoul Global Center.

CityNet was founded in 1987 at the Nagoya Congress (N'LAP) in Japan with the support of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), United Nations Development Programme (UNDP), UN-HABITAT, Nagoya city, and the first 27 member cities. In 1992, the network established its secretariat in Yokohama (Japan) (Niederhafner, 2013, p. 388). In 2013, the secretariat of the network was moved to Seoul. As of January 2023, CityNet has over 150 members—municipalities, NGOs, private companies, and research centers. The network aims to "connect actors, exchange knowledge and build commitment to establish more sustainable and resilient cities" (CityNet, 2023).

The history of WeGo started in July 2008, when the Seoul Metropolitan Government held the World e-Government Market Forum with mayors and representatives of 35 cities. At that time, the first steps were taken to establish a new network of cities. A year later, during the World Cities CIO Forum, representatives of 42 cities agreed to hold the inaugural meeting in 2010 in Seoul and open a headquarters in the South Korean capital city (SMG, 2022)[4]. WeGO was founded by 50 cities in 2010 as the World e-Governments Organization. At first, the network focused on cooperation between cities to promote e-government exchanges. However, as the smart city concept continued to evolve, during the 4th General Assembly in 2017, WeGO expanded its mandate and changed its name to the World Smart Sustainable Cities Organization (WeGO, 2023a). The network began to attract new members—not only cities but also private entities. In 2017, it already had 116 member cities from 53 countries. In 2020, there were 161 such cities. Within a dozen or so years, the number of members of WeGO has more than tripled. It proves a particular success of Seoul—it built and has been gradually expanding a network of cities, to which newer and newer cities from all over the world are joining.

4 An independent WeGO secretariat in Seoul was opened in 2014. Previously it was under the SMG.

4. The Instrumentalization of CityNet and WeGO by Seoul

Participating in TCNs can be a powerful tool for advancing a global city's diplomacy efforts (Acuto and Leffel, 2021). By sharing expertise and knowledge, cities can raise their profiles and visibility on the world stage, showcasing their achievements and innovations to a global audience. They can build relationships and partnerships with other cities and international organizations. Working together through city networks, global cities can advocate for shared interests more efficiently.

This effect is evident when a city directly influences the network. We will show it in the case of Seoul, focusing on four mechanisms of instrumental use of TCNs by a network leader: a) controlling and directing city networks; b) establishing new relationships through networks; c) creating new spaces that serve as a platform for self-promotion; d) using the city networks to implement its own development assistance.

Controlling and directing city networks

There is a "special relationship" between Seoul and CityNet because SMG sets some policy directions along with CityNet's Executive Committee, and Seoul has been supporting the network financially (CityNet Secretariat Official, personal communication, January 25, 2023). Financial support issues are internal to the CityNet Secretariat and Seoul, and the total sum allocated by SMG to CityNet is unknown. However, the interviewed officer said that SMG is "subsidizing most of our operations cost" (CityNet Secretariat Official, personal communication, January 25, 2023). The authorities of the capital of South Korea also delegate employees to the CityNet Secretariat, which means that they support the network in terms of human resources. Seoul sends two secondment staff yearly (CityNet Operation Officer, personal communication, January 26, 2023). It might be perceived as a way to maintain constant influence on CityNet and control its activities.

As President, the SMG manages the overall financial activities of the WeGO Secretariat. The network's budget is financed partly by membership fees, ranging from US$400 to US$10,000, depending on the city's population and Gross Domestic Product (GDP) per capita. SMG also supports the budget. Annually, Seoul spends about 1,000,000,000 Korean won (US$817,000), although, in 2018, it was 1,123,000,000 Korean won (US$917,000) (Lee and Song, 2018, p. 58). Interestingly, the Seoul Institute explicitly states that WeGO is collaborating with

the Seoul Human Resources Development Institute to engage and support officials in the network's member cities who will have a favorable opinion of Seoul and thus can become "ambassadors" for the South Korean capital. It may lay the groundwork for the overseas expansion of the Seoul e-government model (Lee and Song, 2018, p. 59).

Establishing new relationships through networks

Since the CityNet Secretariat moved to Seoul, SMG has been participating in the overall activities of CityNet, strengthening its influence in the Asia-Pacific region and spreading Seoul's policies. According to the Seoul Institute, SMG has been actively leading knowledge-sharing activities and expanding bilateral cooperation and support projects with other cities within the CityNet network (Lee and Song, 2018, p. 50). One of Seoul's first activities after becoming CityNet's President was establishing new cooperation with cities in Asia that are network members. Sidoarjo in Indonesia and Colombo in Sri Lanka were the first full network members targeted by Seoul (Lee and Song, 2018, p. 52). Successful cooperation within CityNet resulted in Seoul and Colombo signing a friendship agreement in 2016.

In 2017, a pilot cooperation project between cities in the European Union (EU) and South Korea was launched as part of the World Cities Project (the initiative of the European Parliament). CityNet started the implementation of the project in South Korea. Four South Korean cities—Seoul, Suwon, Busan, and Gwangju were paired with four European cities—Eindhoven (Netherlands), the Scottish Cities Alliance (United Kingdom), Tampere (Finland) and Barcelona (Spain) respectively (CityNet, 2017). Prior to the start of the project, Seoul did not have any permanent partnership with Eindhoven. It was not the only case when CityNet initiated cooperation with Seoul. Thanks to the involvement of CityNet, recently Seoul Metropolitan Government participated in IURC, the EU-funded city-to-city partnership program, and worked with Dublin (Ireland) (CityNet Operation Officer, personal communication, January 26, 2023). As in Eindhoven's case, Seoul has no partnership agreement signed with Dublin. It shows that thanks to the city network, it can establish new cooperation with new cities.

Through WeGO, SMG has launched an innovative city pilot project promotion in a few cities-members of the network. Among these are the installation of smart streetlamps in Seberang Perai (Malaysia) and the installation of an intelligent waste management system in La Marsa (Tunisia) (Lee Ch., Moon, Lee M. and Song, 2019, p. 35). Between 2017 and 2019, WeGO conducted annual

e-government training for World Bank employees, during which Seoul's policies in this area were presented. A year later, through WeGO, SMG and the World Bank signed a memorandum of understanding and a convention for establishing e-government in developing countries and promoting digital gap mitigation projects (SMG, 2022). The network was first used to establish permanent contacts with an international institution, promote Seoul, and then through this, Seoul set up a partnership with the World Bank.

Creating new spaces that serve as a platform for self-promotion

An official from the CityNet Secretariat emphasized that the network "provides multiple opportunities for member cities to participate in international events and promote their policies to other cities" (CityNet Operation Officer, personal communication, January 26, 2023). When the United Nations adopted the 2030 Agenda for Sustainable Development and Sustainable Development Goals (SDGs) in 2015, Seoul, using CityNet, began efforts to create a new initiative. It was supposed to focus on sustainable urban development. In 2017, Seoul's authorities, jointly with CityNet and the UNESCAP, established the Urban SDG Knowledge Platform to promote and support knowledge sharing and city-to-city cooperation for sustainable urban development. The main goals of the platform are to provide a repository of policies, initiatives, and good practices at the city level by municipal governments and other stakeholders, as well as facilitate North-South, but also South-South, cooperation by linking cities that have developed specific solutions in terms of SDGs (Urban SDG Knowledge Platform, 2023a).

As of the beginning of 2023, 418 policies, projects, and best practices in sustainable development have been published on the Urban SDG Knowledge Platform website. The vast majority (80 percent) come from East and Southeast Asia regions. Notably, 153 of them come from Seoul alone, which means that over one-third of all initiatives come from the capital city of South Korea (Urban SDG Knowledge Platform, 2023b). It shows that a platform is primarily a place where SMG can easily and quickly promote its own experience and solutions which could lead to substantial inter-city exchanges and cooperation from which Seoul draws profits.

For several years, WeGO has extended its scope of activities to cooperation with regional city networks. In 2019, WeGO undertook a series of activities to support ASEAN Smart Cities Network (ASCN) cities through matchmaking with partners, consultants, and solution providers, through a workshop for knowledge

sharing, as well as organizing a conference of mayors with signing ceremonies for partnerships. It is another area where Seoul can play a role and promote its policies. However, Seoul's ambitions extend even further. WeGO's goal is to set up regional networks that would be subject to the Secretariat in Seoul. In 2020, WeGO embarked on a new initiative to establish a network of smart cities in Northeast Asia, including capitals and other major cities across China, Korea, Mongolia, and Russia. In the following year, WeGO initiated Africa Smart City Network (AFSCN) and Latin America Smart Cities Network (LASCN) (WeGO, 2022, pp. 10-11). There are also plans to create the China-Japan-South Korea (CJK) Network (WeGO, 2023c). New regional city networks would undoubtedly play an important role in pursuing SMG's strategy of becoming one of the most important global cities and would assist Seoul in doing so.

There are also situations where CityNet and WeGO are used by Seoul and simultaneously cooperate with SMG. In order to promote and share Seoul's urban policies, the Seoul Human Resources Development Center (SHRDC) of SMG has been conducting international training programs. SHRDC conducts workshops within CityNet and WeGO for members of both networks. Representatives of the secretariats of both networks are also involved in running the courses. Programs include lectures and policy presentations on global urban development and specific topics: smart cities, sustainable mobility, and climate change. From 2008 to 2021, the center trained at least 112 people from CityNet member cities, and since 2010 at least 155 people from WeGO member cities (Seoul Solution, 2023a).
All the examples mentioned above show that Seoul wants to create, develop, and maintain an image of a smart, modern, and green city in its city diplomacy. Urban imaginaries (Dunn, 2018) have been formulated throughout history, but their importance is increasing as globalization and urbanization intensify. City networks are helpful places to promote them (Kamiński, 2023). As the case of Seoul shows, they are places to present and share cities' knowledge, experiences and solutions that help build their image abroad.

Using the city networks to implement own development assistance

Seoul Metropolitan Government provides development assistance to cities in developing countries focusing on six areas: education, information and communication technology (ICT), transport infrastructure, administrative system, healthcare and medical treatment, and environment. The city authorities act in that area within and with the support of city networks. As part of development assistance, Seoul in 2012 allocated 50,000,000 Korean won (approximately US$40,000) for

feasibility studies of the three WeGO member cities. In Ulaanbataar (Mongolia)—the construction of an underground spatial data infrastructure (SDI). In Dar es Salaam (Tanzania)—construction of an interdepartmental document control system. And in San Antonio de Areco/Buenos Aires (Argentina)—construction of a smart card-operated public service hub (Seoul Solution, 2023). It is also known that Seoul carried out project feasibility evaluations, in the field of e-government, in five other cities that are members of WeGO: Kathmandu (Nepal), Maputo (Mozambique), Addis Ababa (Ethiopia), Hanoi (Vietnam), San Fernando (Philippines) (Lee Ch. et al., 2019, p. 34). However, the financial value of these projects is unknown.

In 2015, SMG conducted an eight-day training for officials from Seoul's partner cities from CityNet and WeGO. Eleven sessions of six courses were conducted, including e-government, urban transportation, and urban planning. The Seoul authorities allocated more than 476,000,000 Korean won (nearly US$390,000) for this project. The main purpose of that training was to lay the groundwork for sharing the excellent policies of the SMG with other cities and strengthening the human resources network. It should be emphasized that the training sessions were conducted in cooperation with CityNet, WeGO, and UCLG-ASPAC. The training was attended by 253 officials from 54 cities in 23 countries (Seoul Solution, 2023b). It was another example of using city networks in Seoul's diplomacy.

5. Conclusions

This chapter shows that city networks may serve as a valuable tool for global cities in advancing their diplomacy efforts. By leading these networks, global cities can build their reputation and visibility on the global stage. In other words—they can conduct public diplomacy.

Cities can instrumentally use city networks in a variety of ways. By hosting the city network secretariats, city authorities can substantially influence the direction of TCN's activities. Through city networks, they can establish new relationships with foreign cities. TCNs can also be used as platforms for promoting city policies and solutions. Finally, city networks can serve as vehicles for the city's development aid.

This phenomenon of using networks as public diplomacy tools is very well visible in Seoul. The Korean capital is consequently raising its image by actively

participating in numerous networks and leading two. Hosting the CityNet and WeGO, Seoul creates an image of an innovative, modern, green city. The model it wants to export shares best practices and promotes its vision of an urban future. Rising Seoul's profile ultimately attracts tourists and foreign investors, enhances people-to-people contacts and creates new development opportunities for the city.

We touched on a phenomenon that has not been well-described in the literature. Thus, this paper will contribute to the academic discussion about city diplomacy instruments and help understand the internal policy-making process inside city networks that determine their actions in international relations. However, the four networks' instrumentalization methods listed and described in the chapter might not make a complete list. Therefore, this chapter may serve as a basis for further research, as the topic of using TCNs by cities in their city diplomacy is undoubtedly essential, as demonstrated by the case of Seoul analyzed in this paper.

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The Future of Japanese Urbanization: Technological Wonderland or Robotized Dystopia?

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Abstract: Since the 1868 Meiji Restoration, Japan transformed itself from a closed late-feudal society into a modernizing state increasingly integrated in the global economic and political system. Despite the reactionary interwar expansionist momentum inspired by chauvinistic Tennoism, after 1945 Japan pursued a new path towards economic modernization becoming in less than fifty years an avant-garde of post-modernity and one of the world's wealthiest societies. This modernization, which came along with technological development and investment, deeply affected Japanese urban conception. While public and private initiative have been mobilized towards the achievement of outstanding economic growth and massive increases in standards of living, the benefits of economic growth have been undermined by persistent urban concerns like high land prices, low housing standards, and environmental pollution. However, in the future the major factor that is expected to affect Japanese urban development is demographic change, with a drop to half the current level of almost 130 million people by the end of the 21st century. The rapid ageing of Japanese society, low demographic expectations, swift decline in the workforce, and restrictions of foreign immigration are factors that project a slowdown of human urbanization in the future, with a decline in the need for new housing and other urban investment. At the same time, technological development and urban robotization in the frame of "smart city" programs will forge a new Japanese urban identity hinging on robotics. In this frame, this article wishes to investigate the impact of technological development on future Japanese urbanization asking whether robotics will have the capacity to tackle Japanese demographic decline without leading towards substantial social changes or whether it will transform Japanese cities into dystopic post-human artifacts. The creation of futuristic Japanese hyper-smart cities could boost structural vulnerabilities originating from an overdependence on cybernetic capacities and Artificial Intelligence.

Keywords: Japan; smart cities; internet of things (IoT); Artificial Intelligence (AI); transhumanism
JEL Codes: N4; O3; O4; I3; F5

1. Introduction

The 1868 Meiji Restoration represented a turning point in the path towards Japanese modernization. Thanks to this Restoration, Japan transformed from a closed late-feudal society into a modernizing state progressively integrated in the global economic and political system. Following military innovation, the adoption of the liberal-capitalist economic system, and the adoption of a Western-inspired socio-economic paradigm, Japan gradually began to take on the appearance of a modern imperial nation in search for a hegemonic role in East Asia and the Pacific Ocean. In this climate of transformation, the effects of the Industrial Revolution that had taken place in Europe in the 18th century, eventually reached Japan. The industrialization and modernization of Japan led to radical changes in the country's appearance, affecting also urban conceptual development. Starting in 1870, while pursuing the country's modernization program, the Japanese government invited different exponents of Western culture, including some famous architects, to instruct Japanese on the innovative urban plans and architectural methods and techniques that were rapidly transforming European and American cities (Leone, 1996). However, by the end of the 1920s, in tandem with the inter-war expansionist and militarist momentum inspired by chauvinistic Tennoism, the rediscovery of an awareness of Japanese national identity provoked a strong reluctance towards foreign models. This reflected also in the sphere of architecture and urbanization, where Japanese architects and urban engineers attempted to introduce a modern reinterpretation of the ancient Japanese traditions.

After the dramatic experience of the Second World War, from 1945 Japan adopted a full-fledged Western-inspired socio-economic model that would lead the country to a rapid economic modernization, becoming in less than fifty years an avant-garde of post-modernity and one of the world's wealthiest societies. In the post-war years, public and private initiative have been mobilized towards the achievement of outstanding economic growth and massive increases in standards of living, transforming Japan in one of the world's chief economies (Jorgenson and Nishimizu, 1978). With the forecast of a nominal gross domestic product (GDP) of US$5.4 trillion in 2026, Japan will remain the world's third-largest economy over the next few years (Reynolds, 2022).

However, in recent years Japanese economic performances have been offset by negative matters, including high land prices, low housing standards, environmental pollution, and a rapidly declining population. While factors like quick ageing, low demographic expectations, swift decline in the workforce, and restrictions of

foreign immigration predict a slowdown of human urbanization in the future, with a decline in the need for new housing and other urban investment, at the same time, the massive immigration of the rural population in urban environments is shaping the future identity of Japanese cities. In this sense, technological development and urban robotization in the frame of "smart city" programs are expected to forge a new Japanese urban identity that pivots on Artificial Intelligence (AI) and robotics.

In this context, this article aims at interpreting the impact of technological development on future Japanese urbanization and the enhancement of smart cities, asking whether AI and robotics will have the capacity to tackle Japan's structural deficiencies like demographic decline and a decrease in the workforce without leading towards substantial social changes or whether it will transform Japanese cities into dystopic artifacts where machines and hybrid post-humans will overcome organic humanity. In this sense, the article argues that while futuristic Japanese hyper-smart cities may represent technological wonderlands at the service of individuals, they could also embody robotized dystopias in which humans lose their "humanity" in favor of the advent of the post-human. Also, being overdependent on cybernetic capacities and on AI, smart cities, and "smart" humans, i.e., hybridized cyborgs, could become structurally vulnerable to the threats that characterize cyberspace.

The article is divided as follows. The first section offers a review of the literature on the recent development of smart cities, focusing specifically on Asian cities and, above all, Japanese ones. The second section introduces an account of the structural dilemmas that contemporary Japan needs to face, including a speedy ageing population, low demographic expectations, and a shrinking labor pool, explaining how smart city developmental plans are affecting these domestic challenges. The third section proposes the core argument of the article, stating that smart cities could epitomize a tool to enhance transhumanism and to establish a new future society based on hybridized post-humans who, through the massive use of biotechnologies and information technologies, will tend to prolong as much as possible their life expectancy, in the hope of achieving ephemeral, materialistic immortality. Finally, the conclusions suggest that social pathologies of post-modern urban environments may be overcome by the introduction of an alternative model based on a return to "organic" life, sustainable development, and ruralism.

2. Smart Cities in Japan: A Functional Review

In recent years, the notion of the smart city has become increasingly popular within the context of two remarkable developments, namely the quick expansion of novel Fourth Industrial Revolution technologies such as the Internet of Things (IoT), big data, and AI and a rapidly urbanizing planet, with more than half of the world's population now living in cities (Joo and Tan, 2020). Specifically, the Asian continent is witnessing an ever-growing rise in the number of smart city developments, especially in countries like China, India, Singapore, South Korea, and, of course, Japan. Generally, the proliferation of smart cities in Asia tends to represent a local trend connected to the characteristics of a region that is quickly urbanizing and expanding in the global economy, which does not necessarily reflect an attempt to copy smart city models from the West—chiefly the United States.

The rise of the smart city model has sparked an increasing interest due to the literature in an attempt to understand from various points of view the complexity of this reality. The scholarly debate around the concept of smart cities has witnessed an interdisciplinary effort to appreciate the multifaceted aspects of these urban ambitious initiatives. While highlighting the impact of smart cities' technical and logistical aspects on society (Carvalho, 2015), some studies raised academic and philosophical debates around the goals, ethics, potential and limitations of smart cities, which became a metaphor for urban modernity (Glasmeier and Christopherson, 2015). At the same time, some studies criticized the conducted research on smart cities, arguing that much of the writing and rhetoric on the topic has hinged on non-ideological common-sense, pragmatic considerations, omitting an all-encompassing analysis (Kitchin, 2015), and lacking a critical understanding of the phenomenon (Luque-Ayala and Marvin, 2015). Thus, the efforts to offer consistent explanations to the understanding of smart cities are still inadequate, nor does a standardized smart city index applicable to smart city evaluation exist at present, since different regions use different parameters for classification (Lai et al., 2020). Still, scholarly debate has attempted to understand what would make smart cities "smart" either in relation to variables like economy, people, governance, mobility, environment, and quality of life or to aspects linked to energy, environment, economy, security, health, mobility, education, and governance (Ogrodnik, 2020).

Even in terms of definition, the concept of the smart city has enjoyed nuanced definitions and conceptualizations (Deakin and Al Waer, 2012; Vanolo, 2014; Angelidou, 2015). Generally, in the attempt of providing a definition, the literature

associated with smart cities highlighted some typical aspects, including the active use of advanced and off-the-shelf technologies to solve urban problems (Glasmeier et al., 2015), the conception of the city as a platform where silo-based services and systems are interconnected to produce a collaborative and integrated model (Anttiroiko, 2016) and an apparatus that shifts from innovation to application based on a technical platform supported by cutting-edge technologies, including the IoT, big data and AI (Allwinkle and Cruickshank, 2011). Also, in defining the phenomenon, the literature underlined how the development of smart cities is closely linked to the activity of high-tech companies, which began to conceive urban realities as sources of revenue and business assets (Townsend, 2013). In this respect, the diffusion of the term "smart city" began to appear in 2008—following the 2007-2008 financial crisis—within the context of International Business Machines (IBM) (Söderström et al., 2014). Thus, the concept of the smart city began to combine with that of corporation and urban environments were conceived as an outcome of corporate vision and the market creation strategy of profit-driven multinational corporations like IBM, Cisco, and Intel supported by international consulting firms (Hollands, 2015; Glasmeier and Nebiolo, 2016). In this sense, a smart city has often been considered a basic form of entrepreneurial project that represents a typical milestone in today's technology-driven society and a tool for attracting footloose international capital. In this vein, a critical strand of the literature has accused smart cities of being neoliberal artefacts that poorly improve or actually aggravate the digital divide and socio-economic inequalities afflicting post-industrial and post-liberal societies (Hollands, 2015; Greenfield, 2013; Vanolo, 2014).

Smart cities are also the result of modern phenomena such as increasing population, industrial agglomeration, and climatic deterioration that have challenged urban capability (Wei et al., 2016). These challenges of post-modernity fostered the need to search for new models of urban governance that envision innovation and technological reform (Su et al., 2022).

Within this frame, a smart city can be viewed as a post-modern artifact of urban development that brings together the various sectors of society through the deployment of IoT and distributed computing technologies that offer automatized and robotized services and processes (Mahmood, 2018). Relying evermore on sophisticated algorithms and cybernetic technologies, smart cities rest upon the robotization and automatization of the urban and social environment. In this respect, a smart city is "smart" insofar as it replaces human, "organic" activity with artificial, mechanized performances promoted by the IoT and AI.

As anticipated, in recent years the Asian continent has been witnessing an ever-increasing rise in smart cities, accompanied by the proliferation of a vast literature on the topic (Calder, 2016; Mani, 2016; Yu and Xu, 2018; Hu, 2019). One of the Asian countries in which the phenomenon of rising smart cities has been more visible is Japan. The development of smart cities in Japan has been a direct consequence of the consolidation of Japan as one of the leading economies in Asia, and of Japanese economic successes, and industrialization as highlighted by developmental state theory (Johnson, 1982). Japanese smart cities are also the result of the actions of an interventionist, Keynesian state, followed by speedy industrialization. Given its initial condition of relatively limited natural resources for economic development, Japan had to rely almost entirely on human capital while massively investing on technological developments.

The massive use of information technology (IT) is particularly visible in Japanese cities, for instance, in the transport and energy sectors. Public transportation relies on geo-positioning technology that allows the real-time tracking of means of transportation, notably buses or trains. Cyberspace allows the sharing of information about means of transportation directly to smartphones of people waiting at stops. At the same time, automotive navigation systems in cars that use digital mapping in cyberspace can predict the conditions of streets to the driver and thus orient and guide the driving. Consequently, urban services integrated with systems based on IT and AI have evolved Japanese cities into smart cities and Japanese society into the so-called Society 5.0 (Deguchi et al., 2020). Now, the literature argues that while these smart systems will be increasingly advanced, not only are they supposed to make life more convenient and comfortable, but they also help resolve issues affecting modern societies, including global warming, and ageing of the population (Deguchi et al., 2020). In other words, integrating IT and AI within the structural composition of the urban environment is expected to lead to a more advanced, post-modern society, with people that will gradually dwell in smart megalopolises at the expense of a scarcely populated countryside. In these smart megalopolises, people will develop and evolve following the advances of technological evolution, experiencing in tandem with a robotization of their living space, a phenomenon which has been often described as transhumanism, which is expected to enhance post-humanism (Fukuyama, 2004; Herbrechter, 2013; Huxley, 2015; Nayar, 2018; Krüger, 2021).

In the case of Japan, it is one of the earliest and most active promoters of smart city construction (Cao, 2018). The Japanese smart city developmental program was inspired by a governmental top-down strategy that resulted into a series of

policies aimed at building an advanced digital society, including the "E-Japan" strategy (2001), the "U-Japan" strategy (2006) and the "I-Japan" strategy (2009). These policies pivoted on the idea of continuous technological, electronic, and IT development and aimed at reforming Japan's entire industrial structure. In Japan, the creation of smart cities permeated by digital technology and IT was followed by massive investment in infrastructure. Furthermore, the development of smart cities in Japan has had a deep impact in different sectors, including economy, environment, agriculture, and culture. To be sure, Japanese smart city initiatives can be divided into two broad categories, namely business-led initiatives conducted in tandem with large-scale urban developments and government-led programs anchored within the vision statements of municipalities (Deguchi et al., 2020).

Already in 2010, Keihanna Science City (Kyoto Prefecture), Toyota City (Aichi Prefecture), Yokohama City (Kanagawa Prefecture) and Kitakyushu City (Fukuoka Prefecture) were established as smart cities by the Ministry of Economy, Trade and Industry (METI) of Japan (Su, 2022). In the case of Keihanna, the city has been conceived as a national project born from scratch to serve as a center of culture, learning, and research that will open new paths into the future. As for Toyota, the city embodies a unique example in which local resources like humans, materials, and technology are being combined in a complementary way. The smart city project of Yokohama, a city located just southwest of Tokyo, also represents one of the largest scale smart city experiments in Japan. Finally, in the case of Kitakyushu, which is located at the northernmost of Kyushu Island and represents one of Japan's major industrial hubs, the development of the city was conceived to offer unique experiences especially in terms of environmental sustainability. Moreover, during the 2010s, smart city projects involved new towns, including Kashiwa-no-ha Smart City (Chiba Prefecture) and Fujisawa Sustainable Smart Town (Kanagawa Prefecture). In 2011, Kashiwa-no-ha was designated as a concrete example of a future city; since then, the literature considered the city a model for future Japanese urban development and so-called smart governance (Gornik, 2020).

3. Japan's Post-Modern Dilemmas and the Role of Smart Cities

Smart city development in Japan is directly linked to remarkable social, economic, and ecological issues that Japan faces (Wei et al., 2017). In the last years, despite public and private initiative mobilization towards the achievement of terrific economic growth, the benefits of economic development have been undercut by persistent urban concerns including high land prices, low housing standards,

and environmental pollution. Another major factor that is also expected to deeply affect Japanese urban development in the future is demographic change, which, as shown in Table 1, envisions a loss of roughly 30 percent of Japan's population of around 125 million by 2100.

Table 1: Japanese population in 2000 and 2100, minimum and maximum size up to 2300, and percentage change to these points from 2000

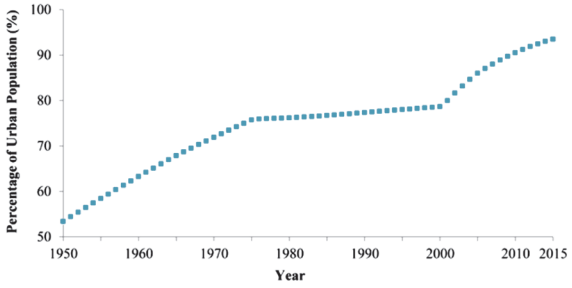
	Population (millions)						*Percentage change from 2000 to*		
Country	*2000*	*2100*	*Minimum*	*(Year)*	*Maximum*	*(Year)*	*2100*	*Minimum*	*Maximum*
Japan	127.0	89.9	89.2	(2115)	128.0	(2010)	-29	-30	1

Source: United Nations Department of Economic and Social Affairs/Population Division, *World Population to 2300*. United Nations, New York, 2004.

In this sense, forecasts indicate that the working-age population will dip as low as 52 million by 2050 (Cabinet Office, 2017). The speedy ageing of the Japanese population, low demographic expectations, a shrinking labor pool, and restrictions of foreign immigration are factors that project a slowdown of human urbanization in the future, with a decline in the need for new housing and other urban investment. In this context, technological development and urban robotization in the frame of smart city programs will forge a new Japanese urban identity that will increasingly hinge on IT, AI, and robotics.

While Japanese birth-rate is expected to fall dramatically and the population to age rapidly, Japanese people tend to concentrate in megacities, gradually abandoning rural communities, which are turning into neglected and desolate realities. As shown in Figure 1, the Japanese population living in urban areas passed from almost 55 percent to roughly 95 percent from 1950 to 2015.

Figure 1: Percentage of Japanese population living in urban areas, 1950–2015



Source: United Nations, Department of Economic and Social Affairs, Population Division (2014).

Thus, one of the major trends in Japanese future development consists in the massive urbanization of the rural population. At the same time, paradoxically, while cities are increasingly crowded, the labor market suffers from shortages that are intensified by the gradual replacement of the human workforce with a robotized one. Thus, as the workforce declines, non-regular employment soars and tax revenue shrinks, while public spending will continue to rise to maintain a deteriorating infrastructure. Moreover, issues such as the bulging welfare budget necessary for dealing with the ageing population place a burden upon the ever-decreasing working-age population. Finally, current Japanese challenges include the issue of climate change and pollution, which is highly affecting the quality of life in Asian megalopolises.

Among Japan's dilemmas of post-modernity, the issue of the shrinking birth-rate and thus of the labor pool may be considered perhaps the most worrisome. The direct consequences of this phenomenon include the overall population decline, especially in the young population, but also the loss of workforce since a sector of the working-age population will be increasingly busy in taking care for their elderly relatives—a situation exacerbated by Japan's strict laws in the sphere of migration which do not encourage the inclusion of migrant workers who take care of elderly people.

At the same time, the shift from an economic model based on manufacturing to services has created the conditions for a radical change in Japanese society. The manufacturing model guaranteed economic growth both in rural and urban areas, establishing factories and securing workforce in the former while ensuring transportation infrastructure that linked rural areas of production with urban areas of consumption, reducing the costs of distributing people and goods (Deguchi et al., 2020). This scenario changed when the industrial structure was shifted from manufacturing to services, with the relocation of many businesses' factories overseas. Thus, rural areas were deprived of job opportunities and a substantial amount of the younger population was forced to move into large cities. However, this arrival of young workers into cities did not stimulate the urban job market, because—also due to the introduction of AI and robotic technology—companies relied increasingly more on an artificial workforce rather than a human one.

The introduction of AI and robotic technology in Japanese smart cities is having tremendous impacts within the job market. The spread of unstaffed convenience stores, automated driving, and advanced forms of automatization procedures for

distributing goods and services is resulting in the loss of many jobs. In turn, the lack of job opportunities forces young people coming from rural areas to accept low-paying jobs that do not offer prospects for getting married and raising a family with obvious consequences on the birth-rate. In other words, large Japanese cities tend to absorb rural inhabitants while failing in increasing the level of population, with a gradual decline of the crammed Japanese population dwelling in cities. Moreover, the concentration of most of the Japanese population in large cities is leading to the drastic reduction of residents in smaller cities, suburbs, and countryside, creating the conditions for the rise of a country that pivots on megalopolises.

At the same time, the ageing population is another major issue that affects the socio-economic resilience of Japan. Indeed, Japan has the highest rate of ageing in the world and by 2050, it is expected that almost 40 percent of the Japanese population will be aged 65 or older (Deguchi et al., 2020). In Japan, the elderly already account for more than a third of the population. If this trend does not reverse, it is expected that by 2030 there will be only ten working-age people for every care-dependent person, and this will decrease to five by 2060. A population that lives longer that is not uniformly supported by a corresponding birth-rate will result in a financial and social burden for the younger generations that will have to support it. Also, while the elderly population gradually retires, a smaller amount of the population in the workforce will result in the stagnation of economic growth, as well as in an inferior tax revenue and thus in minor opportunities of public spending—although an older population requires higher social welfare spending. Therefore, a reduction in fiscal revenues entails a lower quality of social welfare, minor chances of addressing social inequality and assisting vulnerable members of society, a rise in intergenerational inequality, and the rapid decaying of non-urban infrastructures (Deguchi et al., 2020).

4. The Phenomenon of Transhumanism and the Future of Japanese Urbanization

The development of smart cities in Japan and more generally the application of AI and IT to the urban and social environment is closely connected to the phenomenon of transhumanism. Transhumanism has been defined as a cultural, intellectual, and scientific movement that upholds the need to improve the physical and cognitive capacities of the human species and to apply new technologies to humans in order to eliminate unwanted and unnecessary features of the human

condition such as suffering, disease, ageing, and eventually mortality (Savulescu and Bostrom, 2009). Transhumanism represents a new paradigm for the future of humanity with the goal to alter human nature by prolonging its existence through technological manipulation. The core idea is that humanity must be "enhanced" by overcoming its structural, natural flaws. But what are human structural flaws? When is a human "flawed" or "normal"? And what does it mean to be "normal"? Is the criterion of normality established on the basis of physical standards and statistics on the number of human beings who possess it?

The "transhuman" would also represent a human being in transition towards the post-human, that is, a being with physical, intellectual, and psychological enhanced capacities far superior to those of a "normal human". According to a segment of the literature on the topic, a "post-human" would be a being—natural or artificial—with life expectancies of some 500 years, cognitive abilities twice above the maximum available for contemporary humans, control of sensory input, and one deprived of psychological suffering (Ryberg et al., 2007).

According to the core assumptions of transhumanism, humanity will be radically transformed in the future thanks to technological development. Technologies will be able to re-engineer the human condition to avoid the inevitability of the ageing process, to overcome the limitations of the human, organic intellect, and to eradicate pain, sorrow, and ultimately death in human life, shifting humans, as recently highlighted by worldwide renowned scholarship, from *homo Sapiens* to *homo Deus* (Harari, 2016). Transhumanism believes that new technologies and AI allow for the expansion of human physical and intellectual capacities and the overcoming of biological limitations to which contemporary humans are linked.

From a historical and cultural point of view, transhumanist theory finds its roots in Greek classic thought and in subsequent European philosophy. Since time immemorial, humans have always wanted to improve their physical and mental conditions through different means in an attempt to be happier. Undoubtedly, the Scientific Revolution, Humanism, and modern philosophical and scientific thoughts represented a turning point for the first transhumanist theorizations. Philosophers and scientists like Hume, Newton, Bacon, and Hobbes contributed to laying the foundations of rationalist thought, emphasizing scientific development and the capacity of science to ameliorate human conditions. Later, during the Enlightenment, following Kantian rationalism, science was perceived with optimism as a tool to enhance humanity. At the same time, political theory—specifically Rousseau—contributed to questioning whether the "organic" state of

nature was preferable to the "artificial" civil society, indirectly inquiring whether science was to be encouraged or not (Pizzolo, 2019). Moreover, transhumanism has been affected by Bentham's and Mill's utilitarianist thought, as well as by the Darwinian evolutionist paradigm. In an evolutionist perspective, transhumanism believes that humans are in a constant advancement and that the "technologic" human will one day be able to change their nature through biotechnology and AI, orienting themselves towards a new posthuman species that would represent the final step of human evolution. Thus, the transhuman would be somewhere in-between the evolutionary scale that conceives humans developing from apes to post-humans. Put differently, the attempt to introduce post-humans would also legitimize and encourage social Darwinist practices like eugenics, as endorsed, for instance, by Galton—Darwin's half-cousin. Moreover, in works such as *Human, All Too Human* (1878) Nietzsche was famous for advocating the necessity to overcome the human with the superman or meta-human, i.e., the post-human. Notably, in *Thus Spoke Zarathustra* (1883), Nietzsche affirmed "What is the ape to man? A laughing stock, a thing of shame. And just the same shall man be to the Superman: a laughing stock, a thing of shame". Finally, Huxley was the first philosopher to use the term "transhumanism" in 1927. Since then, the transhumanist thesis drew strength from all studies carried out on AI in the second half of the 20th century, including those by Turing in the 1950s and by all subsequent authors belonging to the so-called "futurist" current of the 1960s and 1980s.

The basic assumptions on which the transhumanist theory rests are a great faith and optimism in the possibilities of science, human nature reduced to pure matter, and the human mind reduced to neuronal connections. To ameliorate the human conditions, transhumanism wishes to apply to society the massive use of anti-ageing medicine, genetic engineering, AI, nanotechnology, and cryonics. Thus, the advent of the post-human will save humans from their structural deficiencies, introducing a new, enhanced individual that, while ameliorating its physical and psychic conditions, will gradually reach immortality (Olsen et al., 2009). Transhumanism entails the use of embryonic and prenatal eugenics, i.e., the selection of human beings without "defects" and "pathologies" and the technical elimination of the sick. In fact, the transhumanist movement supports liberal eugenics, the necessity to select healthy embryos and eliminate through abortion those with serious and non-serious pathologies and congenital anomalies (Agar, 2004). It also involves the use of molecular nanotechnology through the introduction of microchips in different parts of the human body to activate and enhance certain capacities, specifically mental, auditory, and visual. Moreover, it

advocates the use of drugs for controlling emotional well-being like antidepressants to reduce the negative impact of certain experiences by blocking the control centers and neurotransmitters. Since the transhumanist paradigm believes that the human mind and all its activity is reduced to pure neuronal connections, to a large extent produced by physical-chemical reactions, the introduction of certain chemical substances in the human organism would modify the personality to overcome psychological limitations and increase emotional capacities. At the same time, transhumanism hinges on the possibilities of extending life expectancy using genetic therapies or biological methods that avert cellular ageing. The ultimate step would be to overcome death itself through cryopreservation and the resuscitation of patients in cryogenic suspension. Furthermore, in its mechanistic vision of human life in which the brain and its data would be reducible to the matter alone, transhumanism postulates the possibility of a post-biological existence through a sort of "scanner" of humans' synaptic matrix to reproduce it afterwards on a computer, transferring the subjective experience from a biological body (deceased by now) to another (brain transplant) in a purely material-digital substrate. Finally, transhumanism requires the evolution of humans into cyborgs, that is, hyper-intelligent quasi-organic beings in which the combination of a cybernetic part and an organic part takes place.

Obviously, the subject of transhumanism and post-humanism raises immense ethical concerns. For instance, while forging the "perfect" post-human being, what should society do with all "nonperfect men"? Who should be post-human and who not? Is it a matter of wealth and therefore connected to the access to costly biotechnologies? Could the potential coexistence of humans and post-humans in the same environment create the conditions for the establishment of an unequal society based on apartheid and discrimination? Why should a post-human live 500 years or even become immortal, while a "common" human die when they are 80 years old? And why would you also want to make flesh (be it organic or artificial) immortal? If death is continuously postponed and, at the same time, births are strictly programmed and controlled, who decides how many people a society should have? Who are the individuals so lucky to be selected for living and according to which criteria? Finally, who will establish demographic control and enhance living humans: private corporations or the state? Would the ownership of these people thus belong to these organizations, or would they be free beings? These questions and many more clearly show how transhumanism has the potential to transform the splendor of human life as it naturally is in a dehumanized, dystopic nightmare.

Japanese futuristic smart cities' development programs may be considered as part of a transhumanist agenda aimed at creating a technological wonderland, i.e., a paradise on Earth where people dwell in an artificial construct that allegedly wishes to enhance them. However, being more than technological wonderlands, smart cities could easily turn into robotized dystopias. In the case of Japan, the ageing population, the trade-off between urbanization and unemployment of the younger sector of the population, the drop in the national birth rate, the chasm between a scarcely populated countryside and crammed megalopolises are factors that make us question not only urbanization development but the deep and ultimate purpose of human existence. What is the purpose of Japanese life in a hyper-technological futuristic smart city? When robots and AI in smart cities would eventually replace most human activities, what would the aim of people be? In other words, if people no longer enjoy a social role, what is, so to speak, their ontological *raison d'être*?

In looking at the demographic and societal trends that are gradually affecting Japanese society, we may affirm that transhumanism is already *en route* and that it will become the core aspect of Japanese, Asian, and perhaps global big city life. Transhumanism is already clearly manifesting in Japanese life and society. For instance, Japan already introduced microchips that are inserted under the skin, although these are limited to such tasks as opening doors and paying for small items like drinks (The Asahi Shimbun, 2019). Still, these implants are considered the beginning of transhumanist practices in Japan, pioneered by the general incorporated group Japan Transhumanist Association. Through the insertion of microchips into human bodies and brains, humans are expected to gradually mutate into cyborgs in order to acquire capabilities beyond their normal limits (The Asahi Shimbun, 2019). We may assume that 100 years from now, huge smart cities will be the only populated environment in Japan, since most people will abandon smaller urban centers and rural settings. At the same time, while the Japanese population will drop, AI and highly sophisticated robots will undertake most social and economic tasks, including the delivery of public services and utilities. This will lead in turn to a form of coexistence between humans and machines, while at the same time hybrid beings that blend organic and artificial matter will become ever more frequent, first in the form of social experiments and then as standardized post-humans.

The robotization and automatization of "smart" societies implies high vulnerability costs. For instance, the building of intelligent cities and societies that hinge on AI and IT demands a sophisticated construction of cybersecurity systems. Apart

from the geographical area where they are located, smart cities are characterized by the so-called cyberspace, which bears no geographical or administrative borders, and which is directly connected to the IoT. Thus, highly technological cities must face the vulnerabilities stemming from potential strikes against infrastructures and devices that rely on AI and IT. In this sense, smart cities must develop a strong cybersecurity apparatus that entails the defense of computers and servers, mobile devices, electronic systems, networks, and data from malicious attacks (Schatz et al., 2017). Cyber activities may be divided into computer network attack (CNA), computer network defense (CND), and computer network exploitation (CNE) which all entail the use of deliberate actions and operations to alter, disrupt, degrade, or destroy adversary computer network systems or the information and programs therein. Being highly dependent on IT, smart societies can easily be affected by cybercrime activities, cyber-espionage, cyber-terrorism, and cyber-warfare. Specifically, cyberwar is not merely a new set of operational techniques, but an emerging new mode of warfare that will call for new approaches to plans and strategies, and new forms of doctrine and organization (Arquilla and Ronfeldt, 1993). Cyberwar also comprises several unusual features that distinguish it from conventional warfare: it is the first major new form of warfare since the development of nuclear weapons and intercontinental missiles; it is difficult to determine the responsibility of cyberattacks; many cyberattacks are not lethal and do not result in permanent damage to physical objects; any computational electronic device is a potential cyberweapon and anyone with advanced IT knowledge is a potential cyber combatant. The most common kind of cyberattack refers to the so-called Denial of Service (DoS) attack which serves the purpose of rendering impossible the access to an IT service. In terms of potential targets, cyber operations tend to tackle enterprises, financial institutions, energy infrastructures, institutions connected to economy, transportation, defense, and health. Particularly, malevolent cyber operations tend to focus on attacking vulnerable assets like sanitary machinery, sensitive data, military data, and citizens' data. Moreover, the possible future hybridization of people into semi-artificial beings could extend the risk of malicious cyber operations to the cybernetic and robotic components of post-humans. In other words, smart cities and future "smart" cyborg citizens may be constantly vulnerable to cyber operations which could destroy their structural functions, thus causing, in the former case, the collapse of service distribution and, in the latter, artificial and organic harm, or uncontrolled and unwanted behavior.

In conclusion, Japanese smart city development can ultimately lead to two outcomes. It will either introduce a technological wonderland in which citizens enjoy a pleasant life supported by technologies that guarantee high standards of living.

Through the massive use of robotics, the Japanese demographic decline can be tackled and the job market fully optimized reducing, in due time, the unemployed or underemployed urban overpopulation. At the same time, fewer "human" Japanese could result in an optimal allocation of social and economic resources which would be fully enjoyed by a longeval residual population, likely enhanced by biotechnologies. On the other hand, however, this artificial wonderland could hide nothing less than a robotized, inhuman dystopia in which people lose their "humanity" in favor of transhumanist evolution. As a social experiment, Japanese smart cities could become the model that a future, hybrid humanity will adopt, while gradually losing all "natural" features in favor of artificial constructs. In this sense, harsh as this may sound, future smart megalopolises appear like huge concentration camps where a high number of human manpower awaits its natural end, replaced by AI and heartless robotics, while a smaller group of "privileged" people enhance their transformation into post-humans. All these things considered, the likelihood that the future of urbanization in Japan will represent a technological wonderland are low; instead, the most plausible scenario suggests that Japan cities will incarnate robotized dystopias where human life could lose purpose and meaningfulness.

5. Conclusions

This article was driven by the interest for understanding the potential future outcomes of smart city developmental plans. Its attempt was to add a novel interpretation to the literature on smart cities, based on the liaison between smart city programs and transhumanist discourse. The section on the literature review offered a nuanced categorization of the main characteristic of smart cities, in the attempt to offer a definition. A subsequent empirical section briefly analyzed some of the main challenges that contemporary Japan is facing which would justify the development of smart city programs. Finally, a theoretical section wished to link Japanese urbanization to the phenomenon of transhumanism, arguing that smart cities could be one of the tools to enhance the advent of post-humanity.

While contemporary Japan represents the third biggest world economy, the country is affected by some of the most worrisome social pathologies of post-modernity, exacerbated by the rise of de-humanized smart megalopolises. A large stratum of Japanese population—especially the younger—suffers from chronical anxiety, intense depression, social inadequacy, agoraphobia, misanthropy, and compulsive introversion. Social anxiety and psychological problems are

encouraging pathological behaviors like committing suicide and practicing *hikikomori*, a trend in which individuals decide to totally withdraw from society and to find a haven on extreme degrees of social isolation and confinement (Masataka, 2002; Furlong, 2008). As anticipated, these phenomena are aggravated by the development of confusing, de-humanized and artificial "smart" urban realities. If smart cities are to be considered a technological paradise, then why would people—especially youngsters—that dwell in them be ever more depressed and sadder? Can a connection be traced between the development of futuristic cities and psycho-pathological social practices?

The rise of futuristic, de-humanized smart megalopolises could result in a full-fledged dystopia. Technological development is not a synonym for happiness and enhancement per se. Moreover, de-humanized humans that rely on AI and IT will gradually lose enthusiasm towards life, losing purpose and existential meaningfulness. To avoid the global proliferation of urban robotized dystopias, the solution could pivot on the introduction of an alternative model of future societal and urban development based on a return to "organic" life, sustainable development, and ruralism. In other words, a return to the "natural" against the "artificial", as already highlighted by Rousseau, could represent—also in the sphere of urban conception—a concrete solution to counter a confusing, hyper-technological urban environment where people have the ephemeral appearance of living a happier life but instead, lose purpose, identity, and significance.

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Issues and Perspectives on the Water Crisis of Metro Manila Cities, Philippines

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Abstract: This study delves into one of the most prevalent problems of Metro Manila: Sufficient Water Supply. With its burgeoning population, the Metropolis is an amalgamation of common problems of Asian cities: pollution, traffic jams and the lack of basic necessities such as water. The lack of recycling facilities, reliable water supply, and an uncontrollable wastage of commodities by the populace are just some of the causes of this social malady and economic malaise. If these problems are not addressed properly, these cities will soon experience not only a substantial loss of income but also a loss of lives. This paper will provide a deep perspective on the different issues involved: the history of the problem, the underlying issues, the root causes, the proposal of economic and political gurus and the most plausible alternative to solve it. With potable water always at a critical level, with Angat Dam as its primary source of water, the Metropolis is at the mercy of natural elements such as rain and the summer heat. Its main proposal to tap the Kaliwa River into a dam has met stiff opposition from the local natives in the area and from environmental groups.
Unfortunately, time is running out and soon, the supply of water will soon run out too.

Keywords: cities, water supply, issues, dams, problems
JEL: Q25, Q28, Q21, Q20, Q29

1. Introduction

Metro Manila Cities in the Philippines can be considered as global cities, especially the City of Taguig, where the economic boom has moved from the cities' previous financial center, Makati City. These Philippine cities are tied together by the same transportation system, water system, traffic system, and even the garbage collection system.

This paper seeks to give an overall perspective on the future needs, e.g., water of one of the world's most congested cities, Metro Manila. It focuses on the need for other water sources as Metro cities rely mainly on the water provided by the decades-old Angat Dam. A catastrophic earthquake that could damage the dam will have devastating effects on the chances of survival of its populace. It also addresses the exploitation of the Controversial Kaliwa (Left) Dam as an alternative source of water and the issue of privatization of the water supply during the term of the late President Fidel V. Ramos. It identifies the different causes of the water crisis and the possible solutions and alternatives to address the problem. Finally, it provides the background on the rampant use of water by Filipinos and the need to conserve as an additional step in solving the shortage. Indeed, a globalized city (Renn, 2012) has been defined as a production center of unique financial capabilities and service provider, which can handle the possible management and running of the global economy. Indeed, much of the production of the country is concentrated in the greater Manila area and services such as Business Processing Outsourcing (BPOs) are consistently dotting the skyline.

Many studies were conducted to create a ranking system but accordingly, these (crgsoft.com, n.d.) are the dominant characteristics that a global city should possess and exhibit. These are:

a) They occupy a large portion of territory with a dense population.
b) They are a haven of tourists and considered for important venues such as global sports tournaments and economic fora.
c) They have massive transportation systems and a complex airport system which connects the country to the main commercial routes of the world.
d) They possess an advance telecommunications system and exhibit an ambience of a unique blend of culture and tradition.
e) They are active participants in global economic transactions and considered a financial center in the region.

f) They have a positive image as a migration mecca, attracting people of different cultures and beliefs.

All of these, of course, characterize Metro Manila cities. Some sectors could indeed question this list of items as unreliable and unsatisfactory due to their un-relatedness and off-tangent make-up with perceived traits of a global city. In fact, they measure the capacities of cities as prominent global sites rather than being functional. Nevertheless, this list also has its merits as there are many ways to measure a city's global index. Accordingly, the global city (Charnock, 2013) theory forwards a proposal which may not be acceptable to state-centered political economists as it disembowels cities from their traditional territories and puts them in the periphery of discussions on globalization.

Global cities have more or less similar characteristics because they share similar experiences with other cities and due to technology are more connected with each other. They are usually financial centers and service oriented. Thus, there is a large concentration of workers in their midst, but they also experience inter-racial conflicts and class discriminations. In certain situations, there is a big disparity between a well-entrenched employment sector with secured tenure and just compensation and the lower-class labor group who may not have the necessities of life. Furthermore, this existence of global cities sometimes marginalized those living in rural areas within their national industries.

In this regard, we may consider Metro Manila cities as global cities as they exhibit the traits and characteristics of such trendy cities. They are also intertwined by the same electrical system and bounded also by the major problem of a constant need: a steady supply of the precious commodity, water.

With its burgeoning population of 14,667,000 (2023 estimate according to macrotrends.net), Metro Manila's need for potable water is almost at a tipping point. The next decades present a pressing struggle as Filipino households may no longer have enough water to utilize in their day-to-day activities.

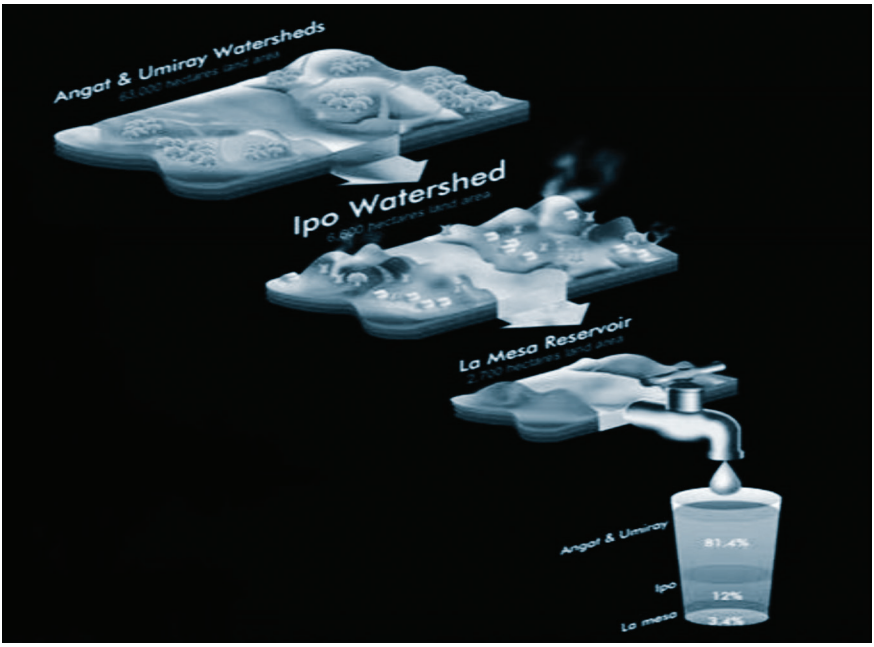
In previous water crises within the Metro where the water levels of dams were at their critical levels; households were informed by the water concessionaires to conserve water and then, rotating water schedules were imposed to make water resources available to everyone. In this regard, the government together with the private sector had been searching for other sources of water supply and had

already privatized its former function of directly supplying water to the residents of the entire Metro Manila.

The data from this research is culled mainly from secondary, literature-based sources buttressed primarily by the experiences and direct observations of the author.

2. Water Source

Figure 1. The picture shows the flow of water from Angat Dam in Bulacan to Ipo Dam and finally to the La Mesa Reservoir



Source: Rotor, 2016.

It is unfortunate that there is only one major source of water (81.4 percent) for the water-starved Metropolis: Angat Dam. Constructed in 1961 and opened in 1967, the dam provides potable water to Metro Manila residents and is also rigged to power a hydroelectric plant (Earthquake Impact Reduction Study for Metropolitan Manila in the Republic of the Philippines, 2023). With a normal

high-water level of 210 meters, the dam has three gates with which to release its waters during storms and typhoons when the capacity of the dam is breached. It operates at the normal level of 180 meters and its critical level is at 160 meters. The dam hit a low of 157.56 meters on July 18, 2010 (Lazaro, 2022) which is considered the lowest level that it has attained. It also provides precious irrigation water to around 28,000 hectares of farmland in the provinces of Bulacan and Pampanga and thus, its water storage capability is also critical to farmers in those provinces. The main function of Angat Dam is, however, to supply safe, potable water to the residents of Metro Manila. The dam is engorged with water during the rainy season when the Metro is often battered by storms and thus, during such periods when it is full; it has to open its three flood gates to prevent the water overflow, resulting in the flooding of some major towns in the nearby province of Bulacan. If somehow this water surplus during such times can be contained, then the need of a water supply for Metro Manila residents can be greatly alleviated. However, as of the moment, there is only one downstream dam built which is the IPO Dam (constructed 7.5 kilometers downstream). The IPO Dam's waters spills into the third and final step in the Metro's water supply chain; the reservoir, La Mesa Dam, the water of which is treated and then distributed to the residents of Metro Manila.

Through the years, this 3-tiered water supply system has done its part in supplying ample and clean water to the cities and municipalities of Metro Manila. A major increase in population in the past decades has, however, affected the availability of the precious commodity. Climate change, likewise, accelerated the dearth of water sources as longer periods of drought and the resulting scarcity plagued the previously abundant water supply.

3. The Controversial Kaliwa (Left) Dam

The search for additional water resources has resulted in the present proposal to construct a major dam in the Kaliwa River, which is, however, as ancestral lands, home to the indigenous Dumagat and Remontado tribes. The Kaliwa River (ABS-CBN News, 2022) is located in General Nakar, Quezon Province and is considered sacred and central to the indigenous group, Dumagat. It is not only a source of transportation, livelihood, and daily necessities to these indigenous group, it is also a source of livelihood for them. These tribes have put up fierce opposition and stubborn resistance against the construction of the Kaliwa Dam and their fight against dam construction bore fruit when the building of the dam was halted in

2019. However, former President Rodrigo Duterte, during his term (2016–2022), has entered into an agreement with China to provide a US$235.9 million loan deal for the construction of the dam to continue. The present administration of President Ferdinand "Bongbong" Marcos, Jr. has likewise, given its endorsement to the project. Accordingly, the Kaliwa Dam, when operational, will not only displace the indigenous tribes living in the vicinity but will also affect the viability of the Sierra Madre Mountain Range which protects Luzon inhabitants from storm surges during the typhoon season and likewise, is home to a myriad of animal species, plants, and even fauna.

In relation to this, a prominent lawmaker, Congressman Neri Colmenares (Subingsubing, 2023) of the party-list Bayan Muna, had questioned the propriety of building the said dam, saying: "We question the need for more large dams because they are situated in critical watershed areas" (Subingsubing, 2023).

In support of the position of the Dumagats, the lawmaker added that, indeed, "Large dams aggravate flooding in low lying areas during the onset of typhoon season, causing billions of pesos in damage to agriculture and fisheries, business establishments, properties, and public infrastructure. At worst, lives are lost," he noted. Thus, Congressman Neri is more open to the construction of smaller but compact dams which have limited impact on the environment and the community; and lessens damage to property.

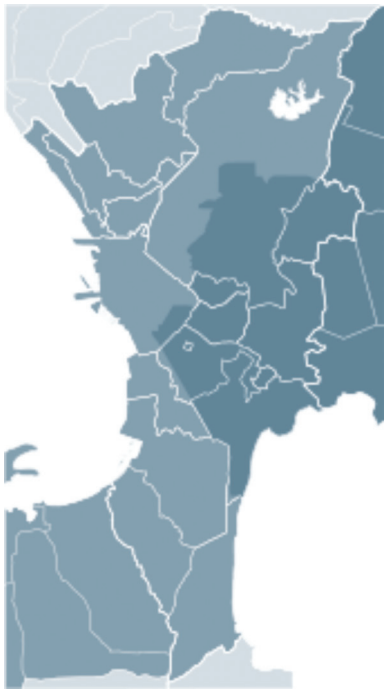
The latest news (Lalu, 2020) accordingly points out to the fact that it seems everything had been ironed out between the tribal leaders and the Metropolitan Waterworks and Sewerage System (MWSS). As of February 2, 2023, it has been agreed that the first phase of the dam construction will now commence and a one-time indemnity fee of 160 million pesos (US$2,939,258) will be paid to the communities of Rizal and Quezon provinces that will be affected by the project. They will also receive an annual share of the first 25 years of the dam's operations. The 12.2 billion pesos (US$224,105,046) Chinese-funded Kaliwa Dam project is supposed to be completed by 2026 and become operational the following year. It is true that the proposed Kaliwa Dam can partially and temporarily solve the impending water crisis as it may be able to produce 600 million liters of water per day when finished. It must, however, overcome the negative tide of public opinion and prove to everyone that it is worth the risk.

4. A Tale of Two Water Concessionaires: Manila Water Company and Maynilad Services, Incorporated.

The local government units of Metro Manila were formerly supplied with water by the government, specifically, by the agency Metro Manila Waterworks and Sewerage System, the MWSS. The impending water crisis in the 90s led the late President Fidel V. Ramos to privatize the MWSS when he was granted emergency powers with the passage into law of the National Water Crisis Act of 1995. Former President Gloria Macapagal Arroyo further reformed the state-run water supply by providing for local service providers which granted franchises to the two current concessionaires. Some sectors also opined that the water system in the Metropolis which was formerly owned and operated by the government was privatized to promote efficiency and to improve water and sanitation services. There were unsubstantiated reports that the public agency (MWSS) was riddled with an inefficient collection system, graft and corruption, subpar standards in water filtration; and consistently losing money in its operations (Kapunan, 2019). Thus, it was conceded to the two aforementioned companies (Cervantes, 2022). This led to the application of the two giant concessionaires which now supply water to the entire Metropolis: Maynilad and Manila Water. It is ironic that both concessionaires are owned by Philippine tycoons with the former being controlled by the consortium of the Consunji and Pangilinan families while the latter is owned by the Zobel family.

Originally, Maynilad Water Services Inc. was given a 25-year concession in 1997 to provide water services to the 17 cities and municipalities which comprise the Western part of the Metropolis. On December 10, 2021, a new law was passed which gave the company another 25 years to operate and maintain a waterworks system and sewerage and sanitation services in the western section of Metro Manila and in addition, the province of Cavite. On the other hand, Manila Water Company, Inc. was given the authority to operate on the eastern zone plus the province of Rizal. Prior to its entry into the Metro Manila water scene, only 26 percent of the eastern portion's population had 24-hour access to the water supply. This lack of water access was efficiently addressed by said company when it took over the eastern part. In 2021, it was also granted another 25-year license to continue operating the east zone.

Figure 2. Light-colored LGUs are supplied by Maynilad while the Dark-Colored LGUs are supplied by Manila Water



Source: Coconuts.co (2013)

According to a report by Abbey Ruth Gita on Sunstar (2019), the previous administration of Rodrigo Duterte had crafted favorable water contracts for these two concessionaires to operate. This is in line with the former President's vision to make water more affordable to the masses, especially to the informal settlers of Metro Manila. It is said that the Kaliwa Dam project was also revived and specifically designed to support Duterte's "Build, Build, Build" program.

5. The Water Crisis

In the past decades, Metro Manila had been hounded not only by the La Niña phenomenon, resulting in floods, but also by dry spells which caused the dams supplying it with water, to drop to very alarming low levels. To combat this climate malady during the dry season, various means and methods were adopted.

In fact, it was the water crisis in 1995 which led to the privatization of the then government owned MWSS and led to the granting of water franchises to the giant concessionaires, Maynilad and Manila Water. In 2019, (Torio, Mendoza and Torres, 2021), just a few years from the international recognition given to the privatization spearheaded by Metro Manila's Concessionaires, a water supply crisis also haunted the Metropolis. The award was based on the exhibition by the two companies of very high operating efficiencies and a vastly improved service level. These improvements were, however, negated by the surge of consumer demand which necessitated the construction of new water infrastructures.

On the other hand, the water crisis in 2019 was primarily caused by a drought that was greatly enhanced by the El Niño phenomenon. Due to the lack of rains, the critical level of the Angat Dam fell below the 160 meters warning threshold. Thus, the government had to make drastic measures again such as rationing water to the populace and imposing moratorium on the supply of water to the farms. The water crisis is further exacerbated by the migration of Filipinos living in the rural areas outside the cities. Attracted by the allure of employment opportunities, high educational standards and the fast life of the city, the needs of these rural dwellers add more burden to the already strained water supply. Migrant Muslims (Reza, 2018) from the war-torn South (Mindanao) have also been pouring into Metro Manila cities, establishing exclusive Muslim-controlled areas such as the Culiat Compound in Quezon City.

Another use of the water from Angat Dam is irrigation. Surplus water during the rainy season is usually diverted to the farms to meet the farmers' needs. This, however, presupposes that there is an oversupply of dam water which is around the normal level of 210 meters. Once water levels reach the critical level of 160 meters, water supply to Metro Manila is reduced. If water from rains is still scant, then the water supply for irrigation is also curtailed.

6. Solving the Water Crisis

The water problem has to be tackled soon, otherwise potential climate change effects and the increasing Metro Manila population will wreak havoc on an already meager supply. It is unfortunate that government leaders had been short-sighted in addressing the recurring problem; relying on decades-old dams and the ample supply of water in previous years was a fatal mistake which they have a difficult time coping with. One way to solve the water crisis is the use of Desalination

plants. These plants can be a major source of fresh water in the Philippines as the country is basically surrounded by water. The issue, however, is on the cost of harnessing energy resources (Gorjian and Ghobadian, 2015) to produce drinkable water under this method and the harmful effects it emits on the environment. One forwarded solution by water management experts is tapping into the unlimited resources provided by the ocean (Rahman, Kumar and Dominguez, 2022). This is very much applicable to the Philippines since it is an archipelago and thus, its islands as we have said, are surrounded by bodies of water. It is also very proximate to the largest body of water on the planet, the Pacific Ocean. While desalination already adopts such technology; it has environmental side effects as it uses substantial energy and produces a by-product, concentrated Brine which is difficult to dispose of. The capture of humid air over the ocean's proposal is more viable and less costly and can also withstand the effects of climate change. It basically consists of "capturing water vapor from the atmosphere just above the ocean surface and transporting the moisture-laden air to proximal land where its condensation can provide fresh water" (Rahman, Kumar and Dominguez, 2022). Indeed, this method if pursued by the authorities, can constantly provide fresh water to areas which have a dearth in water supply. Another option being considered is cloud seeding (Lazaro, 2022); which was also given a trial by the Philippine government but was not that successful. This project was spearheaded by the National Disaster Risk Reduction and Management Council (NDRRMC) which released 18.3 million pesos (US$336,140) to the Department of Agriculture for cloud seeding operations with the Philippine Air Force as implementor. According to the NDRRMC, a cloud-seeding operation is a process of combining chemical agents with existing cloud formations to thicken them and thus, increase the chance of rain. Gude, Gadhamshetty and Ramanitharan (2020) for their part, have put forward the idea that water re-use is the most viable solution to solve a water crisis. While water treatment under this process also has its questionable practices that could harm the environment and the human body, it has been adopted by major cities like Barcelona. If done properly and in the right conditions, water re-use can be a major solution to a water crisis while focusing on the role of water as a finite resource which needs to be enhanced time and again to prevent its demise.

Another viable solution to the water problem is finding a way to contain the water flow of dams like the Angat Dam during the rainy season. These waters, instead of flooding and wasting the farms of the nearby province of Bulacan can be contained, stored, and harnessed to supply the cities of Metro Manila during the lean months of summer. A water viaduct or a tunnel could be dug near the rim of the

Angat Dam and thus, instead of overflowing, the extra water will be re-directed to these water-carrying structures which will carry the latter to giant water tanks or reservoirs, which contents will be tapped only during extreme emergencies when water supply is meager.

Traditionally, by the mid-20th century, the main source of water in the Philippines is groundwater. Water is directly pumped from the ground by the use of water pumps and were consumed by the populace as drinking water; it was also used in washing and bathing and cooking to name a few. A United Nations' Report (Lazaro, 2022), however, stated that ground water is overexploited and diminishing fast as its renewability is extremely slow. Even rainwater itself can also be a major source of water in Metro Manila. Before the onset of modernization, this was the most constant and reliable source of water not only in the cities, but also in the rural areas and different provinces of the country.

Usually, ancestral houses have water tanks made of cement on the side of the house as storage for the rain from the roofs. These water tanks were equipped with faucets but were, however, later demolished when water supply was provided by the water concessionaires e.g., Maynilad and Manila Water. The best option (Practical Engineering, 2019), however, was put forward by the Global Utilities Development Company (GUDC) of Osaka, Japan. It would still involve the construction of dams like the Kaliwa Dam but on a much smaller scale. These proposed smaller dams are called weirs. A weir is a small barrier across a river, it would still change the river's flow and increases its level but not to the extent that a big dam would. The idea was proposed to the MWSS by the GUDC in 2009 via a Memorandum of Understanding. The proposed Kaliwa River Weir would only be seven meters in height, attached with a 16-kilometer-long tunnel and embedded with a water treatment plant. Japan actually proposed the construction of a weir as an alternative to the Kaliwa Dam but it was shelved in favor of the Chinese-funded dam proposal.

While these water source alternatives have their merits and disadvantages; it is ideal that the most plausible alternative will be adopted by the government (MWSS) or the two concessionaires in terms of costs, political and people's acceptance, efficiency, effectiveness, etc. All stakeholders need to be consulted and convinced on the viability of the project. For example, the benefits need to outweigh the costs. Presently, the two most advantageous water sources are the construction of weirs and water re-use. These sources are less costly and more acceptable to the community and less harmful to the environment. Their

implementation can also be fast-tracked, and these projects do not require much technological know-how and expertise.

7. Filipinos' Consumption of Water

Most Filipinos are huge consumers of water. Water is part and parcel of their daily existence. They practically use water in every move, whether for drinking purposes or for other necessities; water is a commodity they cannot live without.

Filipinos cannot simply live without large volumes of water. Aside from drinking, it is a major need in terms of taking a shower, cooking, comfort room necessities, cleaning, washing, etc. With a big bulk of the population living in squalor conditions as informal settlers; these needs are further magnified and enhanced. Indeed, Filipinos consume large volumes of water because of the country's tropical climate; with a mean average temperature of 26.60 Centigrade (Philippine Atmospheric, Geophysical and Astronomical Services Administration, n.d.) and even hotter climate during summers. This leads to Filipinos taking a bath at least twice a day (Halili, 2020) and a large number even take a shower three (3) or more times a day. Some spend at least an hour in the showers and one can only imagine the huge amount of water used during these long periods of bathing. Another major use of water consumption in the Metropolis is unrepaired leaks and car washing. Leaks are most common in places where there is an abundance of squatters which make a living on illegal connections. Car wash shops are also a common sight in the Metro as those who have cars are very particular with how their vehicles are being perceived by other people. A number of these water guzzlers are sprinkled in the major thoroughfares of Metro Manila, and they put a lot of strain on the precious water supply. Pilferage or illegal connections have also been a bane in the neck for the two concessionaires (Supreme Court E-Library, 2019). Like the supply of electricity, water is one other precious commodity which is "hacked" by informal settlers who lack the means to apply for legal water connections with the suppliers.

8. Water Conservation

A constant solution to water shortages adopted by the two concessionaires is, of course, water rationing which is often done during periods where water is hard to come by. During these periods, household water is only available at a certain time. A major concern in water conservation is household leaks which are common in

dilapidated housing programs, old houses and in the houses of informal settlers. Strict implementation of plumbing measures can drastically reduce water consumption as studies (Agarwal et al., 2022) would show that plumbing improvements generate long-lasting effects on water conservation.

A strong educational system which emphasizes the need to conserve natural resources such as water has also been in place in the primary level of schools via such subjects as Science, and Technology and Livelihood Education (TLE) by the Department of Education. Hopefully, such subjects will inculcate in the minds of the Filipino youth the need to conserve water.

9. Conclusion

The impending Metro Manila water crisis would have been averted if government planners had been more intuitive and foresightful about the future of the Metro's water supply. The construction of more strategically located and environment-friendly dams in the last two decades or so would have been major developments in addressing and solving the issue.

Strict water conservation measures are also important components in solving the Metropolis' water needs. People simply lack the awareness and duty to conserve water, especially in times of dry spells. Unrepaired leaks and car wash shops are also gigantic consumers of the precious commodity. While there are various ways to produce drinking water such as desalination, capturing humid air over the ocean, water pumps, water re-use and tapping rainwater, to name a few, these may not be enough to solve the problem as the country still lacks the requisite technology and infrastructure to make desalination and humid air capture work. These are just stopgap measures and not long-term solutions.

Potential water projects such as the Kaliwa Dam have been restrained by stiff resistance from environmental groups and indigenous tribes, making it difficult for them to be operational soon. At the most, downstream dams such as the IPO dam can be of great help in solving the worsening water crisis. The construction of smaller dams such as weirs can also be studied as an alternative to the building of big dams such as the proposed Kaliwa Dam. Weirs incur much smaller costs, do not fully inundate large tracts of land and can be easily maintained. Meanwhile, Metro Manila cities along with other local government units of the country will just have to rely on the chance that dry spells called the El Nino phenomenon will

no longer visit the country, otherwise the nation and Metro Manila's dwindling water supply is doomed.

On a final note, the Philippines must take advantage of the latest technologies and engineering feats that are available in today's world. Indeed, many companies have the "latest tools and techniques to meet engineering challenges over dwindling natural resources" (Brandt et al., 2016).

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The Smart City Concept and its Challenges in India

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Abstract: In the last 20 years, the world economy has shown fast progress towards globalization and urbanization around the world. Urbanization reflects the shift in employment from the agricultural to the industrial and service sectors which is a prerequisite for economic growth. The growth rate of the urban population is increasing very fast due to better living standards and higher employment opportunities in urban areas. Smart cities have been determined as a solution to cater for these problems where the technology will integrate with all city components to provide a good quality of life. As a result, India must properly plan for rethinking and restructuring its existing cities, and the construction of new cities using cutting-edge technology over the decade. This chapter tries to evaluate the essence of smart cities from the Indian context. It describes how urbanization in the world has forced India to think of smart cities. It also describes what was the need for smart cities and how the 100 smart cities were selected in India. This paper then evaluates the Indian smart cities mission based on six parameters, i.e., financing, coordination between the center and the states, master plan, time frame, facilities, and corruption. In the end, certain recommendations are being made to make the Indian Smart Cities Mission successful soon.

Keywords: Smart Cities, Smart City Mission, Smart Living, Smart Citizens, Indian Smart Cities, Urbanization.
JEL: O11, Q01, Q3, R11, R5

1. Introduction

The rise in urbanization has led to a rise in the need for smart cities. Urbanization is the process of concentrating people in densely populated settlements where many people earn their living from non-primary occupations. In recent times, urbanization has been viewed as an indicator of modernization and one of the main factors that reflect growth. Urbanization is a reflection of the shift in employment from the agricultural to the industrial and service sectors which is a prerequisite for economic growth. The natural rate of population growth is one of the primary drivers of urbanization (Chaudhuri, 2001). The more developed and less developed nations diverged significantly in the pattern of urbanization. The industrial revolution of the 19th century significantly accelerated urbanization in developed nations. When compared to developed nations, urbanization in developing nations began around the time of the industrial revolution and continues to expand at a fast rate (Development of Economic and Social Affairs, 2011).

As we move toward urbanization, the requirement for smart cities increases. Albino et al. (2015) claim that smart cities are very hard to define as so many terms are used to describe them, despite the fact that the term "smart city" is utilized more frequently than any other. However, its definition is still unclear, particularly given that a number of related terms are frequently used interchangeably. Albino et al. (2015) use a method based on a comprehensive literature review of relevant studies and official documents of international institutions to explain the meaning of the word "intelligent" in the urban context. Additionally, it identifies important aspects and dimensions of a smart city. Chun et al. (2011) found the use of the latest strategies and technologies to make a smart city. They found that there are three such factors that help in making a smart city, viz. technological factors, human factors, and institutional factors. Chun et al. (2011) also identified technology, people, and institutions as the three main components of a smart city. They formulated that there are common multidimensional components like technology that make a smart city, then there are core factors like people that are helpful in smart city implementation, and lastly, there are some specific factors like institutions related to the cities for making them smart. Al-Hader et al. (2009) have framed a smart city development pyramid based on the technological components in the form of a smart interface, smart control systems, and smart database resources. Florida (2018) stressed the role of smart people making a city smart. The strategic tenets address the issues of governance for institutional improvement and citizen engagement, integration of infrastructures and

technology-mediated services, and social learning for strengthening the human infrastructure as a base for smart city development.

This chapter will try to evaluate the essence of smart cities from the Indian context. It describes how urbanization in the world has forced India to think of smart cities. It describes what was the need for smart cities and how the 100 smart cities were selected in India. Then this chapter also tries to evaluate the Indian smart cities mission.

1.1 Urbanization and Smart City

Goodspeed (2015) defines the smart city as the outcome of technological developments which are required to make urban life of individuals easy and also planning of these lives for sustainable living. The definition and the purpose of smart cities are very confusing as per the previous studies, and they lack clarity on what a smart city should be. Goodspeed (2015) proposed a different angle on urbanization and smart city by the way of socioecological theory. According to him, the various problems of urban cities can be solved by keeping certain assumptions related to the nature of the urbanization problem. A large variety of problems were addressed during the initial phase of urbanization and hence the development of smart cities. Two major areas were identified, i.e., planning the local municipal problems using the latest available technology and collaborating the municipality planning with urban planning. Most of the time, the advancements in technologies have led to the advancement of urbanization. Smart cities are the result of the advancement in technologies (Cross, 2001; McCombs et al., 2014).

Since the introduction of the digital revolution, the various things involving people living, working, playing, and using various sources of entertainment have also changed (Hevner and Chatterjee, 2010a). The various products based on information technology (IT) and IT-enabled services to play a vital role in changing the way to use the products more effectively. The environments created by these products are more engaging for the citizens. In this new world, designing interaction is difficult.

The kind of experience we get playing mobile games, selling, or buying goods over the internet, surfing the internet, or simply visiting certain shopping websites, is unmatched. Designing the environments to use these experiences is more challenging.

According to Cross (2001), whenever research is being designed it is based on a variety of disciplines. Likewise, information and communications technology (ICT) also has various concepts from various disciplines. In contrast, information systems are made up of hardware, software, and human interfaces that are mutable and adaptable by nature. As a result, they have many unique and difficult design problems that necessitate new ideas (Cross, 2001; Hevner and Chatterjee, 2010b).

1.2 From Urbanization to Smart Cities in India

India's economy is heavily influenced by its urban areas, like that of most countries. Indian cities are expected to grow from 282 million to 590 million people over the next two decades, with cities hosting a larger portion of the population, receiving the majority of foreign direct investment (FDI), and contributing approximately two-thirds of the country's economic output. India's cities and towns have expanded rapidly as more people seek economic opportunity in them. India has the world's 10th-largest economy despite having the world's second-highest population (Urbanization in India, 2011). According to Madakam and Ramaswamy (2015), even though urban areas contribute 70 percent of the GDP, the same percentage is spent on urban development.

In the Indian context, for the best economic growth, it needs to focus more on the ever-expanding sectors like infrastructure, hospitals, tourism, information technology, foreign direct investments, and research and development under the various models like the Public Private Partnership (PPP) model, foreign collaborated higher education systems, service industries, and e-government. As a result, India needs to focus on building 100 smart cities in the coming years and increasing GDP (Smart Cities Are Cities That Work, 2014).

1.3 The Need of Smart Cities

Understanding the factors that initially draw people to a city are essential. These reasons cannot be generalized because they would differ greatly depending on the city and population at large. Some cities draw people because they offer opportunities as markets and manufacturing centers, while others do so because of the greatness of their cultures or their cosmopolitan vibes. Other cities also draw people because they can provide better health care and education facilities or a combination of these and other factors.

There are primarily two types of factors that draw people into cities, i.e., push factors and pull factors. Push factors which are driven by distress or scarcity in their home region and include droughts, violence, social rifts, and other similar issues. Whereas the pull factors refer to improved opportunities for education, industry, leisure, art, and culture (Myeong et al., 2021).

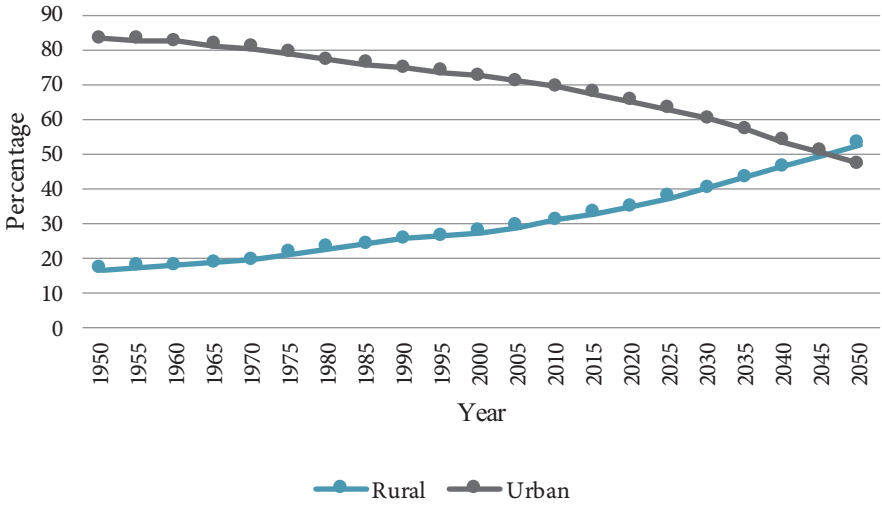
Understanding a city's DNA (the fundamental building blocks that drive the city) requires decoding the specific reasons why people choose one city over others. These reasons must be investigated within the relevant contexts because the aspirations of a city's inhabitants change over time. The various communities that make up the city, their current needs, how those needs change over time, their hopes and aspirations, what draws outsiders to the city, and other pertinent questions must be asked by practitioners of smart cities in order to comprehend these reasons (Smart Cities are Cities That Work, 2014).

If a city helps its residents achieve their goals, it is said to work for them. If someone were a migrant who was in the city for two years because of their job, they would want to have access to decent rental housing, efficient public transportation, recreational areas, and other facilities. However, if a person is a student, they may have concerns about the availability of reputable educational establishments and infrastructure for safe cycling and walking. This is not the same as what an elderly person needs, who may place more importance on having access to high-quality healthcare than anything else (Big Ideas to Achieve Sustainable Cities and Communities, 2018). It is obvious that not all people or groups of people want the same things. A city is helpful to the group, to the diverse needs expressed by a city's residents, which can be placed into three broad categories: livability, economic ability, and sustainability. This makes it easier to comprehend the variety of needs. Consider these to be three computer folders containing a variety of files covering a variety of topics. Thus, these are the three major outcomes that a city must aim for in order to benefit its residents. Ingwersen and Serrano-López (2018) have put it another way to answer the question "what is a smart city?" They have defined a smart city as a city that is livable, sustainable, and has a thriving economy. The smart city gives its residents numerous opportunities to pursue a variety of interests.

Cities provide their residents with numerous opportunities for employment, economic growth, improved living conditions, etc., and as a result, people move from rural areas to urban areas. Because almost 54 percent of the world's population resides within 4 percent of the planet's surface, this constant migration

over time has resulted in densely populated and congested cities. In addition, it is anticipated that 70 percent of the world's population will live in cities by 2050 (Kaluarachchi, 2022). Because cities produce three-quarters of the world's waste and pollution and consume nearly three-quarters of the world's natural resources, this urbanization is also causing concern. India's urbanization is also expanding at an unprecedentedly rapid rate. In the next 20–25 years, the urban population will be estimated to double to approximately 600 million. India's towns and cities are expected to nearly double to 814 million people by 2050, according to the United Nations (UN). Over 60 percent of India's GDP is generated by the urban population, which is expected to grow to 70 percent over the next 15 years (Report on Indian Urban Infrastructure and Services, 2011). The expansion of both urban and rural populations is depicted in Figure 1.

Figure 1: Population in rural and urban areas of India



Source: Adapted from Department of Economic and Social Affairs Population Dynamics, 2018.

2. Review of Literature

Every nation in the world is making an effort to provide its citizens with cutting-edge facilities and amenities. As the need and demand rise, all countries are doing various efforts to establish true smart cities or convert existing cities into

smart cities. The majority of nations are making an effort to provide their citizens with facilities of a world-class standard, and India is also preparing to achieve success with its smart city project (Chatterjee et al., 2018). In order to achieve this goal, departments from both the private sector and the government are attempting to work together. If IT-enabled services of the highest quality are to be offered, and the Indian smart city dream is to become a reality, numerous diverse factors must be taken into consideration.

Despite the numerous studies on information technology-enabled privacy and security issues, still there exists a lot of gaps that bring in trust in the citizen's minds. Manimuthu et al. (2021), found that there are two primary considerations in the context of smart cities, viz. the level of expertise of the internal staff to develop the model and the various kinds of support services in the proposed smart cities, as well as citizen participation in using these services, with a focus on security and privacy.

As we move through the stage of urbanization, the whole world needs to face the opportunities and threats that are being posed by the rising population, the depleting resources, and the drastic changes in the demographics and climate. India is not an exception to these, as the more populated a country is, the more serious are these threats. All its metropolitan cities, viz. Delhi, Mumbai, Kolkata, Bengaluru, and Chennai are facing a severe need for urbanization and smart cities. On the same lines, the classified Tier-II cities also require major reforms in the context of urbanization (World Population Prospects, 2018). Both Tier I and Tier II cities are facing drastic social issues as a result of the environmental issues raised by rapid reforms in urbanization (India's Urban Challenges, 2015). These issues could have been the result of a lack of proper governance, illegally built slums in open areas, a lack of gas and electricity, inadequate and ineffective medical services, or high urban densities (Venkatesham, 2015). In India, many infrastructure systems developed for its citizens including water supply, water drainage, water harvesting, and solid waste treatment and management are experiencing a significant number of challenges as the reforms take place.

Housing has been the most pressing issue in all cities due to the sudden and massive influx of migrants from rural areas to urban areas. According to Busscher and Doody (2010), there is also a strong influence from various criminal networks, a high rate of unemployment, and a lack of infrastructure in the majority of major cities. For Smart Cities, an initial investment of 70,600 million Indian Rupee was made (Report on Indian Urban Infrastructure and Services, 2011).

These smart cities also have the potential to cut down on global warming. India is striving hard to raise the standard of living and provide all facilities to its citizens. It is hoped that India will soon provide its citizens with a quality of life that will be on a par with other smart cities of the world such as on European and American continents (Madakam and Ramaswamy, 2015).

Another important problem that has arisen as a result of the enormous increase in the population is the enormous amount of solid waste that is produced. Air pollution and traffic congestion are there in the majority of Indian cities. Poverty-motivated migration has contributed to very poor planning and management of urbanization which has been followed by a rise in misery, higher rate of poverty and unemployment, exploitation of the workforce, more development of slums, high rise in inequality among its citizens, and a decline in urban residents' quality of life (Sen, 2014).

According to Vanolo (2014), it was emphasized that India should construct 500 more cities if it does not want its existing cities to become slums. In addition, Harrell (2016) found that in every minute in India, 30 people move toward cities from rural areas for a better life, and work opportunities. In order to accommodate 700 million more people who will live in cities by 2050, the nation is planning to build more than 500 cities in the next two decades (Ahluwalia, 2011). Smart cities have been determined to be a solution to cater for these problems where the technology will integrate with all city components in order to provide a good quality of life. As a result, India must properly plan for rethinking and restructuring its existing cities, and the construction of new cities using cutting-edge technology over the next decade (Ahluwalia, 2011).

3. The Objectives of the Study

The present study has been carried out to study how the need of urbanization has led to smart cities in India. The study formulates the following objectives:

- to study the need of Smart Cities,
- to explore the Indian Smart Cities Mission,
- to explore the challenges faced by the Indian Smart Cities Mission, and to address the way forward.

4. Research Methodology

Exploratory research was the choice of method that best suited this study. This method did not only help formulate or define the problem, but also helped to isolate key variables to gain more insight into the problem. The research design was qualitative in nature which helped refine the existing information about smart cities, enhance its readability, and minimize the chances of being misinterpreted. The research philosophy has been a blend of both positivism and phenomenology. The secondary data collected for the present study was critically examined based on specifications, accuracy, objectives, and nature to identify possible sources of bias.

5. Indian Smart Cities Mission

5.1 Features

The goal of the Smart Cities Mission is to promote cities that provide core infrastructure, provide decent living conditions for their residents, maintain a clean and sustainable environment, and employ "smart" solutions (Dameri, 2013). The idea is to examine compact areas and develop a replicable model that will serve as a beacon for other aspiring cities. The focus is on sustainable and inclusive development. The government's Smart Cities Mission happened to be a bold new initiative. Its goal was to serve as an example that can be followed both inside and outside the smart city, resulting in the establishment of other smart cities that are similar to this idea across the nation (Chakraborty et al., 2021).

A smart city's core infrastructure would include reliable electricity and water supply, housing for all, sanitation, and solid waste management. It also stresses robust IT connectivity and digitalization, good governance, particularly e-Governance, citizen participation, a sustainable environment, citizens' safety and security, health, and education (Rana et al., 2019).

The following objectives are considered for the development of Smart Cities:

Figure 2: Objectives of India's Smart Cities Mission

Source: Adapted from Smart City Features, 2011.

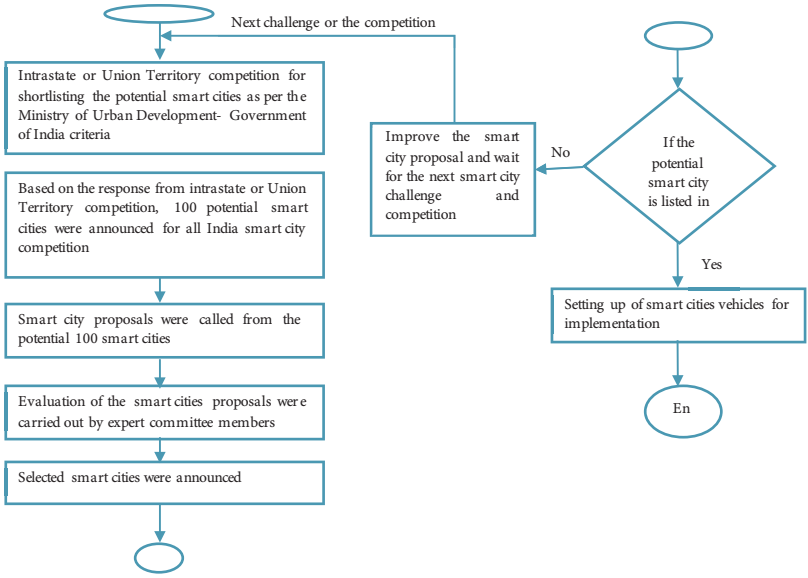
1. Planning for "unplanned areas" that contain a variety of interconnected activities and use the land that is compatible with one another and is close to one another. The overall purpose is to make land use more efficient which is also called encouraging mixed land use in area-based developments. States will permit some adaptability to changes in land use and building regulations;
2. housing and inclusion: make housing more accessible to its residents;
3. efforts should be made to reduce traffic congestion, reduce air pollution and depletion of various vital resources, boost the local economy, encourage interaction, and guarantee safety by creating walkable communities. Not only is the road network constructed or improved for automobiles and public transportation, but also bicycles, pedestrians, and bicyclists; in addition, all the necessary services should be within the reach of all which means they do not need to travel much for benefiting from these services;
4. conserving and expanding open spaces such as parks, playgrounds, and recreational areas to improve citizens' quality of life, and make an effort to reduce the effects of urban heat on areas, and generally encouraging eco-balance;
5. promoting a variety of available transportation options, including public transportation, last-mile para-transport connectivity, and Transit Oriented Development (TOD);
6. making governance more cost-effective and friendly to citizens by relying more and more on online services to bring about accountability and transparency, particularly by using mobile devices to lower service costs and provide services without visiting any government office; create e-groups to listen to its residents

and collecting feedback, use a virtual tour with the help of the latest technology of various workplaces, and to monitor all programs and activities;

7. establishing the city's identity based on its primary economic activities, such as local cuisine, health, education, arts and crafts, culture, sports goods, furniture, hosiery, textiles, and dairy, among others;
8. in area-based development, improving infrastructure and services through the use of smart solutions. For instance, making disaster-prone regions less vulnerable, consuming fewer resources, and offering services at lower prices.

5.2 Process

Figure 3: Process of Smart City Selection



Source: Author's compilation from a review of literature.

The process started with the state itself. The state shortlisted the cities as per the criteria laid down by the Ministry. After evaluation of the various cities those found suitable on the criteria were seen and evaluated. Based on that, 100 potential smart cities were announced. Then these 100 cities were called to submit proposals on how they can make their city a smart city. The submitted proposals were evaluated by the committee constituted by the government to see their feasibility

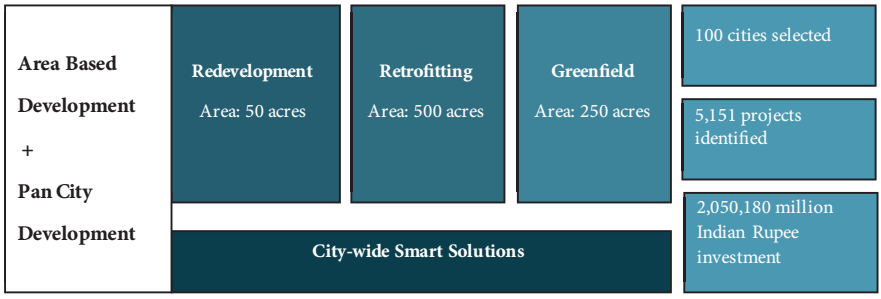
and time requirements. After careful evaluation, the government announced the proposed 100 cities under the mission and shared its vision for smart cities. These cities were announced in three phases. In Phase I 20 cities were selected, then in Phase II and III, 63 and 30 cities were shortlisted, then a comprehensive list of 100 cities was announced (India Smart Cities Mission, 2011).

5.3 Strategy Used in India

By enabling local area development and utilizing technology, particularly the technology that leads to smart outcomes, the Smart Cities Mission aims to drive economic growth and enhance people's quality of life (India Smart Cities Mission, 2011). By retrofitting and redeveloping existing areas, including slums with area-based development, the city as a whole will become more livable. In order to accommodate the growing number of people living in urban areas, new land, known as "greenfield" land, will be developed around cities. Cities will be able to use technology, data, and information to improve their services and infrastructure if smart solutions are implemented.

The strategic components of area-based development in the Smart Cities Mission include retrofitting, redevelopment, and greenfield development (Murthy Nimmagadda and Harish, 2022). It also includes a pan-city initiative in which various smart solutions are used in the bigger parts of the city (Figure 4). The overall development in this way will improve the quality of life, will help in creating jobs, and will raise incomes for everyone, especially the poor and disadvantaged (Ahluwalia, 2011).

Figure 4: Strategies of India's Smart Cities Mission



Source: adapted from India Smart Cities Mission (2011).

It was planned to introduce developments into an existing built-up area through retrofitting in order to achieve smart city goals, and other goals for making the existing area more efficient and livable. The city was asked to select an area of more than 500 acres for retrofitting after consulting with residents. The cities were required to prepare a smart strategy based on the residents' vision and the existing level of infrastructure services in the identified area. It was anticipated that the retrofitted smart city will contain a large number of smart applications and more intensive infrastructure service levels due to the fact that existing structures will largely remain intact in this model. Additionally, this strategy may be implemented faster, resulting in its replication in a different area of the city (Sen, 2014).

The built-up environment, that is currently there, was to be replaced as a result of redevelopment which will also make it possible to co-create a new layout with better infrastructure using mixed land use and increased density. Urban Local Bodies (ULBs), in conjunction with citizens, had identified an area of over 50 acres for redevelopment. For instance, a new layout plan with mixed land use, higher floor space index (FSI), and high-ground coverage was proposed to be created for the identified area. The Saifee Burhani Upliftment Project in Mumbai, also known as the Bhendi Bazaar Project and the National Building Construction Corporation's redevelopment of East Kidwai Nagar in New Delhi, are two examples of the redevelopment model (Buscher and Doody, 2010; Chourabi et al., 2012; Vanolo, 2014).

Using innovative planning, plan financing, and plan implementation tools (such as land pooling and land reconstitution), greenfield development proposed to introduce the majority of the smart solutions in a previously vacant area (more than 250 acres), with provisions for affordable housing, particularly for the poor. In order to meet the requirements of the expanding population, greenfield developments are required around cities. The GIFT City in Gujarat is a well-known illustration. Greenfield developments, in contrast to redevelopment and retrofitting, may be situated within the Urban Local Bodies (ULB) or the local Urban Development Authority (UDA)'s jurisdiction (Chun et al., 2011; Goodspeed, 2015; Hollands, 2015).

The implementation of selected smart solutions to the existing city-wide infrastructure was envisioned as part of a pan-city development. Technology, data, and information were proposed to be used to improve infrastructure and services as part of the application of smart solutions. For instance, citizens' productivity and quality of life were supposed to be improved as a result of implementing

smart solutions in the transportation sector (intelligent traffic management systems) and reducing average commute times and costs. Wastewater recycling and smart metering, for example, can significantly improve city water management using smart solutions. Each shortlisted city's smart city proposal was expected to include a pan-city feature with smart solution(s) and either a retrofitting and redevelopment, or greenfield development model, or a combination of the two. It was essential to note that a pan-city was offered as an additional feature. Due to the fact a smart city focuses on a small area, all city residents needed to believe there would also be something in it for them. In order to make the plan more inclusive, an additional requirement of at least one smart solution for the entire city had been added. The proposed development area for the Himalayan and northeastern states purposed to be half of what was required for any of the alternative models—greenfield development, retrofitting, or redevelopment (Basweshwar et al., 2020).

6. Evaluation

The evaluation of smart cities in India has to be done based on better sanitation in rural and urban areas, transportation within and outside cities, uninterrupted power supply, making housing available for all, digitization and IT connectivity in all parts of the country, a sustainable environment, and good governance (Shruti et al., 2021). More than 30 percent of India's population resides in approximately 500 cities. Given India's rapid urbanization and development, the number is likely to rise in the future (Reforms in Urban Planning Capacity in India, 2021). In light of this development, effective, safe, and efficient integration of ICT into cities is crucial to ensuring a better quality of life for both current and future residents (Yeh, 2017).

Furthermore, rather than just making cities more technologically advanced, the smart cities concept emphasizes their holistic development (Rozario et al., 2021). Furthermore, the evaluation should also address issues like a functioning sewage system, functioning infrastructure, housing, proper planning, and the availability of additional basic amenities (Doorsanchar et al., 2021). In other words, the most pressing requirements and opportunities will be thought of while evaluating smart cities development in India.

6.1 Major Challenges Being Faced

(a) Financing: Finance is the core to implement any projects. But the Indian smart cities project lacks smart privilege in terms of funding. As a result of 100 cities' smart city plans, a total investment of 1,911,550 million Indian Rupee have been approved (Aijaz, 2021). That is staggering. The project also appears to be off to a bad start due to the presence of state-sponsored businesses. The majority of the significant rise in the number of non-performing assets is attributable to the banks that are currently financing these projects. It is expected that the issue will soon be resolved, as the government has taken various measures in order to finance these projects (Kandpal, 2021).
(b) Coordination between the center and the states: A project can only be successfully put into action if various government agencies work together and also in coordinating various tasks. When it comes to planning for the development of smart cities, proper regulation is required. Only then can the Smart Cities Project be coordinated in both directions (India Smart Cities Mission, 2011).
(c) Existence of the master plan: The majority of Indian cities lacked master plans and development plans (Singh and Sharma, 2022). If we talk about turning them into smart cities, this is a tragic situation, because that is where the changes would be monitored and there is no other way to make it simple, better, and more effective. The presence of both requisites, i.e., implementation and encapsulation are the keys to the smart city project. Unfortunately, most Indian cities do not have them (Kadam et al., 2021).
(d) The plan does not include a time frame: The smart city plan, as a whole, was one big plan that needs to receive all approvals, if not immediately. Unfortunately, at some stage, nothing was available online and on time. In this context, the most significant action would have been to establish a single regulatory body to oversee all project approvals. The timely execution and coordination issues would have been addressed in this manner. In addition, it would have been entirely up to the body to meet the financial needs (OECD, 2021).
(e) Facilities are readily available: We are well aware of the regrettable fact that India currently lacks the necessary skilled labor and cutting-edge technology for the development of 100 smart cities (Aijaz, 2021). That is a significant number that necessitates considerable skills. When it comes to capacity building and the creation of skilled labor, neither the federal government nor the state has invested a significant amount of money in such an endeavor. Training, research, and a large database are needed to carry out these projects. This is a huge issue in our country because it is an area that hasn't yet been addressed.

These programs assist in numerous ways, including a time-bound completion.

(f) Corruption: Since this is the root cause of all the problems listed above, this point was likely intended from the beginning. However, if we only discuss it, this also presents a significant obstacle. Corruption exists at both the federal and state levels, and it is to blame for all the delays and mismatches in coordination. Due to this issue, financial constraint also appears in some way. Corruption is a problem in India that has always prevented or hampered the successful completion of the majority of major projects there.

6.2 Strategies that can be useful in the successful implementation of Smart Cities Mission in India

If the vision is to be realized, Indian citizens and government agencies alike will need to respond appropriately. The leadership at the center, the state, and the local level need to collaborate in order to devise strategies for dealing with the complex political environment that significantly impedes urban development at the moment.

- The smart city strategy should be improved by creating opportunities for the ongoing exchange of ideas and experiences. This knowledge should be used to improve the strategy.
- Public safety and security management recommendations should also be included in smart city plans; migrants who are poor and vulnerable and their means of subsistence; unemployment; lack of water, drainage, and sanitation; congestion in traffic and emissions from vehicles; degradation of the environment; encroachments and illegal structures; sloppy development in peri-urban areas; poor management of public celebrations of religion and culture.
- By including useful training programs, traditional urban local institutions should receive more people, money, and technical skills.
- The higher levels of government should help ensure that the lessons learned in trainings are put into practice well.
- Civic organizations ought to have sufficient authority to carry out projects and enforce laws.
- State and local governments should receive assistance in increasing their tax and non-tax revenues to meet the costs of implementing new development projects and day-to-day city management.
- Citizens should have access to efficiently managed services, both online and offline, for reporting issues such as power outages, water logging, and broken

roads. Moreover, these issues ought to be resolved promptly by the relevant agencies.

- The urban reform process ought to involve committed non-state actors working for the benefit of the city and its inhabitants, such as non-profit organizations (NGOs) and the private sector.
- Unemployed people should be made aware of the many career options available to them and be assisted in starting a variety of income-generating activities.
- New institutions should be established to increase the number of urban planners and managers in Indian cities, and more money should be given to improve the capacity of existing urban planning education institutions.

7. Conclusion

The overall need of urbanization has led to the need of developing smart cities in India. In June 2015, the current leadership of India launched the Smart Cities Mission with the intention of improving the quality of life for residents in 100 cities across all the country's states and union territories in a phased manner. Redevelopment, retrofitting and greenfield happens to be the three main strategies of the Indian Mission in order to develop smart cities in India. Reliable electricity and water supply, housing for all, sanitation and solid waste management, and IT and IT-enabled services happens to be the basic services a smart city tries to provide to its residents, but this study found that rather than just making cities more technologically advanced, the smart cities concept must emphasize their holistic development. The present study has also evaluated the Indian Smart Cities Mission and brought out the challenges faced in terms of financing, coordination between the center and the states, existence of the master plan, the plan not including a time frame, whether facilities are readily available, and lastly corruption. In order to achieve the proposed mission, the government needs to work effectively on these challenges. Lastly, certain strategies are also highlighted that can be useful in successful implementation of the Smart Cities Mission in India in the near future.

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Exploring the Diplomatic Role of Ho Chi Minh City in Comprehensive International Integration: The Implication of City Diplomacy for Vietnam

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Abstract: Ho Chi Minh City, which is classed among the fastest developing cities in the Southeast Asia region, is attracting an increasing number of investments for the city and national economic growth. The city has been well known as an economic hub of Vietnam regarding development of finance and infrastructure, etc. The city is becoming an international financial center in the Mekong region. This paper will analyze the development of the city diplomacy concerning policies as well as the city's diplomatic capabilities for international economic integration based on previous theoretical frameworks.

Keywords: Ho Chi Minh City, Vietnam, city diplomacy, international integration, economic development
JEL: F15, F5, F68, D74, P33

1. Introduction

The study of international relations is moving their attention to a more sub-national administration of foreign policy of a nation. In the era of globalization, cities have a rising position to play in the complicated global challenges, notably environmental issues (Wardhani and Dugis, 2020). The involvement of local governments in this field is quite large and happens more frequently as these governments are the direct actors influencing the effectiveness of national economic diplomacy. Globalization is of extreme prevalence. This phenomenon is paving the way for the participation and contribution of non-state stakeholders. Cities are expressing more involvement in the implementation of foreign policy by also establishing direct transnational connections with other cities. Positioning in the international community is becoming more popular with city leaders. The involvement and networking initiative of cities in world politics has also mostly been studied in regard to North American, European, or Western settings (Wu, 2020). Conversely, Wu (2020) also stated that it lacks a literature review in this view from the Southeast Asian region. Acuto et al. (2016) tried to map the twin system for the two nations, the United Kingdom (UK) and China, for competitiveness, analysis, policy implications, etc. Vietnam is a Southeast Asian country that has been gaining noticeable attention from the international community. Recently, the government has outlined the 4 development programs to pitch Ho Chi Minh City into a city that is leading in national economic development and is a location for attracting more Foreign Direct Investment (FDI), and the establishment of multinational companies (MNCs). This paper will study the role of Ho Chi Minh City in the chain of foreign policy and what capacities could be offered (Dugis, 2020). The author also observes the economic diplomacy of Vietnam and its activities implemented to pave the way for this development.

2. Theoretical Frameworks

2.1 Economic Diplomacy

Globalization has altered how world economic interactions are structured globally, changing how societies and their citizens conduct their economic, social, and political lives. It is constituted by a complex system of interconnections and interdependence, with an expanding range of stakeholders interacting with each other. These actors are acting activities, entering markets, and using resources that could be regarded as subjects of diplomacy (Saner and Liu, 2006). Bergeijk

et al. (2011) claimed that embassies and related organizations, especially diplomats were recognized as crucial players in promoting commerce and investments with other nations. Lee and Hocking (2010) stated that economic diplomacy is related to the interests of the nation that employ it. Furthermore, economic diplomacy would consider a wider variety of non-state stakeholders like players in the business sectors or other civil organizations (Lee and Hocking, 2010). The state's activities are the main focus of economic diplomacy as it is a guideline based on the state's decision and orientation of development. It necessitates that economic diplomatic practitioners take into account the contexts of politics and society of the host country. Okano-Heijmans (2011) claimed that economic diplomacy cannot be separated from the internal environment of the sending and receiving states, as well as other players that might impact on the operations like business sectors and civil organizations. Hence, the definition of economic diplomacy was conceptualized as follows:

> (1) Diplomacy concerned with economic policy questions, including the work of delegations to conferences sponsored by bodies such as the *World Trade Organization. While distinct from the *commercial diplomacy of diplomatic missions, it also includes that part of their work concerned with monitoring and reporting on economic policies and developments in the receiving state and advising on how best to influence them. (2) Diplomacy which employs economic resources, either as rewards or sanctions, in pursuit of a particular *foreign policy objective. This is sometimes known as 'economic statecraft'. (Berridge and James, 2003, p. 91)

However, the difference between economic diplomacy and economic statecraft still exists at the debate table. Okano-Heijmans (2011) agreed that while economic statecraft focuses mostly on institutions, economic diplomacy is primarily about procedures and policy. The scholar demonstrated that economic diplomacy is supposed to entail the use of economic tools in "non-coercive" methods, but studies of economic statecraft tend to focus on "coercive" weapons like sanctions and boycotts (Okano-Heijmans, 2011). Hence, Moons and Bergeijk (2016) concluded that the availability of asymmetric information for businesses operating globally, and the externalities related to the gathering and dissemination of data about the economic environment and commercial prospects in foreign marketplaces serve as the economic foundation for economic diplomacy. In recent research, Côté et al. (2020) argued that innovation, the driver of a global city, should be a part of economic diplomacy, and this will call for closer coordination with cities and municipal diplomacy.

2.2 City Diplomacy

In the literature of diplomacy, city diplomacy is not a new tendency. It could be drawn out that any event, negotiation at the bilateral or multilateral level, and acts, etc. concerning foreign policy notions could be involved in the process of diplomacy. Many definitions of diplomacy have come into existence for decades. Some of them were shifted due to changes in international political tendencies and systems. Scholars such as Pluijm and Melissen (2007) defined diplomacy as the institutions and procedures implemented by one state to others, and the expression of their interests in the form of representation. Thus, the nature of diplomacy is involving the achievement of national interests and building relationships. Moreover, the subject of modern diplomacy has been widened. For instance, track two diplomacy, public diplomacy, or economic diplomacy are an extended type of diplomacy. The subject of one type of diplomacy is determined by its prefix. Explaining city diplomacy based on traditional diplomacy, the city could be regarded as one international actor playing in the international arena. Der-Yuan Wu (2020) claimed that because of globalization, cities are more determined and connected to international affairs via establishing cross-border connections. In that sense, cities are intermediate means supporting the pursuit of the nation in the global market.

In the literature of diplomatic studies, when mentioning the involvement in the foreign policy of the non-central government, D. Criekmans (2010) outlined forms of diplomacy that are suitable. These terminologies include "city diplomacy", "sub-state diplomacy", and "subnational diplomacy" detailing how local authorities, municipal governance bodies, or other semi-governmental players participate in international relations on an equal basis with states (Criekemans, 2010). There is a more inclusive term which is "Paradiplomacy" expecting the involvement of non-central governments in international affairs. Numerous practices, such as city twinning, global networking, and decentralized partnership, are included in the concept (Nganje, 2013).

Throughout historical research, Acuto (2013) outlined three bullet points as the foundation of city diplomacy.

I) The representation of a city and its political regime acting in the international arena in the name of the local community;
II) Governmental bodies including embassies, diplomatic officers, or even local governments must be involved in the city's diplomatic acts;
III) City diplomacy is also embodied in mediation with parties.

Hence, scholars like Yu et al. (2021) once again confirmed that city diplomacy was the practice of city governments pursuing international tactics to elevate their standing to advance a variety of economic, cultural, and political objectives. According to Bull, the purpose of conventional diplomacy is to enable communication, facilitate collaboration, acquire information, lessen the negative impacts of conflict in international affairs, and proclaim the existence of the state society (Bull, 1977). Hence, in the context of city diplomacy, the city municipals could promote international cooperation for the sake of the city development and state. Thus, cities could also sign treaties and agreements, and discuss or exchange best practices in the policy. Engagement in diplomatic means is essential for a city to gain a high position in the state. To achieve that, city diplomacy also aims to encourage collaboration between city governments and urban scholars or observers.

2.3 Global Cities

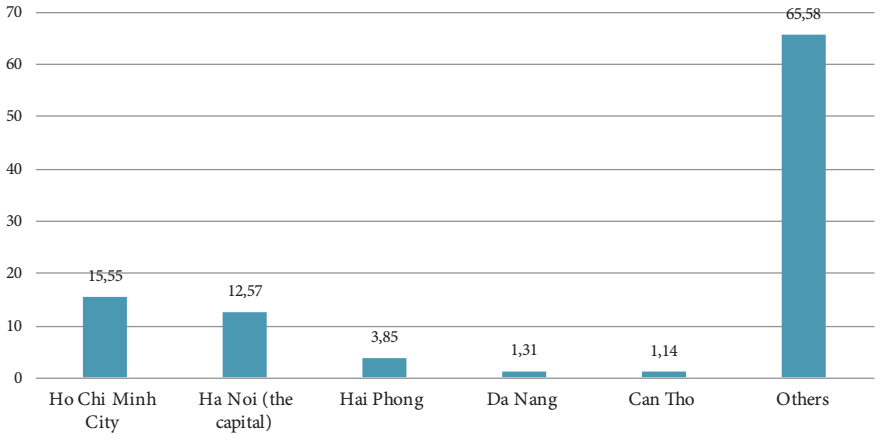
Sassen (2005) conceptualized a global city that must be concentrated on integrating itself into a networked economy. This model emerged due to the demands and nature of industrial-characterized services including "finance and specialized services, the new multimedia sectors, and telecommunications services". Hence the scholar characterized global cities with provided services. Following the conception of a network economy, scholars such as Kim (2016) and Timberlake (2018) suggested another character of a global city which is the interlocking network model. This helps businesses and organizations connect to other cities in the country, enhancing the economic powers and interdependency among cities. Kim (2016) has identified another character that could be a key feature of a global city which is innovation. Innovations are essential to economic wealth which could be disseminated throughout cities to build an international network where the cities support one another (Kim, 2016, p. 131). Yet another feature of a global city can be found in innovation capacity. This feature illustrates the ability to accommodate innovation hubs or high technological consortiums within the city. This is one of the crucial criteria for a company to decide their geographical choice which could exploit the strong points of these companies (Mudambi, 2018). Cantwell (2016) claimed that a global city that has the capacity to embrace innovation at the knowledge base would capture the interest of multinational corporations (MNCs).

3. General Background of Ho Chi Minh City

Vietnam has 63 cities and the province where Ho Chi Minh City is located, had a population of more than 9.1 million in 2021, according to the National General Statistics Department, marking it as the largest city in Vietnam in terms of population. Although this figure was collected in 2021, this figure is considered official because it was published by the National General Statistics Department.

In the view of the UN-Habitat (2018), the city had been going through a rapid economic and demographic expansion and was expecting large number of immigrants from neighboring provinces. The organization stated the reason for this high development as this city is serving as Vietnam's financial and economic center contributing largely to the national gross domestic product (GDP). Minh Tiến (2023) reported that despite the Covid-19 pandemic, the city still possesses a large proportion of national GDP contribution.

Chart 1: Contribution rate of 5 central-state cities to national GDP in 2022 (in percent)



Source: Minh Tiến, 2023.

Chart 1 demonstrates that Ho Chi Minh City has the highest proportion in national GDP contribution with 15.55 percent out of 62 other cities and provinces including the capital city. This means that the role of Ho Chi Minh City is widely acknowledged. This perspective was backed by the Department of Planning and Investment of Ho Chi Minh City where in the period from 2016 to 2020 the city

made the highest contribution to the growth rate of the southeast region and the Southern Key Economic Region (Thái, 2022). This position was recognized by Vuving (2005) when he mentioned the city as a central factor of the Southern region of Vietnam which possessed a more potential and favorable business expansional environment. He also stated that Ho Chi Minh City also played an economic role of the central region of Vietnam and Cambodia.

Picture 1: Geography map of Vietnam

Source: compiled by the author.

From the map above, it is a clear truth of Ho Chi Minh City's position as confirmed by Vuving (2005). Ho Chi Minh City is located in the center of the southern region and is considered as a regional key economic factor as the city could easily access the border of Cambodia and even part of Laos. According to Nguyen (2019), the city possesses "11 container ports and directly exports and imports bulk cargo". This is a certain leverage of Ho Chi Minh City to be a key economic leader in logistics industry and ocean economics. Furthermore, the city is geographically linked to the South China Sea, mobilizing a global value chain. Hence, the comparative advantages of the city could be effectively utilized if it is integrated into the global and local trading networks. In general, Ho Chi Minh City is still leading Vietnam's economy from that day. In the latest report of Vietnam Briefing, 15 years after the argumentation of Vuving, Vettoretti (2020, p. 4) once again confirmed the role of this city in the whole country, expanding to several sectors such as "finance, logistics, tourism, healthcare, and education" with "USD47.3 billion" of FDI. From there, Nguyen Phu Trong, the General Secretary of the Vietnamese Communist Party passed Resolution No. 31-NQ/TW of the Vietnam's Politburo which describes the direction and mission of developing Ho Chi Minh City until 2030, with a vision to 2045. This resolution emphasized and reaffirmed the geopolitical position of Ho Chi Minh City within the nation and the region. This also implies the city's role in the foreign policy of Vietnam. Furthermore, the below sections will discuss diplomatic capabilities of Ho Chi Minh City based on related theory of city diplomacy.

4. Vietnam's Economic Diplomacy as Guidance for Ho Chi Minh City

Historically, national economic diplomacy has encouraged investment and commerce in the manufacturing sector, frequently through trade deals and promotion organizations. It is undeniable that globalization has opened many opportunities for trade agreements, business investments, foreign services, FDI, etc. This event has been backed by Rodrik (2018) that globalization has resulted in a significant rise in international trade and investment. In particular, after 1990, the rise is more considerable because of the decline in costs of "transportation and communications" (Rodrik, 2018). Since the birth of globalization, the world has paved the way for more trade relationships and investment throughout many countries. For instance, the General Agreement on Tariffs and Trade (GATT) represents multilateral cooperation, and the Regional Trade Agreements (RTAs) represent regional trade relations and investments. The number of nations endorsing these agreements has risen threefold since 1990 through organizations that aimed to

encourage global commerce and investment capital (OECD, 2018). Vietnam is not standing outside this tendency. Vietnam has 17 free trade agreements (FTAs), of which 15 are in force and 2 are being negotiated, according to data published by the Vietnam Chamber of Commerce and Industry (VCCI). Regarding the economic diplomacy of Vietnam, the nation is framing the full direction of diplomacy toward international economic development and integration. The Secretariat of Vietnam's government has signed and promulgated a directive number 15-CT/TW on economic diplomacy for the development of the country until 2030. Several key points are leading to the focus of the government on supporting the local authorities. This directive demonstrated the core mission of the Ministry of Foreign Affairs (MOFA) and national diplomatic strategy, namely they need to assist local authorities with integrating into international economic integration (Ban Bí thư, 2022). And this context was mentioned several times, emphasizing the international development of cities and provinces of Vietnam in the economic sector. Although this directive was issued in August 2022, the report of Thùy Chi (2022) showed that there were 70 activities of partnerships with foreign partners organized, and 40 international cooperation agreements signed by cities and provinces with the support of MOFAs.

Table 1: Place for the official visit of Vietnam's Prime Minister and high-ranking officers

No	Partners	Sector and purpose classification	Purposes
1.	The Center Strategic and International Studies	Advocacy	Affirming the strategies of Vietnam in international economic integration and participation in global value chains.
2.	Harvard Kennedy School	Advocacy	Putting emphasis on Vietnam's orientation to multilateral cooperation on international economic integration and renewable energy infrastructure.
3.	New York Stock Exchange	Stock market management	Extending cooperation in sharing management and market capitalization in the sectors of investments, banking, and finance, especially cooperating in establishing a regime for the investors to join the two stock markets.
4.	Kohlberg Kravis Roberts, VISA, Citigroup, Standard & Poor, etc.	Financial technologies and platforms	Extending their investments in the development of infrastructures, tackling environmental issues, financial technologies, and credit scores for Vietnamese enterprises and start-up companies.
5.	Intel, Apple, Microsoft, and Google	Technological advancement	Extending their investments in the development of facilities and factories, global value chains, and digital transformation.

Source: compiled by the author.

Table 1 serves as an example of the active economic diplomacy employed by the head of state. The visit to major companies in the field of technology and finance proved the ambition of the government which is to pitch the country to become more attractive to FDI and a location for MNCs. Furthermore, Vietnam's Prime Minister has been to the two large institutions mentioned in Table 1 to deliver a speech with the purpose of advocacy for future research. This advocacy process was aimed at supporting business facilitation in Vietnam's business environment. In the international context, cities are actors which are operating international strategies like trading goods and attracting FDI. These cities labeled "global" are working especially with multinational companies which have a direct impact on the international development and strategy of a nation as a whole. Hence, it could be observed that Vietnam's government is pushing forward a national economic diplomacy. A feature of economic diplomacy is that it is deployed strictly and accordingly, including multilateral agreements and several cross-border promotion strategies that allow for the opening of markets to trade and investment. Activities in Table 1 serve as one remarkable example of national economic diplomacy in 2022. These advocacy activities are paving the way for cities in Vietnam to attract more foreign investments in the next coming years. In this sense, Ho Chi Minh City, as the leading role in promoting industrial sectors, must be prepared for these opportunities.

5. Diplomatic Role Capabilities of Ho Chi Minh City

Vietnam's city diplomacy walks a different path from other countries due to the different regimes of governance. City diplomacy under democratic regimes tends to give local authorities the political autonomy to decide the path of development by following or disobeying their national government on foreign policy matters (Peter Bursens, 2010). It seems that city diplomacy, in the context of Vietnam, exists to serve the state development of foreign affairs which contributes to enhancing the position of the nation in the international arena. Hence, city diplomacy helps advance national interests. Now that the multifaceted function of geography is more understood, countries are not always the main geographic unit of concern for various policy decisions by businesses and governments. The geography of countries is not always the main matter for numerous governance policy decisions by businesses and governments (Mudambi, 2018). Many scholars have recognized the crucial play of cities as means for the promotion of establishing and exchanging "knowledge-based services" to many MNCs. Iammarino et al. (2018) studied the decisive factors for MNCs to choose the location including

"diversity, demographics, automation and artificial intelligence technologies, industrial policy, and protectionism". The dominant elements concluded were technological and knowledge bases (Iammarino, 2018). When trying to redefine global cities based on metropolitan cities, Trujillo and Parilla (2016) confirmed the importance of knowledge capitals of a city evolving into a global city by considering knowledge as a factor endorsing economic growth. As a result, cities need to act to create a business environment with a rich knowledge frame to attract MNCs' geographic choice. Therefore, the acceleration of trade activities in the country will be high via global cities. The Chinese government has institutionalized subnational diplomacy in a more domestic context by equipping the majority of municipal and provincial governments with Foreign Affairs Offices (FAO) which accommodate diplomatic professionals and bureaus of the Chinese People's Association for Friendship with Foreign Countries (Yu, 2021). From this stage, Vietnam's government institutionalized its sub-diplomatic strategy by establishing Departments of Foreign Affairs (DOA) under the direction of Provincial People's Committees. The Vietnamese government has been pursuing to expand international integration at the provincial level. The scope of diplomacy shall be distributed to provinces and cities in Vietnam. In March 2021, the Ministry of Foreign Affairs of Vietnam promulgated circular number 03/2021/TT-BNG which is related to the instructions on functions, tasks, and authorities on external relations of professional agencies of provincial people's committee, district level people's committee. The circular has identified the role of DOAs and emphasized the importance of cities contributing to the national development.

6. Foreign Investments and Innovation Advancement of the City

According to Côté et al. (2020), a global city could be granted an important role in national and global economic development through a focus toward trade and FDI policy. Hence, the number of FDI and MNCs established within the city could describe the cruciality of that city in global trade. From there, the city is a vital network and knowledge base for economic development. National economic diplomacy and related ministries must issue policies promoting innovation and knowledge since these investments may draw FDI and expand trade in services. Ho Chi Minh City has these features to accelerate international economic integration. According to the Ministry of Planning and Investment, the flow of foreign capital investing in Ho Chi Minh city is US$3.54 billion, accounting for 14.1 percent of total investment capital in the whole country. With the number of new international projects, foreign investors continue to focus on investing heavily in

big cities with modernized and high technological infrastructures, such as Ho Chi Minh City. This city has captured new international projects accounting for 44.5 percent of total projects throughout the country. It is believed that Ho Chi Minh City will hold its place as a leading city in economic, social, and infrastructure development. Thus, the city would eventually become an important gateway for FDI flowing to Vietnam. Leffel and Acuto (2018) demonstrated that the main actors in cities gathering and redistributing global money flows and investments are businesses, especially multinational firms. This process takes on a connected shape and eventually results in a city's economic dominance. As stated above, Ho Chi Minh City accounts for the largest amount of the country's total foreign investments. As a result, many multinational companies would choose the city as their geographical representative. Moving toward the innovation knowledge base, Ho Chi Minh City is home to Saigon High Tech Park formed by the direction of the government. This is a highly technological-focused zone dedicated to attracting investments in Ho Chi Minh City as well as Vietnam. This zone has recently focused on four 'pillars'/sectors, 1) Micro-electronics – Information Technology – Telecommunications; 2) Precision mechanics – Automation; 3) Biotechnology applied to pharmaceuticals and the environment; 4) New Energy – New Materials – Nanotechnology (Khu Công nghệ cao Thành phố Hồ Chí Minh, 2023). With a strong focus on cities, innovation plans should be directly connected to trade and investment development policies. It is believed that the relationship between cities and national trade and investment policies toward innovation strategies cannot be separated (Côté et al., 2020). The formation of the high technological-focused zone is under the direction of the government which was oriented to become an economic-technical zone, built and developed on the basis of high technology. This zone was characterized to attract foreign investment. This is also a place to mobilize resources in science and technology, form a modern production force, and effectively combine production and business with research, acquisition, transfer, and development of high technology, and training human resources for the high-tech industry. Regarding the national policy for the development of Ho Chi Minh City, the People's Committee of Ho Chi Minh City has issued a decree No 6179/QĐ-UBND regarding the highly focused initiative named "Ho Chi Minh City's smart city initiative". Aside from the prioritizations of sectorial industries, this initiative has ensured that the infrastructures of Ho Chi Minh City shall be ready for more FDI and innovation clusters regarding to the digital and knowledge economy. This should be a positive signal that Ho Chi Minh City will be a destination for MNCs in the region. Scholars like Buuse and Kolk (2019) for instance, discussed the development of "smart city" technology by firms such as Cisco, IBM, and Accenture which share information they learn with other parts of

their organizations while conducting testing in numerous cities. They concluded that city-based criteria rather than country-based were typically used to determine the business presence and activities. This statement proved the importance of Ho Chi Minh City in the course of developing the national economy by being a location for MNCs with knowledge-based and shared products and services. Decree No 6179/QĐ-UBND has laid a foundational base for other initiatives to attract more innovative incentives and investments from abroad. Generally speaking, Ho Chi Minh City is not only an ideal location for investing, but also a key point in global value chains. Thus, the local government has implemented many initiatives according to the policy of the country regarding digital transformation. On 18 February 2022, the city's board of leaders seized a big tendency of digital transformation throughout the world by utilizing tools of industry 4.0. Thus, decree No 503/QĐ-UBND was issued by the People's Committee of the city to support and implement comprehensively the project "Phát triển kinh tế số, kinh tế chia sẻ và kinh tế tuần hoàn trên địa bàn thành phố Hồ Chí Minh giai đoạn 2020-2025, tầm nhìn đến năm 2030", translated as 'developing digital economy, sharing economy and circular economy in Ho Chi Minh City in the period of 2020-2025, a vision to 2030'. According to the city's task force for digital transformation, this project aims at helping the local government develop rapidly and sustainably on the basis of applying scientific and technological incentives to innovation initiatives and increasing labor productivity. Furthermore, this project also endeavors the city to become the largest creative start-up hub in the country in the light of the digital economy, the shared economy, and the circular economy (Ủy ban nhân dân Thành phố Hồ Chí Minh , 2022). By apprehending the notions of "digital economy" and "shared economy", Ho Chi Minh City has characterized itself as a global city by becoming an innovation cluster to attract more knowledge-based incentives and MNCs. Côté et al. (2020) described that the widespread presence of high-value-added consulting services and businesses in several locations, especially those in developing countries, is another characteristic of global cities. Nevertheless, some of them could also be the location of more specialized innovation clusters (Côté et al., 2020).

7. City Networks

Grandi (2020) has defined the characteristics of cities at three levels based on the size of the population. The scholar identified that a large city has more than one million people inhabit it while cities with more than 10 million inhabitants could be regarded as a megacities. The reasoning for seeing Ho Chi Minh City as a large

city is that there were more than 8,993,082 inhabitants (statistics of 2019) according to the Steering Committee for the 2019 Ho Chi Minh City's population and housing census. This number might have increased by the end of 2022. It could be concluded that Ho Chi Minh City is regarded as a large city moving toward a megacity if the population rises to more than 10 million.

Considering that cities are expanding involvement in international politics, they are growing attention by engaging in international affairs. In order to enhance its presence in the international community, a global city advances its capacity of building and maintaining external relations. Thus, engagements in solving issues of global governance have become a major type of city diplomacy, shaping the global city network. United Cities and Local Government (UCLG) could be regarded as an example of such a city network. This international organization aims at advancing local cities' goals and interests via the promotion of international cooperation within a global forum. Although Ho Chi Minh City does not hold as a high position as other cities, especially cities of China, the city still participates actively to join hands to cope with environmental and financial issues (Hidalgo et al., 2014; The United Cities and Local Governments, 2015). Another nature of a global city is to become a desired location for MNCs and participate in the trade activities of goods and global value chains. Davis and Dingel (2019) claimed that global cities offer a broad spectrum of value-added services, highly skilled labor forces, and advanced infrastructures of transportation and communication which could become a beneficial accumulation helping keep spatial transaction costs to a minimum. Côté et al. (2020) argued that the nature of global cities rising in the destination participate in the global value chain while producing important elements. The scholar also added the importance of companies offering services that could also contribute to the development of interconnected cities. However, these scholars hinted that these features are favorable and more concentrated in cities in developed countries rather than in developing countries regarding to research and development (R&D) and innovation capabilities, design engineering, and support services for business operations. Thus, Ho Chi Minh City's government acknowledged this phenomenon, and proposed the development of a high technological zone for business. It is not only serving as an assistance platform for high technology R&D, but this zone was also prioritized with tax privilege and lease of the facility. Moreover, Vietnam's government facilitates a "single-door" mechanism which helps the center issue an investment registration certificate and a business license; a license for the representative office of foreign traders at the time of issue (Khu Công nghệ cao Thành phố Hồ Chí Minh, 2023). This mechanism directly manages a faster administrative procedure for

investors. City diplomacy in this sense defines the strategies through which cities can advocate their interests both with other cities, the international communities, and pertinent organizations. In the international economic integration, Hanoi, the capital city, and Ho Chi Minh City are home to many foreign business groups which help facilitate investments and business network in the "two-ways" form, domestically and internationally.

Table 2: List of foreign business groups distributed by cities

No	Business Group	Location
1.	American Chamber of Commerce in Vietnam (AmCham)	Hanoi and Ho Chi Minh City
2.	Australian Chamber of Commerce Vietnam (Auscham)	Hanoi and Ho Chi Minh City
3.	Belgian Luxembourg Chamber of Commerce in Vietnam (Beluxcham)	Ho Chi Minh City
4.	British Business Group Vietnam (BBGV)	Hanoi and Ho Chi Minh City
5.	Canadian Chamber of Commerce in Vietnam (CANCHAM)	Hanoi and Ho Chi Minh City
6.	Chinese Business Association Ho Chi Minh Branch (CBAH)	Hanoi and Ho Chi Minh City
7.	Dutch Business Association (DBAV)	Ho Chi Minh City
8.	European Chamber of Commerce in Vietnam (EUROCHAM)	Hanoi and Ho Chi Minh City
9.	French Chamber of Commerce and Industry in Vietnam	Hanoi and Ho Chi Minh City
10.	German Business Association (GBA)	Ho Chi Minh City
11.	Hong – Kong Business Association	Hanoi and Ho Chi Minh City
12.	Indonesian Chamber of Commerce Vietnam (ICCV)	Ho Chi Minh City
13.	Italian Chamber of Commerce in Vietnam (ICHAM)	Hanoi and Ho Chi Minh City
14.	Japanese Business Association (JBAH)	Ho Chi Minh City
15.	Korean Chamber of Commerce & Industry (KOCHAM)	Ho Chi Minh City
16.	Malaysia Business Chamber, Vietnam (MBC)	Ho Chi Minh City
17.	New Zealand Chamber of Commerce in Vietnam (NZCHAM)	Ho Chi Minh City
18.	Nordic Chamber of Commerce in Ho Chi Minh City (NORDCHAM)	Ho Chi Minh City
19.	The Swiss Business Association Vietnam (SBA)	Ho Chi Minh City
20.	Singapore Business Group Ho Chi Minh City (SBG	Hanoi and Ho Chi Minh City
21.	Spain – Economic and Commercial Office	Ho Chi Minh City
22.	Thai Business Association (TBA)	Ho Chi Minh City
23.	The Council of Taiwanese Chamber of Commerce in Vietnam	Hanoi and Ho Chi Minh City
24.	Indian Business Chamber in Vietnam	Ho Chi Minh City

Source: compiled by the author.

Table 2 demonstrates the importance of Ho Chi Minh City as a geographical choice for MNCs, but also for international organizations for business facilitation. All these 24 business facilitation service organizations are located in Ho Chi Minh City of which 13 organizations established their headquarters only in Ho Chi Minh City. OECD (2018) claimed that one of the effective means for nations to facilitate trade and investment in the host country is to establish related agencies which would offer "information, incentives, and resources" to remedy

the negative externalities of the market caused by information disparities emerging from the lack of relevant knowledge, potential investors, and exporters. It is believed that the 24 business groups above serve as the knowledge-based service providers in Ho Chi Minh City which prove that the city is capturing interest from many countries. It means that the city is an important link in the global value chains of Vietnam. By mentioning the circular economy in the city's digital transformation initiative and perceiving it as one 'pillar' of development, the city is marking its presence in the international community by dealing with environmental issues and trying to achieve the sustainable development goals of the United Nations. However, the presence of these in Ho Chi Minh City is still lacking, as they are in other cities in the country. By observing that China has also been actively participating in the C40 including Beijing, Chengdu, Dalian, Fuzhou, Guangzhou, Hangzhou, Hong Kong, Nanjing, Qingdao, Shanghai, Shenzhen, Wuhan, and Zhenjiang, representing the Central Asian region (C40 Cities, n.d.), while Vietnam has only two, which are Hanoi and Ho Chi Minh City. Moreover, some Chinese cities are also a member of the United Cities and Local Government (UCLG) including Guangzhou as co-president, Beijing, Tianjin, Xi'an, Chengdu, Shenzhen, and Chongqing (Acuto, 2016). It implies the necessity of the city's participation in the activities and operations of the international community.

8. Conclusion

Ho Chi Minh City is on track to become a global city possessing diplomatic capacity. The city still has the ability to develop in the future. However, the author finds that the city is still passively depending on national economic diplomacy. Moreover, the city's potential and advantages have not been effectively exploited. The leading role of the city by its dynamism and creativity as a driving force in the region increased due to the business transfers from China to Vietnam, India, etc. Nevertheless, it did not catch much attention leading to a decrease in international competitiveness. By realizing this fact, the resolution promulgated by the Politburo of Vietnam on January 2, 2023, has indicated these concerns restricting the development of the city. In this sense, this research only focuses on the orientation of the party which was translated that the city must continue to maintain its role as a major center of economy, culture, education—training, science—technology, and hold the most important political position in the whole country, having the power to spread and promote and develop the southeast region and the Southern Key Economic Region. Furthermore, Ho Chi Minh City

must become the center of economy, finance, services, culture, education—training, science—technology, and innovation in Southeast Asia and Asia, with global competitiveness. Thus, the development of Ho Chi Minh City is being supported by the government. The national economic diplomacy activities implemented by the government imply deeply the involvement of the city which will eventually help promote advancement in other cities. A city can advocate its interests to other players by using municipal diplomacy to take an active role in the international arena (Wardhani and Dugis, 2020). In this sense, city diplomacy still has spacious room to research and develop. City diplomacy continues to be attached to national diplomacy, but also has its autonomy. The role of cities in foreign policy was also enhanced with the issuance of the circular of the Ministry of Foreign Affairs defining the role of DOAs in each city. A city's role in international economic integration is recognized, and it is given more autonomy in their economic diplomacy and other international activities. This statement was proven by the circular of the MOFAs. Hence, Ho Chi Minh City must form its policy and clarify its strategy to position the city's recognition in the international community and network. Developing research in twin city modeling could be considered. These "twinning" activities could help Ho Chi Minh City to deepen its relationship with other global cities by signing its own memorandum based on several activities including business cooperation and multidimensional partnership. Economic development and business opportunities in many industrial services are no doubt a clear policy for tackling environmental issues, however, this is yet to be defined. Although the circular economy is now more noticeable in the development strategy of a smart Ho Chi Minh City, a policy guideline has not been clearly outlined. This is an opportunity for the city to conceptualize its strategy to orient the city's development and foreign policy toward tendencies such as circular economy, sustainable development goals (SDGs), or environmental issues. This would help the city's diplomacy to gain its position and enhance the city's reputation. However, city diplomacy still needs to be studied in terms of city leadership and its role in international negotiation, especially with those global-oriented cities, namely Ho Chi Minh City.

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