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Assessing Indonesia's Provincial Development Policies: The Case of DKI Jakarta

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Assessing Indonesia's Provincial Development Policies: The Case of DKI Jakarta

Doris Wan Yin Liew Xuyao Zhang

Abstract

As Jakarta navigates itself out of the COVID-19 pandemic, this paper found that two sectors stood out as the main drivers of growth during the pandemic and in the years to come. The movement restrictions from the pandemic brought forth a massive wave of digitalization sweeping through Indonesia. This paper revealed that Jakarta plays the role of the digital economy centre as tech unicorns conglomerate in what is considered Indonesia's Silicon Valley. Even as the economy contracted by 2.4% in 2020, the province's digital sector recorded a 13% growth. The second driver of growth lies in Jakarta's massive infrastructure development projects such as the expansion of Tanjung Priok Port and Jakarta's first metro network (MRT). This paper found that the workforce in the transportation and ICT sectors grew at an annual compound growth rate of 6.4%. Subsequently, the tracking of Jakarta's current socio-economic progress vis-a-vis its Medium Term Development Plan (RPJMD) targets show that the province has been consistently achieving most of its intended goals before the pandemic.

1 Introduction

The current Jakarta Provincial Government runs the office with "Maju Kotanya, Bahagia Warganya", translated to "A Developed City, A Prosperous Populace". This tagline became the basis of the government program for five years: "Panca Upaya Utama" or Five Main Efforts, which consist of human development, economic and infrastructure, systemic integrity, sustainable city, and a model city characterised by equitable development and cultural preservation.

As part of its economic priorities, the government prioritized five key efforts: human development, infrastructure, governance, sustainable city, and cultural heritage and equitable development. The first effort, human development, targets education, poverty alleviation, healthcare, sports, woman empowerment, and child & disabled protection. The increase entrepreneurship and employment opportunities. The second effort concerns infrastructure development. The government targeted water management, waste management, housing, and transportation to improve infrastructure. With the full support of the National Government, Jakarta is planning to speed up its infrastructure development, mainly on urban transport, targeting to increase mode-share of public transport by 60% in 2030 for all modes of mobility in the Greater Jakarta Area (Law of Indonesia 55/2018 on Transportation Masterplan for Jakarta, Bogor, Depok, Tangerang and Bekasi 2018-2029). The third effort targeted the accountability of the civil servant and administration of the Jakarta Government, which are digitalisation of government system and integrating data to reach their goal in achieving One Data, One Map, One Policy (Jakarta Satu). The fourth effort involves Jakarta's aim to achieve the status of a sustainable city, which consists of the proliferation of open green space and, at the same time advocating for pollution reduction and climate change mitigation. Lastly, as the capital city of Indonesia, Jakarta position itself as a model city to

integrate cultural heritage and equitable development. This consists of directing effort into culture and tourism and improving development in the least developed Jakarta's regency, Kepulauan Seribu.

1.1 Jakarta's Role as the Centre for Digital Economic Growth

2020 was an arduous year for Indonesia, let alone Jakarta, which has consistently tabulated high COVID-19 case counts. Nevertheless, while the pandemic slows down the businesses in sectors such as logistics and trades, the restrictions increased the growth of information and communication technology (ICT) by as much as 11% (Alpha JWC Ventures and Kearney, 2021). This result is reciprocal with the growth of digital consumers in Indonesia, where internet penetration increased from 69.5% before the pandemic to 79.7% by the first half of 2021 (Google, Temasek, and Bain & Company, 2020). Riding on the digital potential, the digital investment in Indonesia in 2020 doubled to USD 4.4 billion, compared to USD 2.1 billion in 2019 (Alpha JWC Ventures and Kearney, 2021). Jakarta held a critical role in this growth, as it is the main economic centre in Indonesia which comprise 16.8% of the national GDP (Indonesia's National Bureau of Statistics, 2021). Online activity in Jakarta comprise 55% in e-commerce, 35% in payment, 50% in both food delivery and ride-hailing, whereas, in urbanites and slow adopters cities[1], it only comprises 38% in e-commerce, 11% in payment, 7% in food and 5% in ride-hailing in rising urbanites and slow adopters categorised cities in Indonesia (Alpha JWC Ventures and Kearney, 2021).

Jakarta is home to 5 out of 12 unicorns in Southeast Asia, spanning across various digital sectors such as payment, ride-hailing, and e-commerce. OVO, one of the unicorns, held 18% of the digital payment market share, and another unicorn, Gopay, had a 17% market share. In 2021, Gojek (Gopay parent company) and Tokopedia merged and renamed the new corporation GoTo (Pillai, 2021). As the growth in the digital market continues to accelerate, Jakarta will play a critical role in the digital economy in Southeast Asia, given the capital centrality to the national economy and the intention of 93% of customers in Indonesia to continue using digital service after the pandemic (Google, Temasek, and Bain & Company, 2020).

1.2 Infrastructure as an Essential Building Block to support Economic Development

Given its strategic location in the country's centrality and its advanced economy as the Indonesian capital, Jakarta was entrusted with several National Strategic Projects. These projects include the inter-city railway, mass rapid transit development, one million housing program, seaport development, and infrastructure acceleration for tourism area (Committee for Acceleration of Priority Infrastructure Delivery, Committee for Acceleration of Priority Infrastructure Delivery). Jakarta operates its long-awaited first metro network under the PT MRT Jakarta for the first time in 2019. It also has the most developed port in Indonesia, the Tanjung Priok port, with a container flow of over six million TEU in 2020 (Indonesia Port Company PT Pelindo II, 2021). Given Indonesia's logistics distribution vitality, a canal route is expected to be built in the Tanjung Priok port to connect logistic streams from Jakarta to Cikarang.

[1] (Alpha JWC Ventures and Kearney, 2021) classified 514 Indonesian cities and regencies into four tiers – tier 1: metropolitan (Greater Jakarta Area, Surabaya, Bandung etc.); tier 2: urbanites (Semarang, Makassar, Denpasar etc.); tier 3: slow adopters (Mengelang, Prabumulih, Bangli etc.); tier 4: rigid watchers (Jepara regency, Jayapura regency, Poso regency etc.). Tier 1 are densely populated cities with considerable policial, economic and cultural influence, urbanites and slow adopters are cities with a rising middle-class consumers and a promising digital growth opportunities, and rigid watchers involve smaller cities and regencies with lacking digital infrastructure.

1.2.1 Jak Lingko to Integrate Public Transport Network

Jakarta's current public transport network covers 83% of its population[2], mainly by the public bus network under PT Transjakarta (PPID PT Transportasi Jakarta., 2020). The provision of a metro rail network in Jakarta since 2019 via the MRT and LRT railways further complements this network. Moreover, the government launched Jak Lingko in 2018 to integrate the transportation network in Jakarta. It developed this concept further by creating the first mobility as a Service (MaaS) apps in Indonesia (Wicaksono and Aryani, 2021). This app integrates public transport under the Jakarta Government and the Greater Jakarta Commuter Line under the purview of the National Government.

1.2.2 Infrastructure for Investment

Jakarta's infrastructure development is expected to drive both foreign and domestic investments. Through infrastructure improvement, the government can mitigate some of logistic and supply chain management costs. This is evident in the advancement of Tanjung Priok Port since 2014, which has reduced dwell time from a week to just over three days (Beth, 2020). Moreover, to enhance the investment climate, the Jakarta government set up Jakarta Investment Centre in 2018 to promote investment, provide facilitation services and engage investors via investment forums. After a year of establishment, Jakarta hit the investment record in 2019: in the third quarter, investment realisation increased by 56.9% compared to the same period in 2018 (Indonesia Investment Coordinating Board, 2020). However, the COVID-19 pandemic shifted Jakarta's investment towards Domestic Direct Investment (DDI) rather than Foreign Direct Investment (FDI) as foreign investors were withholding their investment decision until the pandemic condition stabilised. DDI injection in the second quarter of 2020 increased by 10.49% compared to the same period in 2019 (Indonesia Investment Coordinating Board, 2020).

1.3 Towards Sustainable and Smart City

The national government published a presidential decree, Presidential Decree No. 55/2019, regarding the electric vehicle (EV) to support the procurement and implementation of environmentally-friendly vehicles. As aligned with the national government, in 2020, the Governor of Jakarta signed a commitment to Green and Healthy Streets together with other mayors under the C40 cities, a network of the world's megacities committed to addressing climate change. The main actions are as such: (1) work with transport operators to convert all buses to zero-emission vehicles from 2025, (2) ensure that a major area of the city achieves net-zero emission by 2030. Other supportive measures include: (1) adopting community-centric policies; (2) encouraging green modes of transportation such as walking, cycling, public and shared transport; (3) reducing the number of polluting vehicles on the streets and transition away from vehicles powered by fossil fuels; (4) procuring zero-emission vehicles for the city fleet; and (5) collaborate with suppliers, fleet operators and businesses to accelerate the adoption of zero-emission vehicles (C40 Cities, 2020). The effort towards a greener city is further completed by a plastic ban imposed since July 2021.

Jakarta has also become a major digitalisation hub in Indonesia. Since 2014, the Jakarta Smart City program has positioned the province as a data analytics and digitalisation centre. Since then, Jakarta has benefitted from digitalisation in various government activities, from day-to-day complaint filing via the Qlue Apps to public bus timing, insights and analysis. In 2020, Jakarta took their digitalisation onto the

[2]Percentage covered refers to land areas in Jakarta that were endowed with bus stops, bus station, or train station within a radius of 500m

next level by launching JAKI's super apps, which provides various government services from complaint handling to tax calculation. During the COVID-19 pandemic, the app allowed Jakarta's citizens to schedule and book their vaccination.

The government set up the Jakarta Development Collaboration Network (JDCN) to connect service consumers and providers in six areas: (1) Environmental Resilience, (2) Future of Work, (3) Urban Regeneration, (4) Innovation and Technology, (5) Equality and Empowerment, (6) Art & Culture (Sekretariat JDCN, Sekretariat JDCN). JDCN is embedded in the city's campaigns on Jakarta and Jakarta the City of Collaboration. This collaborative effort was further strengthened during COVID-19 in a new initiative dubbed the Large Scale Social Collaborative program. This program consists of collaboration activities such as complementary training provided by the enterprises, free cellular data for teachers and students provided by ordinary citizens, and food donation to those affected by the pandemic.

2 Economic Development

As one of the largest metropolitan globally, Jakarta has a large and growing economy, comparable to Sweden for per capita GDP (using purchasing power parity (PPP)). As the only financial centre in Indonesia, the province is home to the Indonesia Stock Exchange (IDX). Its robust economy warrants a deeper understanding, which we will be covered in this section.

As illustrated by Fig. 1, Jakarta's economy showed consistent Gross Regional Domestic Product (GRDP) growth from 2012 to 2019, registering an annual expansion between 5.8%-6.5% before the global pandemic. The wholesale and retail trade is Jakarta's largest sector, contributing 17% to its GRDP, followed by the processing (12%), construction (12%), and financial services (11%) sectors.

As the capital of Indonesia, the province has centralised the nation's economy at its core: the province itself contributed 17.6% to the national economy in 2020 (Indonesia's National Bureau of Statistics, 2021). The congregation of businesses and workers in the province gave rise to its vibrancy in the wholesale and retail trade sector and supporting sectors such as finance. Besides that, we also observed a significantly huge construction sector: this is a corollary of President Joko Widodo's mass infrastructure projects across Indonesia to improve connectivity: Presidential Decree No. 58/2017 endowed 26 out of 238 National Strategic Projects to Jakarta Province. These projects include Elevated Highway Jakarta-Cikampek, Mass Rapid Transit (MRT) North-South Corridor, Airport Express Train, and Greater Jakarta Light Rail Transit.

However, the onset of COVID-19 left a profound impact on Jakarta's economy. The enactment of multiple containment measures in the past year resulted in its first economic contraction of 2.4% in 2020 (see Fig. 1). Despite that, two sectors remained resilient: the healthcare and the information and communication technology (ICT) sectors grew by 22% and 13%, respectively.

The need for COVID-19 testing, treatments and vaccination surged amidst the pandemic. The sheer demand for COVID-19 testing opened an avenue for private health providers to fill the gap left by the overstrained public healthcare system. From March 2020 to September 2021, over 6.3 million COVID-19 tests have been administered (Jakarta Smart City, 2021). Due to the overwhelming demand, administering the COVID-19 test is a lucrative business: private clinics in Jakarta often require a premium, promising a reliable and quick turnover. A test in Jakarta could cost anywhere between IDR 700,000 to IDR 1 mn, depending on the result turnover rate. This was lowered when the national government imposed a price ceiling for PCR tests at IDR 250,000 per test to ensure affordability[3] (Indonesia's Ministry of

[3] A price ceiling of IDR 250,000 was imposed in Java and Bali regions. Areas outside these regions have a price ceiling of IDR 300,000.

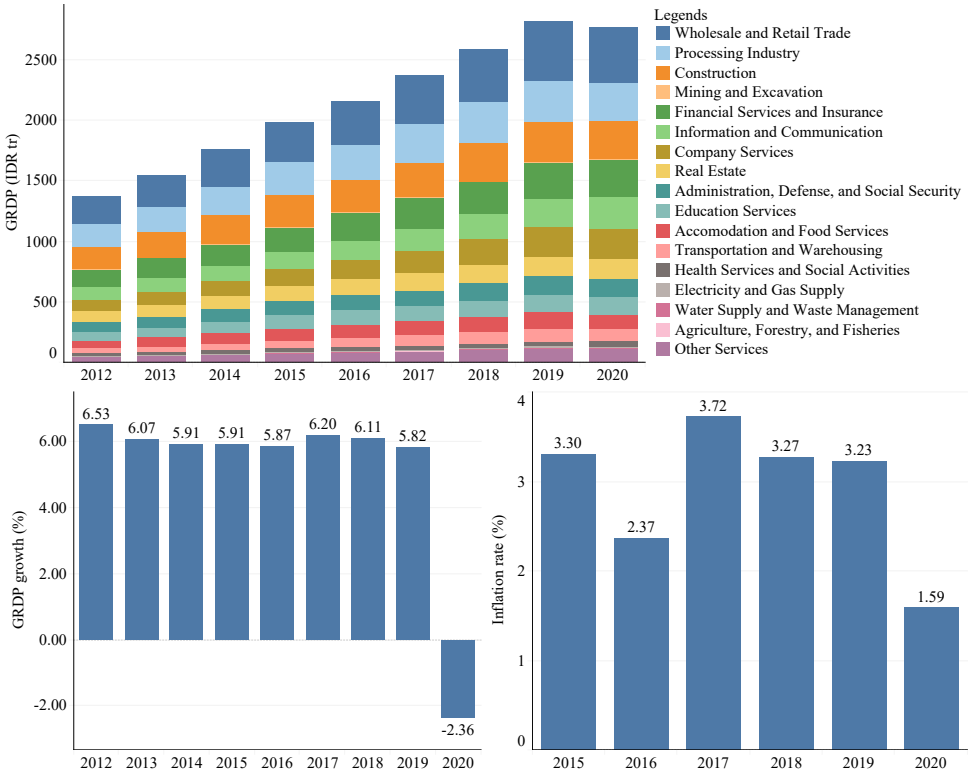

Figure 1: GRDP by sectors (top), GRDP growth (bottom-left), and inflation rate (bottom-right)
Source: Indonesia's National Bureau of Statistics

Health, 2021). Nonetheless, amid the ongoing demand for testing fuelled by health concerns and travel requirements, we will likely continue to observe robust growth in the healthcare sector.

Meanwhile, the growth in the ICT sector is reciprocal with the increase of digital users that spurs online consumption (Google, Temasek, and Bain & Company, 2020). In particular, the movement restrictions imposed spurs demand for e-commerce, remote working platforms and digital learning solutions.

Fig. 1 also shows Jakarta's inflation rate for 2015 – 2019. Varying from 2.37% to 3.72%, Jakarta's inflation rate is above the national average. In 2020, the province recorded the lowest inflation rate at 1.59%, as consumers decreased overall spending due to economic uncertainty.

Fig. 2 shows that DDI accounted for only a small proportion of the total investment in Jakarta before 2017. Since 2017, domestic investments have increased considerably. At the same time, its FDI inflows continue to grow. The province hit a record-high investment of USD 8.51 bn in 2019, propelled mainly by DDI. DDI inflows are concentrated in construction, transport, warehouse, and telecommunications sectors, whereas for FDI, dominant sectors include transportation, warehouse, industrial complex, and telecommunications (Indonesia Investment Coordinating Board, 2020). The drive for investments is further complemented by the establishment of the Jakarta Investment Centre in 2018. The centre supports investors by matching businesses to relevant industries, connecting investors to private and public projects and investment opportunities, and facilitating collaboration with multi-stakeholders via investment forums.

The COVID-19 pandemic also caused a dent in Jakarta's investment inflows, where total investments

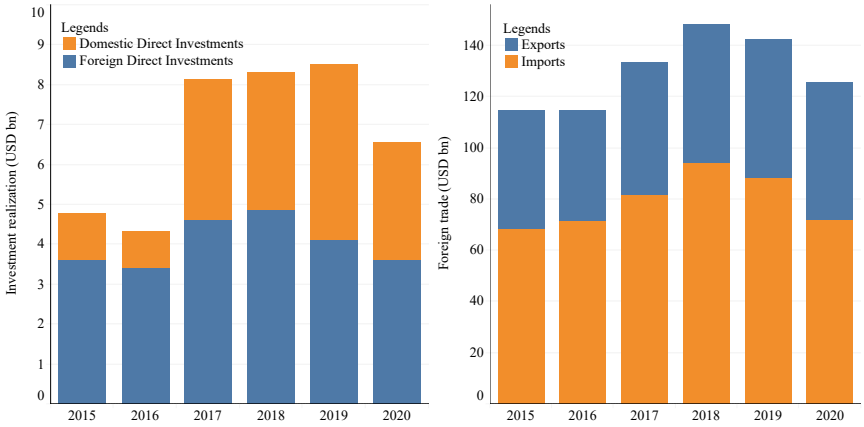

Figure 2: Investment realization (left) and foreign trade (right)
Source: Indonesia's National Bureau of Statistics

dropped from USD 8.41 bn in 2019 to USD 6.56 bn in 2020, a stammering 23% decrease. Amid the uncertain economic condition, investors are likely to withhold their investment decision until business and economic climate stabilised.

The foreign trade activities in Jakarta province also showed an upward trend. Imports dominated the proportion of trade, with an import:export ratio of 3:2. Jakarta's considerably lower export value is understandable due to two reasons. Firstly, its economic structure revolves around non-export services sectors such as administration, defense and social security, finance and ICT. Secondly, the concentration of essential services in the capital city encouraged the agglomeration of consumers and labours, thus increasing the need for imports. While Jakarta does not directly export commodities and other manufactured goods, its Tanjung Priok port processed most of the exports from other provinces: the value of export that pass-through Jakarta (but not from Jakarta) in 2019 amounts to about USD 54 bn (Indonesia's National Bureau of Statistics, 2020)

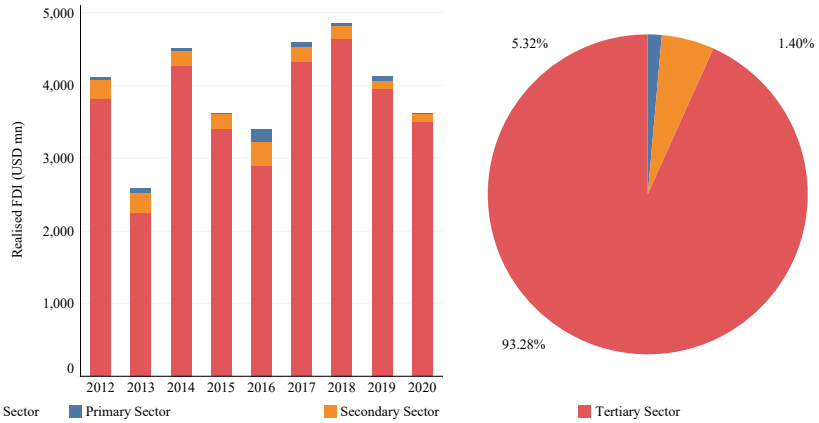

Figure 3: DDI by sector for 2014-2020 (left) and 2020 (right)
Source: Indonesia's National Bureau of Statistics

Fig. 3 provides an overview of domestic investment in the province for the past eight years. As shown, most of the DDI in Jakarta came from the tertiary sector, which has consistently taken up 80% of the total DDI. While DDI hovers around USD 0.5-1.5 bn from 2013-2016, it surged to over USD 3 bn in 2017 and maintained above this threshold throughout. The pandemic has decreased its domestic investment, but it still reaped in over USD 3 bn in 2020.

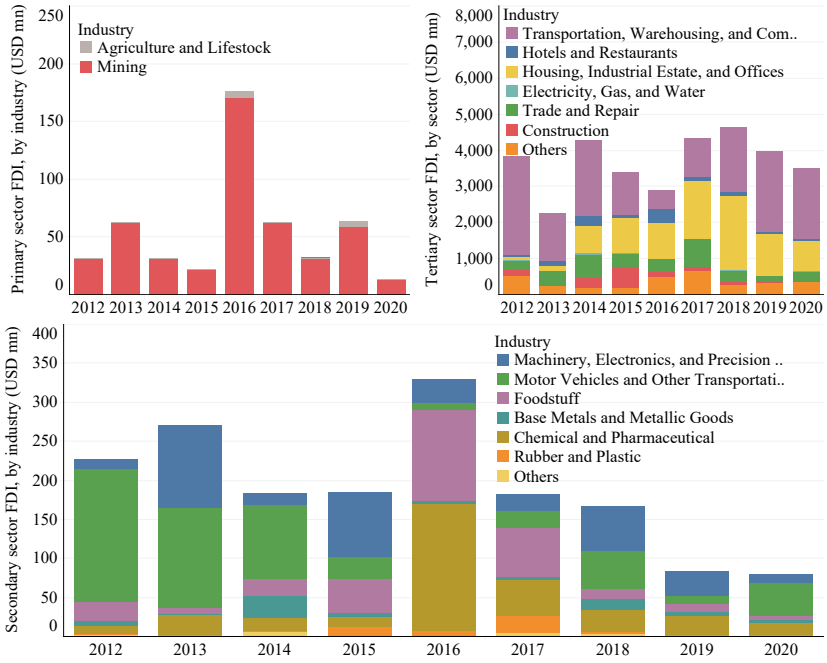

Figure 4: DDI by sectors: primary (top-left), secondary (bottom), and tertiary (top-right)
Source: Indonesia's National Bureau of Statistics

Fig. 4 breaks down DDI by sectors in 2020. We have observed considerable chemical and pharmaceutical industry investments during the pandemic. Investors likely see the high demand for healthcare as a lucrative business opportunity. The transportation, warehousing, and communication industry contributed the most to the province's DDI. This was in line with the booming digital sectors discussed in earlier sections.

The region constantly received over USD 3 bn in FDI from 2012 to 2020, except for 2013 when Indonesia experienced an economic slowdown due to weak global commodity prices. Similar to DDI, the tertiary sector accounts for most of Jakarta's FDI. It is also notable that FDI realisation in Jakarta is highest amongst 34 Indonesian provinces. Singapore was the highest contributor of FDI in Jakarta, accounting for 65.2% of total investment in the first quarter of 2020, followed by China and Japan that made up 13.6% and 11.3% of Jakarta's FDI, respectively (Petriella, 2020). Fig. 5 dissects FDI data into sectors. We are interested in the tertiary sector, which brought in the most FDI. Fig. 6 reflects foreign interests in the transportation, warehousing communication sector. First, this reiterates the growing ICT market in the province. Second, the high turnover in e-commerce propels the need for storage and processing (warehousing) and transportation of goods from warehouse to consumer.

In Jakarta, micro and small enterprises (MSEs) increased from 40 thousand in 2013 to around 63

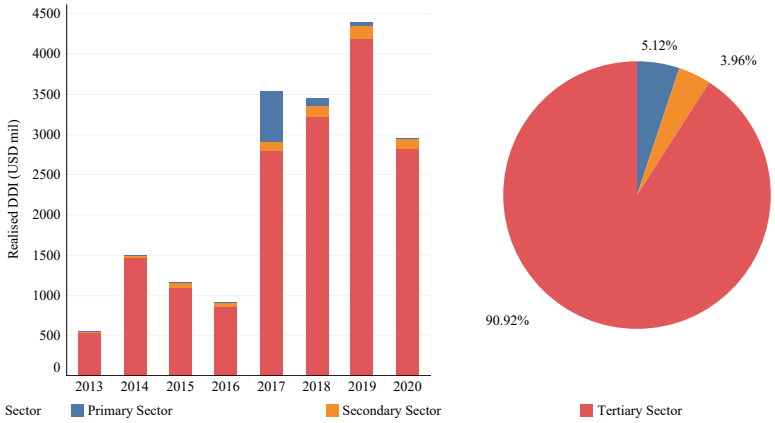

Figure 5: Overview of FDI by sector for 2014-2020 (left) and 2020 (right)
Source: Indonesia's National Bureau of Statistics

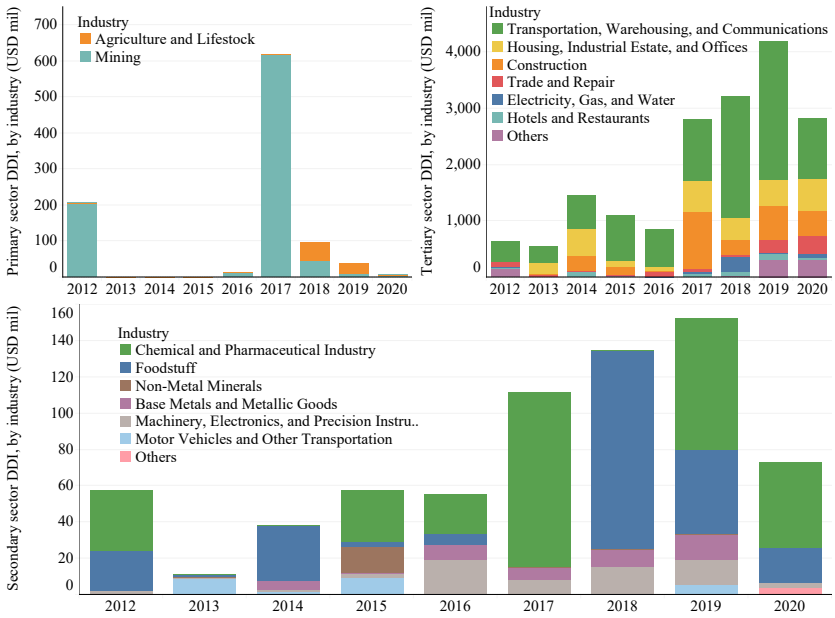

Figure 6: FDI by sectors: primary (top-left), secondary (bottom), and tertiary (top-right)
Source: Indonesia's National Bureau of Statistics

thousand in 2019 (see Fig. 7). However, the numbers fluctuated over the years. It dropped from about 40 thousand in 2013 to 35 thousand in 2015, before surging to its highest of 95 thousand in 2016. Overall, the number of MSEs in Jakarta shows a fluctuating trend. This fluctuation is caused by a low entry and exit barrier (Badan Pusat Statistik, 2020).

Jakarta has also seen a considerable inflow of domestic and international tourists. Fig. 8 shows that the number of international tourists visiting its province ranged between 2.1 to 2.8 million yearly. The number is higher for domestic tourists at between 15-25 million, except for 2014, where it experienced

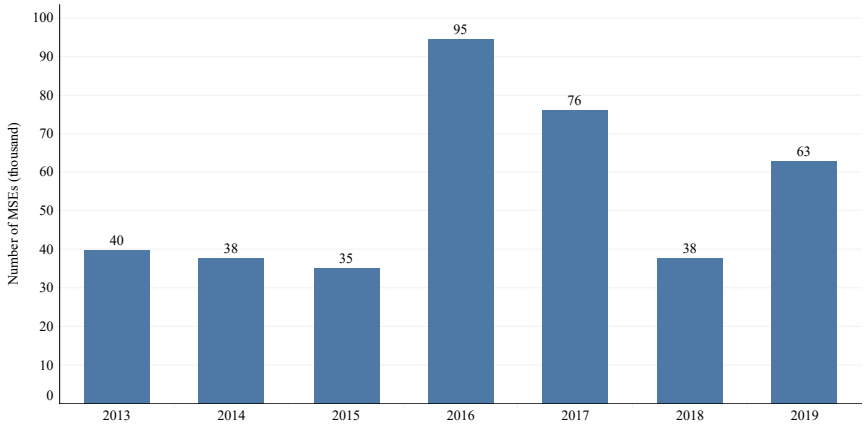

Figure 7: Number of Micro and Small Enterprises
Source: Indonesia's National Bureau of Statistics

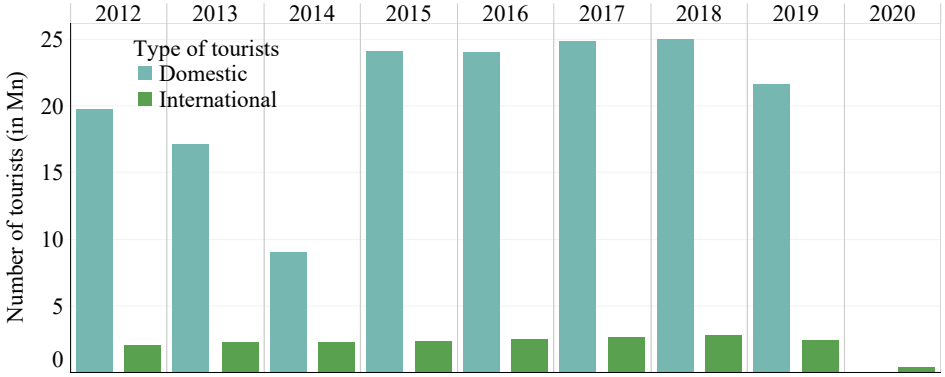

Figure 8: Number of tourists
Source: Indonesia's National Bureau of Statistics

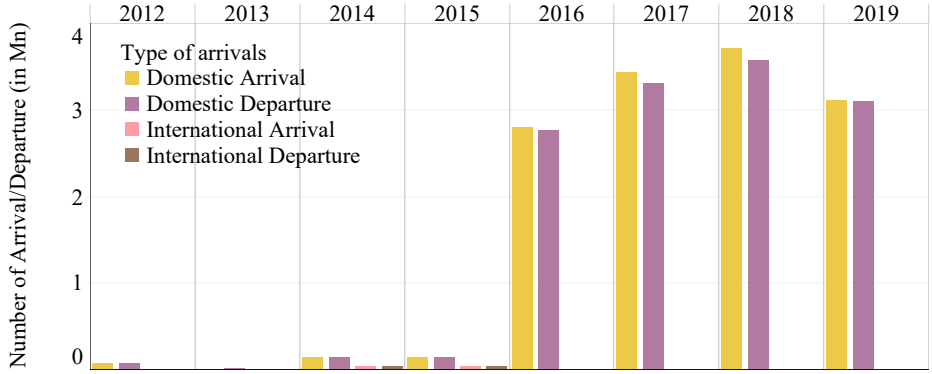

Figure 9: Number of aarrivals and departures
Source: Indonesia's National Bureau of Statistics

a dip, likely due to dampened demand and reduced economic and business activities amid global commodity price shock. Fig. 9 shows that the number of domestic arrival and departure were the highest in 2018, constituting 3.7 million arrivals and 3.6 million departures. On the other hand, the number of

international flights passing through Jakarta's airport has been halted since 2017. However, it is essential to note that the arrival/departure data does not correlate with the inflows of tourists as a large number of tourists arrived via the Soekarno-Hatta International Airport (SHIA), the largest international airport in Indonesia located at the neighbouring Banten province. Fig. 9 also shows that since 2016, Jakarta has received a surge in domestic arrivaldeparture. This is likely due to the opening of Halim Perdanakusuma Airport in Jakarta to divert passengers from the overcrowded SHIA (PT Angkasa Pura II, PT Angkasa Pura II).

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Current progress vis-a-vis RPJMD targets

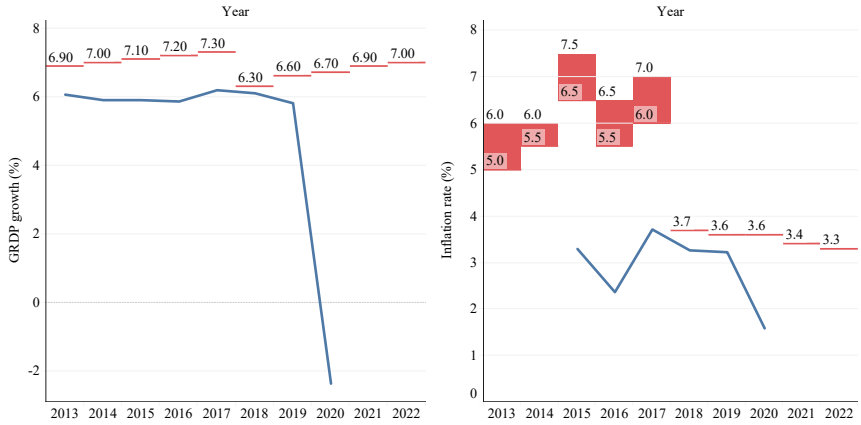

Figure 10: GRDP growth (left), inflation rate (right), and respective RPJMD targets
Source: Indonesia's National Bureau of Statistics, Provincial Government of DKI Jakarta

This section shows the progress of selected macroeconomic indicators relative to the corresponding targets from Jakarta's medium-term development plan (RPJMD) from 2013 to 2022. Fig. 10 shows that Jakarta's GRDP growth remained stable at an average annualised rate of 6%. Despite that, its growth remained below its RPJMD target. As it missed the mark every year, the government adjusted their target in the 2018-2023 iteration of the RPJMD. Even after adjustment, Jakarta continued to perform below its targeted growth rate. The pandemic year of 2020 further intensified the gap between its realised and target value.

The actual inflation rate of Jakarta is below the RPJMD target for all of the years, reflecting the province's ability to keep prices in check. The government has revised their inflation target in the 2018-2022 period based on its last RPJMD performances. In 2020, when the COVID-19 pandemic hit the province, the inflation rate of Jakarta Province plunged to their lowest rate since 2015 due to dampened demand amidst the pandemic (Bank Indonesia, 2020).

3 Labour Market Dynamism

The labour market conditions give us essential insights into the structure and the health of its economy. Jakarta province has a different economic structure compared to other regions in Indonesia. As the most extensive metropolitan area in the nation, Jakarta does not rely on the primary economy such as agriculture and mining. Therefore, it is essential to study how this unique economic structure is intertwined with the labour market. To do this, this section will elaborate on the employment and income statistic of the province. The indicators used for the analysis include labour force participation rate, unemployment rate, numbers of workers by industry, an average monthly wage, and provincial minimum wage. The data presented in this section uses two time periods: February and August of each year.

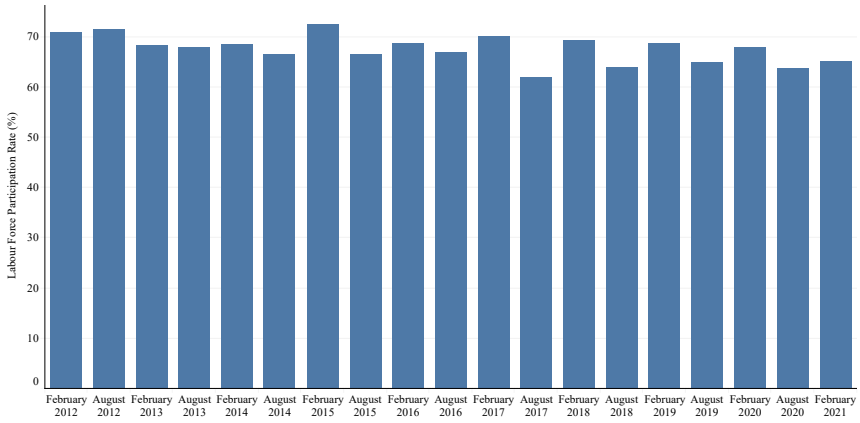

Figure 11: Labour force participation rate (left) and unemployment rate (right)
Source: CEIC, Indonesia's National Bureau of Statistics

Fig. 11 shows that Jakarta's labour force participation rate (LFPR) fluctuated over the years. LFPR tends to be higher in February and lower in August due to seasonal factors and changing economic conditions (Allen, 2020). Before the pandemic, the workforce of the transportation, storage, and communication (transport and ICT) sectors grew with a compound annual growth rate (CAGR) of 6.4% (see Fig. 12). In contrast, other industries with comparatively similar scale such as manufacturing and financial had CAGR of -2.43% and 2.3%, respectively. The workforce expansion in the transport & ICT sector can be associated with the astronomical growth of the platform economy in the Jakarta province. However, the supply of talent could not meet this rapid growth of the platform economy. According to Kearney in Nikkei Asia, Indonesia produced only 278 engineers[4] per million people in 2020 (Tani and Damayanti, 2020). Widianto (2020) reported that the lack of local tech talent drives Indonesia's unicorns

[4]Engineers here refers to tech personnel such as software engineer, IT engineer, data scientist etc.

such as Gojek, Traveloka and Tokopedia to operate their research and development centre abroad. To ease the labour supply crunch, the national government enacted the Omnibus Law in March 2020 to facilitate the hiring of foreign workers.

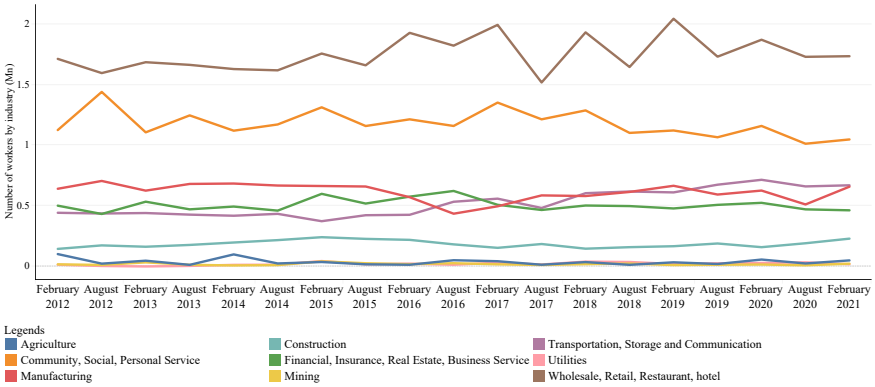

Figure 12: Numbers of Workers by Industry[5]
Source: CEIC

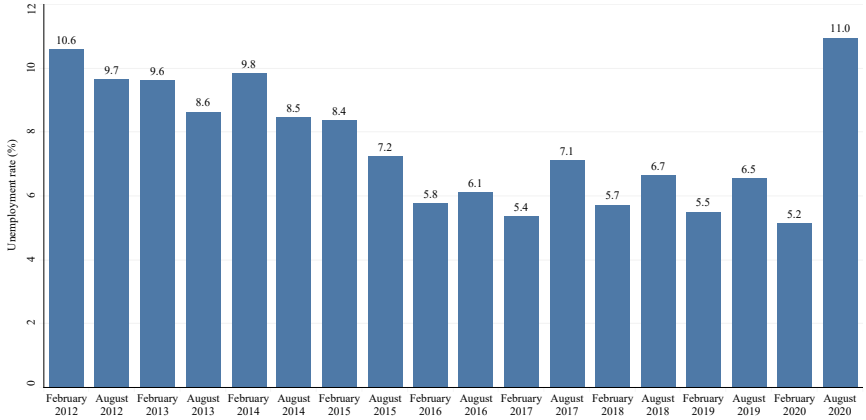

Figure 13: Unemployment rate
Source: CEIC

COVID-19 caused adverse effects on almost all the employment sectors, except for the utilities and construction sectors which registered 18% and 20% growth, respectively (see Fig. 12). Construction activities could operate fully, leading to higher demand for construction workers. For utilities, the increase is likely associated with increased demand for internet and household electricity usage amid a rise in e-commerce and remote working and studying activities.

Fig. 13 shows that the unemployment rate of Jakarta Province shows a decreasing trend over the years, albeit with some seasonal fluctuations. Unemployment hit a record high of 11.0 in August 2020 amid the pandemic. Jakarta collaborated with the private sector to offer a large-scale workforce collaboration programme (KSBB), a workforce training scheme to match job seekers with employers via a government platform to tackle the rise of the unemployment rate. In 2020, the program involved 31 firms and

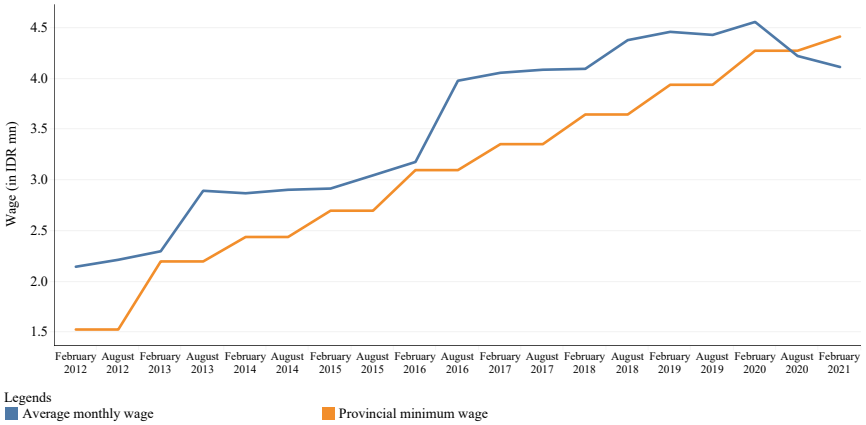

Figure 14: Labour force participation rate (left) and unemployment rate (right)
Source: CEIC, Indonesia's National Bureau of Statistics

successfully trained 3,591 workers (Lumban Tobing, 2021).

Jakarta's economic vibrancy has also benefitted ordinary workers, as reflected in its average monthly wage, which grew from IDR 2.147 in February 2012 to Rp4.560 in February 2020. Its average monthly wage has also treaded above the minimum wage for all the years, except in August 2020 and February 2021 amidst the COVID-19 pandemic. Analysing the labour market conditions in Jakarta province cannot be discussed in isolation without considering the influx of migrant workers from other provinces who were attracted by a more promising job environment in the capital. Furthermore, Jakarta's wages, amongst the highest in Indonesia, have also enticed workers. The province's attractiveness as an employment hub has seen an influx of 103 thousand migrants from January to October 2020, contributing to average monthly population growth of 43% (Nisa, 2020).

Current progress vis-a-vis RPJMD targets

This section shows selected labour market condition indicators' progress relative to the corresponding targets from Jakarta's medium-term development plan (RPJMD) from 2013 to 2022.

Jakarta's unemployment rate has consistently performed better than the targets from 2013 to 2017. The success may have propelled the government to slash its target by half in its 2018-2023 RPJMD: this over-optimistic outlook made the province miss its mark since 2018. The RPJMD intends to decrease unemployment by encouraging entrepreneurial activities via the OK-OCE program. Under the program, the government will establish a consultation, training, and accompaniment centre in 44 locations to foster 200,000 new entrepreneurs.

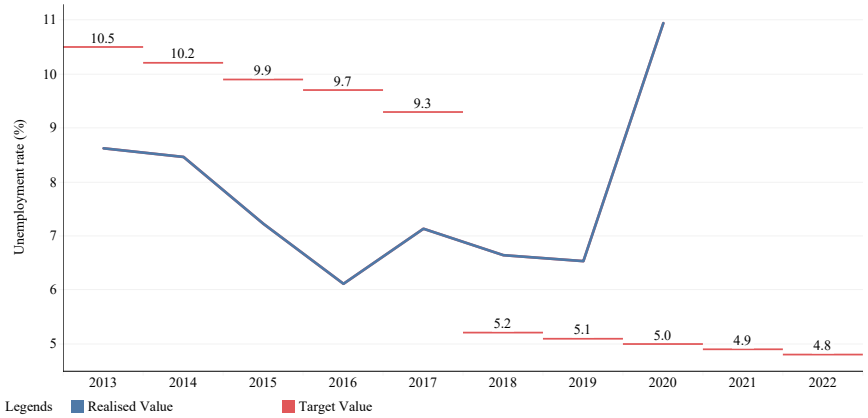

Figure 15: Unemployment rate and RPJMD target
Source: CEIC, Indonesia's National Bureau of Statistics, Provincial Government of DKI Jakarta

4 Infrastructure

As the capital city of Indonesia, Jakarta's infrastructure development carries a high significance: over 10% of the 238 projects laid out in the National Strategic Projects for constructing Jakarta's infrastructure. First, we look at one of Jakarta's key infrastructures, the Tanjung Priok port. The port is the central logistical hub in Indonesia that handles the bulk of Indonesia's exports and imports. Fig. 16 shows that the number of container ports that flow through the port increased to 6.8 million TEU in 2018, from an initial number of 5.9 million in 2013. While the port handles a high volume of containers, these numbers are starked compared to its neighbours: the Klang Port in Malaysia and the Singapore Port handled around 19.6 million and 36.9 TEUs of containers, respectively in 2020 (Maritime and Port Authority of Singapore, 2021; Port Klang Malaysia, 2020). As Indonesia experienced high economic growth, its trade in goods is growing in prominence, leading to an increasing need for logistical facilities. With increased trade volume over the years, the Tanjung Priok port has experienced severe overcapacity in recent years. This prompted the government to expand the Tanjung Priok Port by constructing the New Priok Port: the new port, expected to be fully operational in 2023, will increase the port's annual capacity to 19.5 million TEUs a year (Susanty, 2016). To further complement the port, the National Strategic Project allocated IDR 3.4 trillion to construct inland waterways to connect Tanjung Priok Port to Cikarang and Karawang Industrial Areas (Committee for Acceleration of Priority Infrastructure, Committee for Acceleration of Priority Infrastructure).

Next, we would like to investigate the province's road infrastructure and connectivity. From Fig. 17, the number of road vehicles in Jakarta has increased over the year. 2020 registered the highest number of vehicles on Jakarta's road, totalling 20 mn across various vehicle types. The sharp rise in vehicle numbers is mainly attributed to motorcycle usage. There is no record of the reason for this drastic increase. However, we postulate that the growth could be due to the popularity of e-commerce and delivery services that propel the demand for delivery riders.

Jakarta has also seen a rising number of public transport passengers in the past decade. The number of public bus passengers doubled from 2012 to 2019. The increase was attributed to three factors. First, the privatisation of PT. TransJakarta, the primary public transport provider in Jakarta, propels

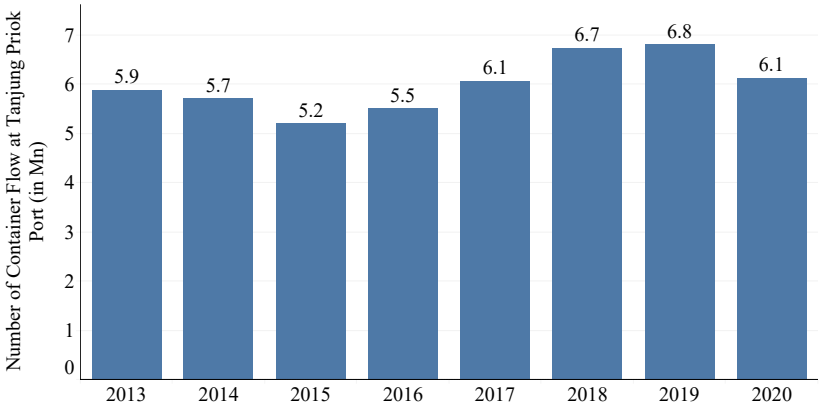

Figure 16: Number of container flow at Tanjung Priok (in Mn TEUs)
Source: Indonesia Port Company PT Pelabuhan Indonesia II (Persero)

new private investments, enabling the firm to open new routes and increase bus frequencies. As such, Jakarta's bus rapid system (BRT) expanded its transportation network in 2017, covering a total of 13 zones in Jakarta. Second, PT. TransJakarta procured new fleets every year to boost its bus services: the number of fleets grew from only 811 in 2012 to 3,865 in 2019. Third, bus fares have been kept constant at a flat rate of IDR 3,500 (SGD 0.30) since 2005, raising the affordability of public transport. Thus, the combination of increased network availability and fare affordability may have encouraged greater public transport usage.

After seven years of construction, Jakarta launched its first metro network (MRT) in 2019. The first phase of Jakarta's MRT consists of a 16 km long network with 13 operating stations. The project was funded by the Japan International Cooperation Agency (JICA) for ¥125 bn (SGD 1.5 mn). The railway transported 25 million and 10 million passengers in 2019 and 2020, respectively (PT MRT Jakarta, PT MRT Jakarta). The 2020 number is a corollary of mobility restriction amidst COVID-19: in a series of mobility restrictions measures, Jakarta limits its MRT operating hours to before 21:00. Besides, commuters numbers dropped as many workers and students worked and studied from home during this period. The second phase of the MRT is in the construction phase. Once completed, it will add 5.8 km of railway length and seven underground stations to the existing network.

Next, we would also like to understand the sustainability element of Jakarta's infrastructure. We evaluate the environmental quality using the Environment Quality Index (EQI). EQI consists of three parts: water quality index, air quality index, and land use quality index. Fig. 18 shows that the EQI of Jakarta has fluctuated but gradually improved from 2017 to 2019. The high EQI in 2015 is likely due to decreased economic activity amid the economic slowdown in Indonesia. The government attempted to strengthen its EQI via several policies such as car-free day and odd-even road policy to enhance air quality. The car-free day is expected to reduce the NO2 emission and PM 2.5 by 43% and 70%, respectively (DKI Jakarta Environment Agency, 2020) (Dinas Lingkungan Hidup DKI Jakarta, 2020). In the C40 summit, the government has also pledged its commitment to adopt electric vehicles (EV) in its public transportation. This follows with a pilot project that operates a transportation route using an electric bus in September 2021 (PT Transportasi Jakarta, 2021).

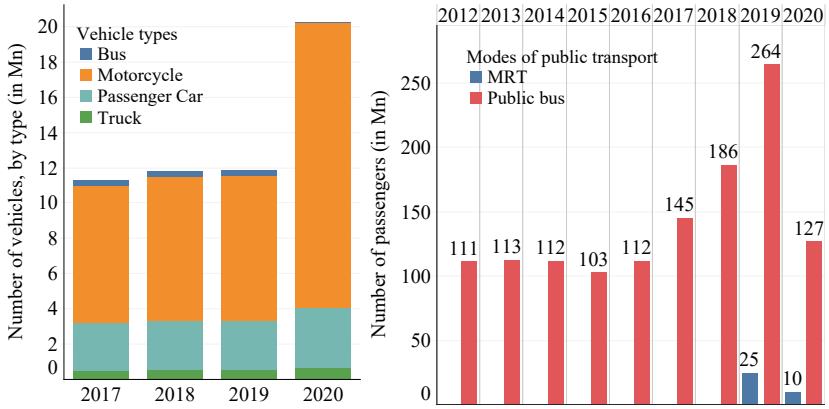

Figure 17: Number of vehicles by type (left) and number of public transport passengers (right)
Source: Indonesia's National Bureau of Statistics, PT MRT Jakarta, PT Transportasi Jakarta

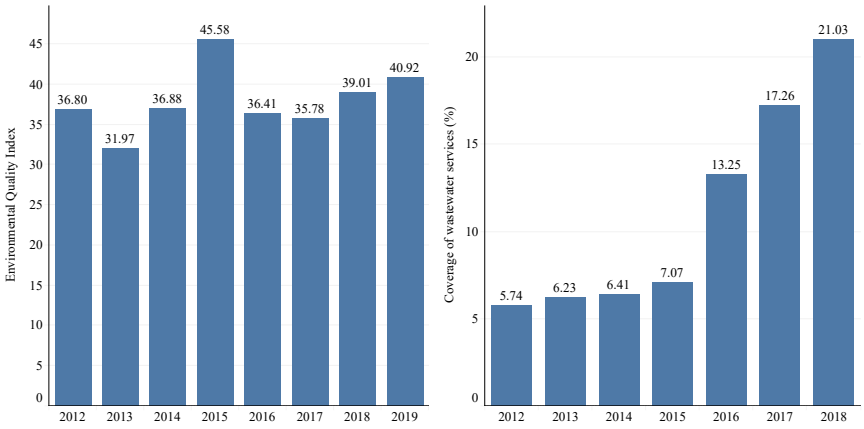

Figure 18: Environmental Quality Index (left) and coverage of wastewater services (right)
Source: Indonesia's National Bureau of Statistics

In terms of wastewater coverage, Fig. 18 shows that the coverage had quadrupled from 5.74% in 2012 to 21.03% in 2018. 15. There is also a considerable jump from 2015 to 2016: This could be due to the building of additional wastewater infrastructure by PD Pal Jaya, a state-owned wastewater management firm, in 2016 (Irawan and Anggraini, 2018). In the same year, PD Pal Jaya has also replaced its septic tanks with Biopal, a modified septic tank that is permeable would prevent wastewater contamination (Irawan and Anggraini, 2018).

Current progress vis-a-vis RPJMD targets

This section shows the progress of selected infrastructure indicators relative to the corresponding targets from Jakarta's medium-term development plan (RPJMD) from 2013 to 2022.

For the latest 2018-2022 RPJMD, the government has decided to include the EQI indicator into their

performance measure. Fig. 19 shows that Jakarta's EQI has met its target since 2018. The government attempts to improve its environmental indicators via green space allocation. The regulation mandates 30% of land in Jakarta be set aside as green spaces.

Figure 19: Environmental Quality Index and RPJMD target
Source: DKI Jakarta Environment Agency, Provincial Government of DKI Jakarta

5 Social Development

Social welfare and human development are relevant components to holistic progress. Several indicators used to measure social welfare - most notably the GINI Index and the Human Development Index (HDI) - are congruent to the realisation of the United Nation's Sustainable Development Goals (SDG). Jakarta's social welfare priorities include human development, quality of education, quality of healthcare (measured by life expectancy) and social equity and inclusivity.

Jakarta Gini index over the past nine years is above the national average (see Fig. 20). The inequality has declined to its lowest of 0.39 in 2018 and 2019. In 2020, the Gini index rose to 0.40, reversing the progress made in the past two years as the pandemic perpetuates inequality amongst the rich and the poor. Ferreira (2021) argued that inequality during the pandemic could either widen or narrow depending on two mechanisms: 1) pre-existing labour and capital market conditions and 2) social transfers.

Pre-existing occupational differences favoured high-income workers that allowed them to work from home during COVID-19 lockdown, whereas low-income workers with physically demanding jobs faced income loss during this period. Furthermore, wealthier individuals invested in assets and stock markets, which had grown in the past year, while their low-income counterparts struggled to put food on the table. On the other hand, income transfers, cash assistance and supporting social programs for low and middle-income households seek to alleviate quality of life and improve income inequality. Based on the Gini, it appears that Jakarta's social transfer is insufficient to mitigate the negative impact of labour and capital market distortion.

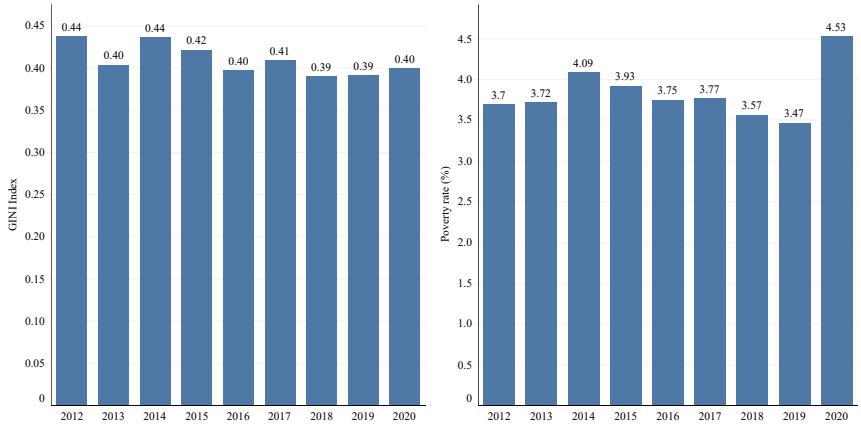

Figure 20: GINI Index (left) and poverty rate (right)
Source: Indonesia's National Bureau of Statistics

The effort to reduce poverty in the Jakarta province shows promising results, with the poverty rate declining from 2014 to 2019. The rate reached an all-time low of 3.47 in 2019. According to the Jakarta Regional Journal, poverty was most affected by unemployment (Yurianto, 2019). As Jakarta's populace lose their job due to COVID-19, this result in a reciprocal increase in the poverty level to 4.53 in 2020, the worst recorded figure in nine years.

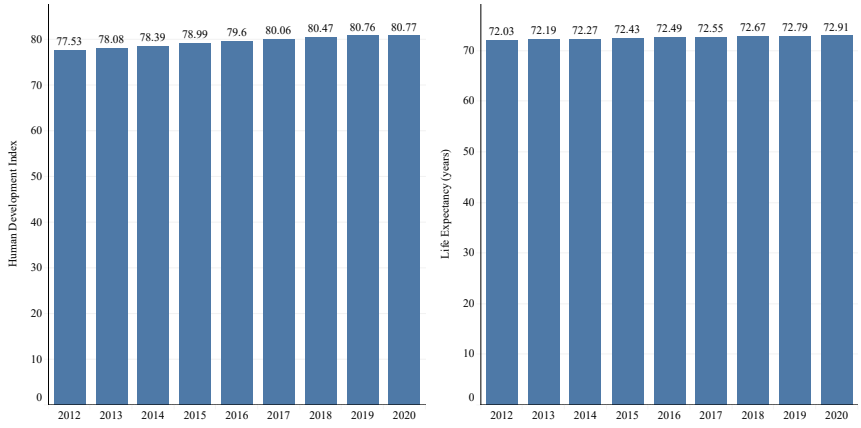

Figure 21: Human development index (left) and average lifespan (right)
Source: Indonesia's National Bureau of Statistics

Jakarta's Human Development Index (HDI) shows stable growth over the past nine years (see Fig. 21). Starting from 77.53 in 2012, the province successfully raised its HDI by 3 points to 80.77 in 2020. One of the factors contributing to the increasing HDI is improved educational attainment. This is reflected in Fig. 22, where the province successfully raised years of schooling from 10.43 years to 11.13 years over the past nine years. As the capital city of Indonesia, Jakarta accounted for more years of educations compared to the national average at 8.43 years (based on 2019 level). Fig. 23 shows that this improvement

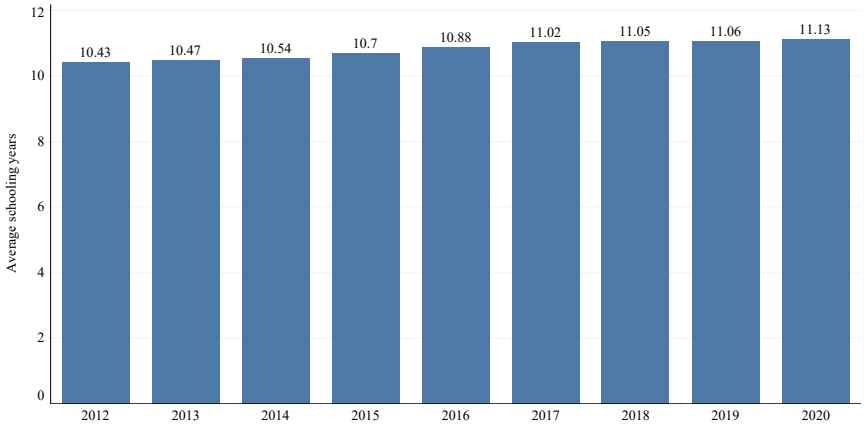

Figure 22: Average schooling years
Source: Indonesia's National Bureau of Statistics

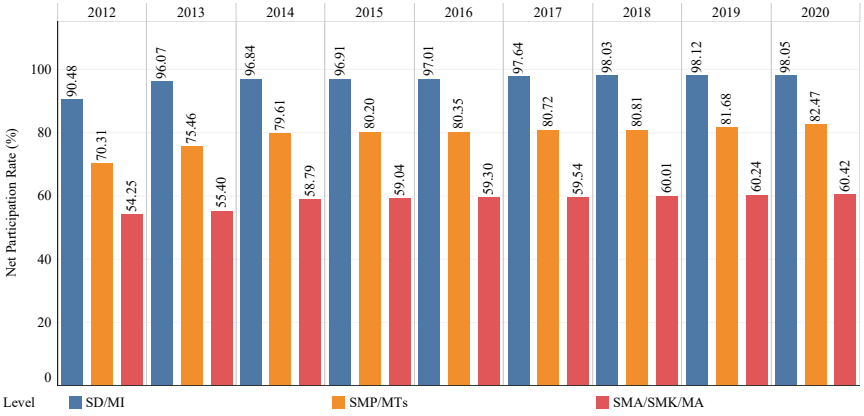

Figure 23: Net Participation Rate (%) of primary school (SD/MI), secondary school (SMP/MTs) and high school (SMA/SMK/MA)
Source: Indonesia's National Bureau of Statistics

manifests in all levels of education: the net participation rate for the SD/MI (primary school), SMP/MTs (secondary school) and SMA/SMK/MA (high school) have increased by 7.5, 12 and 6 percentage points, respectively from 2012-2020.

The government attempts to increase school participation and quality of education through two policies: the zonation system and abolishing the national testing system. The zonation system admits students based on the school's proximity to their home. This policy intends to establish equitable and quality education for all Indonesians by preventing the aggregation of high achieving students in a few elite schools: students with high academic achievement typically come from middle to upper-income households, who also received better out-of-school education supports. Second, the eradication of the national testing system has also encouraged greater school participation and quality of formal schooling. The national testing system is a mass examination at the end of each study level that determines whether

students can graduate. By abolishing the test, school teachers can devote more time to providing quality education than performing tedious administrative tasks such as testing preparation (Sembiring, 2019). Moreover, national tests placed unnecessary stress on students who dropped out of school when they failed the exam (Sembiring, 2019). This is particularly damaging for children in early education (primary/secondary school) who were denied higher education access.

Current progress vis-a-vis RPJMD targets

This section shows the progress of selected social development indicators relative to the corresponding targets from Jakarta's medium-term development plan (RPJMD) from 2013 to 2022.

From Fig. 24, Jakarta's GINI index from 2013 to 2017 has failed to meet its RPJMD targets. Based on these performances, the government adjusted their targets in the subsequent RPJMD for 2018-2022 to a more achievable figure. After revision, the province has been successful in keeping its GINI index below the target value. The province also hit its target in 2020, even though its GINI has increased amid the COVID-19 pandemic. Similarly, the province has failed to meet its poverty rate target from 2013-2017 (see Fig. 24). After revision in 2018, it successfully achieved its target for the first year. Despite improving the poverty rate, the province again missed its mark in 2019, raising the question of whether the target set is too unrealistic.

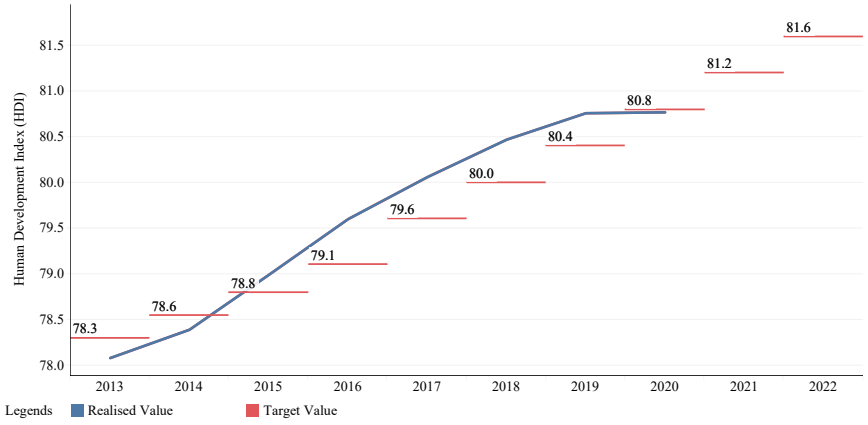

Figure 24: Human Development Index and RPJMD target
Source: Indonesia's National Bureau of Statistics, Provincial Government of DKI Jakarta

In its 2018-2022 RPJMD, the government aims to lower the poverty rate GINI index by two approaches. First, by subsidising basic needs for low-income households such as education, healthcare, and transportation cost. Second, introducing vocational education and entrepreneurship via the One Kecamatan, One Centre of Entrepreneurship (OK-OCE) program to reskill and upskill the low-income workforce and foster entrepreneurship.

Fig. 25 illustrates that Jakarta Province achieved its target for HDI from 2015 to 2019 and is slightly below the mark in 2020. This has been possible with improvement in education via the Kartu Jakarta Pinter (KJP) plus program. The program aimed to reduce the school dropout rate and increase education access by subsidising expenses such as uniforms and books.

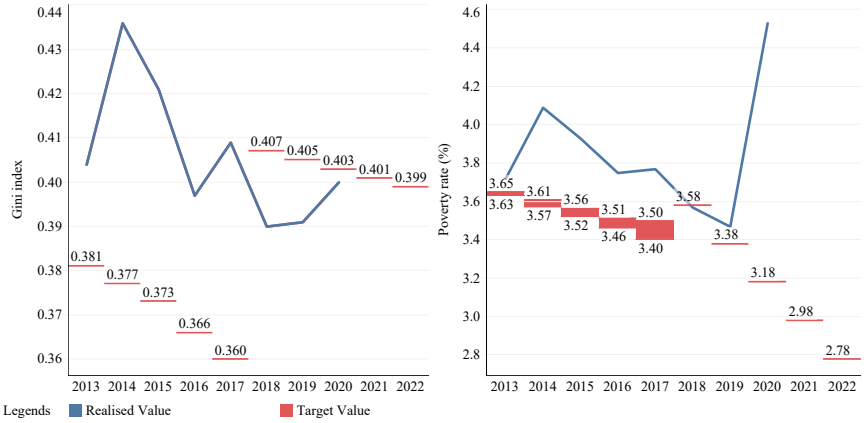

Figure 25: Gini Index (left), poverty rate (right) and respective RPJMD targets
Source: Indonesia's National Bureau of Statistics, Provincial Government of DKI Jakarta

6 Governance

We analyse Jakarta's governance using two indicators. First, we consider the government's fiscal profile. Second, we gather the public report of corruption as a measure of good governance. We scale this indicator with respect to the government's expenditure.

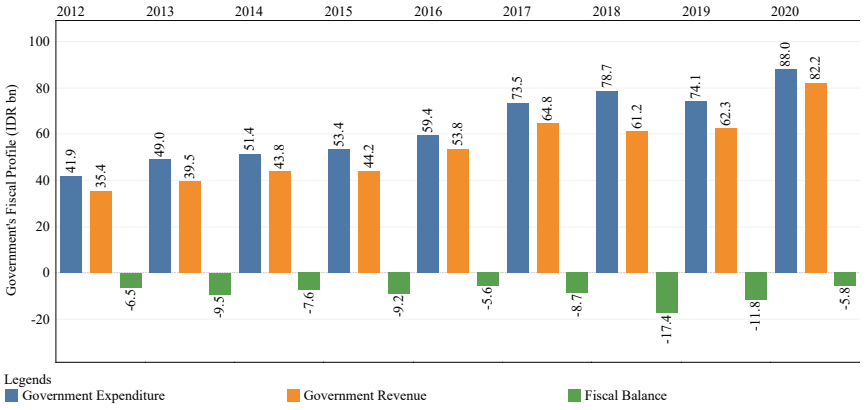

Figure 26: Government Fiscal Profile
Source: Financial Statistics of Provincial Government (Indonesia's National Bureau of Statistics)

As illustrated by Fig. 26, the government's revenue and expenditure have expanded considerably since 2012. The increase in government expenditure is attributable to a multitude of development projects in the province, as laid out in the previous sections.

Next, we look at the public reports of corruption as a measure of good governance. As illustrated in Fig. 27, public reports of corruption (expressed in per 100 million of government expenditure) have eased since 2012. Besides increased government expenditure, the decrease in this indicator is also a result of a significant reduction in public complaints on corruption. The consistent drop shows encouraging

progress in Jakarta's governance.

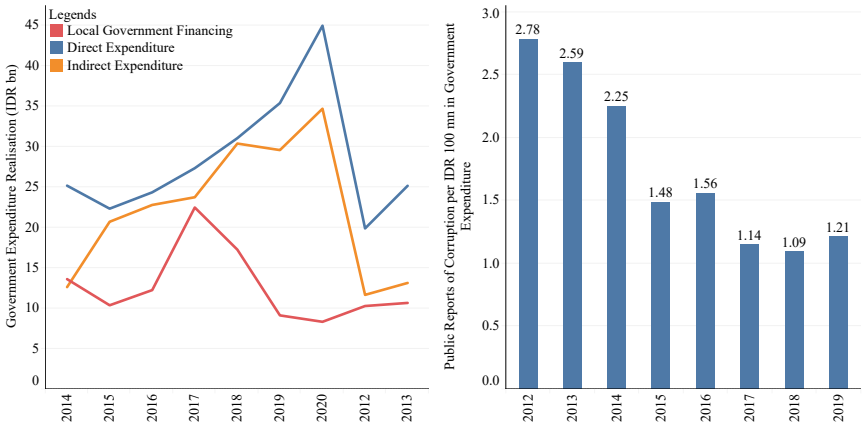

Figure 27: Government Expenditure Realization (left) and Public Report of Corruption per IDR 100 mn in Government Expenditure (right)

Source: Financial Statistics of Provincial Government (Indonesia's National Bureau of Statistics), Corruption Eradication Committee (KPK) Annual Report

7 conclusion

As the capital city of Indonesia, Jakarta's economy contributes 17.6% of the national GDP in 2020. The concentration of economic and trade activities made the province an attractive investments destination in transportation, warehousing, telecommunication and construction sectors. Its vibrant business environment and sizeable online consumer base have also given rise to the province's digital economy.

Jakarta's workforce in transportation and ICT sectors were the only two sectors that registered a positive growth since 2012 due to its growing digital economy, particularly the platform economy driven by eCommerce activities. Its unemployment rate has dropped considerably over the years, except during the COVID-19 pandemic, reaching a record high of 11%. Comparing its realised unemployment rate with its RPJMD target reveals that the province has been achieving its target in the 2013-2017 period. However, the province has missed its target after the government revised it in its 2018-2023 RPJMD.

In terms of infrastructure, the Tanjung Priok port, the main exports and imports hub in Indonesia, is one of the key development focuses. The port processed over 6.8 million TEU in 2018, up from 5.9 million in 2013. The port is currently experiencing overcapacity amid an increase in trade volume over the years, which necessitates the expansion of the port via the construction of the New Priok Port. Besides port infrastructure, Jakarta's megaprojects include expanding its transportation network via the metro network (MRT) and rapid bus system.

Jakarta's social development has seen good progress. Before the COVID-19 pandemic, the province's HDI, Gini index, poverty rate, and educational attainment have improved. These indicators were also seen to exceed their RPJMD targets. For governance, Jakarta's fiscal size has expanded over the years. The province has been running in deficit since 2012. The public reports of corruption have also seen a decrease across the years.

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