



Chapter 7

Regional Dimensions of Infrastructure Development in Indonesia

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The disparity between Java and other regions in Indonesia remains a persistent challenge despite 2 decades of regional autonomy. Economic development continues to be concentrated in Java, while other regions – particularly in eastern Indonesia – experience slower growth and limited access to quality public services. To address this issue, the government has prioritised infrastructure development to promote balanced regional development, primarily through the *Proyek Strategis Nasional* (PSN). This chapter aims to assess the extent to which the PSN has addressed regional disparity and explores the role of local governments in its implementation. It examines ongoing infrastructure development, including the challenges faced by the PSN, and discusses innovative policies in financing, institutions, and the role of local governments. Two case studies of PSN projects – one from Java and another from outside of Java – are presented. The chapter concludes with recommendations to address regional disparities and to foster inclusive and sustainable development across Indonesia. It emphasises the need for integrated regional development, taking into account economic diversification, commodity downstreaming, development linkages, and human resources development. Additionally, it highlights the importance of innovative financing schemes, including public–private partnerships, to meet the substantial infrastructure investment required. Specialised institutions, such as PT Sarana Multi Infrastruktur and PT Penjaminan Infrastruktur Indonesia, are key to facilitating infrastructure financing. Overall, it underscores the significance of infrastructure-driven development in reducing regional disparities and promoting equitable growth in Indonesia.

1. Background

1.1. Fiscal Decentralisation

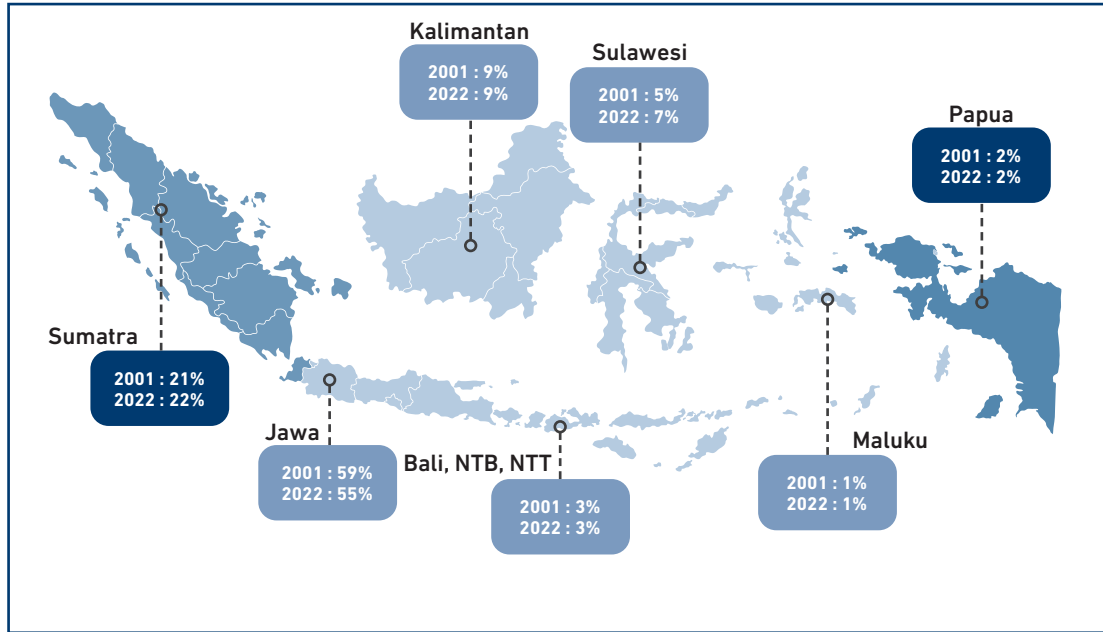
Regional autonomy is the delegation of authority from the national government to regional governments to carry out and be responsible for development in various regions. The delegation of authority is a consequence of the implementation of regional autonomy by prioritising the principles of decentralisation, deconcentration, and co-administration. Therefore, the division of authority into provinces, regencies, and cities – and the division of governmental affairs between levels of government – creates a relationship of authority and financial relations that include public services as well as utilisation of both natural and other resources.

The justification for decentralisation is to lessen reliance on the central government through regional empowerment activities in the context of managing development in the regions based on independence, creativity, and innovation owned by each region. Decentralisation is supposed to increase the quality of services supplied by the government to the public, both directly (i.e. service goods) and indirectly (i.e. public goods), because local governments are closer to their constituents. Decentralisation, in conjunction with democracy, is projected to improve the efficiency, effectiveness, and accountability of the public sector.

However, decentralisation can both benefit and regress regional development. Decentralisation can be a driving force for development – if local governments can measure and fulfil the needs of their people in achieving prosperity and if transaction costs are lower compared to when directly handled by the central government. Based on this perspective, decentralisation works to increase public sector efficiency, good governance, and government accountability. In contrast, decentralisation is an impediment to development when implemented in regions with inadequate governance capacity. Due to the dearth of information and the poor quality of government human resources, there is no assurance that the available budget will be utilised optimally for regional development. Low government capacity tends to increase costs and opportunities for corruption and abuse, inefficient government services, economic distortions, and disparity between communities and regions.

1.2. Regional Disparity

Decentralisation has been unable to deliver fair and equitable economic development for the people of Indonesia, especially in improving welfare. Out of 34 provinces (before proliferation of administrative regions of Papua), the provinces in Java still dominate the Indonesian economy, however (Figure 7.1). The dominant contribution of these regions has persisted since the beginning of fiscal decentralisation implementation in 2001. Yet Java's share in gross domestic product (GDP) has been declining, from 59% in 2001 to 55% in 2022. Some of the challenges to regional development in Indonesia include the country's vast territory, differences in the quality of human resources, and a limited ability of the government to distribute development simultaneously. The impact of such conditions is that rapid development has only occurred in Java, while development in non-Java regions is slow.

Figure 7.1. Contribution of Regions in Each Island to the Economy

Source: Statistics Indonesia, Produk Domestik Regional Bruto, <https://www.bps.go.id/subject/52/produk-domestik-regional-bruto--lapangan-usaha-.html#subjekViewTab3>

The development inequality between Java and non-Java has had a negative impact on both parties. The rapid development of Java encourages high urbanisation of the population there, which makes Java the most populous island in Indonesia. High population growth, the slowing growth of new jobs, and poor regional planning have also had negative impacts, creating slum settlements and new pockets of poverty, especially in urban areas. Non-Java regions with slow development tend not to receive the same quality of public services as those in Java. As an example, the quality of education received by those in Maluku and Papua is different from that received by those in Java, both in terms of knowledge as well as facilities and infrastructure.

Recognising the need to reduce regional disparities, the government has prioritised infrastructure development as part of its development goals, particularly through the *Proyek Strategis Nasional* (PSN). This chapter aims to understand to what extent the PSN has addressed regional disparity and explores the role of local governments in the implementation of the PSN. After the introduction, ongoing infrastructure development is described, particularly through the PSN and its challenges. This is followed by a discussion of innovative policies to support infrastructure development that include finance, institutions, and local government in PSN implementation. Two study cases under the PSN are then outlined, one from Java and another one from outside of Java. The chapter then concludes and provides some recommendations.

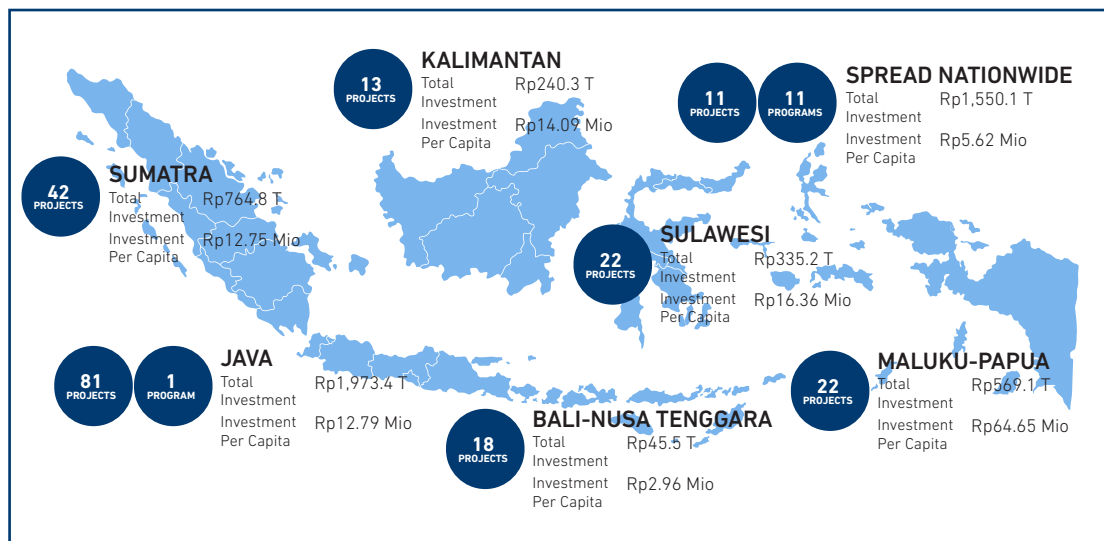
2. Developing Infrastructure

2.1. *Proyek Strategis Nasional (PSN)*

A strong economic structure – based on competitive advantages in various regions – is supported by qualified and competitive human resources. Regional development is a national priority aimed at resolving key strategic issues, including inequality between regions with the aim of increasing interregional equity; increasing the competitive advantage of regional growth centres; improving the quality of and access to basic services, competitiveness, and regional self-reliance; and increasing synergies in the use of regional space. To carry out this development agenda, the government created the PSN. This initiative is structured to make medium- and long-term development more concrete and measurable in resolving development issues – and its benefits more understandable and tangible. The PSN is considered to have strategic value and high leverage to achieve development priority targets.

The PSN project list was first stipulated through Presidential Regulation No. 3 of 2016, which then underwent four changes. Based on Presidential Regulation No. 9 of 2022, there are 200 projects and 12 programmes under the PSN, with a total investment value of Rp5,481.4 trillion. Projects are concentrated in Java and Sumatra in Western Indonesia. However, in terms of investment value per capita (using 2020 census data), the number for Maluku and Papua region is the highest. The number for Java equals that of Sumatra, is slightly lower than those in Kalimantan and Sulawesi, and is higher than those in Bali and Nusa Tenggara.

Figure 7.2. Distribution of PSN Projects



Source: KPPIP, Proyek Strategis Nasional, <https://kppip.go.id/proyek-strategis-nasional/>

2.2. Development Challenges

Decentralisation still raises many issues, including the lack of harmony between implementing regulations and other sector laws and regulations; high dependence of local governments on the national government, especially in financing development; limited apparatus and institutional capacity; and political dynamics that are obstacles to development. Regional development must be carried out in an integrated manner by taking into account overall development capacity; regional economic development on a local, national, and international scale; commodity development; and commodity downstreaming through the development of strategic areas based on natural resources and non-natural resources. In addition, regional development needs to improve linkages between urban and rural areas; revitalise transmigration areas; develop border areas and underdeveloped areas; and foster human resources development through fulfillment of basic services, increased productivity, and competitiveness.

To achieve the goals of decentralisation such as increasing equity between regions and reducing poverty, accelerating infrastructure development is important. Three issues pose challenges to accelerating infrastructure development: land acquisition, project planning and preparation, and funding (KPPIP, 2017). Land acquisition is still the biggest inhibiting factor in infrastructure development, accounting for 30% of problems. As land acquisition is the first step in development, issues must be addressed immediately in a project (Salim and Negara, 2018). Before the authority was given to the State Asset Management Agency, financing for land acquisition was spread across ministries and local governments, making the land acquisition process ineffective and inefficient.

The second obstacle relates to project planning and preparation in terms of coordination amongst project stakeholders as well as the quality of project documents. Infrastructure development involves many parties, which tends to slow down an agreement as each party has its own goal. The solution in this case is an institution that has a coordinating function to reduce and to overcome such a friction of viewpoints. Moreover, weak coordination and high sectoral egos – coupled with poor project design – can be a boomerang on PSN funding. The lengthy process of planning and preparation can reduce the interest and participation of the private sector, as the PSN is designed to minimise the contribution of the State Budget.

The third biggest obstacle is funding. PSN financing can be sourced from the State Budget, regional budgets, and/or other legal financing in accordance with statutory provisions. Funding that comes from governments must consider the national development planning system, while other financing needs to consider the financial capacity of business entities in financing the PSN. If PSN financing is obtained from a combination of sources, the integration of planning, budget allocation, as well as plans for project completion and operation are crucial.

Funding through government sources as well as financing originating from state-owned enterprises (SOEs) may be in line with the 'Money Follow Program' principle, which aims to allocate funds for priority projects and to increase efficiency for spending on priority projects. This principle is implemented by focussing on priority project proposals, integrating various funding sources as well as detailed discussions for project preparation. In addition, the government can use public-private partnerships (PPPs) as well as other innovative financing schemes. As for regions, governments there can use regional debt financing instruments and carry out regional funding synergies both from regional budget and non-regional budget sources. Regional debt financing sources consist of regional loans, regional bonds, and regional *sukuk*.

3. Infrastructure Development Policy

3.1. Financing Needs and Innovation

Under the *Rencana Pembangunan Jangka Menengah Nasional, 2020–2024 (National Medium-Term Development Plan, RPJMN)*, the need for national infrastructure investment will reach Rp6,445 trillion. The budget from the state only comprises 37%, while SOEs are predicted to contribute up to 21%. Thus, the state can sustain around 58% of the total funding target or around Rp3,738 trillion. The funding contribution from SOEs has the risk of meeting the market share of the private sector and recycling assets. The government can also utilise PPPs.

PPPs have various advantages, including improving the quality of government infrastructure spending due to the rigid and accountable requirements. Therefore, they have the advantage of minimising the possibility of cost overruns and completion time of infrastructure projects. PPPs still need to be improved, however, as they have only contributed 0.19% to the total GDP in Indonesia, well below contributions in neighbouring countries, including in Malaysia (0.21%), Thailand (0.31%), Viet Nam (0.48%), and the Philippines (0.50%) (Zen, 2019).

Various efforts have been made by the government through the establishment of the Sovereign Wealth Fund (SWF). The SWF provides investment opportunities by collecting funds from investors to distribute to various strategic projects in Indonesia, including those concerning infrastructure. Investors receive legal certainty as well as clarity in making investments. Through the SWF, the government can increase credibility, accountability, and potential interest from potential investors.

As of 2022, the SWF raised Rp400 trillion and has completed various infrastructure projects including toll roads, airports, and digital infrastructure.¹ To attract investors, the SWF has also implemented sustainable economic principles in accordance with the Sustainable Development Goals (SDGs), including those set forth in Indonesia's net-zero emissions target and Energy Transition Mechanism (GOI, 2022).

In line with the increasing interest in green financing, Indonesia has participated in the issuance of global green *sukuk*. Green financing has various advantages, including more competitive loan interest rates, and supports the concept of sustainability in the selection of financing projects (Fankhauser et al., 2022). Indonesia needs at least \$74 billion per year to meet green infrastructure needs, increasing investor interest, through various green infrastructure ecosystems that are included in the RPJMN (ADB, 2022).

In summary, Indonesia has succeeded in obtaining various financing not only from multi-national banking institutions but also from various private fundraising institutions. It also has shown its commitment to maintaining the resilience and sustainability of infrastructure against climate change. However, blended finance still faces challenges, such as a lack of eligible projects and institutional capacity to connect projects and investors. Consequently, a financing gap in infrastructure development still exists.

3.2. Role of the Special Mission Vehicle

The Ministry of Finance is working to implement a financing ecosystem specifically engaged in financing the infrastructure sector through the establishment of a special mission vehicle that includes PT Sarana Multi Infrastruktur (PT SMI) and PT Penjaminan Infrastruktur Indonesia (PT PII). PT SMI and PT PII are a way for the government to expand both hard infrastructure and soft infrastructure. PT SMI is working to help achieve SDGs through financing environmentally sound green infrastructure while continuing to support the goal of improving basic services, connectivity, and access to quality infrastructure in various regions. During the COVID-19 pandemic, to help local governments recover, PT SMI signed loan agreements, known as PEN Pemda, with 50 local governments, with a total commitment of Rp30 trillion and a total outstanding commitment of Rp10 trillion.² As part of PT SMI's transformation plan to a development financial institution, it is designing programme loans for local governments that are integrated into existing project loans.

¹ Indonesia Investment Authority, Laporan Keuangan Teraudit. <https://www.ina.go.id/id/financial-statement>.

² PT SMI, Kilas Infra, <https://ptsmi.co.id/id/kilas-infra>.

PT PII was formed to mitigate risk, increase access to bank financing, and increase the creditworthiness of infrastructure investment.³ Enabling PT PII to give guarantees is a strategic step for infrastructure development in Indonesia; this is illustrated by the increased interest of investors in Indonesia. Furthermore, various efforts have also been made to increase infrastructure guarantees through the addition of infrastructure projects that are guaranteed and have the participation of private insurance companies, both local and multi-national.

For infrastructure financing by regional governments, the central government has various qualified instruments, where regional governments can take advantage of regional debt financing and synergise regional funding. Regional debt financing sources consist of regional loans, regional bonds, and regional sukuk. One source of regional loans has been provided by PT SMI since 2015 to support acceleration infrastructure development in regions of Indonesia. Furthermore, through the HKPD Act, the regional financing mechanism was strengthened through simplification of procedures, increasing access to Sharia financing, and increasing synergy with the central government by synchronising development targets.

3.3. Role and Responsibilities of Regional Governments in the PSN

Infrastructure-driven development has been a focus of Joko Widodo's administration, including the creation of the PSN. Given the concept of decentralisation in Indonesia, the PSN also ensures that the distribution of authority and responsibilities from the central government to sub-national governments is fairly delegated to produce reliable public goods.

The role and responsibilities of regional governments in the PSN is outlined in Presidential Regulation No. 3 of 2016. Several strategic infrastructure projects have been included on the list of the PSN, encompassing those deemed strategic in contributing to economic growth, social welfare, and regional development. Presidential Regulation No. 3 of 2016 (including its several amendments, Presidential Regulation No. 58 of 2017, Presidential Regulation No. 56 of 2018, and Presidential Regulation No. 109 of 2020) stipulates the roles and responsibilities of regional governments.

Roles and responsibilities were once limited to being a project implementer (bottom-up projects), determining project sites, acquiring land, licensing, non-licensing, spatial planning, and accelerating goods/services procurement. Since regional governments have always been the PSN implementers, their roles and responsibilities are well defined across stages and regulations (Table 7.1). Due to the amendments, however, regional governments are now required to perform works beyond these mentioned duties, such as prioritising projects with job opportunities and overseeing monitoring and evaluation tasks.

³ PT PII, Jejak Langkah PT PII (Persero), <https://ptpii.co.id/jejak-langkah>

Table 7.1. Role of Regional Governments in PSN Projects

Preparation	<ol style="list-style-type: none"> 1. The regional government is a PSN implementer, along with the central government and/or business entity. 2. The regional government provides licenses and non-licenses, i.e. site/land determination, environmental permits, and building permits. The provision is in accordance with online single submission. 3. The regional government considers the environmental impact when issuing licenses and non-licenses (i.e. building permits, disturbance permits, and technical plans). 4. For multi-regency/city national strategic projects, licensing and non-licensing is granted once. This also applies to multi-regency/city projects in a single province. 5. The regional government finalises provincial spatial plans, regency/municipal spatial plans, and/or coastal area and small island zoning plans. 6. The regional government can support business entities in land provision. 7. The regional government can provide funding for land acquisition for the PSN after the land has been acquired.
Implementation	<ol style="list-style-type: none"> 1. The regional government that cooperates with the business entity can obtain central government guarantees by first providing guarantees for implementation of the PSN project. 2. The regional government can expedite the procurement of goods and services through direct procurement or direct appointment.
Monitoring and Evaluation	<ol style="list-style-type: none"> 1. The regional government and other supporting stakeholders are required to submit data and information related to PSN development to KPPIP, both in physical and digital form every 3 months or whenever needed.

KPPIP = Komite Percepatan Penyediaan Infrastruktur Prioritas.

Sources: Presidential Regulation No. 3 of 2016 and its amendments (i.e. Presidential Regulation No. 58 of 2017, Presidential Regulation No. 56 of 2018, and Presidential Regulation No. 109 of 2020).

4. Case Studies

4.1. SPAM Semarang Barat Project

Although drinking water is a basic need, limited access to drinking water services and minimum coverage of piped water remain. Therefore, drinking water supply system – known as *sistem penyediaan air minum* (SPAM) – projects are deemed key and can be carried out through various schemes, including PPPs. The Semarang Barat SPAM Project spans Ngaliyan Subdistrict, Tugu Subdistrict, West Semarang Subdistrict, and West Semarang City in Semarang, Central Java.

The project is under the PSN because it satisfies a strategic project's requirements to improve access to clean water (Table 7.2). Before the project, most residents in the three subdistricts relied on groundwater for domestic use. Moreover, the project is viewed as strategic as it was the first PPP for a SPAM.

Table 7.2. SPAM Semarang Barat Project

Category	Detail
Location	Semarang City, covering Ngaliyan Subdistrict, Tugu Subdistrict, and West Semarang Subdistrict
Capex	Rp1,19 trillion
Government Contracting Agency	Chief executive officer of PDAM Tirta Moedal Semarang
Project Theme	<ul style="list-style-type: none"> • PSN • Collaboration and support from various stakeholders, including the Ministry of Finance, Ministry of Public Works and Housing, and regional government
Objectives	<ul style="list-style-type: none"> • Provide access to clean water for 350,000 residents. • Increase coverage of drinking water services from 41% in 2017 to 84% of the total population in 2030 • Increase the number of customers to 60,000 households with a total PDAM production capacity of 1,000 litres per second.
Scope	<p>Project Scope:</p> <ul style="list-style-type: none"> • Intake construction and operation • Development and operation of water treatment plant with an output capacity of 1,000 litres per second • Development and operation of transmission network construction and operation of three reservoirs • Development and operation of the main, secondary, and tertiary distribution networks <p>PPP Scope:</p> <ul style="list-style-type: none"> • Intake operation • Development and operation of water treatment plant with an output capacity of 1,000 litres per second • Development and operation of the transmission network • Construction and operation of three reservoirs
Timeline	<p>PPP Agreement: 23 November 2018</p> <p>Financial Close: 22 May 2019</p> <p>Construction: 22 May 2019 – 22 May 2021</p> <p>Operation: 22 May 2021</p>
Winning Consortium	PT Aetra Air Jakarta–PT Medco Gas Indonesia Consortium

PPP = public–private partnership.

Source: KPBU Kemenkeu, Informasi Umum, https://kpbu.kemenkeu.go.id/proyek/detail/18-proyek-kpbu-spam-semarang-barat#pdt_1

The World Bank (2016) noted that for society to access the full benefits of a PPP, the government must play a pivotal role in fulfilling several conditions, such as commercial feasibility, affordability, and contract suitability. In the context of the PSN and this project, it is interesting to explore the capacity of the regional government to produce public goods and to observe the role and responsibilities of the regional government in completing the project in a timely manner.

The role and responsibilities of the regional government are stated in Local Government Regulation of Semarang City No. 8 of 2018. Although a definitive measurement is not yet available, Ameyaw and Chan (2016) explained that determinant factors to successful water supply PPPs include the commitment of partners, strength of the consortium, asset quality and social support, political environment, and the national PPP unit.

Ameyaw and Chan (2016) also argued that internal coordination and risk allocations within parties are essential, which is in line with Article 8 of the above regulation that sets out the coordination structure within the regional government domain. Article 26 details risk management and mitigation between the regional government and the government contracting agency (GCA). In the project, the mayor complied with Article 19:1a-b concerning financial support for land acquisition and distribution unit network construction by granting Rp100 billion and Rp150 billion, respectively (Adiyanti and Faturrahman, 2021). In expressing its commitment, Article 26 ensured that the regional government with the GCA is willing to put maximal efforts into controlling, managing, preventing, and mitigating infrastructure risks based on equitable allocations. Moreover, PDAM Tirta Moedal Semarang as GCA committed to bear the financial risks.

The success of a PPP is also highly dependent on local government commitment. One political risk is when the timeframe of the PPP is longer than the administration of the local government head. When the head is replaced, it must be ensured that the new head will issue the same support. In the case of this SPAM project, there was no change in the head of local government during the project period.

In terms of good governance, Central Java Province was awarded best performance at the national level, and Semarang was the best-performing city in the province (VOI, 2023). This attainment is not the first for Semarang; in 2017 and 2018, the Semarang city government was named the best-performing city government due to its transparency and public participation in the policymaking process (Kompas, 2018). While good governance reduces political risk and uncertainty, these records will also encourage more investments in the province and Semarang.

Competitive tendering is another important prerequisite for the success of a PPP. During the pre-qualification phase of this PPP, at least 10 prominent and experienced consortiums submitted their documents, with 4 having successfully passed the phase. Through a competitive and transparent tender process, PT Aetra Air Jakarta–PT Medco Energi Consortium won after proposing the lowest

bid while still being compliant to other requirements. The consortium also committed to providing a tariff discount (Raznak, 2018). The role of local government was essential to attract the private sector to participate; Article 13 of Local Government Regulation No. 8 of 2018 stipulated that the mayor is responsible for arranging a PPP regional working unit (i.e. Simpul KPBU) for policy formulation and coordination purposes.

According to Adiyanti and Faturrahman (2020), Badan Peningkatan Penyelenggaraan Sistem Penyediaan Air Minum (Water Supply Development Supporting Agency, BPPSPAM) set some criteria for PDAM Tirta Moedal Semarang to be considered healthy, including creating a full-cost recovery tariff to appraise its ability to purchase bulk water supplies, setting the average tariff at a minimum rate of Rp3,000 per cubic metre, placing non-revenue water below 40% to reduce system risk, and linking bankability to capability to create a return on investment. The study also revealed that in 2018, PDAM Tirta Moedal was considered healthy since it had covered the full cost recovery tariff requirement, set the average tariff at Rp3,870 per cubic metre, and scored 38.73% for non-revenue water with a debt–equity ratio of 0.111.

To assess the potential profitability of the Semarang Barat SPAM Project, Adiyanti and Faturrahman (2020) measured the project against some indicators listed in ADB (2002). It was determined that for the project to be deemed profitable, it should cost at least Rp1 trillion with a minimum tariff of Rp3,000, have a production capacity of 1,000 litres/second, and possess a minimum financial internal rate of return of 12%. The cost of the project was Rp1.19 trillion, with a tariff of Rp5,841, financial internal rate of return of 16%, and a production capacity of 1,000 litres per second. Thus, it is deemed profitable. The local government also committed to increasing the tariff to ensure that the project remains profitable and attractive for the private sector. For the new water tariff, PDAM Tirta Moedal Semarang is relying on direct interaction with the public and the use of social media (PDAM Kota Semarang, 2021).

The capacity of the local government is important for any PPP. The assignment of PT SMI by the Ministry of Finance to conduct capacity building on the Project Development Fund has equipped the local government with the knowledge of project preparation and transaction. The sufficient capacity of the local government and PDAM Tirta Moedal Semarang as the GCA in project preparation also determined success. In addition, local government capacity can also be measured by the bureaucracy of delivering services such as licensing and simplifying procedures. In the Semarang Barat SPAM Project, the local government was fully supportive in accelerating the implementation of the project by providing licensing and non-licensing services. Due to local government support, the Semarang Barat SPAM Project became the fastest PPP completed in Indonesia.

Ameyaw and Chan (2016) argued that the duties of a national PPP unit include coordinating and supervising nationwide PPPs, encouraging the transparency and accountability of PPP practices, handling conflicts, and linking private investors and subnational governments. In Indonesia, this unit is the Indonesia PPP Joint Office, which consists of Badan Perencanaan Pembangunan Nasional (Ministry of National Development Planning, BAPPENAS), the Coordinating Ministry for Economic Affairs, Coordinating Ministry for Maritime and Investment Affairs, Investment Coordinating Board, Ministry of Finance, Ministry of Home Affairs, , and National Public Procurement Agency.

5. The Bitung Special Economic Zone Project

The Bitung Special Economic Zone (SEZ) demonstrates a national government intervention to promote a growth centre in East Indonesia to address regional disparity, supported by the PSN. The central government established the Bitung SEZ through Government Regulation No. 32 of 2014 to accelerate economic development, especially in North Sulawesi Province. The Bitung SEZ has a strategic location as a growth centre, distribution centre, and logistics hub with an international port. It consists of an industrial zone, logistics zone, and export-processing zone. Its main activities are the coconut-processing industry, fisheries management, and logistics. The Bitung SEZ is expected to attract an investment of Rp32.89 trillion and to absorb as many as 34,710 workers until 2025 (Sari, 2016).

In addition to the designation of the Bitung SEZ on the initial list of the PSN, two projects are listed that support the establishment of the Bitung SEZ: the Manado–Bitung Toll Road, which was constructed in 2016 and completed 2021, at an estimated cost of Rp8,935 trillion; and the Bitung International Hub Port, which was constructed in 2017 and partially completed in 2019, at an estimated cost of Rp34,65 trillion. The 39-kilometre Manado–Bitung Toll Road is another PPP, where the national government (i.e. Ministry of Public Works and Housing) partnered with a toll road enterprise, PT Jasamarga Manado Bitung, to build and to operate the toll road. Although the construction was completed and the toll road inaugurated in 2022, land disputes still need to be addressed (Berita Manado.com, 2023). Meanwhile, the Bitung International Hub Port will increase the capacity of the port from 1.5 million 20-foot-equivalent units (TEUs) to 2.7 million TEUs.

The Bitung SEZ has faced some obstacles, including land acquisition, inability to function as a direct port for exports, and other problems regarding supporting infrastructure (Elena, 2021). Moreover, due to the COVID-19 pandemic that halted construction, many investors were unable to repay. A policy also requires fish caught to be sent to Jakarta before being exported to destination countries. However, PT Membangun Sulut Hebat, as the business entity for the management and development of the Bitung SEZ, is confident that many industries will start to operate in the Bitung SEZ despite these obstacles, based on the memoranda of understanding and letters of intent that were signed.

In terms of the local government commitment to the project, several local regulations were issued anticipating the establishment of the Bitung SEZ, including Government Regulation No. 32 of 2014. Between 2008 and 2013, several local policies were undertaken by the Bitung city government to support the establishment of the Bitung SEZ, such as the Bitung Spatial Plan, *Bitung Medium-Term Development Plan*, or procedures for domestic and foreign direct investment, followed by Bitung mayoral regulations to provide facilities for the private sector to invest in Bitung (Pramoda and Apriliani, 2016).

According to Government Regulation No. 32 of 2014, the Bitung SEZ has an area of 534 hectares in Matuari District. A land management rights decree was issued for an area of 92.79 hectares, while the remaining 441.21 hectares remain in the consultation phase (BAPPENAS, 2021; Purboyo, 2019; Hutapea, 2019). According to the head of the North Sulawesi Province National Land Agency Regional Office, the consultation is regarding whether building or land-use rights will be granted (Bappenas, 2021; Hutapea, 2019). Moreover, during the development process, some conflicts have occurred over an area of approximately 92 hectares related to cultivation rights (Bappenas, 2021; Sari, 2019).

Based on an analysis of socio-economic readiness, the leading sector that can be developed in the Bitung SEZ is the pharmaceutical/herbal industry. Meanwhile, to increase the socio-economic impacts of the Bitung SEZ, other supporting sectors – such as warehousing and transport (i.e. rail, land, sea, air, river, and ferry) – are needed to support the Bitung SEZ. To increase the employment impact of the SEZ, improving the quality of the local human resources is crucial. Although employment opportunities in the SEZ have increased, population growth is high, and the low level of education is a factor in low absorption of labour in the SEZ (Setiawan, Prasetyawati, Salim, 2022).

6. Concluding Remarks

Regional disparity between Java and outside of Java is a persistent situation. Although decentralisation has been in place for more than 2 decades, economic development is still concentrated in Java, in particular around its major metropolitan areas. Thus, the government is trying to speed up infrastructure development to promote economic growth and more balanced development through the PSN. However, this is inevitably biased towards Java and Sumatra in Western Indonesia, in terms of the number and value of the projects. It will take more time to see the impact of the PSN on the development of other regions, especially in Eastern Indonesia.

The implementation of the PSN has faced many challenges, such as land acquisition, planning, preparation, as well as financing. Despite innovative policies introduced by the national government to overcome those challenges, some persist. Two cases studies leave a few lessons learned about the regional dimension of infrastructure development in Indonesia. The Bitung SEZ demonstrates that although the Manado–Bitung Toll Road was constructed and in operation, land acquisition disputes remain and need to be settled by the government, especially the provincial land agency, as the project traverses three local government administrations in North Sulawesi. A land acquisition issue also hinders the progress of Bitung SEZ development, as the private sector is still waiting to invest despite facilities provided by the mayor of Bitung to ease the procedure of doing business in the city.

The Semarang Barat SPAM Project demonstrates the commitment of the mayor through policy, regulations, and finances for land acquisition as well as the involvement of a city-owned enterprise (i.e. PDAM Tirta Moedal). It seems that a project that provides a basic need, such as water, receives more commitment from the local government than one to promote economic growth. In addition, a project that involves fewer land parcels to acquire seems more successful than one that involves many land parcels, such as a transport network project.

Nonetheless, to promote balanced regional development between the eastern and western portions of the country, future interventions should be directed towards promoting economic activities in Eastern Indonesia, as development potential is still abundant. Meanwhile, for Western Indonesia, infrastructure development should focus on improving basic services.

Competitive advantages in various regions can be realised through a regional development approach, not only regarding economic growth but also equitable distribution of development to all regions and communities. The growth approach is carried out to spur national economic growth by accelerating the development of growth areas such as SEZs or urban agglomeration areas in growth loci. The equity approach is taken to fulfil basic services more evenly through the development of regional activity centres or local activity centres to form new basic service centres that reach a wider service area.

Regional development – by combining growth and equity approaches – must be based on evidence of good, accurate, and complete data, information, and knowledge; development scenarios; and location determination in accordance with spatial planning and environmental carrying capacity. In addition, regional development should also be carried out in a holistic and thematic manner based on overall handling and focussing on development priorities and relevant locations. Regional development also requires cooperation and integration of programmes and activities amongst ministries, regional agencies, and regional governments. Integration and synergy amongst stakeholders are crucial in planning, funding and financing, implementing, controlling, and evaluating development processes.

In addition to programme synergy and integration, development optimisation also needs to pay attention to funding through government sources and SOEs in line with the 'Money Follow Program'. The government can use funding sources from the public and the private sector through innovative financing schemes, including PPPs. As for financing for the regions, government can utilise regional debt financing instruments and carry out regional funding synergies both from regional budget and non-regional budget sources.

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