

Advancing Digitalisation with the Digital Readiness Index in Indonesia: Implications for Urban and Rural Areas



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社会全体のデジタル化を進めるには地域の実情を知り、地域ごとに異なるデジタル対応力を向上させる政策努力が必要になる。地域差の大きいインドネシアを例に、具体的な施策を探った。

Abstract

Maximising digital dividends – potential gains from digitalisation in forms of productivity and economic growth – is pivotal in realising a century-long dream of Indonesia to become one of the top five world economies. Yet, in a diverse country like Indonesia, the process is challenging without strategic tools. Indonesia comprises of 16,056 islands spread across 34 provinces, each with its own distinctive urban-rural characteristics. The exceptional diversity of this archipelago poses a tremendous challenge to tailor appropriate policies in advancing digitalisation. With every province at a different stage of the digital transition, “one-fits-for-all” strategies - common in the past - have typically fallen short. Existing indices of digitalisation have failed to account for this subnational diversity and are only available at a cross-country level. This report proposes, designs and tests a new Digital Readiness Index (DRI) for Indonesia using more than 200 provincial data. The DRI advances upon country-level indices by identifying the specific regional barriers within Indonesia that hinder digitalisation progress. In this way, it serves to inform policymakers on regional variation and assist in formulating contextually appropriate policy solutions. The DRI is a weighted index of province-level scores on the four dimensions of digital readiness: (i) infrastructure; (ii) technology use attitudes; (iii) the progress of provincial governments in providing services online, and (iv) human development. Based on the scores, provinces are grouped into three categories based on their stage of digitalisation readiness: low, medium, and high. Provinces in each stage will be aided with specific solutions: digital development, digital transition, and digital growth, respectively.

Keywords Indonesia; digitalisation; index; technology; policy

1. Introduction

Following the global trend, Indonesia is thriving in a digitalisation era as the industrial world changes and shifts in line with internet development, automation, and innovation in various sectors. The presence of the internet creates a rich digital economy ecosystem in many parts of the world. Indonesia’s digital economy could reach \$130 billion in 2025, and that value has skyrocketed more than three times since 2020. The projected value was derived from the pace of digital economic growth in Indonesia, which outpaced other industrial

sectors. However, in some indicators, Indonesia is falling behind its neighboring countries in Southeast Asia. Indonesia’s infrastructure development status is positioned below Thailand and Malaysia. In terms of the 4G download and upload speeds, Jakarta’s internet connection was among the worst in 12 East Asia cities in 2018 (Fitchard 2018). The development of the Internet environment outside urban areas in Indonesia has been slow, and the usage rate remains low (Edamadaka and Seike 2020). Consequently, Indonesia is facing digital divide problem - the gap between people who can and cannot

use information communication technology between urban and rural areas.

There is as much variation within Indonesia as there is within the world as a whole. Indeed, each province could work as if it is a separate country. West Java has a population of 50 million people, equal to Colombia. If it were an independent country, it would be the 29th largest country in the world. Moreover, in the case of internet users, West Java accounted for 16.6% (28 million) of total internet users in Indonesia in 2019 (Soemartono and Rif'an 2019) – equivalent to the number of internet users in California, United States (National Telecommunications and Information Administration 2020) – whilst the users in Nusa Tenggara regions only accounted for 5% (8.5 million) of total internet users in Indonesia, akin to the number of users in Zimbabwe (Internet World Stats 2020).

The inequality within Indonesia is apparent. In Bali, the download speed is 11.6 Mbps, far exceeding the national download speed experience at 9.8 Mbps (Khatri 2020). A citizen can sign documents digitally and correspond with different instances online within seconds (Pemerintah Provinsi Bali [The Provincial Government of Bali] 2020). However, loading a website in remote South Kalimantan still takes a while.

Digital development has not been inclusive and universal to benefit everyone from its burgeoning growth. Agglomeration growth - which has been applied extensively in the past - turns out to be deficient in stimulating economic growth and rural areas' activities. The relationship between economic growth, poverty and inequality is not linear because economic growth will not directly and automatically lead to inequality and poverty reduction (Warda et al. 2018).

Rural blind policymaking overlooks opportunities for people, firms, and places and limits the capacity of Indonesia to build resilience against megatrends and global shocks (Marshallian 2020). Figure 1 indicates that the inequality, measured by the Gini ratio, between urban-rural areas in Indonesia has increased over the past few years, signaling a new Rural Lens approach in policymaking is crucial to apply.

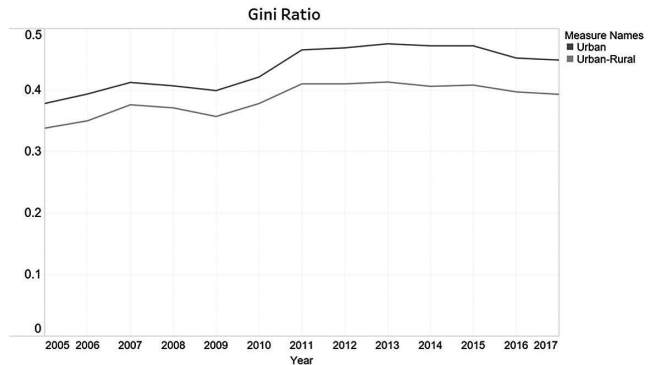


Fig. 1. Inequality by Region, 2005 - 2017

2. Problem Definition

2.1 Methodological Gap

Methodological gaps relate to what existing indicators measure and how they capture and assess digital readiness. Two relevant indices – Digital Adoption Index (DAI) and E-Government Development Index (EGDI) – introduced by the World Bank (WB) and United Nations (UN) are insufficient in guiding policymakers to formulate inclusive digitalisation policy due to exceptional diversity in the subnational level of Indonesia.

- (1) DAI measures countries' digital adoption across three dimensions of the economy: people, government, and business. Each sub-indicator comprises of technologies necessary for the respective agent to promote digital development (World Bank 2016).
- (2) EGDI is a weighted average of normalised scores on the three most important dimensions of e-government: scope and quality of online services, the status of the development of telecommunication infrastructure and inherent human capital (United Nations 2018).

EGDI coverage is also limited at a cross-country level. Besides this, critics asserted that both indices had not incorporated sufficient qualitative aspects compared to the quantitative element to build the index. For instance, EGDI only assesses whether a digital ID is available in a country, forgoing the quality of the provided digital ID.

2.2 Risks

Keeping the status quo of blind spatial digitalisation policies possess at least two risks for Indonesia:

- *Growing inequalities.* The concept of economies of agglomeration has failed to even out economic gain beyond metropolitan areas. Instead, there was an increasing inequality gap between rural and urban areas in Indonesia from 2005 to 2017 (FIGURE 1).
- *Economic growth.* Without a well-tailored digital policy for different regions in Indonesia, it is difficult to unleash digital economy potentials and tackle the associated challenges along the way. Hence, overlooking digital inclusion policies can hamper Indonesia's efforts to become a high-income country in 2045 through a consistent annual growth rate of 5%.

3. Proposal

3.1. The Construction of the Digital Readiness Index

The Digital Readiness Index (DRI) is a weighted average of the four most important dimensions of digital readiness: (i) infrastructure, (ii) attitudes to technology adoption, (iii) the scope of online services provided by the provincial government, and (iv) human development.

Infrastructure status and development of communication infrastructure measures three pillars: access and infrastructure, usage, and digital skills.

Attitudes to Technology Adoption refers to attitude and perception of technology influence on user behaviour in technology diffusion. The public's perceived value of disruptive technology determines the likelihood of the associated technologies' continuous use intention (El-Haddadeh et al. 2019). Given this, DRI incorporates attitude to technology adoption extracted from the World Values Survey (WVS) study in Indonesia, using three technological-related questions as follows:

1. More emphasis on the development of technology
2. Science and technology are making our lives healthier, easier, and more comfortable
3. You say the world is better off or worse off because of science and technology

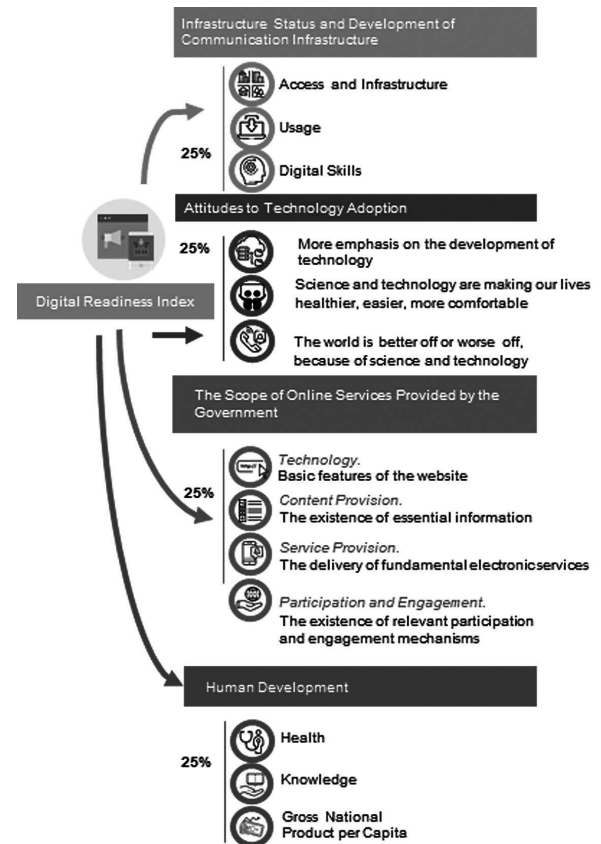


Fig. 2. DRI Construction Path

Scope of Online Services/E-Government is the use of information technology by government departments to implement business processes and service delivery (World Bank 2016). E-government development is associated with the level of digital development of a nation. This implies that government can be the primary force of the digital economy and can play a proactive measure rather than a reactive role in the transition and development of the digital economy.

To get the scope of online services values, 34 provincial government websites were assessed and scored based on four main pillars: technology, content provision, service provision, and participation and engagement (United Nations 2018).

1. *Technology.*

Evaluation includes the ease of finding the portal, availability of mobile services, and foreign language on the website.

2. *Content Provision.*

The existence of essential information is examined according to statistics and studies provision, link to governmental agencies, and news or issue information.

3. *Service Provision.*

The delivery of fundamental electronic services is evaluated based on e-procurement services, e-payment, and online vacancies.

4. *Participation and Engagement.*

The existence of relevant participation, engagement mechanisms, and initiatives through real-time communication, feedback submission, and social networking feature.

Human Development uses Human Development Index (HDI) - a summary measure for assessing long-term progress in three basic dimensions of human development (United Nations Development Programme n.d.).

It should be noted that this dataset is subject to several limitations:

1. The most recent data used to construct the index was 2018. Any changes in 2019 are not captured.
2. The WVS recorded missing data in 15 provinces. The data were corrected by matching the mean of the joint sample, which was then adjusted for the sample to correct any bias.

3.2 *Place-Based Digitalisation Policy Interventions*

3.2.1 *Target Group*

Proposed digitalisation policies should consider place and dimension aspects, tailoring custom policies suitable for urban and rural areas based on the DRI in the following section.

3.2.2 *Classification*

Referring to the UN Index classification methodology, we identify four groups to classify provinces based on their stage of development:

- Very High, for $DRI \geq 80$
- High, for $70 \leq DRI < 80$
- Medium, for $55 \leq DRI < 70$
- Low, for $DRI < 55$

4. Findings

4.1 *Digital Readiness at the Subnational Level*

- Very high (7): Jakarta, Yogyakarta, Riau Islands, East Kalimantan, Bali, South Sulawesi, and North Kalimantan.
- High (3): Aceh, West Java, and East Java
- Medium (5): West Sumatera, Riau, Bengkulu, Central Java, and Banten
- Low (19): The rest of the provinces (Annex A)

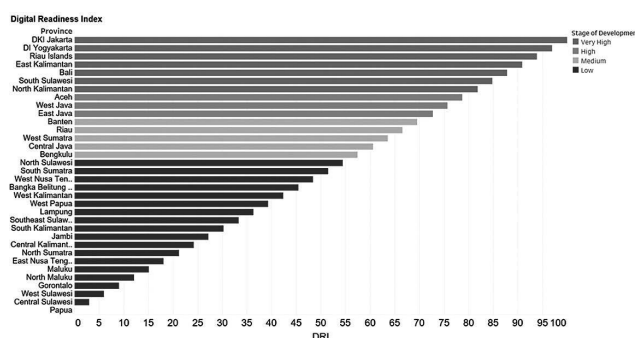


Fig. 3. DRI by Provinces in Indonesia

Referring to the digitalisation stages of development from the World Bank, three typologies of digitalisation stage (World Bank 2016) are generated and mapped in Figure 4:

- Transforming provinces, coloured in green, score very high and high.
- Transitioning provinces, coloured in orange, score medium.
- Emerging provinces, coloured in red, score low.

5. Policy Analysis

5.1 *Approach*

The report used a multi-criteria analysis and High, Medium, and Low status to assess each policy package. These approaches were selected for two reasons:

1. *Variation in interventions.* The DRI comprises of sub-indicators that are highly intertwined. Policy recommendations are likely to improve each sub-indicator in parallel to the changes in the aggregate DRI index. A multi-criteria analysis supports a more robust comparison between these



Fig. 4. Typologies of Digital Readiness

sub-indicators.

2. *Local context.* This approach allows one to factor in policy challenges at the provincial level.

Any intervention should consider five additional general policy considerations:

1. *Align with the objective* to advance each sub-indicator that constructs DRI.
2. *Politically feasible* to ensure the acceptability of the policy alternatives to relevant stakeholders that hold political power. The policy should also align with the mandate and authority of each stakeholder responsible for carrying out the policy – taking into account the coordination among stakeholders and the segregation role between the central and local government.
3. *Financially feasible* to achieve cost-effectiveness.
4. *Be time-bounded.* Potential to have tangible success within a foreseen timeframe (five years/one administration period).

5. *Avoid heavy-handed regulation or direct development.*

High, medium, and low status for each policy is outlined against the general policy considerations above. The results are summarised in Table 1.

- High (3) – high satisfaction to fulfill the criteria;
- Medium (2) – moderate satisfaction;
- Low (1) – low satisfaction.

6. Policy Recommendations

6.1 Emerging Provinces

The emerging group consists of 19 provinces. Overall, the average score of each sub-indicator in emerging provinces is lagging behind the national average.

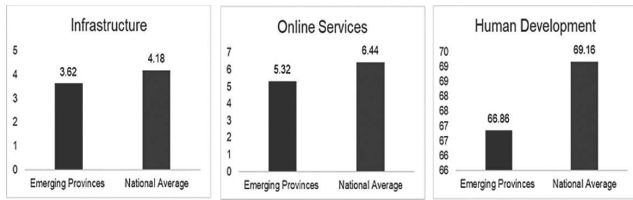


Fig. 5. Emerging Provinces vs National Average Comparison

The concept of digital development for emerging provinces - adapted from the economic development – is the key to address this. Emerging provinces are undergoing significant structural changes while concurrently progressing their DRI. Thus, policy recommendations would center on laying a solid foundation (World Bank 2016).

6.1.1 Infrastructure: Attract more investment to accelerate cellular network expansion through financial loans and subsidies from central government.

Telecommunication infrastructure is facing investment uncertainty in emerging provinces due to higher costs caused by geographical barriers and low commercial gains.

Advantages

- a) All-levels political support and commitment
The proposal can potentially close the long-standing infrastructure investment gap in the foremost, outermost dan underdeveloped regions (3T), fueled by immense government support in the past couple of years to achieve “Signal for All” in 2020.
- b) Strong institutional capacity
The newly-formed institution named BAKTI, which emphasizes corporation management style (KOMINFO 2019), gives an excellent service level to bridge the digital divide in Indonesia. This positive outlook and professionalism – if maintained – can attract more investment to flow in.

Risks

A shortfall in government funding. Currently, the Indonesian Government is experiencing a staggering financial gap of Rp4.5 trillion (~\$70 million) to expedite

network expansion in 2,300 villages across 3T regions (Isna 2018).

Recommendations

The private sector and government can have capital expense joint for constructing cellular towers and Base Transceiver Stations (BTS) equipment. Cases in Norway and Portugal show that strategic management of funding or co-funding mechanisms helped promote digital development (OECD 2018).

6.1.2 Attitude to Technology Adoption: Appoint digital community leaders and add the necessary skills

Several emerging provinces – Central Sulawesi, Central Kalimantan, and North Sumatra - lag in technology adoption. Policymakers need to consider engaging the community leader through a culturally rich dialogue emphasizing the benefits of going digital. Since leaders are the life-blood of rural communities, the success or failure of community development projects often rests with the leadership community leaders are willing to provide (Center for Rural Affairs 2009).

Advantages

Appointing local leaders with shared values and norms with the rural community is advantageous, adding to the diversity of ideas, resources, and local development powers. The proposed policy also covers two main determinants of technology adoption – individual perceptions and social structure (norms and social context) (Correa and Pavez 2016) – attaining high satisfaction to advance the sub-indicator.

Risks

- a) The history of political unrest in certain provinces.
Care must be taken as this policy could be either very successful or create undue impact, particularly in Papua, which has had political tension.
- b) Time risk. Shifting the attitude of a community takes time.

Recommendations

Central government should actively consult with the

local political representatives to make decisions related to technology adoption to improve policy effectiveness.

6.1.3 The Scope of Online Services: Set clear legal, institutional, and accountability framework to ensure the successful application of e-governance.

The frameworks underpinning the application of e-governance are still vague. Evidence shows that even after the autonomy law regulation has been enacted for 20 years, certain provinces, such as Papua, still lack regional regulatory frameworks that should be derived from it (Elisabeth 2020).

Advantages

By establishing the three elements above, the government can deliver citizen-centric services, convince businesses, consolidate its political support, and realise its political promise into impactful programmes (Nugroho and Hikmat 2017).

Risks

Political complexities surrounding the setup of three frameworks push this policy aside from short-term consideration to a longer time.

Recommendations

Solving small portions of a bigger ‘wicked’ problem might be the solution. Strong commitment from political leaders is the first step to streamline the three frameworks mentioned above.

6.1.4 Human Development: Establish a digital assistance premise in rural areas to support the growth and development of voice/data network connectivity.

To make sure everyone can and does access internet, the focus needs to broaden from increasing the supply of internet access to boosting demand. If the marginalised population is not uptaking the services, policy objectives should be questioned.

Since users in emerging provinces are still relying on relatively poor infrastructures to connect, entry to digital services can be adjusted. Instead of starting with 4G,

they can opt for mobile phones to call government’s digital assistance services.

Advantages

The cost of deploying thin clients is low and it is easy to set up (Remer 2017). By using simplified operating systems, local communities can adopt technology universally and inclusively.

Risks

In rural areas with sparse populations, weak 4G could slow down thin client devices’ performance.

Recommendations

Kick-starting digital assistance office at a certain point of locations, preferably local government premises where both internet speed and latency are much better

6.2 Transitioning Provinces

Five provinces in the transitioning category - West Sumatera, Riau, Bengkulu, Central Java, and Banten - are slightly ahead of the national average in all sub-indicators. However, two provinces still fail to meet the national average score for infrastructure and one province for online services.

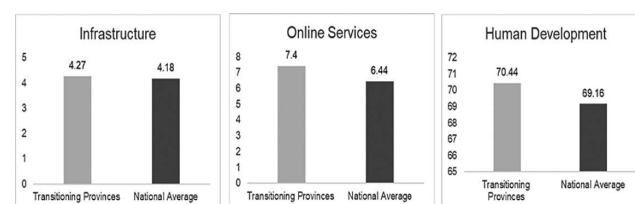


Fig. 6. Transitioning Provinces vs National Average Comparison

Using Rostow’s five stages of growth, they are in-between steps 3 and 4: take off and drive to maturity. These provinces have the prerequisite conditions to take off – political, social, and institutional frameworks that underpin the development of the provincial government’s online services.

At this stage, demand-side intervention, rather than supply-side, may be the decisive element to break-

through (Rostow 1991).

6.2.1 Infrastructure: Expand data network connectivity to rural areas to enable greater economic integration with urban centres

Government has a vital role as an enabler and been supporting infrastructure to boost the status and development of infrastructure in Central Java – the lowest among others. One of the considerations government needs to factor in is Central Java’s strong potential despite having the most rural areas in Indonesia, amounting to 8,559 villages (Badan Pusat Statistik [Statistics Indonesia] n.d.).

Advantages

Investment to expand network would be well justified with potential demand, proxied by high population density in Central Java (1,060/km²) and Banten (1,300/km²). The initiative could be funneled as part of the government strategic plan to build 3,500 additional BTS in 2020 (Jemadu 2019) - if only the local government could proactively facilitate policy discourse, highlighting the potential of blank spots in their rural areas to central government.

Risks

The cost of constructing one tower and BTS equipment in a remote area is around \$90,000 – \$120,000 (Gadi et al. 2014).

Recommendations

A bottom-up policy approach from local government and coordination with incumbent network operators to cover the network’s blank spots is encouraged.

6.2.2 Attitude to Technology Adoption: Raise technological awareness and provide residents with additional digital skills, supported by the telecommunication network of cellular infrastructures (2G/3G/4G).

Transitioning provinces are uniquely placed, having a mix of rural and urban areas with proximity to transforming regions, such as Banten, close to Jakarta.

However, a significant portion of rural areas can only access 2G or 3G, unlike urban areas with 4G.

Given this, policymakers should factor in flexibility of choosing different technologies to promote technological awareness and upskill Indonesians in rural areas.

Advantages

a) Flexibility in skills attainment

Recently, Indonesian villagers who work as farmers by day have alternately switched to logo designers for the web-based graphic design company by night (Pangestu and Dewi 2017). A simple 2G/3G/4G website interface could facilitate villagers accessing the knowledge they need whenever it suits them best.

b) Cost-competitive

The cost of mobile connectivity is far cheaper – only 1.67% of GNI per capita – compared to broadband access (12.44%) (Zambrano and Seward 2013).

Risks

Changing the behavior and perception of technology in rural communities requires tremendous effort and time.

Recommendations

Develop simple dial-in-training with a phone call for rural areas. The case of web-based education for farmers in Austria is exemplary to replicate (Papakonstatinou 2019).

6.2.3 The Scope of Online Services: Promote the provision of compelling and locally available online content and services

Banten is still weak in its Content Provision pillar, missing issues information on the website, while Central Java does not feature statistics and studies on its website. These contradict citizens’ expectations of personalised and responsive public services. Adopting a citizen-centric culture and mind is the key to enhance the end-to-end experience of public services to bolster demand and digital adoption (Bertrand 2019).

Advantages

The initiative is aligned with KOMINFO’s national

programme “One Million Domain” which serves as the fundamental regulatory and legal framework to support more local content creation.

Risks

Creative ecosystems often revolve around educational institutions and areas with inexpensive connectivity (OECD 2013), but fostering an innovative environment for content creation needs time.

Recommendations

To accelerate policy implementation, preparing a specific set of tools and skills to tackle complexities surrounding high-quality local content design is highly recommended.

6.2.4 Human Development: Increase the budget allocation for digital capacity-building within local government.

In 2019, HDI of Indonesia was positioned at 111th out of 189 countries (Lanvin and Monteiro 2019), highlighting the pressing need for major transformation. Policy proposal would suggest increasing a considerable budget allocation directed to strengthen subnational government’s institutional capacity as they are shifting from a traditional to a digitised way of work.

Advantages

Well-resonated with the vision of President Joko Widodo to focus on human development. This policy could gain immense traction, and potentially, an immediate approval from the state budget allocation meeting.

Risks

In 2019, the Ministry of Finance allocated hefty spending of £14 million for digitalisation training and education (Indonesia Ministry of Finance 2019), surpassing the UK Government Digital Service spending of £8.5 million (National Audit Office 2017).

Recommendations

Complementing the budget increase proposal with a robust training plan and evaluation framework would

justify an increase in the budget allocation for training.

6.3 Transforming Provinces

The transforming category consisting of 10 provinces has a high DRI. These provinces have surpassed the national average score for each sub-indicator. However, East Kalimantan and Bali have not met the national average score for online services in individual evaluation, and Aceh is falling behind in infrastructure.

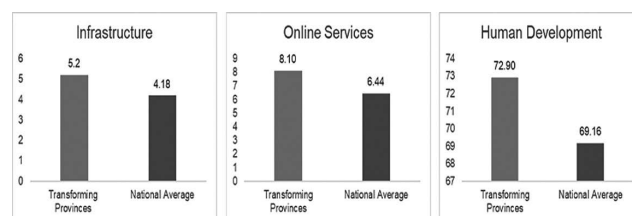


Fig. 7. Transforming Provinces vs National Average Comparison

To sustain the high DRI and stay competitive, digital growth strategies are deemed fit for this group with great technologies, platforms, and demographics but need to finetune its quality of infrastructure and services by improving its operational models.

6.3.1 Infrastructure: Urge cellular network operators to enhance network quality and configuration (network reliability, availability, and optimisation) and continuously improve network service level.

Aceh needs to catch up with other Transforming provinces, but the geographical characteristics of Aceh – largely mountainous – pose challenges to progress its infrastructure to be on par with others. The more dispersed the population in one area, the more network coverage needed to be deployed.

Aside from Aceh, other transforming provinces with a widespread 4G network need to continually re-evaluate their network reliability and ensure serviceability with the deployed infrastructure configuration to stay competitive.

Advantages

Improvement is likely to occur quickly, considering the

flexibility of policy adjustment to the scale of the intervention.

Risks

For a relatively small province like Aceh, a more significant proportion of its budget allocation needs to be prioritised to implement the policy.

Recommendations

Urge operators to enhance network quality and continually improve network service levels in sync with other infrastructure projects – transportation and businesses – to unleash digital economy potentials.

6.3.2 Attitude to Technology Adoption: Continually updating technological knowledge on firms

Advantages

This policy is quick to execute and politically feasible.

Risks

One shortcoming of the policy is its weak alignment with the objective to advance the sub-indicator. The attitude to technology adoption is constructed from a survey at an individual level in which the respondent is a member of a family in a household (World Values Survey n.d.) – instead of firms – so the suggested policy is mistargeted.

Recommendations

Technology update can be done through inter-dialogue forums with IT vendors and technology centres to showcase the value of technology and bridge the information gap that hinders technology adoption among individuals and firms (Asian Development Bank and Indonesia Ministry of Finance 2020).

6.3.3 The Scope of Online Services: Initiate more integration of government digital services nationally

Advantages

The proposed policy aligns well with the objective. Showing long-standing commitments to facilitate a myriad of public services and broaden citizen access through multiple channels on top of a single online and

mobile access point is crucial (Steiner et al. 2018). For instance, the Government can integrate the current silo services – Online Service for People’s Aspirations and Complaints (LAPOR), One Data, and One Map – into an online one-stop-shop.

Risks

a) Cost intensive

The cost to undertake an integration project could start from \$1,500 per municipality or \$1 million nationally (Candra 2020).

b) Interoperability as a major bottleneck

Most e-government projects face the problem during integration with external service, coupled with a lack of collaboration and information exchange among different public administration e-service (Pamungkas et al., 2019).

Recommendations

a) Phase the national integration project to multiple stages. A multiyear project can accelerate budget absorption as it will eliminate any need to retender the same project in the following years (Lestari 2012).

b) Launch an independent task force to integrate services could resolve cross-institutional clashes that hinder integration.

6.3.4 Human Development: Promote better remuneration to attract ICT talents in the public sector to refrain from the civil service brain drain.

The lack of skilled engineers and developers continues to be the primary constraint voiced by businesses (Pangestu and Dewi 2017). The public sector has not always been an employer of choice for top talents. Hence, governments need new plans to attract, retain and develop people with the required skills. Otherwise, they will look for jobs abroad.

Advantages

a) Close cooperation with stakeholders and alignment with an existing government program on upskilling civil services – the Smart Civil Services programme (Tumangger 2020) – will ensure its political feasibility.

ity for its future continuity.

- b) A province attains higher HDI when the gross national income GNI (PPP) per capita is higher.

Risks

High cost. The average annual salary of an IT professional in Singapore with less than seven years of experience is \$39,883, four times higher than an average of \$8,673 in Indonesia (Tan 2017).

Recommendations

Increasing remuneration and building a more dynamic and responsive environment concurrently to attract young talents in search of purpose-led roles where they can bring changes to society (Bertrand 2019).

7. Conclusion

The current digitalisation ecosystem demands a new innovative tool due to the exceptional diversity of

Indonesia. The DRI serves as a transformational tool that local governments can use to help set their digitalisation agenda in three typologies of provinces: emerging, transitioning, and transforming. The recommendations drawn based on the score attained in Table 1 include:

Emerging Provinces

➤ Laying solid foundations in terms of infrastructure and setting up digital assistance premises to get the population onboard on digitalisation ladder.

Transitioning Provinces

➤ Accelerating DRI and its sub-indicators to be far ahead of the national level average by boosting infrastructure development and upskilling communities with cellular network infrastructures to support the dynamic of economic activity with increasing integration within urban-rural areas.

Table 1: Multicriteria Analysis of Policy Interventions using General Policy Consideration

1. Emerging				
Intervention/Criteria	Infrastructure	Attitude to Technology Adoption	The Scope of Online Services	Human Development
Sub-indicator Advancement	High	High	High	High
Financial Feasibility	Medium	High	High	High
Political Feasibility	High	Medium	Medium	High
Time Bound	High	Medium	Low	High
Total	11	10	9	12
2. Transitioning				
Intervention/Criteria	Infrastructure	Attitude to Technology Adoption	The Scope of Online Services	Human Development
Sub-indicator Advancement	High	High	High	Medium
Financial Feasibility	Medium	High	High	Medium
Political Feasibility	High	High	Medium	Medium
Time Bound	High	Medium	Medium	High
Total	11	11	10	9
3. Transforming				
Intervention/Criteria	Infrastructure	Attitude to Technology Adoption	The Scope of Online Services	Human Development
Sub-indicator Advancement	High	Low	High	High
Financial Feasibility	Medium	High	Medium	Medium
Political Feasibility	High	High	Medium	High
Time Bound	High	High	Medium	High
Total	11	10	9	11

Transforming Provinces

➤ Improving competitiveness by continually enhancing cellular network quality and promoting better financial incentives to attract ICT talents to tackle more complex digitalisation problems in the future.

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