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Digital Financial Inclusion in Indonesia

LPEM FEB UI
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Outline

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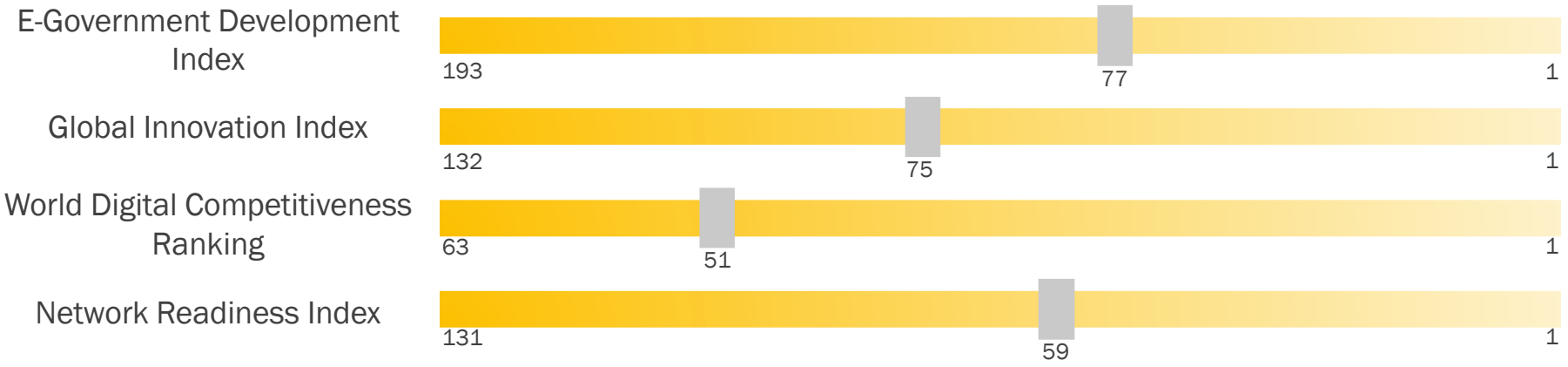
Indonesia's Current Condition: Digital Sector

The digital sector in Indonesia has been improving as shown by the increase in several indicators from 2017 to 2021

	2017	2018	2019	2020	2021
Fixed telephone subscribers per 100 inhabitants	4.22	4.23	3.54	3.40	3.31
Cell phone subscribers per 100 inhabitants	166.17	121.04	128.70	131.66	134.18
Fixed-broadband subscribers per 100 inhabitants	2.37	3.31	3.51	3.96	4.58
Mobile broadband subscribers per 100 inhabitants	96.79	88.12	92.02	104.00	112.45
Percentage of individuals using the internet	32.34	39.90	47.69	53.73	62.10

Source: BPS, 2021

Indonesia's Ranking in 2022

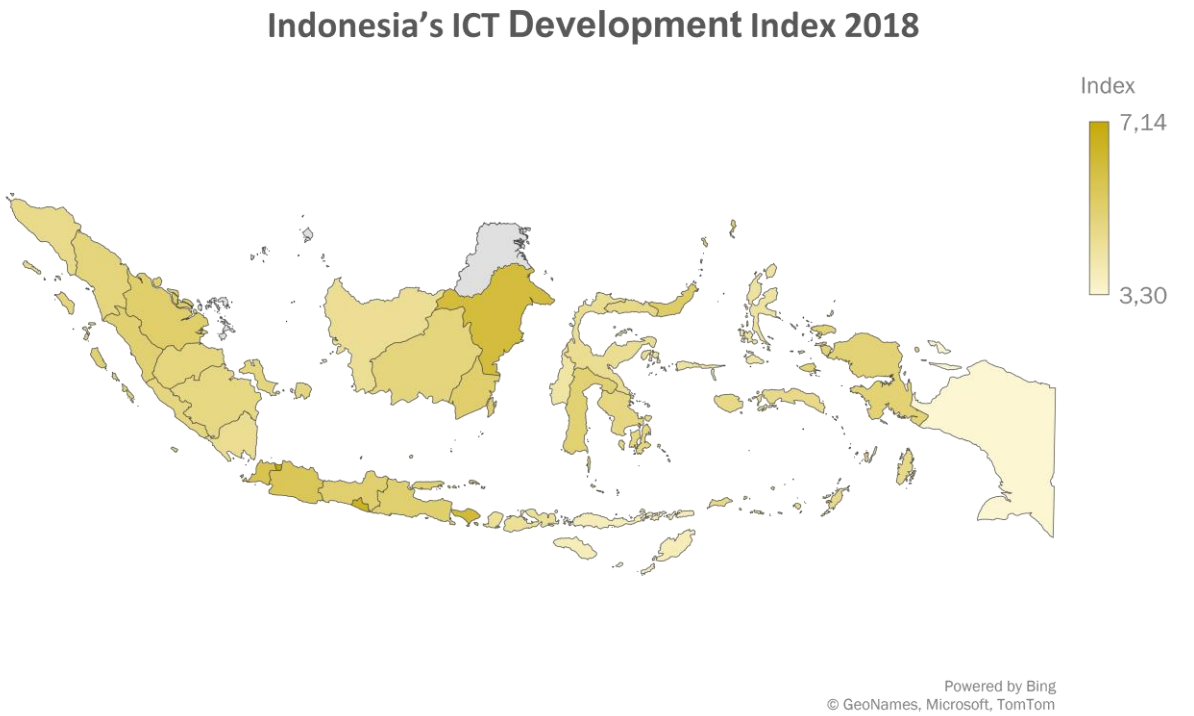


Indonesia is ranked in the lower middle rank in several indexes by 2022. Therefore, improvements are still needed in various sectors, especially the information and communication technology indicator.

Source: United Nation, 2022; WIPO 2022; IMD World Competitiveness Center. 2022; Postulans Institute; 2021

Indonesia's ICT Development Index by Province

All provinces in Indonesia have experienced an increase in the ICT Development Index from 2018 to 2021



ICT Category	Range
High	7.26 – 10.00
Moderate	5.01 – 7.25
Low	2.51 – 5.00
Very Low	0.00 – 2.50

Source: BPS, 2020; BPS, 2022

- The three provinces that have the **highest ICT Development Index in 2018 were DKI Jakarta, DI Yogyakarta, Bali**. However, in **2021, the provinces that have the highest ICT Development Index became DKI Jakarta, DI Yogyakarta, Kep. Riau**.
- Only one province has **increased from the moderate category in 2018 to the high category in 2021, namely DKI Jakarta**. Then, some provinces remain in the moderate category and some provinces increased from low to moderate category.
- However, the inequality of digital development in Indonesia is more widening.

ASEAN Digital Integration Index (ADII)

Only 2 of 6 pillars of Indonesia's score exceed ASEAN score

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NO	PILLAR	INDICATOR	ASEAN SCORE	INDONESIA	MALAYSIA	SINGAPORE	THAILAND	VIETNAM	MYANMAR	BRUNEI DARUSSALAM	CAMBODIA	LAO PDR	PHILLIPINES
1	Digital Trade & Logistics	1.1 Degree to which trade/customs processes are supported by digital technologies 1.2 Degree to which digital certificates and signatures are in place 1.3 Degree to which international standards for trade documents and procedures are followed 1.4 Level of quality of trade- and transport-related infrastructure 1.5 Level of competence and quality of logistics services	**55.27**	49.67	67.35	82.64	83.34	78.5	18.51	54.97	33.91	23.22	60.61
2	Data Protection & Cybersecurity	2.1 Degree to which data protection measures are in place 2.2 Level of legislative and regulatory cybersecurity capabilities 2.3 Level of institutional cybersecurity capabilities 2.4 Level of technical cybersecurity capabilities 2.5 Level of international cooperation on cybersecurity	**62.81**	78.43	91.27	89.7	87.91	63.05	20.41	67.46	24.76	32.58	72.49
3	Digital Payments & Identities	3.1 Proportion of people who use digital platforms or devices for banking purposes only 3.2 Proportion of people who use digital platforms or devices for any type of financial transaction 3.3 Degree to which legal frameworks enable electronic transactions 3.4 Proportion of people who have a national identity card 3.5 Degree to which a digitized ID system is in place	**58.84**	59.73	79.2	86.6	69.73	58.33	32.93	87.56	41.2	44.53	31.89
4	Digital Skills & Talent	4.1 Proportion of graduates in science, technology, engineering, and mathematics 4.2 Proportion of employment in knowledge-intensive services 4.3 Level of multi-stakeholder collaboration in R&D 4.4 Degree to which the active population has digital skills 4.5 Degree to which graduates have business-relevant skillsets	**48.21**	45.64	57.85	63.79	43.76	38.38	19.58	53.31	36.56	43.89	53.13
5	Innovation & Entrepreneurship	5.1 Degree to which venture capital is available 5.2 Proportion of GDP expenditure on R&D 5.3 Degree to which innovative companies can grow 5.4 Degree to which it is easy to start a business 5.5 Degree to which intellectual property protection frameworks are in place and are enforced	**49.32**	48.81	59.22	71.08	56.09	44.55	44.65	42.99	38.19	36.91	46.93
6	Institutional & Infrastructural Readiness	6.1 Proportion of Active mobile-broadband subscriptions 6.2 Proportion of Internet users 6.3 Degree to which government services are available and accessible digitally 6.4 Degree to which a government is considered responsive to disruption and change 6.5 Degree to which a legal framework is considered conducive for digital innovation	**62.86**	62.85	82.18	90.36	62.61	60.72	44.6	71.42	50.97	38.27	58.89

: Above ASEAN score

: Below ASEAN score

Source: ASEAN, 2021

Indonesia Digital Inclusion Program

There are 4 strategic sectors in the Indonesia Digital Roadmap 2021-2024 in accelerating digital transformation

The Indonesian government aims to accelerate national digital transformation to achieve an inclusive digital ecosystem. This is done through the following four strategic sectors:

Digital Infrastructure

Provision of Base Transmission System (BTS) in 3T Areas

The provision of Base Transmission System (BTS) in 3T areas is a tool to **overcome the digital divide, especially in areas that are included in the 3T** (underdeveloped, frontier, and outermost) areas and locations that **have not been built by telecommunications operators** (blank spots).

4G Mobile Facilitation in Non-3T Areas

The 4G Mobile Facilitation Program in Non-3T Areas was established to **improve the coverage and quality of broadband services in commercial areas** in Indonesia.

Internet Access Provision

This program takes the form of **providing internet access in schools, vocational training centres, community health centres, village hall, government offices, and public locations in 3T** (underdeveloped, frontier, and outermost) areas.

Digital Government

The existence of e-Government is intended to ensure the integration of management systems and processing of **electronic documents and information in developing a transparent public service system.** Moreover, e-Government also aims to **build clean, effective, democratic, and reliable governance.**

Digital Society

MSME Scaling Up

The MSME Scaling Up is priority program of Ministry of Communication and Information Technology based on the 2020-2024 Strategic Plan to **encourage online buying and selling activities through social media and e-commerce platforms for MSMEs.**

Digital Talent Scholarship

The Digital Talent Scholarship (DTS) program aims to **improve the digital competence** of Indonesians.

1000 Startup Digital

The 1000 Startup Digital program is a priority program to **create new technopreneurs and digital startups.**

Digital Economy

In 2021, the value of Indonesia's digital economy was USD70 billion and the highest in Southeast Asia. It is predicted to reach USD146 billion by 2025. The main sector supporting the digital economy in Indonesia is e-commerce, which reached USD53 billion in 2021 and is predicted to rise up to USD104 billion by 2025 (Coordinating Ministry for Economic Affairs, 2022).

Source: Ministry of Communication and Information Technology, 2016; Ministry of Communication and Information Technology, 2022; Ministry of Communication and Information Technology & LPEM FEB UI, 2022; Coordinating Ministry for Economic Affairs, 2022

Indonesia Financial Inclusion Program

There are several programs to increase financial inclusion

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There are several programs or products that support digital financial inclusion, as follows:

Branchless Financial Services for Financial Inclusion (Laku Pandai)	Quick Response Code Indonesian Standard (QRIS)	Student and Youth Savings (SiMuda)	Micro Waqf Bank (BWM)	People's Business Credit (KUR)
A Financial Services Authority (OJK) program for the provision of banking services or other financial services through collaboration with other parties (bank agents) and supported by the use of information technology facilities.	Unification of various QR codes from various Payment System Service Providers (PJSP) using QR Code. In order to make transactions involving QR Codes simpler, faster, and safer, the payment system industry and Bank Indonesia created QRIS. In February 2023, there were 24.9 million QRIS merchants and 30.87 million QRIS users. Then, until February 2023, the nominal QRIS transaction was IDR 12.28 trillion with a transaction volume of 121.8 million.	Savings program for 18-30 years old with an insurance feature and/or investment product offered by banks in Indonesia. The bank usually also provides e-banking facilities in opening this savings account.	A Sharia Microfinance Institution (MFI) registered and supervised by OJK that aims to provide access to capital for small communities that do not have access to formal financial institutions with a mentoring. OJK is also digitalizing BWM to encourage the development of a digitalization ecosystem for the Islamic financial services sector that is integrated with the real sector.	Loan facilities provided by banks to micro, small, and medium enterprises (MSMEs) and cooperatives that are feasible but not yet bankable. Furthermore, accessing KUR can be done digitally.

Source: OJK; Bank Indonesia

The Negative Impact of Internet Usage

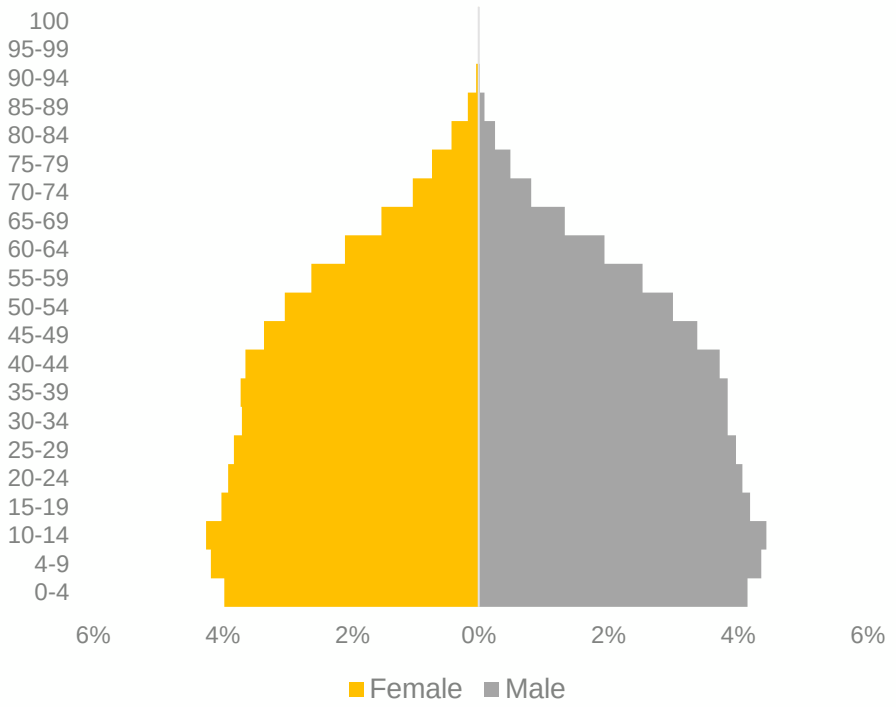
Despite the many benefits of digitization, there are also disadvantages when using the internet

Although digitalization has many positive impacts, the use of the internet also has negative impacts, such as the following:

Internet Addiction and Problematic Internet Use	Negative Effects on Cognitive Development	Information Overload	Impaired Public/Private Boundaries	Damage to Social Relationships and Communities
Quaglio (2020) explained that lack of self-control over internet use can result in a decrease in physical and psychological wellbeing, with symptoms including discomfort, rage, losing control, social disengagement, family problems, and others pushing people towards isolation. Similar findings were also found in a study by Çikrıkci (2016) which showed that problematic internet use has a negative and significant impact on well-being. Zheng et al (2016) also stated that internet addiction results in dry eyes, decreased vision, and pain.	There is research that suggests continuous internet use can harm a child's cognitive development, including language learning, reading comprehension, critical thinking skills, memory capacity, and attention span (Quaglio, 2020).	Losing control, experiencing an overwhelming sense of information, performing less intellectually, and feeling less satisfied with one's job are all symptoms of information overload (Quaglio, 2020).	Such permeations may have negative effects on people's quality of life, privacy, safety and security, and social interactions (Quaglio, 2020).	Use of the internet frequently is linked to social isolation and loneliness. Online groups may additionally have poor communication, rudeness, and a lack of dedication and trust (Quaglio, 2020).

Policy Recommendation

There are different recommendations for each generation



Source: Population Pyramid, 2023

Indonesia has positive population growth. This is shown by the fact that the young population is greater than the old population. Therefore, there are many opportunities that can be explored from the young population in Indonesia, especially in increasing digital financial inclusion.

There are differences in behavior in accessing digital information between generations. Therefore, there are different recommendations for each generation as follows:

Baby Boomer (born in 1946-1964)

In O'Keeffe's (2014) study, it was shown that baby boomers have basic digital literacy skills. Furthermore, O'Keeffe (2014) explained the need for resources to collect, evaluate and provide free information about the many devices and apps available to Baby Boomers and senior citizens. This could be done with mentoring, as baby boomers might not know how to use the devices and apps that can benefit them.

Gen X (born in 1965-1980)

Gen X has institutional knowledge and some non-digital skills that younger people don't yet have. Therefore, the government can design upskilling and training programs for Gen X workers so that they can make better use of digital platforms and tools (Deloitte, 2022).

Gen Y/Millennial (born in 1981-1996)

Ghoorah (2017) explains that Gen Y is a generation that is highly digitally empowered and has a high readiness to use new technologies. Therefore, there is a need to refresh or improve the quality of digital tools and applications to provide usefulness for them.

Gen Z (born in 1997-2012)

According to Kangwa et al. (2021), Gen Z is highly inclined and proficient to use digital gadgets, social media, and financial technology. Therefore, there is a need for technology enhancement (Turner, 2015) and socialization to increase awareness so that Gen Z can use ICT wisely.

Thank you

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