East Ventures

Digital Competitiveness Index 2023

# Equitable digital nation

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Katadata Insight Center

EastVentures

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Mapping the Digital Competitiveness of
38 Provinces and 8 Digital Economy Sectors
in Indonesia

in collaboration with:

pwc

Katadata Insight Center

# Foreword

**Willson Cuaca**
Co-Founder and Managing Partner
East Ventures

As an early believer in the capabilities of Indonesia's digital ecosystem since 2009, East Ventures has witnessed the evolution of digital growth in Indonesia. At that time, the internet penetration was only 30 million people. As of January 2023, internet penetration has reached 212.9 million, or 77 percent of Indonesia's total population.[1] It is an astonishing number for the growth of Indonesia's digital economy.

Indonesia has experienced an extraordinary surge in the digital economy since 2016. As the country with the largest digital economy in Southeast Asia, Indonesia is projected to reach US$ 77 billion in 2022 and will continue to grow to US$ 220-360 billion in 2030.[2]

Indeed, it is not easy to achieve this target, given the geographical conditions of Indonesia, which is an archipelagic country with 38 provinces and 157 cities/regencies. However, on the other hand, Indonesia's demographic factors, predominantly young and of productive age, are one of Indonesia's strengths in pushing the digital economy.

East Ventures believes that every stakeholder, be it the government, industry players, or investors, has a role in creating equitable digital justice for all provinces, cities, and regencies in Indonesia. The use of technology and digital should be concentrated in more than just big cities or tier one, such as Jabodetabek, Bandung, and Surabaya, because the digital economy is the right of all Indonesian citizens.

For this reason, East Ventures has mapped the progress of the digital economy and competitiveness in each province for four consecutive years, which we have shared through the **East Ventures – Digital Competitiveness Index (EV-DCI)** report. Through EV-DCI, we want to encourage all stakeholders to be involved in promoting digitalization and developing the digital economy in Indonesia while at the same time enjoying the positive impact of the digital economy.

This year will be our fourth edition of EV-DCI. From 2019 until now, the median EV-DCI score shows that digital competitiveness between provinces is increasingly evenly distributed. This means that the distance or gap in digital capabilities for each province is getting smaller; digital competitiveness in tier 2 and 3 cities is increasingly catching up with tier 1 cities.

In addition, many Indonesian startup companies have realized the importance of strengthening business fundamentals rather than just increasing user growth in the short term. Finding and building a core business and product is significant and is something we always see in startups.

We also experience value creation through the many collaborations between digital startup players across sectors, the government, investors, and other institutions. One of the actual collaborations that have been carried out is between East Ventures portfolio companies, private companies, and state-owned enterprises, and between the government and institutions or companies.

Finally, applying Environmental, Social, Governance (ESG) by startups in Indonesia can increase their competitiveness. Investors and consumers will trust startups implementing ESG because they have reasonable social and environmental responsibilities and transparent and effective governance. This can increase investment and business opportunities in the province and promote responsible and sustainable business practices, thereby positively impacting the environment and local communities.

Even though the digital competitiveness has become equal, it does not mean the development of the digital economy is over. The digital economy development still continues and grows as we still have a lot of 'homework' and challenges that all stakeholders must complete. We will continue to support equal distribution of digital competitiveness in Indonesia and participate in developing Indonesia's digital economy through various investments and our initiatives or programs.

The EV-DCI report presents conclusions and recommendations for stakeholders in the form of a framework or building blocks to realize an **equitable digital nation** for all Indonesian people.

With the sustainable development of the digital economy, we hope that Indonesia will create millions of children and digital talents from various provinces, cities, and regions.

# Public Services Quality Reflect the Nation's Presence

**K. H. Ma'ruf Amin**
Vice President
Republic of Indonesia

**Information technology should be the backbone of community services and as a tool to improve the investment climate. What kind of collaboration is built between the government and the private sector in the integration of public services, especially in the case of Digital Public Service Mall (Mal Pelayanan Publik/ MPP)?**

I always emphasize the importance of improving public service quality at various events. The government continues to promote public services that are professional, straightforward, free of corruption, and have a real impact on the people. Community satisfaction with public services reflects the state's presence in the society.

One of the strategies to improve public services is through the implementation of MPP in cities/regencies. MPP uses the concept of one stop service as the integration of various types of public services in one building/place.

It is hoped that by the end of 2024, all cities/regencies will have MPPs. As of 1 March 2023, the Minister of State Apparatus Utilization and Bureaucratic Reform (PANRB) had launched 112 MPPs (1 MPP DKI Province and 111 MPP cities/regencies).

We are also committed to develop digital MPP which will make the reach easier, since service requests can be submitted via mobile phone/device. However, we also need to consider the conditions, characteristics, and uneven level of digital literacy of our people. As a result, the presence of physical and hybrid MPPs in multiple cities/regencies is still required whilst digital MPPs are being developed.

The digital MPP developed by the Ministry of PANRB that adopts the Smart Kampung platform belonging to the Banyuwangi Regency MPP is expected to be launched on 20 May 2023, right on the commemoration of National Awakening Day. I hope that this date serves as an awakening day for our public service.

The national digital MPP platform is a collaboration between the Ministries of PANRB, Communication and Informatics, National Development Planning/Bappenas, Home Affairs, the Banyuwangi Regency Government, the National Single Window Institution (LNSW), with assistance from Bank Mandiri and PT Telkom.

**The Vice President of the Republic of Indonesia asked regional governors to make breakthroughs to stimulate regional development. How is the collaboration carried out between the central and regional governments in supporting equitable development in the regions?**

It is indeed impossible to achieve the national development target without good collaboration between the Central and Regional Governments. Development cannot be carried out sectorally or partially in terms of implementing subjects and objects to be built in order to be effective. Synergistic efforts must be made by ministries/institutions, provincial governments, and city/ regency governments, as well as elements of the private sector and the community.

All stakeholders must discuss and agree on development policies, programs, and activities, including the financing, so that development implementation has a significant impact on the welfare and prosperity of all Indonesians. This forum is held in the National Development Planning Conference (Musyawarah Rencana Pembangunan Nasional/Musrenbangnas) at Bappenas which involves all relevant stakeholders.

For example, Presidential Instruction No. 9/2020 on Accelerating Welfare Development in the Provinces of Papua and West Papua, and Presidential Instruction No. 4/2022 on Accelerating the Elimination of Extreme Poverty. There are clear instructions from the President

directing all ministers, heads of institutions, and governors/regents/mayors to work together in accordance with their authority to carry out the mandates of the two regulations.

**What kind of support do regional governments need in promoting development in their area?**

The government is deeply committed to achieving development at both the national and regional levels. Ministries/Institutions support regional development according to their duties and functions. The support provided includes aspects of policy regulation, financing investments or budget allocations disbursed to the regions, as well as institutional aspects.

**What is the government's strategy for encouraging investment and equitable distribution of digitalization in order to accelerate Papua's development?**

Papua is blessed with the potential for abundant natural resources. The 7 customary territories spread across the Papua region have superior potential, for example, fishery/marine products, mines, plantations, and others. Papuan economy is guided by the principles of justice and equity in order to maximize the welfare of the Papuan people.

The government is committed to accelerating Papua's welfare development. For this purpose, I think it is important to go directly and observe the development efforts there as well as to see first-hand the real conditions, challenges and constraints that are still being faced in the development of welfare in Papua, so that the output of development policies and solutions to various problems in Papua can be produced later. Papua is expected to answer the root of the problem better, right on target, and more effectively.

It is also hoped that this policy will accelerate the fulfillment of the basic needs of our brothers and sisters in Papua, such as housing, clean water, electricity, education services, health services, access to economic activities, including the need for information technology.

The government recognizes that an internet connection has become a basic human need, and Papua is no exception. As a result, the government, in this case the Ministry of Communication and Informatics (Kemenkominfo), along with other stakeholders, continues to build internet infrastructure in areas of Papua, which will certainly have an impact on improving the quality of life for the Papuan people, including education, public services, and increased investment.

**What are the government's plans and strategies for developing the digitization of the halal industry and the sharia economic ecosystem?**

One of the strategies is to expand the capacity of the National Sharia Economic and Finance Committee (*Komite Nasional Ekonomi dan Keuangan Syariah*/KNEKS) through the establishment of Regional Islamic Economic and Finance Committees (*Komite Daerah Ekonomi dan Keuangan Syariah*/KDEKS) at the provincial level in Indonesia, as a catalyst of the sharia economic development at the national and provincial levels.

Furthermore, the government continues to encourage the development of business networks and supporting infrastructure to strengthen the sharia economic ecosystem and the halal industry in the regions. The supporting infrastructure includes port and airport facilities, transportation infrastructure, and information technology infrastructure. This aims to strengthen the connectivity and accessibility of the halal industry in the region.

In line with the need for digitization in Papua, we must accelerate digitalization in all parts of the country to help achieve various development goals. The government will promote digitalization in the Islamic economic sector and halal industry, including the use of blockchain technology, the internet of things (IoT), and artificial intelligence (AI). We hope that technological advancements will strengthen innovation and research on halal products/ingredients, halal product safety and credibility, and business efficiency.

The government also continues to support the development of sharia economics and halal product research, study, and innovation centers. It is hoped that this research, study, and innovation facility will also provide halal entrepreneurs, particularly MSMEs, with training, mentoring, and access to capital.

Last but not least, we need to strengthen the capacity of human resources in the sharia economy and the halal industry, through education and training in various fields, including production, distribution, marketing and business development.

# Table of Content







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# List of Abbreviation

| ABREVIATION | ELABORATION |
|---|---|
| [Year]F | [Year]Forecast |
| 3PL | Third Party Logistics |
| 3T | *Terdepan, Terpencil dan Tertinggal*/Foremost, Remote, and Lagging Behind |
| AFPI | *Asosiasi Fintech Pendanaan Bersama Indonesia*/ Indonesian Joint Funding Fintech Association |
| AFTECH | *Asosiasi Fintech Indonesia*/Indonesian Fintech Association |
| AI | Artificial Intelligence |
| APBD | *Anggaran Pendapatan Belanja Daerah*/Regional Revenues and Expenditures Budget |
| API | Application Programming Interface |
| Apindo | *Asosiasi Pengusaha Indonesia*/Indonesian Employers Association |
| ASN | *Aparatur Sipil Negara*/Civil Servant |
| AUM | Assets Under Management |
| B2B | Business to Business |
| B2B2C | Business to Business to Consumer |
| B2C | Business to Consumer |
| Bappeda | *Badan Perencanaan Pembangunan Daerah*/Regional Development Planning Agency |
| BGSi | Biomedical & Genome Science Initiative |
| BI | Bank Indonesia |
| Bisa Ya Lapak | Benahi Infrastruktur dan Sistem Agar Nyaman Bayar Pajak/Improve Infrastructure and Tax Paying Convenience System |
| BLUD | *Badan Layanan Umum Daerah*/Regional Public Service Agency |
| BNPL | Buy Now, Pay Later |
| BOSARA | Belanja Online Sulawesi Tenggara/Southeast Sulawesi Online Shopping |
| BPD | *Bank Pembangunan Daerah*/Regional Development Bank |
| BPJS | *Badan Penyelenggara Jaminan Sosial*/Social Security Administrative Body |
| BPMP | *Balai Penjaminan Mutu Pendidikan*/Education Quality Assurance Center |
| BPOM | *Badan Pengawas Obat dan Makanan*/Indonesian Food and Drug Authority |
| BPPR | *Badan Pengelola Pajak dan Retribusi*/Tax and Retribution Management Authority |
| BPS | *Badan Pusat Statistik*/Statistics Indonesia |
| BTS | Base Transceiver Station |
| CAGR | Compound Annual Growth Rate |
| CBDC | Central Bank Digital Currency |
| CLV | Customer Lifetime Value |
| CRM | Customer Relationship Management |
| DID | *Dana Insentif Daerah*/Regional Incentive Funds |
| DIGI-SM | Digital-Preneur Sukses Mandiri |
| Dinas Kominfosanti | *Dinas Komunikasi, Informatika, Persandian, dan Statistik*/Communication, Informatics, Encryption, and Statistics Auhority |
| Diskominfotik | *Dinas Komunikasi, Informatika, dan Statistik*/ Communication, Informatics, and Statistics Authority |
| Disperindag | *Dinas Perindustrian dan Perdagangan*/The Department of Industry and Trade |
| Ditjen Aptika | *Direktorat Jenderal Aplikasi Informatika*/Directorate General of Informatics Applications |
| DLS | Distributed Ledger System |
| DPMK | *Dinas Pemberdayaan Masyarakat dan Kampung*/ Community and Village Empowerment Department |
| DPSP | *Destinasi Pariwisata Super Prioritas*/Super Priority Tourism Destination |

| ABREVIATION | ELABORATION |
|---|---|
| DTK | *Dana Transfer Khusus*/Special Transfer Fund |
| EBT | *Energi Baru Terbarukan*/New and Renewable Energy |
| Edtech | Education Technology |
| eHealth | Electronic Health |
| eKYC | Electronic Know Your Customer |
| EMR | Electronic Medical Record |
| ESG | Environmental, Social, and Governance |
| ETPD | *Elektronifikasi Transaksi Pemerintah Daerah*/ Electronification of Regional Government Transactions |
| EV-DCI | East Ventures – Digital Competitiveness Index |
| Farmalkes | *Farmasi dan Alat Kesehatan*/Pharmacy and Medical Devices |
| Fintech | Financial Technology |
| FKTP | *Fasilitas Kesehatan Tingkat Pertama*/First Level Health Facility |
| G2P | Government to Person |
| Geber RT | Gerakan Bersama Rukun Tetangga/Joint Neighborhood Movement |
| Gema Ekraf | Berniaga Bersama Ekonomi Kreatif/Doing Business with the Creative Economy |
| Gernas BBI | Gerakan Nasional Bangga Buatan Indonesia/ Proudly Made in Indonesia National Movement |
| GID | *Galeri Investasi Digital*/Digital Investment Gallery |
| GMV | Gross Merchandise Value |
| GHG | Greenhouse Gas |
| GSTC | Global Sustainable Tourism Council |
| GTV | Gross Transaction Value |
| HIMSS | Health Information and Management System Society |
| HNWI | High-Net-Worth Individual |
| IaaS | Infrastructure as a Service |
| ICT | Information and Communication Technology |
| IDPB MTPM | Indonesia PASTI BISA, Maju Terus Pantang Mundur |
| IKM | *Industri Kecil Menengah*/Small and Medium Industries |
| IKN | *Ibu Kota Negara*/The New Capital City |
| IoT | Internet of Things |
| IPM | *Indeks Pembangunan Manusia*/Human Development Index |
| IPO | Initial Public Offering |
| ISA | Income Sharing Agreement |
| IT | Information Technology |
| IUU | Illegal Unreported and Unregulated |
| JAKI | Jakarta Kini |
| JakWas | Jakarta Pengawasan/Jakarta Supervision |
| JKN | *Jaminan Kesehatan Nasional*/National Health Insurance |
| K-12 | SD-SMA |
| K-13 | Kurikulum 2013/Curriculum 2013 |
| KIC | Katadata Insight Center |
| KEK/SEZ | *Kawasan Ekonomi Khusus*/Special Economic Zone |
| Kemendikbudristek | *Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi*/Ministry of Research, Technology and Higher Education Republic of Indonesia |
| Kemenkes | *Kementerian Kesehatan*/Ministry of Health Republic of Indonesia |
| Kemenkominfo | *Kementerian Komunikasi dan Informatika*/Ministry of Communication and Informatics Republic of Indonesia |
| Kemenparekraf | *Kementerian Pariwisata dan Ekonomi Kreatif*/Ministry of Tourism and Creative Economy Republic of Indonesia |
| KKN | *Kuliah Kerja Nyata*/Community Service Program |

| ABREVIATION | ELABORATION |
|---|---|
| KLHK | *Kementerian Lingkungan Hidup dan Kehutanan*/Ministry of Environment and Forestry Republic of Indonesia |
| KUR | *Kredit Usaha Rakyat*/Micro Credit Program |
| Kurikulum Darurat | Kurikulum 2013 yang disederhanakan karena COVID-19/2013 curriculum which was simplified due to COVID-19 |
| Laku Pandai | Layanan Keuangan Tanpa Kantor dalam Rangka Keuangan Inklusif/Officeless Financial Services in the Framework of Financial Inclusion |
| LPDBE | *Layanan Pemerintah Daerah Berbasis Elektronik*/Electronic based local government services |
| LPS | *Lembaga Penjamin Simpanan*/Deposit Insurance Agency |
| M&A | Merger and Acquisitions |
| MA | Madrasah Aliyah/Islamic Senior High School |
| MATA TANI | Manajemen Pola Tanam Sulawesi Tengah yang Terintegrasi/Integrated Central Sulawesi Cropping Management |
| MOOC | Massive Open Online Course |
| MPP | Mal Pelayanan Publik/Public Service Mall |
| NDC | Nationally Determined Contribution |
| NIB | *Nomor Induk Berusaha*/Business Identification Number |
| NLE | National Logistics Ecosystem |
| NTT | Nusa Tenggara Timur |
| OJK | *Otoritas Jasa Keuangan*/Financial Services Authority |
| OPD | *Organisasi Perangkat Daerah*/Regional Apparatus Organizations |
| OTA | Online Travel Agency |
| OTT | Over the Top |
| p.a. | per annum |
| P2P | Peer to peer |
| PAD | *Pendapatan Asli Daerah*/Regional Original Income/ Local Own-source Revenue |
| PAUD | *Pendidikan Anak Usia Dini*/Early Childhood Cducational Program |
| GDP | Gross Domestic Product |
| PDM | *Praktik Dokter Mandiri*/Independent Doctor Practices |
| PDN | *Pusat Data Nasional*/National Data Center |
| GRDP | Gross Regional Domestic Product |
| Permenaker | *Peraturan Menteri Ketenagakerjaan*/Minister of Manpower Regulation |
| Perpres | *Peraturan Presiden*/President Regulation |
| PHK | *Pemutusan Hubungan Kerja*/Work termination |
| Pinjol | *Pinjaman Online*/Online loans |
| PISA | *Program Penilaian Pelajar Internasional*/Programme for International Student Assessment |
| PLTS | *Pembangkit Listrik Tenaga Surya*/Solar Power Plant |
| POJK | *Peraturan Otoritas Jasa Keuangan*/Financial Services Authority Regulation |
| PPKM | *Pemberlakuan Pembatasan Kegiatan Masyarakat*/ Implementation of Restrictions on Social Activities |
| Puskesmas | *Pusat Kesehatan Masyarakat*/Community Health Center |
| Q[Number] | The [Number]-quarter in a period of one year |
| QRIS | Quick Response Code Indonesia Standard |
| OTS GO | One Tax Service Gorontalo |
| RPJMN | *Rencana Pembangunan Jangka Menengah Nasional*/ The National Medium-Term Development Planning |
| RTIK | *Relawan Teknologi Informasi dan Komunikasi*/ Information and Communication Technology Volunteers |

| ABREVIATION | ELABORATION |
|---|---|
| SaaS | Software as a Service |
| SCF | Securities Crowdfunding |
| SiKesal | Sistem Informasi Keluhan Masyarakat Online/ Online Community Complaint Information System |
| SILANCAR | Sistem Layanan Pencari Kerja/Job Seeker Service System |
| SIMBA | Scan QRIS via Mobile Banking |
| Simolek | *Sistem Informasi Mobil Literasi dan Edukasi Keuangan*/Financial Mobile Literacy and Education Information System |
| SIPADAH | *Sistem Informasi Pajak Daerah*/Regional Tax Information System |
| SIPADU | *Sistem Pengaduan Terpadu*/Integrated Complaint System |
| SIPECEL | *Sistem Pencarian Elektronik*/Electronic Disbursement Information System |
| SKS | *Satuan Kredit Semester*/Semester Credit System |
| SKH | *Sekolah Khusus*/Special School |
| SLB | *Sekolah Luar Biasa*/Special Needs Schools |
| SNAP | *Standar Nasional Open API Pembayaran*/National Payment Open API Standard |
| SNLKI | *Strategi Nasional Literasi Keuangan Indonesia*/ National Strategy on Indonesian Financial Literacy |
| SOE | State-owned Enterprise |
| SP2D | *Surat Perintah Pencairan Dana*/Order for funds Disbursement |
| SPBE | *Sistem Pemerintah Berbasis Elektronik*/Electronic based Government System |
| SRO | Self-Regulatory Organizations |
| STEM | Science, Technology, Engineering, and Mathematics |
| STRANAS KA | Strategi Nasional Kecerdasan Artifisial/Artificial Intelligence National Strategy |
| TCFD | Task Force on Climate-Related Financial Disclosure |
| TIMISTAAGA | Sistem Informasi Tindak Lanjut Hasil Pengawasan/ Information System Follow-up for Supervision Results |
| TKDD | *Transfer ke Daerah dan Dana Desa*/Transfers to Regions and Village Funds |
| TP2DD | *Tim Percepatan dan Perluasan Digitalisasi Daerah*/ Regional Digitalization Acceleration and Expansion Team |
| TPAK | *Tingkat Partisipasi Angkatan Kerja*/Labor Force Participation Rate |
| TTDI | Travel and Tourism Development Index |
| UKM | *Upaya Kesehatan Masyarakat*/Community Health Efforts |
| UKP | *Upaya Kesehatan Perseorangan*/Individual Health Efforts |
| MSME | Micro, Small, and Medium Enterprises |
| UMP | *Upah Minimum Provinsi*/Provincial Minimum Wage |
| UMR | *Upah Minimum Regional*/Regional Minimum Wage |
| UPI | Unified Payments Interface |
| UU PDP | *Undang-Undang Perlindungan Data Pribadi*/Personal Data Protection Law |
| VC | Venture Capital |
| VPN | Virtual Private Network |
| WGS | Whole Genome Sequencing |
| WHO | World Health Organization |
| YoY | Year-on-Year |

# Executive Summary

**Optimism Amidst Global Economic Uncertainty**

In 2022, Indonesia's digital economy faced various challenges originating from within and outside the country. However, Indonesia's demographic potential still presents an opportunity to reach the golden era of digital economy, which value is predicted to reach **US$ 360 billion by 2030.**

**Consistent Improvement in EV-DCI up to 2023**

The index has generally **increased for four consecutive years** with the median score of 38.5 in 2023. An increase in the median score indicates improvement in digital competitiveness for middle and lower ranking provinces. The spread or gap between the index scores for the largest and smallest provinces increased to 53.2 from 48.3 in the previous year, due to the division of the provinces of Papua and West Papua from 34 to 38 provinces.

**Provinces on Java Island Still Dominate the Top Positions**

Out of the 10 provinces with the highest index scores, 6 are from Java Island. Central Java province ranked 6th, up from 14th in the previous year. Meanwhile, for the first time North Sumatra entered the top 10 after previously ranking 13th.

**Significant Index Changes across Provinces**

Jambi became the province with the largest improvement, by an increase of 16 ranks. One of the supporting factors is the Financial Pillar. The Jambi provincial government has improved digital services through the implementation of the Electronic-Based Government System (SPBE) and encouraged MSMEs to implement cashless payments. Meanwhile, Southeast Sulawesi declined by 13 ranks due to the low growth of GRDP in the digitalization sector.

**Continuation of Digital Economy Development**

The increase in the 2023 EV-DCI score reflects various developments in 2022. Numerous achievements in ICT infrastructure development, government digitization, digital business transformation, digital society enhancement, and the application of sustainability aspects can be the foundation for the journey toward Indonesia's digital golden era. All digital economy players must collaborate in advancing these five aspects.

**Digital Economy Development in Various Sectors**

**The ICT** sector is the foundation of the digital economy as it enables online economic activities. Currently, ICT infrastructure has been enjoyed by various layers of society, with internet penetration reaching 77%. However, some challenges remain, including internet quality and speed, digital literacy, and cybersecurity.

**The e-commerce, logistics, and fintech** sectors are growing due to the rise of disposable income, easy access to digital payments, and the establishment of online shopping habits. However, there are challenges, including e-commerce players' profitability, high logistics costs, and low financial technology literacy.

Finally, **the health, education, tourism**, and **climate** sectors have significant growth opportunities supported by various policies that lead to public sector digitization efforts and improvements toward a sustainable economy.

**Strategies for An Equitable Digital Nation**

The key factors to enhance Indonesia's digital economy ecosystem are (1) equal distribution of the digital economy ecosystem, (2) strengthening the business fundamentals of startup companies, (3) increase collaboration between stakeholders, and (4) sustainable development based on ESG approach. These four things would not only maximize the potential value of Indonesia's digital economy, but would also foster **an equitable digital nation.**

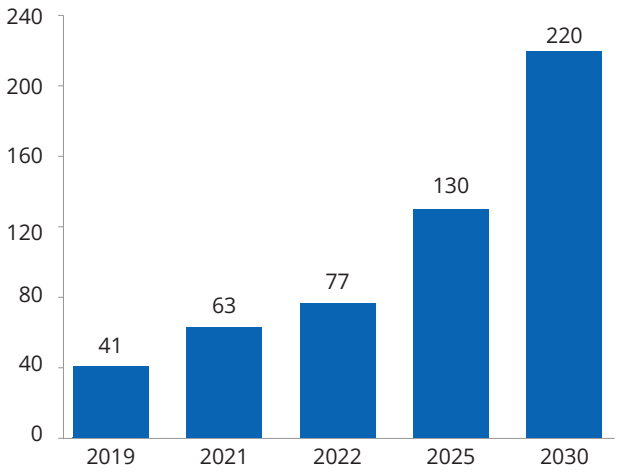
# 01

# Opportunities and Challenges of Indonesia's Digital Economy

# Indonesia's Digital Economy Potential

**THE JOURNEY** towards Indonesia's digital golden era continues. By 2030, the value of Indonesia's digital economy is projected to reach US$ 220-360 billion. The growth potential of Indonesia's digital economy is inseparable from demographic factors, as Indonesia is the country with the largest population in Southeast Asia and fourth largest in the world.

**Indonesia's Digital Economy Value**
GMV, in US$ Billion

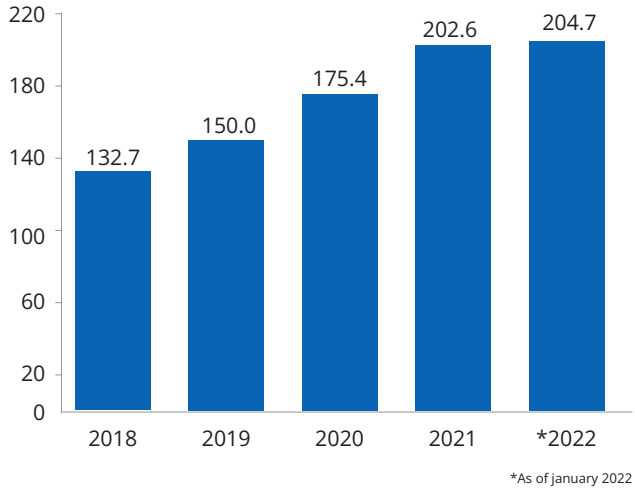



Source: Google, Temasek and Bain, e-Conomy SEA 2022

> 2023 is a momentum and an important milestone for the government to seriously accelerate the development of the digital economy in accordance with the directions given by the President.
>
> **Luhut Binsar Pandjaitan,** Coordinating Minister for Maritime & Investment Affairs Republic of Indonesia

The main prerequisite to make demographic factors a driving force of digital economy growth in Indonesia is the increased internet penetration in society. Based on the Directorate General of Informatics Applications (*Direktorat Jenderal Aplikasi Informatika*/Ditjen Aptika), from the Ministry of Communication and Informatics (*Kementerian Komunikasi dan Informatika*/Kemenkominfo), internet adoption rate in Indonesia consistently shows a positive trend. Despite a slowing growth at the beginning of 2022, 77.0% of Indonesians have become internet users.

**Number of Internet Users in Indonesia**
in Million

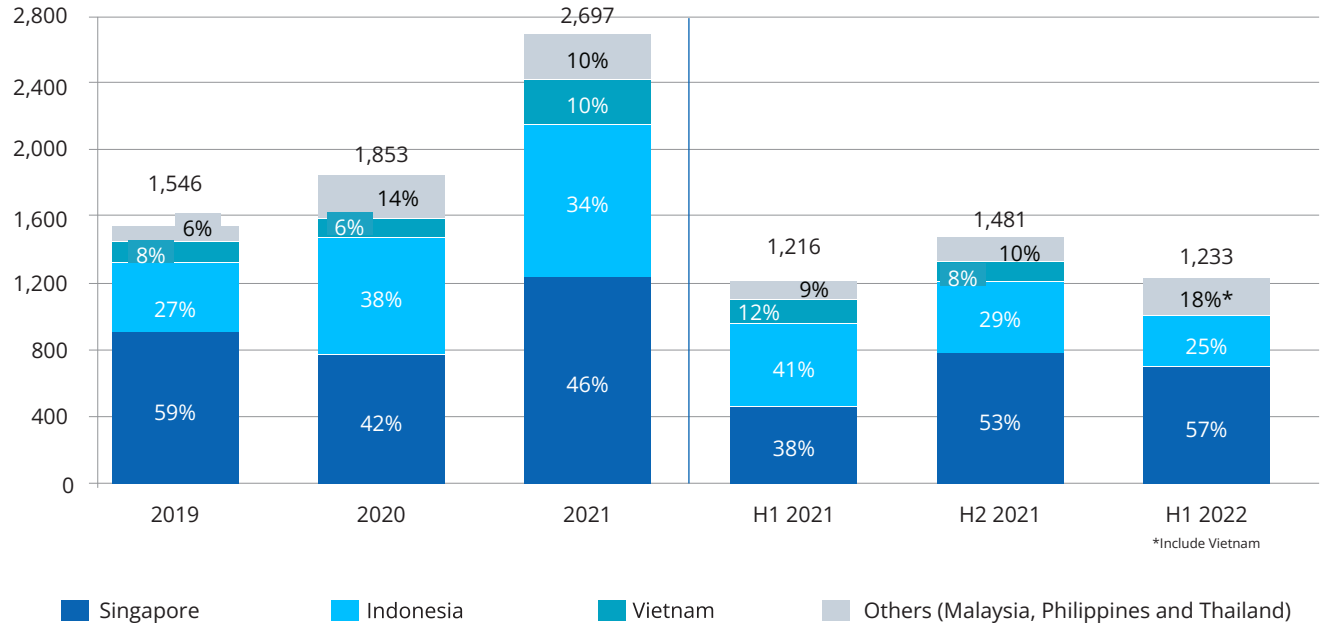



Source: We Are Social, Databoks (2022)

Internet coverage expansion increases user penetration, thus potentially boosting the frequency of transactions in the digital ecosystem. In addition to frequency, the increase in disposable income would raise the transaction value, thus boosting the digital economy's growth.

Demographic factors supported by high internet penetration puts Indonesia as a prospective digital economic market. As of December 2022, Indonesia is the 5th country with the most startups in the world. This contributes to the influx of foreign investment funds into Indonesia.

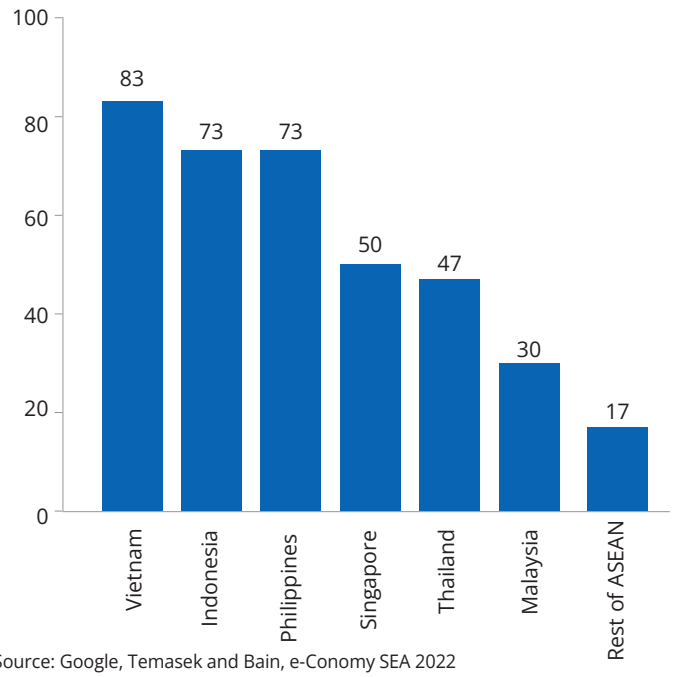
**Investor Funding for Startups in Southeast Asia**
in US$ Billion




Source: Google, Temasek and Bain, e-Conomy SEA 2022

Since 2019, Indonesia and Singapore have been dominating startup funding from investors. Moreover, investors remain optimistic that until 2025-2030, Indonesia will remain as the country in Southeast Asia to achieve the highest growth rate in funding deals after Vietnam.

**Expected Growth of Funding Deals in 2025-2030**
in Percentage




Source: Google, Temasek and Bain, e-Conomy SEA 2022

Despite having the potential to support digital economic growth, Indonesia is facing various challenges externally and internally. That said, all stakeholders in the digital ecosystem have to modify their strategies so that the projected growth can be actualized, whilst making good use of this momentum as a means to advance equitable development nationally.

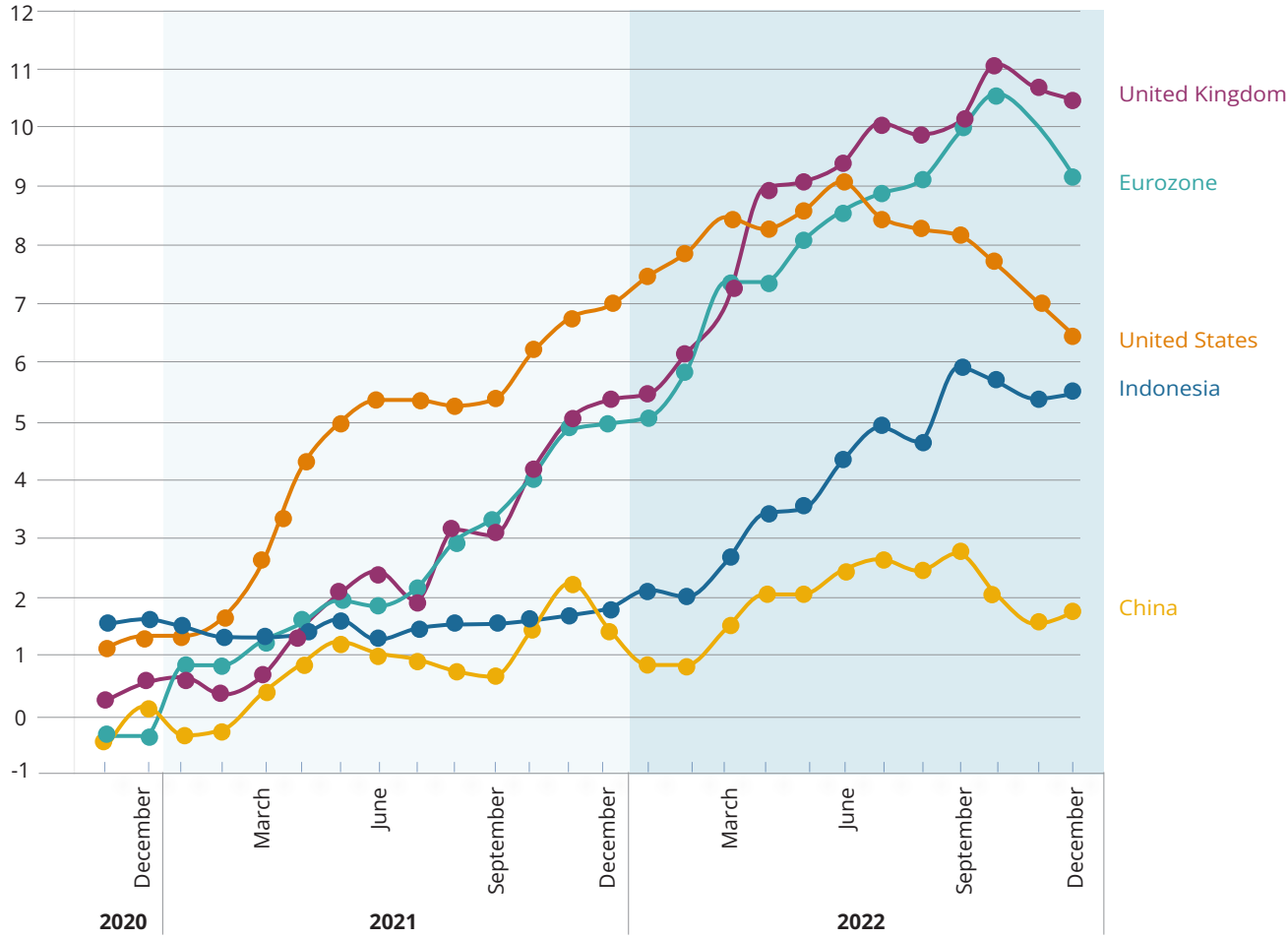
# Digital Economy Landscape in 2022

## Geopolitical and Global Economic Uncertainties

The Russian invasion of Ukraine since the beginning of 2022 has become a challenge for global economic growth in 2023. Moreover, several countries are predicted to experience economic recession.

Conflicts at the international level caused supply disruptions on a number of major commodities needed in the global supply chain. As a result, scarcities and inflation occurred, including in Indonesia.

**Inflation around Several Countries in the World**
in Percentage, YoY




Source: Refinitiv, CNBC (2022)

To control the inflation rate, some countries have opted for a tight money policy by raising the interest rate. The Federal Reserve System (The Fed) has raised its benchmark interest rate seven times during March-December 2022.

The Fed's policy of interest rate hikes affects liquidity limitation and causes higher investment costs. As a consequence, the digital economy sector that is still highly dependent on investor funding to run its businesses, has also been influenced.

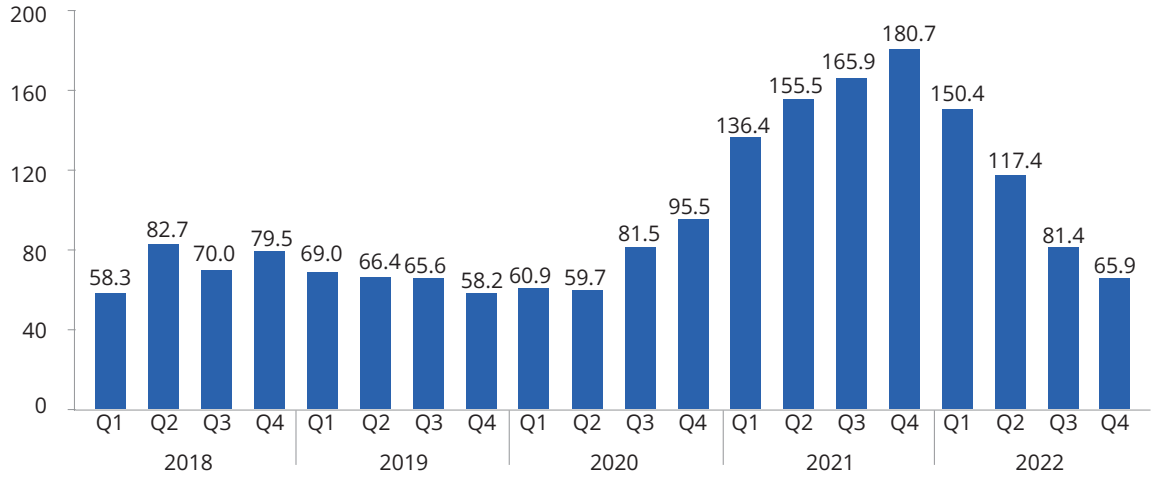
Based on the "State of Venture 2022 Report" which was released by CB Insights, the global venture capital funding for startups dropped by 35% to US$ 415.1 billion from what previously was US$ 638.4 billion.

In December 2022, the Minister of Communication and Informatics Johnny G. Plate acknowledged that there had been a 60% (YoY) decline in the flow of startup funding in Asia in the third quarter of 2022.

> "Facing the challenge of currency fluctuations due to interest rate hikes by the United States, the government is trying to manage the export proceeds to strengthen the Rupiah in the future."

**Airlangga Hartarto,** Coordinating Minister for Economic Affairs Republic of Indonesia

**Global Startup Funding Value per Quarter**
in US$ Billion, 2018-2022



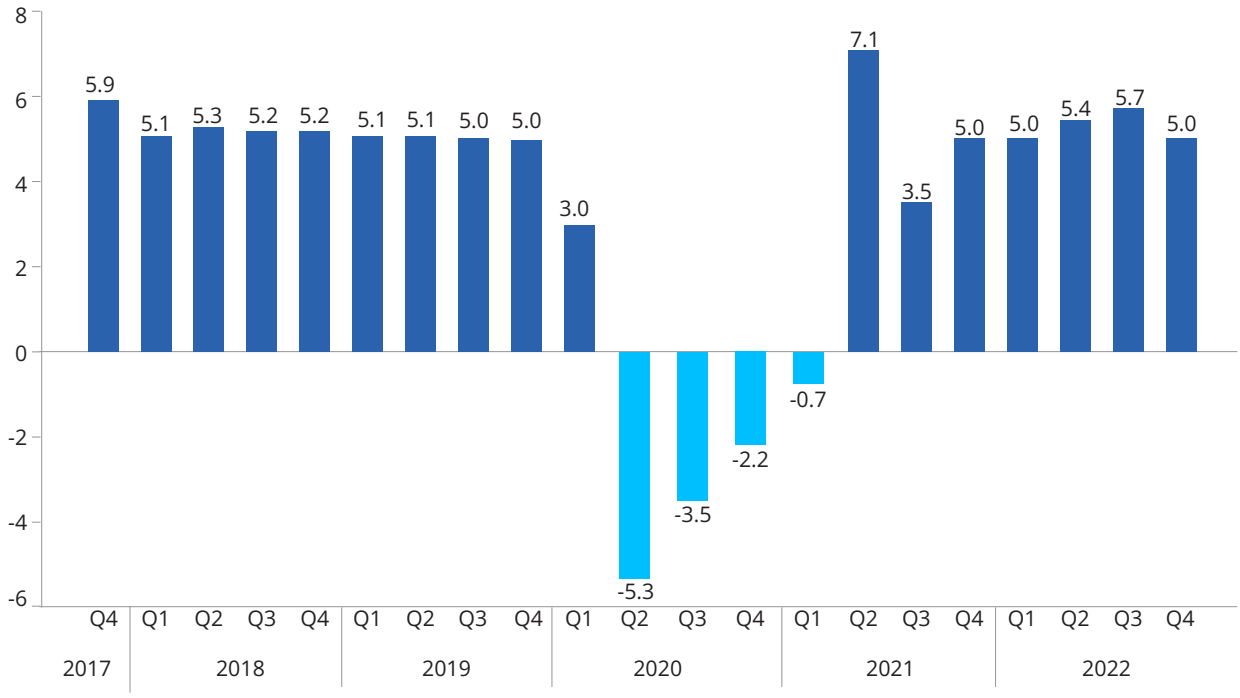

Source: Databoks

The data proves that investors are currently becoming more selective in providing funding. At the same time, startups need to adjust their operational strategies from being expansive to being efficient.

Giant digital companies such as Meta, Twitter, Microsoft, and Google were not immune from economic uncertainties that demand efficiency and layoffs. In Indonesia, renowned startups such as Shopee Indonesia and GoTo had to conduct layoff as efficiency measures, 3% and 12% respectively of the total employees.

Although layoffs also happened in Indonesia, investors will keep eyeing for opportunities to fund companies. This is because Indonesia's economy remains relatively safe from the risk of global recession in 2023. It is proven by the fact that Indonesia's economy managed to grow by 5.3% (Year-over-Year/YoY) throughout 2022.

**Indonesia's GDP**
in Percentage, YoY




Source: Refinitiv, CNBC

## Basic Elements of Indonesia's Digital Ecosystem

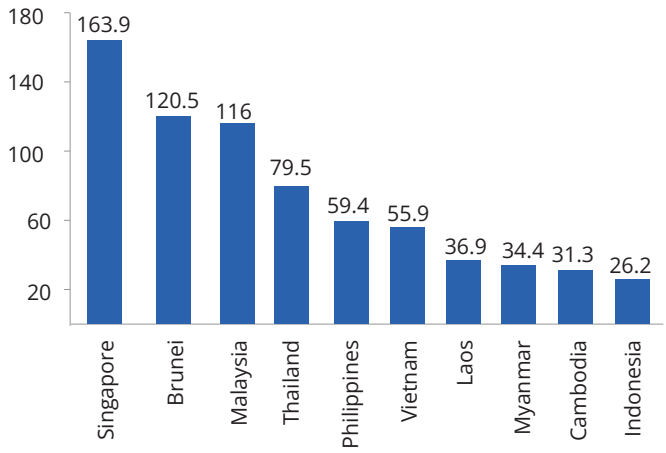
Apart from being affected by the global situation, several challenges to achieve Indonesia's digital economy potential by 2030 also come from within the country itself. A number of traits, such as geographic conditions, society dynamics, and population distribution caused Indonesia's basic elements of digital ecosystem, particularly digital literacy, ICT infrastructure, and data security, in need of improvement.

According to IMD World Digital Competitiveness Ranking 2022, Indonesia's digital capability or literacy ranked 51st out of 63 countries. Although there was an increase in ranking compared to the previous year (53), several neighboring countries such as Singapore (3), Malaysia (31), and Thailand (40), still have higher levels of digital capability.

One of the reasons behind Indonesia's low digital literacy is the uneven internet penetration within the country. Based on the Information and Communication Technology Development Index 2021, six provinces have internet penetration rates below 50%.[3] Although those rates have improved compared to the previous year which recorded eight provinces.

In terms of ICT infrastructure, Indonesia's rank (45) on the IMD World Digital Competitiveness Ranking 2022 was superior to Malaysia (49), but was still lower than Thailand (15) and Singapore (9). Internet speed, one of ICT infrastructures, is still lagging behind in Indonesia. As of December 2022, Indonesia is the country with the lowest mobile internet download speed in the ASEAN region.

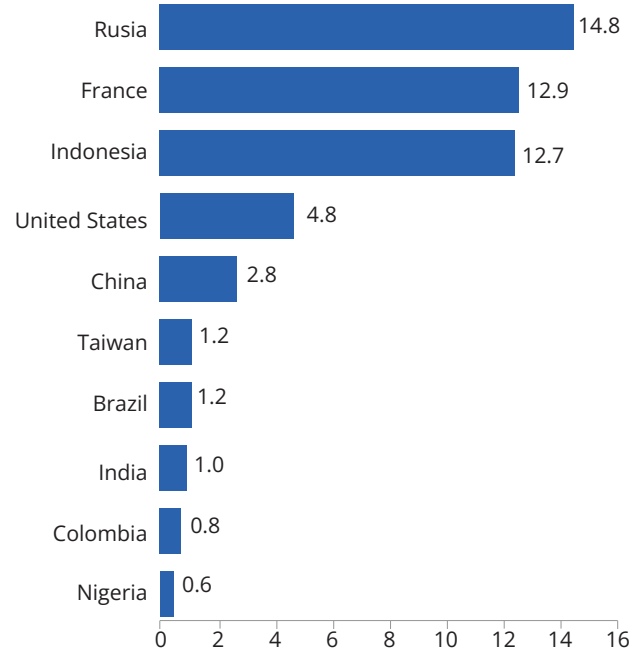
**Average Mobile Internet Download Speed in ASEAN Countries**
in Mbps, December 2022




Source: Ookla, Speedtest Global Index (2022)

Data security in the digital space also calls for attention. Massive utilization of technology and digital media is proportional to the amount of personal data stored in various digital platforms. Therefore, a system that can guarantee personal data security is needed.

**Countries with the Most Cases of Data Leakage**
in Million, 3rd Quarter-2022




Source: Surfshark, Databoks (2022)

The leakage of public figures' personal data by a hacker known by the moniker 'Bjorka' in September 2022 became one of the data leakage cases in Indonesia that caught most people's attention. This signifies that the security and protection of personal data remains an issue within Indonesia's digital ecosystem.

# Key Factors for Indonesia's Digital Economy Growth

Facing various changes ahead, Indonesia still has opportunities to head towards the golden era and achieve the expected digital economy value in 2030. To actualize that, Indonesia has to be able to accelerate various factors in the digital ecosystem, starting from (1) equitable distribution of the digital economy ecosystem, (2) strengthen the business fundamentals of startup companies, (3) increase collaborations between stakeholders, to (4) sustainable development based on ESG approach.

## Equitable Distribution of the Digital Economy Ecosystem

The digital economy consists of every economic activity that utilizes the internet and transforms business processes to create new mechanisms such as in the ICT, e-commerce, logistics, finance, health, education, tourism, and climate sectors.

The utilization of the internet in the digital economy has opened up plenty of chances and opportunities. In this case, both startups and traditional businesses can be a part of the digital economy.

In order for the digital economy to grow as expected, inclusivity is the key to success. According to research by Kredivo and Katadata Insight Center (KIC) titled "Indonesian E-Commerce Consumer Behavior", it shows that the proportion of e-commerce transactions in tier 2 and 3 cities in 2021 has increased from 33% to 36%.

Based on the research, people living outside metropolitan cities have become more accustomed to the digital economy, especially e-commerce. However, digital economic inclusivity has not been optimal due to the inequitable distribution of the supporting factors for the digital economy.

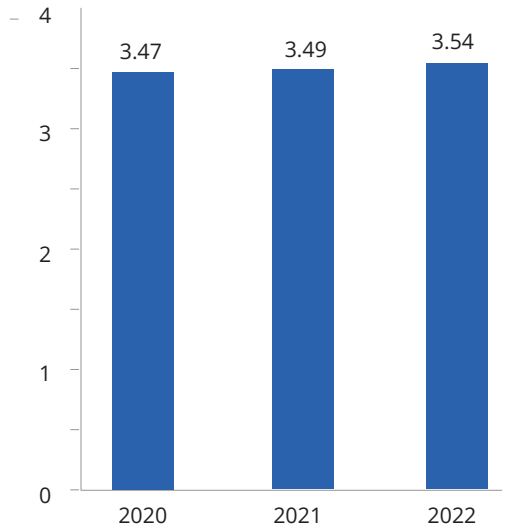
Supporting factors for the digital economy, particularly infrastructure, regulation, and citizens' digital capabilities, puts the digital economy as a means of equitable distribution of economic growth throughout Indonesia, especially outside the metropolitan area. This is due to the findings that, through the digital economy, interactions between producers and consumers have become easier. For example, residents in the Least Developed, Frontier, and Outermost (*Tertinggal, Terdepan & Terluar*/3T) areas can have the same market access opportunities as residents in Jakarta as a result of the digital economy.

In terms of infrastructure, the government continuously pushes for development. The most recent effort is the establishment of National Data Centers (*Pusat Data Nasional*/PDN) in Bekasi, Batam, IKN, and Labuan Bajo.

The government has also prepared data security regulations. Through the Personal Data Protection Law which was enacted in October 2022, the government is committed to ensure data security in the digital ecosystem. With this effort, it is expected to boost society's trust in the digital ecosystem as a safe medium for economic activities.

Equitable digital distribution is also influenced by improved digital skills of the citizens. Based on a survey conducted by the Ministry of Communication and Informatics with KIC, Indonesia's Digital Literacy Index has been continuously increasing during the past three years.

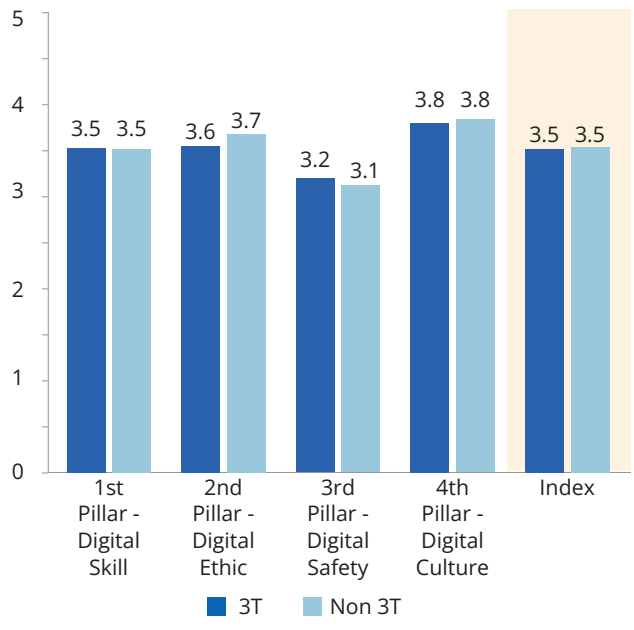
**Indonesia's Digital Literacy Index**




Source: Katadata Insight Center (2023)

This shows that the digital transformation process is getting better. Furthermore, in terms of equity, there is no significant difference in the index results and each of its pillars between the 3T and non-3T regions.

**Indonesia's Digital Literacy Index 2022 Based On Pillars**




Source: Katadata Insight Center (2023)

Quoting the official page of the Ministry of Communication and Informatics, through the Digital Literacy National Movement (GNLD), the government is working to improve Indonesian citizens' digital literacy through four pillars which are digital skill, digital ethic, digital safety, and digital culture.

## Strengthen the Business Fundamentals of Startup Companies

Indonesia's success in using its potential for digital economy growth is influenced by all stakeholders, one of them being startup companies. Facing various challenges, these companies have to adjust according to the current condition, particularly by strengthening the fundamentals of their business models.

There is a need to ensure that the company's business model is aligned with the market needs (product-market fit). When startups are able to provide solutions and innovations that suit the market's needs, they will attract investors to provide funding. In fact, amidst the downward trend in funding value, two Indonesian companies, namely Dana and Traveloka, are still among the top 10 startups that receive the biggest funding in Asia throughout the third quarter of 2022.[4]

The success of these two companies cannot be separated from their ability to identify shifts in customer behavior that have become more reliant on access to digital technology since the COVID-19 pandemic. Traveloka, for instance, continues innovating to come up with a super-app which not only caters to travel ticket purchases, but also offers loan disbursement and insurance services.

East Ventures remains committed to providing investment support for startup companies. Throughout 2022, the funding disbursed for startup companies reached US$ 211.6 million. Despite taking a more prudent approach, East Ventures will continue investing in startups that can present solutions to society through wiser and more measurable means.

In addition to strengthening the fundamentals, startups must also be able to increase efficiency. With a limited amount of funding, startups need to gain positive cash flow to survive. This is due to challenges that do not only come from the global level, but also from within the country, whereas employees' salary costs will increase up to a maximum of 10% with the enactment of Permenaker No.18/2022 about the 2023 Minimum Regional Wage Setting.

## Increase Collaboration Between Stakeholders

Digital transformation opens up many opportunities for governments, corporations, and startups at the domestic and international levels to collaborate.

In addition to government support and programs directed to increase digital literacy, the government can facilitate startups collaboration in terms of funding, mentoring, and business matching in the digital ecosystem.

The Ministry of Health, for example, in collaboration with East Ventures, has launched the Biomedical & Genome Science Initiative (BGSi). BGSi seeks to provide more accurate treatment services for the community, by collecting genetic information (genome) from humans and pathogens such as viruses and bacteria, or what is known as whole genome sequencing (WGS). Many health sector startups can participate by presenting medical research that supports the program.

Not only collaboration with the government, startups also have various other collaboration options. Some examples are corporations wanting to enter into digital platforms, MSMEs relevant to the business model, and collaborations between startups as needed.

One example of collaboration between startups can be seen in the collaboration between Komunal from the fintech sector and Chickin from the agritech sector. Data exchange in the agritech sector with fintech can expand financing for Indonesian farmers. The risk of loans to farmers can be managed by utilizing the data recorded at agritech companies such as production capacity and farmers' finances.

## Sustainable Development Based on ESG Approach

On 25 September 2015, at the UN Headquarters, 193 countries gathered to formulate the Sustainable Development Goals (SDGs) agenda.

As one of the development agents, private companies take the initiative in supporting the SDGs, namely with the concept of Environmental, Social, and Governance (ESG). Through ESG, companies are required to adjust

company performance standards by considering other factors besides economic benefits, such as environmental, social, and governance.

Being a company widely known for its digital technology, startups can spearhead the implementation of ESG. In fact, there are a lot of startup business models that can naturally combine economic and ESG goals.

From an environmental perspective, the issue of carbon emissions and waste management are the main topics of sustainable development. The initiative to expand the use of electric vehicles by digital companies in the transportation sector is an effort to reduce the impact of air pollution in business operations. On the waste treatment side, startup companies, such as Waste4Change, provide waste management services that adopt digital technology.

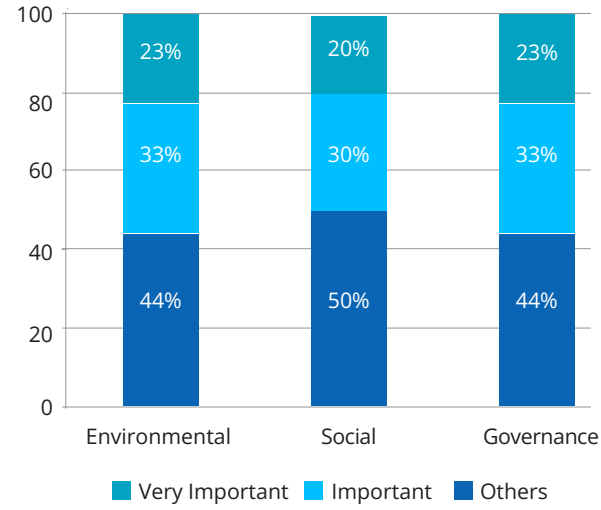
In social terms or looking at the company's relationship with external parties, the e-commerce sector has provided chances and opportunities for all levels of society, including housewives to SMEs, to join as sellers and develop entrepreneurship. This is a real form of community economic empowerment with digital transformation.

Governance is a principle that promotes good corporate governance internally. The ideal form of implementation is corporate financial governance that is transparent, guarantees legality, and does not violate ethical rights. Companies within the digital economy ecosystem, which are synonymous with information disclosure, can serve as examples for implementing these values.

Not only from the company side, consumers in the digital ecosystem are playing a role in supporting sustainable development as well. One of them is using products/ services from companies that have implemented ESG principles. Another method is by adjusting consumption patterns. Even though shopping has become easier, purchasing through digital platforms still generates emissions. Consumers can support the ESG implementation through adjusting purchasing patterns by ordering on a large scale with fewer frequencies, resulting in lower emissions than the opposite.

**Perceptions of Venture Capital Investors in Southeast Asia on the Importance of Applying ESG**

in Percentage




Source: Google, Temasek and Bain, e-Conomy SEA 2022

The application of ESG by companies in the digital economy ecosystem does not only have an impact on positive branding in the eyes of consumers. Investors, who are the startups' primary funding source, are starting to make ESG implementation as one of the evaluation points in investment decisions.

Considering the digital economy situation in 2023, efforts from all stakeholders in the digital ecosystem are needed to tackle various challenges in the future. Indonesia's demographic and investment potential needs to be utilized in order to achieve the target of digital economic growth. The prerequisite is to strengthen various key factors for Indonesia's digital economic growth, starting from **(1) equitable distribution of the digital economy ecosystem, (2) strengthen the business fundamentals of startup companies, (3) increase collaboration between stakeholders,** and **(4) sustainable development based on ESG approach.**

# Government's Push to Create the Environment for Innovation

> "Of course, the government creates a climate so that the private sector, especially young people, has an environment for innovation."
>
> **Airlangga Hartarto,** Coordinating Minister for Economic Affairs Republic of Indonesia

**There is a possibility of economic recession and food crisis next year. What are the government plans to overcome this phenomenon?**

The most important to overcome food recession is supply, demand, and stock. Food is also a factor causing inflation, and the government is very serious in dealing with this issue so that inflation can be managed because it will greatly affect economic growth.

Our challenge is to intensify food production with limited land. Our food industry is still 2.0, which is still mechanization. In the future, we will encourage smart farming. We know that nowadays young people do not want to work in the agriculture sector but we encourage them with smart farming, so that they want to go back to fisheries, horticulture, rice plants, and so on.

**How are the government's efforts to encourage digital equity to all regions, especially investment?**

We do not have to see the uniformity of digitization between cities in tier 1, 2, 3, but Indonesia's economic development is cluster-based. For example, outside Java, such as in Sulawesi, Maluku, we are pushing for downstream natural resources, not digitalization. So it is not one size fits all. Not all of 514 cities/regencies must be digital, but digital literacy is important. One of them is through the Pre-Employment Card (Kartu Prakerja) program.

In the United States, for example, Silicon Valley does not exist in all states. It is only around Stanford and in several other places. Thus, we will push the digital cluster, whether it is around Jakarta, in the BSD area, Batam, or Malang, which is close to the university cluster.

**What is the government's strategy to build collaboration with the private sector that will encourage the emergence of new startups in Indonesia?**

Of course, the government creates a climate for the private sector, especially young people, to be open minded and has an environment for innovation. We also push for several co-working spaces to be built, including at several universities. Hence, the opportunity to build startups is wide open, especially with their applications that are very broad, including in the health sector.

A simple example is Halodoc, we use it to treat COVID-19. With the PeduliLindungi application, we can track anyone who is positive, by name, by address, so we can immediately send medicine. In other countries, it is not possible because regulations are hampered by doctor consultation.

**The government breakthrough will continue to provide benefits to export surplus. What kind of contribution of digitalization's role in driving exports?**

For digitalization, it is more of producer to consumer, consumer to consumer, mainly through digital trade through e-commerce. We want to bring e-commerce to support ASEAN, so that Southeast Asia does not only become a market for Alibaba, Amazon, and others. We hope that Indonesia has e-commerce that can enter the ASEAN level.

One of the things that we can do is for the payment system, we already use QR so the payment system will be easy. Then next we will manage the logistics of e-commerce trade because there are customs. We hope that this can really free flow within ASEAN. This is also included in the ASEAN digital economy framework. Thus, we hope for the contribution of digitalization on exports, especially from MSMEs, to emerge.

# All Stakeholders Has to Synergize in Developing the Digital Ecosystem

**ONE OF THE TOPICS** discussed at the G20 Summit in Bali and the main concern of countries with the strongest economies in the world is digital transformation to support economic resilience. President Joko Widodo has expressed his optimism that Indonesia will become the fourth largest economic power in the world by 2045. In fact, Indonesia's digital economy is growing rapidly compared to other Southeast Asian countries. The value of Indonesia's digital economy will reach US$ 70 billion in 2021 and is expected to double by 2025.

2023 is a momentum and an important milestone for the government to seriously accelerate the development of the digital economy in accordance with the directions given by the President. Based on data from the Master Plan for the Development of Indonesia's Digital Industry 2023-2045, the value of the digital economy is targeted to reach IDR 22,513 trillion in 2045, or 15 times the achievement in 2021 of IDR 1,490 trillion. I believe that the current transition of the Indonesian economy towards digital is a necessity.

However, despite the bright prospect of Indonesia's digital economy, there are still obstacles to overcome. One of the biggest challenges is the lack of internet access in many parts of Indonesia. We all know that the current geographical conditions of the islands, as well as the uneven distribution of infrastructure, made it difficult for this country to achieve this goal.

The adoption of digital technology that occurred during the past COVID-19 pandemic needs to be balanced with digital literacy by business players, especially MSMEs. A qualified ecosystem, in addition to investment, is required for the growth of the digital economy. I believe that in the future, digital literacy will be as important as basic skills like reading, writing, and arithmetic.

Returning to President Joko Widodo's earlier statement, the President stated that Indonesia's digital economic potential must be fully utilized and not be "taken" by other countries. For this reason, all stakeholders must work together to develop a digital ecosystem in the country.

Currently, the government continues to encourage telecommunication players to actively build network infrastructure to remote areas. Through the Palapa Ring project and the Satria multifunctional satellite, the government is also involved in providing a backbone network. On the downstream side, the government is collaborating with a number of partners to provide digital technology skill training.

We also conduct literacy training and business coaching so MSMEs are literate in digital marketing through the Proudly Made in Indonesia (Bangga Buatan Indonesia) program. And the most important thing, the government needs policies related to coordination issues between the Central and Regional governments, which are oftenly not aligned.

In the midst of the various opportunities and challenges above, new acceleration and enthusiasm are needed to welcome this year full of uncertainties. Collaboration is a single word that must be carried out between the government, digital industry players, and the community to achieve common goals in 2045 for the prosperity of all Indonesian.

> "A qualified ecosystem, in addition to investment, is required for the growth of the digital economy. All stakeholders must work together to develop a digital ecosystem in the country."

**Luhut Binsar Pandjaitan,** Coordinating Minister for Maritime Affairs and Investment Republic of Indonesia

# 02

# Conditions and Mapping of Digital Competitiveness in Indonesia

**TO DEAL WITH** economic uncertainty caused by various factors in Chapter 1, it is crucial to strengthen the digital economy, especially in tier 2 and 3 cities. Those developments work as a solution for the industry, along with consumer behavior changes that increasingly rely on digital service.[1]

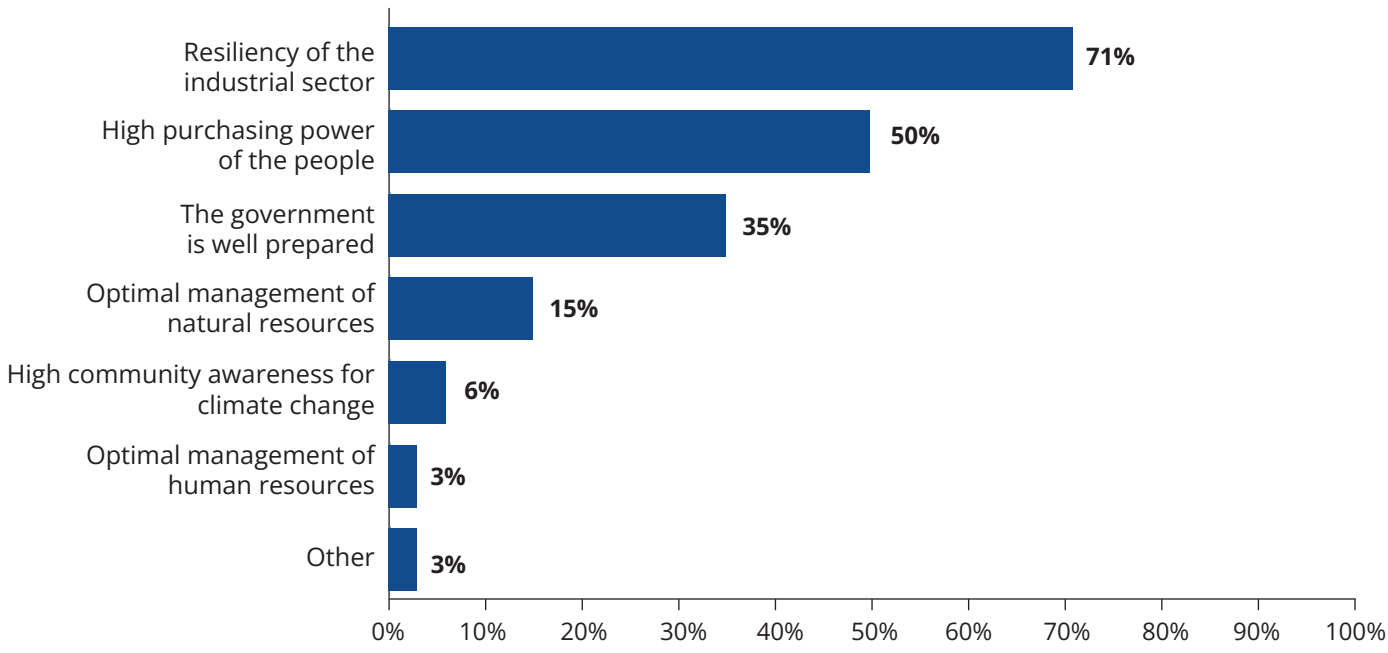
Equitable infrastructure remains as the main challenge in developing Indonesia's digital economy. According to the World Bank, although Indonesia is one of the countries with the fastest growing digital economy in Southeast Asia, actions are still needed to ensure inclusiveness for accessing digital technology and services.

The national digital economy still has the potential to keep on growing, so that it can form resilience amid global uncertainty. Based on the EV-DCI 2023 Digital Companies Survey, 87% of business players remain optimistic that Indonesia is able to withstand the global economic uncertainty, and 71% of them feel that the industrial sectors in Indonesia remain strong.[2]

This optimism is supported by the value of Indonesia's digital economy which is estimated to reach US$ 77 billion in 2022, an increase of 22% from the previous year.[3] In addition, President Joko Widodo has also given directions for the government to take advantage of the potential of this digital economy through inclusive and sustainable digital transformation in the trade sector.

The Ministry of Trade (*Kementerian Perdagangan*/ Kemendag) has prepared programs to improve the quality of the e-commerce ecosystem by digitalizing traditional markets and empowering MSMEs throughout Indonesia. The high potential of the national digital economy is also supported by the high number of internet users in the country, which has reached 202.6 million people.[4] The EV-DCI 2023 findings also show a more even distribution of the scores for the pillars of Finance, ICT Usage, as well as Entrepreneurship and Productivity among provinces.

**What makes you optimistic about Indonesia's ability to face global uncertainty?**




Source: EV-DCI 2023 Digital Companies Survey

# About East Ventures — Digital Competitiveness Index (EV-DCI) 2023

EV-DCI 2023 measures and maps the development of digital competitiveness in 38 provinces and 157 cities/regencies in Indonesia as an index. Unlike the previous version, EV-DCI 2023 added four new provinces as a result of provincial expansion.

*The data for the 4 new provinces is calculated by aggregating the cities/regencies data from the previous province, according to the indicators forming the EV-DCI index, so that new provincial data is formed. This process is undertaken because the new provincial data is unavailable.*

The index consists of three sub-indexes: Input, Output, and Support. Each sub-index consists of three pillars so there are nine pillars that make up the EV-DCI. Each pillar consists of 3-9 indicators, so in total there are 50 indicators used to compile the index.

## EV-DCI Indicator List 2023

### INPUT

**Human Resources**

1. Number of Students with Digital Capabilities
2. Growth of Students with Digital Capabilities
3. Number of Lecturers in Digitalization-Related Study Programs
4. Number of Digitalization-Related Study Programs
5. Digital Literacy Index

**ICT Usage**

1. Ratio of Citizens that Have Cellular Phone
2. Ratio of Households that Have Computer
3. Ratio of Citizens that Have Access to Internet
4. Ratio of Citizens that Have Access Internet from Home
5. Ratio of Citizens that Access Internet from Office
6. Ratio of Citizens that Access Internet from School
7. Ratio of Citizens that Access Internet with Laptop
8. Ratio of Citizens that Access Internet with Cellular Phone

**ICT Expenditure**

1. Ratio of Households Who Have ICT Expenditure
2. Average Expenditure of Households for ICT
3. Total Renumeration and Wage of Information and Communication Sector Workers
4. Average Renumeration and Wage of Information and Communication Sector Workers

### OUTPUT

**Economy**

1. GRDP of the Information and Communication Sector
2. GRDP Contribution of the Information and Communication Sector
3. GRDP Growth of the Information and Communication Sector
4. GRDP of Warehousing, Transportation Support, Post & Courier Subsector
5. GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector
6. GRDP Growth of Warehousing, Transportation Support, Post & Courier Subsector
7. GRDP of the Financial Services Sector
8. GRDP Contribution of the Financial Services Sector
9. GRDP Growth of the Financial Services Sector

**Entrepreneurship and Productivity**

1. Ratio of Workers Using the Internet in their Main Job
2. Ratio of Workers Using the Internet at Work for Communication
3. Ratio of Workers Using the Internet at Work for Marketing
4. Ratio of Workers Using the Internet at Work for Sales via Social Media
5. Ratio of Workers Using the Internet at Work for Sales via Website/E-commerce
6. Loan Using Fintech

**Manpower**

1. Number of Workers in Digitalization-Related Sectors
2. Ratio of Workers in Digitalization-Related Sectors
3. Growth of Workers in Digitalization-Related Sectors
4. Number of Workers in Digitalization-Prone Categories (Reverse Indicator)
5. Ratio of Workers in Digitalization-Prone Categories (Reverse Indicator)
6. Growth of Workers in Digitalization-Prone Categories (Reverse Indicator)

### SUPPORT

**Infrastructure**

1. Level of Electricity Disturbance (Reverse Indicator)
2. Ratio of Villages that Get Strong and Very Strong Signal
3. Ratio of Villages that Get 3G Signal
4. Ratio of Villages that Get 4G Signal
5. Ratio of Households with Fixed Line Connection

**Finance**

1. Financial Inclusion Index
2. Number of Officeless Financial Services Agents (Laku Pandai Agents)
3. E-wallet Adoption as a Payment Method

**Regulation and Capacity of the Regional Government**

1. Gross Enrollment Rate of Senior High Shools/ Vocational Schools
2. Gross Enrollment Rate of Higher Education (Diploma-Bachelor)
3. Life Expectancy Growth
4. Reduction of Poverty Rate (Reverse Indicator)

## Index Calculation

To standardize each indicator reported in different unit of measurement, the actual value of each indicator is converted into a standardized score with a scale range of 0 to 100. This score shows the relative comparison of the performance of one region to another.

The indicator score for a region is calculated using the following formula:

$$Score\ for\ Indicator_i = \left(\frac{X_i - X_{min}}{X_{max} - X_{min}}\right) 100$$

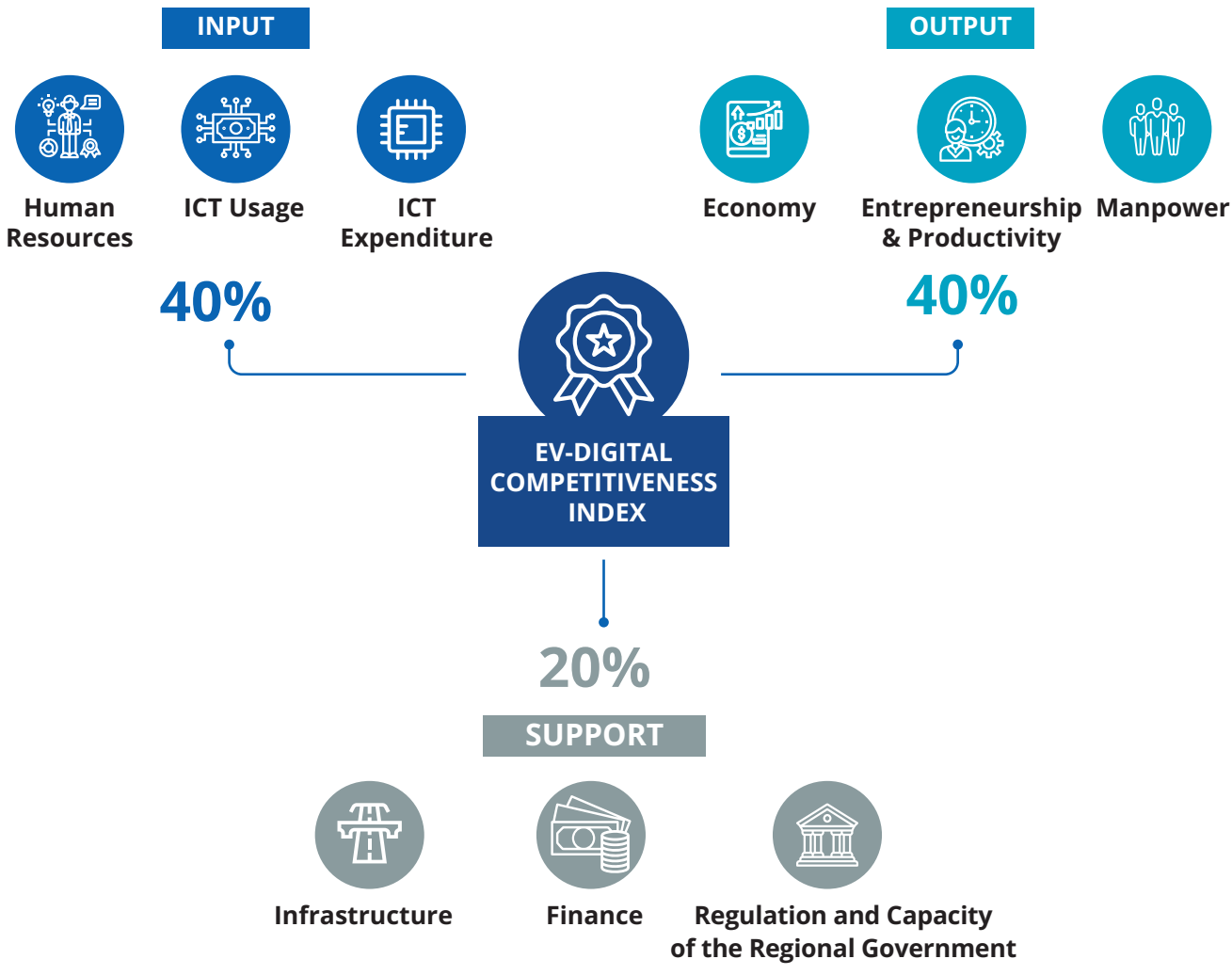
Where $X_i$ is the actual value obtained by region i for a certain indicator. $X_{min}$ and $X_{max}$ are the minimum and maximum values of the entire region for each indicator, respectively. Specifically for indicators that are categorized as "reverse indicators" (the less/smaller value, the better) in the list of indicators, the score formula is as follows:

$$Score\ for\ Indicator_i = 100 - \left[\left(\frac{X_i - X_{min}}{X_{max} - X_{min}}\right) 100\right]$$

The EV-DCI calculation uses a stratified approach: the scores of each indicator are aggregated into the pillar scores. Then, the pillar score is aggregated into the sub-index score. Finally, the sub-index score is aggregated into the overall index score. Each indicator carries equal weight into the pillars and sub-indexes.

However, in the final step combining the three sub-index scores into the final EV-DCI index, different weights are assigned for the sub-indexes. A smaller weight is assigned for the Support sub-index to highlight higher importance of the digital economy's direct Input and Output sub-index rather than indirect factors supporting it.

**Methodology Summary East Ventures — Digital Competitiveness Index (EV-DCI)**



## How does EV-DCI 2023 bring perspective to the report?

EV-DCI 2023 report includes regional and sectoral analysis from various digital economy sectors. In addition, to strengthen the index findings, EV-DCI 2023 focuses on four key factors, as seen in the image below.

### Key Factors of EV-DCI 2023

**1 EQUITABLE DIGITALIZATION**
Equitable digital economy ecosystems in terms of infrastructure and people's digital literacy in tier 2 and 3 cities

**2 STRENGTHEN BUSINESS FUNDAMENTALS**
Strategy for strengthening business fundamentals in the midst of the potential for global uncertainty

**3 INCREASE COLLABORATION**
Development of the digital economy through collaboration between stakeholders

**4 IMPLEMENTATION OF ESG**
Sustainable business process based on ESG approach

# EV-DCI 2023

**THE INDONESIAN GOVERNMENT** continues to encourage the development of the digital economy. According to the Coordinating Minister for Maritime Affairs and Investment, Luhut B. Pandjaitan, digitalization is one of the pillars needed to survive amid global uncertainty.

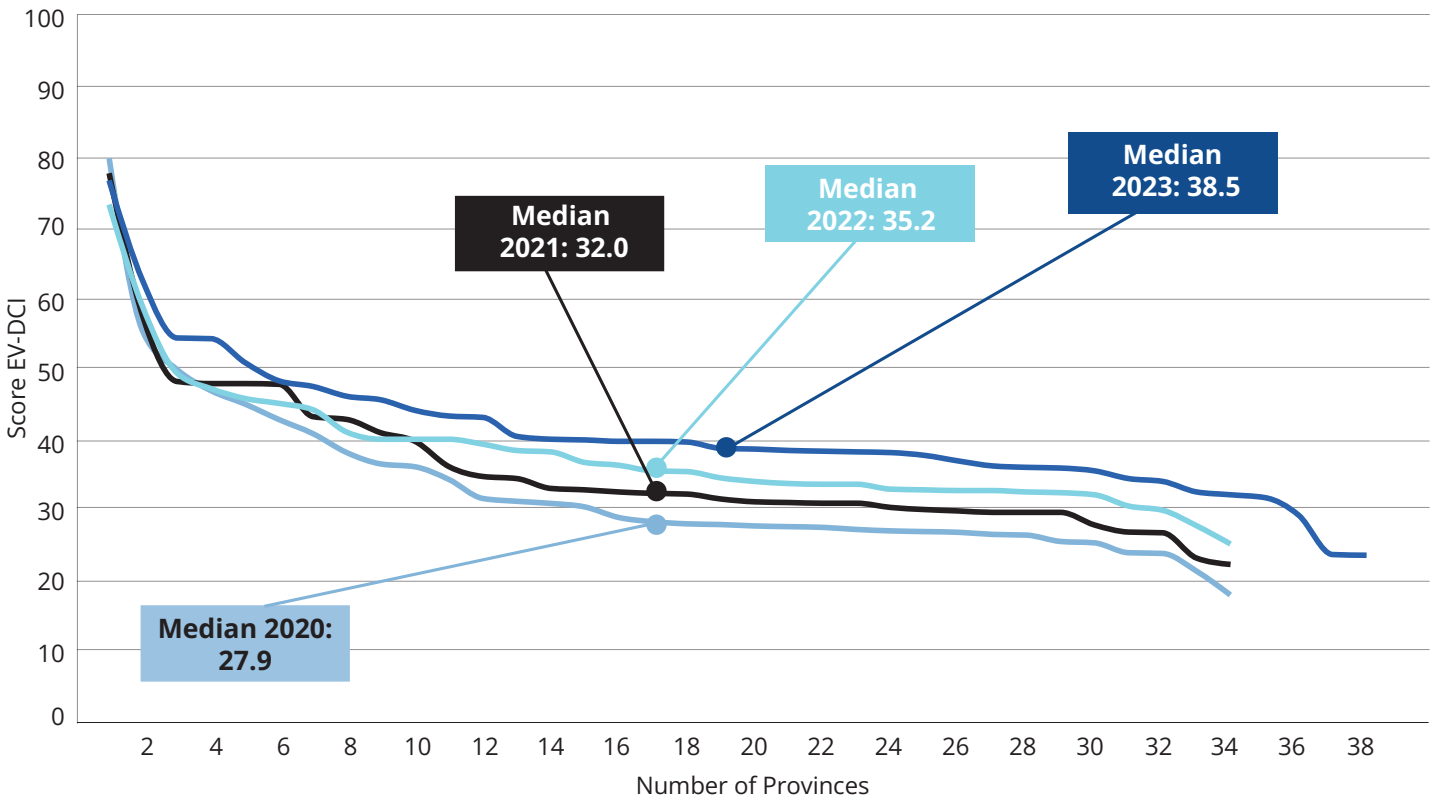
The government and other stakeholders are making various efforts to help the people in each region to handle digitalization. For example, efforts to digitalize MSMEs have increased internet penetration in promotional activities, sales through social media, and e-commerce.

The EV-DCI 2023 provides an overview of provincial digital economy conditions in Indonesia throughout 2021-2022.

**The digital competitiveness index has generally increased for four consecutive years with a median score of 38.5 in 2023.** An increase in the median score indicates an improvement in digital competitiveness in the group of middle and low ranked provinces.

Unlike previous years, the spread or distance between the largest and smallest values increased to 53.2 due to the division of the Provinces of Papua and West Papua. The actual values in the new provinces are calculated by using the aggregate values of the cities/regencies included in them, therefore these values tend to be smaller. However, this does not necessarily mean that digitalization in other regions has worsened. Instead, it has improved, as indicated by the increase in index scores in almost every province.

**Distribution of EV-DCI score**

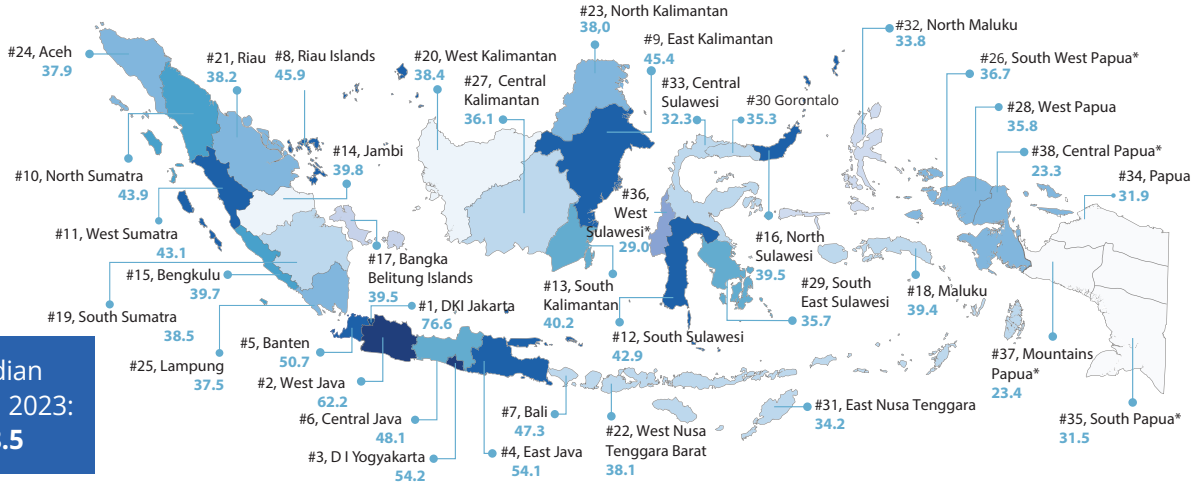



**National EV-DCI Table**

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| **Max Value** | 79.7 | 77.6 | 73.2 | **76.6** |
| **Min Value** | 17.7 | 22.0 | 24.9 | **23.3** |
| **EV-DCI (Median)** | 27.9 | 32.0 | 35.2 | **38.5** |
| **Spread** | 62.0 | 55.6 | 48.3 | **53.2** |
| **Standard Deviation** | 11.6 | 10.7 | 9.0 | **9.7** |

## Mapping of 2023 EV-DCI Scores by Province

20 — 80




Median EV-DCI 2023: **38.5**

### 2023 EV-DCI Ranking by Province

| Ranking | Province | Score EV-DCI 2023 | Score EV-DCI 2022 | Ranking Change |
|---|---|---|---|---|
| 1 | DKI Jakarta | 76.6 | 73.2 | = |
| 2 | West Java | 62.2 | 58.5 | = |
| 3 | D I Yogyakarta | 54.2 | 49.2 | = |
| 4 | East Java | 54.1 | 45.6 | ↑1 |
| 5 | Banten | 50.7 | 47.0 | ↓1 |
| 6 | Central Java | 48.1 | 38.0 | ↑8 |
| 7 | Bali | 47.3 | 44.9 | ↓1 |
| 8 | Riau Islands | 45.9 | 40.8 | = |
| 9 | East Kalimantan | 45.4 | 44.0 | ↓2 |
| 10 | North Sumatra | 43.9 | 38.2 | ↑3 |
| 11 | West Sumatra | 43.1 | 39.8 | ↓2 |
| 12 | South Sulawesi | 42.9 | 39.8 | ↓2 |
| 13 | South Kalimantan | 40.2 | 36.5 | ↑2 |
| 14 | Jambi | 39.8 | 31.9 | ↑16 |
| 15 | Bengkulu | 39.7 | 39.1 | ↓3 |
| 16 | North Sulawesi | 39.5 | 39.8 | ↓5 |
| 17 | Bangka Belitung Islands | 39.5 | 32.2 | ↑12 |
| 18 | Maluku | 39.4 | 32.5 | ↑9 |
| 19 | South Sumatra | 38.5 | 33.4 | ↑3 |
| 20 | West Kalimantan | 38.4 | 29.7 | ↑12 |
| 21 | Riau | 38.2 | 35.2 | ↓3 |
| 22 | West Nusa Tenggara Barat | 38.1 | 32.3 | ↑6 |
| 23 | North Kalimantan | 38.0 | 35.3 | ↓6 |
| 24 | Aceh | 37.9 | 32.7 | = |
| 25 | Lampung | 37.5 | 33.8 | ↓5 |
| 26 | South West Papua* | 36.7 | | |
| 27 | Central Kalimantan | 36.1 | 32.6 | ↓2 |
| 28 | West Papua | 35.8 | 34.3 | ↓9 |
| 29 | South East Sulawesi | 35.7 | 36.1 | ↓13 |
| 30 | Gorontalo | 35.3 | 33.5 | ↓9 |
| 31 | East Nusa Tenggara | 34.2 | 32.5 | ↓5 |
| 32 | North Maluku | 33.8 | 30.3 | ↓1 |
| 33 | Central Sulawesi | 32.3 | 33.4 | ↓11 |
| 34 | Papua | 31.9 | 24.9 | = |
| 35 | South Papua* | 31.5 | | |
| 36 | West Sulawesi | 29.0 | 27.5 | ↓3 |
| 37 | Mountains Papua* | 23.4 | | |
| 38 | Central Papua* | 23.3 | | |

*New provinces resulting from division of Papua and West Papua

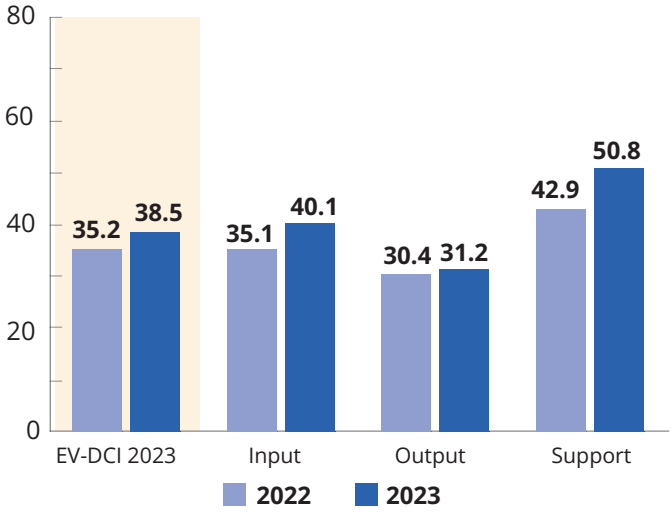
The top position of digital competitiveness between provinces in Indonesia remains dominated by the provinces in Java Island. The middle positions are generally occupied by the provinces of Sumatra and Kalimantan. Provinces with the best performance are Jambi, Bangka Belitung Islands and West Kalimantan.

At the same time, the lowest position remains dominated by provinces from the eastern part of Indonesia. A significant decrease occurred in the province of Southeast Sulawesi. Rankings of other provinces on Sulawesi Island have also declined, and some are coupled with a decline in the scores as well. This happened because the growth of digitalization in Sulawesi is not as big as the growth in other provinces. Discussion of the factors influencing the increase or decrease in each region will be explained in Chapter 3.

# Competitiveness According to Three Sub-Indexes

The digital competitiveness of the Indonesian province can be seen in more detail through the Input, Output, and Support sub-indexes. In general, the scores of the three sub-indexes increased with the highest increase occurring in the Support sub-index. This increase is influenced by the constituent pillars in it.

**2023 EV-DCI Scores by Sub-Index**



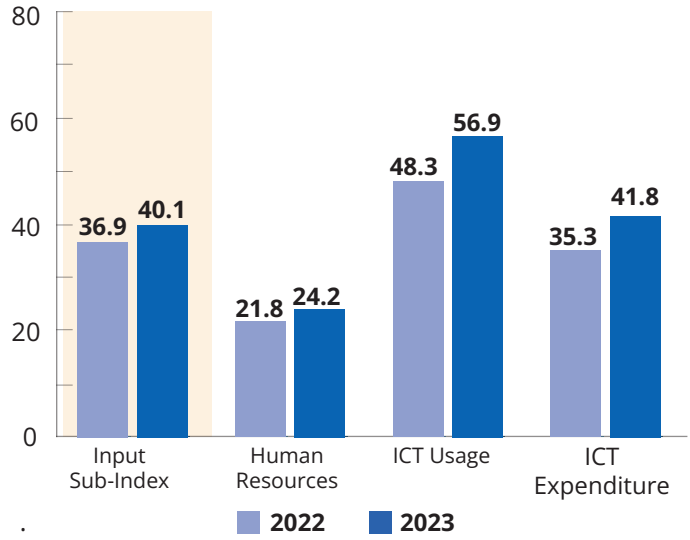

## Input Sub-Index

The Input sub-index describes the digital economy in terms of the readiness of human resources, the usage level of digital technology, and the expenditure related to digital technology. This applies to both personal and corporate expenditures spent by companies to hire ICT-related employees.

In terms of scores, the median value of the Input sub-index increased by 3.2 points to 40.1. This is due to the increased score of the three pillars within the sub-index. The largest increase was supported by the ICT Usage pillar, in line with the score increase in the indicators of the Ratio of Citizens that Have Cellular Phone by 13.9 and the Ratio of Citizens that Have Access to Internet by 17.8.

The increase in the ICT Usage pillar subsequently affects the increase in the ICT Expenditure pillar. The average household expenditure for ICT needs, such as buying mobile credit and internet quota, has increased. In addition, the average salary for ICT employees has also increased.

**EV-DCI Scores by Input Sub-Index**




The last pillar to rise is the Human Resources pillar. The growth of students studying digital courses and the increase in the digital literacy index in several provinces has significantly helped to improve the Input components needed to develop the digital economy.

Jambi Province's ranking rose 15 places to 12th. Jambi has also received the highest score for the Input sub-index, which rose 14.4 points to 45.5. The increase occurred in all the pillars that make up this sub-index, especially in the HR pillar. The growth of digital students in Jambi over the past five years has been very rapid, in line with the intense ICT training programs conducted by the local government.

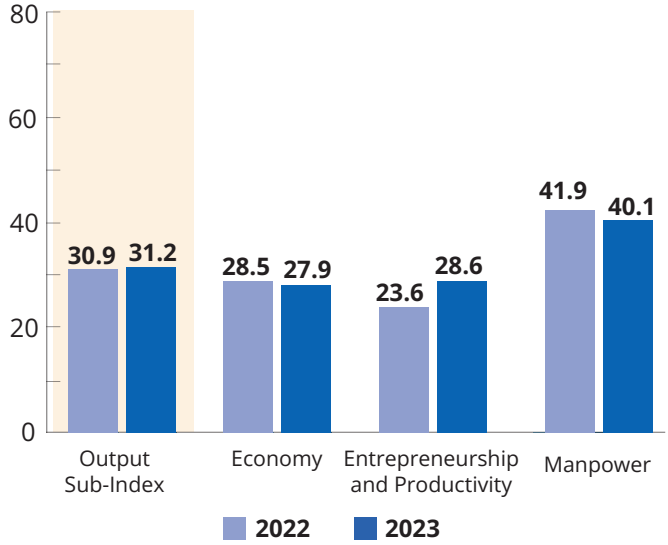
## Output Sub-Index

The Output sub-index measures the development of digitalization in the economy, the level of entrepreneurship and productivity as well as the employment conditions of

sectors affected by digitalization in Indonesia. Compared to the other two sub-indexes, the Output sub-index had the smallest increase, namely 0.3 points to 31.2.

Among the three constituent pillars, only the Entrepreneurship and Productivity pillars scored an increase. The use of the internet for work, both for main work and for communication, promotion, and sales activities through social media and e-commerce has also increased. This is in accordance with the MSMEs digitalization program by several stakeholders.

**EV-DCI Scores By Output Sub-Index**




Meanwhile, even though the score of the Manpower pillar decreased, the actual ratio of workers in sectors related to digitalization has increased. This increase occurred in line with the rapid growth of the telecommunications, informatics, and transportation industries on a national scale.

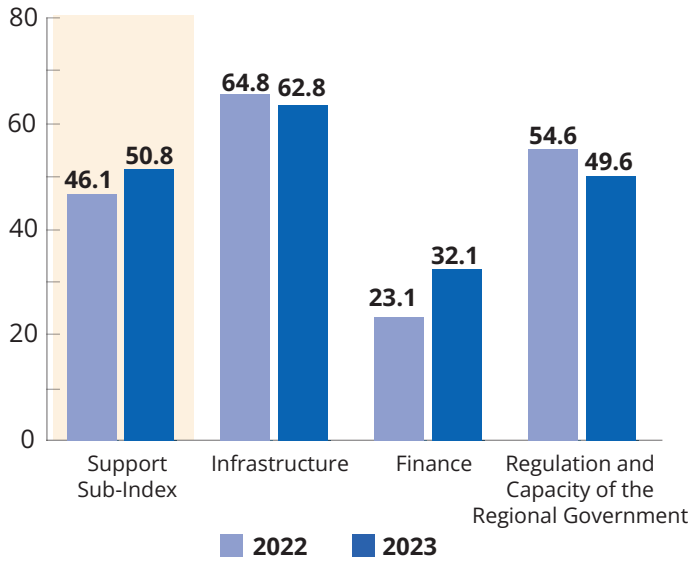
Such decline is also observed in the Economy pillar. The most significant decline in this pillar was caused by a decrease in the Gross Regional Domestic Product (GRDP) Growth in the Warehousing, Transportation Support, Post, and Courier Subsector indicator score by 24.0 points. Despite the decline in the score, the actual value of this indicator is actually growing. However, this growth has not been able to exceed the magnitude of the decline that occurred in the previous year.

Riau Islands is one of the provinces that has increased significantly in terms of ranking and score of the Output sub-index, which rose 15 ranks to 8$^{th}$ position with an increase in the sub-index score of 7.9 points to 37.6. The increase mainly occurred in the Manpower pillar. The indicator score of the Ratio of Workers in Digitalization-Related Sectors increased by 12.9 points to 23.2. This occurred as a result of a decrease in the unemployment rate of 1.7%, resulting in higher absorption of labor in various sectors.

## Support Sub-Index

The Support sub-index measures supporting aspects of regional digital economy development such as infrastructure, finance, and regional government capacity. The median for the Support sub-index increased by 4.6 points to 50.8.

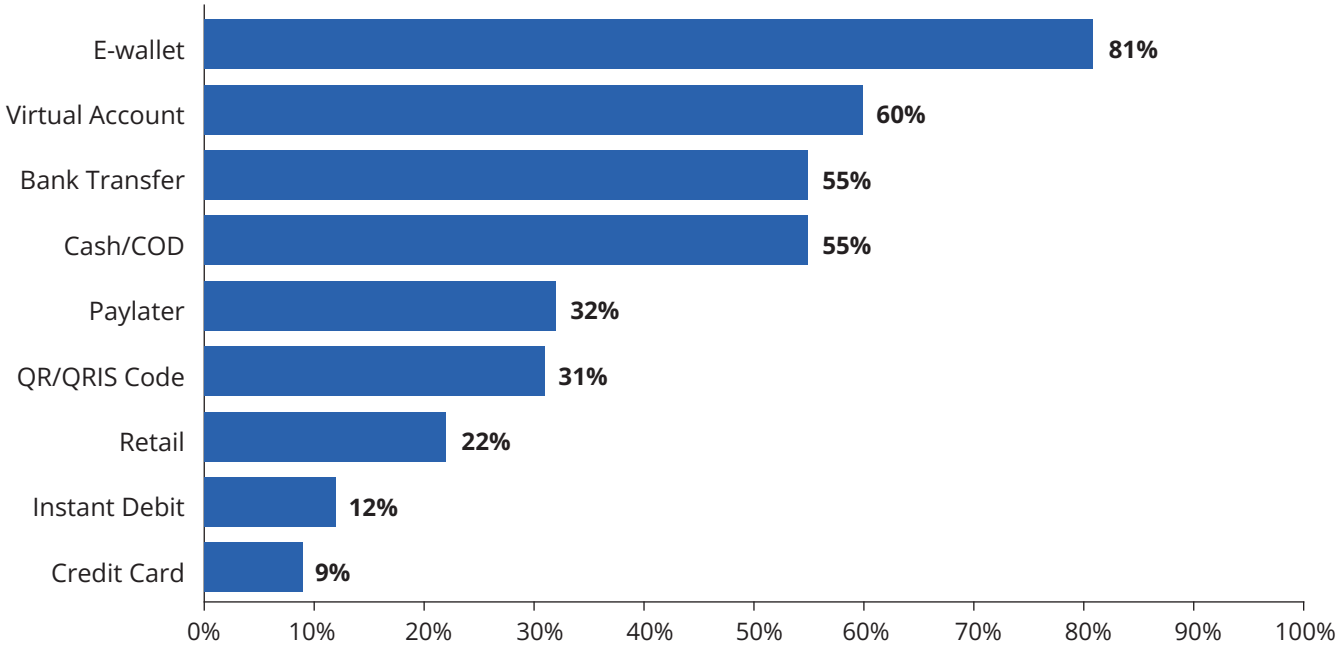
**EV-DCI Scores By Support Sub-Index**




The Finance pillar has risen along with the significant increase in the Financial Inclusion Index and E-wallet Adoption as a Payment Method indicator in several provinces. This is in line with local government programs in several provinces which have implemented various cashless payment methods such as Quick Response Code Indonesia Standard (QRIS) and e-wallet in traditional markets. The EV-DCI 2023 Consumer Survey also shows that the most used payment method when transacting with digital applications is e-wallet.[6]

Meanwhile, the pillar of Regulation and Capacity of the Regional Government decreased by 4.6 points. A significant decrease occurred in the Poverty Decreasing Rate indicator score. Even though the percentage of people living below the poverty line in 2022 has increased by almost 0.2% when compared to 2021, the poverty line increased by 10.2%. This was influenced by, among other things, the increase in fuel prices and in turn had an

**Most Used Payment Method**




Source: EV-DCI 2023 Consumer Survey

impact on the increase of commodities prices consumed by the people of Indonesia.[7]

In addition, the Infrastructure pillar has declined slightly due to the reduced score of the Ratio of Households with Fixed Phone Connection indicator by 2.0 points. In terms of the percentage, this indicator decreased to 1.4% in 2021 from the previous 1.7%.[8] This is in line with the increase in mobile phone usage by 3.0% in the same period.[9]

Maluku is the province with the highest increase in the Support sub-index score, with an increase of 16.1 points to 55.5. This increase occurred in all pillars. In terms of the Finance pillar, the indicator of E-Wallet Adoption as a Payment Method has been growing as the result of the implementation of a cashless payment system in traditional markets, in Ambon City to be precise. In terms of the pillars of Regulation and Capacity of the Regional Government, Maluku Province has succeeded in reducing the poverty rate by 2.0%[10] in 2022, and improving life expectancy by 0.3 years.[11]

# 03

# Conditions of Equitable Digitalization by Region

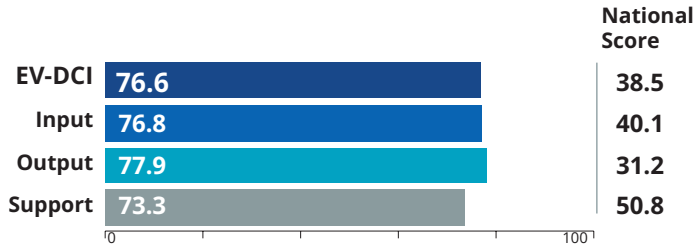
In this chapter, EV-DCI 2023 will analyze the profiles of the top 10 provinces with the highest level of digital competitiveness. In addition, 4 provinces with the highest rank increase and 4 provinces with the largest decline in ranking will also be analyzed. The analysis for each province is complemented by significant changes to the score as well as the regional government's efforts to improve competitiveness.

# DKI Jakarta

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| Rank | 1 | 1 | 1 | 1 |
| Score | 79.7 | 77.6 | 73.2 | 76.6 |

**DKI JAKARTA** managed to occupy the first position based on EV-DCI result calculation, for the fourth time in a row. The Entrepreneurship and Productivity pillar is the most significant contributor to this province's score. The score for this pillar is also the highest compared to other provinces.

The provincial government presented Jakarta Kini (JAKI), a platform for public complaints regarding facilities and public order. The implementation of the Electronic Based Government System (SPBE) is carried out through Jakarta Supervision (JakWas). One of its services is the Integrated Complaint System (SIPADU), a channel for complaints of alleged corruption. The provincial government also established Jala Hoaks, a channel for public complaints about news circulating through technology.


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 62.4 | 83.0 | 85.1 | 73.6 | 100.0 | 60.1 | 98.2 | 84.4 | 37.4 |

## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Input | ICT Expenditure | 18.8 ↑ | Household consumption, including for ICT, has increased. E-commerce transactions reached IDR 25.3 trillion, mainly for mobile phones and accessories products.[1] |
| Support | Finance | 14.0 ↑ | The increase was driven by intensive efforts to expand financial literacy by Bank DKI through the agents role of Officeless Financial Services in the Framework of Financial Inclusion (Layanan Keuangan Tanpa Kantor dalam Rangka Keuangan Inklusif/Laku Pandai). |
| Input | ICT Usage | 9.6 ↑ | Integration of digital services in the health sector, JakSehat into JAKI to facilitate access to health services. JAKI has also been downloaded by more than 3.5 million users.[2] |

## Special Analysis

In the pursuit of equitable development, the DKI Jakarta Provincial Government collaborates with 11 regions outside DKI Jakarta in the public service sector. One of them is the collaboration between the DKI Jakarta Regional Public Service Agency (*Badan Layanan Umum Daerah*/BLUD) and the Department of Communication and Informatics (Diskominfo) of East Kalimantan to optimize the use of technology to maximize public services. The scope of cooperation built with other regions includes technology and information, creative economy, human resource development, and the development of Regional-Owned Enterprise (*Badan Usaha Milik Daerah*/BUMD). Collaborations are also expected to increase society's welfare.

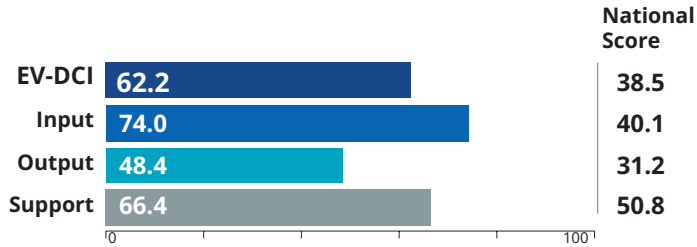
In the ESG sector, the DKI Jakarta Provincial Government is collaborating with Kaktus Indonesia to digitize waste management. This digitization aims to track waste transportation in real-time and encourage people to sort waste. Another innovation was the implementation of the Flood Control System, a flood detection and handling system through data collected by sensors. The data is integrated into an IoT platform to assist decision-making processes. This flood handling innovation was awarded the 2022 World Summit on the Information Society (WSIS) Prizes.

# West Java

| | Year | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| | Rank | 2 | 2 | 2 | 2 |
| | Score | 55.0 | 57.1 | 58.5 | 62.2 |

Similar to DKI Jakarta, West Java has consistently ranked 2nd in the last three years. The Finance pillar is the biggest scorer for this province. This pillar has experienced an increase supported by the indicator of E-wallet Adoption as a Payment Method.

The presence of Jabar Digital Service has assisted the West Java Provincial Government in the digitalization process, including through the one data portal, integrated public services, and Digital Village (Desa Digital). The provincial government also brought back the Candradimuka Jabar Coding Camp in 2022 to encourage the emergence of digital talent and meet industry needs. The digitization of 15,000 cooperatives is also encouraged through the cooperation of the provincial government with GudangAda.


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 81.3 | 65.5 | 75.2 | 42.2 | 62.6 | 40.4 | 78.6 | 82.1 | 38.3 |

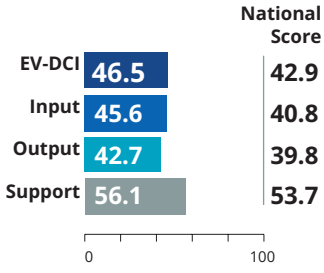
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Input | ICT Usage | 15.7 ↑ | The Digital Village Program helps community empowerment through digital technology and the internet in up to 5,300 villages.[3] |
| Input | ICT Expenditure | 12.2 ↑ | West Java's e-commerce transaction value is the highest in Indonesia, with a market share reaching 22.1%.[4] Mobile phones and accessories are among the categories with the most purchases. |
| Support | Finance | 10.7 ↑ | Until the third quarter of 2022, the number of QRIS merchants in West Java has reached 4.5 million (20.8% of the national number).[5] |

## Highlighted Cities/Regencies

### Bandung Regency

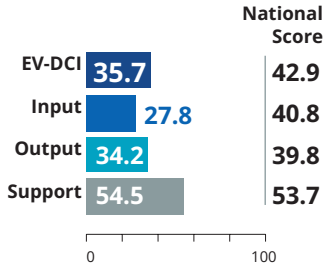
**Cities/Regencies Rank:**
**52 ( ↑ 25)**




The Entrepreneurship and Productivity pillar experienced the highest score changes, it was driven by the collaborative efforts of the Bandung Regency Government and Telkom University to digitize MSMEs. This effort was carried out through the Digital-Preneur Sukses Mandiri (DIGI-SM) program to help 50 MSMEs become digitally literate.

### Banjar City

**Cities/Regencies Rank:**
**143 ( ↓ 60)**



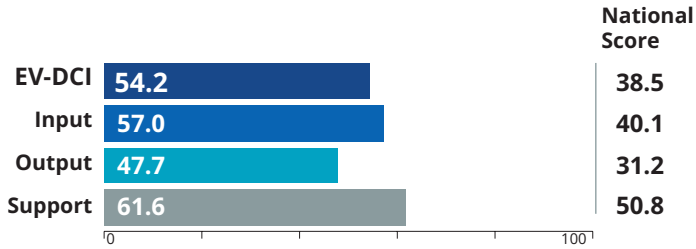

The Economy pillar has experienced a decline due to the slow GRDP in the digitalization sector. The city government seeks to increase investment to encourage economic growth through Technical Guidance on Implementing Risk-Based Business Licensing Supervision for 27 cooperative players.[6]

# DI Yogyakarta

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| Rank | 4 | 6 | 3 | 3 |
| Score | 46.7 | 47.6 | 49.2 | 54.2 |

**DI YOGYAKARTA** reoccupied the 3rd rank for the EV-DCI 2023. The Infrastructure pillar contributes for the highest score. There has been an increase in the ratio of villages with 3G and 4G signals in this pillar. This aligned with the target of the Ministry of Communication and Informatics (Kemenkominfo) BAKTI program to improve 4G internet services in 41 villages in DI Yogyakarta.[7]

The provincial government presents the Jogja Smart Service (JSS) application with 222 public services that can be accessed online, such as emergencies, licensing, complaints, population management, and reporting.[8] The provincial government also won the third-best place in the 2022 Regional Digitalization Acceleration and Expansion Team Championship.


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 46.8 | 82.2 | 42.0 | 41.8 | 59.5 | 41.6 | 84.3 | 32.6 | 68.0 |

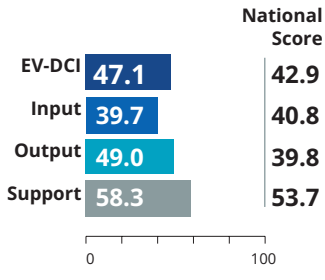
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Input | ICT Expenditure | 12.5 ↑ | The Diskominfo of DI Yogyakarta encourages MSMEs productivity and utilization of digital markets through digital-based MSMEs assistance. |
| Output | Manpower | 7.1 ↑ | The Digital Society Index from the Kemenkominfo shows that DI Yogyakarta is ranked as the second-best human resource market in Indonesia in 2022.[9] |
| Support | Finance | 6.5 ↑ | The DI Yogyakarta Provincial Government implements cashless payment in 7 markets and 1 mall. This has also been applied to the payment of local taxes and retribution. |

## Highlighted Cities/Regencies

### Bantul Regency

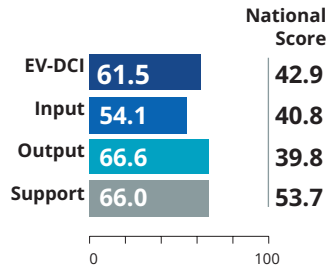
**Cities/Regencies Rank:**
**39 ( ↑ 8)**




The Entrepreneurship and Productivity pillar experienced the highest increase, driven by efforts to create a business incubator by the Bantul Regency Government to encourage MSMEs to use digital marketing. This digital marketing is focused on fulfilling the marketplace made by the district and central governments.

### Yogyakarta City

**Cities/Regencies Rank:**
**2 ( ↑ 1)**



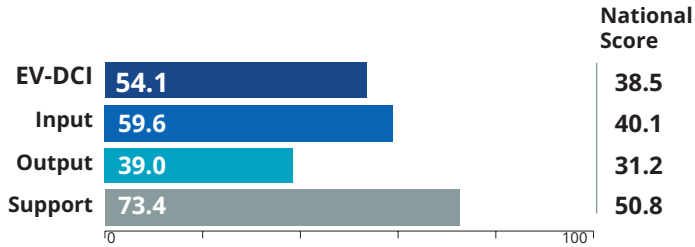

The Entrepreneurship and Productivity pillar experienced the most significant score increases. Digitalization in the city is supported by the efforts of the Yogyakarta City Government in collaboration with Tokopedia to encourage digitalization of public services through cashless payment services for local taxes and retribution.

# East Java

| | Year | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| | Rank | 3 | 3 | 5 | 4 |
| | Score | 49.7 | 48.0 | 45.6 | 54.1 |

**EAST JAVA** is ranked 4th, one rank higher compared to the previous year. The Financial pillar contributed the most to the score. This pillar has experienced an increase supported by the growth in E-wallet Adoption as a Payment Method. BI noted that the implementation of QRIS in East Java reached 2.3 million total merchants, dominated by MSMEs (97.5%).

The digitization of MSMEs is encouraged through collaboration with several startups, such as implementing the MSME Campus with Shopee and Smart Warehouse Served by Tokopedia with Tokopedia. To support public services that are easy, fast, transparent, and accountable, the East Java Provincial Government also encourages the digitization of record keeping in the internal environment.


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 76.1 | 60.3 | 42.6 | 40.2 | 43.6 | 33.3 | 76.5 | 81.4 | 62.2 |

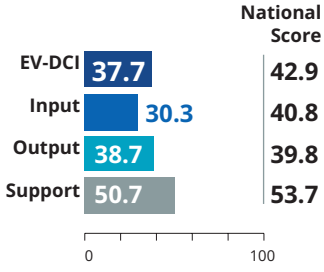
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Support | Finance | 23.5 ↑ | The presence of the Financial Mobile Literacy and Education Information System (Simolek) service and the East Java Inclusion Festival helped increase community financial inclusion. |
| Input | Regulation and Capacity of the Regional Government | 21.2 ↑ | The East Java Provincial Government encourages the development of internal Civil Servant (*Aparatur Sipil Negara*/ASN) capabilities in digitalization through Social Media Management Technical Guidance. |
| Input | Human Resources | 10.7 ↑ | The East Java Provincial Government is developing the Singhasari Special Economic Zone (*Kawasan Ekonomi Khusus*/KEK) to support creative and digital economic growth. |

## Highlighted Cities/Regencies

### Blitar Regency

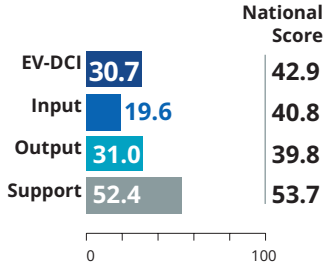
**Cities/Regencies Rank:**
**86 ( ↑ 43)**




Implementing digitalization acceleration programs, including Blitar Smart Regency and the Electronic Disbursement Information System (SIPECEL), has boosted the pillar of Regulation and Capacity of the Regional Government. The regency government also received the ISNA Award 2022 for implementing smart cities in various sectors.[10]

### Probolinggo City

**Cities/Regencies Rank:**
**70 ( ↓ 24)**



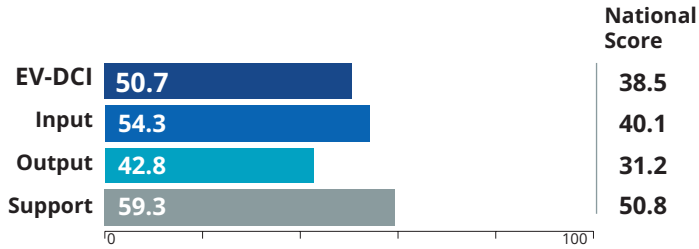

Several indicators related to the use of the internet for sales via social media and e-commerce in Probolinggo have decreased, in line with the findings of MSME players who still need to gain digital knowledge.[11] The city government also held e-marketing training to encourage the development of MSMEs in the region.

# Banten

| Year | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| Rank | 5 | 5 | 4 | 5 |
| Score | 44.8 | 47.7 | 47.0 | 50.7 |

**BANTEN** is ranked 5th this year, one rank lower compared to the previous year. The Infrastructure pillar contributed the most to the score, while the Regulation and Capacity of the Regional Government pillar has improved due to higher Life Expectancy Rate.

The provincial government encourages digitization in various fields such as education, public services, and MSMEs. One of these efforts is to increase public access to digital books by owning technological devices in the library application, iBanten. In addition, BPD Banten launched the Jawara Mobile application to facilitate public financial access. The use of the E-Catalog and Plaza Banten is also optimized to encourage digitalization of MSMEs.


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 30.0 | 66.7 | 66.2 | 33.1 | 55.4 | 39.8 | 73.7 | 55.5 | 48.7 |

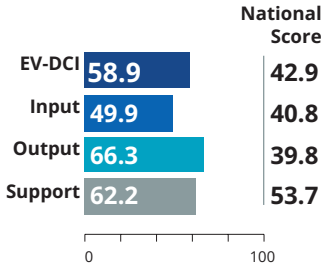
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Support | Regulation and Capacity of the Regional Government | 20.7 ↑ | Higher Life Expectancy Rate through health cost support and implementing a comprehensive thematic approach has impacted in 4.5% stunting rate reduction. |
| Input | ICT Usage | 11.5 ↑ | BPMP Banten Province encourages ICT usage in the education sector through Training on the Management and Usage of ICT in Learning for Elementary School (SD) and Special School (*Sekolah Khusus*/SKH) teachers. |
| Output | Manpower | 3.4 ↓ | The absorption of graduates from Vocational High Schools (SMK) and High Schools (SMA) has not been maximized due to a an incompatibility between the skills owned by job seekers and the industry needs. |

## Highlighted Cities/Regencies

### Tangerang City

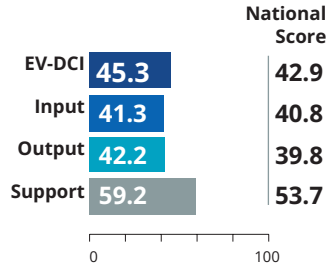
**Cities/Regencies Rank:**
**16 ( ↑ 3)**




Entrepreneurship and Productivity has increased significantly. This was driven by the formation of TP2DD for various financial and MSME digitalization processes, such as applying local electronic catalogs for MSMEs. Digital marketing training and MSME incubation were also held through collaboration with AirNav Indonesia.

### Cilegon City

**Cities/Regencies Rank:**
**60 ( ↓ 17)**



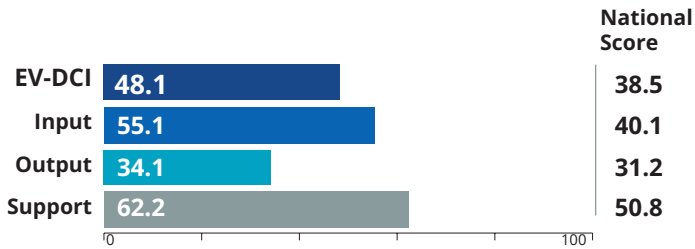

Regulation and Capacity of the Regional Government is one of the pillars that experienced a decrease in score. The Cilegon City Government tried to encourage efficient and transparent public services by opening the Public Service Mall (MPP). Until the end of 2022, 21 agencies have joined and opened counters at MPP.

# Central Java

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| Rank | 6 | 8 | 14 | 6 |
| Score | 42.6 | 42.6 | 38.0 | 48.1 |

This year, Central Java is back in the top 10, ranked 6th, eight ranks higher compared to the previous year. The ICT Usage pillar contributed as the biggest score. In the effort to become a smart province, the Central Java Provincial Government implemented digital-based public services to expand the access to community services.

These efforts are carried out by developing ICT infrastructure, forming a team to handle cybersecurity incidents, and forming millennial work units in each city/regency. Furthermore, the Central Java Provincial Government launched a command center at the Department of Health to help collect valid data that are used as the basis for decision making.


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 65.1 | 62.0 | 38.3 | 30.8 | 40.5 | 31.0 | 78.3 | 68.3 | 40.2 |

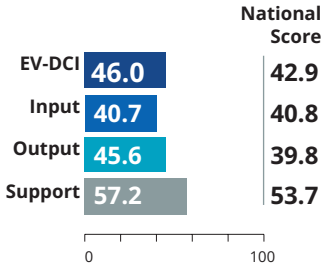
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Support | Finance | 34.0 ↑ | Ease of payment methods in public services such as Trans Jateng and payment of regional taxes and retribution has increased the adoption of cashless payments. |
| Input | Human Resources | 18.5 ↑ | The Department of Education and Culture of Central Java Province initiated the Digital School Bootcamp to train teachers regarding digital learning media. |
| Input | ICT Usage | 13.4 ↑ | Telkomsel's upgrading/switching of 3G to 4G/LTE network services has improved the quality of the internet network in Central Java. |

## Highlighted Cities/Regencies

### Magelang City

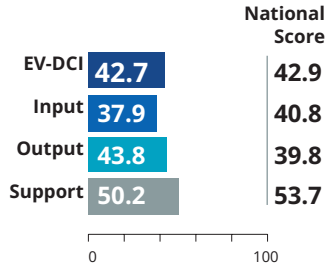
**Cities/Regencies Rank:**
**31 ( ↑ 54)**




One of the pillars that experienced quite a significant growth is ICT Usage. To create effective and efficient administration services for the population, the Magelang City Government promoted the implementation of Digital Population Identity to simplify population administration services.

### Tegal Regency

**Cities/Regencies Rank:**
**118 ( ↓ 18)**



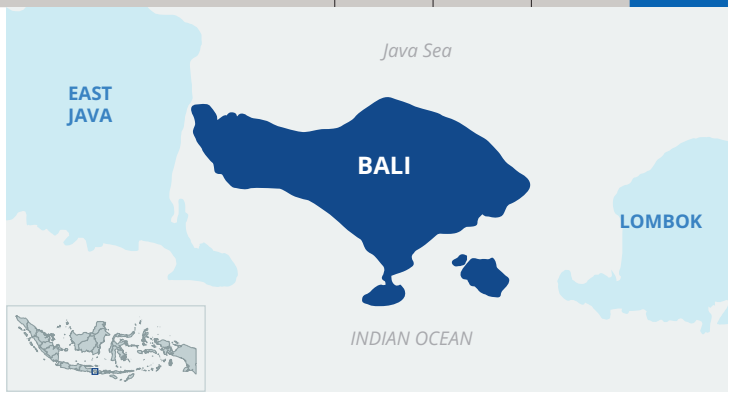

Digital utilization has yet to optimally contribute to the regional economy, depicted by the decline in GRDP growth in the digitalization sector. TPP2D encouraged the digitization of cashless payments. Tegal Regency also won the 2022 Most Innovative TPP2D award from the BI Representative Office for Central Java.

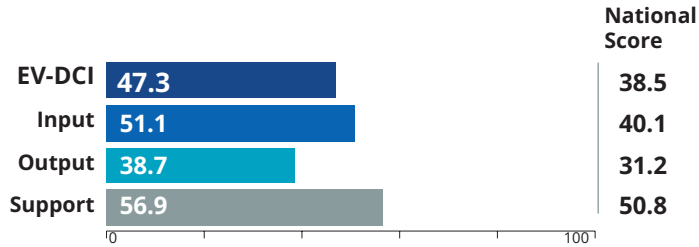
# Bali

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| Rank | 7 | 4 | 6 | 7 |
| Score | 40.6 | 47.7 | 44.9 | 47.3 |

**BALI** experienced a rank decline by 1 position, one of the reasons being a decreased Economy pillar. The decline was due to the decrease of the growth indicators of the GRDP of Warehousing, Transportation Support, Post, and Courier. After experiencing negative growth during the pandemic, these sectors are starting to recover in 2022. However, in general, Bali's economy has not fully recovered as it was before the pandemic.

The Bali Provincial Government held Bali DigiFest 2022 and Bali Fab Fest 2022 in an attempt to make Bali the center for the digital community and create job opportunities for creative economy players. Through the acceleration and expansion of digitalization, the provincial government also won 3 TP2DD trophies in the 2022 Provincial TP2DD Championship.




Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 27.1 | 78.5 | 47.7 | 20.2 | 54.6 | 41.3 | 76.2 | 41.0 | 53.4 |

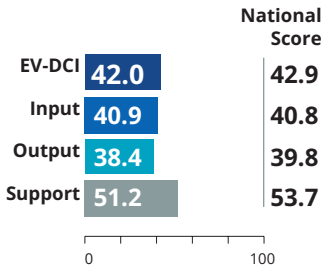
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Support | Regulation and Capacity of the Regional Government | 16.2 ↑ | The provincial government encouraged internal digital literacy through e-office development, a virtual office feature for simplifying correspondence management and internal coordination. |
| Input | ICT Usage | 9.1 ↑ | The 5G services expansion to support the 2022 G20 Bali Summit drives improvement in the quality of internet accessed by the people. |
| Output | Economy | 6.9 ↓ | The pressure of inflation of -0.51% (YoY) in Bali on the information, communications, and financial services sectors led to a decrease in the sectors' GRDP contribution score.[12] |

## Highlighted Cities/Regencies

### Tabanan Regency

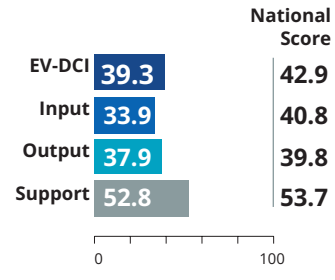
**Cities/Regencies Rank:**
**64 ( ↑ 39)**




The Regulation and Capacity of the Regional Government became one of the pillars to experience increase. This was encouraged by the efforts of the regency government to carry out digitalization in procurement of goods and services through a partnership with Mbiz for marketplaces utilization aiming to empower MSMEs.

### Buleleng Regency

**Cities/Regencies Rank:**
**146 ( ↓ 37)**



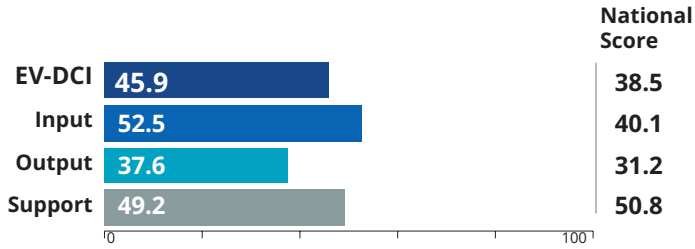

The Economy pillar's score experienced a decline, one of them was due to the slowing growth of GRDP in the digitalization sector. To promote Buleleng Smart City Program, the Regency Government of Buleleng established a partnership with Biznet for the installation of free Internet in 4 points of public spaces.

# Riau Islands

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| Rank | 10 | 7 | 8 | 8 |
| Score | 35.9 | 43.0 | 40.8 | 45.9 |

Similar to last year, Riau Islands takes the 8th place. The ICT Usage contributed the largest score. To overcome areas untouched by the internet (blank spots) and expand the internet network, the provincial government added 77 BTS through the Kemenkominfo BAKTI program and partnerships with private sectors.

The provincial government launched the Doing Business with the Creative Economy (Gema Ekraf) application to assist the marketing of MSMEs and creative economy businesses. The Diskominfo of Riau Islands also launched several applications to improve public service. One of these applications is JapriGub, an application to file complaints or submit public aspirations to the Governor.


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 25.8 | 74.5 | 57.1 | 18.9 | 55.6 | 38.2 | 68.0 | 34.7 | 44.9 |

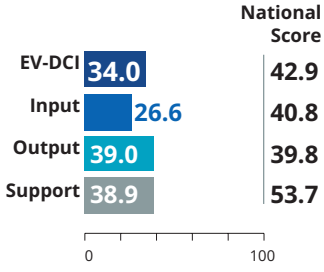
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Output | Manpower | 11.2 ↑ | The provincial government encouraged the improvement of skills and expertise of the workforce according to the market needs by training 702 workers through Vocational Training Centers in 2022.[13] |
| Input | ICT Expenditure | 10.5 ↑ | Batam's role as the largest internet gateway in Indonesia encourages easier and faster internet access in the region. |
| Output | Entrepreneurship and Productivity | 7.6 ↑ | The Department of Cooperatives and MSMEs of Riau Islands has deployed MSME volunteers to assist MSMEs in entering the digital market. |

## Highlighted Cities/Regencies

### Bintan Regency

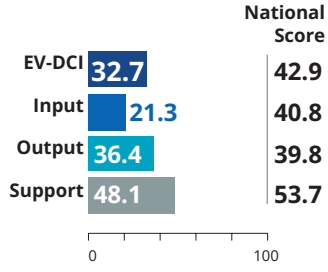
**Cities/Regencies Rank:**
**115 ( ↑ 20)**




Indicators related to the workforce in the digitalization sector also increased. The Bintan Regency Government launched the Job Seeker Service System (SILANCAR) application which provides online employment services. One of SILANCAR's features is the job seekers' card service (AK1).

### Tanjung Pinang City

**Cities/Regencies Rank:**
**63 ( ↓ 29)**



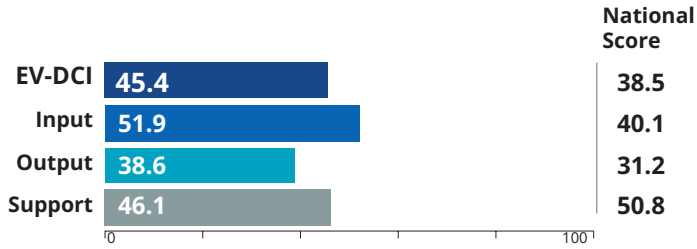

Manpower experienced quite a significant decline. One of the reasons for the slow absorption of labor after the pandemic is because companies are reluctant to spread job vacancies information to the government. The issuance of AK1 Cards was also made easy through cooperation with several Vocational High Schools (SMK).[14]

# East Kalimantan

| | Year | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| | Rank | 8 | 10 | 7 | 9 |
| | Score | 37.9 | 39.5 | 44.0 | 45.4 |

**EAST KALIMANTAN** ranked 9th and experienced a decrease by 2 positions compared to the previous year. The ICT Usage pillar contributed the most score, while the Regulation and Capacity of the Regional Government pillar experienced the biggest score decline. The Life Expectancy Rate of East Kalimantan was 74.6, higher than the national rate. However, compared to the other provinces, East Kalimantan had the smallest growth.

The provincial government promoted equitable distribution of internet access and reduced blank spots through the Village Internet program in 38 villages in 4 regencies. The internet network installation helped the information dissemination to the community and improved villagers' digital literacy.


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 32.8 | 74.5 | 48.4 | 24.1 | 50.0 | 41.6 | 45.5 | 47.7 | 44.9 |

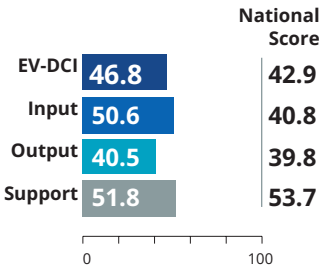
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Input | ICT Usage | 14.4 ↑ | The appointment of the new capital city in this province has influenced the acceleration of internet expansion through the establishment of BTS to the District Internet Service Center Car. |
| Support | Finance | 13.4 ↑ | The Regional Revenue Agency and Bank Kaltimtara launched the Joint Neighborhood Movement (Gerakan Bersama Rukun Tetangga/Geber RT) to promote tax compliance through Laku Pandai agents. |
| Support | Regulation and Capacity of the Regional Government | 21.9 ↓ | The efforts to improve the community welfare have not been optimal. It is shown by the poverty rate which increased by 0.17% to 6.44% and the Life Expectancy Rate which only grew by 0.01 year. |

## Highlighted Cities/Regencies

### Bontang City

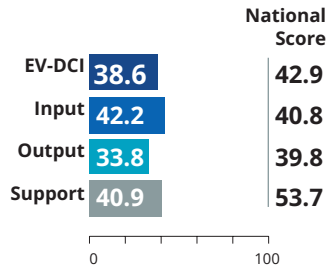
**Cities/Regencies Rank:**
**47 ( ↑ 22)**




One of the pillars that experienced increase is Finance, driven by the expansion of the implementation of the use of integrated cashless government financial transactions. The application was carried out through the government transaction and financial application (ATKP) in partnership with Bank Kaltimtara.

### Berau Regency

**Cities/Regencies Rank:**
**119 ( ↓ 51)**



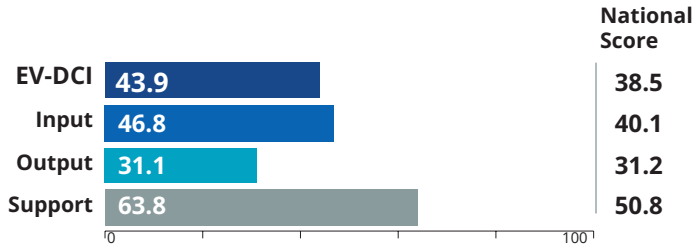

The Economy pillar also experienced a decline, it was not supported by the digital expenditure realization. The absorption of digital spending through Digipay, an online ecosystem for the procurement of goods/ services and payment of government spending, was only IDR 30.3 million, which was 2.3% of the budget value.[15]

# North Sumatra

| | Year | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| | Rank | 12 | 13 | 13 | 10 |
| | Score | 31.4 | 34.2 | 38.2 | 43.9 |

**NORTH SUMATRA** ranked 10th, increasing by 3 positions compared to the previous year. The Regulation and Capacity of the Regional Government pillar contributed the largest score. The improvement of this pillar was supported by Gross Participation Rate of High Schools (SMA)/Vocational High Schools (SMK) and the growth of Life Expectancy Rate.

Innovative health programs such as Dignified Health Service launched by the North Sumatra Provincial Government has expanded access to health services and promoted Life Expectancy Rate. The provincial government also partnered with Troya Academic Platform (TAP) to facilitate digitalization access in more than 700 Special Needs Schools (SLB) and High Schools (SMA)/Vocational High Schools (SMK) in the province. [16]


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 43.5 | 56.9 | 40.1 | 28.3 | 26.6 | 38.5 | 65.2 | 54.5 | 71.8 |

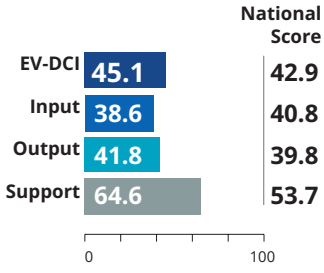
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Support | Regulation and Capacity of the Regional Government | 17.1 ↑ | The provincial government executed digitalization in various lines of public services such as vehicle tax payments through e-Samsat Sumut Bermartabat application. |
| Input | ICT Usage | 15.5 ↑ | The addition of network capacity by telecommunications operators such as XL Axiata, also supported the improvement of internet quality. |
| Output | Entrepreneurship and Productivity | 7.6 ↑ | The Department of Industry and Trade (Disperindag) held the IKM Boothcamp Go Digital program attended by 1000 participants as a means of training MSMEs in digital marketing.[17] |

## Highlighted Cities/Regencies

### Pematang Siantar City

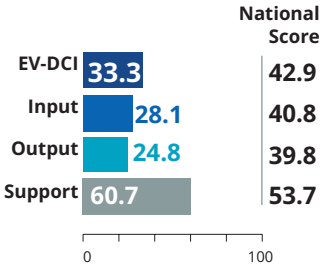
**Cities/Regencies Rank:**
**36 ( ↑ 31)**




The Finance pillar experienced the largest score increase, driven by the application of the Electronification of Regional Government Transactions (ETPD) of the Pematang Siantar City Government. This program aimed to improve regional financial management and prevent leakage of regional revenues.

### Serdang Bedagai Regency

**Cities/Regencies Rank:**
**151 ( ↓ 13)**



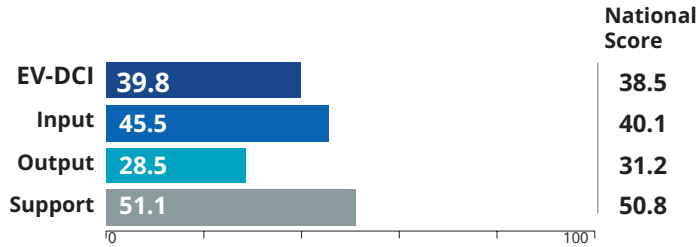

The ICT Usage pillar experienced a decline in score. The low utilization of the Internet in work has caused the Entrepreneurship and Productivity pillar to decline most significantly. As of mid 2022, out of 2.231 Small and Medium Industries (IKM), only 6 have gone digital.[18]

# Jambi

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| Rank | 23 | 20 | 30 | 14 |
| Score | 27.0 | 30.9 | 31.9 | 39.8 |

**JAMBI** experienced the biggest increase compared to other provinces, climbing 16 places to 14th. Finance is the pillar with the highest score increase. The improvement of this pillar was driven by growth in the Financial Inclusion Index (Composite) and E-wallet Adoption as a Payment Method.

The Jambi Provincial Government is improving the quality of digital services through the implementation of SPBE. The provincial government also encouraged MSMEs to go digital and implement cashless payment methods to improve productivity. By 2022, around 2,000 MSMEs have joined the digital ecosystem in Jambi City. This achievement was due to the support of the technology application training program held by the Kemenkominfo.[19]


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 39.6 | 57.0 | 39.8 | 16.6 | 28.8 | 40.1 | 67.8 | 36.7 | 48.9 |

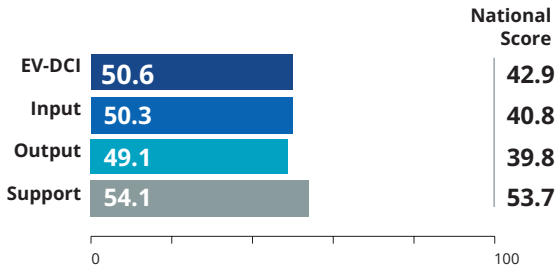
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Support | Finance | 26.4 ↑ | Programs to accelerate digital transactions in people's markets, one of which was the Angso Duo Jambi Modern Market, encouraged an increase in financial inclusion. |
| Input | Human Resources | 25.0 ↑ | The assistance from the Information and Communications Technology Volunteer (RTIK) helped increase the community's digital literacy. |
| Support | Regulation and Capacity of the Regional Government | 13.6 ↑ | The increase in Life Expectancy Rate was supported by improved access to health facilities. The Jambi Health BPJS has established partnerships with 168 First Health Facilities (FKTP).[20] |

## Highlighted Cities/Regencies

### Jambi City

**Cities/Regencies Rank:**
**26 ( ↑ 15)**




Infrastructure is the pillar with the most significant score increase. This increase has led the Diskominfo of Jambi Province to innovate in creating applications for the needs of government administration and public services. One of them is the Online Community Complaint Information System (SiKesal), a channel that is intended to absorb people's aspirations.

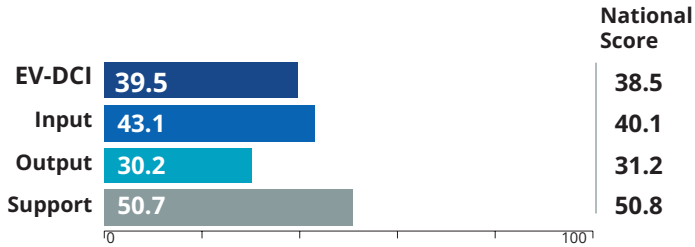
Entrepreneurship and Productivity is another pillar which also experienced a significant increase. The Jambi City Government, together with BI and OJK, also has executed strategic collaborations for digitalization purposes in various sectors from tax and retribution payments, MSMEs and markets, trade and service, education, transportation, to tourism.

# Bangka Belitung Islands

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| Rank | 19 | 25 | 29 | 17 |
| Score | 27.7 | 29.8 | 32.2 | 39.5 |

**BANGKA BELITUNG ISLANDS** placed 17th, climbing 12 places compared to the previous year. The Infrastructure pillar contributed the largest score. The high score of this pillar was also supported by the increase in the Ratio of Village with Strong and Very Strong Signals. The other two supporting pillars also showed significant improvements.

In promoting the digital economy, the Bangka Belitung Islands Provincial Government provided a number of assistance to MSMEs such as the distribution of the Regional Incentive Funds (DID) for cooling machines, packaging machines, and cameras needed by businesses to thrive on digital platforms. The government also collaborated with the logistics company JNE to build a logistics center in Bangka Belitung.


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 24.2 | 62.6 | 42.6 | 24.5 | 36.5 | 29.6 | 73.7 | 29.7 | 48.7 |

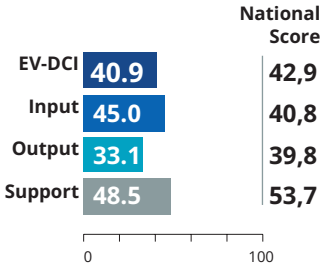
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Support | Finance | 24.8 ↑ | The presence of Digital Investment Gallery (GID) has made it easier for the public to access information on the capital market and digital investments. |
| Support | Regulation and Capacity of the Regional Government | 17.7 ↑ | The poverty rate of 4.90%, which is lower than the national average, is supported by government programs to boost the economy of Bangka Belitung on superior commodities such as tin. |
| Input | ICT Expenditure | 11.2 ↑ | The Department of Cooperatives and MSMEs held the Information Security Self-Assessment Implementation Program, which was attended by 70 MSMEs, as an effort to improve capacity in the digital ecosystem.[21] |

## Highlighted Cities/Regencies

### Belitung Regency

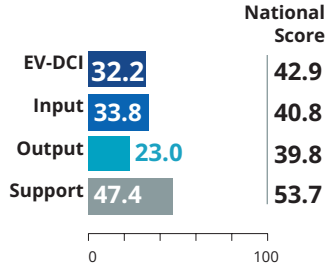
**Cities/Regencies Rank:**
**92 ( ↑ 47)**




ICT Expenditure became the pillar with the highest increase. This was driven by the development of Digital Village, which is equipped with digital applications for transactions and community services. The Diskominfo also conducted socialization to village officials to encourage village website management.

### East Belitung Regency

**Cities/Regencies Rank:**
**154 ( ↑ 1)**



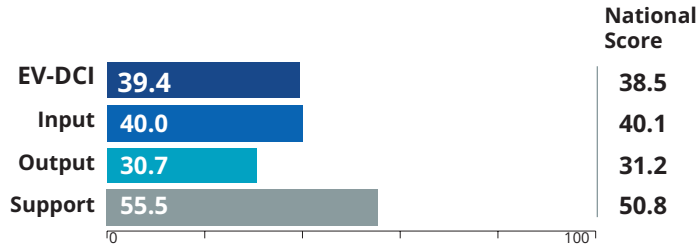

One of the reasons for this relatively significant decline in the economy pillar was the low contribution of GRDP in the digitalization sector. The East Belitung Regency Government implemented a smart city to drive the regional economy and formed the Lawang Beltim portal as a forum for public complaints to the government.[22]

# Maluku

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| Rank | 27 | 24 | 27 | 18 |
| Score | 26.3 | 30.1 | 32.5 | 39.4 |

**MALUKU** is ranked 18th, an increase from position 27 in the previous year. The pillar of Regulation and Capacity of the Regional Government makes the biggest contribution driven by high growth in Life Expectancy Rate. In comparison, Finance became the pillar with the highest score increase.

The Regional Revenue Agency for Maluku Province launched a digital-based service innovation, the Improve Infrastructure and Tax Paying Convenience System (Bisa Ya Lapak) application, to make it easier for people to pay provincial taxes. In supporting the improvement of community services, the Maluku Provincial Government also launched the Information System Follow-up for Supervision Results (TIMISTAAGA) application.


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 18.7 | 56.9 | 44,4 | 29.0 | 20.6 | 42.7 | 51.5 | 29.9 | 85.2 |

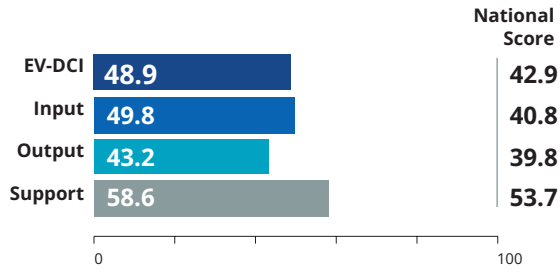
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Support | Finance | 24.2 ↑ | The BI Representative Office for Maluku Province conducted socialization on the use of cashless transactions in community-based communities, including the Passo traditional market. |
| Support | Regulation and Capacity of the Regional Government | 20.0 ↑ | Life Expectancy Rate, which represents the human development index, shows an increase. The Maluku Health BPJS introduced the Phased Payment Plan program as a solution to lighten the burden on participant contributions. |
| Input | ICT Usage | 19.0 ↑ | The Maluku Provincial Government is committed to optimizing the implementation of the One Data System in Maluku Province. |

## Highlighted Cities/Regencies

### Ambon City

**Cities/Regencies Rank:**
**32 ( ↑ 21)**




The Financial pillar shows the highest increase. In 2022, the achievement of Regional Original Income (PAD) for the Ambon City Government was 81% of the target[23]. This is supported by the collaborative efforts of the Regional Tax and Retribution Management Agency (BPPD) with BNI in actualizing digital transactions in government activities.

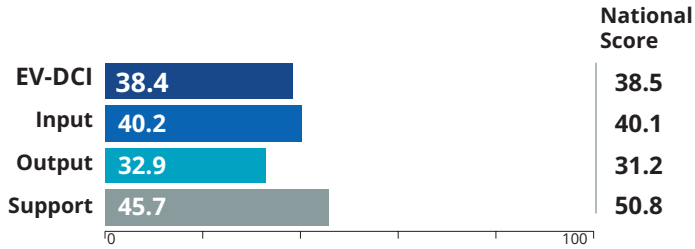
The pillar of ICT Usage has also increased. The Ambon City Government launched the Baktiku application, electronic attendance for ASN to support digital transformation. The city government is also collaborating with Amazon Web Service (AWS) in the development of SPBE and smart city.

# West Kalimantan

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| Rank | 21 | 31 | 32 | 20 |
| Score | 31.4 | 34.2 | 38.2 | 43.9 |

**WEST KALIMANTAN** is ranked 20th, with an increase of 12 positions compared to the previous year. The pillar of ICT Usage contributed the biggest score. The high score of this pillar is supported by an increase in the Ratio of Citizens that Access Internet with Cellular Phone.

To encourage the development of the digital ecosystem, the West Kalimantan Provincial Government collaborated with the Ministry of State-Owned Enterprises to implement the 2022 Proudly Made in Indonesia National Movement (Gernas BBI) West Kalimantan. It includes assistance regarding export procedures, expanding marketing access, and business matching between business players and SOEs. This activity involved 1,900 MSMEs Rumah BUMN partners and helped 30 MSMEs join the UMKM Digital Platform.[24]


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 27.5 | 53.7 | 39.3 | 24.4 | 28.5 | 45.7 | 49.6 | 40.4 | 46.9 |

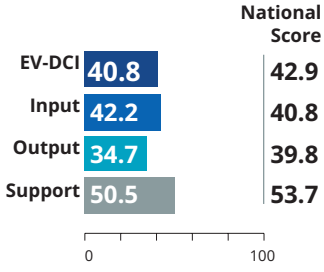
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Support | Finance | 24.0 ↑ | The provincial government is expanding the electronification of expenditure and income transactions, including the use of QRIS and the implementation of online Fund Disbursement Orders (SP2D). |
| Input | ICT Usage | 11.7 ↑ | West Kalimantan ICT Volunteers organize various activities such as Digital Pandu empowerment and ICT Festivals to socialize the use of internet access. |
| Input | ICT Expenditure | 11.0 ↑ | E-commerce transactions recorded an increase in Quarter II/2022, growing by 21.54% (YoY), with most product purchases coming from the fashion category.[25] |

## Highlighted Cities/Regencies

### Singkawang City

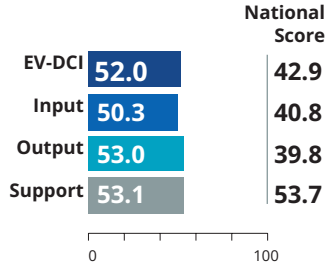
**Cities/Regencies Rank:**
**93 ( ↑ 29)**




The relatively high increase in the Financial pillar was supported by the implementation of the ETPD. The Singkawang City Regional Finance Agency created an innovation in the form of a digital application for the Regional Tax Information System (SIPADAH) for paying local taxes online. This system will ease the supervision of regional revenues.

### Pontianak City

**Cities/Regencies Rank:**
**20 ( ↑ 9)**



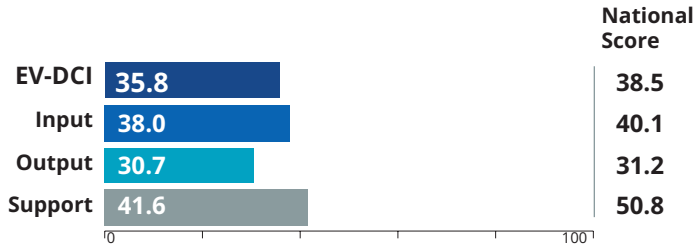

Infrastructure gets the highest pillar score increase in the city. The Pontianak City Government has widely implemented smart city, which is marked by the construction of the Pontive Center infrastructure as a government data center that accommodates and manages information between regional apparatuses.

# West Papua

| | Year | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| | Rank | 28 | 30 | 19 | 28 |
| | Score | 26.2 | 27.6 | 34.3 | 35.8 |

**WEST PAPUA** is ranked 28th, declined nine ranks compared to the previous year. Even though the EV-DCI 2023 score shows an increase, West Papua still lags behind compared to the increase in other provinces. As in the previous year, the Entrepreneurship pillar received the lowest score, while Regulation and Capacity of the Regional Government became the pillar with the highest score.

The West Papua Provincial Government seeks to create innovation in public services. The Community and Village Empowerment Department (DPMK) initiated the Information System Innovation of Village Administration (SiKampung). This application provides a number of data regarding education, health, and superior commodities to economic promotion from 1,742 villages.


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 20.1 | 46.1 | 47.9 | 29.1 | 15.7 | 47.3 | 41.3 | 18.1 | 65.5 |

## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Support | Finance | 18.0 ↑ | In mid-2022, the government inaugurated several electronic payment channels, including local tax payments and the launching of two QRIS Modern markets. |
| Support | Regulation and Capacity of the Regional Government | 8.4 ↑ | The West Papua Provincial Government plans to develop a cultural arts park area as a center for developing a technology-based creative economy. |
| Output | Manpower | 4.0 ↓ | The level of education that still needs to be higher and tends to be left behind results in low absorption of labor in the digitalization sector. |

## Highlighted Cities/Regencies

At the end of 2022, the government officially authorized the province's division in Papua, namely the Southwest Papua Province, along with three other new autonomous regions. Southwest Papua Province, with the capital city of Sorong, is the result of division from West Papua Province.

The expansion also affected the downgrade of West Papua Province due to cities/regencies that moved administrative areas to new provinces. In EV-DCI 2023, Southwest Papua gets a higher score of 36.7. At the city/regency level, Sorong City also experienced a change, rising three ranks to the 73rd position.

Furthermore, the formation of the Southwest Papua Province is part of efforts to accelerate development, as well as increase the Human Development Index (HDI) and the welfare of the people of Papua. The government has also prepared a plan for the Acceleration of Papua Special Autonomy Development.

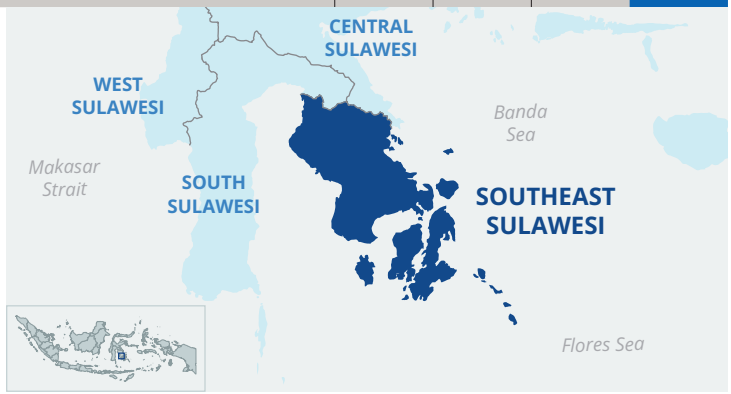
In West Papua, the government encourages economic growth based on the region's main potential and sustainable human resource empowerment. In this case, the collaborative efforts of stakeholders are needed to accelerate digital economic growth in West Papua.

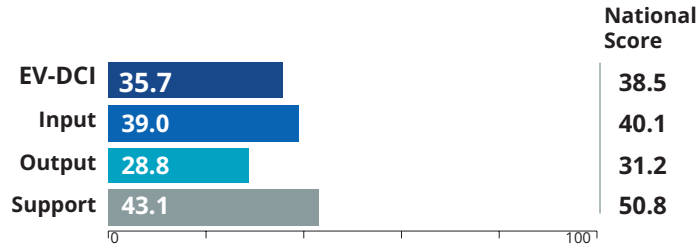
# Southeast Sulawesi

| Year | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| Rank | 26 | 18 | 16 | 29 |
| Score | 26.6 | 32.0 | 36.1 | 35.7 |

**SOUTHEAST SULAWESI** is ranked 29th, down 13 ranks compared to the previous year. The Economy pillar has the lowest score, while the Finance pillar has the highest score increase.

The Southeast Sulawesi Provincial Government continues to support the development of MSMEs in the digital ecosystem. The Southeast Sulawesi Online Shopping (BOSARA) application is an online government shopping platform that offers a variety of products ranging from food and beverages to fashion, household appliances, and electronics. This marketplace portal brings together MSME players and procurement officials as buyers for the routine shopping needs of Regional Apparatus Organizations (OPD).




Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 22.5 | 55.6 | 38.8 | 18.2 | 26.3 | 42.0 | 55.8 | 26.6 | 46.8 |

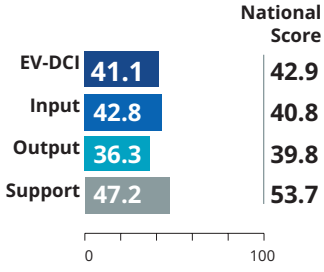
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Support | Finance | 11.4 ↑ | Digital transactions continue to increase; as of November 2022, QRIS users from MSMEs have reached more than 100,000.[26] |
| Support | Regulation and Capacity of the Regional Government | 9.1 ↓ | The percentage of people with education up to university is recorded low, namely 7.6% as of June 2022.[27] To improve the education sector, the provincial government has repeated its Sultra Cerdas scholarship program. |
| Output | Economy | 8.1 ↓ | GRDP growth in the digitization sector is still low. Thus, the provincial government encourages the optimization of one data of the Southeast Sulawesi economy to develop regional superior products. |

## Highlighted Cities/Regencies

### Baubau City

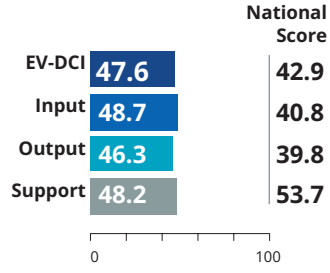
**Cities/Regencies Rank:**
**90 ( ↑ 5)**




The Entrepreneurship and Productivity pillar showed the highest score increases. The Department of Cooperative and MSMEs uses a digital application system to manage the needs and develop skills of start-up business players in the area; around 5,000 business actors are recorded in the database.[28]

### Kendari City

**Cities/Regencies Rank:**
**44 ( ↓ 20)**



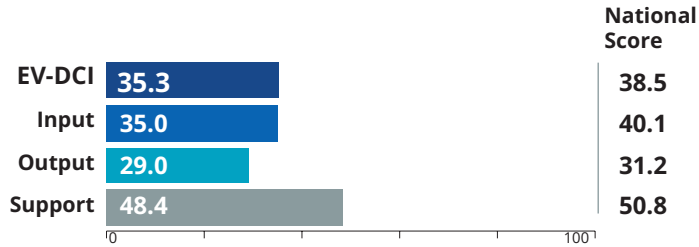

The low contribution of GRDP in the digitalization sector have caused a decline in the economic aspect. The local government collaborates with the Kemenparekraf to encourage MSMEs to enter the digital ecosystem, including holding a Workshop on the Development of Indonesian Creative Regencies/Cities.

# Gorontalo

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| Rank | 20 | 16 | 21 | 30 |
| Score | 27.5 | 32.3 | 33.5 | 35.3 |

**GORONTALO** is ranked 30th, experiencing a decrease of 9 positions from the previous year. Despite experiencing an increase in scores, Gorontalo has not been able to catch up with the rise in other provinces. The Financial pillar has the highest score increase, while the Economy is the pillar with the most significant decrease in score.

The Gorontalo Provincial Government encourages digitization through the implementation of ETPD with the integration of cashless payment channels, which reached 86.3% in the first semester of 2022.[29] In addition, the government also organizes Gebyar UMKM Gorontalo, which focuses on displaying superior products and socializing QRIS Scan via Mobile Banking (SIMBA) to accelerate digital finance.


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 13.7 | 57.3 | 34.0 | 25.9 | 24.5 | 36.6 | 64.3 | 29.3 | 51.6 |

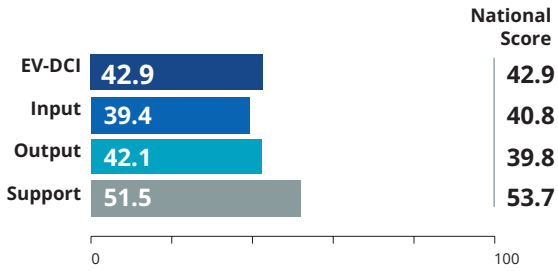
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Support | Finance | 24.2 ↑ | The significant increase in the Financial Inclusion Index in Gorontalo is driven by socialization programs on digital finance adoption. |
| Input | ICT Usage | 9.3 ↑ | E-commerce transactions increased in Gorontalo along with increased internet access, recorded in the first quarter of 2022, growing by 30.97% compared to the fourth quarter of 2021.[30] |
| Output | Economy | 9.3 ↓ | The use of digitalization has yet to show a high contribution to the regional economy. As of 2022, Gorontalo will still be one of the five poorest provinces in Indonesia. |

## Highlighted Cities/Regencies

### Gorontalo City

**Cities/Regencies Rank:**
**80 ( ↓ 10)**




As at the provincial level, the Economy pillar experienced the most significant decrease in score. Enhancing the capacity of MSME players and the creative economy is needed to spur the growth of GRDP in the digitalization sector. The BI Representative Office for Gorontalo also organizes MSME development activities to increase the added value of superior local products.

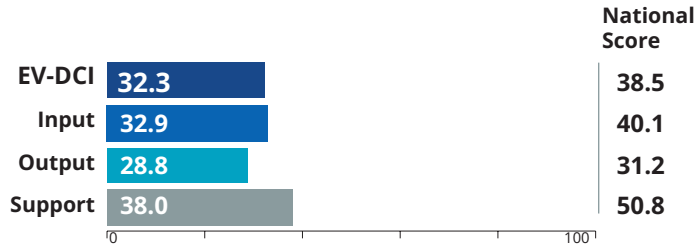
In addition, Gorontalo City shows improvements in the Financial pillar. Through the formation of TP2DD, in 2022, local tax payment transactions in Gorontalo City has reached 100% cashless. The Gorontalo City ETPD is implemented in one tax service through the One Tax Service Gorontalo (OTS GO) application, supported by a socialization program with BI.

# Central Sulawesi

| | Year | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| | Rank | 29 | 23 | 22 | 33 |
| | Score | 25.3 | 30.7 | 33.4 | 32.3 |

**CENTRAL SULAWESI** experienced a decrease in the EV-DCI 2023 rank, with a change of 11 positions to 33rd place. The Human Resources pillar received the lowest score, while the ICT Usage pillar had the highest score increase.

The Department of Cooperatives and MSMEs of Central Sulawesi Province held e-commerce training for cooperatives to improve skills and knowledge in expanding marketing. The Central Sulawesi Provincial Government also launched the Integrated Central Sulawesi Cropping Management (MATA TANI) program, which provides a real-time integrated database for farmers. This agricultural innovation program can increase sustainable regional food productivity.


Score 0-100

| Input | | | Output | | | Support | | |
|---|---|---|---|---|---|---|---|---|
| Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepreneurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |
| 15.2 | 49.7 | 33.7 | 23.7 | 23.2 | 39.6 | 51.4 | 17.8 | 44.9 |

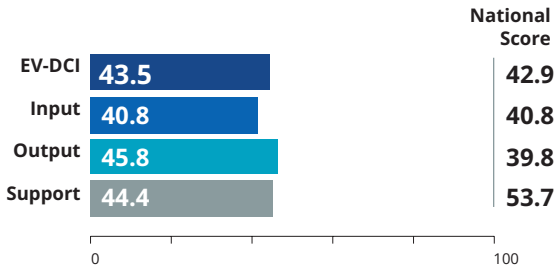
## Pillars with Significant Changes

| | | | |
|---|---|---|---|
| Input | ICT Usage | 12.3 ↑ | The coverage of regions with internet networks is increasing in 2022-2023. The Kemenkominfo is targeting the construction of 396 areas with BTS services.[31] |
| Output | Entrepreneurship and Productivity | 6.8 ↑ | The Department of Women's Empowerment and Child Protection held digital-based entrepreneurship training to increase the capacity of women's MSMEs. |
| Support | Regulation and Capacity of the Regional Government | 16.9 ↓ | Inflationary pressure by 6.0% in Central Sulawesi reduced the ability of provincial government to optimize budget absorption and overcome poverty.[32] |

## Highlighted Cities/Regencies

### Palu City

**Cities/Regencies Rank:**
**74 ( ↓ 42)**




The Infrastructure pillar has the highest score in Palu City. In contrast, the Finance and Regulation and Capacity of the Regional Government are the two pillars with the most significant decrease in score. It indicates the need for comprehensive improvements on the supporting factors driving Palu City' digital economy.

In transforming public services,the Regional Development Planning Agency (Bappeda) of Palu City launched the One Data Application for Palu City Regional Development Planning. The Department of Communication and Informatics of Palu City also socialized the use of digital platforms as a means of public communication through the Palu Mayor's Report portal.

# 04

# Digital Economy Development Across Sectors

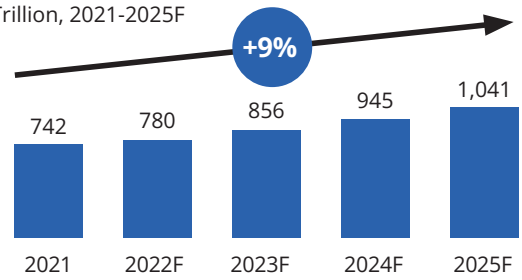
# ICT: Continuing the National Digital Transformation

**THE INFORMATION AND COMMUNICATION TECHNOLOGY** (ICT) sector continues its role as the backbone of the digital economy after having previously been a key driver in economic recovery during the pandemic. This growth is driven by an increase in public digital consumption and ICT investment by business players. However, the ICT sector is still dominated by the same classic obstacles, such as inequitable infrastructure, an inadequate amount of digital talent, and weak cyber security in Indonesia. In addition to government programs, collaborations with the private sector have been conducted to overcome these challenges. In the future, Artificial Intelligence (AI) will be one of the key drivers in fostering the growth of the ICT sector and the Indonesian economy. Well-planned AI adoption will promote ICT capabilities in sustaining Indonesia's economic growth.

## The ICT sector shows promising growth projections with more diverse range of products

The ICT sector is projected to grow with an increase in the contribution of ICT goods producers and services in Indonesia, as represented by the surge in Gross Value Added (GVA). Moreover, the ICT trade deficit of US$ 13 billion indicates that domestic consumption remains unfulfilled. Thus, the ICT sector has great potential to grow.[1]

**Gross Value Added* of Information and Communication Sector**
in IDR Trillion, 2021-2025F




Source: EMIS: Indonesia ICT Sector 2022/23

Indonesia's digital economy is predicted to reach US$ 360 billion in 2030, with an annual growth of 21% during 2022-2030.[2]

The Indonesian market has the highest growth in Information Technology (IT) expenditure within the Asia Pacific, with annual growth of 13% during 2020-2024, reaching US$ 6 billion.[3]

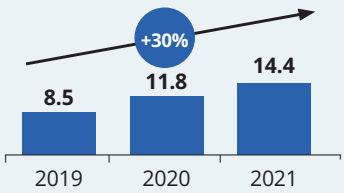
*Gross value added describes the added value of a product or service by subtracting production value from costs during the production process and is one of the components in GDP calculation.

### Growth of the ICT sector is driven by three main factors

The surge in online activities and the quality of digital product services contribute to the increase in public digital consumption. Conventional businesses are also progressively venturing into the digital world, driven by the rapid growth in digital business.

#### Increase in Internet Consumption

**Cellular Data Consumption per Month**
in Gigabyte, 2019-2021

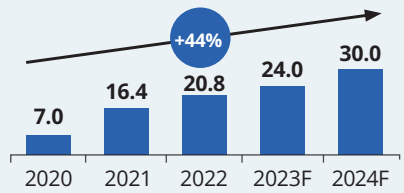



Source: opensignal.com

- The increase in internet consumption is accelerated by the surge in internet users from 224 million in 2022 to 269 million in 2028;[4]
- On the other hand, the wider use of the Internet of Things (IoT) and the expansion of the 5G network will drive internet consumption.

#### MSMEs Digitalization and Startup Growth

**Accumulation of MSMEs Go Digital**
Million MSMEs, 2020-2024F

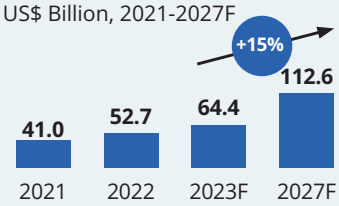



Source: DataIndonesia

- The government encourages the digitalization of MSMEs through several financing programs, such as DigiKU, e-Farming, and e-Payment;[5]
- The number of startups offering technology-based innovation is growing rapidly, including startups in tier 2 and 3 cities.

#### Vertical Sector Growth

**Indonesia's E-commerce Transaction Value**
in US$ Billion, 2021-2027F




Source: Euromonitor, PwC's Analysis

- The growth of the fintech and e-commerce industries is supported by adequate hardware and software;
- Conventional businesses are starting to adopt technology for operational efficiency;
- These trends have increased ICT investments by business players.

### The ICT sector has a wide range of products that can be classified into 2 layers

ICT products can be categorized into 2 layers, namely the Infrastructure layer and the Application layer. The Infrastructure layer comprises hardware, network infrastructure, and cloud computing (a technology enabling online data storage, processing, and access). These three components form a computer network that enables information and communication exchange. On the other hand, the Application layer harnesses the computer network for various uses, such as spreading information and processing data.

**Indonesia's ICT Ecosystem**

**Application**

| Digital Enabler | | Digital Content | | | Deep Tech | | |
|---|---|---|---|---|---|---|---|
| Software as a Service (SaaS) | ICT Consultation | Content Platform | Media | E-sport | Artificial Intelligence (AI) | IoT | Blockchain |
| • SaaS adoption by MSMEs and corporations drive SaaS growth;<br>• **Point of Sales** and **human resource management applications** are the most popular products.[6] | | • Indonesia's **content creator** economy market is estimated to be worth **IDR 4-7 trillion in 2022** with the development of influencer marketing services;[7]<br>• The majority of Indonesians opt for OTT (Over-the-Top) platforms over traditional televisions.[8] | | | • The IoT is projected to grow rapidly at 16% per year during 2022-2025 with the highest demand coming from the telecommunications and media, health, and agriculture sectors;[9]<br>• 78% of Indonesians are optimistic about the presence of AI.[10] One possible use of AI is the use of chatbots to increase customer engagement.[11] | | |
| desty, MULTIPOLAR TECHNOLOGY GROUP, mekari | | TipTip, IDN MEDIA, Vidio, katadata, | | | qlue, nodeflux, Kata.ai, snapcart | | |

**Infrastructure**

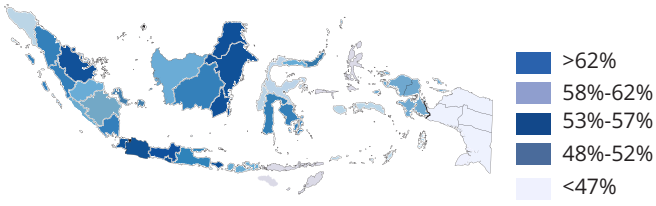
| Hardware<br>Examples: Mobile Phones and Computers | Network<br>Examples: Internet and Base Transceiver Station (BTS) | Cloud Computing<br>Example: Infrastructure as a Service (IaaS) |
|---|---|---|
| • 80% of Indonesia's population owned mobile phones in 2022. This number is predicted to reach 89% in 2025;[12]<br>• Computer penetration remains below 20% which potentially hinders the adoption of productive applications.[13] | • The increase in internet consumption, 5G's presence, and IoT implementations in various sectors are escalating the demand for internet, telecommunication towers, and BTS;[14]<br>• The migration to digital TV also increases the usage efficiency of the 700 MHz frequency so that the 5G internet can be developed.[15] | • Indonesia's Public Cloud services had the fastest annual growth in the Asia Pacific at 25% during 2018-2023;[16]<br>• Cloud services are becoming a more affordable option for SMEs due to their ability to save more than 10% of operational costs, compared to other alternatives such as computer servers.[17] |
| zyrex, ASUS, METRODATA, SAMSUNG, SYNNEX | FIRST MEDIA, Mitratel, TELKOMSEL, smartfren., NOKIA | GTN, aws, Google Cloud |

### Amidst the growth of Indonesia's ICT sector, there are still a number of challenges hindering the advanced development

Inequitable network infrastructure between provinces in Indonesia and unequal levels of digital literacy, remain obstacles limiting the potentially high growth of the ICT sector. Apart from that, the data theft by the hacker "Bjorka" in 2022 is one of the examples that data protection in Indonesia remains inadequate. Data leakage risks due to the vulnerable security and governance systems are the threats hindering technology adoption by the public or traditional businesses.

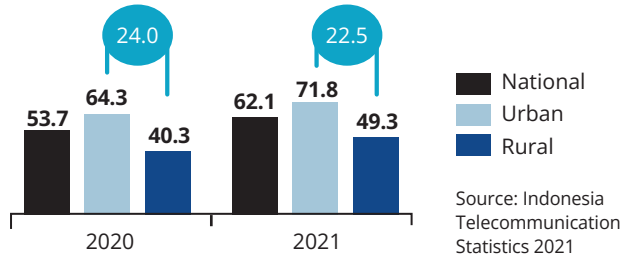
## Inequitable internet access and slow internet speed

**Percentage of Population Accessing the Internet in 2021**




Source: Indonesia Telecommunication Statistics 2021

**Percentage of Population Accessing the Internet by Regional Classification**
in %, 2020-2021

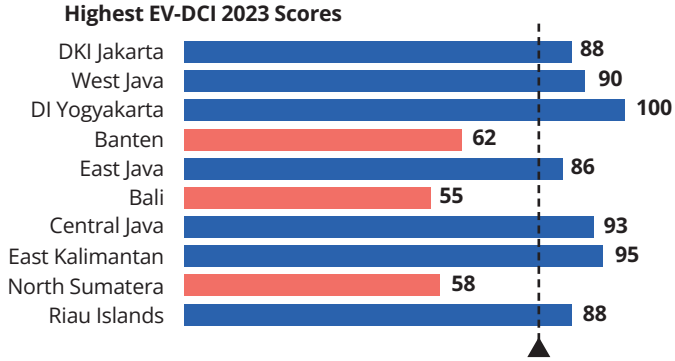



Source: Indonesia Telecommunication Statistics 2021

Internet access tends to be concentrated in the western part of Indonesia and urban areas. Thus, the distribution of ICT infrastructure needs to be enhanced. The improvement of internet access for rural areas in 2021 has not been able to eliminate the discrepancy between urban and rural areas. On the other hand, Indonesia's average internet speed ranks in the bottom 3 among ASEAN countries.[18]

## Unequal level of digital literacy

**Digital Literacy Index of 10 Provinces with the Highest EV-DCI 2023 Scores**

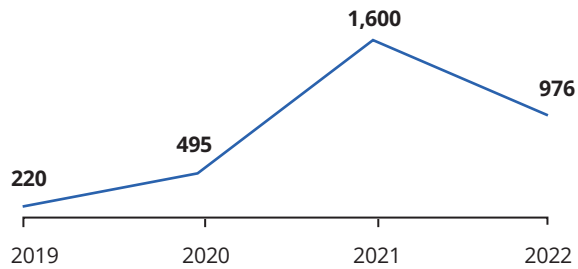



Source: EV-DCI 2023

- 3 of the top 10 digitally competitive provinces have a digital literacy index below the median. A lack of digital knowledge can hinder the adoption and development of existing technologies in those provinces;
- This also affects the quality of Indonesia's digital talent, where only 50% have basic and intermediate digital skills, while only 1% have advanced level skills (such as: AI, IoT).[19]

## Weak cyber security

**Number of Cyber Attacks in Indonesiaa**
in Million Cases, 2019-2022




Source: PwC Analysis, Public Information

- According to the National Cyber Security Index ranking, Indonesia occupied the third lowest place among the G20 countries. One of the reasons is the lack of cyber security policy and independent data protection authority;[20]
- Furthermore, 77% of respondents to the EV-DCI 2023 Consumer Survey considered cyber security threats as a challenge for the digital economy, which also related to personal data security.

### Actions that can be taken by the government to tackle the challenges in the ICT sector

The government continues to encourage investments for internet networks, especially in 3T areas. Moreover, the government strives to improve digital literacy through training programs and strengthen cyber security through strategic planning.

| Internet Infrastructure | Digital Literacy | Cyber Security |
|---|---|---|
| 2021 **The 5G network** was launched and wider implementation is estimated to be in 2025;[21]<br>2023 **The Satria Satellite** will be launched to improve signal in 3T areas;[22]<br>2024 Construction of 7,000 **BTS** in 3T areas.[23] | • The 2020-2024 Digital Literacy Roadmap has been implemented;<br>• The Siberkreasi Digital Literacy National Movement (Gerakan Literasi Digital Siberkreasi) developed digital literacy modules and activities;[24]<br>• The Digital Talent Scholarship Program is targeting 100,000 participants in 2023.[25] | • The 2019-2045 Indonesian Cyber Security Roadmap has been established as a long-term blueprint for Indonesian cyber security;[26]<br>• The Personal Data Protection Law was passed in October 2022 and showed the government's commitment to cyber security.[27] |

**The private sector play a role in finding solutions to Indonesia's ICT challenges**

Considering the important role of the private sector, the Ministry of Communication and Informatics (*Kementerian Komunikasi dan Informasi*/Kemenkominfo) through the Siberkreasi Digital Literacy National Movement has partnered with private companies to improve digital literacy.

**Kemenkominfo's Collaborations with Several Companies**

**TikTok: short video content platform**
Collaborating through #MakinCakapDigitalChallenge and the "Bincang Literasi Digital" webinar with TikTok creators.[28]

**WhatsApp: Internet-based instant messaging application**
Collaborating to launch Siberkreasi Digital Literacy AI-based chatbot to learn about digital literacy modules.[29]

**Spotify: music and podcast streaming platform**
Collaborating to launch "Kelas Podcast Siberkreasi 2022" which educates the public about podcasts.[30]

**Mekari: Cloud-based business automation SaaS**
Collaborating to hold the "UMKM Digital Cemerlang Melaju Bersama Kementerian Kominfo" program.[31]

## Besides improving digital literacy, the government's initiatives are directed to building Indonesia's digital economy

Digital economy is one of Indonesian economy key drivers and is projected to reach 18% of GDP in 2030.[32] In order to develop the digital ecosystem in Indonesia, the government has carried out several initiatives, starting from the #1000StartupDigital movement to share information to a startup incubation program called HUB.ID.

HUB.ID

Kemenkominfo's platform focuses on local post-seed startups to develop at the regional level by utilizing Kemenkominfo's partner network.[33]

| | |
|---|---|
| **Accelerator** | Accelerating growth through panel and mentoring processes |
| **Business Ecosystem** | Connecting startups with stakeholders in the digital ecosystem for potential collaborations |
| **HUB.ID Summit** | Facilitating funding through matchmaking startups with venture capital (VC) |

**100+** startups

**47** partners from SOEs and cooperatives

**280+** matchmakings

In 2022, 24 startups were selected to participate in a series of programs, such as coaching, business matchmaking, and pitch presentation training. Two of them managed to receive funding:[34]

1. **PasarMIKRO:** an agriculture startup;
2. **Grouu:** a kids catering startup.

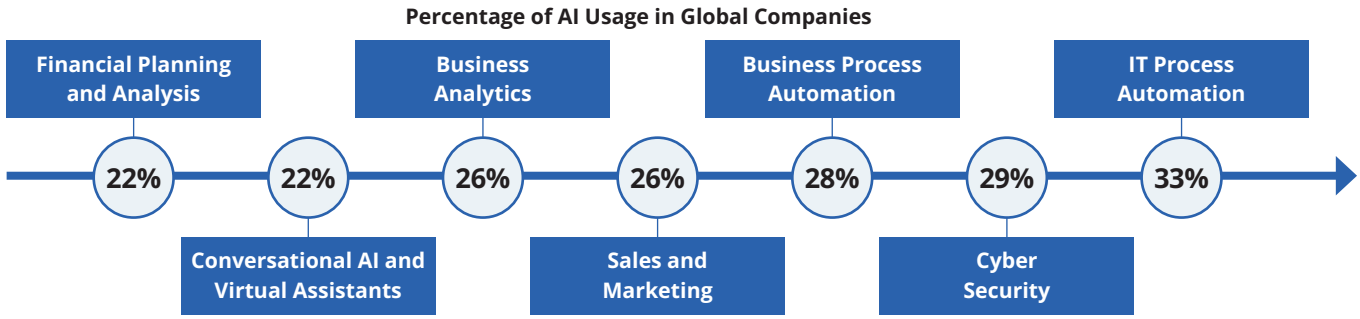
## AI adoption will be the key to Indonesia's ICT and economic growth

AI is predicted to increase Indonesia's GDP by 12% in 2030 through increased business productivity.[35] Moreover, AI allows for the rapid production of personalized products and services tailored to consumers' needs so it can drive the market demand. Recognizing the huge potential of AI, the government issued the National Artificial Intelligence Strategy (STRANAS KA) 2020-2045 as a guide in maximizing AI potential.[36]

**STRANAS KA 2020-2045**
One of the strategies developed by the government was preparing policies and infrastructure to overcome shifts in employment due to the presence of AI.

**Digital Talent Scholarship Program**
Collaboration between the government and the private sector in creating qualified digital talent capable of developing and operating technologies such as AI.[37]

From businesses' perspectives, several companies have started to implement AI with various use cases to increase revenue and operational efficiency.




Source: IBM Global AI Adoption Index 2022

Based on the IBM Global AI Adoption Index 2022 survey, 33% of companies use AI to automate IT processes, such as the AIOps technology that can monitor and diagnose anomalies in systems before they disrupt business activities. Apart from that, AI is also widely used to identify cyber attacks, automate business processes, and improve sales activities, such as mapping potential customers' behavior and intentions.

**There are 4 things ICT companies should consider when adopting AI**

| 1. Evaluate the roles of AI in business | 2. Prioritize the measures taken |
|---|---|
| • Analyze of technology development in accordance with the company's business;<br>• Identify operational problems that can be solved by AI automation and application. | • Plan areas to transform;<br>• Gather information regarding costs of related technologies;<br>• Comparative analysis of costs and benefits obtained from AI implementation. |
| **3. Supporting digital talents, culture, and technology** | **4. Establish proper governance and control** |
| • Conduct training regarding AI utilization to mitigate the scarcity of digital talents;<br>• Develop collaborations between humans and AI. | • Consider the ethical and social aspects of the technology use;<br>• Cultivate transparency to build trust towards AI technologies. |

Source: PwC Sizing the prize

## ESG implementation opens opportunities for AI-based business development

One of the ESG initiatives that had been implemented in companies is protecting the privacy of personal data collected. The implementation of good data governance is in line with the Governance element of the ESG principles. AI implementation by cyber security companies allows them to promote better security for the data they have collected.

**Peris.ai**

- A cyber security startup;[38]
- Using AI and machine learning as a basis for identifying cyber security threats and recommending responses to users.

| The Roles of AI | | Offered Solutions | |
|---|---|---|---|
| AI is used to analyze large amounts of data so that the Peris.ai system can respond to the latest cyber threats. | Develop applications to scan client security systems automatically. | Evaluate the client's security system by simulating cyber attacks. | Conduct investigations into cyber crimes and provide recommendations for solutions. |

The ICT sector has a bright outlook with the continuous evolution of product innovation. In spite of that, various obstacles potentially hinder progress, such as inequitable ICT infrastructure, unequal levels of digital literacy, and weak cyber security. Good collaboration between the government and the private sector is required to maintain the growth of the ICT sector. Moving forward, one of the biggest opportunities will come from AI implementation, which will potentially increase Indonesia's GDP with its various uses. The expansion of internet access through equitable development of communication infrastructure to 3T areas and the implementation of the 5G network play vital roles in AI adoption, as well as the application of other technologies, such as IoT and blockchain.

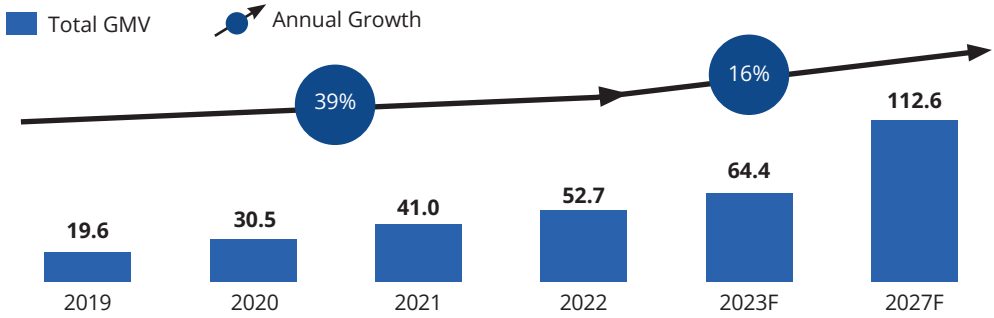
# E-Commerce: Increase Resilience with Way-to-Play Adaptations

**The pandemic** provided an opportunity for e-commerce players to create an online shopping habits. However, with the end of the pandemic in Indonesia, people were able to regain the experience of direct offline shopping. The return of offline shopping availability and with funding challenges in e-commerce, require the business players' attentiveness. However, market conditions are expected to continue growing in 2023 due to increased economic capabilities and ease of transactions, which play a vital role in maintaining consumer interest in online shopping. E-commerce players need to enhance their relevance through innovation that adapts to changes in consumer behavior and executes business diversification and expansion. The implementation of these strategies are expected to add higher value for the consumers to carry out their online shopping activities.

## Indonesia's e-commerce continues to grow by strong consumption, ease of access to payments, and increased public trust

Indonesia has succeeded in maintaining e-commerce Gross Merchandise Value (GMV) growth in 2022 after achieving high transaction growth during the pandemic. Going forward, Indonesia's e-commerce GMV is projected to reach US$ 64.4 billion in 2023 supported by 9.8% growth in the number of users and 11.5% growth in the average revenue per user.[1,2]

**GMV of E-Commerce Indonesia**
In US$ Billion



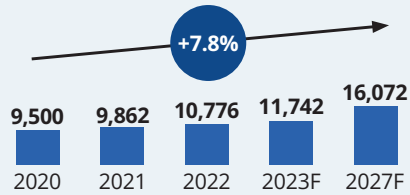

**Overall growth** (2019 to 2027F) **is 24% per year**

Source: Euromonitor, PwC Analysis

**There are three key drivers to uplift e-commerce growth in 2023**

### Disposable Income Growth*

**Indonesia Household Total Disposable Income**
in IDR Trillion

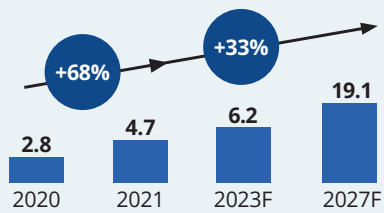



Source: Euromonitor, PwC Analysis

The growth shown above is also in line with the increase in the proportion of people's income used for consumption, which reached 75.6% in December 2022, regardless of rising inflation.[3]

### Ease of Payment Access

**GMV Buy Now Pay Later (BNPL) Indonesia**
in US$ Billion

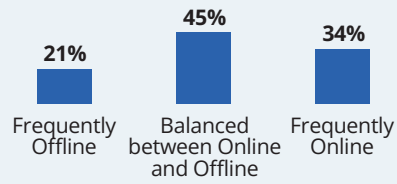



Source: Research and Market, PwC Analysis

BNPL, as a financing facilitator, provides convenience through flexible credit approvals and quick access to meet people's shopping needs.

### Ease of Online Shopping

**Indonesian Consumer Spending Choices**
in %, 2022



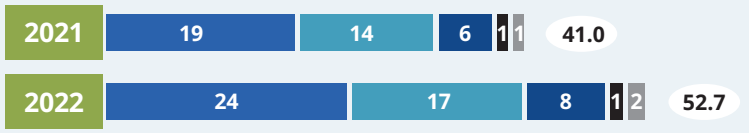

Source: EV-DCI 2023 Consumer Survey

The convenience of remote shopping, a wide selection of products, and attractive promotions have shaped people's online shopping habits. The PwC survey shows that, in the next six months, people will still prefer online shopping over offline.[4]

*) Disposable Income is the amount of income after deducting taxes that is ready to be used, both for consumption and savings.

## Several trends are shaping the growth of the Indonesian e-commerce subsector

### Indonesia's E-Commerce Subsector GMV
in US$ Billion




General Marketplace*
B2B Commerce
Social Commerce
E-Grocery and Quick Commerce
Others

Source: Euromonitor, Statista: E-Commerce, Statista: Quick Commerce, Reogma, Dailysocial, PwC Analysis

*) General Marketplace is an e-commerce platform that brings together sellers and brand owners with buyers, which covers various types of good categories

**Key Players**

tokopedia Shopee blibli.com Lazada bukalapak

**The General Marketplace focuses on profitability and business diversification**

- In the midst of external funding difficulties, the General Marketplace aims to increase business efficiency by being more selective in offering promotions to customers.
- To maintain market share, General Marketplace players generally diversify their business by developing new business units, such as Tokopedia establishing Tokopedia Now (Quick Commerce) and Bukalapak by having B2B Commerce that strengthens Mitra Bukalapak.

**Key Players**

Ralali.com Mbiz BHINNEKA

**Fierce competition in B2B Commerce**

- B2B Commerce players are competing to attract sellers and increase transactions through the platform. Players focus their strategies on product category specialization, business models, and operating areas.
- A mutually beneficial relationship between B2B Commerce and goods manufacturers supports the projected growth in the market value of B2B Commerce by 25% in 2023.[5]

**Key Players**

**Liveshopping becomes a major shopping trend by Social Commerce players**

- Business players have succeeded in converting large volumes of traffic from social media users into shopping transactions through live shopping features. Even though the average spending value per transaction is quite low, TikTok is able to take advantage of this trend and has achieved a GMV of US$ 4.4 billion in Southeast Asia in 2022.[6]
- Social Commerce (buying and selling transactions through social media) utilizes reseller and wholesale sales models and targets local communities as a strategy to increase transactions.

**Key Players**

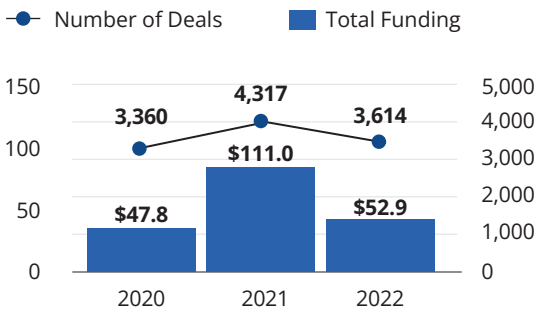
pasarnow happyfresh sayurbox allofresh

**E-grocery and Quick Commerce are testing the relevance of their business after the pandemic**

- Challenges occurred to Quick Commerce and E-grocery players due to the easing of PPKM and the change in the status of COVID-19 from a pandemic to an endemic, which provided opportunities for customers to return to offline shopping at physical stores.
- Quick Commerce and E-grocery players continue to explore the B2B market.

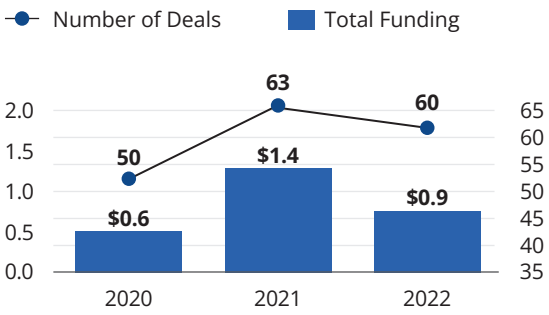
## Funding challenges in Indonesia's digital sector, especially e-commerce, encourage adaptive actions that focus on business efficiency and profitability

### Global E-Commerce Funding
in US$ Billion, 2020 – 2022




Source: CB Insights State of Venture Report 2022, PwC Analysis

### Indonesia E-Commerce Funding
in US$ Billion, 2020 – 2022




Source: Crunchbase Database, PwC Analysis

Uncertain global macroeconomic conditions pose funding challenges for global and Indonesian startup companies. To maintain businesses, players need to innovate and adjust their business operations. Some examples of adaptive steps taken by startups are as follows:

| | |
|---|---|
| **Focus on more profitable services** | The focus on more profitable business areas was carried out when startups had difficulty reducing operational costs. For example, Sayurbox closed its only offline store to focus on other businesses, such as plantations and expansion in Jakarta and Surabaya.[7] |
| **Adjustment of customer incentives** | Tokopedia adjusted its customer incentives and marketing costs as a strategy to increase profitability.[8] A similar course of action was taken by Shopee by cutting cost in sales and marketing by 16% in 2022 compared to 2021.[9] |
| **Adjustment of HR needs** | Startups are consolidating employee roles and responsibilities to streamline its organizations, increase cash reserves, and increase business continuity. |

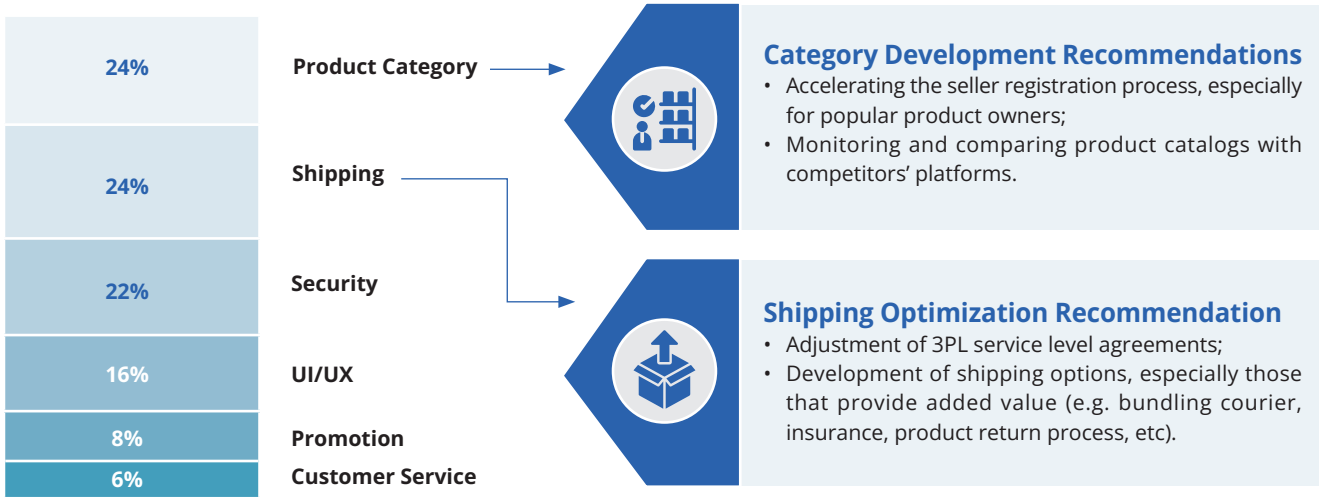
## To achieve sustainable growth, several opportunities need to be optimized by e-commerce players

### 1. Adaptive business innovation following changes in consumer behavior

Technological developments, lifestyles, and consumer behavior form the dynamics that encourage e-commerce to continue to adapt. In 2022, Kadence International's consumer survey finds that having complete product category information and shipping reliability are the most important aspects of online shopping.

**Contributing Factors to Online Shopping Satisfaction Level**

in %, 2022




Source: Gatra.com (Interview from Kadence International)

E-commerce players also need to realign marketing programs that are not only oriented towards acquiring new users and also pay attention to the current customer lifetime value (CLV). Correspondingly, promotion as a way to increase revenue and attract new users was only prioritized by 8% of survey respondents.[10] This is reflected by the decreasing effectiveness of double date campaigns (for example, 11.11 and 12.12 promotions) which regularly generate 1.6 times GMV compared to normal days in 2019, down to 1.3 times in 2022. CLV improvement can be achieved through loyalty programs and enhancement of the shopping experience.[11]

**2. End-to-end business ecosystem diversification to enhance competitiveness**

Considering that consumers can easily switch between platforms, followed by a high level of competition between players, e-commerce players can also diversify their business portfolios. Other than maintaining market share, a complete ecosystem will provide various benefits for both the consumers and the sellers. For example, Tokopedia was able to strengthen its business lines through the merger of two tech giants with Gojek and made other business acquisitions. The acquisition made by Tokopedia is a combination of expanding market coverage and strengthening the ecosystem to increase its competitiveness.

**Tokopedia's Timeline of Development** → **Business Portfolio Development through Merger and Acquisition Activities**

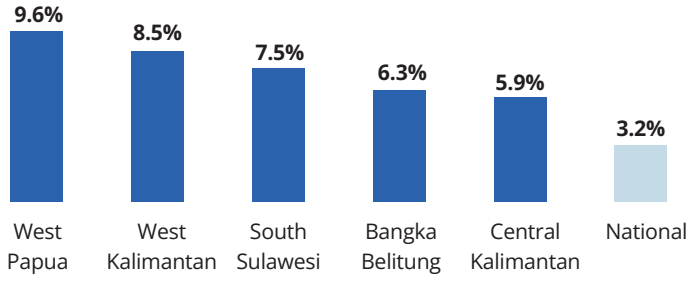
| | 2019 | 2021 | 2022 |
|---|---|---|---|
| **Development Trail** | Acquisition of the startup Bridestory, a wedding vendor marketplace platform. | Merged with Gojek, an online transportation and last-mile logistics platform, and formed GoTo.[13] | Acquisition of Swift Logistics Solutions, a logistics startup by GoTo.[14] |
| **Benefits** | Tokopedia expanded its market coverage on the consumer and supplier side with Bridestory users, most of which are young and old family segments, as well as vendors of wedding products and services.[12] | There are several synergies that occur through the merger, namely:<br>• A smoother **shopping experience** with a complete service.<br>• Development of sharper **data analysis** through data consolidation.<br>• **Complementary business** strengthening, such as GoTo Financial which provides a lot of space for value creation. | Tokopedia can provide a **complete service** to consumers and partners or merchants by **integrating** the process from sales transactions to delivery. **End-to-end** operations can improve service efficiency to deliver lower shipping costs and faster service. |

**3. Expand outside Java through a combination of online and physical stores approach**

There is business expansion potential in tier 2 and 3 areas, which are growing at a faster pace compared to Indonesia's economic center. Thus, e-commerce players need to pay more attention to these areas.

**Provinces with the Largest Growth of GRDP* Household Consumption[4]**

in %, 2021




- **West Papua** Province recorded a threefold consumption **increase** compared to the **national** growth.
- Provinces outside of Java and Sumatra show **huge market potential** as reflected by **high consumption** growth.

Source: BPS: "PDRB Provinsi di Indonesia" 2021, PwC Analysis *) GRDP = Gross Regional Domestic Product

As many as 50.2% of people in rural areas still have a low digital literacy index.[15] This needs to be a concern for business players when penetrating into tier 2 and 3 areas. As was done by Sociolla, the presence of a physical store works as a means of direct education and commercialization.

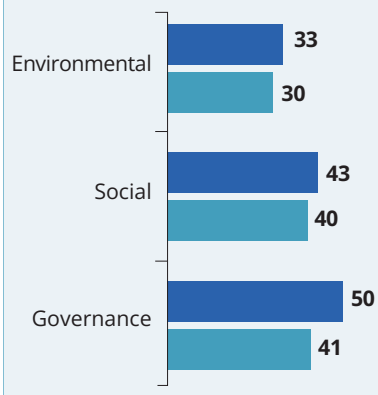
| Case | Challenges | Strategies |
|---|---|---|
| sociolla<br>A marketplace focusing on beauty and personal care product categories | Digital infrastructure is not yet optimal<br>Level of product and brand knowledge is not high enough | • Using a **physical store** as an outlet for serving consumers with education and direct offers to **initiate initial transactions.**<br>• Online platforms **shape digital consumer behavior** to facilitate subsequent transactions supported by automatic **integration of online systems and physical stores**.<br>• **Collaborate with local brands** to build consumer awareness of Indonesian products. |

### 4. ESG implementation to improve business performance

Based on various consumer studies conducted globally and nationally, there is high concern from the Indonesian society about ESG practices.

**Consumer Survey on ESG Issues**

in %, 2022 — Indonesia — Global



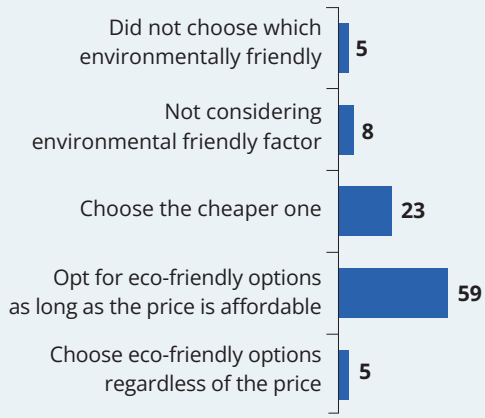

Percentage of answers "**often**" or "**always**" to questions:

**"How often does the ESG aspect of the company influence your decision to buy products/services from that company?"**

Source: PwC Global: "Global Consumer Insights" 2022, PwC Analysis

**Consumer Survey on Environmental Issues**

in %, 2022




Percentage of respondents' answers to questions:

**"Which choice reflects you when there is a choice of environmentally friendly digital applications?"**

Source: EV-DCI 2023 Consumer Survey, PwC Analysis

ESG implementation is an opportunity to increase the value proposition to consumers and to improve business efficiency. For example, SIRCLO monitors carbon emissions and reduces plastic waste through environmentally friendly packaging fulfilment materials, both of which are carried out with the help of technology. In addition, SIRCLO also promotes an inclusive economy through the Orami business line, which empowers the economic activities of housewives. This has resulted in a 34% increase in MSMEs turnover an increase in the inclusiveness for women business owners by as much as 71x compared to 2021.[16]

## E-commerce is expected to be the growth pioneer through cooperation enhancement between the government and the digital ecosystem

**Referring to the 2021-2024 Indonesia Digital Roadmap, the Government of Indonesia is targeting 50% or 30 million MSMEs to enter the digital ecosystem by 2024.[17]**

**7 Focus of Government Digitalization**

1. **Market Access**
2. **Quality and Production Monitoring**
3. **Finance and Access to Financing**
4. **Organization Management**
5. **Production Capacity**
6. **Supplier**
7. **Distribution**

> We need to expand our digital platform in certain regions or captive markets (special market). Many MSMEs cannot last long on national digital platforms because their production capacity is small, making it difficult to access national-scale digital platforms.[18]
>
> **Teten Masduki**, Minister of Cooperatives and Small and Medium Enterprises Republic of Indonesia

**Several short-term collaboration potential needs to be jointly developed by e-commerce players and the government**

- The penetration rate of social media users reached 191 million people in 2022, which supports Social Commerce players to reach their consumers easier;[19]
- Marketplace businesses with global corporate networks (such as Shopee, Lazada, etc.) have implemented "local go global" within several countries across Southeast Asia.

**National and regional market expansion with corporate networks**

- Marketplace platforms provide sales dashboard feature for seller partners to help evaluate performance with data;
- A more accurate and data-driven business evaluation helps MSMEs to measure how their products are welcomed by the market, as well as to identify the room for improvement.

**Monitoring business performance as a support for strategic planning**

**Access to business education through digital platforms**

- Several marketplace players have also provided education centers regarding business and sales through webinars, seminars or learning content as well as business consulting services;
- For example, Tokopedia built the Tokopedia Seller educational platform, which teaches various tips on selling online.

**Expansion of alternative procurement through online means**

- B2B Commerce helps MSMEs in supplying work materials while also expanding MSME market access at the same time;
- Some B2Bs have developed an omnichannel business model to further establish their presence in tier 2 and 3 areas.

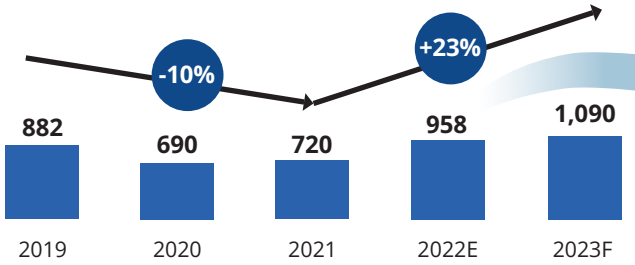
E-commerce players must keep innovating to remain relevant amidst changes in consumer behavior to achieve the expected growth. This urgency arose considering the conditions of global macroeconomic uncertainty, and e-commerce is considered an integral part of the digital economy ecosystem. Every opportunity needs to be maximized including business diversification, business expansion to high-growth areas, or adopting ESG principles, in order to increase value for the consumers. Certainly, the collaboration of all stakeholders is an important foundation of digital economic growth.

# Logistics: Strengthening digital logistics as the driving force of the economy

**HIGH LOGISTICS** costs have long been a problem in Indonesia. This issue is mainly caused by uneven transportation infrastructure and weak links in supply chains. The government has attempted to reduce these costs through infrastructure development and launching the National Logistics Ecosystem (NLE) platform. By 2023, logistics players can develop technology adoption strategies, diversify their business through collaboration or merger and acquisition activities, and expand ESG implementation. These strategies are expected to address challenges and unlock the potential of a growing market due to strengthened demand from producers and consumers.

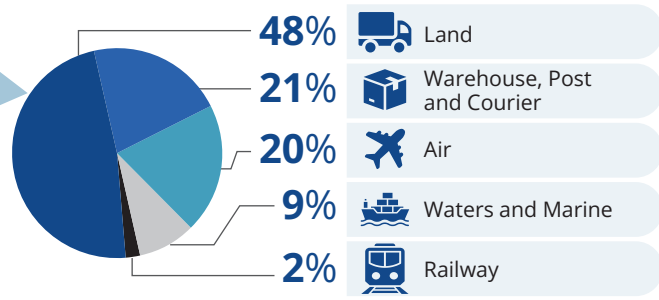
## Harmonization of growth with related industries (manufacturing, e-commerce, and international trade) has become the main driver of logistics growth

**Indonesian Logistics Sector Transaction Value**
in IDR Trillion, 2019-2023F




Source: BPS 2018-2022, Republika.co.id, PwC Analysis

**Logistic Subsector (2022)**



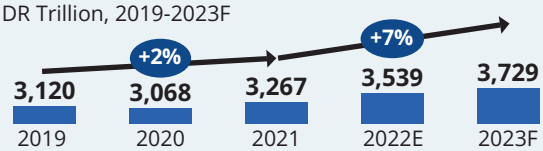

Annual Growth

In 2022, Indonesia's logistics sector surpassed pre-pandemic transaction values due to the recovery of Indonesia's manufacturing and foreign trade sectors. During the pandemic, the growth of the e-commerce industry helped to keep the logistics sector strong while the manufacturing and international trade industries recovered at a slower pace. It is projected that the transaction value of Indonesia's logistics sector will grow to reach IDR 1,090 trillion in 2023 with a growth rate of ~13.8% YoY, higher than the global logistics growth projection of 4.6%.[1,2] This also comes from the growth projection in 2023 of related industries, such as e-commerce, manufacturing, and international trade.

### Indonesia's Logistics Industry Growth

**Increase in Manufacturing Production**

**Indonesia Manufacturing Gross Domestic Production**
in IDR Trillion, 2019-2023F



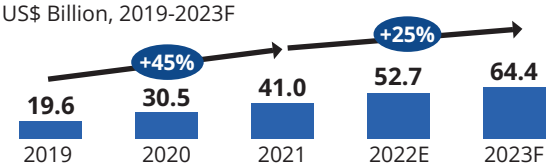

Source: BPS 2018-2022

Annual Growth

The manufacturing industry requires logistics services to deliver its processed goods to distributors and consumers. The growth of the logistic industry goes hand in hand with the projected increase in production which is expected to grow at a rate of 5.36% YoY in 2023.[3]

**E-commerce Transaction Growth**

**Gross Merchandise Value E-Commerce Indonesia**
in US$ Billion, 2019-2023F

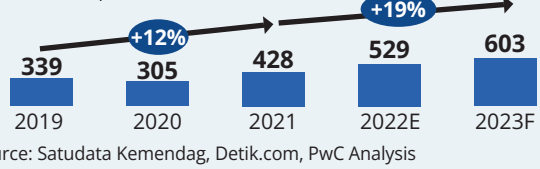



Source: Euromonitor, PwC Analysis

E-commerce relies on logistics services to deliver products that are distributed to consumers. The transaction value of e-commerce is projected to grow up to 22.3% YoY in 2023, supported by an increase in the number of users and the average transaction value.[4]

**Strengthened International Trade**

**Indonesia's Export and Import Value**
in US$ Billion, 2019-2023F

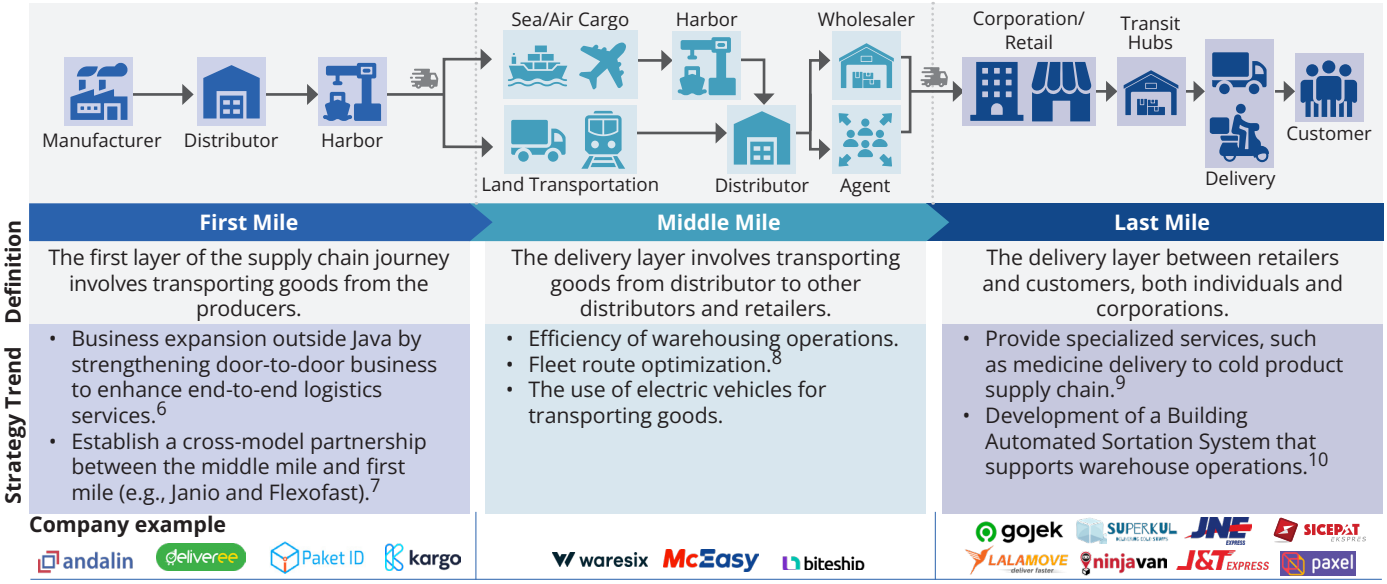



Source: Satudata Kemendag, Detik.com, PwC Analysis

Export and import activities require logistics services as a means of transportation and warehousing between countries. In 2023, exports and imports are expected to increase by 13% and 15% respectively.[5]

**Logistics growth can be analysed through the trends that occur along the supply chain in three main areas of service focus**

**The Logistics Layer in Indonesia's Supply Chain**




## Relatively high logistics costs in relation to economic activities drive Indonesia to implement logistic sector efficiency

The World Bank issued a Logistics Performance Index (LPI) on a scale of 1-5 as a comparison of logistics between countries which considers the following: 1) customs efficiency, 2) quality of infrastructure, 3) ease of international shipping, 4) competence of human resources, 5) tracking capabilities, and 6) punctuality. A score of 5 indicates the best value relative to best practices in global logistics.

According to the latest LPI 2018, Indonesia's performance is on par with the average index in the Asia Pacific region. The biggest discrepancy occurs in the customs aspect, especially in import activities.[11] This serves as a protection measure for domestic businesses.

| From maximum index 5 | Indonesia | Asia Pacific | Gap |
|---|---|---|---|
| **LPI Score** | 3.2 | 3.2 | - |
| **Customs** | **2.7** | **3.0** | **-0.3** |
| **Infrastructure** | **2.9** | **3.1** | **-0.2** |
| **International Delivery** | 3.2 | 3.0 | 0.2 |
| **Human Resources Competency** | 3.1 | 3.1 | -0.0 |
| **Tracking** | 3.3 | 3.2 | 0.1 |
| **Punctuality** | 3.7 | 3.5 | 0.2 |

Source: LPI World Bank

Another aspect hindering the improvement of Indonesia's LPI is the low quality of infrastructure. This caused the high national logistics cost, which reached 21.3% of total GDP in 2020.[12] This ratio is still higher compared to Malaysia (13%), Thailand (15%), and Singapore (8%).[13]

As an archipelagic nation, Indonesia faces greater challenges compared to non-archipelagic countries. A study by the International Monetary Fund (IMF) examining trends from the past 30 years shows that logistics costs can affect inflation, with the greatest impact felt by archipelagic nations.[14] In addition to the slow development in infrastructure, the numerous unconnected layers of supply chain delivery also contributed to the high logistics costs. Therefore, the government has made reducing logistics costs one of its strategic priorities going forward.

> So, our target (logistics costs to total GDP) is to reach 17 percent by 2024. I said that I want it to be 15 percent of GDP, therefore, I challenge all to achieve this target. [15]
>
> **Luhut Binsar Pandjaitan**, Coordinating Minister for Maritime Affairs and Investment Republic of Indonesia

In the EV-DCI 2023 component, the contribution of the Warehousing, Transportation Support, Post and Courier Sectors to the GRDP indicator shows a decrease in median value by 0.48.[16] This is an initial indication that there is an ongoing trend of decreasing logistics cost from the total GDP.

## Infrastructure
Slowdown in infrastructure development due to limited government funds

Indonesia's logistic challenges mainly come from funding limitations for infrastructure development. Some main infrastructure problems are the lack of access roads and poor road conditions in some areas. Therefore, the Government of Indonesia has focused on infrastructure development, including through Public-Private Partnership (PPP) schemes with private entities. However, the funding efforts from the State Revenue and Expenditure Budget (*Anggaran Pendapatan dan Belanja Negara*/APBN) have been reduced due to the government funds diversion for fuel subsidies, resulting in a slowdown in infrastructure development.[17]

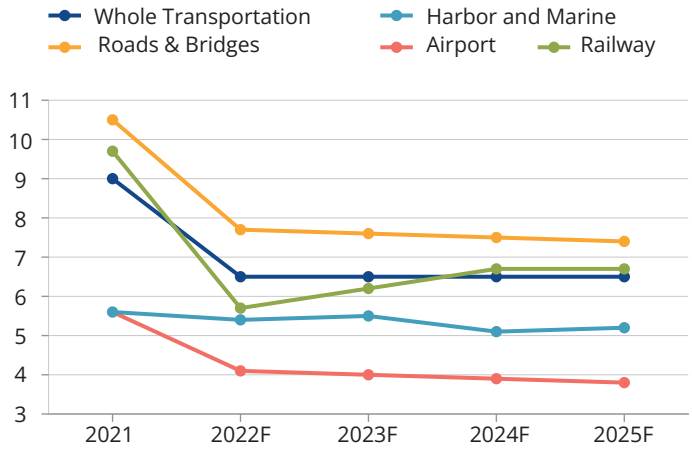
Some examples of the slowdown in infrastructure development in Indonesia are as follows:

The Trans Java Highway strategic project has experienced delays and will not be fully completed by 2024 due to the limited government funding capacity for land acquisition.[18]

In the strategic Trans Sumatra Toll Road project, challenges occurred on the Jambi-Rengat Toll Road due to demands for changes in the alignment of cultural heritage sites and land acquisition issues in the West Sumatra area.[19,20]

The integrated container port project worth US$ 1.2 billion in Gresik, which was originally planned to start in Q3 2021, has been delayed by one year and will now begin in May 2022 due to the pandemic and unresolved permit issues.[21]

**Transportation Infrastructure Growth Rate**
in %, 2021-2025F




Source: FitchSolutions "Infrastructure Report Q1 2023"

In 2023, the government has increased the infrastructure budget to IDR 392 trillion which is expected to be used to accelerate road and other transportation infrastructure development projects.[22]

## Supply Chain Connectivity
Inefficiency in the logistics sector as a result of unconnected national supply chain information

A complex supply chain system has the potential to incur additional logistics costs. The complexity of information and data processing coupled with rigorous bureaucracy caused inefficiency that became another challenge in reducing Indonesia's logistic costs.

| | Problems and Consequences[23] | Case Example |
|---|---|---|
| **Low Data Transparency** | Limited data transparency between stakeholders causes the following:<br>• Unoptimized supply chain processes due to the lack of information on transport schedules for each region;<br>• Less effective government policies in ensuring data availability. | A logistics company offered compensation **10x** Service fee in case of loss[24] |
| **Lack of Stakeholder Collaboration** | Collaboration between stakeholders (such as central government, spatial management, private business players, and financial institutions) has not been optimal, which leads to the following:<br>• Backhaul problem (unladen fleet on the return journey);<br>• Difficulty conducting collaboration between players;<br>• Stockpiling of goods in the warehouse. | **70-80%** Trucks experience backhaul problem[25] |
| **Reporting Inefficiencies** | Manual reporting to many layers of authorities causes:<br>• Additional administrative costs;<br>• Data duplication;<br>• Inefficiency in loading and unloading of goods. | Customs inspection takes **7 days** Meanwhile, the average process in the Asia Pacific region is 2.6 days[11] |

The government has identified the connectivity problem and is in the stage of implementing a solution to integrate the logistics system through the National Logistics Ecosystem (NLE).

## Digital transformation in the logistics industry through the NLE needs to be consistently considered to ensure a value-added collaboration between stakeholders

The NLE is an initiative of the Ministry of Finance to build a digitalized logistics ecosystem to increase collaboration between stakeholders. NLE implementation aims to improve logistics sector operations and open up space for private investment to increase efficiency.

### Purposes and Ranges of NLE Services[26]

**A digital ecosystem used for harmonizing the international flow of goods and documents through data exchange and simplification of processes and information systems in the entire logistics process.**

Aggregator Platforms | Collaboration API

**Government**
Integrated inspection via single submission (SSm), Port Services, and Licensing Services

**Private**
Transportation, Shipping, Container Management, Warehousing

**Collaboration Between Stakeholders**

**Spatial Management**
Arrangement of Main Ports, Placement of Container Depots, Establishment of Island Consolidation Center

**Payment**
Through collaboration with fintech and banking players

### Collaboration made through NLE until January 2023

**40** cooperating entities

- SOE
- Private Logistics
- Startups
- Banking
- Association
- Related Institutions

| | | |
|---|---|---|
| Delivery Order | 8 Providers | 21,040 Transactions |
| Trucking | 8 Providers | 18,155 Transactions |
| SP2* | 2 Providers | 7,373,563 Transactions |
| Payment | 2 Providers | 7 Transactions |

*) Letter of Delivery of Containers (*Surat Penyerahan Peti Kemas*/SP2)

### Examples of strategies that can be carried out through collaboration:

**1 Coordination with related Ministries[27]**

The NLE team coordinates with the Ministry of Trade:
- Integrating the Ministry of Trade's warehousing data with NLE;
- Utilizing NLE to increase the efficiency of the Sea Highway program.

**2 Implementation of NLE and Tanjung Perak Customs[26]**

SSm implementation and collaborative inspection:
- Reducing duplication of business processes through data integration in the Indonesia National Single Window (INSW).

**3 Simplification of the trucking business process[28]**

Digitalization through NLE to increase truck utilization in Indonesia:
- Encouraging the digitalization of trucking companies which is projected to increase utilization by 50%.

**4 Bridging CEISA with supply[27]**

The logistics community within CEISA (customs application) is linked with supply through the NLE:
- Facilitating importers/exporters through API collaboration e.g., example looking for trucking services.

## Key Lessons Learned from the Implementation of the National Logistics Platform LOGINK by the Republic of China

**The People's Republic of China previously developed a system similar to NLE in 2010. The benefits of collaboration on this platform are felt by business players, for example the logistics company CAINIAO.**

LOGINK
国家交通运输物流公共信息平台
NATIONAL PUBLIC INFORMATION PLATFORM FOR TRANSPORTATION&LOGISTICS

China's national information integration platform connecting Chinese, East Asia, Regional, and Global supply chain stakeholders (governments, associations, as well as trade and logistics business players)[29]

**LOGINK'S Services**

| | |
|---|---|
| **G2B** Government to Business | Monitor cargo and ship status, company registration and due diligence, transit conditions, and general information |
| **B2G** Business to Government | Customs inspections, item detail information, electronic billing, and transportation asset geo-location data |
| **B2B** Business to Business | Electronic order, price inquiries, financing and insurance, billing and payments, and document exchange |

**Example of Utilization of LOGINK**

CAINIAO **Alibaba's subsidiary on logistics**

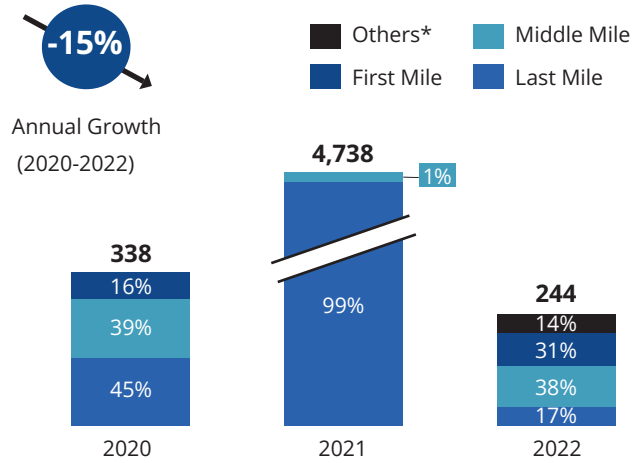
1. Enable direct Europe – China distribution channels;
2. Cooperate to build a global logistics intelligence network;
3. Manage and monitor global logistics.[30]

**In addition to infrastructure issues and supply chain connectivity, the logistics sector faced funding challenges in 2022, which reduced the ability to invest in capital**

The funds received by digital logistics players are generally utilized to increase productive assets, such as fleets and warehousing facilities. In addition, the funds are also used as capital to improve business processes, increase HR and internal technology capabilities, and expand the business.

However, there was a decrease in funding throughout 2022. Although faced with unstable macroeconomic conditions, the prospect of the digital logistics sector still shows promising growth in 2023. Positive outlook arises from property developers in Indonesia who are expanding their business into the logistics and data center sectors, encouraged by steady growth in 2020-2022.[31] One of them is property issuer PT Puradelta Lestari Tbk. that is aggressively expanding its business into the data center sector at the Greenland International Industries Center (GIIC).[32]

**Funding for Indonesia's Digital Logistics**
in US$ Million, 2020-2022




*) Others include electric vehicles, Enabler, SaaS, and so on.

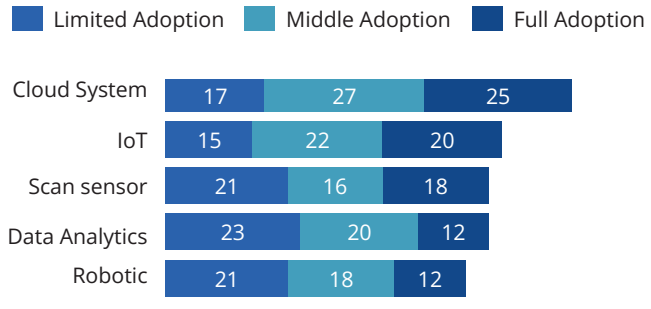
Source: Crunchbase

**The future challenges of the digital logistics sector require a holistic, profit-oriented, and sustainable approach**

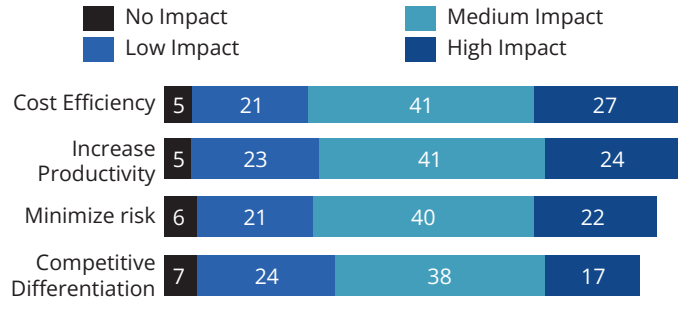
**1. Implementation of the latest technology to strengthen business resilience**

The application of technology is crucial in logistics because it can help increase cost efficiency and productivity. That way, the company can have a competitive advantage over its competitors.

**Opinions of Global Logistics Business Leaders on Technology Adoption Plans**
in %, 2022




**Opinions of Global Logistics Business Leaders regarding Positive Results of Technology Investment on Business Performance**
in %, 2022




Source: PwC: "Technology in Supply Chains: Investments yield mixed results". 2022

The global trend of supply chain business players is oriented towards the utilization of the latest technology. This increases the urgency to invest in the most recent technology to escalate the competitiveness of companies.

**Global Logistics Business Model Trends 2023**

**Locus**

**End-to-end Last Mile delivery solution specialist company through technology development[33]**

- **Delivery Management:** Provides flexibility for consumers to pick and adjust the time.
- **Last Mile Delivery:** Route optimization model, total capacity, and order quantity, with a comprehensive configuration model.
- **Carrier Management:** Delivery management on an extensive network with a rule-based system engine.

**FREIGHTOS** Smooth shipping

**Global cargo comparison, ordering, and management platform[34]**

- **Freight Booking:** Provides access to the freight marketplace, equipped with a reliable payment infrastructure.
- **Manage and Track:** Assists customers in checking the loading status of all orders in real time.

In addition, digital logistics and conventional players can apply several technologies.[35]

| | Benefit | Usage Example |
|---|---|---|
| **Cloud Based System** | • Reduce investment in IT infrastructure and internal software maintenance costs;<br>• Provide access to real-time data;<br>• Offer strict data security. | Transportation Management System<br>Fleet Management<br>Route Planning<br>Cargo Tracking |
| **Real-time Visibility** | • Manage the transportation network in a proactive and controlled manner;<br>• Save processing time, which reduces human resource and support needs. | Transportation Management System<br>Real-time Visibility Platform<br>Track and Trace Solutions |
| **Advanced Analytics** | • Increase efficiency with more accurate management;<br>• Reduce errors and connectivity issues to the requested data. | Artificial Intelligence<br>Network Modelling<br>Demand Forecasting |

**2. Develop competitiveness through business diversification and extensification**

The entry of new players enlivened Indonesia's digital logistics competitive landscape. The new entrants, which come from outside and within the country, as well as related industries (such as e-commerce) that are building their fleet capabilities, have also contributed to the current increase in competition.

**1 Challenge comes from new entrants with specific value offerings**

- **Superkul,** a Last Mile startup focused on cold product logistics, will expand its services in the Middle Mile after receiving initial funding.[36]
- **Biteship**, a startup providing logistics service integration solutions by focusing on developing technology from property developers for MSMEs and e-commerce, plans to increase platform adoption after receiving initial funding.[37]

**2 Vertical expansion of e-commerce to develop the internal fleet capability**

- **Tokopedia** acquired Swift Logistics to strengthen its logistics services, such as improved accuracy for parcel or inventory records, and enhanced delivery service (e.g., three-day service throughout Indonesia, cash-on-delivery coverage, and same-day delivery).[38]

To be able to compete well, it is necessary to offer services needed by consumers is necessary to strengthen competitiveness, such as lower prices or higher quality. Vertical or horizontal integration through acquisitions or mergers is a faster alternative to organic service development.

In addition, integration has other benefits compared to collaboration models between companies, such as increasing control over the target company, getting more comprehensive innovation flexibility with the target company, and giving the target company exclusivity from competitors. Acquisitions and mergers can strengthen competitiveness in urgent conditions, for example, through technology integration and market penetration in a shorter time.

**Strengthening services through synergy between assets and technology**

Vertical Integration

waresix **Acquisition** trukita

- Waresix, a logistics service aggregator startup with a platform and technology without heavy assets, acquired Trukita, a First Mile player with a large fleet of trucks;
- The benefit is that Waresix enriches services as well as penetrates the First Mile sector through operational assets of a truck fleet that is strengthened by Waresix's technology.[39]

**Expanding markets through integration of asset-intensive logistics across different geographies**

Horizontal Integration

HAULIO **Acquisition** logol Indonesia

- The First Mile and Middle Mile logistics startup Indonesia, Logol, was acquired by the First Mile logistics startup from Singapore, Haulio, as a business expansion effort;
- After owning 10,000 First Mile fleets, Haulio added 2,000 First Mile fleets thanks to acquisitions;
- Haulio can also operate in the Indonesian logistics market and expand its market coverage.[40]

### 3. Implement ESG, especially on environmental sustainability aspects

**Action Effectiveness on Business Priorities according to Global Investors**
in %, 2022


Source: PwC Global Investor Survey 2022

**The reduction of emissions and negative environmental impacts are two priority aspects that have not been implemented effectively**

- Environmental sustainability is one of the concerns of Indonesian society based on the EV-DCI 2023 Consumer Survey, which shows that 33% of Indonesian consumers consider environmentally friendly aspects in product purchases.[41]
- 69% of global investors want companies to provide information on the relevance of sustainability aspects of their business models.[42]

Battery Electric Vehicles (BEV) have started to be adopted by Indonesian logistics industry players. Some examples of adoption are us follow:

- Grab is preparing a fleet of 8,500 BEV motorbikes spread across 8 provinces, as a form of collaboration between Grab and electric vehicle manufacturing partners.
- This is part of Grab's green campaign, which targets to reduce its carbon footprint by 41% by 2030.[43]

- Change gasoline-based land fleets to electricity to increase business productivity and efficiency with reduced operational costs.
- Currently has 10 units of electric cars and 200 units of electric motorbikes, which are targeted to increase to 100 units of cars in 2023.[44]

- Semolis is a startup owned by a local electric motorcycle manufacturer, Volta, which is engaged in providing BEV motorbike fleets through lease and rent-ownership models.
- Semolis provides battery replacement stations that are widely available in Jakarta.
- Consumers can rent an electric motorbike at a rate of IDR 40,000 – 50,000 per day and have the option of adding a rental fee with a commission for 750 days to obtain ownership rights.[45]

In addition to environmental aspects, social aspects and corporate governance remain a challenge for ESG implementation in the logistics sector. Below are some examples of ESG implementation in these two aspects.

**Social: Increase the inclusiveness of women workers from a disadvantaged backgrounds.[46]**

- A 1-year employment contract program focusing on training young talents from rural areas in three countries.
- Prioritizing female talent to drive electric vehicles.

**produce**

- Increasing the competitiveness of more than 1,700 young talents from rural areas in Peru, Argentina and Chile.
- 32 female staff become electric fleet drivers and are targeted to reach 140 people by the end of 2022.

**Governance: Increase the adoption of the code of conduct and security for data management.[47]**

- Implementing a code of conduct for all levels of employees and goods supplier partners.
- Maintaining consumer and partner data carefully.

**produce**

- 96% of goods supply partners are committed to the code of conduct.
- 67% of employees in Q1 2023 attended training on consumer data governance and the use of AI.

Amid the existing challenges, the logistics sector can continue to grow with the support of related industries and the emergence of potential collaboration at the national level through to the NLE. Players can take advantage of the latest technology adoption opportunities, seek business diversification, and take advantage of funding interests by implementing ESG. Making good use of opportunities will strengthen the pursuit to achieve the desired growth.

# Fintech: Towards a Resilient Digital Finance

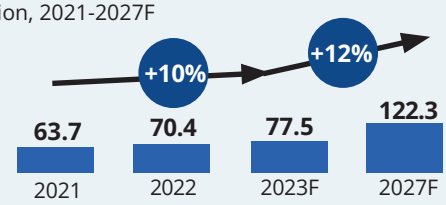
**INDONESIA'S** fintech industry is on track to grow rapidly, leveraging on the enormous number of the productive-age population that earned an income. However, financial literacy remains one of the biggest challenges in fintech adoption. The government has collaborated with various parties, including the private sector, to implement various breakthroughs in pursuit of higher financial literacy. Future development opportunities lie in the open flow of information between fintech and financial institutions in Indonesia, which allows cross-platform services that could increase the number of users and transactions.

## Fintech growth is supported by increasing digital transactions and collaboration

One of fintech's growth drivers is the surge in the use of e-commerce during and after the pandemic. Although COVID-19 has been subdued, online shopping activities, and digital payments have become daily habits. Therefore, fintech is predicted to maintain its positive growth, taking into account the potential of higher user penetration and digital transactions increase in the future.

### Fintech Digital Payment

**Transaction Value of Fintech Digital Payment**
in US$ Billion, 2021-2027F



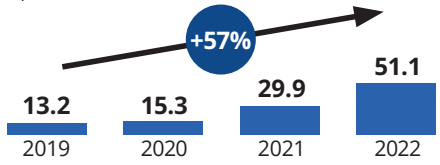

Source: Statista

**Digital Payment is driven by an increase in e-wallet users and QRIS adoption**

- The number of e-wallet users is predicted to increase by 116.8 million during 2021-2026;[1]
- The growth is accelerated by QRIS adoption, with the total transaction quantity reaching 282 million[2] and could now be used for cross-border transactions in Thailand.[3]

### Fintech Lending

**Outstanding Loans by Fintech Lending**
in IDR Trillion, 2019-2022



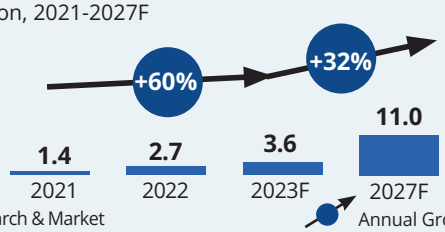

Source: OJK

**Fintech Lending collaborates with the banking industry**

- The growth in Fintech Lending's outstanding loans in 2022 was supported by national banks as the main fund providers with a contribution of 41%;[4]
- This is one of the most beneficial collaborations between banks and Fintech Lendings to accommodate BI regulations on banks that require at the very least 20% of their loan to be disbursed to MSMEs.[5]

### Buy Now Pay Later (BNPL)

**Total Amount of BNPL Loans**
in US$ Billion, 2021-2027F



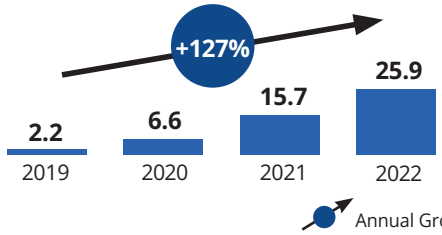

Source: Research & Market

**BNPL as an alternative to credit card**

- Financing for e-commerce purchases is the main target of BNPL, as 90% of consumers used BNPL to shop online in 2022;[6]
- The low penetration rate of credit cards, only 6% in 2021, supports BNPL adoption as an alternative product with a faster and easier approval process.[7]

### Fintech Investment

**Fintech Investment Asset Under Management Amount**
In IDR Trillion, 2019-2022




Source: KSEI

**Fintech Investment attracts the interests of young investors and HNWI**

- Fintech Investment growth is boosted by the number of capital market investors, which has increased 4 times from 2019 to 2022. Investors under 30 years old are dominating (58.7% of the total investors);[8]
- Moreover, an increase in HNWI (individuals having a total wealth value of at least US$1 million) investors is predicted to grow by 63% during 2021-2026.[9]

**Government policies continue to drive fintech adoption by boosting the existing momentum**

Digital ecosystem development, financial product adoption, and the growth of the productive-age population that earns an income are expected to drive fintech's transaction value in Indonesia. On the other hand, BI and OJK as the financial regulators in Indonesia, have provided a framework to support fintech development.

| Digital ecosystem development (B2B & B2C) | Significant increase in financial inclusion | Increase in productive population with fixed income |
|---|---|---|
| E-commerce transaction volume grew 40% YoY in H1/2022.[10] Furthermore, 53% of e-commerce consumers used e-wallets most frequently compared to other payment methods.[6] | Financial inclusion increased by 8.9% from 2019 to 2022 and has reached 85.1%[11] due to various reasons, including the government's program to implement digital payments for MSMEs. | In 2022, the growth of the working population by 3% YoY[12] coupled with a 14% rise in average income YoY [13] caused a total increase in public consumption. As a result, the transaction value of digital financial products has grown accordingly. |

**Regulators' Strategies**

**BI: Blueprint Payment System (2025)[14]**
- Serving MSMEs and the unbanked population with a payment system as the foundation of growth and stability;
- This is accomplished through banking digitalization, digital financial inclusion, and digital transactions.

**OJK: The Indonesian Financial Services Sector Master Plan (2021-2025)[15]**

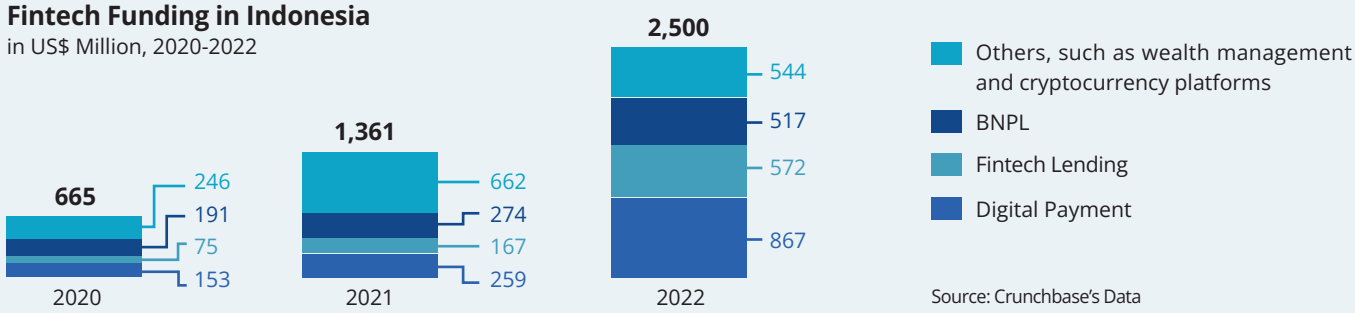
Increasing the resilience and competitiveness of the financial services sector through:
- Collaboration between stakeholders;
- Digital transformation acceleration;
- Ecosystem development.

**Funding for the fintech sector increased sharply, dominated by the Digital Payment segment**

Funding to the fintech sector increased by 83% between 2021and 2022.[16] This shows investors' optimism about the opportunities in the fintech sector.

**Fintech Funding in Indonesia**

in US$ Million, 2020-2022



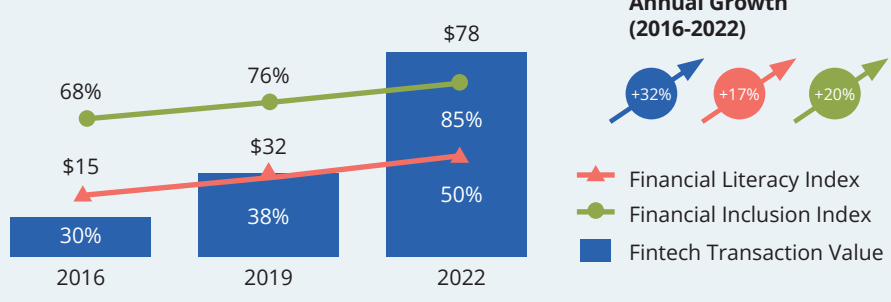

Source: Crunchbase's Data

## Limited financial literacy presents a challenge to optimize the potential of fintech's growth

Adequate knowledge (literacy) and sufficient access (inclusion) to financial products will encourage people to use financial products. This is proven by a high correlations between fintech transaction value and financial literacy and inclusion.

**Fintech Transaction Value, Financial Literacy Index and Financial Inclusion Index**

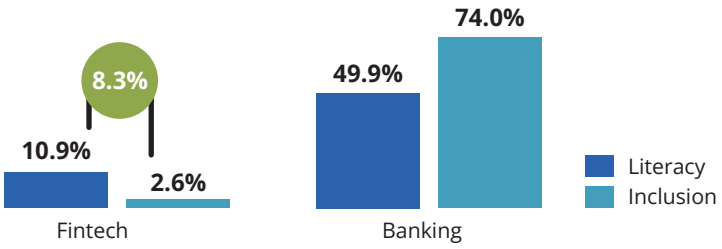
Fintech Transaction Value in US$ Billion and Index in %, 2016-2022




Source: Statista - Fintech Indonesia, OJK - SNLIK 2022

Financial literacy and inclusion in the fintech sector are the lowest compared to other financial services sectors such as Banking. This is due to the bank adoption that has been ongoing for decades, while fintech has only started to develop in the last decade.

### Financial Literacy and Inclusion by Financial Services Sectors, 2022




Source: OJK: SNLIK 2022

8%

- The gap between financial literacy and inclusion in the fintech sector is 8%. This shows that there are people who **have an understanding of fintech services but do not have access to those services.**
- This means that there are opportunities that can be captured by fintech players through expanding the financial access to these people.

Apart from that, there is a regional disparity in the level of financial literacy across provinces, in particular, the three provinces with the lowest financial literacy scores below 35%. However, these three provinces' financial inclusion is considerably high, scoring above 80%. The inclusion index being twice as high as the literacy index indicates that the people in these provinces have access to financial products but without adequate understanding of the product. Thus, putting them at risk of using illegal Fintech Lending.

### Provinces with the Lowest Financial Literacy, 2022

| | Literacy 2022* | Change 2019-2022 | Inclusion 2022* | Change 2019-2022 |
|---|---|---|---|---|
| **Bengkulu** | 30.4% | -3.7% ↓ | 88.1% | 2.4% ↑ |
| **Southeast Sulawesi** | 31.9% | -4.8% ↓ | 84.4% | 9.4% ↑ |
| **Central Kalimantan** | 32.7% | -4.3% ↓ | 81.3% | 5.9% ↑ |
| **National Statistics** | 49.7% | 11.5% ↑ | 85.1% | 8.9% ↑ |

Source: OJK: SNLIK 2022, SNLIK 2019 | *% Province population

Three provinces with the lowest financial literacy experienced a decrease in financial literacy scores during 2019-2022;

However, the inclusion of the three provinces improved in line with the increased e-wallet adoption median index by 29.7 points in EV-DCI 2023;

This shows a gap between access and financial knowledge, which requires fintech players to provide financial education during the marketing process.

### The Government has implemented the National Strategy on Indonesian Financial Literacy (SNLKI) 2021-2025 to achieve literacy and inclusion targets

**90%** **Financial inclusion**

**Target in 2024**[17]

The **2021-2025** SNLKI consists of three pillars, (1) financial competence, (2) prudent financial attitude and action, and (3) financial access. Several programs under SNLKI include the development of Massive Open Online Courses (MOOC) and the provision of a financial calculator to assess financial health and develop financial plans through the OJK website.

"Financial literacy on fintech and P2P lending are required to boost public literacy, especially regarding the charged interest rate (on financial products), so that people have a better understanding and could prevent sudden default. One of the digitalization measures is through Pre-Employment Card (Kartu Prakerja) with 5 million recipients in 1 year. Previously, they did not have bank accounts. When given a choice of incentive disbursement methods, almost 95% of the recipients opted for e-wallets over conventional banks."[18]

**Airlangga Hartarto**, Coordinating Minister for Economic Affairs Republic of Indonesia

Collaboration between the government through OJK and fintech players are essential for the success of the program. There are several implementations carried out by fintech players, both the companies and the associations.

| | |
|---|---|
| **4.432**<br>Illegal fintech lending was shut down during 2018-2022[19] | The Indonesian Fintech Association (AFTECH) and the Indonesian Joint Funding Fintech Association (AFPI) together with the government launched cekfintech.id; |
| | Users could use this website to check fintech's legality status and credibility of bank account numbers to minimize fraud.[20] |
| **~60 mn**<br>Unlicensed MSMEs as of July 2022[21] | The Ministry of Investment cooperated with DANA to accept MSME Business Identification Numbers (NIB) registration; |
| | Business players registered through DANA gain access to financial products, such as QRIS.[22] |

**Fintech could explore collaboration methods to socialize fintech products to the people in the bottom layer of society as a key to boost adoption**

Apart from several ongoing collaborations, there are numerous opportunities for fintech to collaborate with the government in programs to improve financial literacy.

| Government to Person Program (G2P) | Community Service Program (KKN) |
|---|---|
| Expand the number of fintech users by becoming the government's partner in distributing social aid. | Organize KKN activities to motivate university students as changemakers in improving financial literacy in communities around the program's area. |

## Fintech Lending and Securities Crowdfunding promote an equitable economy by empowering MSMEs and startup companies

Besides promoting inclusion, by expanding services to tier 2 and 3 regions, fintech players also improve financial literacy. The business development outside of tier 1 regions is also in line with ESG principles of creating a more equitable economy.

- Initially, Hijra was known as ALAMI, a sharia P2P Lending;
- Has a business model aiming to improve financial inclusion and literacy, one of which is through training and funding programs for Islamic startups and MSMEs.

| MSMEs Funding | Startup Training | Health Access |
|---|---|---|
| 1,000+ MSMEs which are generally unable to acquire loans from traditional banks.[23] | Helping 4,000+ Islamic startups and MSMEs through mentorship, courses, workshops, and funding.[24] | Together with Impact Credit Solutions, financing health service providers through US$ 20 million credit facility.[23] |

**Hijra's growth during 2019-2021**[25]

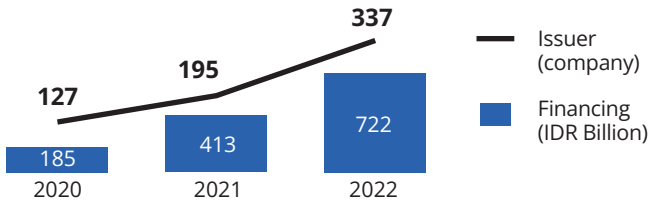
**343x**
Growth in the number of lenders

**236x**
Growth in the total value of financing

**78x**
Growth in the number of funded projects

Aside from Fintech Lending, MSMEs and startups can obtain financing through Securities Crowdfunding which already had a fourfold increase in total financing value during 2020-2022.

**Amount of Securities Crowdfunding Issuer and Financing**




Source: OJK

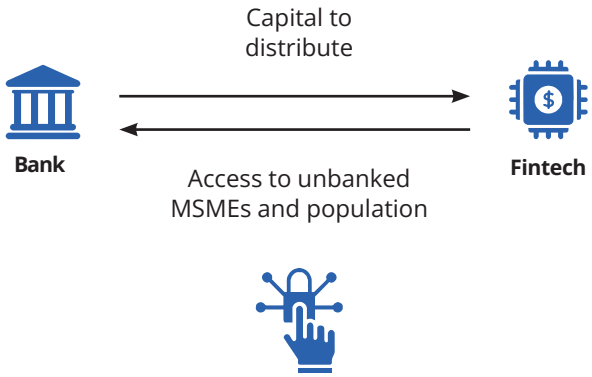
- Securities Crowdfunding (SCF) is one of the alternatives to fill the MSMEs financing gap of IDR 1,500 trillion;[26]
- In contrast to Fintech Lending, which yields interest, SCF investors will obtain stocks, bonds, or Islamic bonds from MSMEs and startups they invest in;
- In 2022, there were 14 SCF platform providers with key players such as the following:

BIZHARE INVESTING BUSINESS TOGETHER · FundEx · SHAFIQ · EKUID

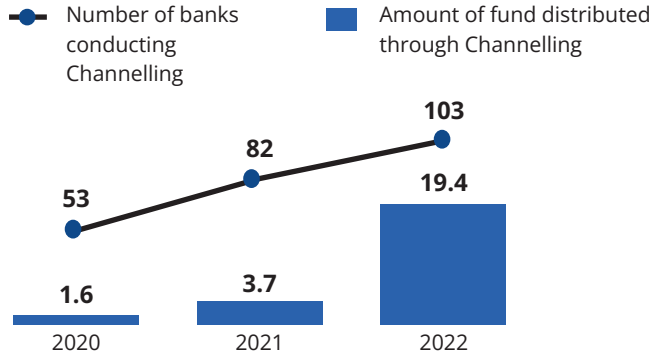
## Collaborations between financial institutions through fund distribution and information integration will be the keys to future growths

By channelling the savings funds they accumulated from the public to Fintech Lending companies, banks could increase the financial services penetration rate towards the unbanked consumers. This development is a mutually-beneficial collaboration since banks can leverage this channelling approach to conform with BI's regulation of disbursing at least 20% of their to loan MSMEs. The growth in the number of banks conducting channelling is projected to increase and accelerate the penetration of financing access to all layers of society.

**Banking-Fintech Channelling Scheme**




**Loan Channelling through Fintech Lending**
in IDR Trillion and unit, 2020-2022

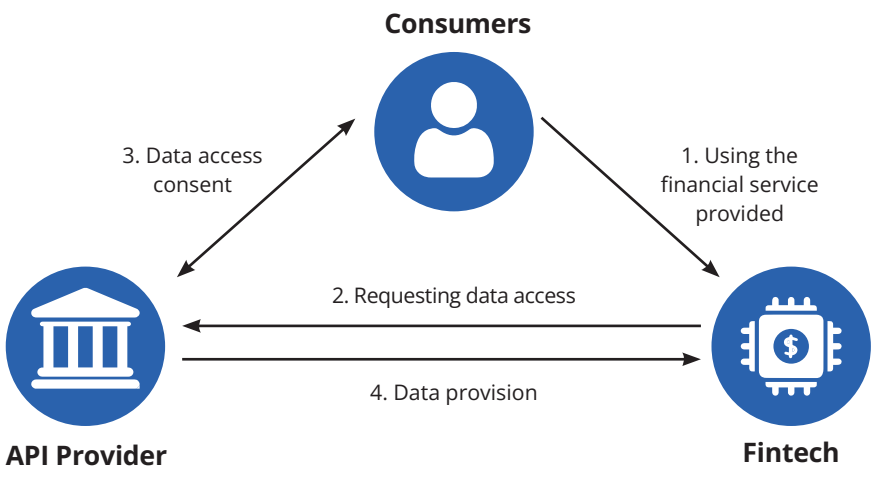



Source: Statistik Fintech Lending OJK

### Open Banking facilitates and improves consumers' convenience in digital transaction

Open Banking is a form of cooperation where banks can grant data access and financial information to other institutions after obtaining customers' consent. In this case, access is granted to fintech players through the Open Application Programming Interface (API) technology, an interface that enables banks and fintech to perform system integration. This flow of information facilitates bank customers in using fintech services. Besides fintech, other digital sectors, such as e-commerce, utilize Open Banking to allow customers to complete transactions instantly and conveniently from the e-commerce application. One example of open banking implementation with e-commerce is the CIMB Niaga OCTO Cash auto debit payment method that integrates with Tokopedia accounts.[27]

**Open Banking Collaboration Scheme**



| Banks as API Providers | Fintech |
|---|---|
| • Large customer base<br>• Expansive distribution network<br>• Stable source of fund<br>• Customer trust | • Innovative solutions<br>• Scalability with relatively lower operational costs<br>• Technology capacity<br>• Integration capability<br>• Adaptation speed<br>• Penetration agility |

## Examples of Open Banking Collaborations

| gopay X BANK BRI | DANA X BNI | bibit X Jago |
|---|---|---|
| The GoPay e-wallet integrates with Bank BRI's BRIAPI system, which would allows direct e-wallet top-ups with the BRI auto debit feature.[28] | Dana issued a product innovation feature called "Simpan Kartu" through collaboration with nine banks to encourage contactless transactions.[29] | Customers can open a Bank Jago account through the Bibit application and buy mutual funds seamlessly with the Jago account auto debit feature.[30] |

**Open Banking Implementation**

**>200** BI issued the National Open Payment API Standard (SNAP), which >200 companies currently use.[31]

**265 T** Bank BRI's sales volume through the Open Banking scheme reached IDR 265 trillion (+325% YoY).[32]

**Open Finance offers information exchange opportunities to expand customer access to various financial services**

Unlike Open Banking, where information flow only moves between banks and other institutions, the Open Finance scheme enables information to flow between financial institutions. Open Finance allows collaboration with more diverse players and different forms of partnerships. If implemented, the market potential of Open Finance could be up to IDR 30 trillion.[33]

### Differences Between Open Banking dan Open Finance

| Platform | Data Access | API Provider | Data Controller |
|---|---|---|---|
| **Open Banking** | Banking and payment data | Limited to banks | Banks |
| **Open Finance** | Mortgage, insurance, pension fund, loan, and investment data | Financial institutions | Consumers[34] |

| Open Finance Benefits | Open Finance Challenges |
|---|---|
| • Easy and instant registration of consumer accounts;<br>• Better understanding of consumer profiles;<br>• Increased financial inclusion;<br>• Personalized products and services;<br>• More accurate credit risk assessment. | • There are no regulations governing Open Finance;<br>• Infrastructure readiness in API integration;<br>• Consumer data protection and consent. |

### Collaboration Opportunities

1. Fintech Lending can determine **credit scores** more efficiently by leveraging borrowers' transaction data in Digital Payment Fintech.
2. Fintech can instantly verify user data by using **eKYC** (Electronic Know Your Customer).
3. Fintech can receive **automatic payments** from other financial accounts, such as e-wallet or BNPL.
4. Fintech can create **consumer profiles** seamlessly through the data that has been integrated into other accounts.

The Open Finance platform opens up opportunities for new business model development. One example is Tumelo, an English fintech startup that encourages the implementation of ESG through collaboration with other financial institutions.

**Case Study: Tumelo[35]**

- In conventional practices, pooled fund investment managers generally vote at portfolio companies' General Meeting of Shareholders (GMS) without involving institutional and retail investors in their decision-making;
- Tumelo develops an API system that allows institutional and retail investors to give votes on portfolio companies through a mobile application. As a result, the public's satisfaction with investment managers increased; this product can be a breakthrough in the implementation of governance principles to encourage ESG implementation in the investment sector.

## In the future, fintech could harness the opportunities from the implementation of Central Bank Digital Currency (CBDC) by Bank Indonesia

CBDC is a program by Bank Indonesia to circulate digital money under the name Digital Rupiah. Digital Rupiah will be a legal means of payment, similar to physical Rupiah. The implementation of this digital currency will bring many new opportunities that fintech could grasp.

**CBDC Program[31]**

| Strategic Reasoning | Program Scheme |
|---|---|
| • Cryptocurrency development caused financial system regulation to be more complex;<br>• Emergence of shadow currency risk, where the unofficial currency circulates for transactions within the society. | • There are two types of Digital Rupiah, namely W-Rupiah/wholesale and R-Rupiah/retail;<br>• The central bank distributes W-Rupiah to wholesalers;<br>• Wholesalers are in charge of converting W-Rupiah to R-Rupiah and distributing it to the public;<br>• R-Rupiah is used together with physical money for transactions at the retail level. |

| Anticipation of Fintech Policies and Its Responses: | | |
|---|---|---|
| **Strategy Evaluation and Business Development Opportunity** | **The Proposition to become a Wholesaler in the Digital Rupiah Ecosystem** | **Adequate Technology Preparation based on BI Standards** |
| • Digital Rupiah will allow cryptocurrency-based product development that was previously restricted by regulation;<br>• Players can develop new business models based on Digital Rupiah, such as tokenization and smart contract. | • Becoming a wholesaler will give broader access to funding for fintech;<br>• As of January 2023, BI has not appointed any party that will become the wholesaler. | • Implementation of Digital Rupiah will create an impact on fintech operations. Therefore, an investment in related technologies is required;<br>• Fintech players aspiring to become a wholesaler have to prepare a distributed ledger infrastructure. |

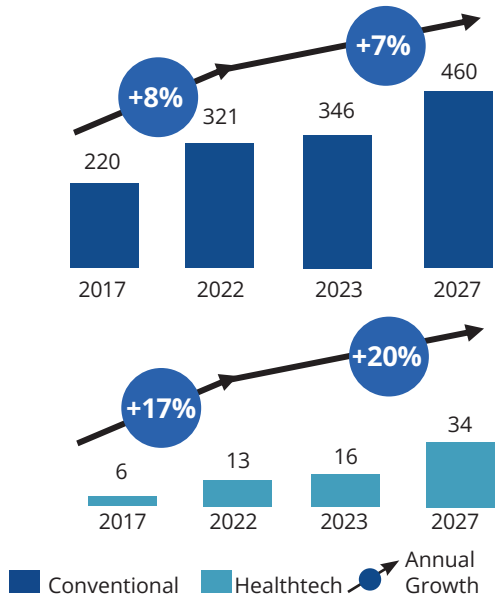
2023 provides many opportunities as well as challenges for fintech players. To maintain positive growth, fintech players need to innovate continuously by considering the developments of the financial industry and government policies. At the same time, fintech players could enhance existing collaborations with other financial institutions. It is expected that these development efforts will result in a resilient business model that can grow in 2023 and beyond.

# Health: Towards a Collaborative Era with Health Data Integration

**THE INDONESIAN PEOPLE** have experienced the success of technological development in the health sector, which supported the activities during the pandemic, including through PeduliLindungi to telehealth services. However, the health sector may face further challenges, namely equity of healthcare access throughout Indonesia. The market projection shows stable growth, which can potentially be achieved if stakeholders can maximize the region's market opportunities. The digital transformation agenda by the Government of Indonesia, SATUSEHAT, provides opportunities for healthtech players through close collaboration, business efficiency, and increased added value for consumers. Thus, healthtech is expected to strengthen Indonesia's health sector.

## Healthtech as a contributor to the health sector, will continue to grow, supported by the increase in BPJS adoption, patient visits, and digitalization

**Transaction Value of Indonesia's Health Sector**
in IDR Trillion




Source: Euromonitor, Statista, The Business Research Company, Marketline, PwC Analysis

Healthtech, as a pioneer in technology adoption, plays a significant role in the health sector to increase the value and efficiency of healthcare services. It is shown by the healthtech transaction value, which is predicted to record a higher growth (20% YoY) compared to the conventional health sector (7% YoY) in 2022-2027.

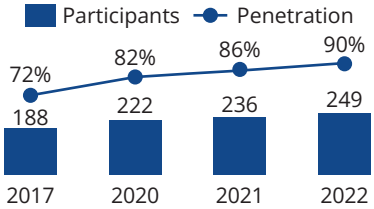
Healthtech adoption has increased rapidly due to the urgent need for healthcare services during the pandemic. This growth is seen from the increase in the number of users of the PeduliLindungi and telehealth applications which had been used as a platform to monitor the spread of COVID-19, vaccinations, and health consultation services.

Post-pandemic recovery has not slowed down the development and use of healthtech in Indonesia. For example, PeduliLindungi is adding more personalized features, such as medication reminders and vaccination records. On the other hand, telehealth continues to develop health consultation services, becomes a place to order medicines, and becomes an enabler of health insurance products. Time-saving and easy access are the main factors driving customers to use telehealth services.[1]

### Growth in the health sector is driven by three key factors

#### Increasing BPJS Adoption

**Number of Participants and Penetration of BPJS**
in Million People, 2017 - 2022

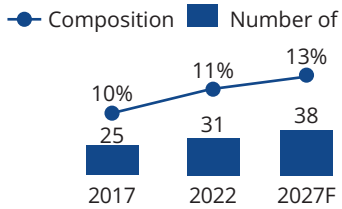



Source: BPJS Kesehatan, Public Information

The expansion of BPJS adoption opens the door for equal distribution of access to health services in Indonesia. In 2022, BPJS collaborated with a telehealth service to conduct a medicine delivery trial in 20 cities. Moving forward, BPJS can develop collaborative measures as a payment provider partner for telehealth consultations to increase health services inclusivity.

#### High Elderly Population

**Population and Composition of People Age 60+**
in Million People, 2017 - 2027F

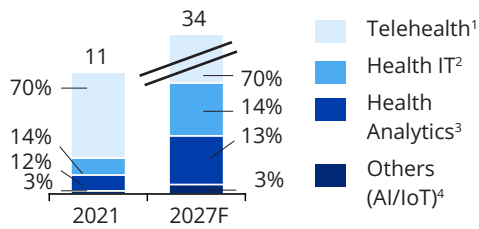



Source: UN - World Population Prospects 2022

The elderly population is vulnerable to non-communicable diseases, such as diabetes, heart disease, and stroke, which require treatment at primary and secondary health facilities. Therefore, data integration is needed to handle the potential critical conditions by utilizing the medical record from historical doctor appointments.

#### Rising Trends of Digitalization

**Market Size of Healthtech Sector**
in IDR Trillion, 2021 - 2027




Source: The Business Research Company, PwC Analysis

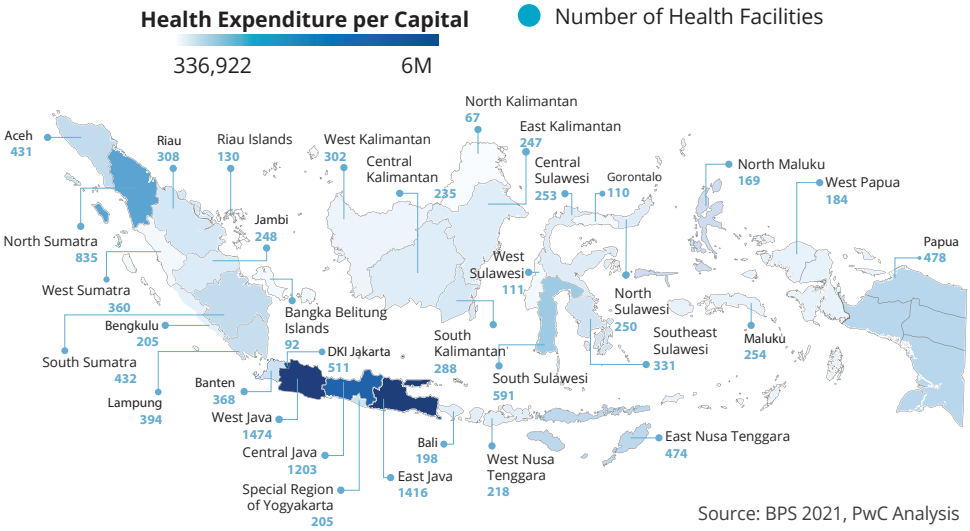
The launch of the telehealth application by conventional health services is predicted to increase the transaction value until 2027, which has the potential to foster competition and collaboration with telehealth startups.

Note: 1) Telehealth is clinical and non-clinical services via telecommunications; 2) Health IT is the provision of electronic products and services to manage health information; 3) Health Analytics is data analysis service for health industry; 4) Others include the provision of technology to support disease handling.

## Nevertheless, the health sector in Indonesia faces various challenges in achieving equity in all regions

### Distribution of Hospitals and Health Expenditure per Capita in Indonesia

in Units and IDR, 2021




Source: BPS 2021, PwC Analysis

**~40% of health facilities are located in Java Island[2]**

**Based on the EV-DCI 2023 Consumer Survey, 19-26% of the population in each province has adopted healthtech[3]**

There is still a gap between health facilities in the western and eastern regions of Indonesia. Unequal access leads to higher health expenditure per capita in areas with lower numbers of health facilities because it requires higher costs for patient mobilization. There are **three main challenges** for various stakeholders:

### Government

**Economic Inequality in Regional Health Sector Development**

| Regulation | Current Condition |
|---|---|
| **Decentralization of Health System** | The coordination, synergy, and integration of the central and regional governments are not fully aligned |
| **Allocation of 10% APBD (excluding salary) for the health sector** | Fulfilment of the minimum limit of fund allocation is relatively low; only done by **±32%** of Cities or Regencies (2021)[4] |

**Impact**

The management of Individual Health Efforts *(Upaya Kesehatan Perorangan*/UKP) and Community Health Efforts *(Upaya Kesehatan Masyarakat*/UKM) is not evenly distributed across all regions

### Conventional Health Services

**Fragmented data leads to difficulty in medical record transfer**

**Currently, millions of fragmented medical records...**

**275 Million+** citizens[5]

**30 Thousand+** health facilities[6]

**>80%** of health facilities do not use digital records[6]

There are **400+** Application in the health sector[6]

**...obstruct the information exchange between health facilities**

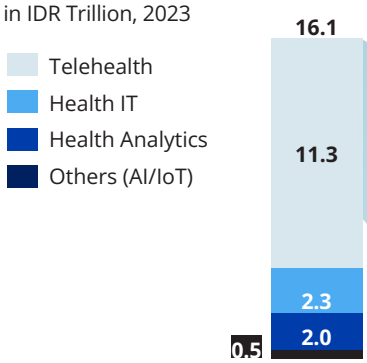
- Data is not standardized nor integrated
- Data overlaps due the large number of applications used

**It is difficult for health facilities to access health data on an ongoing basis**

## Healthtech

Telehealth adoption faces challenges from disintegrated health data

**Market Size of Healthtech**
in IDR Trillion, 2023




Source: The Business Research Company, PwC Analysis

**Market Landscape of Indonesia's Telehealth** (Example of Players)

| | Government | Conventional Players | Digital Players |
|---|---|---|---|
| B2B | Komen Konsultasi Medis Online | | |
| B2C | sehatpedia | RSPI Mobile; Siloam Hospitals My Siloam | ALODOKTER; Good Doctor; riliv; halodoc; bicarakan.id |

In the context of telehealth services in patient care, the B2B approach is carried out collaboratively with several health facilities remotely. Meanwhile, the B2C approach is carried out only from one health facility remotely (online).

Indonesia's healthtech market will remain dominated by telehealth players from 2023 to 2027, with a growth of 20% per year. However, based on the characteristics of the adoption level of telehealth technology issued by the Healthcare Information Management System Society (HIMSS), in general, Indonesia is positioned at level 2.[7]

| | Regulation | Utilization of Video Conference | | Personification | Automatic Data Transfer | Use of Portable Medical Devices | Integrated |
|---|---|---|---|---|---|---|---|
| | | Provider-Provider | Provider-Patient | | | | |
| Level 0 | ✓ | | | | | | |
| Level 1 | ✓ | ✓ | | | | | |
| Level 2 | ✓ | ✓ | | ✓ | | | |
| Level 3 | ✓ | ✓ | ✓ Simple | ✓ | ✓ | | |
| Level 4 | ✓ | ✓ | ✓ Complex | ✓ | ✓ | | |
| Level 5 | ✓ | ✓ | ✓ Complex | ✓ | ✓ | | |
| Level 6 | ✓ | ✓ | ✓ Complex | ✓ | ✓ | ✓ | |
| Level 7 | ✓ | ✓ | ✓ Complex | ✓ | ✓ + tertiary data | ✓ | ✓ |

Source: Healthcare Information Management System Society (HIMSS) 2015 - Advancing Telemedicine through an Adoption Model

To reach the next level, the main aspect needed by the Indonesian health sector is an integrated system capable of facilitating the automatic exchange of data between health services. In line with the principles of the Global Digital Health Strategy 2020-2025 by WHO, healthtech should have an ecosystem that involves coordination from various stakeholders.[8]

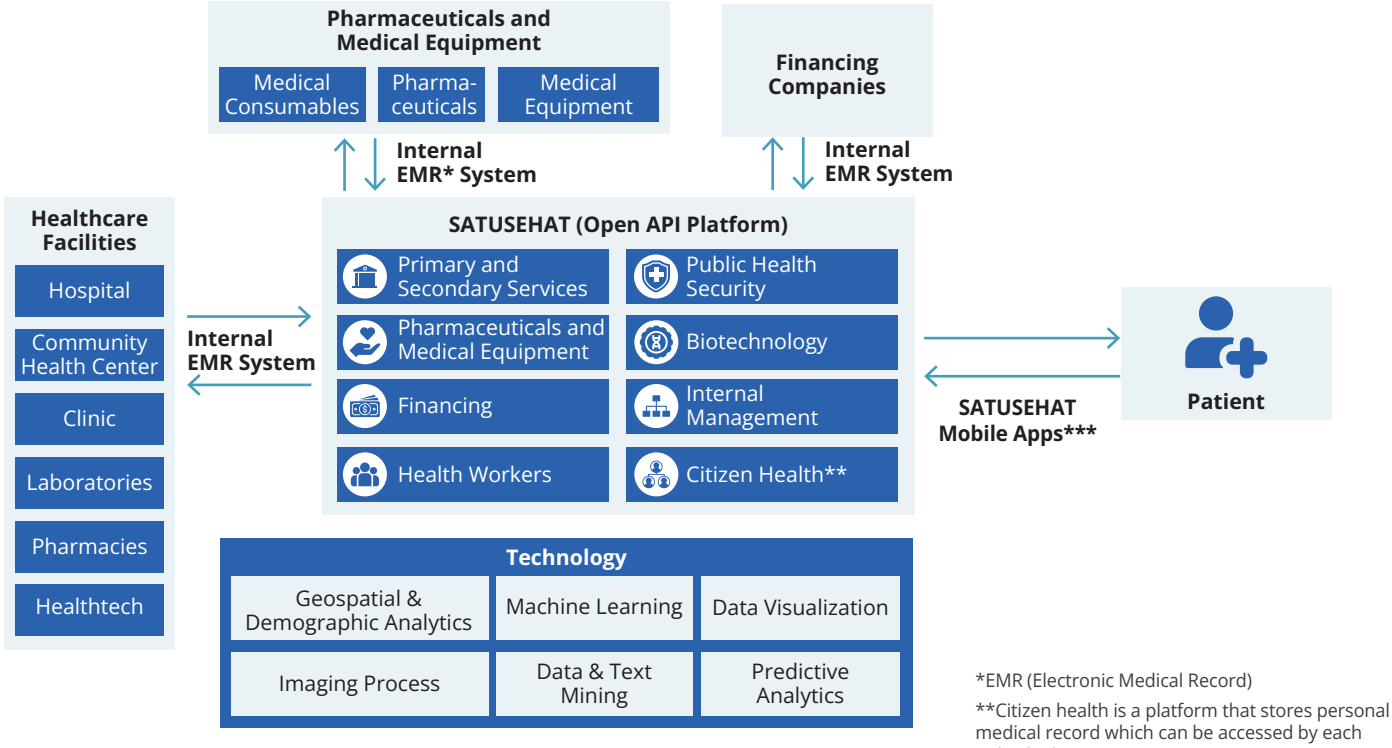
### The government, as one of the stakeholders in the health sector, has launched a digital transformation to address the issue of health equity

> SATUSEHAT enables patient data to be recorded digitally, connected, and privately owned, which allows providers to analyze patient data without limitations in the distance.[9]

**Budi G. Sadikin,** Minister of Health Republic of Indonesia

To answer the challenges of digitalizing the health sector, the Ministry of Health initiated the 2020-2024 Digital Transformation Strategy in the Health Sector, which turned into action through the SATUSEHAT platform.

**Illustration of the SATUSEHAT Platform**




*EMR (Electronic Medical Record)

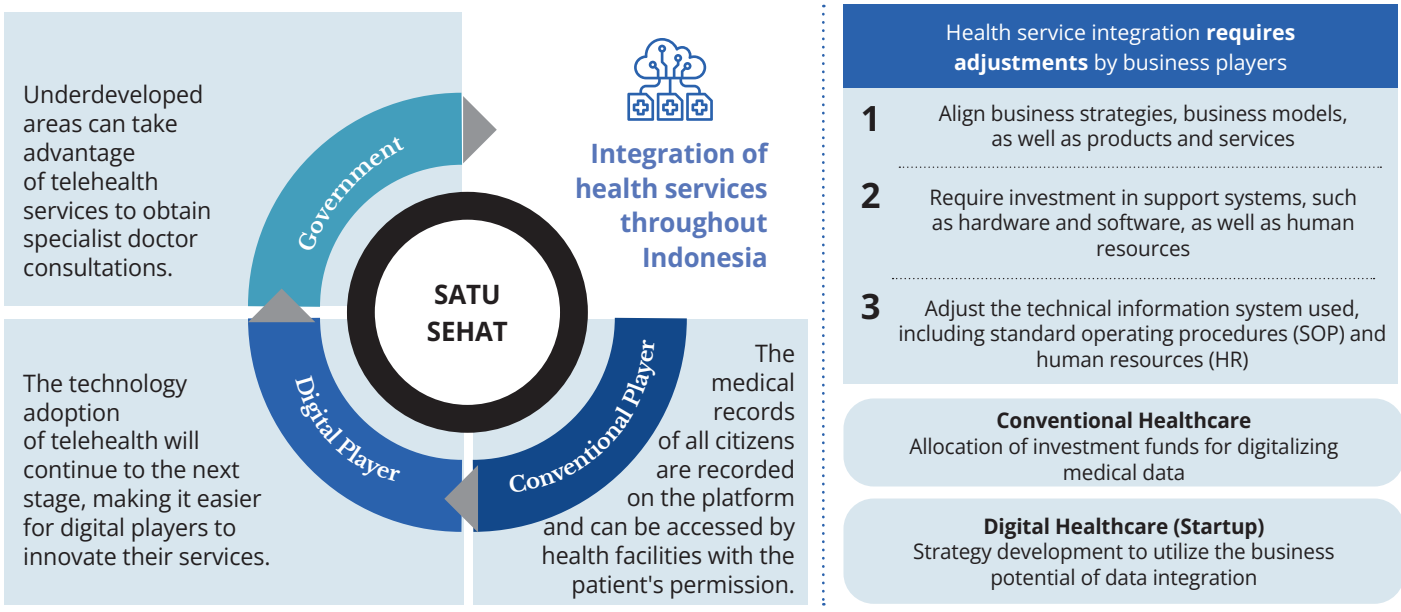
**Citizen health is a platform that stores personal medical record which can be accessed by each individual

*** Previously named PeduliLindungi

Source: Blueprint of Digital Transformation Strategy in the Health Sector 2024, PwC Analysis

SATUSEHAT is a platform to facilitate data exchange and collaboration for all service providers. It is expected to be the answer to the challenges of equity in the health sector. There are several stakeholders affected by the implementation of SATUSEHAT.

**Impact of SATUSEHAT on Current Issues Faced by Various Stakeholders**

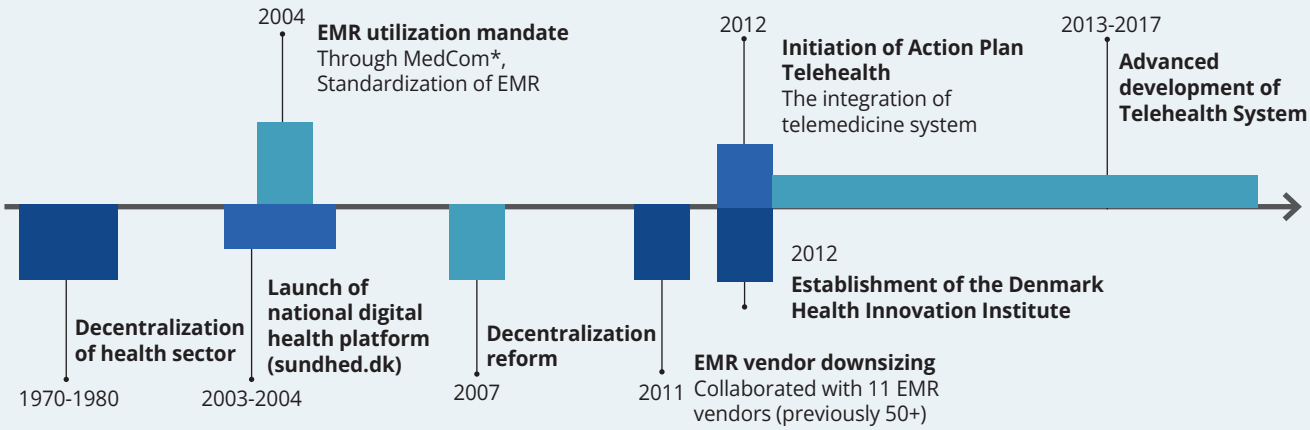



After operating for three months until November 2022, the government managed to integrate approximately 2,900 out of the total target of approximately 30,000 Community Health Center, hospitals, clinics, and Independent Doctor Practices (*Praktik Dokter Mandiri*/PDM).[6,10] This year, the government is focusing on the integration and implementation of the SATUSEHAT platform in Java and Bali, which will then be expanded throughout Indonesia starting in 2024.

## Digital and conventional healthcare service providers need to innovate to deal with potential changes after SATUSEHAT integration

The potential impact of health sector integration can be explored through benchmarks in other countries that have decentralized their health system and successfully implemented eHealth systems. For example, Denmark is at level 6 based on the HIMSS categorization of telehealth adoption.

### Denmark's eHealth Journey




Note: *) MedCom is a Denmark state-owned company that connects government, healthcare, information technology vendors in setting and testing communication standards, coordinating project (management and monitoring), and establishing a digital foundation for projects.

### Key Learnings of Denmark's e-Health Implementation

| Stakeholders | Strategy | Impact |
|---|---|---|
| **Government** | • Establishment of the integration agency (MedCom).<br>• National telehealth integration.<br>• Establishment of a startup innovation hub. | • Enabled the collaboration process to be run in a structured manner because it is managed by a centralized institution.<br>• Reduced the length of stay and the need for hospital beds.<br>• Contributed to a 24% increase in healthtech market value (YoY 2017-22).[11] |
| **Conventional Healthcare Service** | 100% compliant with the EMR integration initiative since 2010.[12] | Contributed to the growth of the healthcare sector (7.1% CAGR 2010-22), which is consistent with the growth of the previous period (7.7% CAGR 2000-2010).[13] |
| **Digital Healthcare Service** | • Adjustment of EMR system products according to e-Health platform standards;<br>• Development of health innovation as a complement to the existing business. | Shifted in startup innovations to be dominated by players who utilize AI/IoT technology (55%) for the development of preventive (e.g., brain activity scanners) and curative (e.g. cardiovascular) medical devices.[14] |

Source: PwC Analysis

Mongolia has also implemented eHealth since 2008. The wide geographical area and the distribution of 30-35% of the population in rural and remote areas pose challenges for national eHealth implementation.[15]

### Key Learnings of Mongolia's e-Health Implementation

| | Overcoming Geographical Barriers[16] | Avoiding EMR Security Issues[17] |
|---|---|---|
| **Condition** | • Medical personnel visited areas where it is difficult to access health facilities by carrying portable medical devices;<br>• The examination results are forwarded to health facilities with related medical experts for further diagnosis. | • Health Facilities with a low level of capital experience difficulties in carrying out EMR maintenance (including antivirus);<br>• The government funds the application of VPNs on health facilities' computers to reduce the potential of cyber attacks on EMR. |
| **Strategy** | • **Government:** Continue physical distribution of health in 3T areas<br>• **Healthtech:**<br>► Leverage the potential of B2B telehealth<br>► Develop portable medical devices | • **Government:** Ensures health facilities have an adequate security system<br>• **Healthtech:** Provides EMR with package options that are affordable for health facilities with limited capital |

In particular, SATUSEHAT put biotechnology as one of the integration modules. Biotechnology in humans can be used for various things, such as developing specific medicines, more precise diagnoses, and treating cancer.[18] This function is used as the basis for prescribing personalized medicine. However, the growth of biotechnology in Indonesia remains slow due to 2 main factors:[6]

**Limited Resources and Policies**
A limited number of biotechnology experts, as well as government policies that need to be updated, pose challenges to developing and marketing biotechnology products in Indonesia.

**Insufficient Funding**
Biotechnology processes require special laboratories with high costs. An insufficient amount of research funding limits the birth of innovation and practical application in this field.

To accelerate biotechnology implementation as a precise health solution, in 2022, the government conducted trials and evaluated a regulatory sandbox for biotechnology innovations. Going forward, the government is preparing a biotechnology-based health innovation ecosystem through various programs such as Collaborative Sandbox, Hackathon Biotechnology (e.g., Health Innovation Sprint Accelerator 2023 – a collaboration between the Ministry of Health and East Ventures[19]), and Hub Startup & Capital Providers. The programs provide space for startups that offer consumable, wearable, and biotechnology services to develop and collaborate. On the other hand, the program aims to bring together innovators and investors who can become the solutions to the funding issues in the biotechnology sector.

## In addition, healthtech players need to consider the benefits of ESG implementation to improve business resilience and attractiveness to investors

From 2014 to 2021, the investment value in ESG-themed instruments has increased by approximately 80% annually due to the implementation of the Sustainable Finance Roadmap by OJK.[20, 21] ESG implementation has impacted the global and national health sector, as experienced by global players.

| | Cases | Strategy | Highlighted Impact |
|---|---|---|---|
| Environmental | **AMGEN**[22]<br>American biopharmaceutical company<br>**Establishment of Next-Generation Factory** | Manufacturing facilities construction use environmentally friendly technology (e.g., LED lights, insulator technology) and implement a data-based monitoring system. | **73%** Energy consumption<br>**54%** Water use<br>**69%** Carbon emissions |
| Social | **UnitedHealth**[23]<br>Health product provider company from the United States<br>**Utilization of Unused Medicine** | Collaborate with the Kansas Government on policies for the utilization of unused medicines in nursing homes to be donated to selected clinics. | Donations of **>US$ 30 million** of potentially wasted medicines |

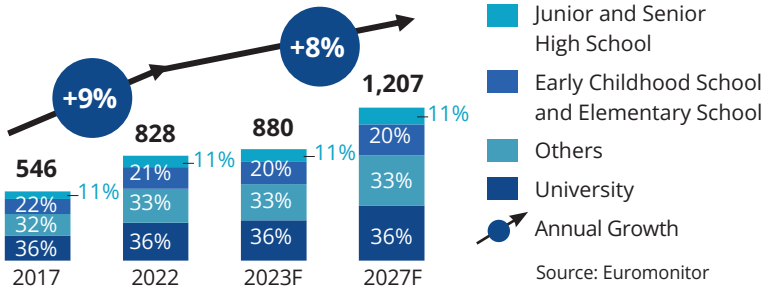
Digitalizing medical record data is a golden opportunity for business players to develop business potential by analyzing competition in the health market. Early identification of potential collaboration with stakeholders and implementation of a sustainable strategy can become the key to maintaining business performance during the transition period.

# Edtech: Sustaining Education Transformation Through Digital Innovation

**THE DEVELOPMENT** of edtech (education technology, the use of technology in the education sector) in recent years aims to address issues in the education sector. However, there are challenges for edtech to develop a sustainable business model. Moving forward, edtech can target educational institutions as clients (B2B and B2B2C schemes) or target more specific market segments. These strategies are expected to improve and stabilize the performance of edtech businesses. Thus, a sustainable edtech ecosystem can be established to continue contributing and strengthening the Indonesian education sector.

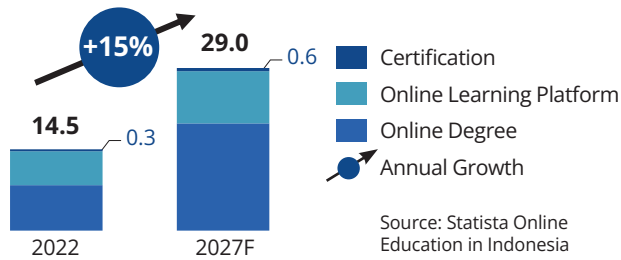
## The education sector is projected to grow 8% per year until 2027, with edtech growing faster than conventional education

**Education Sector Transaction Value**
in IDR Trillion, 2017-2027F




Source: Euromonitor

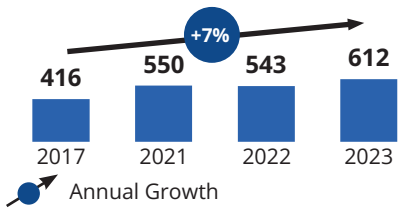
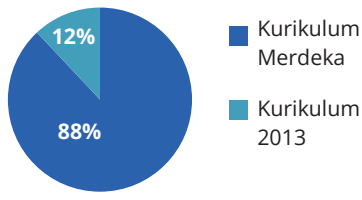
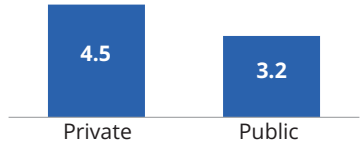
**Edtech Economic Value**
in IDR Trillion, 2022-2027F




Source: Statista Online Education in Indonesia

Since 2020, the government has implemented a series of changes in the education sector with the Merdeka Belajar (Freedom to Learn) policy. In the 2022/2023 school year, as part of this policy, the Kurikulum Merdeka (Independent Curriculum) program is being implemented officially and is gradually adopted by schools. For edtech, the average growth is predicted to reach 15% per year between 2022-2027. However, growth has slowed down compared to during the pandemic, which reached 28% per year (2019-2021 annual growth) due to the return of face-to-face learning.[1] As a result, edtech businesses are trying to adapt their business models, one of which is by entering the offline ecosystem.

## Growth in the education sector is driven by increased budget and improved education quality by the government and private investment

| Education Budget Increase | Education System Transformation | Private Investment |
|---|---|---|
| **Ministry of Education and Culture (Kemendikbudristek) Budget** in IDR Trillion, 2017-2023 | **Adoption Proportion of Kurikulum Merdeka in 2022** | **Number of Registered Students by Type of Institution** in Million People, 2021 |
|   Source: Kemendikbudristek |   Source: Kemendikbudristek |   Source: Badan Pusat Statistik |
| Kemendikbudristek uses the budget, among others, for the following:[2]<br>• School operations.<br>• Primary-tertiary education scholarships.<br>• Educational infrastructure, such as schools and ICT infrastructure.<br>• Implementation of Kemendikbudristek's programs, such as Kurikulum Merdeka and Kampus Merdeka (Independent Campus). | Two education transformation programs of Kemendikbudristek under the Merdeka Belajar policy as follows:[3]<br>• **Kampus Merdeka**: the higher education system introduced by the Kemendikbudristek in January 2020.<br>• **Kurikulum Merdeka**: a new curriculum for the Elementary School up to Senior High School level, which officially begins in the 2022/2023 school year. | The private sector plays an important role in driving the growth of the education sector, especially at **the junior high school to university levels**. By 2021, 27% of secondary school students (Junior High School/Senior High School) and 58% of University students attend private institutions.[4] As household incomes increase, enrolment in private schools is projected to continue to increase due to perceptions of better quality compared to public schools.[5] |

## Edtech was proven to be able to offer solutions to issues in the education sector

**Impact of edtech startups**
The majority of edtech business players position themselves as enablers rather than as substitutes for conventional education.

| Education Level | | Issues* | Startup Example | Startup Impact |
|---|---|---|---|---|
| Level of Education | Early Childhood Education | 30% of rural areas do not have early childhood education, which causes low participation rates.[6] | Solite KIDS | ✓ |
| | Elementary School- Senior High School | The quality of student learning outcomes is low, with Indonesia's Programme for International Student Assessment (PISA) score ranking 71 out of 79 countries.[7] | ruang guru | ✓ |
| | | The quality of teaching staff is unequally distributed. For example, the proportion of qualified elementary school teachers is 95% in western Indonesia, but only 89% in eastern Indonesia. | GuruInovatif ruang guru | ✓ ✓ |
| | | Teachers' digital literacy is not evenly distributed, whereas 60% of their ICT proficiency is limited.[8] | GuruInovatif | ✓ |
| | | Teachers are too preoccupied with administrative tasks.[9] | | ✓ |
| | University | A low absorption rate of graduates. This is evidenced by the fact that 14% of the unemployed are university graduates.[10] | MySkill HACKTIV8 | ✓ |
| | | The enrolment rate is low due to the limited number of tertiary institutions, which can only accommodate 48% of Senior High School/ Vocational High School/Madrasah Aliyah annual graduates.[11] | PINTAR | ✓ |
| Others | | 76% of children dropping out of school is caused by economic factors.[12] | Pintek schoters | ✓ |

*Not a complete list

✓ **Facilitate access to education**
through online learning that can be accessed anywhere as well as providing loan funds.

✓ **Improve the quality of education**
through providing relevant material for professional work as well as upskilling of teachers.

✓ **Improve administrative efficiency**
through digitalization of documentation and school administration

## One of the prospects for edtech business players is to enter the market with a more specific target

Online degrees have great opportunities, considering that the higher education segment contributes 36% to the transaction value of the education sector and the need for higher education has not been met.

**1.9 mn**
Potential prospective students

**Large Potential of Prospective Students**
- There are 3.7 million Senior High School/Vocational High School/Madrasah Aliyah graduates each year, while the capacity to admit new students is only around 1.8 million students.[11]
- Online degrees have the potential to attract students from different backgrounds because of lower total tuition fees, both in terms of school fees and living costs.

**4**
Universities providing full online learning

**Low Level of Competition**
- There is a limited number of universities offering online degree programs.
- Most universities offering online lectures lack expertise in developing e-learning platforms, which might lessen the quality of learning.
- Pintar.co is the only edtech startup that has offered online lecture programs.[13]

When preparing for an online degree program, Indonesian edtech entrepreneurs can consider a similar program that has been developed by Coursera, one of the largest edtech companies in the world.[14]

**Case Study of Coursera's Online Degree Programs**

| | |
|---|---|
| **Educational Needs** | • There is a demand for online university learning due to time and cost limitations.<br>• Standardization is needed to determine the quality of learning across certification programs |
| **Business Strategy** | • Collaborate with well-known universities to provide qualified teaching staff.<br>• Offers 100% online learning for undergraduate and master's programs. |
| **Key Success Factors** | • Global reputation from university partners, such as Imperial College London and HEC Paris.<br>• Coursera's track record as an online learning platform has been in development for 11 years. |
| **Result** | • Coursera generated **US$ 46.9 million** in revenue from **17,442 students** taking online bachelor/master's programs in 2022.[15] |

Source: PwC Analysis

### Developments in telecommunications infrastructure and the quest for sustainable business models may limit edtech's growth

Apart from the high potential in the edtech sector, there are several obstacles faced by edtech startups in running their business.

#### 1. Limited internet access still complicates access to learning

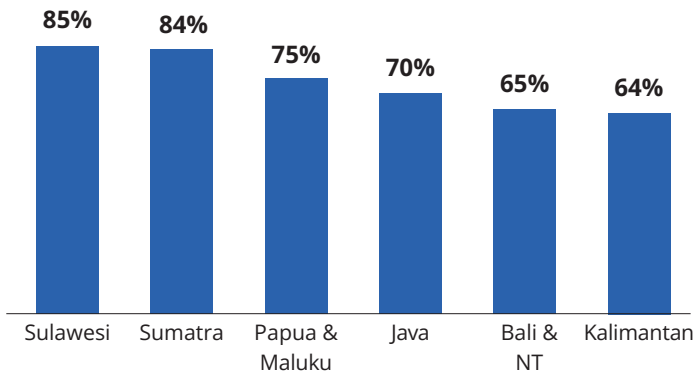
- 74% of respondents to the EV-DCI 2023 Consumer Survey who have edtech applications on mobile phones said that network access is one of the obstacles in accessing applications.
- The uneven quality of internet access between islands causes learning disparities between regions.

#### 2. Most edtech companies have not made a profit.[8]

- In 2020, only 27% of edtech startups were profitable.
- 51% of active users are unpaid users and subsidized recipients.
- Edtech business players have difficulty mapping the causes of the losses they experience, whether low economic capacity or users' willingness to pay.

**Users Who Have Network Constraints, 2022**
in Percentage (%)

Q: What obstacles do you usually face when accessing digital applications? [Unstable internet network option]




Source: EV-DCI 2023 Consumer Survey

**3%** **The number of freemium users who converted to paid users after the trial period.[8]**

To overcome these challenges, there are several strategies that can be considered by edtech business players

| Strategy | Startup Example | Actions Performed | Benefit |
|---|---|---|---|
| **Exploring into the offline ecosystem** | ruang guru | Conduct face-to-face and hybrid courses. | • Business expansion to reach students with network connection constraints. |
| **Changing the business model towards B2B or B2B2C** | MySkill, RumahCoding | Targeting companies that want to improve the ability of their employees through training. | • Efficiency over high B2C (business to consumer) consumer acquisition costs.<br>• Stable income because B2B and B2B2C consumers are easier to maintain. |
| **Intensifying marketing to parents as decision makers** | ruang guru, co·learn | Using various information channels to promote parents the advantages of using edtech. | • Easier decision making by parents as the bearer of educational expenses, which can increase the number of students. |
| **Offers a profit sharing scheme** | HACKTIV8 | Launched an income sharing program | • Expansion of market reach to potential consumers from various economic groups.<br>• Lighten the burden on students with the option to pay tuition after earning a decent salary. |

## ESG implementation, such as equal access to education, can strengthen business fundamentals and open up new opportunities

Profit-sharing schemes after getting a job as payment for education costs can facilitate access to education regardless of students' economic backgrounds. From a business perspective, this has a positive impact because it increases the number of students that can enrol.

**Hacktiv8 Income Sharing Agreement Program for Developers**

**Process**

| Registration and Selection | Training | Placement | Payment |
|---|---|---|---|
| No charge until graduation | Duration 16 or 30 weeks | Placement to 400 employers | 20% of salary for 36 months with a maximum of 1.5x the program price |

**Impact**

**Business:** increase income by increasing the number of students and paying a maximum of 1.5x the normal price.

**ESG:** increasing the inclusiveness of education and teaching relevant skills to be used on the job.

## Improving the quality of education requires the collaboration of the government, educational institutions, business players, and startups

Regardless of the solutions offered by education startups, the root causes of education problems need to be resolved by transforming the formal education system. For this reason, the Kemendikbudristek established the Merdeka Belajar program which includes the Kampus Merdeka and the Kurikulum Merdeka.

> Merdeka Belajar policy gives independence to each education unit to innovate. School teachers can improve the quality of learning independently. Independently by not only following the educational bureaucratic process, but by innovating according to the conditions in which the teaching and learning process takes place, both in terms of culture, local wisdom, socio-economy and infrastructure.[17]

**Nadiem Makarim,** Minister of Education, Culture, Research and Technology Republic of Indonesia

### Ministry of Education and Culture's Education Transformation Program[18]

| | | |
|---|---|---|
| Kampus Merdeka (University) | **Learning System** | • Universities are encouraged to develop curriculum with business players, such as multinational companies and State-Owned/Regional-Owned Enterprises (BUMN/BUMD)<br>• Out-of-school education, such as internships, research, entrepreneurship, and independent studies with Kampus Merdeka partners, can be counted as course credits. |
| | **Digital Platforms** | • Kedaireka: a site that facilitates partnerships between universities and industry players.<br>• Kampus Merdeka: site for information center and registration for additional out-of-school programs. |
| | **Scoring** | • Universities are not required to carry out national accrediation every 5 years.<br>• Universities are encouraged to take international accreditation. |
| Kurikulum Merdeka (Elementary School-SHS) | **Learning System** | • Learning content is reduced and emphasized more on essential material.<br>• Teachers/schools have the discretion to determine the number of hours of each subject per week. |
| | **Digital Platforms** | • Merdeka Mengajar: an application for teachers to access teaching and training materials and upload content to share with other teachers.<br>• Rumah Belajar: a site for students to study online, access virtual labs, and solve practice questions. |
| | **Scoring** | • The assessment is carried out through the Education Report (Rapor Pendidikan) platform, which is also a source of data collection for the Ministry of Education and Culture. |

### Edtech can support the Kampus Merdeka and Kurikulum Merdeka programs through collaboration with companies and universities

| Strategy | Supporting Reasons | Steps |
|---|---|---|
| Creating an internship or independent study program curriculum for companies wishing to be involved in the Kampus Merdeka program. | • Edtech has the knowledge and experience to create relevant curriculums for companies.<br>• Edtech has a stable learning platform for college students. | • Encouraging B2B edtech clients to get involved in the Kampus Merdeka program by offering curriculum development services and socializing the Kampus Merdeka program. |
| Product development according to the administrative needs of the Kampus Merdeka and the Kurikulum Merdeka. | • The implementation of the new program creates different administrative processes, such as administration of matching funds, international accreditation, and assessment of the Education Report. | • Add new features in the app.<br>• Integrate API with Kemendikbudristek system whenever possible. |

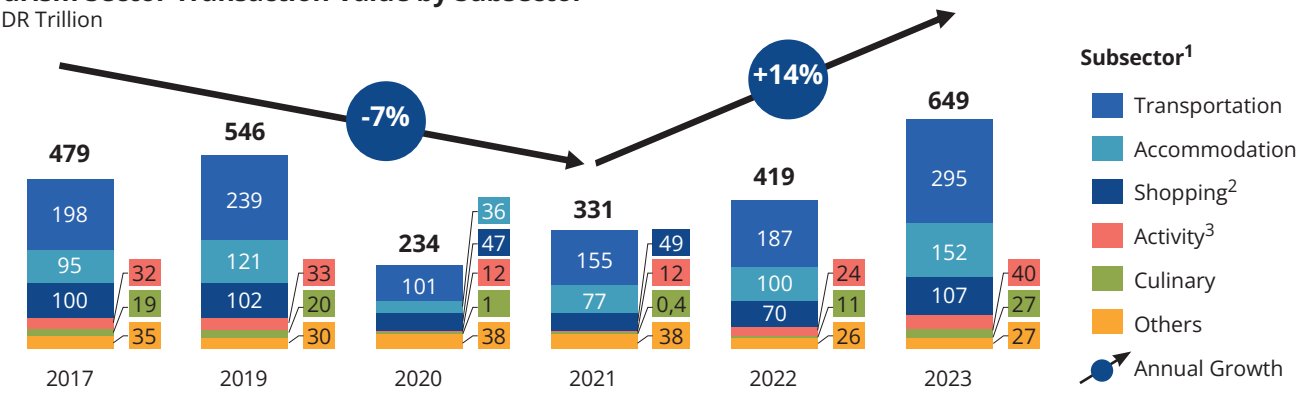
Amid the economic development of the education sector, there remain many issues to be addressed. Collaboration between the government and the private sector, both conventional and edtech, is needed to find innovative solutions to problems. Adaptation according to the government's education program will be the key for startups to develop Indonesia's education sector.

# Tourism: Keeping the Growth Momentum Through Technology

**INDONESIAN TOURISM** is showing a significant recovery after the pandemic. Moving forward, there is an opportunity to increase Indonesia's tourism revenue from domestic and international tourists. To capture this opportunity, Indonesia's tourism competitiveness needs to be improved. Currently, there are strategic initiatives supporting the growth of the tourism industry, such as increasing the infrastructure budget and developing 5 Super Priority Tourism Destinations (Destinasi Pariwisata Super Prioritas/DPSP). Digital businesses can offer the use of technology to support efforts to leverage Indonesia's tourism potential.

## The tourism industry is predicted to grow 14% per year until 2027, driven by the transportation and accommodation subsector

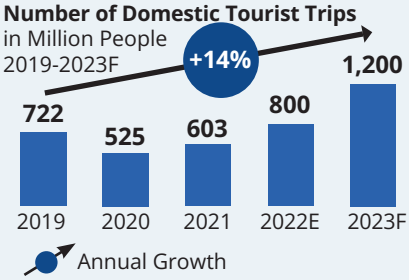
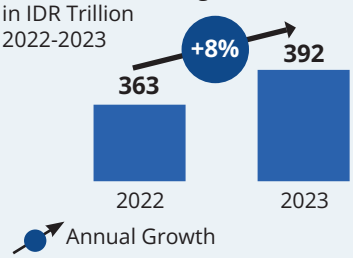
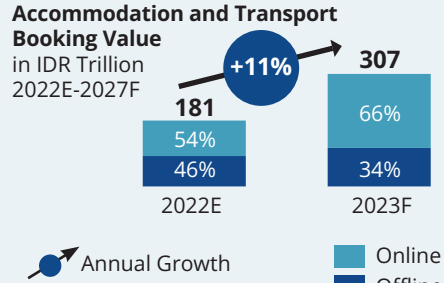
**Tourism Sector Transaction Value by Subsector**
in IDR Trillion




Source: Euromonitor, PwC Analysis

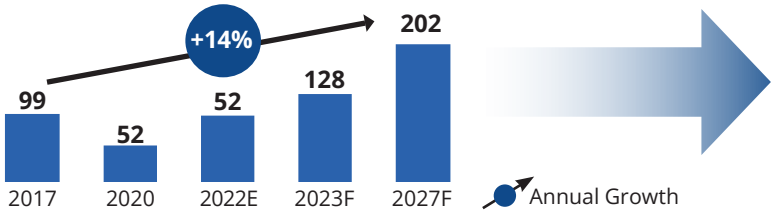
Despite the rapid growth, the transaction value of the tourism sector in 2023 is projected not to rebound to the pre-pandemic level yet. The total number of airplane passengers in 2023 is predicted to be lower than the number of passengers in 2019, thus impacting transactions in the transportation subsector.[4] On the other hand, the accommodation subsector recovered faster as a result of staycation and work-from-destination trends that have developed during the pandemic.[5]

## The numbers of post-pandemic visits, infrastructure improvements, and digitalization are the drivers for tourism growth

| Number of Trips Rebound | Improvements of Supporting Infrastructure | Adoption of Technology in the Tourism Sector |
|---|---|---|
| **Number of Domestic Tourist Trips**<br>in Million People<br>2019-2023F<br>  <br><br>Source: Central Agency on Statistics and Kompas | **Infrastructure Budget**<br>in IDR Trillion<br>2022-2023<br>  <br><br>Source: Investor.id | **Accommodation and Transport Booking Value**<br>in IDR Trillion<br>2022E-2027F<br>  <br><br>Source: Euromonitor |
| • In the short term, the recovery is led by domestic tourists who prioritize tourist attractions closely located to their residences.[5]<br>• The number of foreign tourists is targeted to increase by 75% YoY in 2023, driven by the easing of China's travel restrictions, which is the second largest country of foreign tourists travelling to Indonesia before the pandemic.[6] | • Revitalization of old airports and building of new airports by the government in order to serve more passengers. [7]<br>• The length of toll roads has increased by 20% during the 2020-2022 period and has had an impact on increasing the movement of domestic tourists. [8]<br>• To accommodate tourists, 5G internet will be available in 5 DPSP in 2024.[9] | • The growth of online transactions was driven by the availability of the Buy Now Pay Later (BNPL) payment feature.[10]<br>• ICT implementation has the potential to boost promotional activities and increase tourist comfort during the trip. |

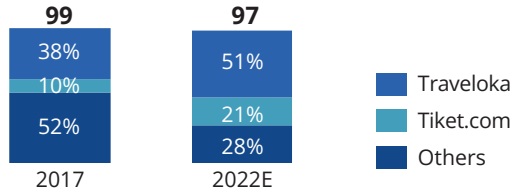
**The development of Indonesia's digital tourism is dominated by the Online Travel Agencies (OTAs) Traveloka and Tiket.com**

**Online Booking Value**
in IDR Trillion, 2017-2027F




Source: Euromonitor

**Online Booking Market Share**
in IDR Trillion, 2017-2022E




Source: Euromonitor

The online booking market is dominated by Traveloka and Tiket.com, which have a total market share of 72%. As a business strategy, Traveloka has developed a lifestyle app offering various services besides tourism, such as paying for electricity bills and investing in gold. Meanwhile, Tiket.com is conducting cross-platform collaboration with Blibli.

Considering that the OTA market share is dominated by several companies, a bigger opportunity for new tourism technology lies beyond accommodation and transportation booking. For example, room service facilities via mobile applications developed by Izy.ai or the customer relationship management (CRM) platform for hotels and restaurants from Member.id.

## Indonesia's OTA must adapt to the trend of sustainable tourism

Moreover, one of the growing trends in Indonesia and the world is sustainable tourism.[11] Tourists want to be more responsible for the environmental and social impacts of tourism activities. OTA platforms can adapt to this trend by offering products that are more environmentally friendly according to ESG principles.

**Sustainable tourism in Indonesia and the world is predicted to grow, supported by rising consumer awareness**

**Global sustainable tourism market value growing 8% per year from 2019 to 2027**

Source: Statista


**Indonesia's Sustainable Tourism Value (2027)**

**Percentage of App Users Interested in Environmentally Friendly Add-Ons** (2022)

"Would you be interested if you were offered environmentally friendly add-ons when making transactions in digital applications? Example: carbon offset add-on"


Source: EV-DCI 2023 Consumer Survey

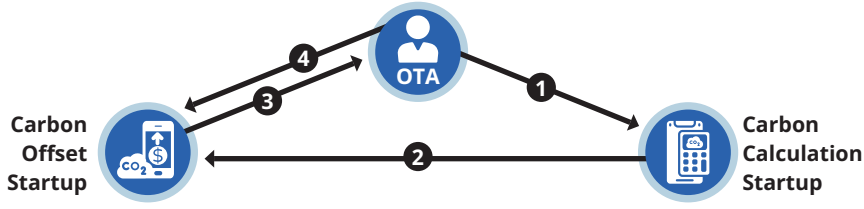
As a first step, the Indonesia's OTA platform can consider several initiatives that have been carried out by global businesses to offer products that are more environmentally friendly.

| Booking.com | KAYAK | Skyscanner | HOLIABLE |
|---|---|---|---|
| Displays the Travel Sustainability Badge for accommodation that meets environmental standards. | Provides a search filter for flights with the lowest carbon emissions. | Offers a carbon offset option when purchasing a flight ticket. | Curating eco-friendly lodging, restaurants and activities. |

**OTA can collaborate with related startups for product adaptation**

By offering more environmentally friendly products, OTA platforms may consider collaborating with other startups. For example, startups that provide emission calculation and carbon offset options. Such collaboration will be able to speed up the product customization process by the OTA platform.

**Collaboration Scheme**

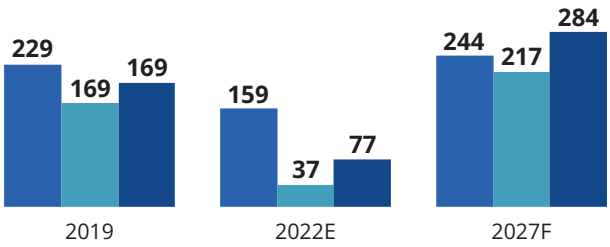



1. Sharing information related to transportation and accommodation being sold
2. Reporting the results of calculations
3. Offering a carbon offset option
4. Channeling tourists choices and payments regarding carbon offset options

> In general, we see that businesses come with two main aspects, which are innovation and the courage to take risks. Additionally, there's also speed in executing. This is in line with our mantra at the Ministry of Tourism and Creative Economy, namely innovation, adaptation, and collaboration, especially the pentahelix collaboration. Because of that, we see this collaboration as a necessity. [12]
>
> **Sandiaga Uno**, Minister of Tourism and Creative Economy Republic of Indonesia

## Indonesia's tourism revenue optimization can be achieved by increasing the number of foreign and domestic tourists

**Total Tourist Spending***
in IDR Trillion, 2019-2027F




*Total spending excluding transportation

| Subsectors | Annual Growth (2022-2027) |
|---|---|
| Domestic | 9.0% |
| Foreign | 42.7% |
| Outbound** | 29.6% |

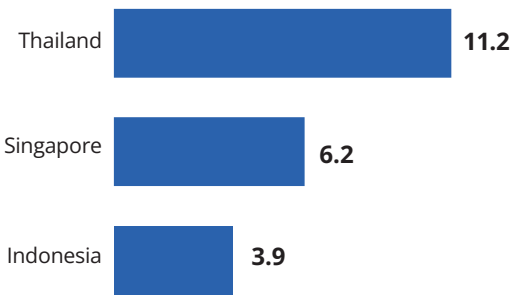
**Indonesian tourists visiting abroad

Source: Euromonitor

Although the transaction value of domestic tourists has recovered faster after the pandemic, it is predicted that foreign and outbound tourist spending will grow faster in the medium term. To maximize Indonesia's tourism revenue, efforts to target foreign and outbound tourist segments are needed.

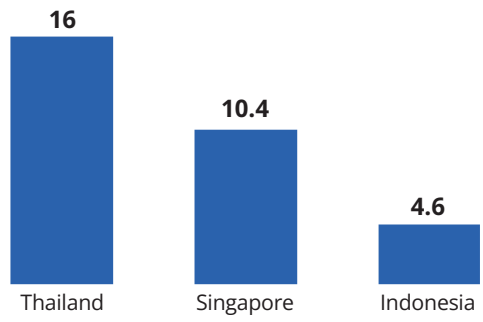
To increase tourism revenue from foreign tourists, Indonesia needs to improve its regional competitiveness. Despite holding the title of the country with the most beautiful nature in 2022,[13] Indonesia was unable to attract as many tourists as Thailand and Singapore. This was reflected in the revenue of the tourism sector in 2022.

**ASEAN Countries Based On Foreign Tourists' Number of Arrival**
in Million People, 2022




Source: Reuters dan Singapore Tourism Board, PwC's Analysis

**Revenue from Foreign Tourists**
in US$ Billion, 2022




Source: CNN Indonesia, Channel News Asia, Data Indonesia, PwC's Analysis

On the other hand, tourism business players can leverage the high purchasing power of outbound tourists. The average expenditure per outbound tourist trip (IDR 19.96 million) surpasses the average expenditure of foreign tourists in Indonesia (IDR 13.52 million).[4] To increase tourism revenue, tourism players need to formulate a strategy to attract potential outbound tourists to travel within the country instead of travelling abroad.

**Marketing, tourism infrastructure, as well as driving comfort and safety are the aspects that need to be improved for maximizing tourism revenue**

Inadequate marketing, lack of supporting infrastructure and overcrowding of vehicles were identified in the Travel and Tourism Development Index (TTDI) 2021.

**Rank of Search Variables on the Internet, Tourism Support Infrastructure Availability, and Road Density in TTDI 2021**

| Issue | Variable | Rank | | |
|---|---|---|---|---|
| | | Thailand | Singapore | Indonesia |
| Marketing | Total internet searches related to travel | **7** | **40** | **44** |
| Tourism Infrastructure | Accommodation and transportation availability | **32** | **60** | **91** |
| Density | The ratio of road length to area | **26** | **4** | **69** |

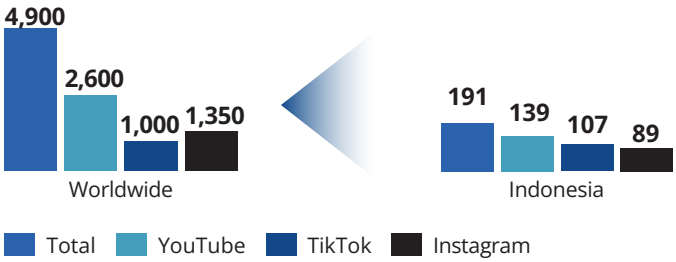
Source: World Economic Forum, PwC's Analysis

## Digital business players can play a role in maximizing revenue from foreign and domestic tourists

### 1. Carefully planned social media marketing can increase awareness and perceptions of Indonesian tourism

The number of social media users in Indonesia and the world keeps increasing every year. Furthermore, tourism is an industry that relies on product visualization. Therefore, promotion via social media becomes important in shaping potential tourists' perceptions of Indonesia as a tourist destination. The government and business players can collaborate to make use of influencers and the latest technology to strengthen the image of Indonesian tourism.

**Active Social Media Users in 2022**
in Million People




Source: Euromonitor and Oberlo, PwC's Analysis

**The role of social media and influencers on tourism**

- 49.5% of respondents of Market Intelligence: United Kingdom by the Ministry of Tourism and Creative Economy use social media to plan trips.[14]
- 48% of respondents of Influencing Travel: How to Turn Lookers into Bookers admitted influencers' content increases travel interest in a destination.[15]
- 88% of global tourism businesses use social media to promote their services.[16]

To maximize revenue from foreign tourists, the government can work together with foreign influencers. As an example, the Ministry of Tourism and Creative Economy held a Familiarization Trip with several influencers from India to introduce destinations in Indonesia. This activity aims to build a perception of Indonesia as a major destination for tourists from India.

On the other hand, to attract potential outbound tourists to travel domestically rather than going abroad, influencers can be directed to create content related to various tourist destinations in Indonesia. This could increase potential outbound tourists' awareness of the myriad of choices and activities available in Indonesia.

Additionally, to maximize marketing via social media, there are several information and communication technologies that can be utilized.

- Geolocation data analysis can be used to measure the performance of marketing efforts.
- Social media listening to analyze social media content in order to find out the preferences of potential tourists.
- Big Data and Artificial Intelligence (AI) to perform marketing that is more in line with the preferences of potential tourists.

Arrivalist®

United States' startup, **Arrivalist**, specializes in **data location analysis** to improve **marketing performance**

Geolocation data analysis is used to compare a company's marketing exposure to the number of tourist arrivals. That way, the effectiveness of every marketing initiative can be mapped accurately. Large amounts of geolocation data are then processed to provide in-depth insights to businesses.

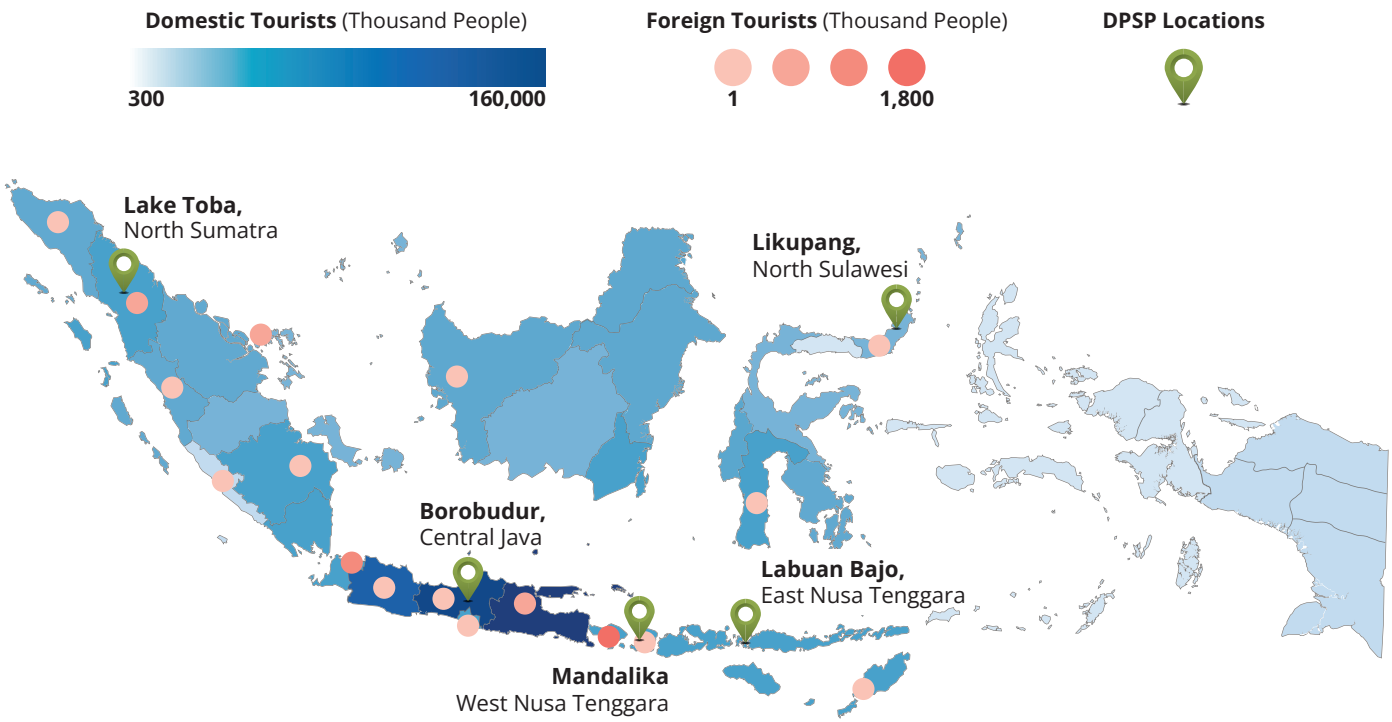
**Case study:** Montana State in the United States attracts tourist visits **2,5 times more efficiently**.[17]

- Background: Montana experienced a difficulty determining the effect of the distance of prospective tourists' residence from tourist destinations on marketing effectiveness.
- After working together with Arrivalist, Montana found the right location spot and ad display time to optimize marketing.

**2. Expansion of transportation and accommodation startups in accordance with the government's travel destination development**

In nurturing Indonesian tourism, the government encourages the development of tourist destinations outside of Bali. The 5 DPSP program is the government's main policy to encourage this. This program is included in the 2020-2024 National Medium-Term Development Plan (*Rencana Pembangunan Jangka Menengah Nasional*/RPJMN) and is focused on repairing and developing infrastructure, as well as organizing international-level events.[18] As an example of infrastructure improvement, Komodo Airport in East Nusa Tenggara has been revitalized to become a landing area for planes from overseas.[19]

**Visits by Domestic and Foreign Tourists and 5 DPSP Locations in 2022**




Source: BPS, the Ministry of Tourism and Creative Economy, PwC's Analysis

Transportation and accommodation startups can support government programs by expanding and strengthening the operations in the 5 DPSPs. Compared to conventional businesses, transportation and accommodation startups generally have an advantage in terms of the asset ownership level that is not too heavy (asset-light). This allows for easier operational expansion.

For tourists, the presence of digital businesses in the transportation and accommodation sector enables a more comfortable tourism infrastructure with fixed prices. As for startups, expansion to tourist areas increases their range of services, with high growth potential as tourist destinations develop.

**Startups' Actions**

| Standardizing Product Quality | Educating Businesses | Providing High Quality Accommodation |
|---|---|---|
| • Establish service quality guidelines that must be achieved by transportation and accommodation partners.<br>• Example: OYO sets guidelines for hotel room quality.[20] | • Nurturing lodging and transportation partners regarding the quality of service for tourists.<br>• Example: Gojek nurtures drivers in terms of cleanliness and friendliness.[21] | • Fulfill the demand for clean and comfortable accommodation in tourist destinations.<br>• Example: Bobobox provides comfortable accommodation around Lake Toba by opening Bobocabin.[22] |

### 3. Implementation of traffic and crowd control systems can improve the ease of driving

The Internet of Things (IoT) and AI-based traffic management can increase the efficiency of road usage. These implementations provide smooth and safe driving in tourist destinations.

**Safe Driving**

3,457 accidents causing 530 deaths during homecoming (*mudik*) in 2022.[23]

**Smooth Driving**

Congestion often happens in tourist destinations, such as Bali, in Canggu, Kuta, and Ubud areas.[24]

The use of cameras and sensors to detect the amount, density, and license plates of vehicles.

Analysis by AI algorithms to determine risks and suggest recommended actions.

#### Traffic Control System Case Study[25]

visionaire by nodeflux

A specialized Surveillance as a Service startup that uses software to solidify CCTV cameras in monitoring processes

- **Objective:** As the amount of vehicles increases, Manado city government wants to develop a system that reduces congestion and improves driving safety.
- **Method:** The utilization of Vehicle Counting, Vehicle Dwelling, and Vehicle Trajectory features to calculate the number of vehicles and estimate the average speed. The data was then processed into recommendations for traffic control policies;
- **Result:** Traffic jams were reduced by 25% and accidents were reduced by 15%.

Although the tourism sector is predicted to grow rapidly, Indonesia still has to improve to maximize revenue from this sector. The foreign and outbound tourist segments can be priority targets considering the high growth predictions for both. Going forward, digital businesses can play a role by escalating the marketing efforts of tourist destinations and providing a better travel experience for tourists. Technology adoption is hoped to go hand in hand with government policies that can actualize Indonesia's potential in the tourism sector.

# Climate: The Urgency to Save the Environment Generates Optimism for Climate Tech Business Players

**THE RISK OF CLIMATE** change impacts presents an urgent opportunities for stakeholders, including innovators, to provide solutions through a technological approach. Although many parties have not yet adopted climate tech in Indonesia, the government's support as a regulator and the growing trend of sustainable investment among investors have opened opportunities for climate tech business players to continue to grow. Climate tech businesses can accelerate the use of environmentally friendly technologies and increase efficiency, both in energy usage as well as in the supply chain. In terms of disclosure, the implementation of the Task Force on Climate-related Financial Disclosure (TCFD) aimed to understand risks and opportunities for companies related to climate, provides transparency to investors thus also supports funding for companies that carry out sustainable business activities.

## Climate tech can assist the government in achieving the target of Greenhouse Gas Emissions reduction

In 2022, there are
**3,515**
Disasters due to climate change*
(97% increase from 2012)[1]

Potential loss
**US$ 16.3 billion**
during 2023-2024[2]

*Excludes earthquakes and volcanic eruptions

**Indonesia updated its 2030 Greenhouse Gas (GHG) emission reduction target[3]**

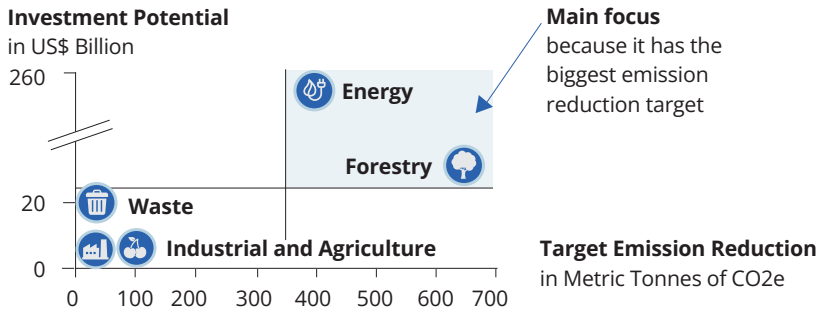
**32%** Target with local capacity

**43%** Target with international support

The government emphasizes climate change mitigation in 5 main sectors[2]

- Energy
- Forestry
- Waste
- Agriculture
- Industrial

**Climate Sector Investment Potential and Emission Reduction Targets**




Source: Indonesia's GCF Country Programme Document, PwC Analysis

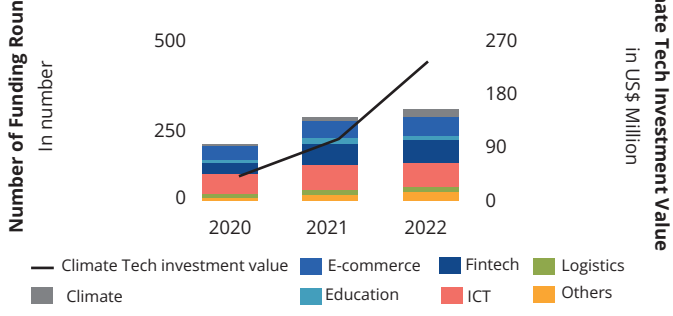
In the government's strategic plan, technological capabilities are needed to handle climate issues. Climate tech plays a role as a catalyst in launching efforts to reduce GHG emissions.

Climate tech is defined as technology that focuses on reducing GHG emissions or overcoming the effects of global warming. Climate tech applications can be grouped into three parts:[4]

- Enhance **understanding** of the impacts of climate change
- Support efforts to **adapt** to the impacts of climate change impact
- **Mitigate** or **remove** emissions directly

In line with the government's target to deal with climate issues, the climate tech sector is experiencing growth, as indicated by an increase in the number of funding rounds by 55% YoY in 2020-2022, [5] exceeding other digital sectors, such as e-commerce. Moreover, this growth is driven by increased demand for climate tech for ESG reporting and access to green finance.

**Climate Tech Number of Funding Rounds and Investment Value in Indonesia**




Source: Crunchbase: Funding 2020-2022, PwC Analysis

## Driving Factors of Climate Tech Funding Growth In Indonesia

### Corporate Awareness of ESG

ESG reporting by Indonesian public companies increased by 38% annually during 2018-2021 to 153 issuers in 2021.[6] This is supported by the Financial Services Authority Regulation (POJK) Number 51/2017 concerning Obligations for Sustainability Reports.[7]

### Green Financing

Obtaining funding (including bonds and sharia-compliant bonds) is easier if the business model incorporates the sustainability (ESG) aspect. In 2022, BRI issued green bonds worth IDR 5 trillion, which will be channelled to finance green economy projects.[8]

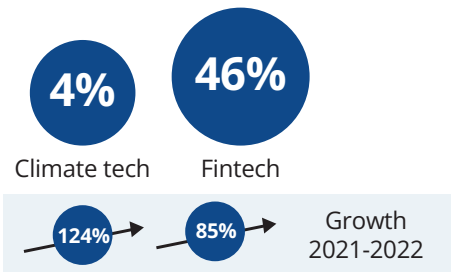
### Affordable Carbon Credit Prices

Indonesia's forest oxygen production is projected to exceed the emission reduction target thus enabling Indonesia to export carbon. Even though it has not been implemented evenly, Indonesia can offer a lower carbon credit price than other countries considering the low carbon tax rate (±7% compared to the global average).[9] Thus, this can potentially become a competitive advantage in international carbon trading.

## Business players have the opportunity to develop the potential of climate tech which has not been widely adopted yet

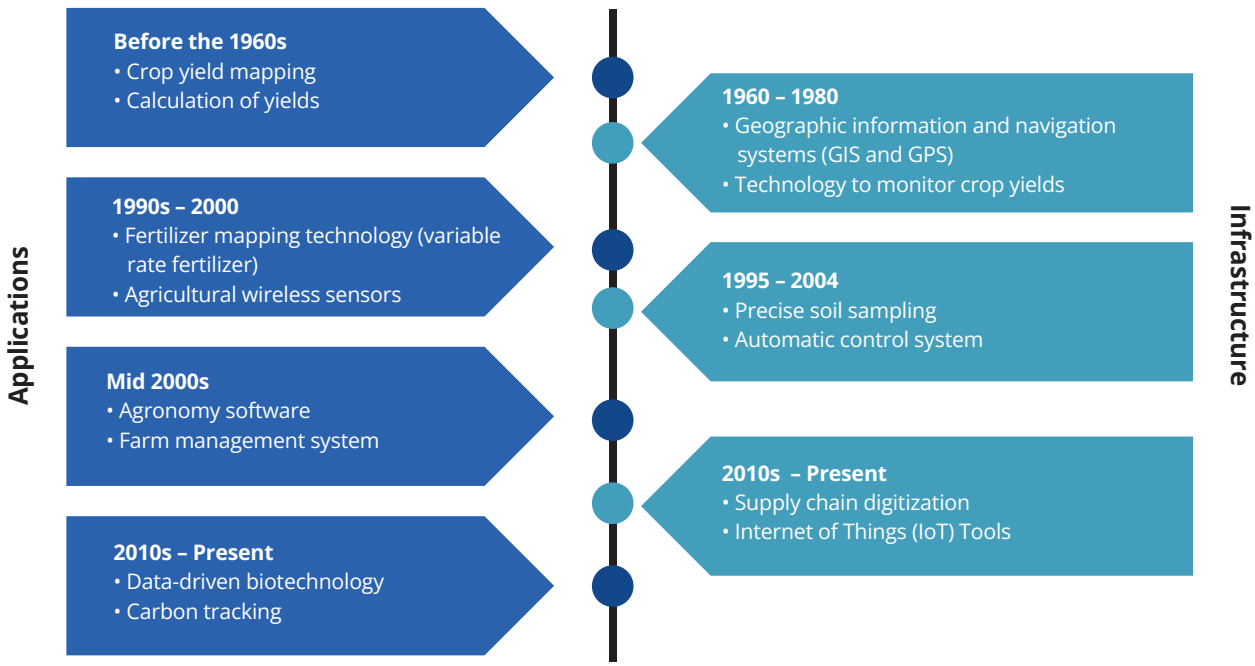
Even though the investment value for climate tech grew rapidly during 2021-2022, it is still lower than other digital sectors, such as fintech. Mass adoption of climate technology will drive the need for infrastructure since the application supports business functionalities, while infrastructure plays a role in supporting the application. For example, crop yield mapping in agriculture would encourage the use of crop monitoring technologies. Opportunities for other application innovations, such as agricultural wireless sensors, will open up with the presence of infrastructure. Currently, the adoption of climate tech in Indonesia is still not widely used, thus opening up opportunities for business players and investors to develop the infrastructure and other climate tech applications.

### Composition of investment value per sector to total digital sector investment in 2022[5]




## Climate Tech Global Infrastructure and Application Evolution Map

Examples of Application in the Agricultural Sector




Source: withleaf.io

Currently, various climate tech business players in Indonesia in 5 sectors focus on GHG reduction, but each sector has different functions in dealing with climate issues. However, technology is still concentrated on adaptation rather than mitigation. This depiction aligns with the PwC study, which found that climate tech, in general, can only contribute 20% of emission reductions.[10]

**Examples of Climate Tech Business Players**

| | | Energy | Forestry | Agriculture | Waste | Industrial |
|---|---|---|---|---|---|---|
| Mitigation | Reduce | XURYA, myECO, POWERBRAIN | | | RECIKI, waste4change | REBRICKS, MYCL |
| | Eliminate | | lindungihutan, MULTI RIMBA BORNEO | | | |
| Adaptation | | SWAP | Jejak.in, lindungihutan | ARIA, Chickin, aruna, gokomodo | rekosistem | |
| Enabler | | | | SUPERKUL, CROWDE | | |
| | | ecoxyztem VENTURE BUILDER | | | | |

*Not a complete list
**The grouping is based on the definition of climate tech by considering the division of sectors in Indonesia's Nationally Determined Contribution (NDC) document, KLHK, 2017

**Information:**

**Mitigation:** having a direct impact on reducing emissions

- Replace or make current technology more environmentally friendly
- Eliminate emissions directly

**Adaptation:** helping adjustment to environmental conditions, which can be done through the following:

- Supporting economic resilience through efforts to implement a sustainable economy.
- Developing ecosystem resilience through management and protection of forest areas, waters, and public spaces.

**Enabler:** a platform that supports the ongoing function of mitigation and adaptation but does not have a direct climate impact. Examples include fintech, venture builders, supply chain intermediaries, and company operational management systems.

The development of the climate tech business model, especially those with a role in mitigation, is currently hampered due to the following:

**1 The need for hardware that requires a large amount of capital[11]**

**Hardware development is urgently needed** in climate tech because software alone cannot change production and consumption processes. However, hardware development **requires a massive amount of funding and a longer time frame** to be accepted by the market.

**2 Lack of connection with experts regarding green technology [12]**

**Experienced technical climate tech personnel** in Indonesia **are hard to find** because the **market** tends to be **reactive**. Thus, it is difficult for climate tech businesses to **find a business model** and **commercialize their products** properly.

With the existing conditions, there is an opportunity for business players, as the main driver of the climate tech sector, to gain the advantage, especially in sectors that do not have a solution yet, as illustrated in the Climate Tech Example Business Players map above. However, collaboration between business players, investors, and the government is needed to actualize future growth.

**Climate Tech Business Players**
Develop technology-based innovations (hardware and software) to solve specific issues. This balanced innovation can increase climate tech adoption and economies of scale.

**Government**
Form a climate tech innovation hub, a collaboration facility between business players, investors, and experts. This hub can accelerate the process of going to market for climate tech products.

**Investors**
Provide funding to climate tech business players to accelerate the sector's growth. Acceleration programs can be carried out through competition (for example: Climate Impact Innovations Challenge by East Ventures and Temasek Foundation).

## Energy: Climate tech business players can accelerate the implementation of renewable energy and increase the efficiency of energy use

Energy utilization will still depend on non-renewable energy until 2027. Even so, new and renewable energy (NRE) plays a role as a driving factor for the growth of the energy sector.

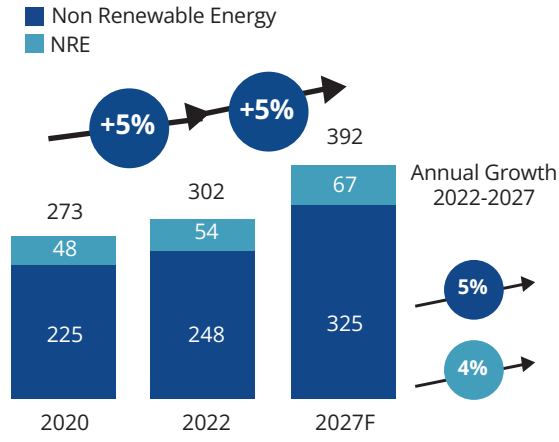
**NRE potential**

- The NRE generating capacity grows 4.5% per year until 2027[13]
- Industry players are starting to switch to using NRE with an annual growth of 12% in 2019-2021, where 38% of energy consumption comes from the industrial sector[14]

**Government Support**

- Currently, 40% of the electricity network is on Java island, indicating the uneven distribution of electricity on other islands[15]
- The government is developing an archipelago solar energy program, especially in the Foremost, Outermost, and Disadvantaged (3T) regions, with an integrated Solar Power Plant (PLTS) budget of IDR 94.4 billion in 2023[16]

**Indonesian Energy Production**
in Terra Watt hours (TWh), 2020-2027




Source: Fitch: Indonesia Power Report

### However, 3 things hindering the growth of NRE

1. The carbon tax policy has been postponed until 2025, considering the potential for global economic crises.
2. Energy losses, defined as energy lost in the transmission process, grow 5.2% per year to reach 34 TWh in 2027.[17]
3. NRE rates tend to be 1.25–4x more expensive than non-renewable energy rates.[18]

Climate tech business players in the energy sector have the opportunity to accelerate NRE adoption and increase energy efficiency. Therefore, there are 2 main recommendations for business players:

**Renewable energy development in the 3T region**

- In the NRE development strategic map, at least 10% of rooftop solar power establishments will be developed by the private sector in 2024;[19]
- The target of rooftop PLTS is focused on subsidized-electricity consumers, especially in areas without access to electricity.

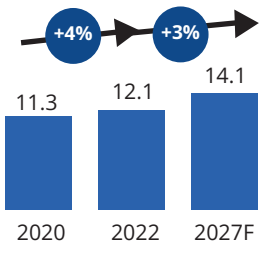
**Collaboration reduces the impact of energy losses[20]**

India experienced an energy loss of 21% in 2019, which was larger than the ideal score of 6-8%.[20]

In 2022, India's Ministry of Energy started to collaborate with 7 technology companies to develop AI-based electricity meters to monitor electricity usage more accurately.[21]

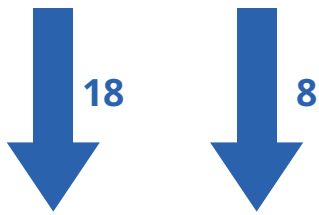
## Forestry: Empowerment of forest monitoring and management technology can overcome deforestation and forest degradation problems

**Indonesian Forestry Production Value**
in US$ Billions, 2020-2027




Source: Euromonitor

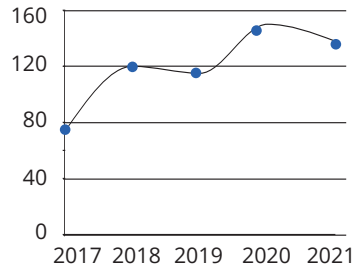
**Decrease in Indonesia's Forest Area 2020-2022[22]**




thousand hectares of Protected forest

thousand hectares of Production forest

**Illegal Forest Activities Number of Cases**




Source: KEMLU, KEMENLHK

The forestry sector not only plays a role as a source of income but also as a control for GHG increases. However, Indonesian forestry is still facing challenges related to deforestation and degradation triggered by illegal forestry activities. Climate tech business players have the opportunity to overcome this.

**Forest Monitoring System**

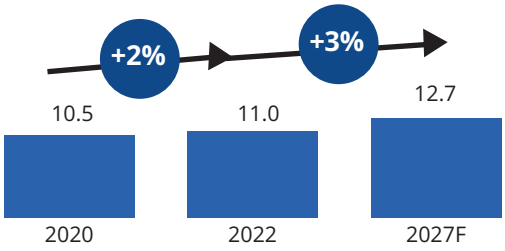
The Utilization of satellites, drones, thermal sensors, and image-based inspection technology (machine vision) as an early warning system and monitoring of illegal activities in forest areas.

**Forest Carbon Management**

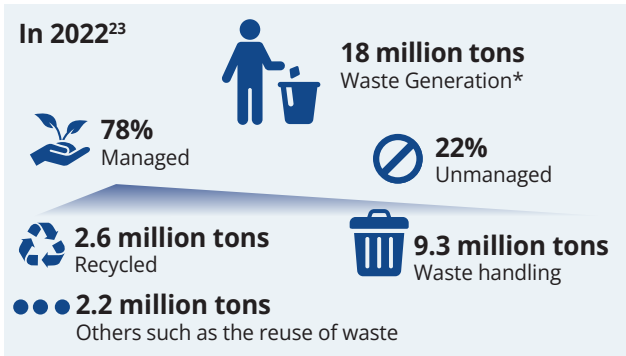
Provision of software to accurately calculate the impact of deforestation as an infrastructure for implementing carbon trading in 2025, which has been regulated in the Minister of Environment and Forestry Regulation 21/2022 regarding the mechanism of carbon trading.

## Waste: Opportunity for business players in waste management because 22% of the waste produced is still unmanaged

### Indonesian Waste Management Production Value
in US$ Billions, 2020-2027F

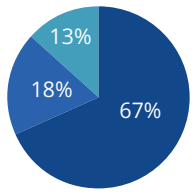



Source: GlobalData




* Waste generation: the amount of waste generated in a certain period
** Waste accumulation: the amount of waste that has accumulated

### Waste Type
in %, 2022




By 2022, waste accumulation** in Indonesia reached 70 million tons.[24] There are several business potentials that can be explored:

Souce: SIPSN MENLHK

**Waste Collection**

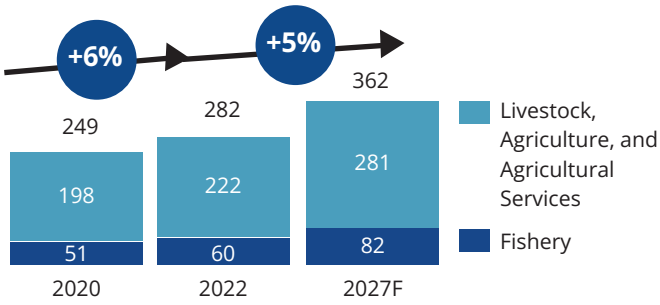
Ensure that waste accumulates at the management center based on its types, such as the separation of medical waste and hazardous and toxic materials that require special handling. Waste collection can be done using IoT sensors to sort and monitor the volume of trash.

**Recycling Facility**

Building management facilities that can convert waste into new products such as recycled plastic, asphalt, energy, handicrafts, etc.

## Agriculture: Potential climate tech development in every agricultural value chain in Indonesia

### Indonesian Agricultural Production Value
in US$ Billions, 2020-2027F




Source: Euromonitor

2 main factors drive the increase in the economic value of agriculture:

**High Food Consumption Rate**

Indonesia is the largest food market in Southeast Asia, with the potential to grow 8.5% annually until 2027,[25] accelerated by population[26] growth and online food purchases.[27]

**Increase in Food Exports**

The value of agricultural and fishery exports in 2022 rose 6% from the previous year to US$ 6.9 billion, [28] which pushed the acquisition value per quantity to be higher.

However, the agricultural sector still faces various challenges in each supply chain:

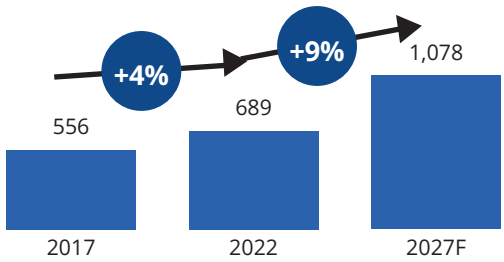
| | Pre-Production | Production | Distribution |
|---|---|---|---|
| Agriculture | **Difficulties in Accessing Financing** People's Business Credit (Kredit Usaha Rakyat/KUR) is only received by <1% of smallholder farmers[29] due to the low income of farmers (35-40% lower than the average regional minimum wage)[30] | **Decrease in Land Area** Reduction of agricultural land by 150-200 thousand hectares per year[31] due to land conversion | **Long Supply Chain** The profits that farmers receive are only 10-20% of the selling price in the market due to inefficient supply chains[32] |
| Fishery | **Low Technology Adoption** Indonesian fishermen are dominated by small fishermen who have not used GPS or a navigation system in sailing | **Illegal Fishing** Cases of Illegal, Unreported, and Unregulated (IUU) fishing result in losses of around US$ 3 billion per year[33] due to a lack of oversight | **Limited Capability to Handle the Fish Catch** The cold storage locations are limited, which results in a decrease in the quality of the catch, causing fishermen to sell produce at low prices to collectors |

There are **3 main solutions** that climate tech businesses can offer in dealing with these challenges:

| 1 Financing Solutions | 2 Technology Adoption | 3 Trade Intermediary |
|---|---|---|
| Providing financing that accommodates micro business players, such as a joint responsibility payment system (shared costs in a community group) | The utilization of technology such as drones, satellite mapping, management systems, automatic fish/poultry feeders, and fertilization systems to increase productivity | Simplification of supply chains for agricultural and fishery products as well as providing storage and sales equipment to the market |

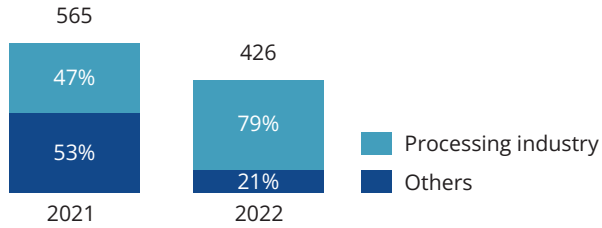
## Industrial Process: Green industry implementation is expected to increase business efficiency and productivity

**Indonesian Industrial Process Production Value**
in US$ Billions, 2017-2027F




Source: EMIS, PwC Analysis

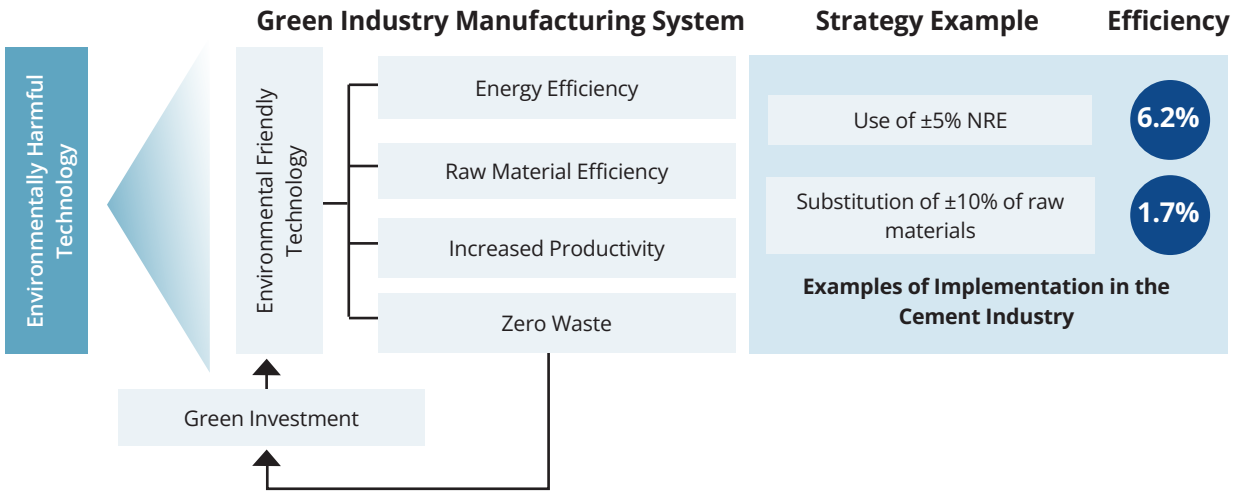
**Indonesia's Emission Load**
in Tons, 2021–2022




Source: KEMENLHK

In 2021, industrial processes contributed 19% to Indonesia's GDP.[30] However, industrial processes are the largest contributor to emission loads (NOx, $SO_2$, PM, and Hg combined). Green industry implementation as an industry that considers aspects of sustainability in its production process is expected to balance economic growth while reducing environmental damage.

### Case Study: Green Industry Implementation



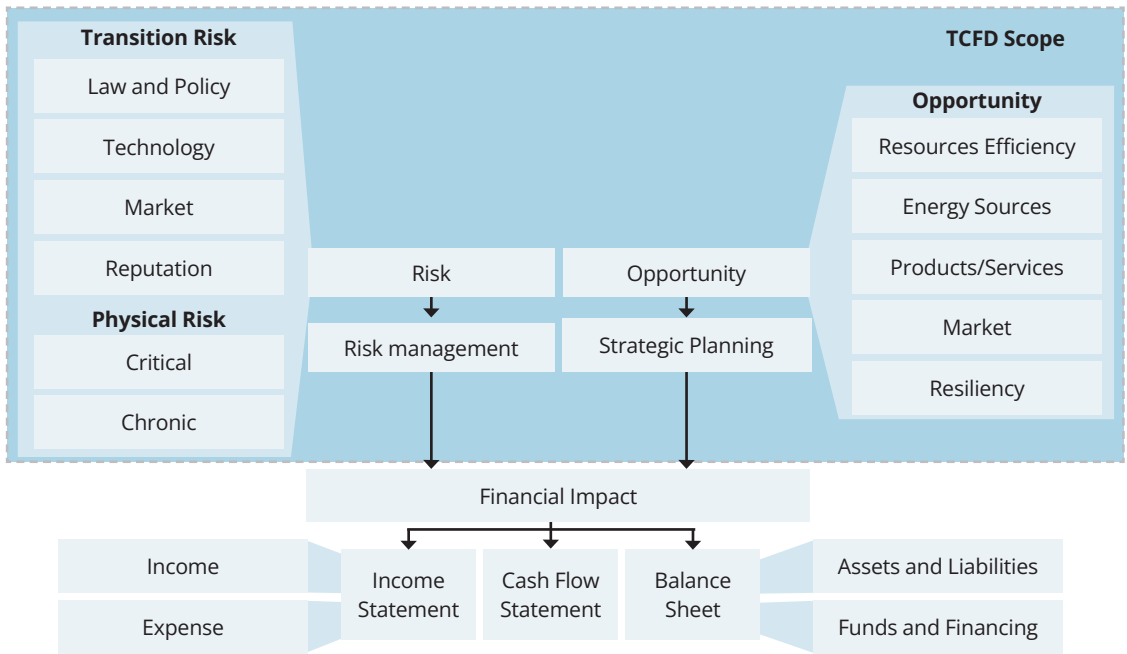

Source: Kemenperin Presentation: Green Industry Scheme Implementation in Indonesia, PwC Analysis

Business players in the industrial process sector can take advantage of environmentally friendly technologies, starting by using the NRE to the construction of facilities using a smart building system. This technology can simplify decision-making, increase efficiency, and reduce the cost of losses due to production waste.

## To identify business risks and opportunities related to climate, business players can make use of the Task Force on Climate-related Financial Disclosures (TCFD)

Company participation in tackling climate change is usually stated in a sustainability report. The TCFD framework can help prepare structured reports to map targets, performance, and sustainability risks that affect company performance, thereby facilitating investor decision-making.

**Climate-Related Risks, Opportunities, and Financial Impacts**




Source: Principles for Responsible Investment

The formulation of recommendations in the TCFD document considers 4 core elements regarding how the organization operates: governance, strategy, risk management, as well as metrics and targets. These recommendations need to be supported by information that can help investors and other readers understand how business players assess climate-related opportunities and challenges.

**TCFD Core Elements**


Source: Recommendations of the TCFD Final Report

*BoD = Board of Directors (includes the supervisory and directors board)
** KPI = Key Performance Indicators

| Element | Example of Information Disclosure |
|---|---|
| **Governance**<br>Organizational management of climate risks and opportunities | • Process and frequency of reporting climate issues to the Board of Directors (BoD)*<br>• Organizational structure responsible for climate issues |
| **Strategy**<br>Steps to address climate-related risks and opportunities | Explanation regarding the impact of climate-related risks and opportunities on the company's business, strategy, and finances (for example, products and services, potential for M&A, access to financing) |
| **Risk Management**<br>Identify climate-related risks | • Explanation of risk management (mitigation, transfer, treatment, and control) processes<br>• Definition of terminology used in the risk management framework |
| **Metrics and Target**<br>Metrics and strategic achievement targets on climate issues | • Targets must be accompanied by timeframes and key performance indicators (KPI**) used to measure success<br>• In companies that are closely related to climate issues, it is necessary to consider explanations related to the impact of metrics on remuneration policies |

Climate tech can help the government achieve its emission reduction target by 2030. There are 5 main sectors that receive special attention for emission reduction efforts: namely energy, forestry, waste, agriculture, and industrial processes. Appropriate technology is the main key to development in each sector. In addition, business players can use TCFD as a corporate sustainability reporting framework and make it the basis for calculating the climate impact on company finances.

05

# Recommendation: Achieving Digital Equity Collectively

# Indonesia's Digital Economy in 2023: Equitable Digital Nation

Global geopolitical tensions and economic uncertainties in 2022 caused instability in the financial condition of digital businesses. The majority of business players were more cautious going into 2023 and this sentiment persists right now. In spite of this, the digital economy sector is projected to continue growing due to the massive market potential and the lingering innovation possibilities.

| 5.3% | 22.2% | 10% |
|---|---|---|
| Indonesia's YoY GDP growth 2021-22[1] | Indonesia YoY digital economy growth 2021-22[2] | National EV-DCI score YoY change 2021-22[3] |

## Indonesia's Digital Sector Performance in 2022

The increase in the EV-DCI score indicates that digitalization is advancing in most regions. Among the contributing factors to this advancement are the development of ICT infrastructure across regions, an increase in the level of awareness, and adoption of digital applications in the society, especially e-commerce and fintech apps.

As discussed in the previous section, **robust household consumption** and **increasingly widespread digitalization trends** support the growth of Indonesia's digital economy. Household consumption grew 4.5% from 2021 to 2022, driven, among others things, by the easing of community activities restrictions enforcement (PPKM) and an accommodative monetary policy because Bank Indonesia's interest rate remained low until mid-2022. Structurally, the increase in household incomes and sustained rise in the working-age population continued to provide the underlying support for consumption growth. At the same time, the level of public adoption of digital applications continues to improve. The internet penetration rate in Indonesia has reached 77%, an increase of 5.2% from 2021. Furthermore, the average internet usage duration of Indonesian is higher than the global average.[4]

## Realization of 2023 Growth Requires Digital Sector Resilience

Both the Indonesian conventional and digital economies have favourable prospects. Bank Indonesia projects Indonesia's economic growth to be in the range of 4.5 – 5.3%, with inflation dropping to 3.0±1% in 2023.[5] On the other hand, Indonesia's digital economy is projected to increase by 19% per year until 2025, driven by the internet penetration rate which currently has not reached its peak, a large unbankable population, as well as innovation opportunities that are ready to be tapped.[2]

### Realization of 2023 Growth Requires Digital Sector Resilience

**Optimism and Priorities**

**87%** of digital business players are **optimistic** about **Indonesia's** ability to face global **challenges** due to the resilience of the industrial sector and household purchasing power.

**97%** of digital businesses **prioritize increasing revenue and profitability** in 2023 over other aspects, such as pivoting to new markets and fundraising.

**Concerns and Challenges**

**62%** of digital business players believe that Indonesian people's **low digital literacy** poses a **challenge** to the development of the digital economy in 2023.

**56%** of digital businesses are worried about the dynamics of **Bank Indonesia's interest rate** in 2023. This is in line with the finding that **59%** of digital businesses consider **fundraising** a priority in 2023.

Source: EV-DCI 2023 Digital Companies Survey

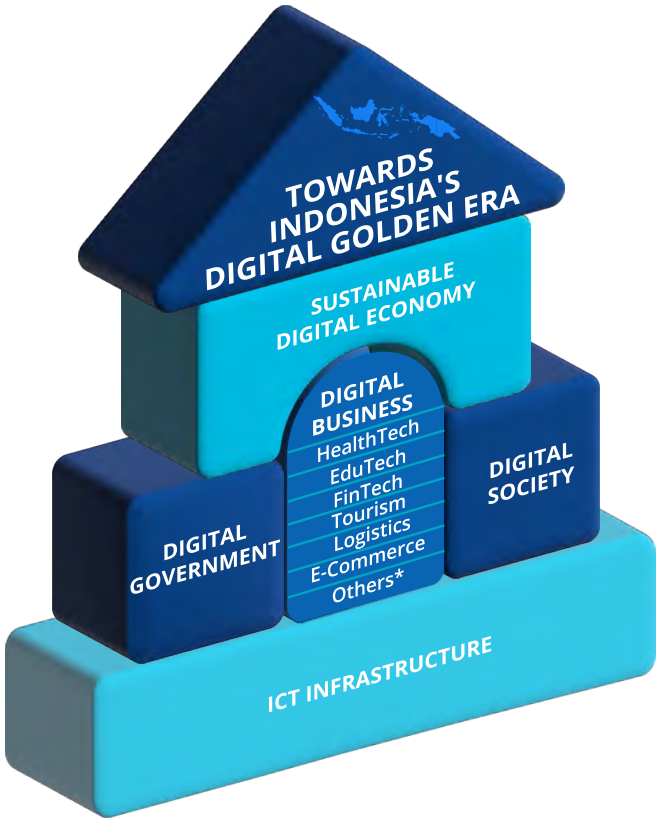
There were several opportunities that were not fully maximized in 2022 and could become key in 2023, namely the following:

- Business expansion into tier 2 and 3 areas with growing market potential through the omnichannel approach, which was exemplified by e-commerce, as well as online to offline business development by edtech;
- Collaboration with platforms that have been planned and implemented by the government, such as National Logistics Ecosystem (NLE) in the digital logistics sector, SATUSEHAT for health tech businesses, and e-Catalog for the e-commerce sector;
- The implementation of advanced technology such as artificial intelligence (AI), that could enable tourism tech businesses to provide better destination management and climate tech player to solve specific climate issues.

The optimism of Indonesian digital entrepreneurs must come hand in hand with the active role of the other stakeholders in the digital ecosystem. To create a resilient digital economy, all stakeholders in the digital economy need to work collectively to provide a valuable offering for the consumers.

## Getting Closer towards Indonesia's Digital Golden Era

Witnessing the potential of Indonesia's digital economy that is projected to reach US$ 360 billion in 2030, EV-DCI 2022 report provided building blocks that serve as a framework to assist stakeholders in building toward Indonesia's digital golden era.[2]




### Advancing the Development of the Digital Economy

As a foundation, evenly distributed ICT infrastructure is fundamental to enabling the digital economy across the country. Digital government, through system integration and strong regulations, together with a technologically-savvy digital society, will drive digital business growth. Digital business block consists of startups that initiate breakthroughs with technology or conventional businesses that pivot to a digital mode of business. The role of investors in digital business is also crucial, as showcased by providing startups with funding and coaching. Collaboration between government, business, and digital society can support a sustainable digital economy by implementing Environmental, Social, and Governance (ESG) principles. The development of Indonesia's digital economy in 2022 shows that all stakeholders have to advance and accelerate the development of each building block to strengthen them as pillars of the digital economy.

### Notable Achievements in 2022

#### ICT Infrastructure

One of the objectives set for Indonesia's digital golden era is the accelerated development of evenly-distributed ICT infrastructures. During 2022, the government has taken several measures include the following:

1. Building 7,482 Base Transceiver Stations (BTS) in frontier, remote and disadvantaged (3T) areas to improve signal services[6]
2. Continuing the construction of Satria satellite and Palapa Ring Integrasi to expand internet access
3. Expanding the 5G network to improve internet quality and speed[7]

The program implementation resulted in an increase in internet users by 5% YoY (from 213 million to 224 million people) in 2022.[8] Even so, the government still needs to intensify infrastructure development, especially in the 3T areas, to encourage equity. In addition, it is necessary to expand the quality of the internet to 5G to boost the adoption of various technologies, including the Internet of Things (IoT) and AI.

## Digital Government

One of the objectives of Indonesia's digital golden era is a digital government that is efficient and transparent. Therefore, the government pushed several breakthroughs during 2022 include the following:

| | Initiative | Achievement |
|---|---|---|
| 1 | Digitalized public services to encourage efficiency, effectiveness, and transparency | NLE policy implementation progress has reached 90.5% of the initial plan[9] |
| 2 | Started the construction of the National Data Center (PDN) facility in Bekasi[10] | The implementation of the SATUSEHAT platform, which provides integration of health data, has begun in Java and Bali[11] |
| 3 | Passed the Personal Data Protection (PDP) Law[12] | Businesses have started to take certifications required to meet the standards of the PDP Law, such as ISO 27001 and ISO 27701[13] |

In 2023, the government needs to collaborate with other stakeholders, including businesses, to advance these programs in order to succeed in digitalizing public services and integrating data nationally. In addition, the government needs to reinforce the PDP Law with detailed follow-up regulations, such as cyber law.

## Digital Business

Digital business players spearhead the digital economy. They produce digital transactions by developing the latest solutions for consumers' daily lives. Several government and digital business initiatives that had an impact on increasing digital transactions in 2022 include the following:

| | Initiative | Achievement |
|---|---|---|
| 1 | MSMEs digitalization program, such as ePayment Bank Indonesia, Adoption of Digital Technology 4.0, and Digitalisasi Pasar Rakyat by Tokopedia | The number of digitalized MSMEs reached 20.76 million in 2022, an increase of 4.36 million (26.6%) YoY[14] |
| 2 | Business development to tier 2 and 3 areas, such as the omnichannel and social commerce business models | The digital economy grows 22% from 2021 to 2022, higher than Indonesia's overall economic growth (5.3%)[2] |
| 3 | Technology that increases conventional businesses' performance and efficiency, such as payment gateways by fintech that facilitate intercompany transactions | There are 3 new fintech startups with "Unicorn" status (companies with a valuation exceeding US$ 1 billion) in 2022, namely Kredivo, DANA, and Akulaku[15] |

The above achievements need to be appreciated considering the decline in startup funding that has occurred since the beginning of 2022. Strengthening business fundamentals and enhancing collaboration between stakeholders will be crucial going forward.

## Digital Society

From society's perspective, the pathway towards the digital golden era is by expanding the adoption of ICT, especially in areas related to the digital economy. Several achievements towards this direction in 2022 include the following:

| | Initiative | Achievement |
|---|---|---|
| 1 | Relawan TIK, a non-profit organization (NPO), socialized digital literacy to tier 2 and 3 cities with activities such as Pandu Digital and Festival TIK | The EV-DCI 2023 digital literacy median rose 20% YoY and recorded a score 75.6[3] |
| 2 | The use of digital payments for transactions and for making payments for public services | Indonesia's financial literacy index reached 50%, up 12% in the 2019-2022 period, and the value of digital payment transactions rose 11% YoY[17] |

In order to reach the digital golden era, ICT adoption must continue to increase. In addition, it is also necessary to improve the quantity and quality of digital talent who can implement the latest technology.

### Sustainable Economy

To achieve a sustainable digital economy, it is necessary to apply ESG principles in the economic activities. Initiatives that have been carried out in 2022 include the following:

| | Initiative | Achievement |
|---|---|---|
| 1 | Ministry of Finance, UNDP, and World Bank launched ESG Framework and Manual on Infrastructure Financing[18] while OJK published the Green Taxonomy[19] | ESG evaluation of government infrastructure projects[20] |
| 2 | Issuance of Presidential Regulation 112/2022 to accelerate renewable energy development | The installed capacity of renewable energy reached 12,557 MW, exceeding the target of 12,529 MW[21] |
| 3 | Investment management companies are developing ESG-based financial products, while banks and fintech are increasing green financing | The number of ESG-based mutual fund products increased from 14 to 21 products with a rise of 2.3% in the managed fund*[22] |

*December 2021-November 2022

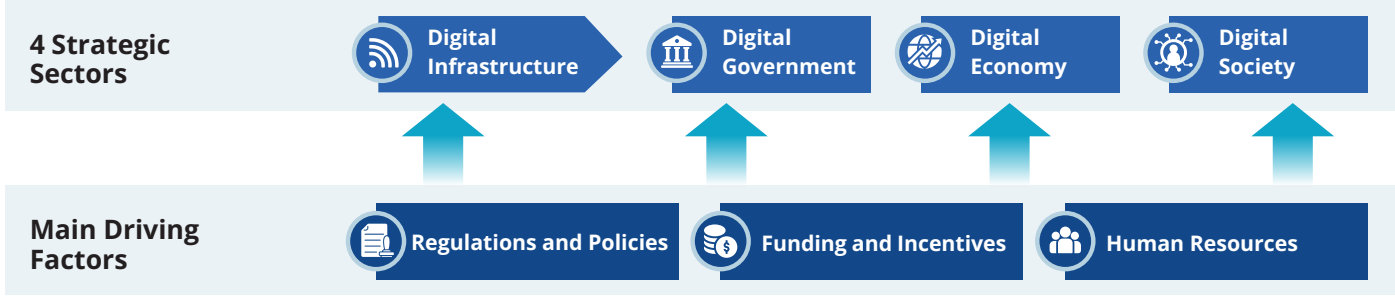
Furthermore, the benefits of adopting ESG need to be widely disseminated to grow the adoption rate of ESG implementation and reporting in companies that are not required by OJK Regulation No. 51/POJK.03/2017 yet. These include startups that are not public companies yet. The government is also expected to continue to develop policies that encourage sustainable digital businesses. In addition, community and investor support for a sustainable business is very important in order to motivate other business players to implement ESG in their businesses.

## Recommendations for 2023 Digital Economy Strategy

In 2023, the right strategy is needed to maintain the development of Indonesia's digital economy. Stakeholders can consider four key factors as the strategic direction for 2023: (1) equitable digitalization, (2) strengthen business fundamentals, (3) increase collaboration, and (4) implementation of ESG.

### Equitable Digitalization: Infrastructure development needs to go hand-in-hand with the enhancement of human resources

The government continues to accelerate the nationwide digital transformation to transform Indonesia from a consuming-oriented country to a manufacturing-oriented country. In line with the EV-DCI 2022 building blocks, the four strategic sectors of digital transformation will not function well without the main driving factors of harmonious regulation, supportive funding, and qualified human resources.




Source: Kemenkominfo Regulation Number 2 Year 2021

Digital transformation indirectly enhances national economic equality. As an example, this can be seen in the e-commerce platform which allows merchants in tier 2 and 3 areas to offer products nationwide. Therefore, stakeholders must continue to advance digitalization across Indonesia.

## Digital Infrastructure
The need for equally-distributed access and quality internet networks network as well as stronger cyber security

| | Government | Digital Players and Investors | Society | Potential Impact |
|---|---|---|---|---|
| **Infrastructure Development** | Supervision of ICT infrastructure projects (example: Satria satellite, BTS, 5G network) to complete them on time | Private sector participation in supporting ICT infrastructure development projects through funding | | Acceleration of equitable internet access throughout Indonesia |
| **Data Protection Implementation** | Establishment of an independent Personal Data Protection (PDP) authority that incorporates the following:<br>• Build close relationships with private business players and foreign PDP agencies so that policies can adapt to changes<br>• Provide information transparency through regular publications | Adjustments to the PDP Law through the following:<br>• Implementation of data management standardization based on required certifications<br>• Development of data governance and control (example: use multi-step authentication security feature for data access and organize privacy training for employees to safeguard consumer data) | Use the internet wisely:<br>• Participate in government's cyber security programs (example: reporting fraudulent accounts on the Kemkominfo's Cek Rekening website)<br>• Filter information obtained online<br>• Improve personal data protection | Improve security for consumers' personal data |

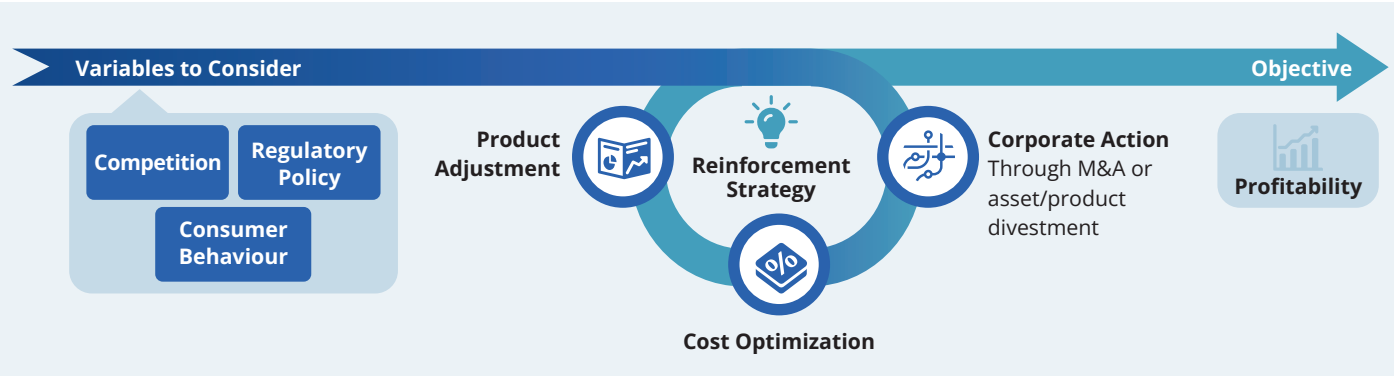
## Digital Government, Economy, and Society
The need to increase digital literacy and digital economic equity in tier 2 and 3 cities

| | Government | Digital Players and Investors | Society | Potential Impact |
|---|---|---|---|---|
| **Increasing Digital Literacy** | • Intensify the creation of digital literacy educational content on social media | • Educate target consumers to properly apply the services/ products offered (example: financial literacy education by digital fintech in collaboration with Relawan TIK) | • Improve digital capabilities and skills according to the skills required by employers (example: utilizing materials available on the internet to learn to code) | • Increase society's digital literacy<br>• Improve the quality of human resources by increasing digital capability and efficiency<br>• Increase the number of digital talents with advanced skills due to the availability of facilities/job opportunities that match their expertise<br>• Mitigate risks due to inappropriate use (example: fintech lending lender's nonpayment) |
| | • Collaborate with multinational companies engaged in the fields of science, technology, engineering and mathematics (STEM) to create jobs in the country | • Facilitate human resources upskilling such as by providing internship programs at home and abroad, as well as cooperation with the Kampus Merdeka especially in the ICT field | | |
| | • Improve the quality of human resources through improving the quality of academics and the STEM curriculum | | | |

| | | | | |
|---|---|---|---|---|
| **Equitable Distribution of Government and Regional Digitalization** | • Participate in digital business acceleration efforts (startup and MSMEs)<br>• Digitize public administration services through collaboration with startups | • Leverage digital platforms and omnichannel business models to reach tier 2 and 3 cities | • Utilise technology as a productive tool rather than only for consumption (example: building an online business using social media) | • Equitable growth and utilization of economic potential in tier 2 and 3 cities<br>• Growth of digital activities that can increase digital economic value<br>• The addition of digital business players has increased the number of digital transactions<br>• Increase in efficiency in the implementation of public administration |

## Strengthen Business Fundamentals: Adjusting company products and services to anticipate market dynamics

In 2023, The Fed (USA's central bank) is predicted to continue raising the interest rate. This will cause an increase in the cost of capital; therefore the downward trend in startup funding in 2022 could continue in 2023. Even though Indonesia's economy shows resilience compared to global conditions, startups must adapt towards a business model that prioritizes profitability. Thus, startups need to implement strategies that strengthen business fundamentals to achieve profitability.




**First, product adjustment.** Startups can consider the changes occurring from the consumer, competitor, or the government ends to determine whether product adjustment is required to achieve product-market fit.

As an example, from the government end, business players in each sector can consider the following programs and regulations. Some of the programs and regulations have started in previous years but will continue in 2023.

### Government Key Programs and Regulations in Each Sector

| ICT | E-Commerce | Logistics | Fintech |
|---|---|---|---|
| • Development of National Data Center in 4 locations<br>• Palapa Ring<br>• PDP Law | • Digitalization of 30 million MSMEs | • NLE | • Digital Rupiah<br>• National Strategy on Indonesian Financial Literacy |
| **Health** | **Education** | **Tourism** | **Climate** |
| • SATUSEHAT | • Kampus Merdeka<br>• Kurikulum Merdeka | • 5 Super Priority Tourism Destinations (5 Destinasi Pariwisata Super Prioritas) | • Indonesia Green Climate Fund<br>• OJK Regulation No. 51/2017 concerning Sustainability Reporting Requirement |

In fintech, for example, the plan to introduce the Digital Rupiah currency by Bank Indonesia opens up many opportunities for the development of new business models. Cryptocurrency-based products that previously could not be marketed due to regulatory restrictions become increasingly interesting to be explored.

Regarding health sector data digitalization by SATUSEHAT, telehealth startups can integrate their data and services into the government ecosystem. This policy also opens up the door for the development of digital technology-based products. For example, companies in the healthcare industry could develop IoT and AI-based products for preventive and curative purposes.

**Second**, other than considering product adjustments, profitability can be obtained through **cost optimization**. Cost optimization can be the first step for a startup when adjusting cash flow to mitigate the impact of reduced funding in 2022. This strategy can be carried out by reviewing cost components that have a high composition, such as incentives given to customers and employee salaries/benefits. Cost optimization strategies have been implemented by many e-commerce players, such as Shopee which has reduced sales and marketing costs by 16% in 2022.

**Third, consider corporate actions through mergers and acquisitions (M&A) or divestment of assets, products or services.** Startups with sufficient funds that seek to adapt their products to the changing market landscape swiftly could consider M&A. On the other hand, M&A could strengthen the company's fundamentals through the synergies generated after the company's merger. One of the biggest M&A actions in the Indonesian startup community is the merger between Gojek and Tokopedia. Gojek, which is a transportation startup, joined Tokopedia, which is an e-commerce business player. This merger allows the two companies to provide comprehensive services to their users to maximize the customer-lifetime-value.

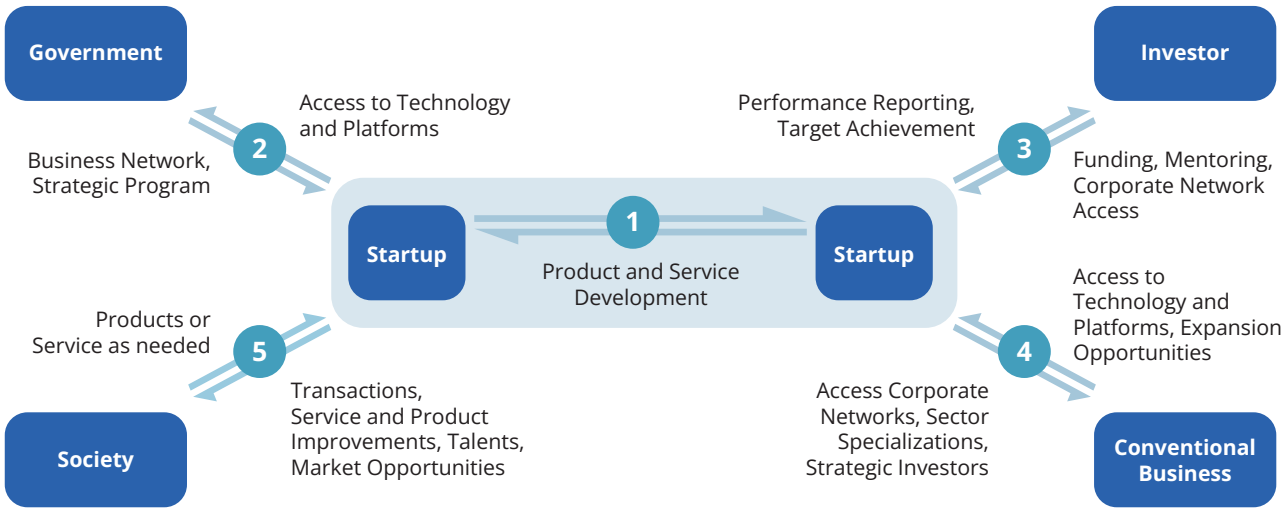
For startups that have assets, products or services that are unproductive and have the potential to reduce profitability, divestment can be an option. For example, Traveloka closed its food delivery service after operating for about 1 year.

## Increase Collaboration: Accelerating and strengthening mutually beneficial cooperation

In general, there are 5 stakeholders in the digital economy ecosystem, namely the government, the public/society, investors, startups, and conventional businesses. Each stakeholder is interconnected, so collaboration between related parties is needed to encourage sustainable digital economic growth.

Startups have a central role because they deal directly with all related parties and become the main players in the digital economy through the transaction value (GMV) they generate. Therefore, startups need to enhance collaboration with other stakeholders to accelerate digital economic growth.

**Diagram of Relations Between Stakeholders in the Indonesian Digital Economy Ecosystem**



The previous diagram provides an overview of the value offering of each stakeholder. The form of collaboration between stakeholders can be further explained as follows.

1. Startups could provide services for other startups. For example, fintech can offer payment services to make e-commerce transactions easier.

2. With the government, startups could leverage the opportunities that come from programs or policy implementation, such as SATUSEHAT promoted by the Ministry of Health. On the other hand, the existence of digital businesses with technology-based products and services enables the government to improve it employees' productivity and carry out community development and services.

3. With investors, startups can acquire funding access to develop their businesses. Digital businesses can provide transparent and accountable performance reporting. For investors, the presence of startups with new business ideas provides portfolio diversification opportunities in businesses with high potential going forward.

4. With conventional businesses, startups can provide solutions through their technology, such as software as a service (SaaS) solutions. Conventional businesses that have experiences operating in a particular industry can also help digital businesses to expand their market access and expand their industry specialization. Furthermore, conventional businesses could also act as strategic investors for startups to seek synergy in improving performance.

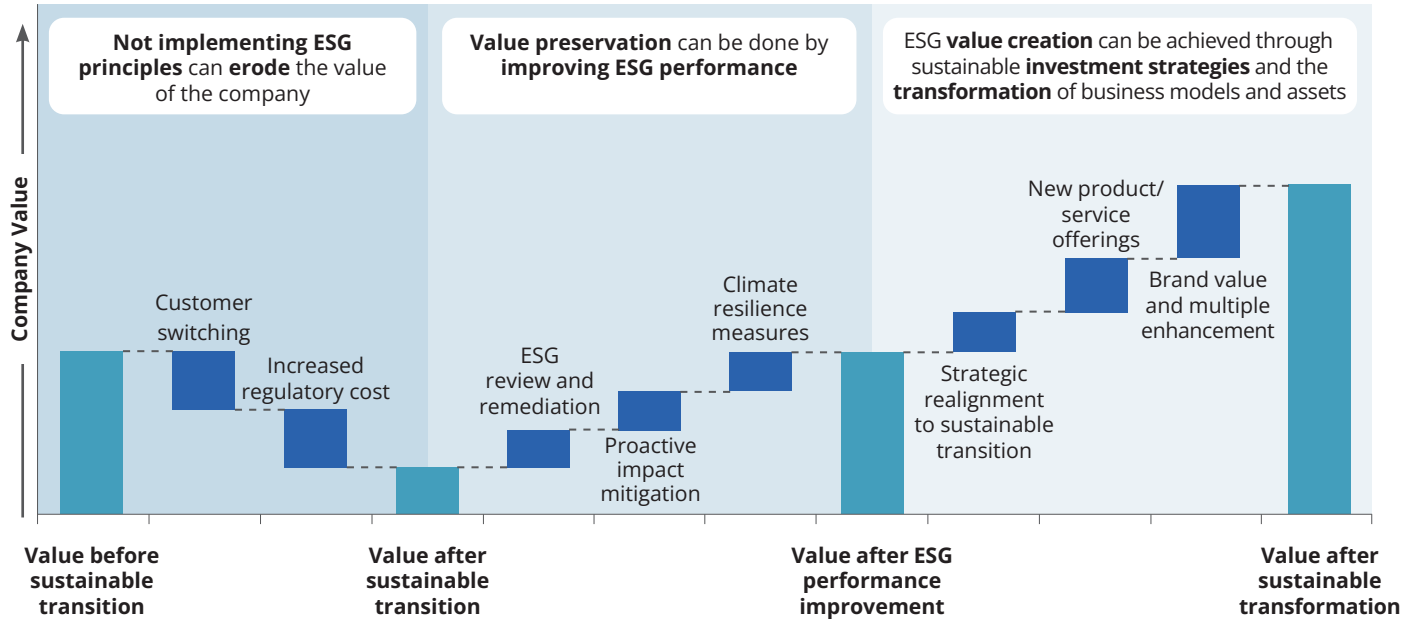
5. With society, startups can create products and services to support the development of MSMEs that seek synergies to improve their performance and to increase the capability of Indonesian digital talent. In addition, startups can take advantage of the viral marketing phenomenon resulting from social media activities for consumer acquisition purposes. Society would experience additional benefits when startups provide product/service offerings that suit the needs and desires of society.

## Implementation of ESG: Sustainable development and strengthening corporates' value

Implementation of ESG principles is one of the main trends shaping the development of the digital economy globally. While staying profit-minded, companies should take responsibility for the impact of their operations on the environment and society, as well as establish good corporate governance. At the same time, it is also crucial to note that investors, both domestic and foreign-based investors, have also taken ESG implementation into consideration in the funding process.

**Dynamics of Corporate Value Based on ESG Transformation Journey**

*Illustration only, does not represent actual values

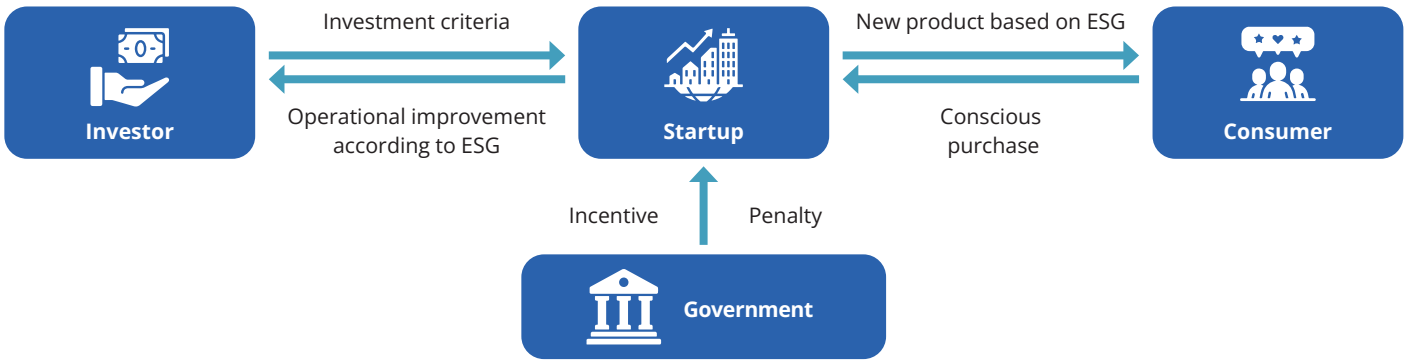



Source: PwC

Without implementing ESG principles, businesses run the risk of losing their customers to competitors or getting fined by the regulators, both of which are detrimental to the company's value. Meanwhile, those who at least evaluate and anticipate the impact of ESG are likely to maintain their valuation. Beyond that, businesses are likely to accelerate valuation growth by adopting and implementing ESG principles, for example, with new ESG-based product offerings.

The application of ESG in digital ecosystems requires the active role of all stakeholders. The government can create policies in the form of incentives for business players who have implemented ESG or penalties as a form of enforcing regulations. On the other hand, investors can provide investment criteria that lead to operational improvements and implementation of ESG-compliant governance as funding requirements. Finally, as consumers, the demand for sustainability-based products can also drive startups to develop products or strategies that are in line with ESG principles.

**The Role of Digital Economy Players in ESG Implementation**




Source: EV-DCI 2023 Chapter 4, PwC Analysis

There are several examples of ESG implementation by Indonesian startups that could impact company value.

| Aspect | Sector | Initiative | Analysis |
|---|---|---|---|
| Environmental | Climate | **Xurya**<br>• Perform installation and maintenance of solar panels on the roof of the client's building<br>• Provide financing for the initial investment in solar power generation infrastructure | • Generate a competitive advantage, by offering digital solutions for climate change impacts |
| | Tourism | **Traveloka**<br>• Plant 40,000 mangrove seedlings in Bali with the Ministry of Tourism and Creative Economy<br>• Become a member of the Global Sustainable Tourism Council (GSTC) | • Conserve environment through actions outside of business activities has the potential to protect company value |
| Social | E-commerce | **SIRCLO**<br>• Empower the economic activities of housewives through expanding job opportunities with the IbuSibuk Orami platform | • Increase the inclusiveness of economic activities for housewives<br>• Increase the engagement rate of Orami user products |
| | Edtech | **Hacktiv8**<br>• Expand class access to various groups through the Income Sharing Agreement (ISA) program | • Expand access to education<br>• Increase the company's value by expanding market and revenue |

| | | | |
|---|---|---|---|
| Governance | ICT | **Peris.ai**<br>• Offer AI-based cybersecurity products | • Generate a competitive advantage through product offerings for companies that want to implement good data governance aspects |
| | **Multiple Sectors** | **GoTo**<br>• Establish a Sustainability Advisory Council to create and oversee the implementation of policies related to ESG<br>• Develop procedures for preventing conflicts of interest, managing donations and sponsorships, and enabling whistleblowing<br>• Implement ISO 27001 and ISO 27701 in a number of subsidiaries in the context of consumer data protection | • Reduce top-up fraud by 97%<br>• Strengthen GoTo's brand value as a company with good governance |

**Tips: Steps to Build Corporate Governance**

| 1. Develop a Governance Framework | 2. Supervise | 3. Follow Up |
|---|---|---|
| • Establish rules and procedures that prioritize the division of tasks<br>• Establish a competent board of directors and commissioners<br>• Develop a risk management and governance framework in business processes | • Form a supervisory and internal audit committee<br>• Evaluate corporate governance periodically based on international frameworks<br>• Uphold a culture of transparency by disclosing important information, such as the ownership structure and financial performance | • Prepare periodic ESG reporting according to the framework<br>• Develop a violation mitigation program (example: whistleblower and anti-fraud policies)<br>• Evaluate the governance system periodically |

Source: PwC

## Summary

The digital economy enables an **equitable economy** in the nation. Starting in 2020, EV-DCI has mapped out the **opportunities and challenges of the digital economy** throughout Indonesia with the hope of encouraging all stakeholders to work together in achieving equity. In the following year, the pandemic generated **momentum to accelerate** digital economic transformation. Continuing in 2022, the distance or score gap between tier 1 cities and tier 2 and 3 cities is getting smaller indicating that Indonesia is starting to move **towards a digital golden era**. At the beginning of this year, global geopolitical and economic uncertainties have affected the development of the digital economy. However, strengthening business fundamentals and implementing ESG principles by stakeholders in the digital economy, while supported by strong collaboration between parties, will undoubtedly form national resilience to realize an **equitable digital nation**.

# Appendix:

This appendix is incorporated with index and survey methodologies, perspectives from a variety of relevant sources, as well as footnote reference. Digital competitiveness profile of 38 Indonesian provinces, complete interviews from various stakeholders, and other important information, can be accessed at the following link:

# Summary Statistics

## SUMMARY OF EV-DCI 2020-2023 STATISTICS (COMPOSITE)

| | 2023 | 2022 | 2021 | 2020 |
|---|---|---|---|---|
| **EV-DCI (Median)** | 38.4 | 35.2 | 32.0 | 27.9 |
| **Spread** | 53.2 | 48.3 | 55.6 | 62.0 |
| **Standard Deviation** | 9.7 | 9.0 | 10.7 | 11.6 |

## SUMMARY OF EV-DCI 2020-2023 STATISTICS, BY SUB INDEX

| | INPUT | | | | OUTPUT | | | | SUPPORT | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2023 | 2022 | 2021 | 2020 | 2023 | 2022 | 2021 | 2020 | 2023 | 2022 | 2021 | 2020 |
| **EV-DCI (Median)** | 40.1 | 36.9 | 36.9 | 31.9 | 31.2 | 30.9 | 26.9 | 23.7 | 50.7 | 46.1 | 39.1 | 34.2 |
| **Spread** | 55.6 | 45.0 | 52.6 | 63.8 | 58.3 | 54.2 | 63.9 | 62.3 | 54.7 | 55.5 | 71.0 | 68.1 |
| **Standard Deviation** | 11.0 | 9.1 | 10.4 | 12.3 | 9.1 | 9.8 | 11.2 | 11.4 | 12.7 | 10.9 | 14.6 | 14.8 |

## SUMMARY OF EV-DCI 2020-2023 STATISTICS, BY PILLAR

| | INPUT | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Human Resources | | | | ICT Usage | | | | ICT Expenditure | | | |
| | 2023 | 2022 | 2021 | 2020 | 2023 | 2022 | 2021 | 2020 | 2023 | 2022 | 2021 | 2020 |
| **EV-DCI (Median)** | 24.2 | 21.8 | 20.9 | 16.3 | 56.9 | 48.3 | 51.2 | 48.5 | 41.8 | 35.3 | 39.9 | 33.7 |
| **Spread** | 79.3 | 67.5 | 58.4 | 77.3 | 61.2 | 57.3 | 70.5 | 68.2 | 71.2 | 46.0 | 53.3 | 80.5 |
| **Standard Deviation** | 16.8 | 14.7 | 14.0 | 18.1 | 12.3 | 12.0 | 15.0 | 15.2 | 12.2 | 12.1 | 11.4 | 14.4 |

| | OUTPUT | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Economy | | | | Entrepreneurship and Productivity | | | | Manpower | | | |
| | 2023 | 2022 | 2021 | 2020 | 2023 | 2022 | 2021 | 2020 | 2023 | 2022 | 2021 | 2020 |
| **EV-DCI (Median)** | 27.9 | 28.5 | 30.8 | 27.2 | 28.6 | 23.6 | 13.5 | 8.4 | 40.1 | 41.8 | 39.8 | 39.0 |
| **Spread** | 57.1 | 63.5 | 72.7 | 79.2 | 100.0 | 98.9 | 99.7 | 88.4 | 30.4 | 32.2 | 37.0 | 37.1 |
| **Standard Deviation** | 10.2 | 11.3 | 12.2 | 13.4 | 18.1 | 19.6 | 19.0 | 18.8 | 6.3 | 7.3 | 7.6 | 6.4 |

| | SUPPORT | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Infrastructure | | | | Finance | | | | Regulation and Capacity of the Regional Government | | | |
| | 2023 | 2022 | 2021 | 2020 | 2023 | 2022 | 2021 | 2020 | 2023 | 2022 | 2021 | 2020 |
| **EV-DCI (Median)** | 62.8 | 64.8 | 54.3 | 46.8 | 32.1 | 23.1 | 25.8 | 20.4 | 49.6 | 54.6 | 35.5 | 40.3 |
| **Spread** | 79.3 | 79.0 | 87.3 | 91.9 | 82.2 | 71.4 | 75.5 | 81.0 | 58.2 | 38.8 | 63.3 | 61.1 |
| **Standard Deviation** | 16.9 | 16.3 | 18.5 | 19.2 | 19.6 | 18.4 | 18.0 | 18.4 | 13.4 | 11.1 | 12.8 | 13.1 |

**Notes:**

- **The median** is the value that divides the distribution of index data for for 34 provinces (or 38 provinces in 2023) into two, after all the indexes are sorted.
- **The spread** is the distance between the highest score and the lowest score, to describe the range of disparities between provinces.
- **Standard deviation** is the value that describes the distance between a province's score data and the average of all for 34 provinces (or 38 provinces in 2023).

# Index Methodology

## EAST VENTURES – DIGITAL COMPETITIVENESS INDEX (EV-DCI)

**EV-DCI 2023** measures and maps the development of digital competitiveness in 38 provinces and 157 cities/regencies in Indonesia as an index. Unlike the previous EV-DCI, EV-DCI 2023 added four new provinces as a result of provincial division.

*The data for the 4 new provinces is calculated from the identification of cities/regencies within them with the data aggregation process according to the indicators forming the EV-DCI index so that new provincial data is formed. This is done because new provincial data is still not available.*

Meanwhile, the selection of 157 cities/regencies refers to a World Bank report entitled "Time to ACT: Realizing Indonesia's Urban Potential" which was published in 2019.

Based on this report, 80 cities/regencies were identified, which make up 28 metropolitan areas and 82 cities/regencies with urbanization rates of 50% or above. However, DKI Jakarta, which comprises 6 administrative regions, is considered as one unit, and therefore the total number of regions analyzed is 157 cities/regencies.

To calculate the EV-DCI in the 157 cities/regencies, a framework and methodology consistent with those applied at the provincial level is used. But, not all indicators used at the provincial level are completely available at the city and regency levels. Due to this limitation, we use provincial data, which is normalized based on the population in each city/regency in proportion to the total population in the province.

Indicators that use normalization as informed above are Loan Using Fintech and Number of Officeless Financial Services Agents (Laku Pandai Agents). In addition, due to the high disparities, especially in rupiah and the disparity between Jakarta and small cities/regencies, a transformation was carried out using logarithms.

Indicators that use the transformation are Total Remuneration and Wage of Information and Communication Sector Workers, Loan Using Fintech, GRDP of the Information and Communication Sector, GRDP of Warehousing, Transportation Support, Post & Courier Subsector, and GRDP of the Financial Services Sector.

Both indexes for 38 provinces and 157 cities/regencies consist of three sub-indexes: Input, Output and Support. Each sub-index consists of three pillars so there are nine pillars that make up the EV-DCI. Each pillar consists of 3-9 indicators, so there are 50 indicators used to compile the index.

### SUB-INDEX 1. INPUT

The development of the digital economy requires specific inputs to help the sector improve in one region and provide the expected output. Sub-index 1 (Input) consists of three pillars that directly enable the development of the digital economy, which is the human resources condition, the level of ICT usage, and the level of consumer expenditure in accessing ICT. In addition to direct inputs, digital economy development also requires indirect inputs that are calculated in the Support sub-index as infrastructure, access to financial resources, and good governance.

**Pillar 1.1 Human Resources**

The development of the digital economy is heavily dependent on the availability of human resources, specifically those who are adept in information and communication technology. This pillar consists of five indicators, namely the number of study programs related to digitization, such as Informatics Technology, Computer Science, Mathematics, Statistics, and other study programs; the number of lecturers in digitalization-related study program; the number and growth rate of students with digital capabilities; and the Digital Literacy Index score sourced from a survey conducted by the Katadata Insight Center with Kominfo.

**Pillar 1.2 ICT Usage**

The development of the digital economy is also enabled by the use of ICT in a given region. This pillar comprises eight indicators. The first three indicators are the ratios of households owning a mobile phone, computer, and internet access. The next three indicators consist of the location of accessing the Internet (the ratio of internet usage from home, work, and school). The last two indicators are how the population accesses the internet (the ratio of internet usage through cellular phones and computers).

**Pillar 1.3 ICT Expenditure**

The development of the digital economy in a region also depends on the level of desire and ability of households and companies to pay for access to ICT. This pillar considers four indicators, namely the proportion of households having specific expenditure on ICT, the average monthly household expenditure on ICT, and the wages (total and per worker) paid by companies to those working in the ICT sector.

## SUB-INDEX 2. OUTPUT

With the direct input described in sub-index 1, it is expected that the digital economy can expand and provide outputs or benefits to regions where digital economy activities are being developed. Sub-index 2 (Output) measures three pillars or aspects that describe the outputs of the digital economy: Economy, Entrepreneurship and Productivity, and Manpower.

**Pillar 2.1 Economy**

Digital economy activities certainly contribute to the economy of a province, city, or regency, which can be measured through the contribution of sectors related to digitalization to the GRDP of the region. There are three sectors or business fields of which growths are estimated to be closely related to the growth of the digital economy: (i) Information and Communication, (ii) Warehousing, Transportation Support, Post and Courier, and (iii) Financial Services. There are 9 indicators that are measured. Each of these sectors are measured for the economic value in IDR, its contribution to regional GRDP, and the growth level.

**Pillar 2.2 Entrepreneurship and Productivity**

Apart from contributing to the economy as described in Pillar 2.1, digital economy activities should also result in an output in the form of using the Internet for productive and entrepreneurial activities. There are six indicators used in this pillar, to calculate productivity, the ratio of workers who use the internet for work, both in their main jobs and in communicating for work are included Meanwhile, to calculate entrepreneurship, the ratio of the workers using the internet for promotion and trade or transactions is used. In addition, we also calculated the amount of money loaned through financial technology (fintech).

**Pillar 2.3 Manpower**

As economic activity and the number of businesses are growing, it is expected that there will be an increase in the number and proportion of workers engaged in sectors related to digitalization, in this case: (i) Information and Communication, (ii) Transportation and Warehousing, and (iii) Financial Services. For these three sectors, we calculated the number and ratio of the workforce in 2022, and their growth from 2017 to 2022. In addition, we analyzed the number and ratio of the groups of workers that are predicted to be vulnerable to digitalization in 2022, and their growth rates from 2017 to 2022. Those vulnerable to the impact of digitalization are workers from the following categories: (i) administrative staff, (ii) processing and handicraft workers, (iii) machine operators and assemblers, and (iv) manual workers. Their number, ratio, and growth were calculated as reverse indicators (the lower, the better).

## SUB-INDEX 3. SUPPORT

The competitiveness of the digital economy cannot be fulfilled only by relying on direct inputs and outputs, but it is also influenced by supporting factors that allow these inputs to be processed properly into outputs. These supporting factors consist of infrastructure, financial inclusion, and effective and efficient local governance.

**Pillar 3.1 Infrastructure**

This pillar focuses on infrastructure that supports the development of the digital economy. There are five indicators to consider, namely the level of electrical disturbances that occur (reverse indicator), the ratio of households with fixed line telephone connections, the ratio of villages that have access to a strong internet connection, as well as 4G and 3G signals.

**Pillar 3.2 Finance**

The development of the digital economy is also related and needs to be supported by financial inclusion factors, including access to capital and business financing. Three indicators are considered in this pillar. To measure financial inclusion, we adopted an index that was developed by the Financial Services Authority (*Otoritas Jasa Keuangan*/OJK), which is the Financial Inclusion Index. In addition, the number of Officeless Financial Services Agents and the E-wallet Adoption as a Payment Method are also calculated.

**Pillar 3.3 Regulation and Capacity of the Regional Government**

The third Support pillar is the government regulations and capacity. In this pillar, there are four indicators that show the performance of local governments, which are the gross enrollment ratio for senior high schools (*Sekolah Menengah Atas*/SMA) and vocational schools (*Sekolah Menengah Kejuruan*/SMK) and higher education (diploma to bachelor levels), Life Expectancy Growth, and Reduction of Poverty Rate.

## INDEX CALCULATION

The EV-DCI index was calculated using a stratified approach: the scores of each indicator were aggregated into pillar scores. The pillar scores were then aggregated into sub-index scores. Finally, the sub-index scores were aggregated into an overall index score (EV-DCI). Each indicator carries the same weight for the score of each pillar. Similarly, the pillar scores carry the same weights into the sub-indexes.

However, when combining the three sub-indexes into the overall EV-DCI Index, we assigned a weighting of 40 percent to sub-index 1 (Input) and sub-index 2 (Output), while the remaining 20 percent was allocated to sub-index 3 (Support). The use of lower weights for sub-index 3 aimed to ensure that the direct inputs and outputs of the digital economy were considered more significantly than the factors that support the economy indirectly.

The actual value of each indicator is stated in different units. For example, GRDP was calculated in Rupiah, growth was calculated in percentages, and the number of students was calculated as a person unit. In order for one indicator to be combined with the other indicators, the units must be equated or standardized.

To synchronize each indicator, the actual value of each indicator was converted into a standard score on a scale of 0 to 100. This score shows the relative comparison of the performance of one region from another. A score of 0 indicates a region has the lowest actual value compared to other regions for this indicator. A score of 100 shows that the region has the highest actual value compared to other regions. Regions with higher indicator scores are considered "more competitive" in that indicator.

The indicator score is not the same as the actual value of an indicator. Although the actual value of an indicator for Region A increases (improves) from one year to the next, the score may decrease. This is because the indicators for other regions have risen, and therefore Region A's competitiveness has decreased in relative terms. Similarly, the actual value of an indicator for Region A may decrease, but the score increases instead as other regions experience greater declines. Therefore, the movement of scores at the indicator, pillar, sub-index, and index levels should be considered relative movements, not absolute ones.

The indicator score for a region is calculated using the following formula, where $X_i$ is the actual value obtained by region *i* for a particular indicator, $X_{min}$ dan $X_{max}$ are the minimum and maximum values for that indicator, respectively, among all the regions being compared.

$$Score\ for\ Indicator_i = \left(\frac{X_i - X_{min}}{X_{max} - X_{min}}\right) 100$$

For indicators that are "reverse indicators" (meaning the lower/the better, identified in the list of indicators), the formula is as follows:

$$Score\ for\ Indicator_i = 100 - \left[\left(\frac{X_i - X_{min}}{X_{max} - X_{min}}\right) 100\right]$$

After obtaining the score for each indicator, the indicator scores were aggregated into pillar scores. A pillar's score was calculated using the average of the scores of all the indicators in that pillar. The weight of each indicator forming a pillar was considered equal.

Next, the scores for each pillar were aggregated into sub-indexes scores. The sub-indexes scores were calculated using the average scores of the three pillars in the sub-indexes. The weight of each pillar making up a sub-index

was considered equal, which was 33.3% in terms of its contribution to the sub-index score. Finally, the final EV-DCI score was calculated based on the following weights for each sub-index:

*40% Input Score + 40% Output Score + 20% Support Score*

EV-DCI is an index that measures digital competitiveness across regions in Indonesia. The EV-DCI score for a region reflects the comparison of that region relative to other regions. The best performing region among all the regions receives a score of 100 (similarly, the worst performing region receives a score of 0), regardless of whether the region has progressed or regressed in absolute terms compared to the previous year.

There is no EV-DCI score for Indonesia, because Indonesia is not measured in this index. The score for each region cannot be aggregated or averaged to obtain an aggregate score for Indonesia. However, in some parts of the analysis, we present the median score of the 38 provinces, to understand the gap in scores between provinces.

## COMPANY AND CONSUMER SURVEY METHODOLOGY

The subject of the study in the East Ventures – Digital Competitiveness Index (EV-DCI) is to compare digital competitiveness in 38 provinces and 157 cities/regencies in Indonesia in the form of an index. In collecting data and supporting information related to digital competitiveness, the EV-DCI team also conducted a survey of digital companies and startups as well as consumers using digital applications.

This survey on company perceptions of digital competitiveness was carried out in November 2022 – January 2023, involving 39 digital companies and startups as respondents. Meanwhile, the consumer survey was carried out in December 2022 involving 2,209 digital application users. The methods used in this survey were telesurvey (interviews using online media) and filling out questionnaires distributed online via a website link.

**Processing and Data Analysis**
Before conducting data analysis, data processing was carried out. The data processing stage in this study includes editing, coding, and tabulation.

**Editing**
Editing or checking involves checking or re-examining the data that has been collected to determine and assess the suitability and relevance of the data collected for further processing. What needs to be considered in the editing process is the completeness of filling out the surveys, the suitability of the answers, and the relevance of the answers.

**Coding**
Coding is the classification of the answers given by the respondents according to the type of answer. In the coding stage, scores and symbols are usually assigned to the respondents' answers to facilitate data processing.

**Tabulation**
Tabulation is the step undertaken after checking and coding. In this stage, the data were arranged in a table to facilitate data analysis in accordance with the research objectives. The table used in this study was a frequency table expressed in percentages.

The data analysis used in this research was descriptive quantitative. The quantitative analysis referred in this section is the presentation of the results of data processing expressed in numbers. The data presented in a frequency table were then analyzed descriptively by presenting it in a representative narrative form supported by the data that had been processed to facilitate comprehension.

# Momentum to See the Resilience of MSMEs

> This is a momentum for the government to see the economic power of MSMEs that really have resilience and have the potential to strengthen their access.
>
> **Teten Masduki,** Minister of Cooperatives and SMEs Republic of Indonesia

**What are the efforts of the Ministry of Cooperatives and SMEs to maintain the momentum of increasing Indonesia's digital economy?**

One of the triggers for digital transformation of MSMEs was the COVID-19 pandemic that forced MSMEs to look for alternatives in order to survive. Secondly, the trend of online shopping is expected to grow even more due to its convenience. Third, the availability of digital markets which helps MSMEs to access a wider market.

Regarding the threat of recession, the Ministry of Cooperatives and MSMEs are preparing several scenarios to anticipate possible impact. One of which is that we will continue the loan restructuring program. We are also proposing that MSME's non-performing loans, which are not significant in value, be written off at the bank. It would be great because so far many MSMEs are still constrained by Bank Indonesia (BI) checking to be able to get new financing.

**What are the efforts from the Ministry of Cooperatives and SMEs to increase the competitiveness of MSME products in foreign markets?**

First, we need to expand our digital platforms on a regional scale or in certain captive markets. This is because many MSMEs cannot last long on digital platforms on a national scale, for example because their average production capacity is weak. We also continue to organize Pahlawan Digital (Digital Heroes), digital awards for young people who develop digital applications. In 2020, there were around 20 digital platforms which have been very good at helping to access the market, financing, raw materials, and quality human resources.

Second, digital literacy. This is not a major obstacle and is relatively easy because now many young people are involved in the digital economy and its reach is wider. Therefore, at this time we are targeting assistance in secondary cities.

**What are the collaborations that have been carried out by the Ministry of Cooperatives and SMEs together with the private sector to advance MSMEs in Indonesia to go digital?**

To encourage the MSMEs digital transformation, the government has collaborated with e-commerce. We provide assistance to them and we also have facilities in the area of integrated service centers, there are 74 and we will continue to add to this. This will also become a training ground and photo shoots to become a studio for MSME products to be ready in the digital market.

Secondly, we also organize MSMEs through SMESCO which has reached 35,000 members who are committed to promoting the sale of local products. Third, the need to protect domestic MSMEs and e-commerce from external threats.

**How has the progress of the green economy movement been for MSMEs? What are the challenges faced during the implementation of this movement?**

I am optimistic that green economic movement will continue to grow. Our survey shows that more than 70% of MSMEs agree or more interested in environmentally friendly businesses. The remaining task is finding out how this movement can be enlarged, which includes the venture into organic products. For example, the use of non-fossil fuels. However, we definitely need to collaborate with other institutions in order to make this idea happen. We and the Ministry of Energy and Mineral Resources are currently preparing training courses for electrical conversion workshops to encourage this conversion.

# Digitalization Helps Increase Competence and Integrity

> Digitalization really helps us to be able to compete directly and increase awareness, ability, and integrity.
>
> **Budi Karya Sumadi,** Minister of Transportation Republic of Indonesia

**Indonesia is expected to face global uncertainty that will affect various sectors. What strategy has the government prepared to deal with this phenomenon?**
One of the most crucial is air transportation, because it is a capital-intensive sector and is prone to changes when there is economic pressure. Therefore, I conveyed to my colleagues that, during the pandemic, the lesson is the situation was chaotic, then we applied restrictions, and finally achieved recovery. As a result, the economic growth grew 5.3% and Transportation and Warehousing grew 19.9%. This means that our recovery is fast, but still lagging behind. It does take time.

Our strategy is Indonesia-centric, not only on Java island. For example, we launched the Trans Sulawesi Railway in South Sulawesi and built an airport in Papua. We also encourage creative financing to finance these infrastructure development projects without depending on the state budget. So when the state budget is affected by a recession, we will prepare creative financing. This is relevant to our strategy for dealing with the recession that digitalization is an easy means for us to reach the public.

**What obstacles does the Ministry of Transportation face in its digital transformation efforts in the transportation sector?**
The biggest obstacle is human resources. This relates to understanding and awareness that has not been evenly distributed. For example, the process of submitting permits by the private sector. It certainly requires an expensive, long, and difficult process. We then make improvements to achieve efficiency. We have launched the Integrated Hubla Electronic System (Sistem Elektronik Hubla Terintegrasi/ SEHATI) application. Another thing is to improve the integrity of officials in the regions.

Distance is indeed a problem, and therefore digital will help. Digitalization really helps us to be able to compete directly and increase awareness, ability, and integrity. Since nowadays this integrity is often neglected, we appreciate you all working to push for digital transformation.

**How is the development of the digitalization of the maritime logistics and transportation sector? What are the challenges faced by the government?**
Human resources and sectoral ego. For example in land transportation. Association groups pull against each other to maintain their respective egos. The Over Dimension Over Load (ODOL) policy's effectiveness is also questioned. If there are good best practices, it will help us break through the unwillingness of officers to carry out checking through the role of the back office. Since we need firmness in the field so that truck owners comply, then we will secure the taxes and focus on cargo from the port.

During the last three years, we have learned from best practices of the most appropriate way to do this, including the matter of sea transportation. I routinely coordinate with the Directorate General of Sea Transportation to address problems in that sector. For example, in the fish exporting ports, how we identify them properly and monitor them so that the amount of exports are measured properly. To monitor ship movements, we installed CCTV which is digitalized and connected to satellites.

# Transforming Primary Healthcare Services for Sustainable Benefits

> By allocating attention, budget, and time to transform primary health care services, we are ensuring that the sustainability of health benefits will continue to be felt by the society.
>
> **Budi Gunadi Sadikin,** Minister of Health Republic of Indonesia

**The economic crisis is forecasted to be quite challenging while the digital industry is currently experiencing post COVID-19 challenges, including the health industry sector. How are the anticipations in facing these challenges?**

COVID-19 pandemic has accelerated the digital transformation in the health sector. One of the breakthroughs we have made is to shorten the digital data transfer process, so PCR result data came directly from the testing lab in the city/regency and province. As a result, the number of cases reported hiked but that innovation changed everything. The condition enables the development of startups, Halodoc, and others.

When the PCR result is positive, we immediately send WhatsApp. Then, the patient responds and registers on telemedicine. The telemedicine gets multiple clients. Through that, other digital innovations come out again. I think Indonesia is actually very ready because the people are digitally literate.

Now it is just a matter of how we can prepare an excellent infrastructure and platform, so that every time there is a new innovation, it can be replicated, then used by subsequent applications, all of which is to expand access to health services for the Indonesian society.

**What is the strategy for preparing health facilities in tier two and tier three cities so they can be digitized so that data is easy to access?**

We have built SATUSEHAT, in this platform all individual data will be digitized, interconnected, and become private property. SATUSEHAT will later increase the benefits of health data to the user. If the patient gets sick, for example, their data will be in the SATUSEHAT platform. So, the patients can track the progress of their health and medication.

Moving forward, health services will evolve into more personalized and become a personal responsibility. Since a health problem is not only a matter for doctors or hospitals, but it is more of a personal matter. How we can take care of ourselves, take proper diet, exercise, and so on.

**How are the government's efforts in developing a digitalized health system that is aligned with sustainable development goals?**

We have several sustainable development goals. Health is number three, to promote healthy life and wellbeing for all people and all ages. The sustainability aspect means that we must provide healthcare services inclusive, to everyone of all ages. The principles of global health are actually heading that way. Being sick is temporary, but being healthy is sustainable.

Now, in carrying out its program, the Ministry of Health is striving to keep people healthy, instead of curing sick people. That is why we are pushing a primary health care transformation program that is promotive and preventive. This is different from secondary health services which are curative. The primary is upstream, while the secondary is downstream.

Promotive and preventive programs prevent people who are still healthy from getting sick. Meanwhile, the secondary is treating people who are already sick. By allocating attention, budget, and time to transform primary health care services, we are ensuring the sustainability of health care services and that its benefits will continue to be felt by the society.

# We Must Think Agile Like a Startup

> The collaboration with startups is a necessity. I convey to the Ministry of Tourism and Creative Economy colleagues that we must think agile like a startup.
>
> **Sandiaga Salahuddin Uno,** Minister of Tourism and Creative Economy Republic of Indonesia

**Indonesia is expected to face global uncertainty that will affect various sectors. What strategy has the government prepared to deal with this phenomenon?**
We are pretty certain that tourism and the digital economy possesses toughness and resilience. Our digital economic growth is massive and is targeted to reach US$ 150 billion. I believe that it is a momentum that leads to recovery. Furthermore, we will organize many events this year such as the world shooting championship, ASEAN Tourism Forum (ATF), FIFA World Cup U-20, etc. When it comes to the digital economy, the unstoppable trends are digitalization, health, and sustainability which keep the economy running.

Secondly, facilities and the competency improvement of local human resources are also of importance since the digital economy surely needs digital talents. Third, strengthening the implementation of inclusive and sustainable tourism and the digital economy. One of our tips in increasing the Tourism Development Index is to focus on inclusive tourism that involves MSMEs, women, youth, and sustainability.

Fourth, encourage equity in capital assistance. Fifth, facilitating players in market development ranging from fundraising to marketing, especially digital economy players. Finally, assisting in facilitating registration and accelerating the acquisition of intellectual property rights.

**How are the government's efforts to maintain growth momentum amidst the threat of global uncertainty?**
I repeatedly reminded that we must strengthen the supply chain by empowering MSMEs to deal with the inflation threat. Thus, we prioritize local supplies facilitated by the digital economy. This is a movement that we call the Proudly Made in Indonesia National Movement (Gerakan Nasional Bangga Buatan Indonesia/Gernas BBI) which is facilitated by the digital economy.

Second, startups as a factor to overcome increasingly extraordinary competition. Indonesia has 2,346 startups, the fifth highest in the world. This is believed to be part of the economic potential which is targeted to reach US$ 124 billion in 2024. We can respond to inflation threats with programs that are right on target, beneficial, and timely. Gernas BBI is targeted to reach 30 million MSMEs by 2023. However, certainly there are many gaps remaining in this digital transformation process due to limited infrastructure.

**What are the challenges and opportunities faced in building collaboration with the private sector? What are the strategies undertaken to optimize these synergies?**
Our mantra is innovation, adaptation, and collaboration. This is certainly in line with pentahelix concepts. Business players who dare to take risks, innovate, and have speed in execution become reliable partners in enhancing digital transformation actions.

Our collaboration with startups is a necessity. I convey to the Ministry of Tourism and Creative Economy colleagues that we must think like an agile startup. One of our supports is regulations that favors improvement in the startup class and collaboration in the form of initiating development movements such as infrastructure. The point is we encourage startups, especially those driven by the younger generation, to be better at capturing opportunities, especially business opportunities, generating added value and creating jobs.

# Integrating SDGs Principles as the Basis for Sustainable Business

> We believe that integrating SDGs principles creates the basis for a sustainable business, therefore we strive for innovations that are always measurable and in line with universal principles.
>
> **Franky Oesman Widjaja,** Chairman of PT Sinar Mas Agro Resources & Technology

**How has Sinar Mas progressed so far in advancing smart cities? How big is the growth of the ecosystem in it?**

Sinar Mas Land through the big project of Bumi Serpong Damai (BSD) City has transformed into an integrated smart digital city by creating various technology-based infrastructure and facilities, starting with the construction of the Digital Hub area of 25.86 ha as a business location for technology-based companies, incubators/accelerators, entrepreneurs, investors, and digital communities.

BSD City has a variety of complete infrastructure which combines solutions to climate change. The implementation of technology in smart cities that currently exists in BSD City is the concept of green district, green building, and green office.

The development of a smart city in BSD City has received appreciation from various parties. Currently, BSD City is also becoming a benchmarking city for the development of the upcoming National Capital (*Ibu Kota Negara*/IKN) in East Kalimantan.

**What programs are prepared to strengthen the digital ecosystem so that it can optimize the potential utilization of digital platforms and services?**

Sinar Mas will remain focused on managing the main existing business pillars. But there will be adjustments to trends in digital economy development. For example, the Financial Services pillar, which has introduced online products and services to users and the public.

In addition, since 2015 Sinar Mas Land has seen opportunities for digital transformation in its business. The first step taken is to build a digital ecosystem that accommodates startups through investment in the development of digital areas such as the Digital Hub in BSD City, as well as the Nongsa Digital Park on Batam Island which houses 20 startups. In its development, it is hoped that digital talent with global standard will emerge, which is the key to digital economic growth.

**How is sustainable development implemented in Sinar Mas and what are the challenges in alignment with SDGs through the ESG implementation?**

We believe that integrating SDGs principles into business practices will be the basis for creating a sustainable business. Therefore, we strive to ensure that the innovations we carry out are always measurable and in line with universal principles in terms of human rights, employment, environmental sustainability, and anti-corruption as described in the SDGs.

The adoption of ESG practices in corporations involves integrating these values into the company's operations, culture and decision-making processes. This can involve a variety of activities, such as reducing greenhouse gas emissions, promoting diversity and inclusion in the workplace, and ensuring ethical and transparent business practices.

One of the challenges in aligning with the SDGs through adopting ESG practices is that the SDGs are broad and complex, and it can be difficult for one company to tackle all of them directly. Another challenge is that these goals are global, it can be difficult for companies to understand and address the specific needs and concerns of different communities and stakeholders around the world.

# Urgency to Strengthen Business Fundamentals to Become More Resilient

> Startups need to prioritize the sustainability aspect in their business, ensure the implemented business model is proven, and strengthen the company's fundamentals so they can become more resilient when a crisis occurs.

**Arsjad Rasjid,** Head of KADIN (Indonesian Chambers of Commerce and Industry)

**What strategic steps are needed to maintain the investment and business climate to help business players remain conducive in the midst of a prolonged global crisis?**

Business players must be able to adapt amidst this uncertainty and be keen to see opportunities, one of which is to innovate and enter the digital ecosystem. By entering the digital world, businesses can streamline operational costs such as moving physical stores to online stores and utilizing industry 4.0 technology to increase efficiency.

The investment climate also needs to be maintained by providing east of investment that can contribute added value to the community. Examples are infrastructure projects, industrial downstreaming, and the development of connectivity in Indonesia which involves local entrepreneurs and MSMEs.

**What is the role of KADIN as an industrial forum in increasing digital economy competition in Indonesia?**

KADIN has launched several initiatives: Wirausaha WIKI as a digital information centre regarding training and partnerships, connecting MSMEs with IoT technology provider companies as well as a discussion platform for MSMEs. There is also KADIN International Trading House as a digital platform which provides assistance services for MSMEs to export products, as an effort to integrate MSMEs in the digital ecosystem and global value chains.

**Regarding startup's IPO strategy, how important is it for startups that have met the requirements to go public? What impact will this have on the digital sector in the long run?**

We often see startups adopting a 'growth at all costs' strategy as a way to improve user metrics and enterprise valuation for the next round of funding. The most important thing startups need to prioritize is the sustainability aspect in their business, ensure that the implemented business model is proven, and strengthen the company's fundamentals so they can become more resilient when a crisis occurs.

Go public is a way that can attract funding. However, if they go public, the company needs to be healthy. It is because the company has a responsibility to the public to make sure that the collected funds are managed properly as well as maintain the company's financial health.

**In the midst of rapidly developing digitalization, digital and physical infrastructure remain uneven in Indonesia. How to encourage investment towards equal distribution of digital economic potential?**

Government partnerships with business entities are needed to encourage investment in digital infrastructure. The government can issue pro-regulations and policies to attract investment in digital infrastructure and to improve the level of ease of doing business in Indonesia. If all of that has been done, the government has to be more proactive by directly offering digital infrastructure projects to investors.

KADIN as the government's strategic partner is ready to facilitate this initiative. We will assist the government in encouraging Public Private Partnership (PPP) projects for national and foreign private companies to participate in the pursuit of equitable digital infrastructure development.

# Interview Highlight

**Complete perspectives from various stakeholders can be accessed at: east.vc/dci**

## Sakti Wahyu Trenggono

**Minister of Marine and Fisheries Republic of Indonesia**

**THE ECONOMY** of the marine and fisheries sector is closely related to the availability of natural resources and environmental sustainability. Digital economy players must understand that the development of a fishing business needs to be managed as best as possible by implementing the blue economy concept so that the business can develop in a sustainable manner to generate greater profits in the future.

## Akmal Malik

**Acting Governor of West Sulawesi**

**FOR US,** data acts as the best "policy intelligence device" that really helps us save time and money because in an economic situation that is not doing well, we still have to remain alert. That means we have to formulate appropriate policies, particularly in managing the funds for regional development and people's welfare.

## Neneng Goenadi

**Country Managing Director of Grab Indonesia**

**TO BE ABLE TO ADAPT,** a change in the way of thinking and working of digital talent is needed to be disciplined in implementing a business strategy that focuses on the concept of sustainable growth > growth at all cost. This concept means that growth carried out slowly but continuously is better than growth carried out aggressively at all cost, but may not necessarily be sustainable in the long term.

## Brian Marshal

**Founder & CEO of SIRCLO**

**FOR DIGITAL PLAYERS,** there are actually more problems to solve in tier 2 and 3. Since there is still a digitalization discrepancy compared with tier 1, there is also profit or potential growth that can be seized. SIRCLO is focusing on tier 2 and 3 cities in this time of crisis because we see them as an intriguing priority.

## Christopher Madiam

**Co-Founder & CEO of Social Bella**

**THERE IS A GAP** or separation between big and small cities in Indonesia. The further ahead the gap is getting smaller. We realize that for tier 2, especially in the last 10 years, it has been much better. Government initiatives and startup growth are the driving factors. However, tier 3 cities and maybe some smaller cities show that there are still very clear gaps.

## Andree Susanto

**Founder & CEO of Waresix**

**WE REDUCE CARBON REQUIREMENTS** by streamlining the supply chain and minimizing the distance traveled to reach consumers. The social impact of this efficiency is helping logistics partners to be more efficient and increase monthly income. This is also related to wealth distribution because it raises truck entrepreneurs' standard of living.

## Sigit Kouwagam

**Co-Founder of Bibit.id and Stockbit**

**THE REQUIRED BUSINESS MODEL** to unlock new digital economy potentials is the one focusing on at least 2 things: first, one that solves problems faced by people. Second, something that can elevate the quality of people's experience in carrying out their activities. Meanwhile, digital talents are needed who not only master their areas of expertise, but also to be capable of critical thinking, problem-solving, and leadership.

## Benedicto Haryono

**Co-Founder & CEO of KoinWorks**

**CURRENTLY,** startups are not only players and catalysts, but they also act more as facilitators. We see that the financial industry has massively digitized. Digitalization also happens to other industries. However, one important note is that startups are the top leaders which can hopefully give guidance so other industries' transformation can go smoother.

## Sharlini Eriza Putri

**Co-Founder & CEO of Nusantics**

**ONE MEDICAL HEALTH RECORD** has a significant impact at a national level. The presence of this platform is able to help store the patient's medical history, making it easier to check when he moves cities or hospitals. Additionally, it helps in decision-making and avoids unfair treatment during medication trials. One medical health record is necessary in every country.

## Iman Usman

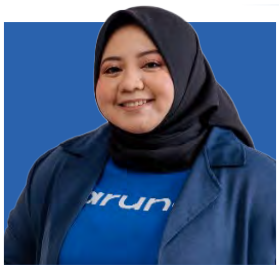
**Co-Founder & COO of Ruangguru**

**TO THIS DAY,** our main focus has remained on our efforts in bringing access to quality education for all as well as continuing to listen and serve the needs of our more than 40 million users in Indonesia, Vietnam, and Thailand. We believe every student has equal rights and opportunities to learn easily and effectively.

## Caesar Indra

**President of Traveloka**

**MOST IMPORTANT OF ALL,** companies must find a business model that is highly scalable and sustainable in the long run in order to unlock the potential of the new digital economy. Financial prudence and execution focus continue to be crucial, especially in managing disruptive businesses.



## Utari Octavianty

**Co-Founder & CSO of Aruna**

**INTRODUCING** the internet and applications to fishermen is not an easy task, so we are currently assisted by the presence of Aruna's Local Heroes, who is our extension in the field. They are the local youth generation who help us to interact directly with Aruna's fishermen. Through Local Heroes, digitalization of technology for Aruna's fishermen and coastal communities can be realized.

## Eka Himawan

**Managing Director of Xurya Daya Indonesia**

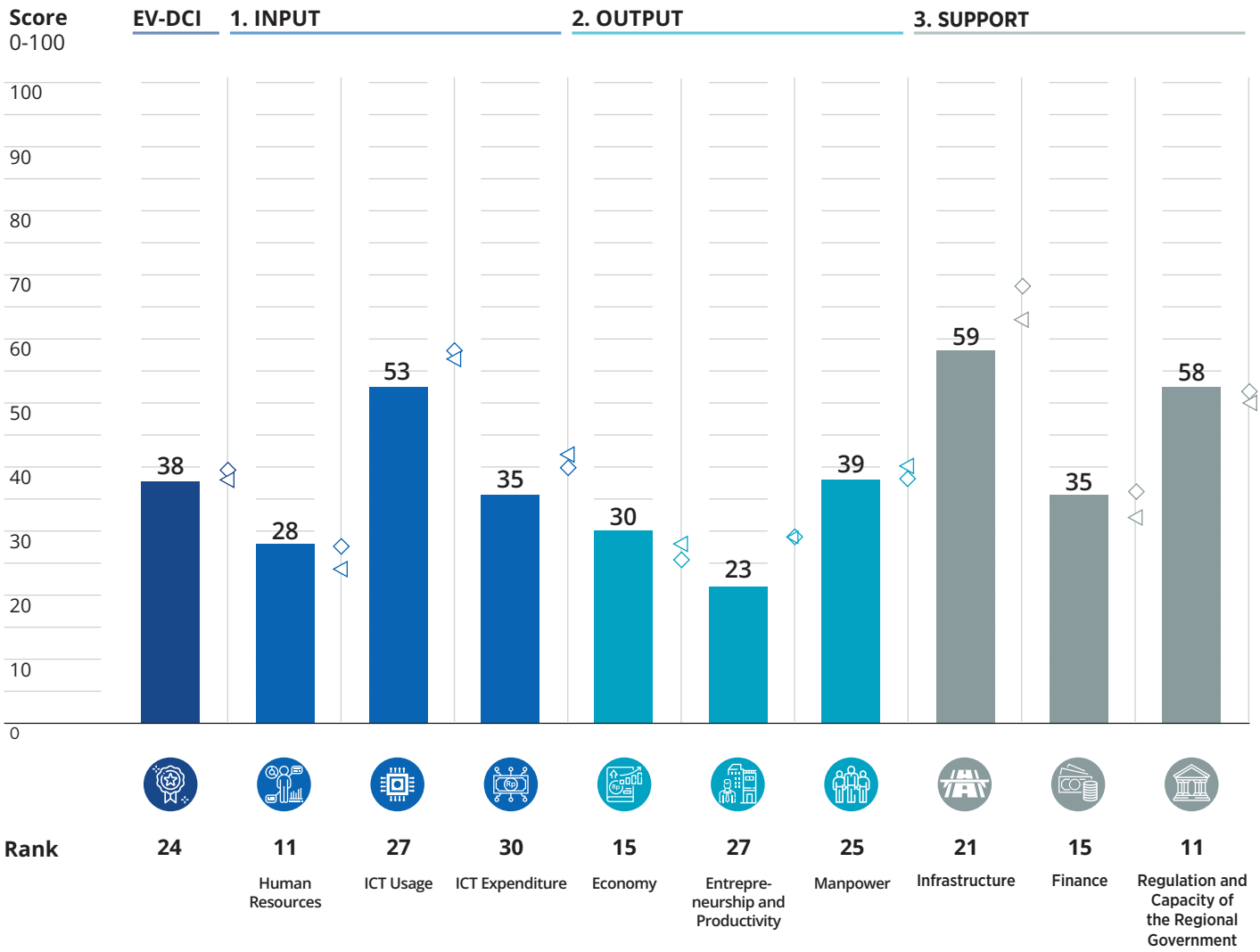
**WHAT WE DO** is using technology for upskilling. We are training these partners about solar panels and construction and monitoring through mobile phone's application. So far, we have received positive responses because it not only helps contractors to monitor quality but also helps them in education.

# Aceh

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 22 | 27 | 24 | 24 |
| Score : | 27.3 | 29.4 | 32.7 | 37.9 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sumatera




## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **5,407.9** |
| **Area** ($km^2$) | **57,956.0** |
| **Economic Growth** (percent) | **2.8** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **184,976.0** |
| **GRDP per Capita** (IDR thousand) | **34,680.0** |
| **Human Development Index** | **72.2** |
| **Life Expectancy** (year) | **70.0** |
| **School Life Expectancy** (year) | **14.4** |
| **Average School Attendance** (year) | **9.4** |
| **Domestic Investment Realization** (IDR billion) | **7,904.7** |
| **Foreign Investment Realization** (USD million) | **203.3** |

# Aceh

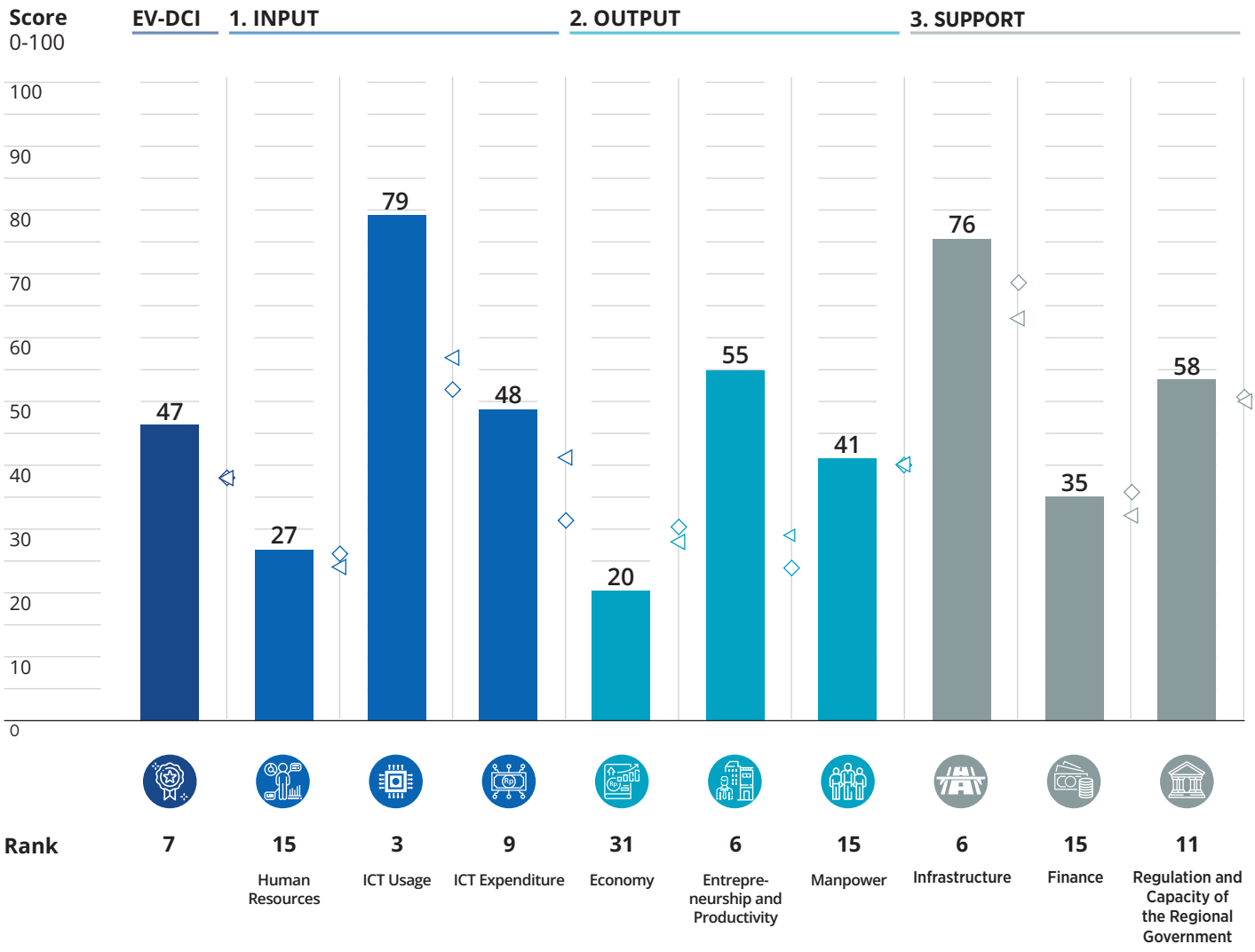
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **38.5** | **25** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **28.2** | **11** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 16.8 | 12 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 17.7 | 14 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 17.7 | 12 | ↑ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 14.4 | 13 | = | 7.7 |
| 1.1.05 | Digital Literacy Index | 74.4 | 20 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **52.5** | **27** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 70.9 | 27 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 34.4 | 32 | ↓ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 60.7 | 30 | = | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 91.7 | 16 | ↑ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 35.0 | 20 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 22.0 | 27 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 20.1 | 24 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 85.2 | 31 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **34.9** | **30** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 90.2 | 22 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 22.1 | 27 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 1.0 | 21 | ↓ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 26.1 | 31 | ↓ | 34.1 |
| **2** | **OUTPUT** | **30.7** | **23** | ↑ | **31.2** |
| **2.1** | **Economy** | **29.9** | **15** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 1.8 | 22 | ↑ | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 22.1 | 21 | = | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 36.0 | 20 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 8.0 | 16 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 46.3 | 10 | ↑ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 100.0 | 1 | ↑ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 1.0 | 23 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 13.4 | 27 | = | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 40.0 | 36 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **23.4** | **27** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 39.2 | 25 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 38.4 | 24 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 25.1 | 28 | ↓ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 26.2 | 28 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 10.2 | 25 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 1.0 | 24 | ↓ | 1.9 |
| **2.3** | **Manpower** | **38.9** | **25** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 4.8 | 21 | ↓ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 16.2 | 34 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 9.7 | 35 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 92.7 | 22 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 34.8 | 14 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 74.9 | 5 | ↓ | 64.6 |
| **3** | **SUPPORT** | **51.0** | **18** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **59.1** | **21** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 39.9 | 35 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 80.1 | 12 | ↓ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 95.4 | 11 | = | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 75.9 | 18 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 4.3 | 27 | ↑ | 7.7 |
| **3.2** | **Finance** | **35.4** | **15** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 74.3 | 7 | ↑ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 3.5 | 26 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 28.3 | 24 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **58.4** | **11** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 76.7 | 10 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 48.7 | 4 | = | 28.7 |
| 3.3.03 | Life Expectancy Growth | 52.9 | 32 | ↑ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 55.4 | 19 | ↓ | 55.3 |

# Bali

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 7 | 4 | 6 | 7 |
| Score : | 40.6 | 47.7 | 44.9 | 47.3 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Bali-Nusra




| Rank | 7 | 15 | 3 | 9 | 31 | 6 | 15 | 6 | 15 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| | EV-DCI | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **4,415.1** |
| **Area** ($km^2$) | **5,780.1** |
| **Economic Growth** (percent) | **-2.5** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **219,800.0** |
| **GRDP per Capita** (IDR thousand) | **50,381.0** |
| **Human Development Index** | **75.7** |
| **Life Expectancy** (year) | **72.2** |
| **School Life Expectancy** (year) | **13.5** |
| **Average School Attendance** (year) | **9.4** |
| **Domestic Investment Realization** (IDR billion) | **6,355.2** |
| **Foreign Investment Realization** (USD million) | **452.0** |

# Bali

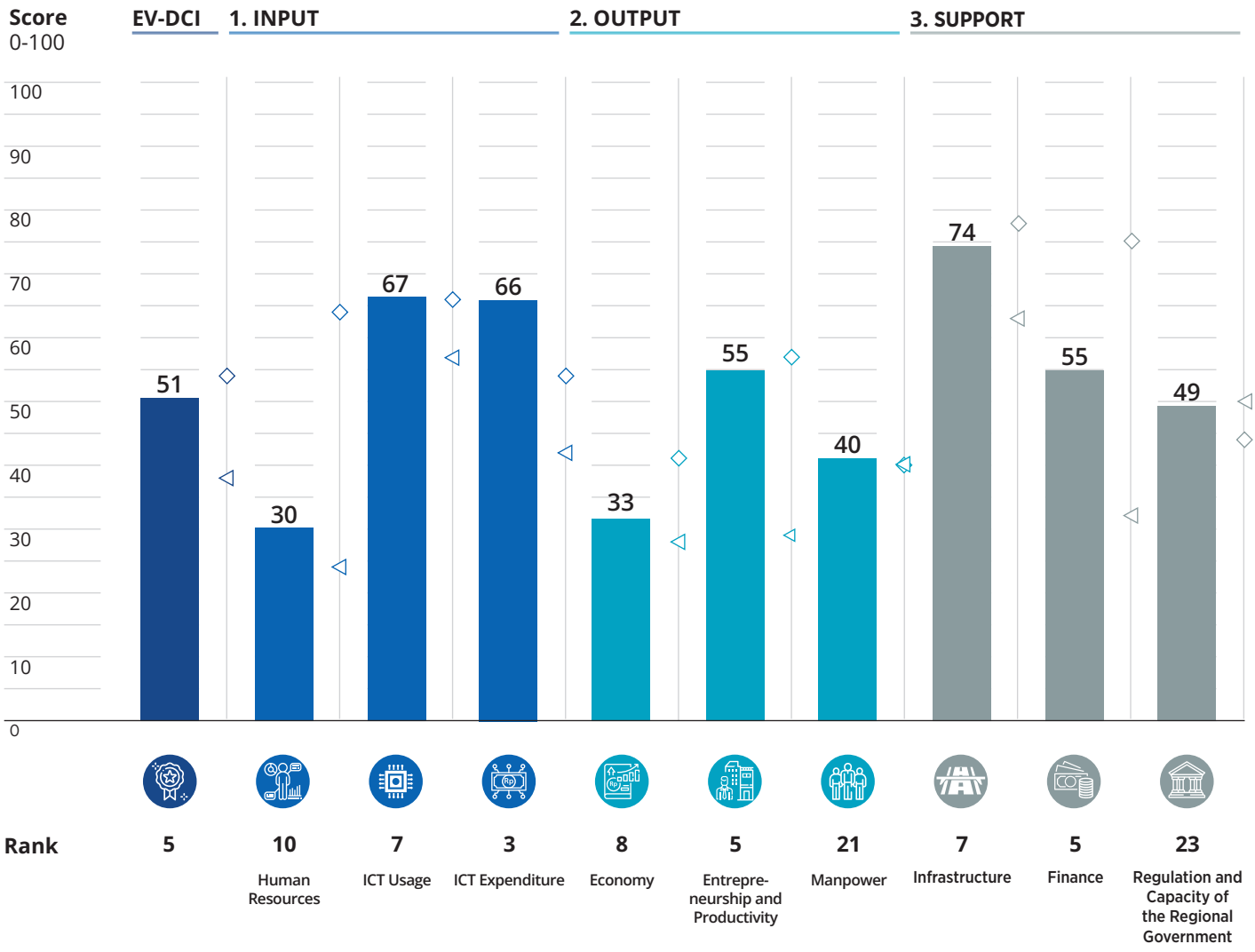
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **51.1** | **9** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **27.1** | **15** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 9.7 | 16 | ↓ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 45.0 | 3 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 13.0 | 15 | ↓ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 11.9 | 14 | = | 7.7 |
| 1.1.05 | Digital Literacy Index | 55.8 | 30 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **78.5** | **3** | = | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 85.9 | 8 | ↓ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 74.2 | 5 | = | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 82.5 | 8 | ↓ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 98.6 | 2 | ↑ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 100.0 | 1 | ↑ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 26.8 | 19 | ↑ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 66.1 | 3 | ↑ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 94.2 | 12 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **47.7** | **9** | ↑ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 94.6 | 10 | ↑ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 53.1 | 11 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 4.2 | 8 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 38.8 | 12 | = | 34.1 |
| **2** | **OUTPUT** | **38.7** | **6** | ↓ | **31.2** |
| **2.1** | **Economy** | **20.2** | **31** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 5.2 | 12 | ↓ | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 59.9 | 4 | ↑ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 20.5 | 32 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 10.7 | 12 | ↓ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 51.8 | 8 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 0.0 | 38 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 1.8 | 18 | ↓ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 20.9 | 19 | ↓ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 11.2 | 37 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **54.6** | **6** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 74.7 | 4 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 74.4 | 4 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 65.3 | 3 | = | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 72.1 | 3 | = | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 37.2 | 5 | = | 13.4 |
| 2.2.06 | Loan Using Fintech | 4.2 | 10 | ↓ | 1.9 |
| **2.3** | **Manpower** | **41.3** | **15** | ↑ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 8.7 | 10 | ↑ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 29.3 | 14 | = | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 48.1 | 4 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 90.0 | 28 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 17.3 | 31 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 54.6 | 30 | ↓ | 64.6 |
| **3** | **SUPPORT** | **56.8** | **8** | ↓ | **50.7** |
| **3.1** | **Infrastructure** | **76.2** | **6** | ↓ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 63.6 | 29 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 96.1 | 2 | = | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 99.9 | 2 | = | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 92.3 | 4 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 28.8 | 3 | = | 7.7 |
| **3.2** | **Finance** | **41.0** | **9** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 83.2 | 5 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 5.1 | 19 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 34.6 | 22 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **53.4** | **14** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 69.0 | 11 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 38.9 | 11 | ↑ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 85.2 | 9 | ↑ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 20.6 | 35 | ↓ | 55.3 |

# Banten

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 5 | 5 | 4 | 5 |
| Score : | 44.8 | 47.7 | 47.0 | 50.7 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Java




| Rank | 5 | 10 | 7 | 3 | 8 | 5 | 21 | 7 | 5 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **12,252.0** |
| **Area** ($km^2$) | **9,662.9** |
| **Economic Growth** (percent) | **4.4** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **665,922.0** |
| **GRDP per Capita** (IDR thousand) | **55,211.0** |
| **Human Development Index** | **72.7** |
| **Life Expectancy** (year) | **70.0** |
| **School Life Expectancy** (year) | **13.1** |
| **Average School Attendance** (year) | **9.1** |
| **Domestic Investment Realization** (IDR billion) | **25,989.5** |
| **Foreign Investment Realization** (USD million) | **2,190.0** |

# Banten

| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **54.3** | **6** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **30.0** | **10** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 21.6 | 9 | ↓ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 12.9 | 27 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 26.0 | 7 | = | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 27.0 | 7 | ↓ | 7.7 |
| 1.1.05 | Digital Literacy Index | 62.8 | 26 | ↑ | 75.6 |
| **1.2** | **ICT Usage** | **66.7** | **7** | ↑ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 82.1 | 14 | = | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 51.6 | 9 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 82.7 | 7 | ↑ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 87.6 | 22 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 74.5 | 5 | = | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 29.7 | 15 | ↑ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 42.1 | 9 | ↑ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 83.0 | 33 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **66.2** | **3** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 92.2 | 18 | ↑ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 50.2 | 12 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 37.8 | 3 | = | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 84.8 | 2 | ↓ | 34.1 |
| **2** | **OUTPUT** | **42.8** | **4** | = | **31.2** |
| **2.1** | **Economy** | **33.1** | **8** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 9.6 | 6 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 32.0 | 14 | ↑ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 27.6 | 28 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 37.1 | 4 | = | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 58.0 | 7 | ↑ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 52.7 | 24 | ↑ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 6.8 | 6 | = | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 27.0 | 13 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 47.3 | 16 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **55.4** | **5** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 60.0 | 7 | = | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 59.4 | 7 | = | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 62.9 | 4 | = | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 65.3 | 4 | = | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 53.4 | 3 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 31.2 | 4 | = | 1.9 |
| **2.3** | **Manpower** | **39.8** | **21** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 32.4 | 5 | = | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 49.9 | 2 | = | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 18.8 | 26 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 74.3 | 34 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 6.8 | 36 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 56.5 | 28 | ↓ | 64.6 |
| **3** | **SUPPORT** | **59.3** | **7** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **73.7** | **7** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 96.0 | 7 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 76.7 | 16 | ↓ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 97.7 | 9 | ↓ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 77.9 | 16 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 20.1 | 4 | ↑ | 7.7 |
| **3.2** | **Finance** | **55.5** | **5** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 58.4 | 18 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 16.2 | 6 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 91.8 | 2 | = | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **48.7** | **23** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 0.0 | 38 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 29.3 | 18 | = | 28.7 |
| 3.3.03 | Life Expectancy Growth | 90.5 | 7 | ↑ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 74.8 | 9 | ↑ | 55.3 |

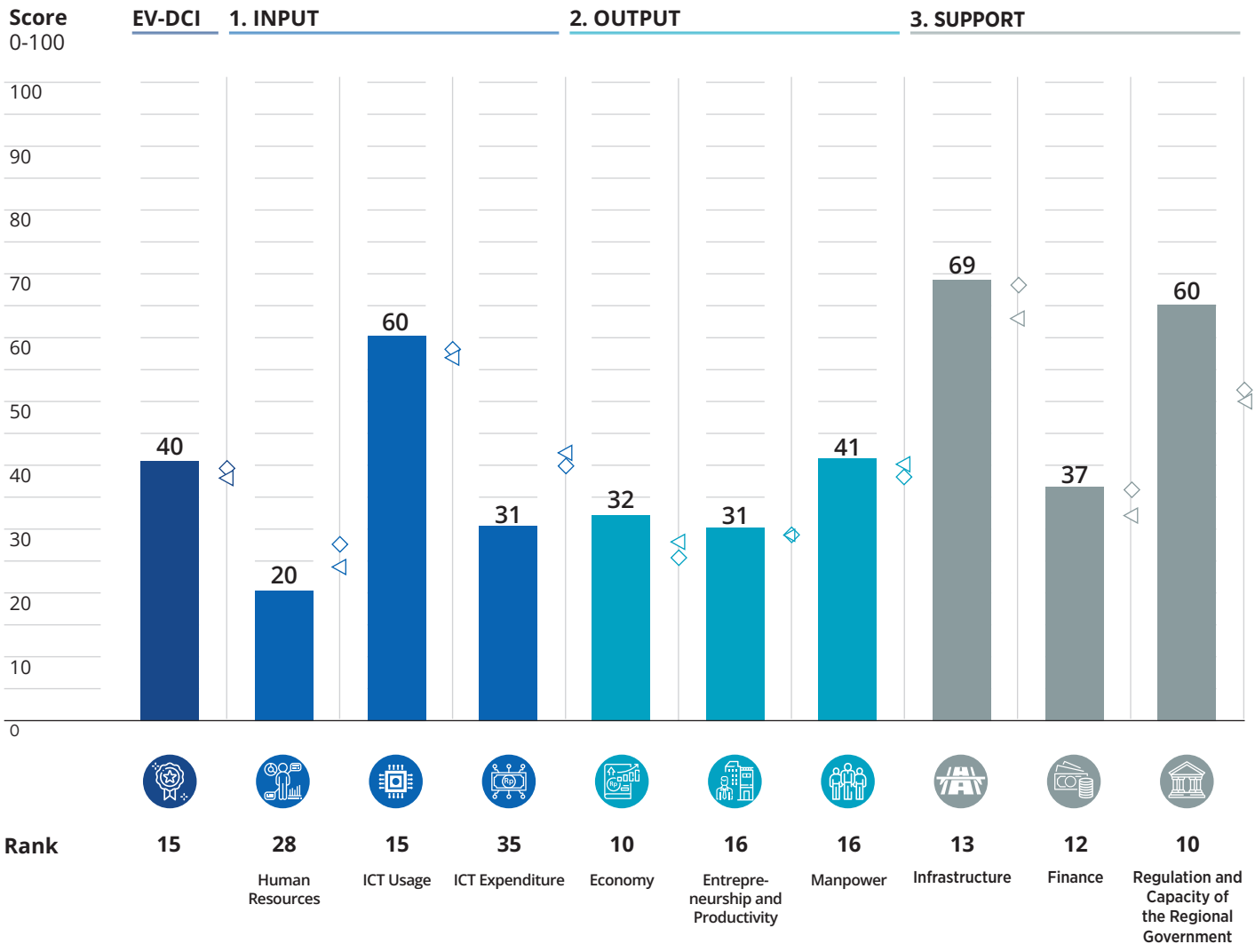
# Bengkulu

**Province Rank**

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 30 | 19 | 12 | 15 |
| Score : | 25.1 | 31.3 | 39.1 | 39.7 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sumatera




| Rank | 15 | 28 | 15 | 35 | 10 | 16 | 16 | 13 | 12 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **2,060.1** |
| **Area** ($km^2$) | **19,919.3** |
| **Economic Growth** (percent) | **3.2** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **79,576.0** |
| **GRDP per Capita** (IDR thousand) | **39,143.0** |
| **Human Development Index** | **71.6** |
| **Life Expectancy** (year) | **69.4** |
| **School Life Expectancy** (year) | **13.7** |
| **Average School Attendance** (year) | **8.9** |
| **Domestic Investment Realization** (IDR billion) | **4,923.5** |
| **Foreign Investment Realization** (USD million) | **23.7** |

# Bengkulu

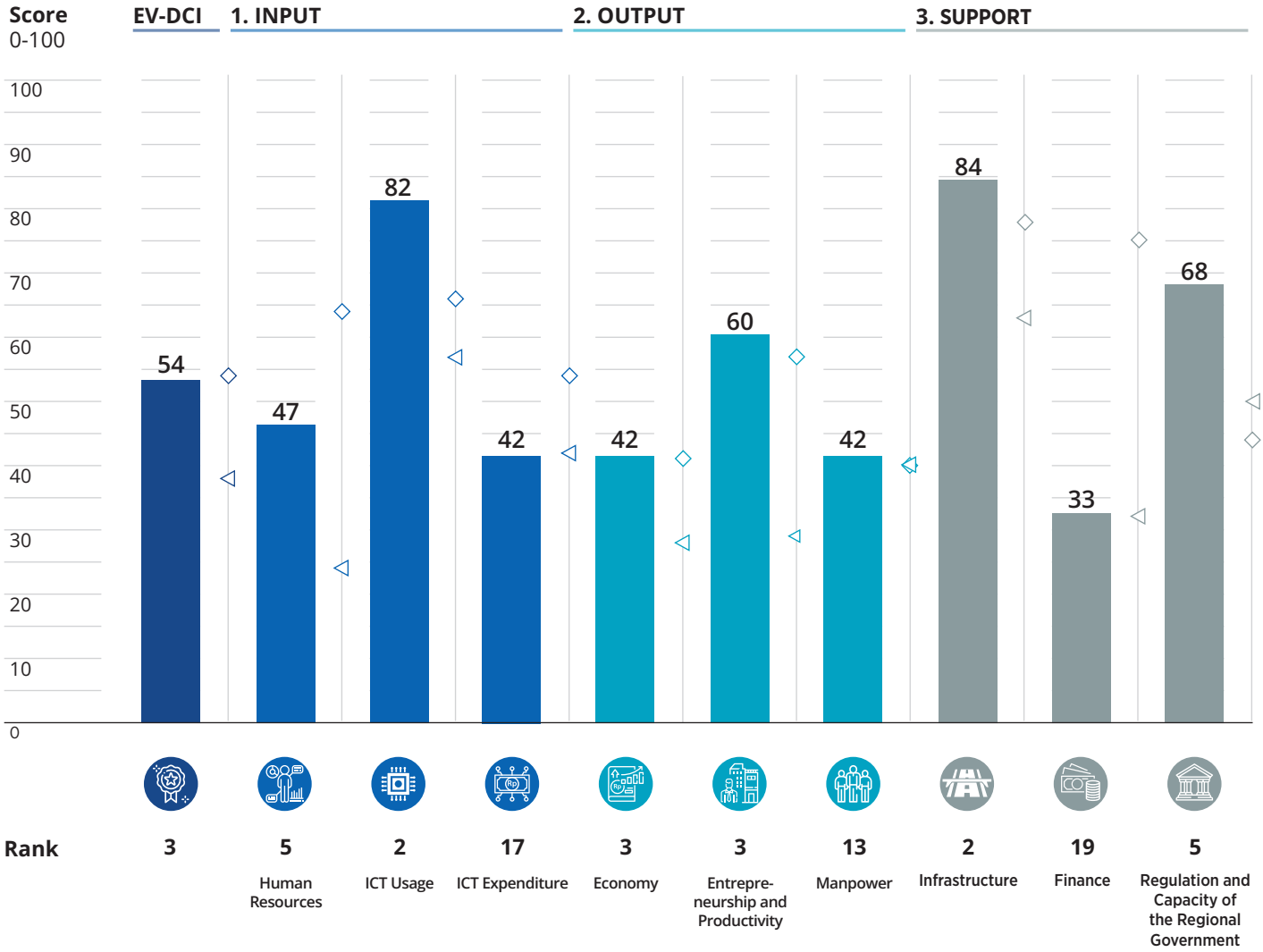
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **37.1** | **27** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **19.8** | **28** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 3.6 | 26 | = | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 6.5 | 36 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 5.4 | 23 | = | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 4.5 | 25 | = | 7.7 |
| 1.1.05 | Digital Literacy Index | 79.1 | 16 | ↑ | 75.6 |
| **1.2** | **ICT Usage** | **60.0** | **15** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 77.1 | 20 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 46.3 | 14 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 73.3 | 19 | ↑ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 97.4 | 4 | ↑ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 38.6 | 16 | ↑ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 25.8 | 23 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 24.9 | 21 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 96.5 | 4 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **31.5** | **35** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 90.9 | 21 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 6.3 | 36 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.6 | 26 | ↓ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 28.1 | 28 | ↓ | 34.1 |
| **2** | **OUTPUT** | **34.4** | **14** | ↓ | **31.2** |
| **2.1** | **Economy** | **31.5** | **10** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.9 | 25 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 29.8 | 17 | ↑ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 38.5 | 16 | ↑ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 5.1 | 21 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 75.3 | 3 | = | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 56.2 | 16 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 0.8 | 25 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 28.1 | 10 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 48.9 | 7 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **30.5** | **16** | ↑ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 44.5 | 18 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 43.7 | 17 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 40.4 | 13 | ↑ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 44.4 | 12 | ↑ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 9.4 | 27 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 0.7 | 27 | = | 1.9 |
| **2.3** | **Manpower** | **41.1** | **16** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 2.0 | 27 | ↑ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 17.3 | 32 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 32.4 | 16 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 97.1 | 12 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 39.0 | 9 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 58.5 | 26 | ↓ | 64.6 |
| **3** | **SUPPORT** | **55.5** | **11** | = | **50.7** |
| **3.1** | **Infrastructure** | **69.4** | **13** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 93.9 | 8 | ↑ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 74.3 | 18 | = | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 92.4 | 17 | ↓ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 77.3 | 17 | ↑ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 8.8 | 16 | ↓ | 7.7 |
| **3.2** | **Finance** | **37.4** | **12** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 67.3 | 12 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 4.7 | 21 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 40.1 | 19 | ↑ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **59.8** | **10** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 83.2 | 8 | = | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 38.4 | 12 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 66.0 | 27 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 51.8 | 23 | ↓ | 55.3 |

# D I Yogyakarta

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 4 | 6 | 3 | 3 |
| Score : | 46.7 | 47.6 | 49.2 | 54.2 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Java




| Rank | 3 | 5 | 2 | 17 | 3 | 3 | 13 | 2 | 19 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **3,761.9** |
| **Area** ($km^2$) | **3,133.2** |
| **Economic Growth** (percent) | **5.5** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **149,369.0** |
| **GRDP per Capita** (IDR thousand) | **40,230.0** |
| **Human Development Index** | **80.2** |
| **Life Expectancy** (year) | **75.0** |
| **School Life Expectancy** (year) | **15.7** |
| **Average School Attendance** (year) | **9.8** |
| **Domestic Investment Realization** (IDR billion) | **2,761.3** |
| **Foreign Investment Realization** (USD million) | **21.8** |

# D I Yogyakarta

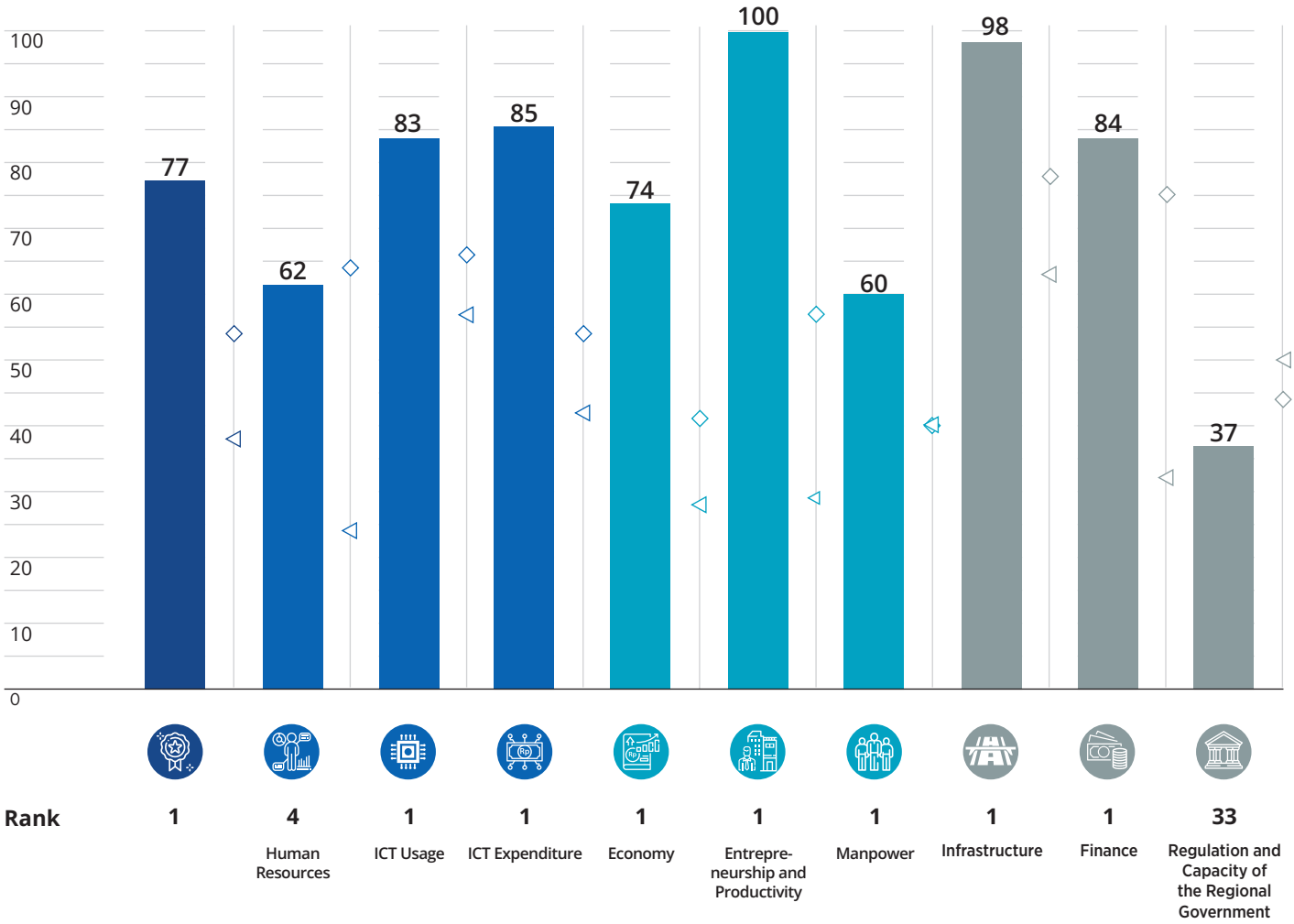
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **57.0** | **4** | = | **40.1** |
| **1.1** | **Human Resources** | **46.8** | **5** | = | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 42.3 | 6 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 26.3 | 8 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 33.0 | 6 | = | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 32.3 | 6 | ↑ | 7.7 |
| 1.1.05 | Digital Literacy Index | 100.0 | 1 | = | 75.6 |
| **1.2** | **ICT Usage** | **82.2** | **2** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 82.3 | 12 | ↓ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 83.9 | 2 | = | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 88.5 | 5 | ↓ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 97.7 | 3 | = | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 84.4 | 3 | ↑ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 42.1 | 3 | ↑ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 85.7 | 2 | = | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 93.2 | 14 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **42.0** | **17** | ↑ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 89.9 | 23 | ↑ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 24.7 | 26 | ↑ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 6.9 | 6 | = | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 46.7 | 9 | ↓ | 34.1 |
| **2** | **OUTPUT** | **47.7** | **3** | = | **31.2** |
| **2.1** | **Economy** | **41.8** | **3** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 5.7 | 9 | ↑ | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 100.0 | 1 | = | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 91.0 | 3 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 5.4 | 20 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 39.0 | 18 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 56.1 | 17 | ↑ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 1.8 | 17 | = | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 32.9 | 7 | = | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 44.7 | 24 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **59.5** | **3** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 74.3 | 5 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 74.0 | 5 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 74.4 | 2 | = | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 76.7 | 2 | = | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 53.7 | 2 | ↑ | 13.4 |
| 2.2.06 | Loan Using Fintech | 4.1 | 11 | = | 1.9 |
| **2.3** | **Manpower** | **41.6** | **13** | ↑ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 7.7 | 12 | ↑ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 30.7 | 12 | ↑ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 37.2 | 11 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 91.5 | 24 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 17.4 | 30 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 65.3 | 18 | ↑ | 64.6 |
| **3** | **SUPPORT** | **61.6** | **6** | ↓ | **50.7** |
| **3.1** | **Infrastructure** | **84.3** | **2** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 97.8 | 3 | ↑ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 91.7 | 3 | ↑ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 98.6 | 7 | ↑ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 86.9 | 8 | = | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 46.3 | 2 | = | 7.7 |
| **3.2** | **Finance** | **32.6** | **19** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 44.6 | 23 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 7.9 | 15 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 45.4 | 15 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **68.0** | **5** | ↓ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 65.0 | 13 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 100.0 | 1 | = | 28.7 |
| 3.3.03 | Life Expectancy Growth | 7.0 | 36 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 100.0 | 1 | ↑ | 55.3 |

# DKI Jakarta

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 1 | 1 | 1 | 1 |
| Score : | 79.7 | 77.6 | 73.2 | 76.6 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Java




| Rank | 1 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 33 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **10,680.0** |
| **Area** ($km^2$) | **664.0** |
| **Economic Growth** (percent) | **3.6** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **2,914,581.0** |
| **GRDP per Capita** (IDR thousand) | **274,710.0** |
| **Human Development Index** | **81.1** |
| **Life Expectancy** (year) | **73.0** |
| **School Life Expectancy** (year) | **13.1** |
| **Average School Attendance** (year) | **11.3** |
| **Domestic Investment Realization** (IDR billion) | **54,708.2** |
| **Foreign Investment Realization** (USD million) | **3,330.6** |

# DKI Jakarta

| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **76.8** | **1** | = | **40.1** |
| **1.1** | **Human Resources** | **62.4** | **4** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 72.2 | 4 | ↓ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 15.0 | 21 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 73.0 | 3 | ↓ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 63.4 | 4 | = | 7.7 |
| 1.1.05 | Digital Literacy Index | 88.4 | 9 | ↑ | 75.6 |
| **1.2** | **ICT Usage** | **83.0** | **1** | ↑ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 99.9 | 2 | ↓ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 100.0 | 1 | = | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 100.0 | 1 | = | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 84.4 | 24 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 83.4 | 4 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 27.9 | 18 | ↑ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 100.0 | 1 | = | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 68.1 | 36 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **85.1** | **1** | = | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 99.3 | 2 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 62.3 | 7 | ↑ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 78.8 | 2 | = | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 100.0 | 1 | ↑ | 34.1 |
| **2** | **OUTPUT** | **77.9** | **1** | = | **31.2** |
| **2.1** | **Economy** | **73.6** | **1** | = | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 100.0 | 1 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 86.0 | 2 | = | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 21.8 | 30 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 100.0 | 1 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 32.6 | 21 | ↑ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 79.4 | 2 | ↑ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 100.0 | 1 | = | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 100.0 | 1 | = | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 42.6 | 33 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **100.0** | **1** | = | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 100.0 | 1 | = | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 100.0 | 1 | = | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 100.0 | 1 | = | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 100.0 | 1 | = | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 100.0 | 1 | = | 13.4 |
| 2.2.06 | Loan Using Fintech | 100.0 | 1 | = | 1.9 |
| **2.3** | **Manpower** | **60.1** | **1** | = | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 50.7 | 3 | = | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 100.0 | 1 | = | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 38.4 | 10 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 81.3 | 33 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 17.6 | 29 | = | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 72.4 | 8 | ↑ | 64.6 |
| **3** | **SUPPORT** | **73.3** | **2** | ↓ | **50.7** |
| **3.1** | **Infrastructure** | **98.2** | **1** | = | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 90.8 | 10 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 100.0 | 1 | = | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 100.0 | 1 | = | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 100.0 | 1 | = | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 100.0 | 1 | = | 7.7 |
| **3.2** | **Finance** | **84.4** | **1** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 100.0 | 1 | = | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 53.3 | 4 | ↑ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 100.0 | 1 | = | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **37.4** | **33** | ↓ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 6.4 | 37 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 40.7 | 9 | ↑ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 72.3 | 20 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 30.4 | 31 | ↓ | 55.3 |

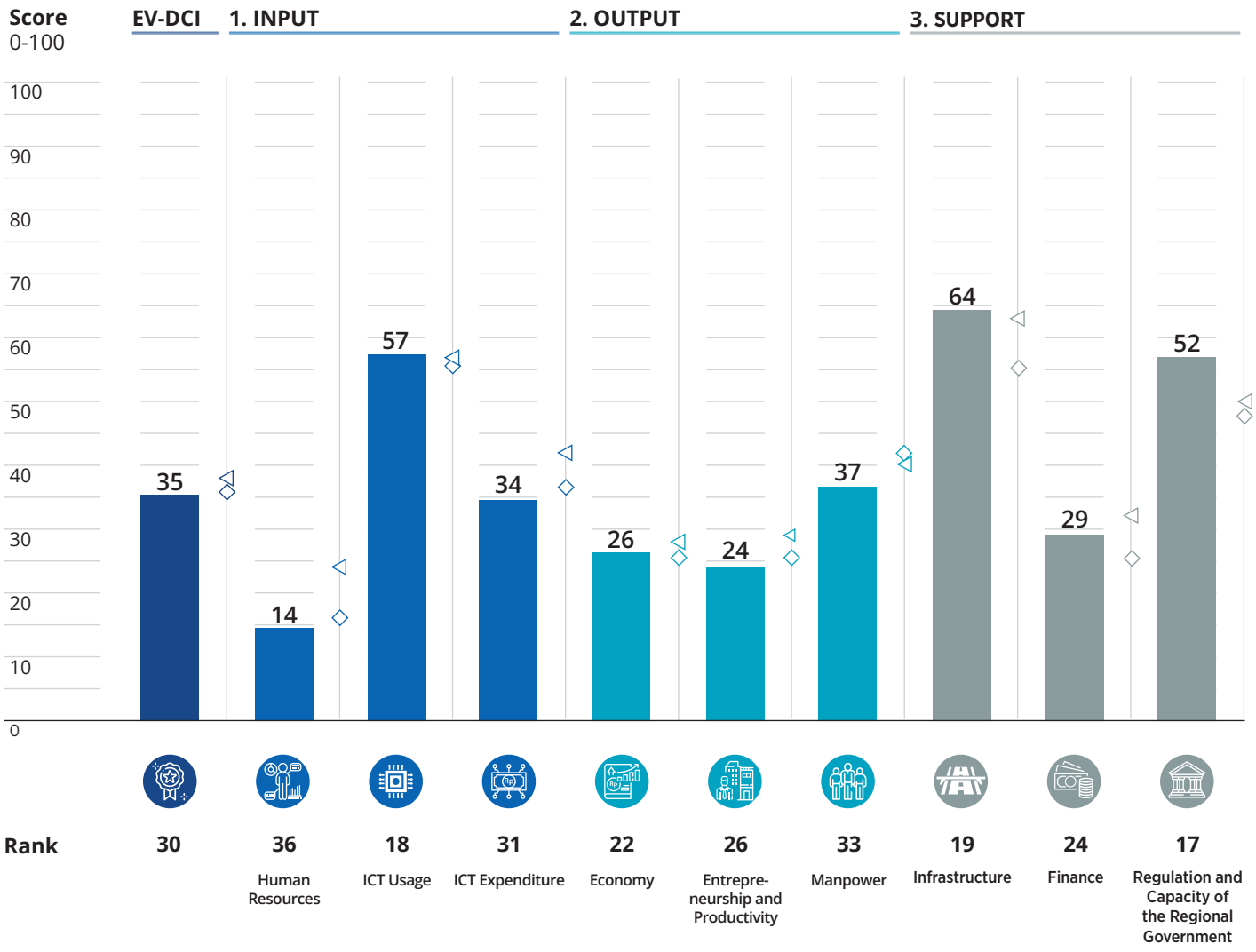
# Gorontalo

**Province Rank**

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 20 | 16 | 21 | 30 |
| Score : | 27.5 | 32.3 | 33.5 | 35.3 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sulawesi




| | EV-DCI | 1. INPUT | | | 2. OUTPUT | | | 3. SUPPORT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rank | 30 | 36 | 18 | 31 | 22 | 26 | 33 | 19 | 24 | 17 |
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **1,192.7** |
| **Area** ($km^2$) | **11,257.1** |
| **Economic Growth** (percent) | **2.4** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **43,896.0** |
| **GRDP per Capita** (IDR thousand) | **37,170.0** |
| **Human Development Index** | **69.0** |
| **Life Expectancy** (year) | **68.2** |
| **School Life Expectancy** (year) | **13.1** |
| **Average School Attendance** (year) | **8.0** |
| **Domestic Investment Realization** (IDR billion) | **1,004.3** |
| **Foreign Investment Realization** (USD million) | **78.0** |

# Gorontalo

| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **35.0** | **32** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **13.7** | **36** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 2.7 | 32 | ↓ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 25.2 | 9 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 4.4 | 29 | ↓ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 3.9 | 27 | = | 7.7 |
| 1.1.05 | Digital Literacy Index | 32.6 | 35 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **57.3** | **18** | = | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 78.4 | 18 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 38.1 | 23 | ↓ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 69.8 | 25 | ↓ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 88.0 | 20 | ↑ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 19.0 | 29 | ↑ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 39.4 | 5 | ↑ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 33.4 | 15 | ↑ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 92.2 | 17 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **34.0** | **31** | = | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 92.8 | 17 | = | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 15.1 | 32 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.5 | 29 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 27.9 | 29 | ↑ | 34.1 |
| **2** | **OUTPUT** | **29.0** | **28** | ↓ | **31.2** |
| **2.1** | **Economy** | **25.9** | **22** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.2 | 35 | ↓ | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 19.0 | 23 | ↑ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 18.0 | 35 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 1.5 | 30 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 48.0 | 9 | = | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 54.0 | 23 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 0.6 | 28 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 41.3 | 3 | ↓ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 50.6 | 5 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **24.5** | **26** | ↑ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 39.0 | 26 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 38.3 | 26 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 28.6 | 24 | ↓ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 29.4 | 25 | ↑ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 10.2 | 24 | ↑ | 13.4 |
| 2.2.06 | Loan Using Fintech | 1.2 | 21 | ↑ | 1.9 |
| **2.3** | **Manpower** | **36.6** | **33** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 1.7 | 29 | ↓ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 29.4 | 13 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 0.0 | 38 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 97.9 | 9 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 22.6 | 25 | ↑ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 67.9 | 15 | ↑ | 64.6 |
| **3** | **SUPPORT** | **48.4** | **22** | ↓ | **50.7** |
| **3.1** | **Infrastructure** | **64.3** | **19** | ↓ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 70.0 | 27 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 77.8 | 14 | ↑ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 91.6 | 19 | ↑ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 81.7 | 12 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 0.3 | 36 | ↓ | 7.7 |
| **3.2** | **Finance** | **29.3** | **24** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 69.3 | 8 | ↑ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 2.1 | 28 | ↑ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 16.5 | 28 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **51.6** | **17** | ↓ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 55.5 | 17 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 36.4 | 13 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 80.1 | 15 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 34.2 | 30 | ↓ | 55.3 |

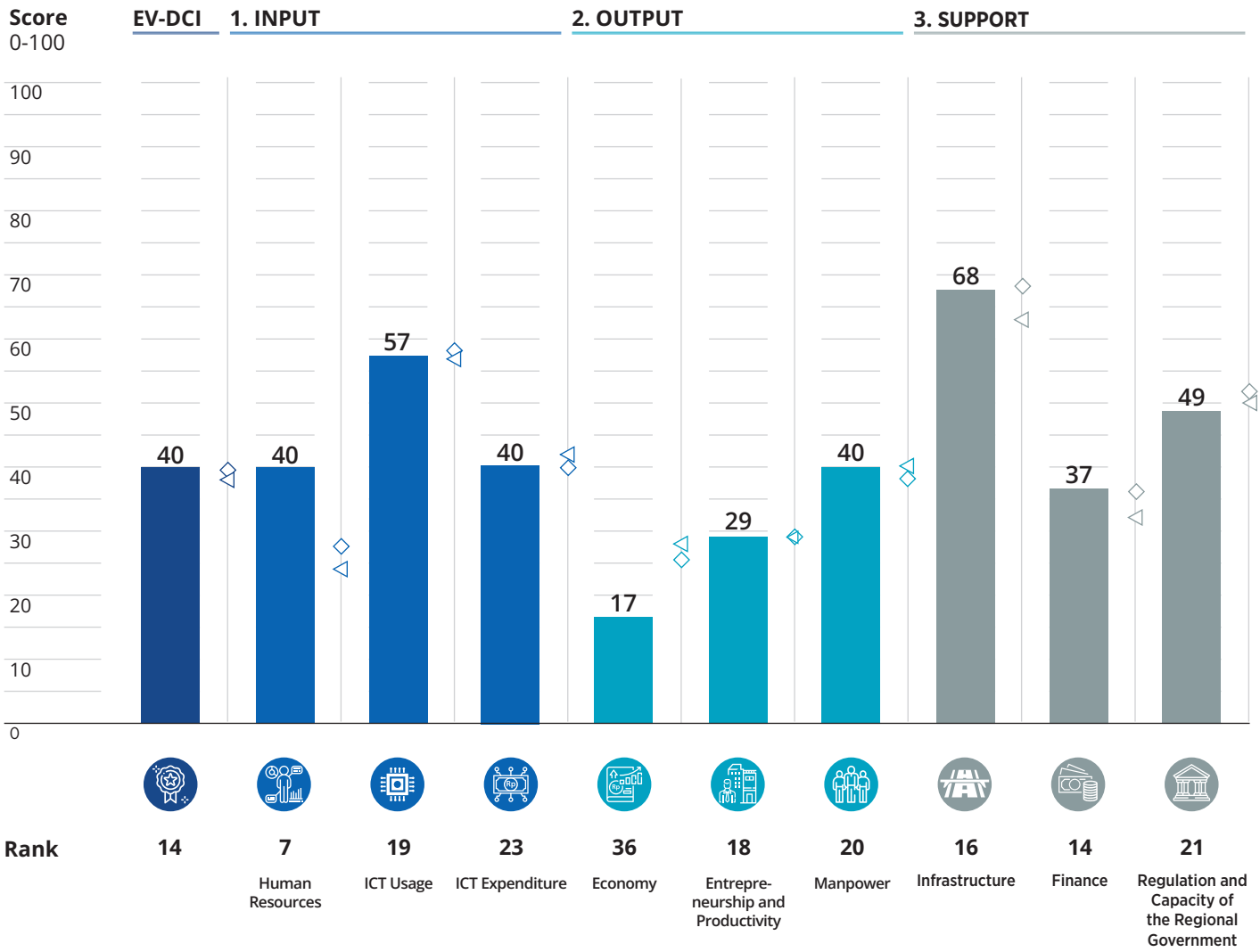
# Jambi

**Province Rank**

| 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|
| 23 | 20 | 30 | 14 |
| **Score :** 27.0 | 30.9 | 31.9 | 39.8 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sumatera




| Rank | 14 | 7 | 19 | 23 | 36 | 18 | 20 | 16 | 14 | 21 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **3,631.1** |
| **Area** ($km^2$) | **50,058.2** |
| **Economic Growth** (percent) | **3.7** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **233,725.0** |
| **GRDP per Capita** (IDR thousand) | **65,193.0** |
| **Human Development Index** | **71.6** |
| **Life Expectancy** (year) | **71.2** |
| **School Life Expectancy** (year) | **13.1** |
| **Average School Attendance** (year) | **8.7** |
| **Domestic Investment Realization** (IDR billion) | **6,204.2** |
| **Foreign Investment Realization** (USD million) | **50.9** |

# Jambi

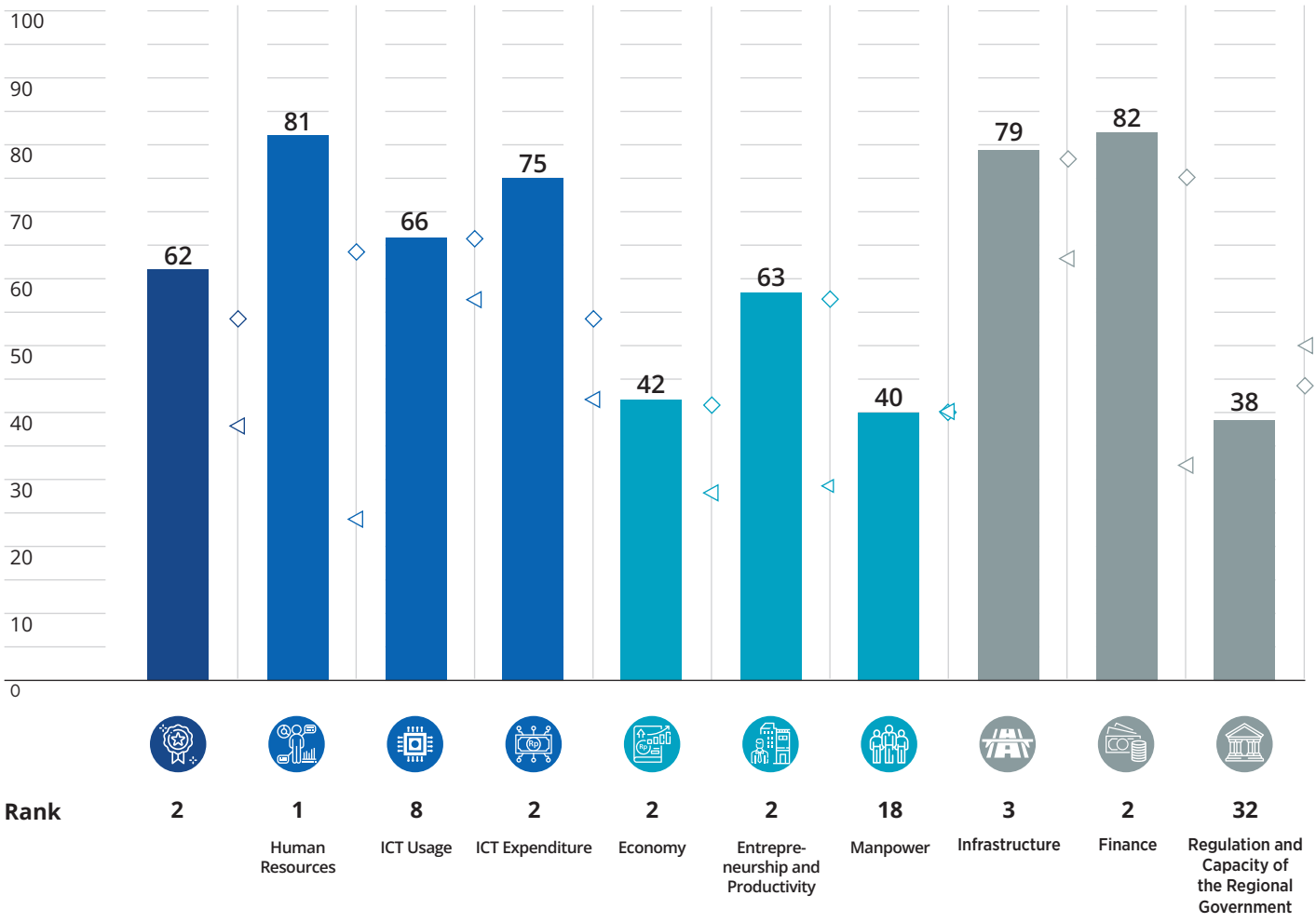
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **45.5** | **12** | ↑ | **40.1** |
| **1.1** | **Human Resources** | **39.6** | **7** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 8.3 | 20 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 100.0 | 1 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 5.3 | 24 | ↓ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 7.6 | 20 | ↑ | 7.7 |
| 1.1.05 | Digital Literacy Index | 76.7 | 18 | ↑ | 75.6 |
| **1.2** | **ICT Usage** | **57.0** | **19** | ↑ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 81.2 | 16 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 41.6 | 20 | = | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 74.4 | 18 | ↑ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 90.4 | 18 | ↑ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 38.2 | 17 | ↑ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 22.2 | 26 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 14.1 | 33 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 93.9 | 13 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **39.8** | **23** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 93.2 | 14 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 30.4 | 24 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.4 | 32 | ↓ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 35.0 | 17 | ↑ | 34.1 |
| **2** | **OUTPUT** | **28.5** | **33** | ↓ | **31.2** |
| **2.1** | **Economy** | **16.6** | **36** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 3.3 | 14 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 32.8 | 13 | ↓ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 21.3 | 31 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 4.8 | 22 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 19.7 | 30 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 61.3 | 13 | ↑ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 0.7 | 26 | ↓ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 5.8 | 34 | ↓ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 0.0 | 38 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **28.8** | **18** | ↑ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 43.6 | 19 | ↑ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 42.9 | 19 | ↑ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 32.7 | 19 | ↑ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 36.1 | 19 | ↑ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 15.8 | 15 | = | 13.4 |
| 2.2.06 | Loan Using Fintech | 1.8 | 20 | = | 1.9 |
| **2.3** | **Manpower** | **40.1** | **20** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 4.2 | 22 | = | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 19.9 | 23 | ↑ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 35.4 | 12 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 94.0 | 19 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 27.4 | 20 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 59.7 | 24 | ↓ | 64.6 |
| **3** | **SUPPORT** | **51.1** | **16** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **67.8** | **16** | = | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 89.6 | 18 | ↑ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 74.1 | 19 | = | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 90.4 | 20 | ↓ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 78.4 | 15 | = | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 6.7 | 21 | ↓ | 7.7 |
| **3.2** | **Finance** | **36.7** | **14** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 56.4 | 19 | ↑ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 8.7 | 12 | ↑ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 45.0 | 16 | = | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **48.9** | **21** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 39.8 | 28 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 25.1 | 22 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 66.7 | 25 | ↑ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 63.8 | 16 | ↑ | 55.3 |

# West Java

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 2 | 2 | 2 | 2 |
| Score : | 55.0 | 57.1 | 58.5 | 62.2 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Java




| Rank | 2 | 1 | 8 | 2 | 2 | 2 | 18 | 3 | 2 | 32 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **49,405.0** |
| **Area** ($km^2$) | **35,377.8** |
| **Economic Growth** (percent) | **3.7** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **2,209,822.0** |
| **GRDP per Capita** (IDR thousand) | **45,300.0** |
| **Human Development Index** | **72.5** |
| **Life Expectancy** (year) | **73.2** |
| **School Life Expectancy** (year) | **12.6** |
| **Average School Attendance** (year) | **8.8** |
| **Domestic Investment Realization** (IDR billion) | **59,948.5** |
| **Foreign Investment Realization** (USD million) | **5,217.7** |

# West Java

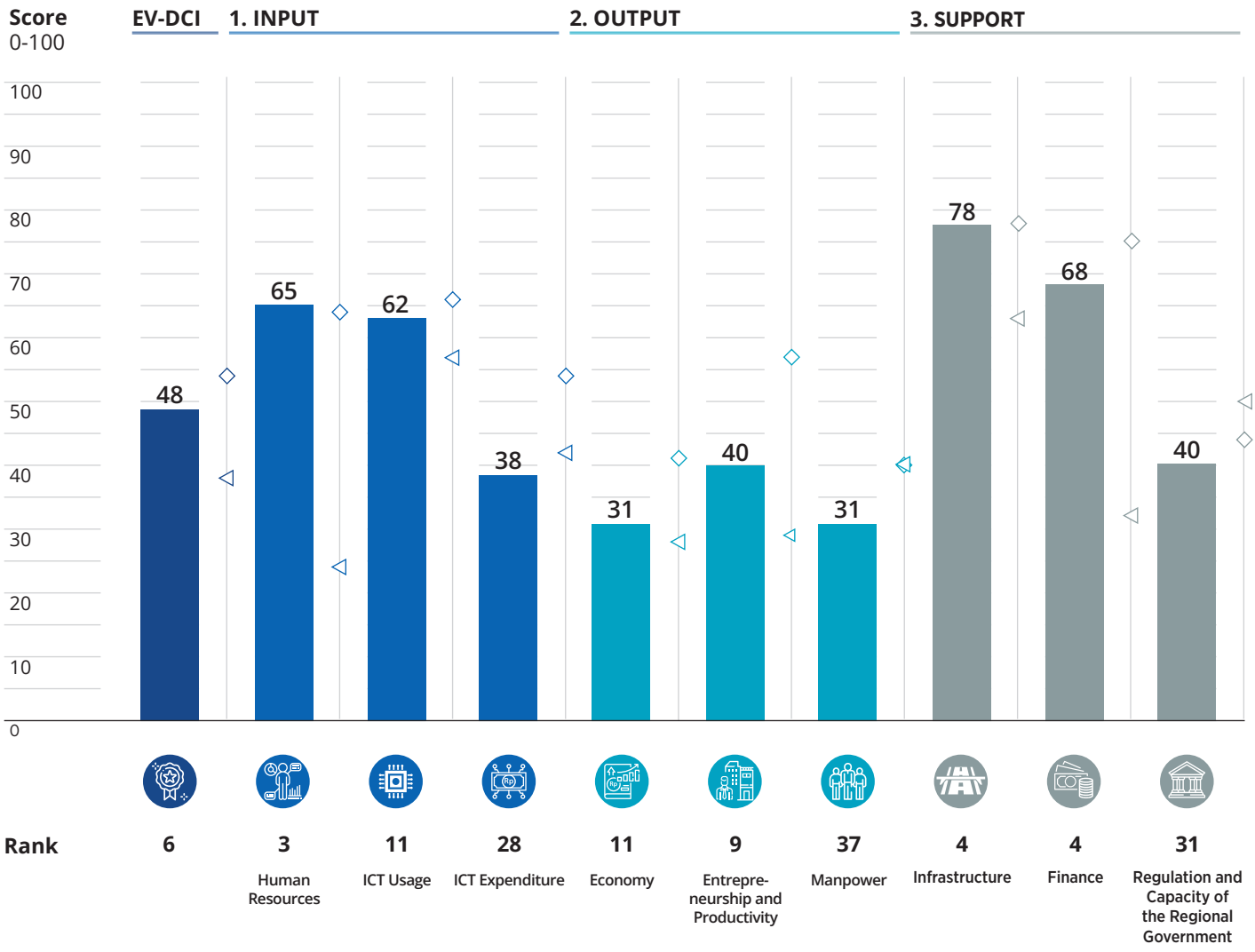
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **74.0** | **2** | = | **40.1** |
| **1.1** | **Human Resources** | **81.3** | **1** | = | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 100.0 | 1 | = | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 15.6 | 20 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 100.0 | 1 | = | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 100.0 | 1 | = | 7.7 |
| 1.1.05 | Digital Literacy Index | 90.7 | 7 | ↑ | 75.6 |
| **1.2** | **ICT Usage** | **65.5** | **8** | **↑** | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 82.3 | 13 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 48.6 | 10 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 83.2 | 6 | = | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 91.2 | 17 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 58.7 | 11 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 32.3 | 10 | ↑ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 41.1 | 10 | ↑ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 86.9 | 26 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **75.2** | **2** | **↑** | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 87.5 | 29 | ↑ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 36.2 | 18 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 100.0 | 1 | = | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 77.2 | 3 | = | 34.1 |
| **2** | **OUTPUT** | **48.4** | **2** | **=** | **31.2** |
| **2.1** | **Economy** | **42.2** | **2** | **=** | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 32.0 | 3 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 31.6 | 15 | ↑ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 32.3 | 23 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 99.4 | 2 | ↓ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 44.9 | 12 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 48.6 | 30 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 19.9 | 3 | = | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 23.0 | 17 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 47.9 | 12 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **62.6** | **2** | **↑** | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 59.2 | 9 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 58.7 | 9 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 60.9 | 5 | = | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 60.5 | 6 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 41.3 | 4 | = | 13.4 |
| 2.2.06 | Loan Using Fintech | 94.9 | 2 | = | 1.9 |
| **2.3** | **Manpower** | **40.4** | **18** | **↑** | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 100.0 | 1 | = | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 37.4 | 7 | ↑ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 34.6 | 14 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 0.0 | 38 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 8.8 | 35 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 61.5 | 22 | ↓ | 64.6 |
| **3** | **SUPPORT** | **66.3** | **3** | **↓** | **50.7** |
| **3.1** | **Infrastructure** | **78.6** | **3** | **↑** | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 90.5 | 12 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 90.4 | 7 | ↓ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 99.7 | 3 | = | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 92.7 | 3 | ↑ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 19.7 | 5 | ↓ | 7.7 |
| **3.2** | **Finance** | **82.1** | **2** | **↓** | **32.1** |
| 3.2.01 | Financial Inclusion Index | 68.3 | 11 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 100.0 | 1 | = | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 78.1 | 3 | ↑ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **38.3** | **32** | **↓** | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 15.2 | 32 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 18.4 | 29 | = | 28.7 |
| 3.3.03 | Life Expectancy Growth | 67.2 | 23 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 52.5 | 22 | ↑ | 55.3 |

# Central Java

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 6 | 8 | 14 | 6 |
| Score : | 42.6 | 42.6 | 38.0 | 48.1 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Java




| Rank | 6 | 3 | 11 | 28 | 11 | 9 | 37 | 4 | 4 | 31 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **37,032.0** |
| **Area** ($km^2$) | **32,800.7** |
| **Economic Growth** (percent) | **3.3** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **1,420,800.0** |
| **GRDP per Capita** (IDR thousand) | **38,669.0** |
| **Human Development Index** | **72.2** |
| **Life Expectancy** (year) | **74.5** |
| **School Life Expectancy** (year) | **12.8** |
| **Average School Attendance** (year) | **7.9** |
| **Domestic Investment Realization** (IDR billion) | **31,311.2** |
| **Foreign Investment Realization** (USD million) | **1,465.9** |

# Central Java

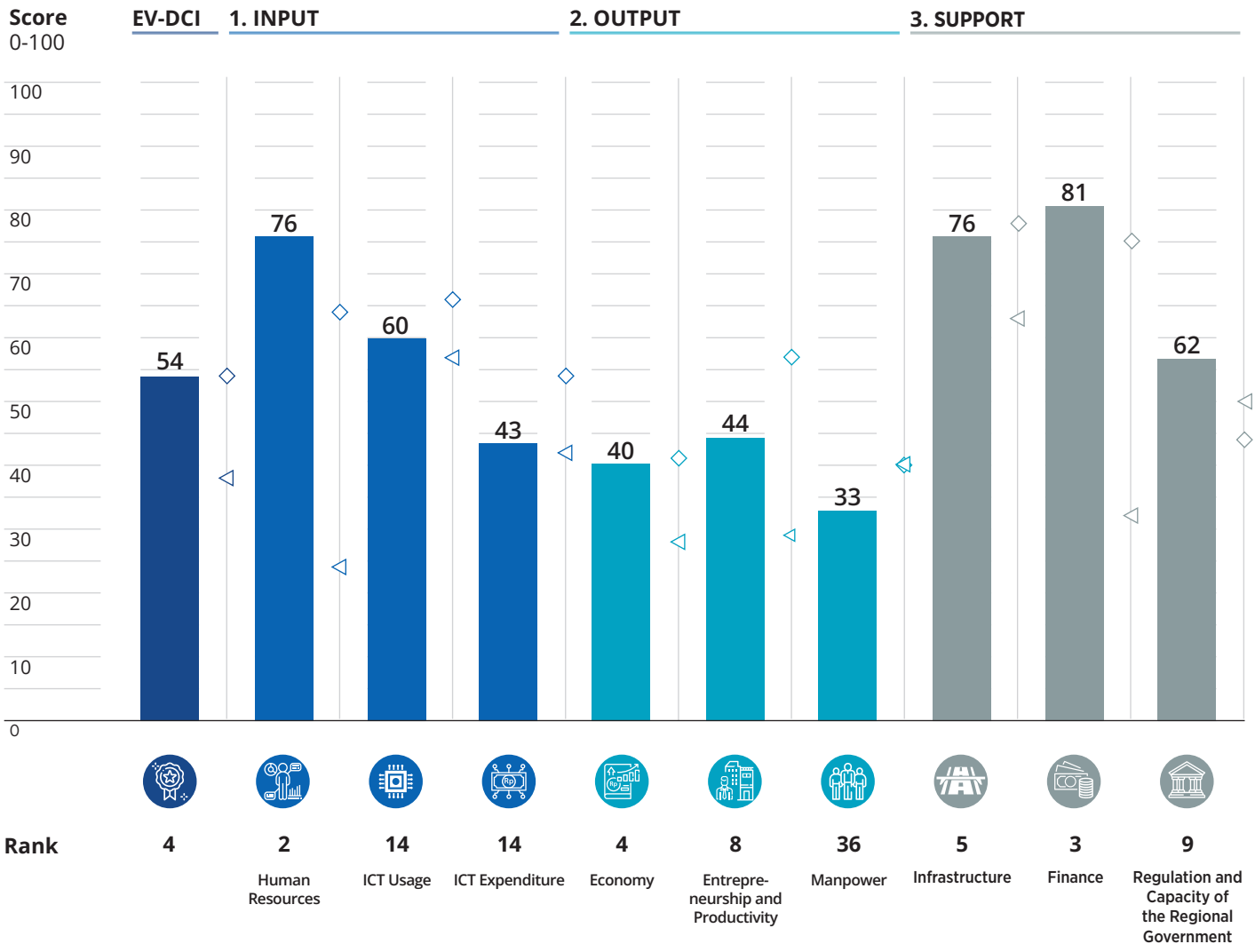
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **55.1** | **5** | ↑ | **40.1** |
| **1.1** | **Human Resources** | **65.1** | **3** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 74.9 | 3 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 18.3 | 12 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 69.5 | 4 | = | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 69.6 | 3 | = | 7.7 |
| 1.1.05 | Digital Literacy Index | 93.0 | 6 | ↑ | 75.6 |
| **1.2** | **ICT Usage** | **62.0** | **11** | ↑ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 74.6 | 24 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 37.9 | 25 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 79.0 | 12 | ↓ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 94.8 | 9 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 61.6 | 8 | ↑ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 30.3 | 14 | ↑ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 22.7 | 22 | ↑ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 95.2 | 8 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **38.3** | **28** | ↑ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 86.1 | 30 | ↑ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 17.8 | 31 | ↑ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 14.3 | 5 | = | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 34.8 | 19 | ↑ | 34.1 |
| **2** | **OUTPUT** | **34.1** | **15** | ↑ | **31.2** |
| **2.1** | **Economy** | **30.8** | **11** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 22.2 | 4 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 35.0 | 8 | ↑ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 30.4 | 25 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 28.5 | 6 | = | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 16.5 | 31 | = | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 63.1 | 10 | ↑ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 13.2 | 4 | = | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 23.9 | 15 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 44.8 | 22 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **40.5** | **9** | ↑ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 52.1 | 12 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 51.5 | 12 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 48.1 | 9 | = | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 46.5 | 10 | ↑ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 18.5 | 10 | ↑ | 13.4 |
| 2.2.06 | Loan Using Fintech | 26.1 | 5 | = | 1.9 |
| **2.3** | **Manpower** | **31.0** | **37** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 44.4 | 4 | = | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 18.8 | 25 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 24.2 | 21 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 22.0 | 36 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 9.2 | 34 | = | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 67.5 | 16 | ↑ | 64.6 |
| **3** | **SUPPORT** | **62.2** | **5** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **78.3** | **4** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 97.8 | 3 | ↑ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 91.5 | 5 | = | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 99.6 | 4 | = | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 90.5 | 6 | = | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 12.0 | 9 | ↓ | 7.7 |
| **3.2** | **Finance** | **68.3** | **4** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 59.4 | 15 | ↑ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 74.9 | 3 | = | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 70.5 | 4 | ↑ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **40.2** | **31** | ↓ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 51.0 | 21 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 15.0 | 32 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 21.2 | 35 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 73.4 | 11 | ↑ | 55.3 |

# East Java

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 3 | 3 | 5 | 4 |
| Score : | 49.7 | 48.0 | 45.6 | 54.1 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Java




| Rank | 4 | 2 | 14 | 14 | 4 | 8 | 36 | 5 | 3 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **41,150.0** |
| **Area** (km²) | **47,803.5** |
| **Economic Growth** (percent) | **3.6** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **2,454,499.0** |
| **GRDP per Capita** (IDR thousand) | **60,043.0** |
| **Human Development Index** | **72.1** |
| **Life Expectancy** (year) | **71.4** |
| **School Life Expectancy** (year) | **13.4** |
| **Average School Attendance** (year) | **8.0** |
| **Domestic Investment Realization** (IDR billion) | **52,552.2** |
| **Foreign Investment Realization** (USD million) | **1,849.2** |

# East Java

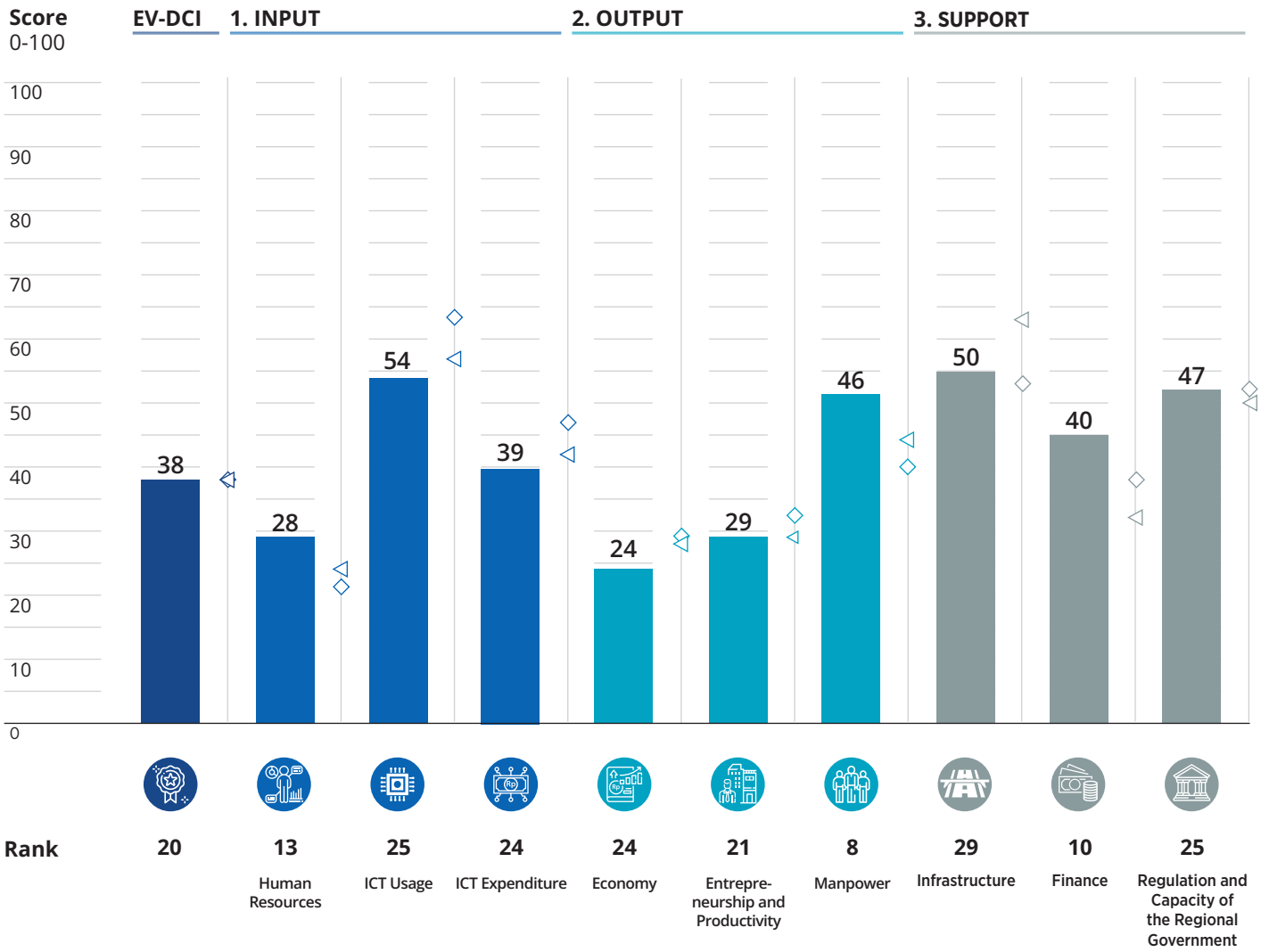
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **59.6** | **3** | ↑ | **40.1** |
| **1.1** | **Human Resources** | **76.1** | **2** | = | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 88.3 | 2 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 14.7 | 23 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 99.0 | 2 | ↑ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 92.3 | 2 | = | 7.7 |
| 1.1.05 | Digital Literacy Index | 86.0 | 11 | ↑ | 75.6 |
| **1.2** | **ICT Usage** | **60.3** | **14** | ↑ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 74.7 | 23 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 42.1 | 19 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 74.7 | 16 | ↑ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 93.3 | 12 | ↑ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 42.2 | 15 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 31.3 | 12 | ↑ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 33.9 | 13 | ↑ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 89.8 | 22 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **42.6** | **14** | ↑ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 85.4 | 31 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 13.5 | 34 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 25.8 | 4 | = | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 45.5 | 10 | ↑ | 34.1 |
| **2** | **OUTPUT** | **39.0** | **5** | ↑ | **31.2** |
| **2.1** | **Economy** | **40.2** | **4** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 47.2 | 2 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 44.7 | 7 | = | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 42.4 | 12 | ↑ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 63.9 | 3 | = | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 23.2 | 28 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 55.1 | 19 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 20.3 | 2 | = | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 20.7 | 20 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 44.0 | 27 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **43.6** | **8** | = | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 48.6 | 13 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 48.0 | 13 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 48.0 | 10 | ↓ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 47.2 | 9 | = | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 25.6 | 8 | ↑ | 13.4 |
| 2.2.06 | Loan Using Fintech | 44.2 | 3 | = | 1.9 |
| **2.3** | **Manpower** | **33.3** | **36** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 56.4 | 2 | = | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 20.7 | 22 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 24.1 | 22 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 17.5 | 37 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 19.0 | 27 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 61.7 | 21 | ↓ | 64.6 |
| **3** | **SUPPORT** | **73.4** | **1** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **76.5** | **5** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 90.4 | 13 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 91.5 | 4 | ↓ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 98.8 | 6 | = | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 89.4 | 7 | = | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 12.2 | 8 | ↑ | 7.7 |
| **3.2** | **Finance** | **81.4** | **3** | = | **32.1** |
| 3.2.01 | Financial Inclusion Index | 86.2 | 4 | ↑ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 88.2 | 2 | = | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 69.8 | 5 | ↑ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **62.2** | **9** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 53.5 | 19 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 25.1 | 23 | = | 28.7 |
| 3.3.03 | Life Expectancy Growth | 86.3 | 8 | ↑ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 84.1 | 6 | ↑ | 55.3 |

# West Kalimantan

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 21 | 31 | 32 | 20 |
| Score : | 27.4 | 26.6 | 29.7 | 38.4 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Kalimantan




## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **5,541.4** |
| **Area** ($km^2$) | **147,307.0** |
| **Economic Growth** (percent) | **4.8** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **231,321.0** |
| **GRDP per Capita** (IDR thousand) | **42,283.0** |
| **Human Development Index** | **67.9** |
| **Life Expectancy** (year) | **70.8** |
| **School Life Expectancy** (year) | **12.7** |
| **Average School Attendance** (year) | **7.6** |
| **Domestic Investment Realization** (IDR billion) | **10,773.4** |
| **Foreign Investment Realization** (USD million) | **463.4** |

# West Kalimantan

| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **40.2** | **19** | ↑ | **40.1** |
| **1.1** | **Human Resources** | **27.5** | **13** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 6.9 | 22 | = | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 16.3 | 18 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 7.9 | 21 | ↓ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 6.6 | 23 | ↓ | 7.7 |
| 1.1.05 | Digital Literacy Index | 100.0 | 1 | ↑ | 75.6 |
| **1.2** | **ICT Usage** | **53.7** | **25** | ↑ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 73.9 | 25 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 37.9 | 24 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 72.0 | 22 | ↑ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 81.0 | 28 | = | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 34.4 | 21 | ↑ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 18.2 | 34 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 18.3 | 30 | = | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 94.3 | 10 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **39.3** | **24** | ↑ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 89.4 | 25 | ↑ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 35.6 | 19 | = | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 1.2 | 19 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 31.0 | 26 | ↓ | 34.1 |
| **2** | **OUTPUT** | **32.9** | **16** | ↑ | **31.2** |
| **2.1** | **Economy** | **24.4** | **24** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 3.3 | 15 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 33.2 | 12 | ↑ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 37.9 | 17 | ↑ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 6.6 | 17 | = | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 28.4 | 24 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 34.0 | 36 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 2.4 | 14 | ↓ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 27.7 | 11 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 46.5 | 17 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **28.5** | **21** | ↑ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 44.9 | 17 | ↑ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 44.1 | 16 | ↑ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 30.4 | 23 | ↑ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 37.7 | 18 | ↑ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 12.1 | 21 | ↑ | 13.4 |
| 2.2.06 | Loan Using Fintech | 2.0 | 18 | ↑ | 1.9 |
| **2.3** | **Manpower** | **45.7** | **8** | ↑ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 5.4 | 17 | ↑ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 17.3 | 33 | ↑ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 51.5 | 3 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 92.3 | 23 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 35.8 | 12 | = | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 72.0 | 9 | ↑ | 64.6 |
| **3** | **SUPPORT** | **45.7** | **26** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **49.6** | **29** | = | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 100.0 | 1 | ↑ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 41.9 | 35 | ↓ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 60.8 | 30 | ↓ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 40.1 | 32 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 5.4 | 24 | ↓ | 7.7 |
| **3.2** | **Finance** | **40.4** | **10** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 59.4 | 15 | ↑ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 5.7 | 18 | ↑ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 56.1 | 8 | ↑ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **46.9** | **25** | ↓ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 41.9 | 27 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 19.3 | 27 | ↑ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 62.2 | 29 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 64.3 | 15 | ↓ | 55.3 |

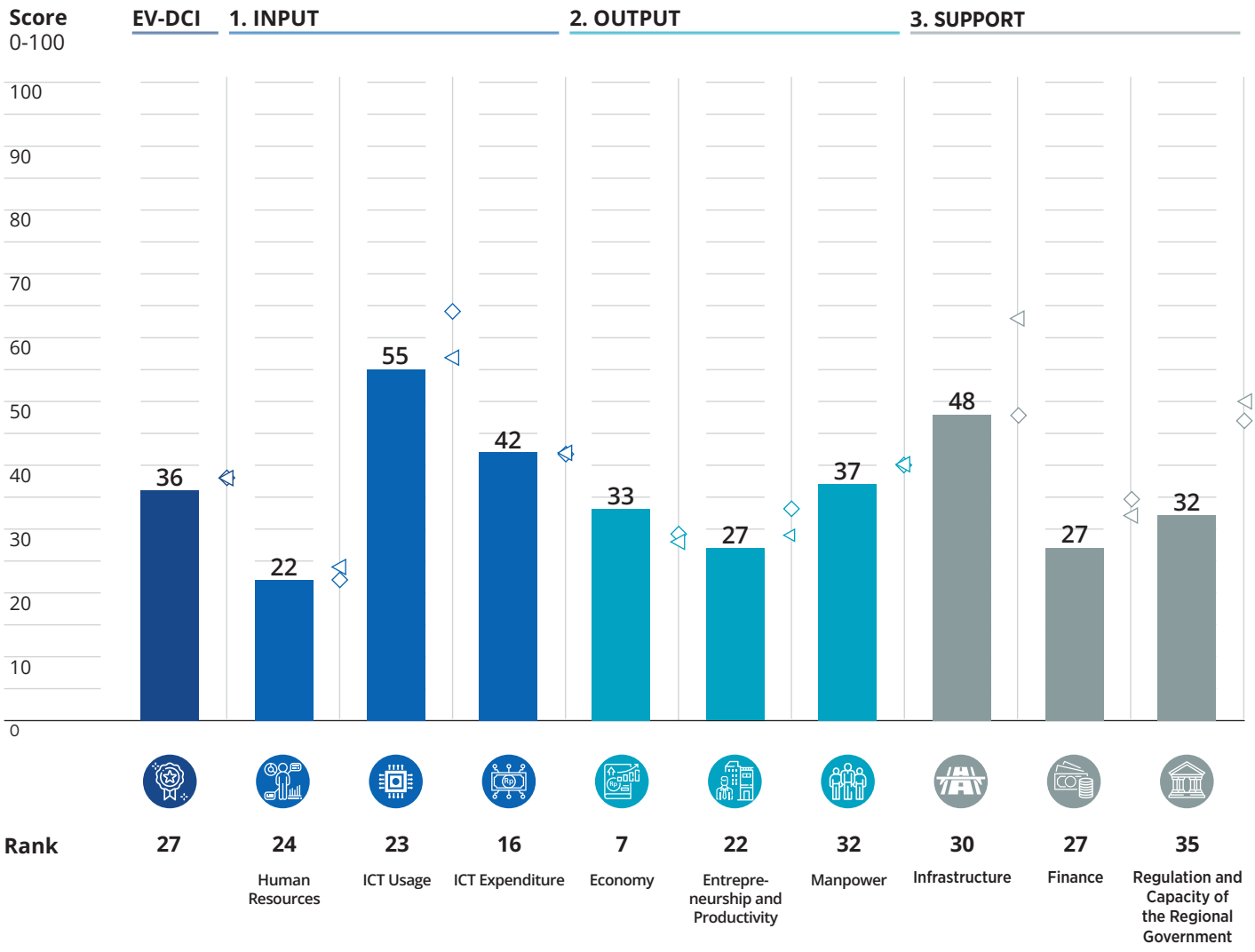
# Central Kalimantan

**Province Rank**

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 32 | 28 | 25 | 27 |
| **Score :** | 23.6 | 29.4 | 32.6 | 36.0 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Kalimantan




| | EV-DCI | 1. INPUT | | | 2. OUTPUT | | | 3. SUPPORT | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Rank** | 27 | 24 | 23 | 16 | 7 | 22 | 32 | 30 | 27 | 35 |
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **2,741.1** |
| **Area** ($km^2$) | **153,564.5** |
| **Economic Growth** (percent) | **3.4** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **170,001.0** |
| **GRDP per Capita** (IDR thousand) | **62,913.0** |
| **Human Development Index** | **71.3** |
| **Life Expectancy** (year) | **69.8** |
| **School Life Expectancy** (year) | **12.8** |
| **Average School Attendance** (year) | **8.7** |
| **Domestic Investment Realization** (IDR billion) | **6,359.8** |
| **Foreign Investment Realization** (USD million) | **162.5** |

# Central Kalimantan

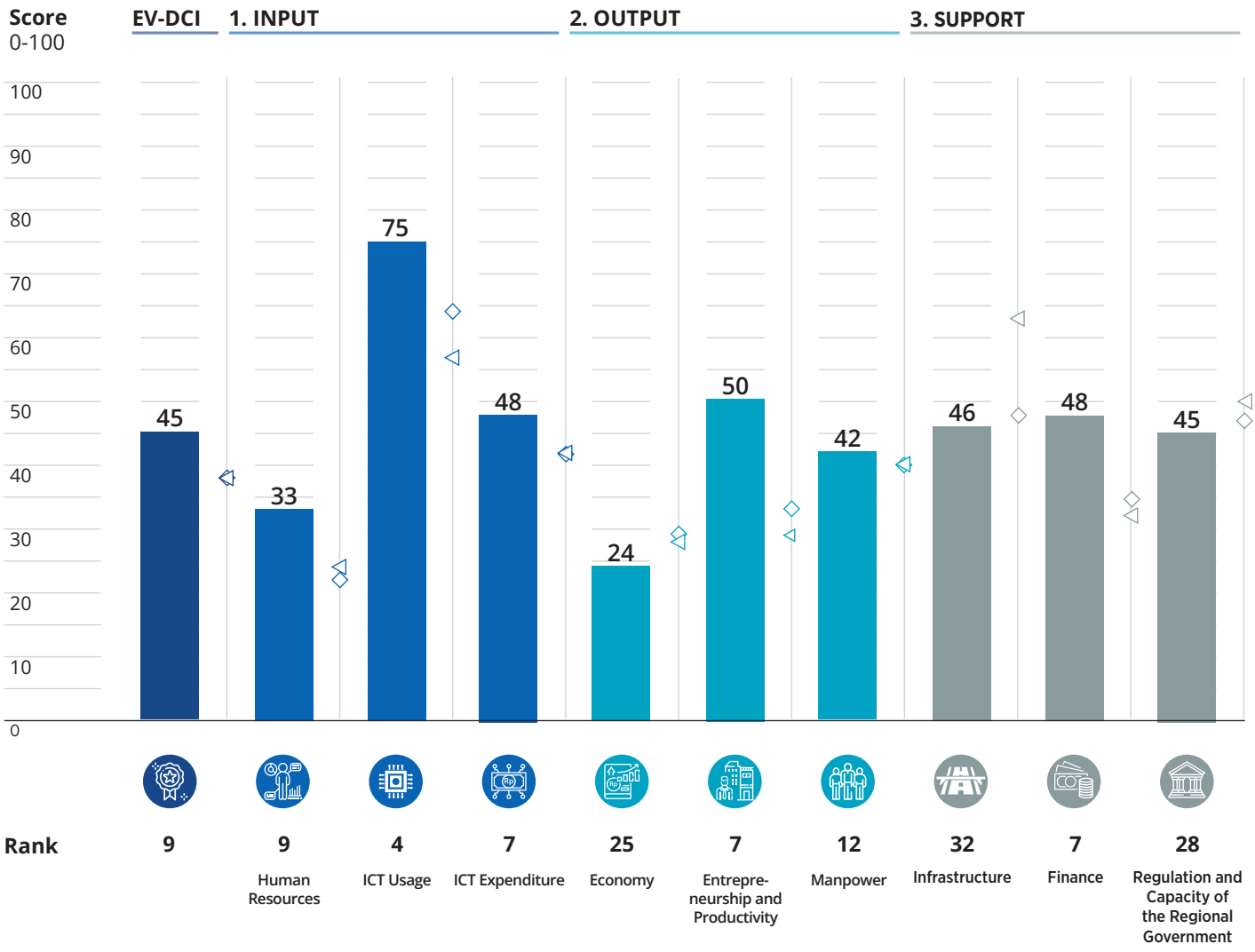
| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **39.9** | **21** | ↑ | **40.1** |
| **1.1** | **Human Resources** | **22.2** | **24** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 3.1 | 30 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 10.6 | 29 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 3.4 | 30 | ↓ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 3.1 | 30 | ↑ | 7.7 |
| 1.1.05 | Digital Literacy Index | 90.7 | 7 | ↑ | 75.6 |
| **1.2** | **ICT Usage** | **55.3** | **23** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 85.9 | 7 | ↓ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 42.9 | 18 | ↓ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 76.6 | 13 | = | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 77.2 | 31 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 29.2 | 24 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 12.5 | 36 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 28.2 | 19 | ↑ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 89.7 | 23 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **42.3** | **16** | ↑ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 93.0 | 15 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 37.7 | 17 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.4 | 31 | ↓ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 38.0 | 14 | ↑ | 34.1 |
| **2** | **OUTPUT** | **32.4** | **18** | ↓ | **31.2** |
| **2.1** | **Economy** | **33.4** | **7** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.5 | 30 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 3.5 | 36 | ↓ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 96.2 | 2 | ↑ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 9.6 | 14 | = | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 62.0 | 4 | = | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 51.7 | 29 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 1.8 | 19 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 27.7 | 12 | ↓ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 47.6 | 15 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **26.8** | **22** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 48.2 | 15 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 47.7 | 14 | = | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 27.3 | 26 | ↓ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 27.9 | 27 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 8.3 | 29 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 1.2 | 22 | = | 1.9 |
| **2.3** | **Manpower** | **37.1** | **32** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 2.3 | 26 | ↑ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 14.8 | 37 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 17.8 | 27 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 95.3 | 17 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 23.5 | 23 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 68.7 | 13 | ↑ | 64.6 |
| **3** | **SUPPORT** | **35.5** | **33** | ↓ | **50.7** |
| **3.1** | **Infrastructure** | **47.9** | **30** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 97.5 | 5 | ↑ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 45.2 | 31 | ↓ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 57.3 | 32 | ↓ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 35.9 | 35 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 3.3 | 33 | ↓ | 7.7 |
| **3.2** | **Finance** | **26.7** | **27** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 41.6 | 25 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 4.6 | 22 | ↑ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 34.0 | 23 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **32.0** | **35** | ↓ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 38.2 | 29 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 18.1 | 30 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 60.6 | 30 | ↑ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 11.3 | 37 | ↓ | 55.3 |

# East Kalimantan

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 8 | 10 | 7 | 9 |
| Score : | 37.9 | 39.5 | 44.0 | 45.4 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Kalimantan




| Rank | 9 | 9 | 4 | 7 | 25 | 7 | 12 | 32 | 7 | 28 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **3,859.8** |
| **Area** ($km^2$) | **129,066.6** |
| **Economic Growth** (percent) | **2.5** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **695,158.0** |
| **GRDP per Capita** (IDR thousand) | **182,541.0** |
| **Human Development Index** | **76.9** |
| **Life Expectancy** (year) | **74.6** |
| **School Life Expectancy** (year) | **13.8** |
| **Average School Attendance** (year) | **9.9** |
| **Domestic Investment Realization** (IDR billion) | **30,297.4** |
| **Foreign Investment Realization** (USD million) | **745.2** |

# East Kalimantan

| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **51.9** | **8** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **32.8** | **9** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 13.2 | 14 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 31.1 | 6 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 12.8 | 16 | ↓ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 11.3 | 15 | ↑ | 7.7 |
| 1.1.05 | Digital Literacy Index | 95.3 | 5 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **74.5** | **4** | ↑ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 100.0 | 1 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 77.6 | 3 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 94.9 | 3 | = | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 91.9 | 14 | ↑ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 60.1 | 9 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 28.4 | 16 | ↑ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 53.1 | 6 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 90.3 | 21 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **48.4** | **7** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 98.9 | 3 | = | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 54.6 | 10 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 2.2 | 13 | ↓ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 37.9 | 15 | ↓ | 34.1 |
| **2** | **OUTPUT** | **38.6** | **7** | = | **31.2** |
| **2.1** | **Economy** | **24.1** | **25** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 3.5 | 13 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 6.5 | 34 | ↓ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 43.9 | 9 | ↑ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 20.4 | 8 | = | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 27.7 | 25 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 55.7 | 18 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 3.4 | 9 | = | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 10.7 | 32 | ↓ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 45.2 | 21 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **50.0** | **7** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 80.9 | 3 | ↑ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 80.6 | 3 | ↑ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 54.6 | 7 | ↓ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 58.1 | 7 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 22.0 | 9 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 3.8 | 12 | = | 1.9 |
| **2.3** | **Manpower** | **41.6** | **12** | ↑ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 7.1 | 14 | ↑ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 37.3 | 8 | ↑ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 48.0 | 5 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 93.5 | 21 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 19.1 | 26 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 44.7 | 36 | ↓ | 64.6 |
| **3** | **SUPPORT** | **46.1** | **24** | ↓ | **50.7** |
| **3.1** | **Infrastructure** | **45.5** | **32** | ↓ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 0.0 | 37 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 63.1 | 23 | ↑ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 81.6 | 24 | ↑ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 66.2 | 25 | = | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 16.6 | 7 | ↑ | 7.7 |
| **3.2** | **Finance** | **47.7** | **7** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 87.2 | 3 | ↑ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 8.6 | 13 | ↑ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 47.5 | 12 | ↑ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **44.9** | **28** | ↓ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 88.2 | 7 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 42.4 | 8 | = | 28.7 |
| 3.3.03 | Life Expectancy Growth | 0.0 | 38 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 49.0 | 24 | ↑ | 55.3 |

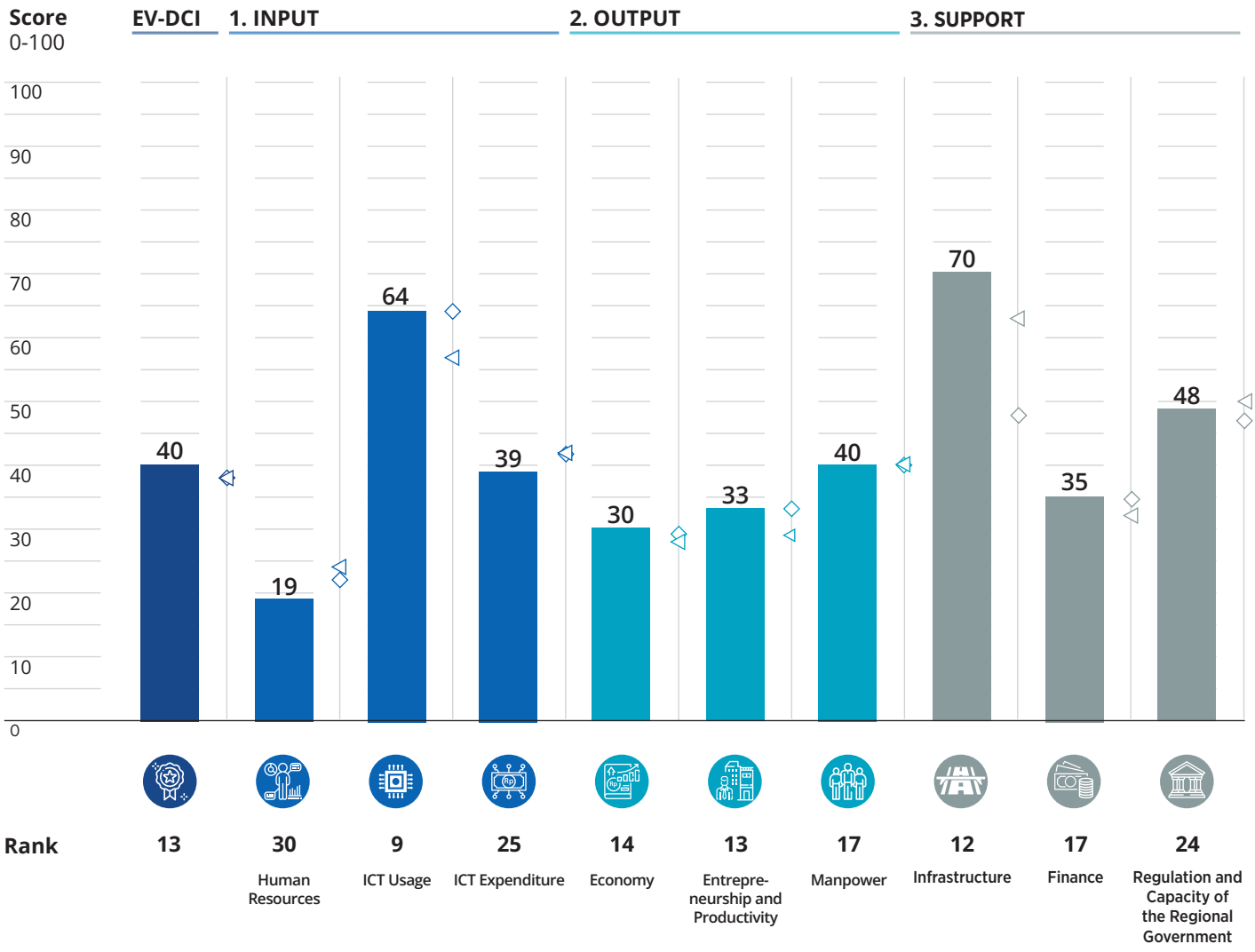
# South Kalimantan

**Province Rank**

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 14 | 15 | 15 | 13 |
| Score : | 30.7 | 32.6 | 36.5 | 40.2 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Kalimantan




## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **4,182.1** |
| **Area** ($km^2$) | **38,744.2** |
| **Economic Growth** (percent) | **3.5** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **192,577.0** |
| **GRDP per Capita** (IDR thousand) | **46,713.0** |
| **Human Development Index** | **71.3** |
| **Life Expectancy** (year) | **68.8** |
| **School Life Expectancy** (year) | **12.8** |
| **Average School Attendance** (year) | **8.5** |
| **Domestic Investment Realization** (IDR billion) | **11,003.9** |
| **Foreign Investment Realization** (USD million) | **117.2** |

# South Kalimantan

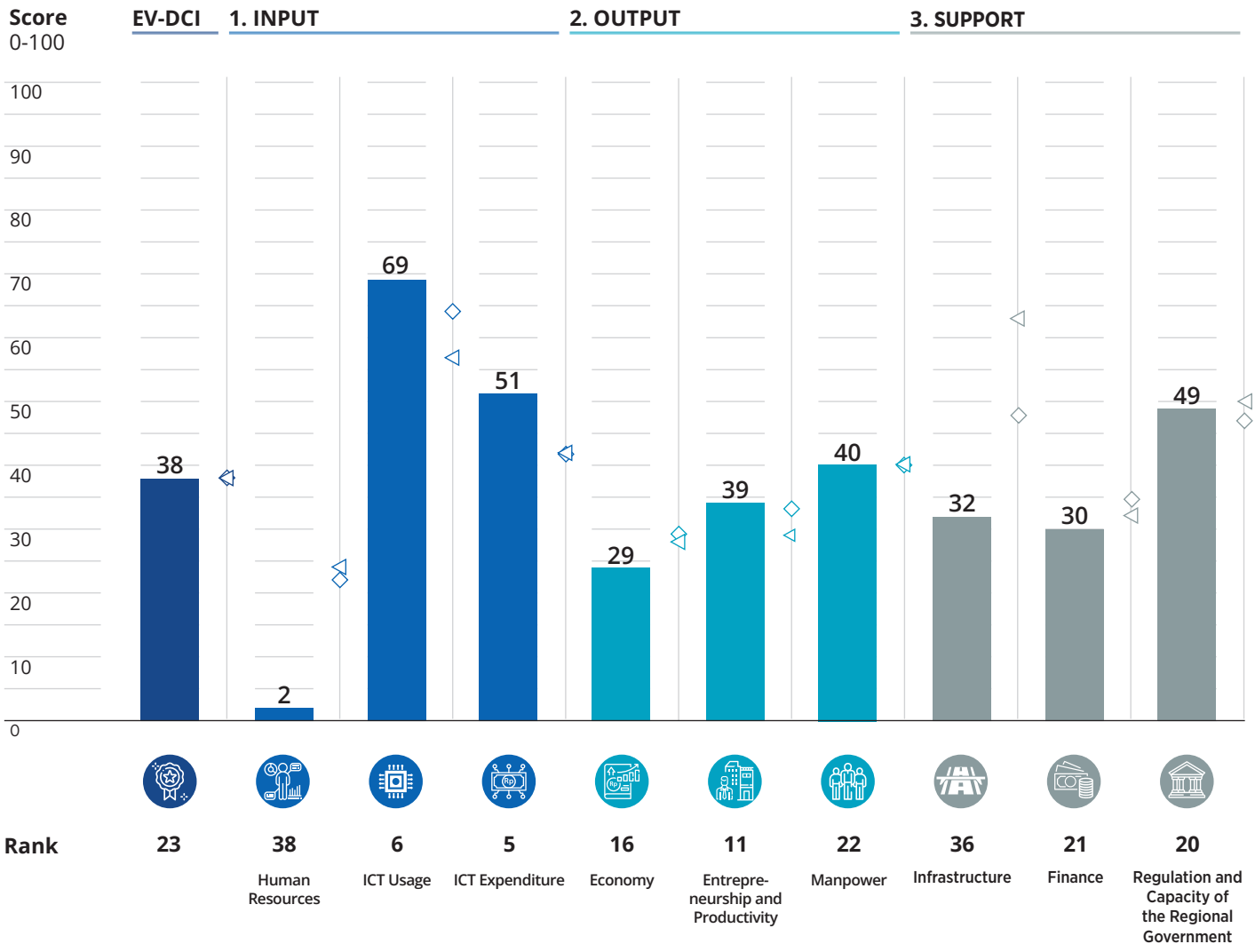
| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **40.7** | **16** | ↑ | **40.1** |
| **1.1** | **Human Resources** | **18.7** | **30** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 6.5 | 23 | ↓ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 7.9 | 34 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 8.8 | 20 | ↓ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 7.7 | 19 | ↑ | 7.7 |
| 1.1.05 | Digital Literacy Index | 62.8 | 26 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **64.2** | **9** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 82.5 | 11 | ↓ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 47.2 | 12 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 82.1 | 9 | = | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 96.1 | 6 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 53.8 | 12 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 21.5 | 30 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 30.3 | 18 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 100.0 | 1 | = | 91.2 |
| **1.3** | **ICT expenditure** | **39.2** | **25** | ↑ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 91.5 | 19 | ↑ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 32.5 | 22 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 1.4 | 17 | = | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 31.2 | 25 | ↑ | 34.1 |
| **2** | **OUTPUT** | **34.5** | **13** | ↓ | **31.2** |
| **2.1** | **Economy** | **29.9** | **14** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 2.6 | 17 | ↑ | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 31.5 | 16 | = | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 38.9 | 15 | ↑ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 10.4 | 13 | = | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 58.4 | 6 | ↑ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 52.2 | 27 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 2.1 | 16 | = | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 29.3 | 9 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 43.9 | 29 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **33.0** | **13** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 53.5 | 10 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 52.9 | 10 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 37.2 | 14 | = | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 38.3 | 16 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 13.3 | 20 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 2.6 | 15 | = | 1.9 |
| **2.3** | **Manpower** | **40.5** | **17** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 5.4 | 18 | ↓ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 22.0 | 20 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 10.1 | 34 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 93.6 | 20 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 34.1 | 15 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 77.6 | 3 | ↑ | 64.6 |
| **3** | **SUPPORT** | **50.8** | **19** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **69.9** | **12** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 96.7 | 6 | ↑ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 81.2 | 10 | ↑ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 93.0 | 15 | ↓ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 73.1 | 20 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 5.2 | 25 | ↓ | 7.7 |
| **3.2** | **Finance** | **34.7** | **17** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 42.6 | 24 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 6.4 | 17 | ↑ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 55.0 | 9 | ↑ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **47.9** | **24** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 24.7 | 31 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 20.8 | 25 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 74.2 | 19 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 71.8 | 12 | ↑ | 55.3 |

# North Kalimantan

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 11 | 14 | 17 | 23 |
| Score : | 34.1 | 32.8 | 35.3 | 38.0 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Kalimantan




| Rank | 23 | 38 | 6 | 5 | 16 | 11 | 22 | 36 | 21 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **727.8** |
| **Area** (km²) | **75,467.7** |
| **Economic Growth** (percent) | **4.0** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **110,669.0** |
| **GRDP per Capita** (IDR thousand) | **155,081.0** |
| **Human Development Index** | **71.2** |
| **Life Expectancy** (year) | **72.7** |
| **School Life Expectancy** (year) | **13.1** |
| **Average School Attendance** (year) | **9.3** |
| **Domestic Investment Realization** (IDR billion) | **3,792.5** |
| **Foreign Investment Realization** (USD million) | **133.5** |

# North Kalimantan

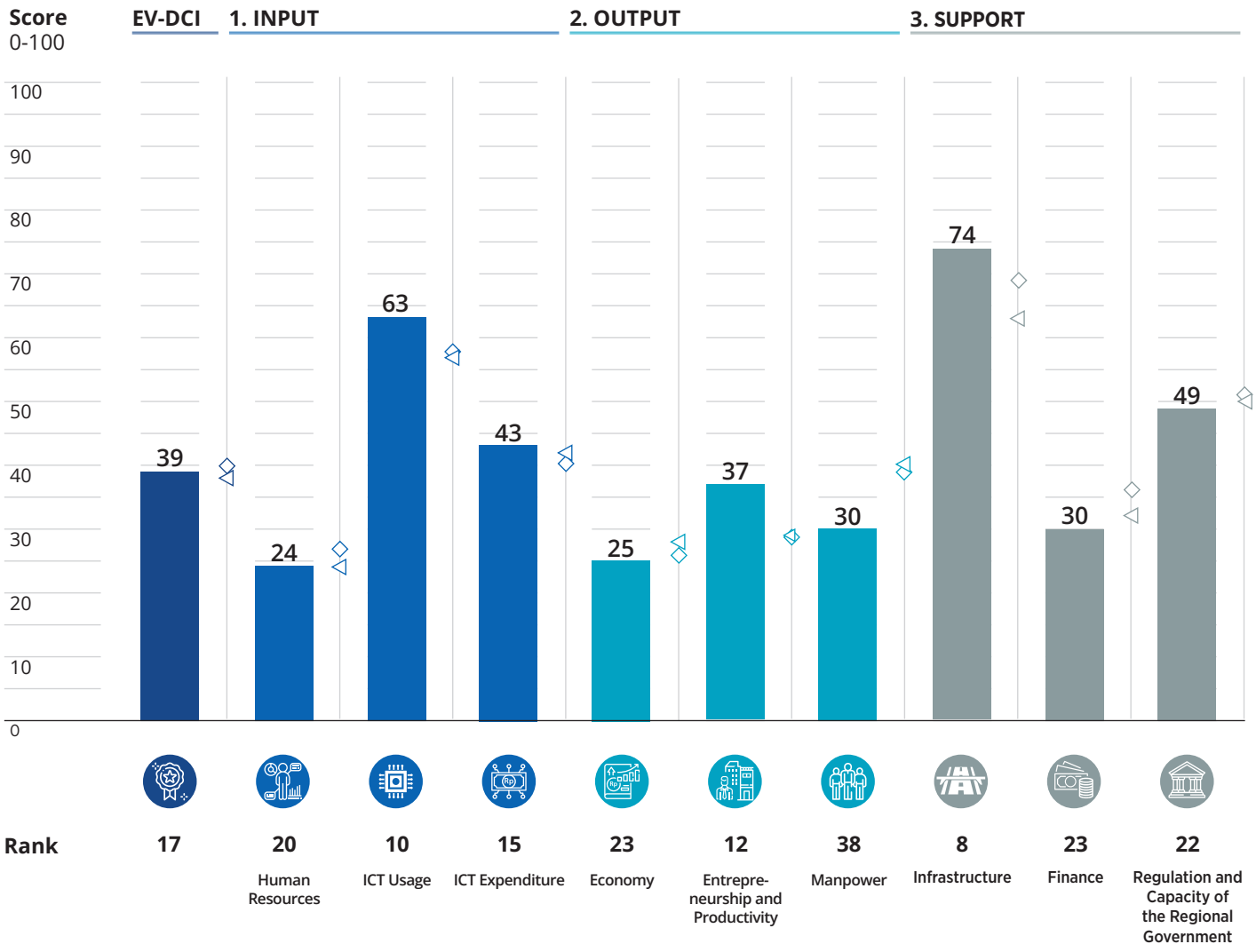
| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **40.7** | **17** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **2.0** | **38** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 0.5 | 36 | ↓ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 6.0 | 37 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 1.8 | 34 | ↓ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 1.8 | 35 | ↓ | 7.7 |
| 1.1.05 | Digital Literacy Index | 0.0 | 38 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **68.5** | **6** | ↑ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 94.5 | 4 | = | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 75.5 | 4 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 91.0 | 4 | ↑ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 83.9 | 25 | = | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 45.9 | 14 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 16.4 | 35 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 49.3 | 7 | ↑ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 91.8 | 19 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **51.5** | **5** | ↑ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 98.9 | 4 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 68.9 | 5 | ↑ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 1.5 | 16 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 36.6 | 16 | ↓ | 34.1 |
| **2** | **OUTPUT** | **35.7** | **12** | ↓ | **31.2** |
| **2.1** | **Economy** | **29.1** | **16** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.9 | 26 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 18.6 | 25 | = | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 71.4 | 4 | ↑ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 5.7 | 19 | = | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 58.6 | 5 | ↑ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 52.1 | 28 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 0.3 | 32 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 6.1 | 33 | = | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 48.3 | 10 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **38.5** | **11** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 63.0 | 6 | = | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 62.6 | 6 | = | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 46.8 | 11 | ↓ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 44.5 | 11 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 13.9 | 17 | ↑ | 13.4 |
| 2.2.06 | Loan Using Fintech | 0.2 | 31 | = | 1.9 |
| **2.3** | **Manpower** | **39.6** | **22** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 0.9 | 34 | = | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 31.9 | 11 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 14.1 | 30 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 98.9 | 7 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 23.7 | 22 | = | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 68.1 | 14 | ↑ | 64.6 |
| **3** | **SUPPORT** | **37.3** | **32** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **32.0** | **36** | ↓ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 0.0 | 37 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 57.4 | 26 | = | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 48.8 | 33 | ↓ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 43.3 | 31 | = | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 10.7 | 11 | ↑ | 7.7 |
| **3.2** | **Finance** | **30.4** | **21** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 81.2 | 6 | ↑ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 8.6 | 13 | ↑ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 1.4 | 37 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **49.4** | **20** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 99.4 | 3 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 17.8 | 31 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 2.5 | 37 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 78.1 | 8 | ↑ | 55.3 |

# Bangka Belitung Islands

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 19 | 25 | 29 | 17 |
| Score : | 27.7 | 29.8 | 32.2 | 39.5 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Kalimantan




## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **1,494.6** |
| **Area** ($km^2$) | **16,424.1** |
| **Economic Growth** (percent) | **5.1** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **85,943.0** |
| **GRDP per Capita** (IDR thousand) | **58,339.0** |
| **Human Development Index** | **71.7** |
| **Life Expectancy** (year) | **70.7** |
| **School Life Expectancy** (year) | **12.2** |
| **Average School Attendance** (year) | **8.1** |
| **Domestic Investment Realization** (IDR billion) | **3,677.4** |
| **Foreign Investment Realization** (USD million) | **44.7** |

# Bangka Belitung Islands

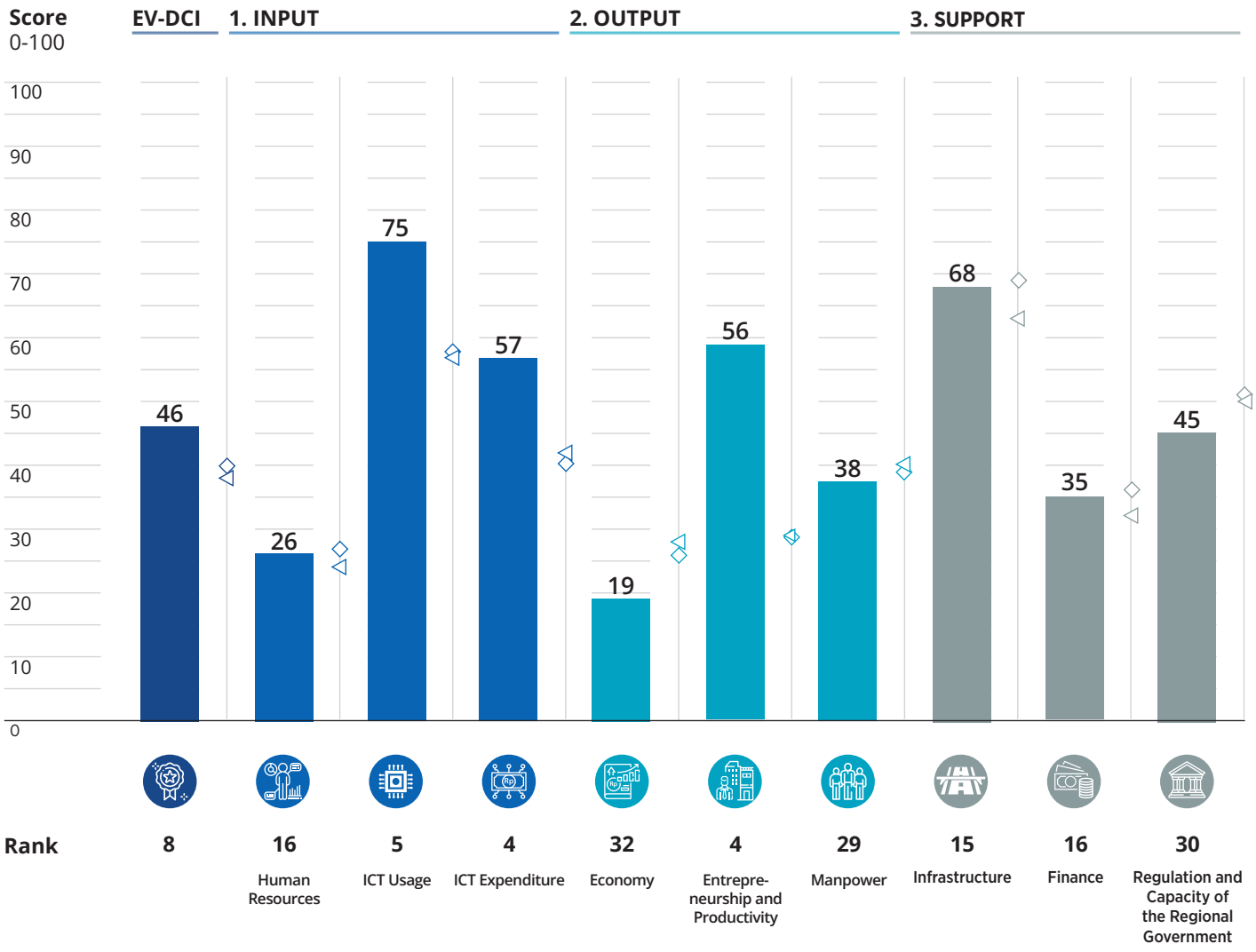
| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **43.1** | **13** | ↑ | **40.1** |
| **1.1** | **Human Resources** | **24.2** | **20** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 3.2 | 28 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 37.6 | 4 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 4.5 | 28 | ↑ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 3.5 | 29 | ↑ | 7.7 |
| 1.1.05 | Digital Literacy Index | 72.1 | 22 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **62.6** | **10** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 86.4 | 6 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 46.3 | 15 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 80.2 | 11 | ↑ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 100.0 | 1 | = | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 50.7 | 13 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 18.6 | 33 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 20.4 | 23 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 98.1 | 3 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **42.6** | **15** | ↑ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 93.5 | 13 | ↑ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 25.6 | 25 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 1.0 | 20 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 50.1 | 7 | ↑ | 34.1 |
| **2** | **OUTPUT** | **30.2** | **25** | ↑ | **31.2** |
| **2.1** | **Economy** | **24.5** | **23** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.4 | 31 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 12.6 | 30 | ↓ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 39.9 | 14 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 2.2 | 29 | = | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 30.3 | 23 | = | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 74.6 | 3 | ↑ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 0.4 | 30 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 12.5 | 28 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 47.8 | 13 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **36.5** | **12** | ↑ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 60.0 | 8 | ↑ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 59.3 | 8 | ↑ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 46.1 | 12 | ↑ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 43.5 | 13 | ↑ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 9.3 | 28 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 0.8 | 25 | ↑ | 1.9 |
| **2.3** | **Manpower** | **29.6** | **38** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 1.1 | 32 | = | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 15.2 | 35 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 21.3 | 24 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 96.8 | 13 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 0.0 | 38 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 43.4 | 37 | ↓ | 64.6 |
| **3** | **SUPPORT** | **50.7** | **20** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **73.7** | **8** | ↓ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 76.1 | 25 | ↑ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 91.0 | 6 | ↑ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 99.3 | 5 | = | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 95.3 | 2 | ↑ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 6.7 | 22 | ↓ | 7.7 |
| **3.2** | **Finance** | **29.7** | **23** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 34.3 | 29 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 1.9 | 29 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 52.9 | 10 | ↑ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **48.7** | **22** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 49.5 | 22 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 0.0 | 38 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 59.8 | 31 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 85.6 | 5 | ↑ | 55.3 |

# Riau Islands

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 10 | 7 | 8 | 8 |
| Score : | 35.9 | 43.0 | 40.8 | 45.9 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sumatera




| Rank | 8 | 16 | 5 | 4 | 32 | 4 | 29 | 15 | 16 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **2,179.8** |
| **Area** ($km^2$) | **8,201.7** |
| **Economic Growth** (percent) | **3.4** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **275,636.0** |
| **GRDP per Capita** (IDR thousand) | **130,125.0** |
| **Human Development Index** | **75.8** |
| **Life Expectancy** (year) | **70.1** |
| **School Life Expectancy** (year) | **13.0** |
| **Average School Attendance** (year) | **10.4** |
| **Domestic Investment Realization** (IDR billion) | **9,768.7** |
| **Foreign Investment Realization** (USD million) | **1,043.7** |

# Riau Islands

| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **52.5** | **7** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **25.8** | **16** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 9.0 | 18 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 14.0 | 24 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 10.1 | 19 | ↑ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 7.5 | 21 | ↓ | 7.7 |
| 1.1.05 | Digital Literacy Index | 88.4 | 9 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **74.5** | **5** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 96.3 | 3 | = | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 73.5 | 6 | ↓ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 97.2 | 2 | = | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 97.0 | 5 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 72.4 | 6 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 12.3 | 37 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 61.1 | 4 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 86.3 | 28 | = | 91.2 |
| **1.3** | **ICT expenditure** | **57.1** | **4** | ↑ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 100.0 | 1 | ↑ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 77.7 | 2 | ↑ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 2.2 | 12 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 48.6 | 8 | ↑ | 34.1 |
| **2** | **OUTPUT** | **37.6** | **8** | ↑ | **31.2** |
| **2.1** | **Economy** | **18.9** | **32** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 2.4 | 18 | ↑ | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 17.7 | 26 | ↓ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 44.9 | 8 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 2.9 | 28 | = | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 7.4 | 36 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 30.6 | 37 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 2.2 | 15 | = | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 20.0 | 21 | ↓ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 41.8 | 35 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **55.6** | **4** | ↑ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 89.2 | 2 | ↑ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 88.2 | 2 | ↑ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 58.3 | 6 | ↑ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 62.3 | 5 | ↑ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 33.2 | 6 | = | 13.4 |
| 2.2.06 | Loan Using Fintech | 2.5 | 16 | ↑ | 1.9 |
| **2.3** | **Manpower** | **38.2** | **29** | ↑ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 5.1 | 19 | ↑ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 42.6 | 3 | ↑ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 32.7 | 15 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 95.1 | 18 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 4.7 | 37 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 48.7 | 34 | = | 64.6 |
| **3** | **SUPPORT** | **49.2** | **21** | ↓ | **50.7** |
| **3.1** | **Infrastructure** | **68.0** | **15** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 91.8 | 9 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 66.3 | 22 | = | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 89.1 | 21 | ↑ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 73.1 | 21 | ↑ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 19.6 | 6 | ↓ | 7.7 |
| **3.2** | **Finance** | **34.7** | **16** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 63.4 | 13 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 3.1 | 27 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 37.7 | 20 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **44.9** | **30** | ↓ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 52.2 | 20 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 20.8 | 26 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 92.9 | 6 | = | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 13.7 | 36 | ↓ | 55.3 |

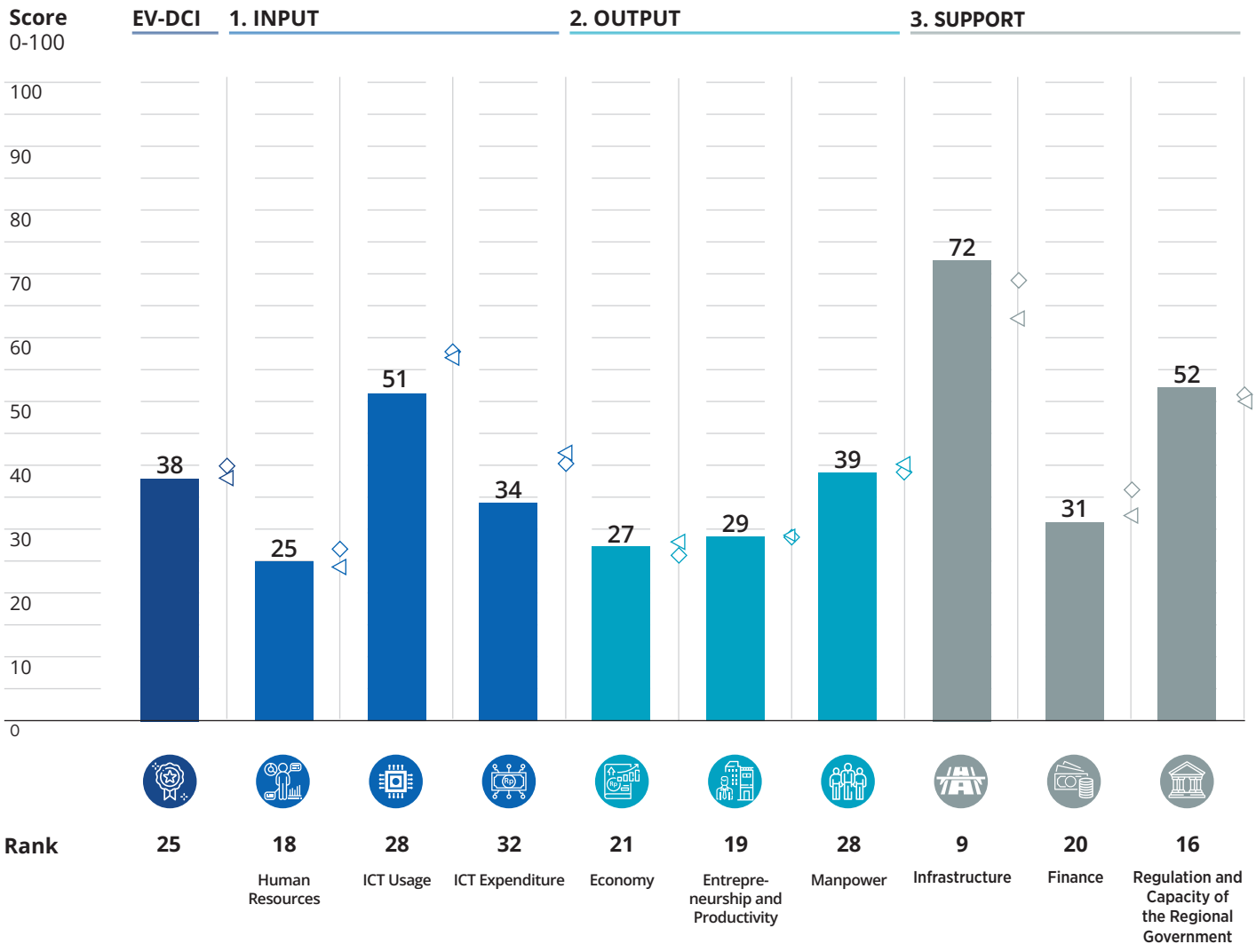
# Lampung

**Province Rank**

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 24 | 26 | 20 | 25 |
| Score : | 26.8 | 29.6 | 33.8 | 37.5 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sumatera




| Rank | 25 | 18 | 28 | 32 | 21 | 19 | 28 | 9 | 20 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **9,176.6** |
| **Area** ($km^2$) | **34,623.8** |
| **Economic Growth** (percent) | **2.8** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **371,903.0** |
| **GRDP per Capita** (IDR thousand) | **40,950.0** |
| **Human Development Index** | **69.9** |
| **Life Expectancy** (year) | **70.7** |
| **School Life Expectancy** (year) | **12.7** |
| **Average School Attendance** (year) | **8.2** |
| **Domestic Investment Realization** (IDR billion) | **10,513.2** |
| **Foreign Investment Realization** (USD million) | **173.8** |

# Lampung

| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **36.7** | **28** | ↑ | **40.1** |
| **1.1** | **Human Resources** | **24.9** | **18** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 14.2 | 13 | ↓ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 11.9 | 28 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 16.7 | 13 | ↓ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 16.4 | 11 | ↓ | 7.7 |
| 1.1.05 | Digital Literacy Index | 65.1 | 24 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **51.4** | **28** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 76.0 | 22 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 25.9 | 36 | ↓ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 75.9 | 15 | ↓ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 95.0 | 8 | ↑ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 14.0 | 33 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 22.0 | 28 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 6.5 | 37 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 96.0 | 6 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **33.7** | **32** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 94.7 | 9 | ↑ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 13.6 | 33 | ↑ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 1.7 | 14 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 25.0 | 35 | ↓ | 34.1 |
| **2** | **OUTPUT** | **31.2** | **19** | ↓ | **31.2** |
| **2.1** | **Economy** | **26.6** | **21** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 5.6 | 11 | ↓ | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 34.7 | 9 | ↑ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 19.6 | 34 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 16.2 | 9 | = | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 44.6 | 14 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 55.0 | 20 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 2.5 | 12 | ↓ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 16.3 | 25 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 44.7 | 23 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **28.6** | **19** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 40.9 | 22 | ↑ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 40.3 | 22 | ↑ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 33.0 | 18 | ↓ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 39.6 | 15 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 13.4 | 19 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 4.3 | 9 | ↑ | 1.9 |
| **2.3** | **Manpower** | **38.5** | **28** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 10.2 | 8 | ↑ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 18.7 | 26 | = | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 25.0 | 20 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 85.9 | 32 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 31.8 | 18 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 59.6 | 25 | ↓ | 64.6 |
| **3** | **SUPPORT** | **51.9** | **15** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **72.4** | **9** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 98.4 | 2 | ↑ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 82.0 | 9 | ↑ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 97.0 | 10 | = | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 80.9 | 13 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 3.6 | 30 | ↓ | 7.7 |
| **3.2** | **Finance** | **31.5** | **20** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 16.9 | 37 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 14.6 | 8 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 62.9 | 6 | ↑ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **51.7** | **16** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 53.6 | 18 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 10.9 | 33 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 62.3 | 28 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 80.1 | 7 | ↑ | 55.3 |

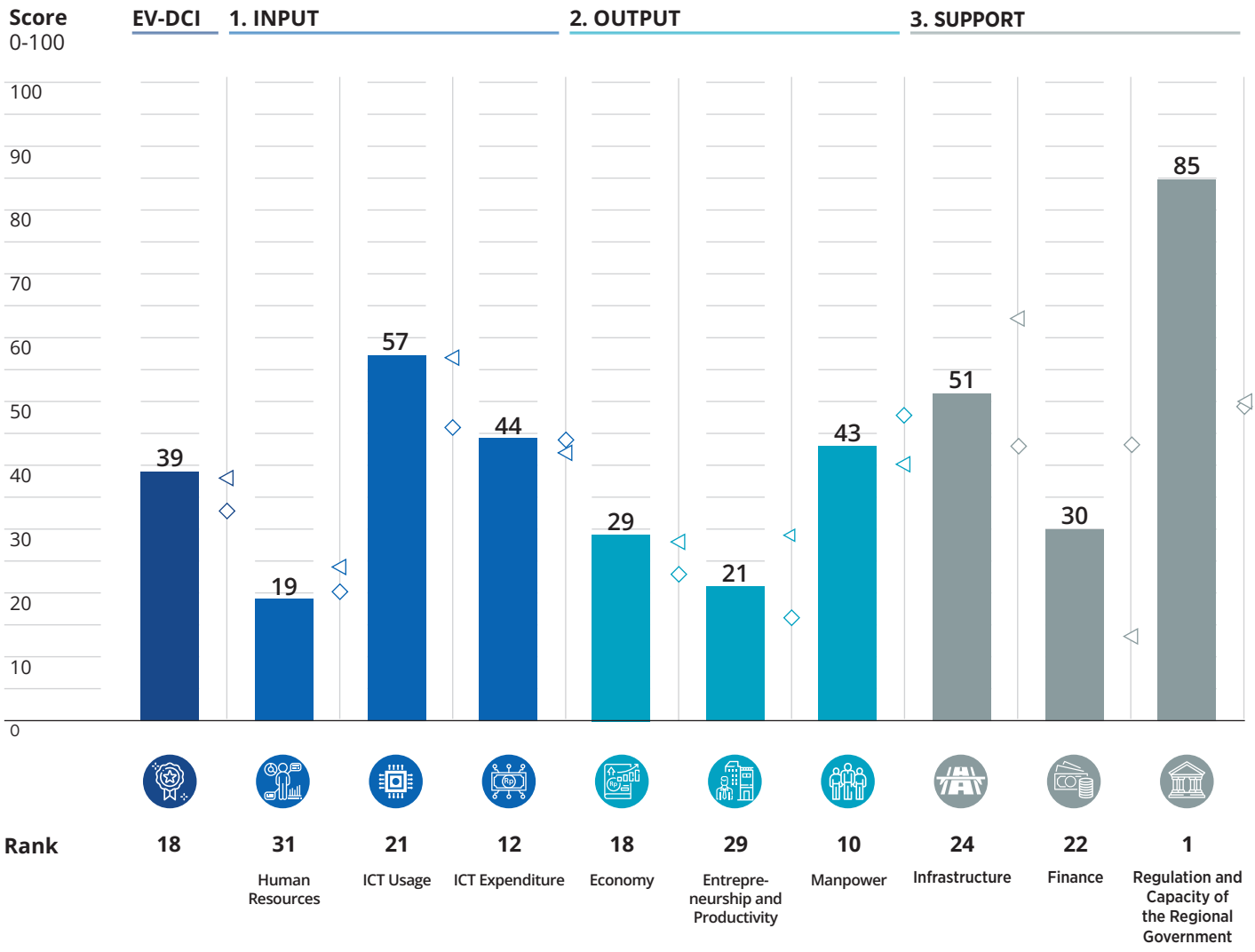
# Maluku

**Province Rank**

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 27 | 24 | 27 | 18 |
| Score : | 26.3 | 30.1 | 32.5 | 39.4 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Maluku - Papua




| Rank | 18 | 31 | 21 | 12 | 18 | 29 | 10 | 24 | 22 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **1,881.7** |
| **Area** ($km^2$) | **46,914.0** |
| **Economic Growth** (percent) | **3.0** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **48,564.0** |
| **GRDP per Capita** (IDR thousand) | **26,073.0** |
| **Human Development Index** | **69.7** |
| **Life Expectancy** (year) | **66.1** |
| **School Life Expectancy** (year) | **14.0** |
| **Average School Attendance** (year) | **10.2** |
| **Domestic Investment Realization** (IDR billion) | **2,939.7** |
| **Foreign Investment Realization** (USD million) | **13.3** |

# Maluku

| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **40.0** | **20** | ↑ | **40.1** |
| **1.1** | **Human Resources** | **18.7** | **31** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 3.0 | 31 | ↓ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 9.1 | 32 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 2.4 | 32 | ↑ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 2.1 | 32 | ↑ | 7.7 |
| 1.1.05 | Digital Literacy Index | 76.7 | 18 | ↑ | 75.6 |
| **1.2** | **ICT Usage** | **56.9** | **21** | ↑ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 72.7 | 26 | = | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 47.1 | 13 | ↓ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 63.5 | 28 | ↑ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 78.7 | 29 | ↑ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 11.2 | 36 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 38.4 | 6 | ↑ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 45.0 | 8 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 98.4 | 2 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **44.4** | **12** | ↑ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 91.4 | 20 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 61.1 | 8 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.3 | 34 | ↓ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 24.9 | 36 | ↓ | 34.1 |
| **2** | **OUTPUT** | **30.7** | **21** | ↑ | **31.2** |
| **2.1** | **Economy** | **29.0** | **18** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.3 | 33 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 23.6 | 20 | ↑ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 43.9 | 10 | ↑ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 1.5 | 31 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 42.0 | 15 | ↑ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 66.7 | 5 | ↑ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 0.6 | 29 | ↓ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 35.7 | 5 | = | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 46.3 | 18 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **20.6** | **29** | ↑ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 37.2 | 27 | ↑ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 36.5 | 27 | ↑ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 20.1 | 31 | ↓ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 19.1 | 32 | = | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 10.3 | 23 | ↑ | 13.4 |
| 2.2.06 | Loan Using Fintech | 0.3 | 29 | ↑ | 1.9 |
| **2.3** | **Manpower** | **42.7** | **10** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 3.4 | 24 | ↑ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 42.2 | 5 | = | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 26.1 | 18 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 97.6 | 11 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 32.7 | 16 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 54.1 | 32 | ↓ | 64.6 |
| **3** | **SUPPORT** | **55.5** | **12** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **51.5** | **24** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 66.5 | 28 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 54.3 | 27 | ↑ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 68.9 | 27 | ↑ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 61.8 | 26 | ↑ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 5.9 | 23 | ↓ | 7.7 |
| **3.2** | **Finance** | **29.9** | **22** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 31.7 | 30 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 1.7 | 30 | ↑ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 56.3 | 7 | ↑ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **85.2** | **1** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 92.1 | 5 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 60.1 | 2 | = | 28.7 |
| 3.3.03 | Life Expectancy Growth | 93.4 | 5 | ↑ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 95.0 | 3 | ↑ | 55.3 |

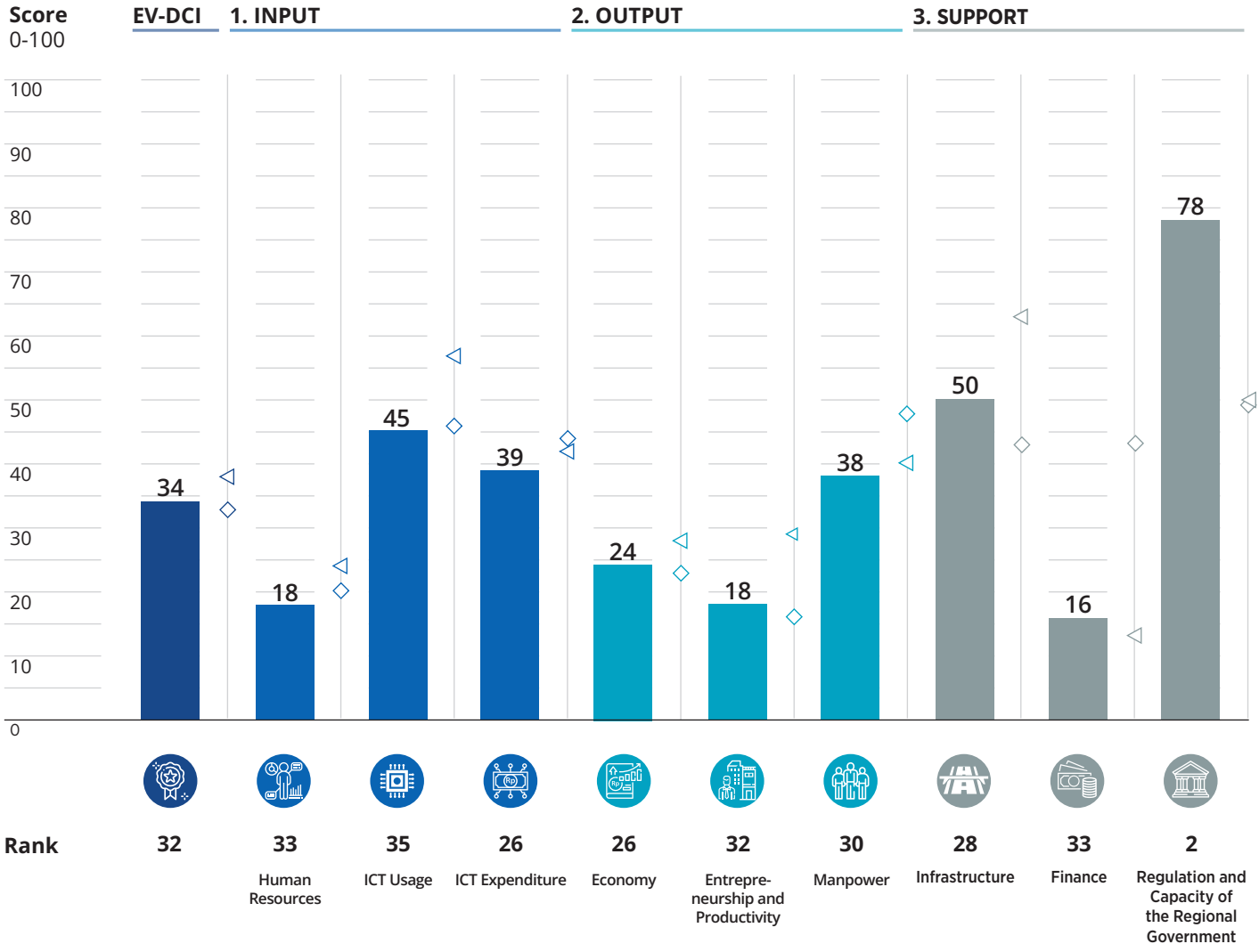
# North Maluku

**Province Rank**

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 17 | 32 | 31 | 32 |
| **Score :** | 28.1 | 26.5 | 30.3 | 33.8 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Maluku - Papua




| Rank | 32 | 33 | 35 | 26 | 26 | 32 | 30 | 28 | 33 | 2 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **1,319.3** |
| **Area** ($km^2$) | **31,982.5** |
| **Economic Growth** (percent) | **16.4** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **52,360.0** |
| **GRDP per Capita** (IDR thousand) | **40,302.0** |
| **Human Development Index** | **68.8** |
| **Life Expectancy** (year) | **68.5** |
| **School Life Expectancy** (year) | **13.7** |
| **Average School Attendance** (year) | **9.2** |
| **Domestic Investment Realization** (IDR billion) | **2,665.3** |
| **Foreign Investment Realization** (USD million) | **2,819.9** |

# North Maluku

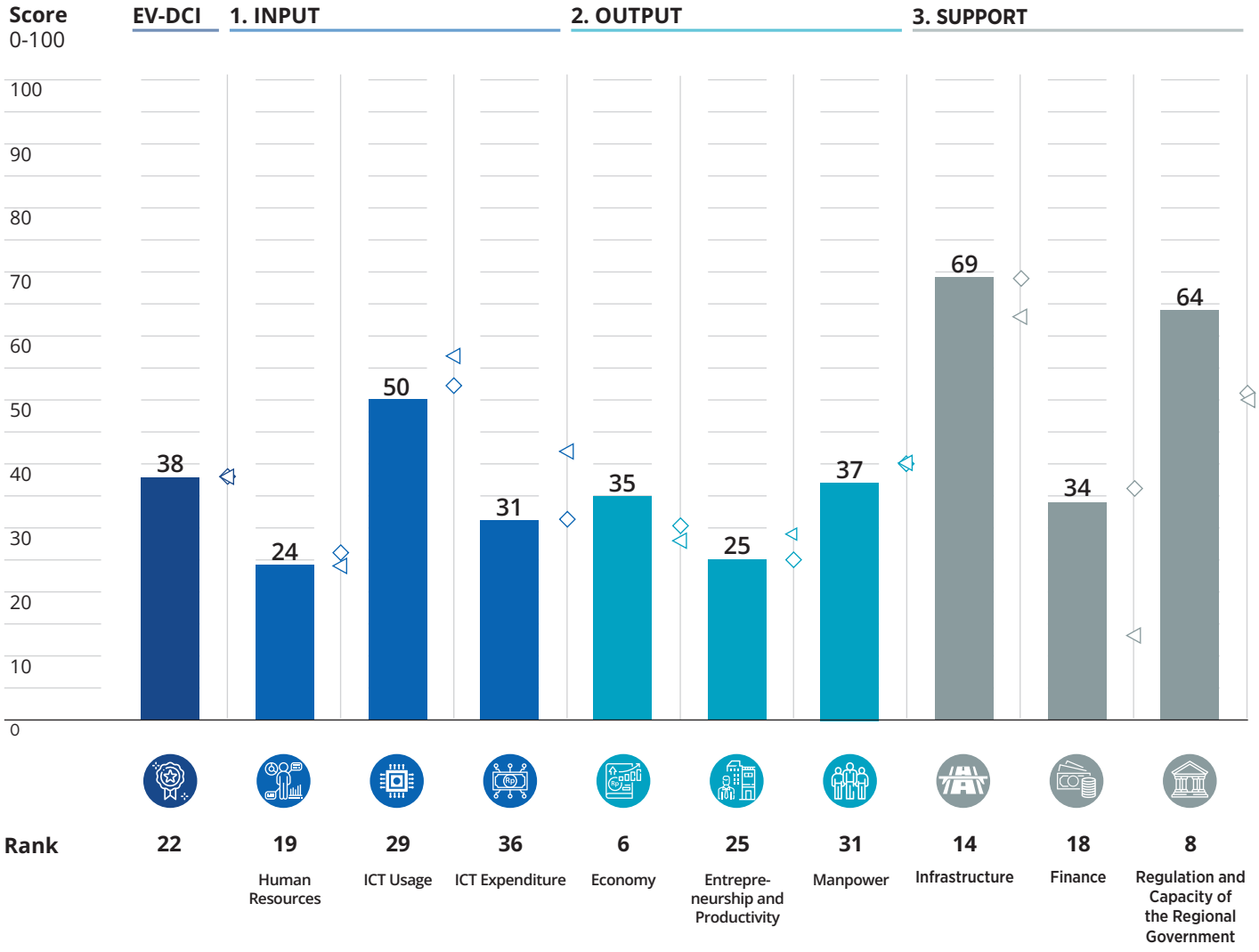
| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **34.1** | **34** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **18.4** | **33** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 4.7 | 25 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 13.2 | 26 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 4.5 | 27 | ↑ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 4.2 | 26 | ↑ | 7.7 |
| 1.1.05 | Digital Literacy Index | 65.1 | 24 | ↑ | 75.6 |
| **1.2** | **ICT Usage** | **45.0** | **35** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 69.3 | 29 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 34.1 | 34 | ↓ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 57.2 | 31 | ↑ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 62.8 | 34 | = | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 14.3 | 32 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 26.7 | 20 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 9.1 | 36 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 86.1 | 29 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **39.0** | **26** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 88.0 | 27 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 41.1 | 14 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.1 | 37 | ↓ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 26.6 | 30 | ↓ | 34.1 |
| **2** | **OUTPUT** | **26.4** | **37** | ↓ | **31.2** |
| **2.1** | **Economy** | **23.8** | **26** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.4 | 32 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 22.1 | 22 | ↓ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 42.0 | 13 | ↑ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 1.2 | 32 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 31.6 | 22 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 43.4 | 33 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 0.4 | 31 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 21.7 | 18 | ↓ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 51.0 | 4 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **17.5** | **32** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 30.8 | 31 | = | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 30.0 | 31 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 18.2 | 33 | ↓ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 18.9 | 33 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 7.0 | 32 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 0.2 | 33 | ↑ | 1.9 |
| **2.3** | **Manpower** | **37.9** | **30** | ↑ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 1.9 | 28 | ↑ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 33.7 | 10 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 28.3 | 17 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 97.8 | 10 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 12.0 | 33 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 53.5 | 33 | = | 64.6 |
| **3** | **SUPPORT** | **47.9** | **23** | = | **50.7** |
| **3.1** | **Infrastructure** | **50.3** | **28** | = | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 80.6 | 22 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 47.9 | 30 | ↓ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 65.3 | 28 | ↓ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 53.6 | 29 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 4.2 | 28 | ↑ | 7.7 |
| **3.2** | **Finance** | **15.6** | **33** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 40.6 | 28 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 1.0 | 31 | ↑ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 5.1 | 36 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **77.8** | **2** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 89.6 | 6 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 48.4 | 5 | ↑ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 84.9 | 10 | ↑ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 88.2 | 4 | ↑ | 55.3 |

# West Nusa Tenggara

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 25 | 22 | 28 | 22 |
| Score : | 26.7 | 30.7 | 32.3 | 38.1 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Bali - Nusra




| Rank | 22 | 19 | 29 | 36 | 6 | 25 | 31 | 14 | 18 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **5,473.7** |
| **Area** ($km^2$) | **18,572.3** |
| **Economic Growth** (percent) | **2.3** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **140,153.0** |
| **GRDP per Capita** (IDR thousand) | **26,002.0** |
| **Human Development Index** | **68.7** |
| **Life Expectancy** (year) | **66.7** |
| **School Life Expectancy** (year) | **14.0** |
| **Average School Attendance** (year) | **7.6** |
| **Domestic Investment Realization** (IDR billion) | **9,090.5** |
| **Foreign Investment Realization** (USD million) | **244.2** |

# West Nusa Tenggara

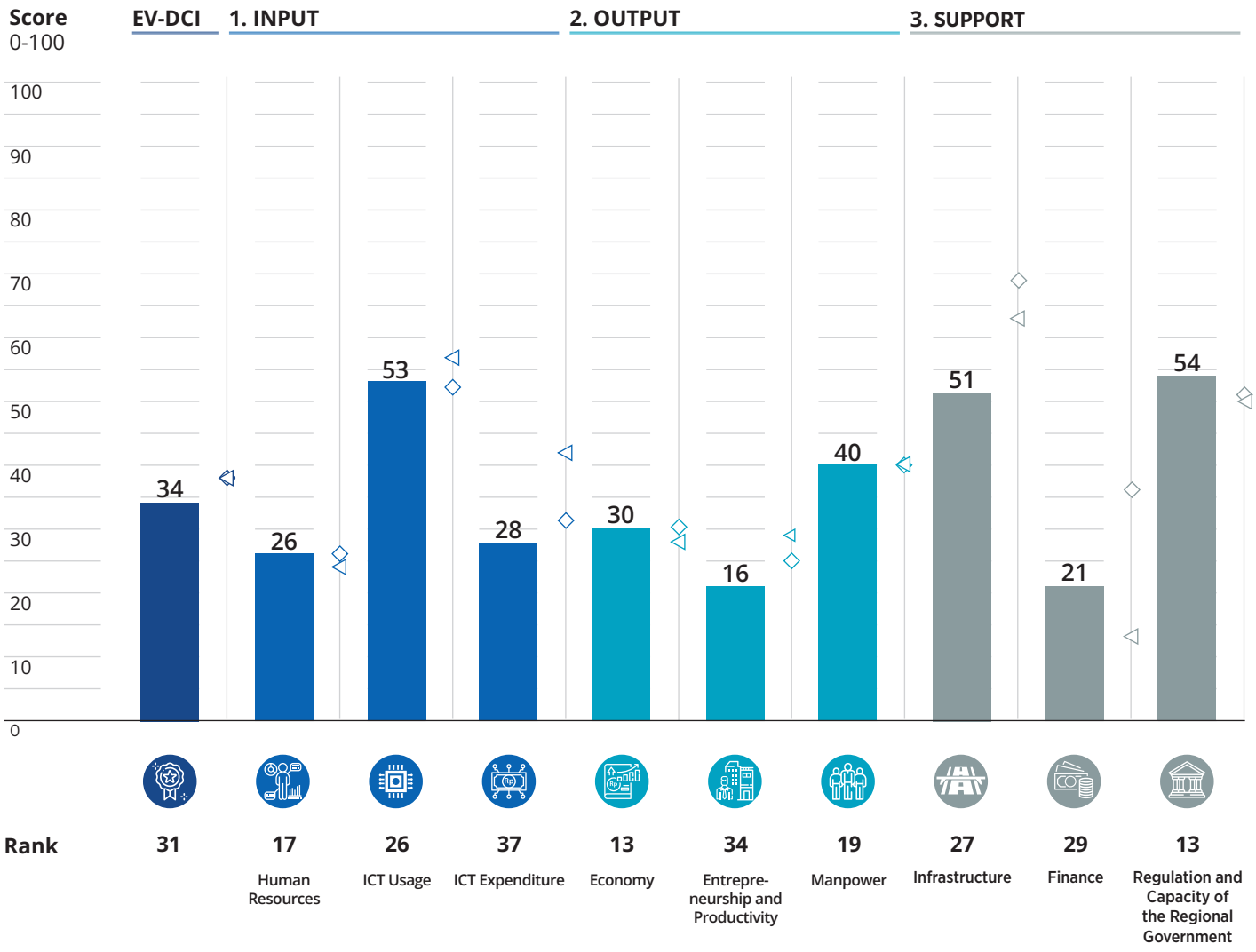
| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **34.8** | **33** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **24.3** | **19** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 9.5 | 17 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 33.6 | 5 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 14.7 | 14 | ↑ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 10.1 | 16 | ↑ | 7.7 |
| 1.1.05 | Digital Literacy Index | 53.5 | 31 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **49.7** | **29** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 68.7 | 30 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 26.9 | 35 | ↓ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 68.6 | 26 | ↑ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 93.4 | 11 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 11.4 | 35 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 21.4 | 31 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 19.1 | 27 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 88.2 | 25 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **30.5** | **36** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 87.7 | 28 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 0.0 | 38 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 1.3 | 18 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 33.1 | 22 | ↑ | 34.1 |
| **2** | **OUTPUT** | **32.5** | **17** | ↑ | **31.2** |
| **2.1** | **Economy** | **35.1** | **6** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.9 | 24 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 14.0 | 29 | ↓ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 28.2 | 26 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 5.8 | 18 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 44.9 | 13 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 58.8 | 14 | ↑ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 2.9 | 10 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 60.4 | 2 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 100.0 | 1 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **25.1** | **25** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 36.2 | 28 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 35.4 | 28 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 31.6 | 22 | ↓ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 35.0 | 21 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 10.7 | 22 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 1.9 | 19 | ↓ | 1.9 |
| **2.3** | **Manpower** | **37.4** | **31** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 6.0 | 16 | ↓ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 18.0 | 28 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 12.2 | 31 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 90.6 | 27 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 25.9 | 21 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 71.7 | 10 | ↑ | 64.6 |
| **3** | **SUPPORT** | **55.7** | **10** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **68.8** | **14** | ↓ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 61.8 | 30 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 88.9 | 8 | = | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 98.6 | 8 | ↑ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 91.6 | 5 | = | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 3.3 | 32 | ↓ | 7.7 |
| **3.2** | **Finance** | **34.5** | **18** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 45.6 | 22 | ↑ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 7.9 | 16 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 50.0 | 11 | ↑ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **63.8** | **8** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 81.9 | 9 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 28.3 | 20 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 97.8 | 2 | ↑ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 47.3 | 25 | ↓ | 55.3 |

# East Nusa Tenggara

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 31 | 29 | 26 | 31 |
| Score : | 23.7 | 29.4 | 32.5 | 34.2 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Bali - Nusra




| Rank | 31 | 17 | 26 | 37 | 13 | 34 | 19 | 27 | 29 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **5,466.3** |
| **Area** ($km^2$) | **48,718.1** |
| **Economic Growth** (percent) | **2.5** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **110,886.0** |
| **GRDP per Capita** (IDR thousand) | **20,581.0** |
| **Human Development Index** | **65.3** |
| **Life Expectancy** (year) | **67.2** |
| **School Life Expectancy** (year) | **13.2** |
| **Average School Attendance** (year) | **7.7** |
| **Domestic Investment Realization** (IDR billion) | **3,742.6** |
| **Foreign Investment Realization** (USD million) | **79.0** |

# East Nusa Tenggara

| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **35.8** | **31** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **25.5** | **17** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 10.0 | 15 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 56.5 | 2 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 10.6 | 18 | ↑ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 8.7 | 17 | ↑ | 7.7 |
| 1.1.05 | Digital Literacy Index | 41.9 | 34 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **53.5** | **26** | ↑ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 56.3 | 35 | ↓ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 35.0 | 31 | = | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 53.7 | 34 | ↓ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 87.8 | 21 | ↑ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 19.4 | 28 | ↑ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 53.5 | 2 | = | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 33.4 | 14 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 88.7 | 24 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **28.3** | **37** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 84.7 | 33 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 2.5 | 37 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.9 | 23 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 25.3 | 34 | ↓ | 34.1 |
| **2** | **OUTPUT** | **28.8** | **31** | ↓ | **31.2** |
| **2.1** | **Economy** | **30.0** | **13** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 2.8 | 16 | ↑ | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 66.6 | 3 | = | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 19.7 | 33 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 4.0 | 25 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 40.4 | 17 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 52.6 | 26 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 1.5 | 21 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 37.4 | 4 | ↓ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 44.7 | 25 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **16.2** | **34** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 26.1 | 35 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 25.1 | 35 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 21.3 | 30 | ↑ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 18.0 | 34 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 6.3 | 34 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 0.6 | 28 | ↑ | 1.9 |
| **2.3** | **Manpower** | **40.1** | **19** | ↑ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 8.3 | 11 | = | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 24.3 | 19 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 38.9 | 9 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 90.8 | 26 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 32.6 | 17 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 45.7 | 35 | ↓ | 64.6 |
| **3** | **SUPPORT** | **42.0** | **29** | ↓ | **50.7** |
| **3.1** | **Infrastructure** | **51.0** | **27** | ↓ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 61.6 | 31 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 53.0 | 29 | ↓ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 80.2 | 26 | = | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 56.1 | 28 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 4.2 | 29 | ↑ | 7.7 |
| **3.2** | **Finance** | **21.4** | **29** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 59.4 | 15 | ↑ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 4.9 | 20 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 0.0 | 38 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **53.7** | **13** | ↓ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 49.0 | 24 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 29.0 | 19 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 81.4 | 13 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 55.2 | 20 | ↓ | 55.3 |

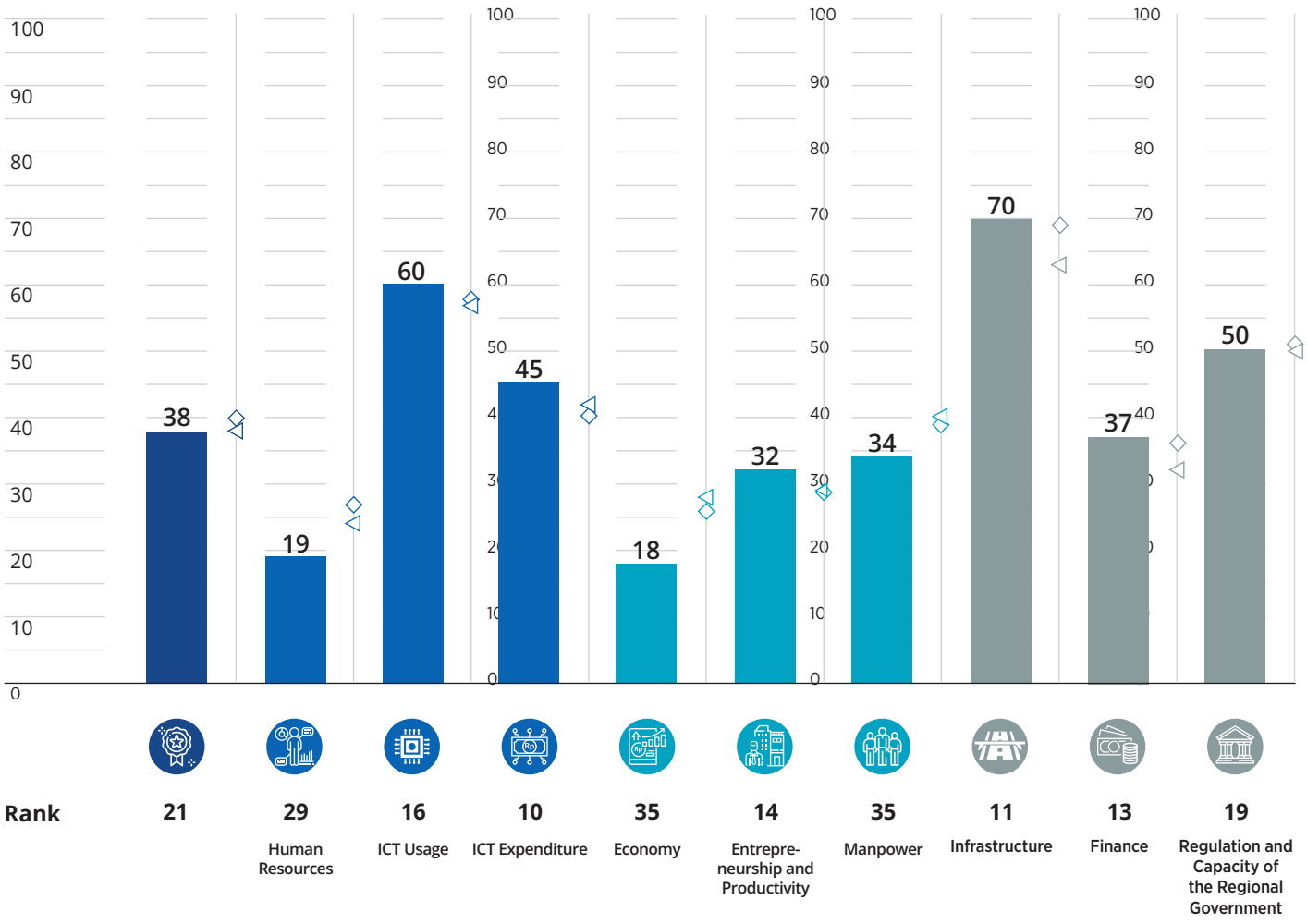
# Riau

**Province Rank**

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 16 | 17 | 18 | 21 |
| Score : | 28.7 | 32.1 | 35.2 | 38.2 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sumatera




| Rank | 21 | 29 | 16 | 10 | 35 | 14 | 35 | 11 | 13 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **6,614.4** |
| **Area** (km²) | **87,023.7** |
| **Economic Growth** (percent) | **3.4** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **843,211.0** |
| **GRDP per Capita** (IDR thousand) | **129,853.0** |
| **Human Development Index** | **72.9** |
| **Life Expectancy** (year) | **71.7** |
| **School Life Expectancy** (year) | **13.3** |
| **Average School Attendance** (year) | **9.2** |
| **Domestic Investment Realization** (IDR billion) | **24,997.8** |
| **Foreign Investment Realization** (USD million) | **1,921.4** |

# Riau

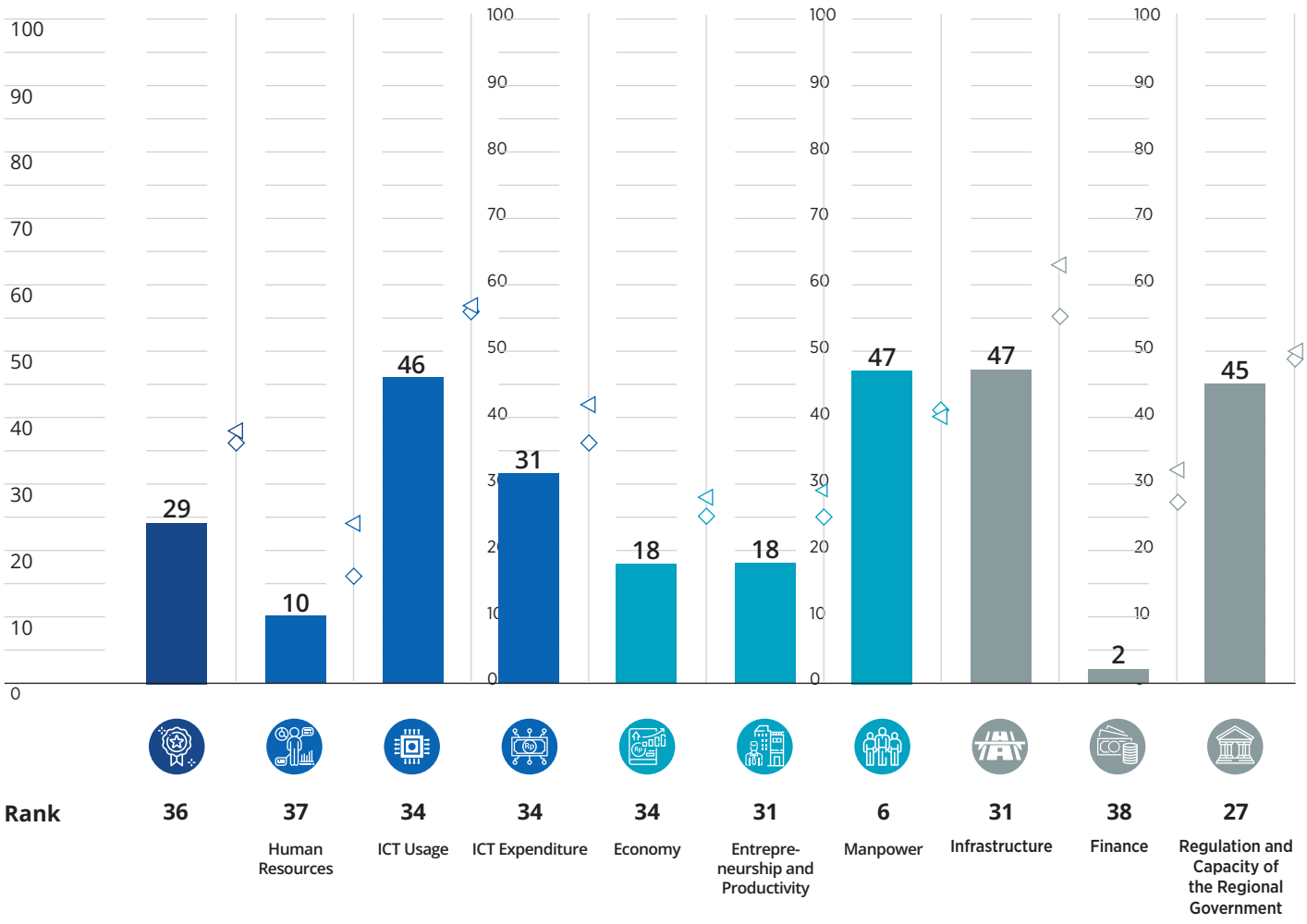
| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **41.3** | **15** | = | **40.1** |
| **1.1** | **Human Resources** | **19.0** | **29** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 20.2 | 10 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 9.8 | 31 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 20.8 | 9 | ↑ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 16.3 | 12 | = | 7.7 |
| 1.1.05 | Digital Literacy Index | 27.9 | 36 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **59.7** | **16** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 86.9 | 5 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 48.3 | 11 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 80.4 | 10 | = | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 93.0 | 13 | = | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 38.2 | 18 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 18.7 | 32 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 19.3 | 26 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 92.6 | 15 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **45.2** | **10** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 98.3 | 5 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 41.1 | 13 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 3.4 | 10 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 38.2 | 13 | ↑ | 34.1 |
| **2** | **OUTPUT** | **28.0** | **34** | ↓ | **31.2** |
| **2.1** | **Economy** | **17.9** | **35** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 2.3 | 19 | ↑ | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 0.0 | 38 | ↓ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 37.9 | 18 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 4.6 | 23 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 0.0 | 38 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 61.8 | 11 | ↑ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 2.4 | 13 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 4.4 | 36 | ↓ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 48.0 | 11 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **31.7** | **14** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 48.3 | 14 | ↑ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 47.5 | 15 | = | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 36.7 | 16 | ↓ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 36.1 | 20 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 18.5 | 11 | = | 13.4 |
| 2.2.06 | Loan Using Fintech | 3.4 | 13 | = | 1.9 |
| **2.3** | **Manpower** | **34.2** | **35** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 7.4 | 13 | ↓ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 19.1 | 24 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 16.0 | 29 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 88.0 | 29 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 18.2 | 28 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 56.4 | 29 | ↓ | 64.6 |
| **3** | **SUPPORT** | **52.3** | **14** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **70.0** | **11** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 90.7 | 11 | ↑ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 78.8 | 13 | = | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 92.9 | 16 | ↑ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 79.7 | 14 | ↑ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 7.6 | 20 | ↓ | 7.7 |
| **3.2** | **Finance** | **37.2** | **13** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 56.4 | 19 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 12.0 | 11 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 43.3 | 17 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **49.8** | **19** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 42.1 | 26 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 33.7 | 16 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 66.3 | 26 | = | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 57.2 | 18 | ↑ | 55.3 |

# West Sulawesi

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 33 | 33 | 33 | 36 |
| Score : | 21.1 | 22.9 | 27.5 | 29.0 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sulawesi




| Rank | 36 | 37 | 34 | 34 | 34 | 31 | 6 | 31 | 38 | 27 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **1,458.6** |
| **Area** (km²) | **16,787.2** |
| **Economic Growth** (percent) | **2.6** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **50,341.0** |
| **GRDP per Capita** (IDR thousand) | **35,036.0** |
| **Human Development Index** | **66.4** |
| **Life Expectancy** (year) | **65.3** |
| **School Life Expectancy** (year) | **12.9** |
| **Average School Attendance** (year) | **8.1** |
| **Domestic Investment Realization** (IDR billion) | **395.3** |
| **Foreign Investment Realization** (USD million) | **5.9** |

# West Sulawesi

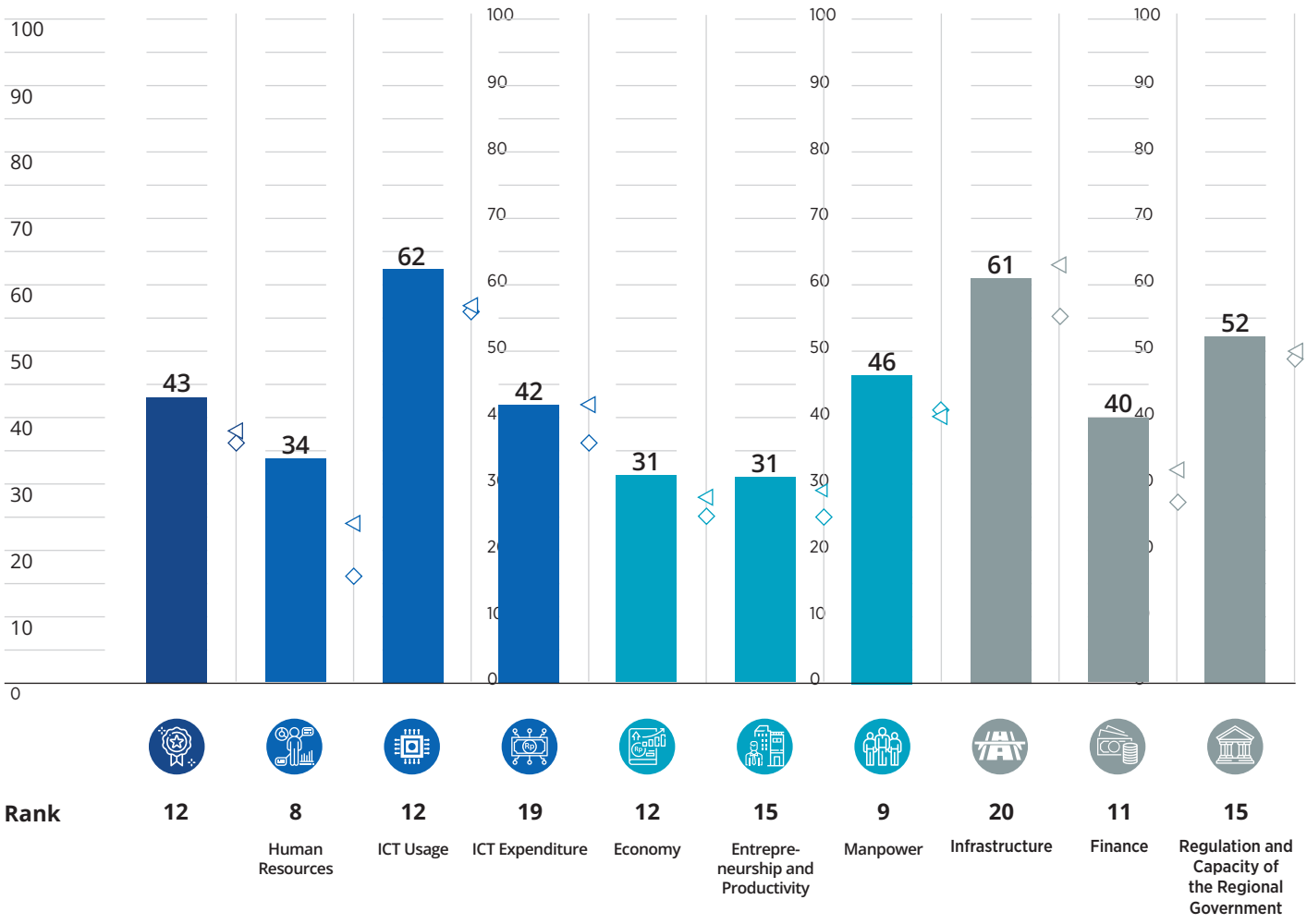
| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **29.0** | **37** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **9.8** | **37** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 3.2 | 29 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 14.9 | 22 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 2.8 | 31 | ↑ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 2.6 | 31 | ↑ | 7.7 |
| 1.1.05 | Digital Literacy Index | 25.6 | 37 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **45.6** | **34** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 68.6 | 31 | ↓ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 34.2 | 33 | ↓ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 63.7 | 27 | ↑ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 76.8 | 32 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 0.0 | 38 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 26.6 | 21 | ↑ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 0.0 | 38 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 95.0 | 9 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **31.5** | **34** | = | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 89.7 | 24 | ↑ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 11.8 | 35 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.3 | 33 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 24.1 | 37 | ↓ | 34.1 |
| **2** | **OUTPUT** | **27.8** | **35** | ↓ | **31.2** |
| **2.1** | **Economy** | **18.2** | **34** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.5 | 29 | ↓ | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 33.4 | 11 | ↓ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 1.9 | 37 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 0.0 | 38 | ↓ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 6.3 | 37 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 54.8 | 21 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 0.3 | 33 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 17.7 | 24 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 48.5 | 9 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **17.7** | **31** | ↑ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 29.6 | 33 | = | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 28.5 | 33 | = | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 21.5 | 29 | ↑ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 20.9 | 30 | ↑ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 5.6 | 35 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 0.2 | 30 | ↑ | 1.9 |
| **2.3** | **Manpower** | **47.5** | **6** | ↑ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 1.3 | 31 | ↑ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 17.8 | 29 | ↑ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 44.3 | 6 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 98.4 | 8 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 49.6 | 5 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 73.3 | 7 | ↑ | 64.6 |
| **3** | **SUPPORT** | **31.4** | **34** | ↓ | **50.7** |
| **3.1** | **Infrastructure** | **47.0** | **31** | ↓ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 74.6 | 26 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 43.7 | 32 | ↓ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 63.2 | 29 | ↓ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 51.6 | 30 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 2.0 | 35 | ↓ | 7.7 |
| **3.2** | **Finance** | **2.2** | **38** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 0.0 | 38 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 0.8 | 32 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 5.9 | 31 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **44.9** | **27** | ↓ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 55.7 | 16 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 24.0 | 24 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 100.0 | 1 | ↑ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 0.0 | 38 | ↓ | 55.3 |

# South Sulawesi

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 9 | 9 | 10 | 12 |
| Score : | 36.3 | 40.7 | 39.8 | 42.9 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sulawesi




## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **9,225.8** |
| **Area** ($km^2$) | **46,717.5** |
| **Economic Growth** (percent) | **4.7** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **545,230.0** |
| **GRDP per Capita** (IDR thousand) | **59,656.0** |
| **Human Development Index** | **72.2** |
| **Life Expectancy** (year) | **70.7** |
| **School Life Expectancy** (year) | **13.5** |
| **Average School Attendance** (year) | **8.6** |
| **Domestic Investment Realization** (IDR billion) | **12,075.4** |
| **Foreign Investment Realization** (USD million) | **310.0** |

# South Sulawesi

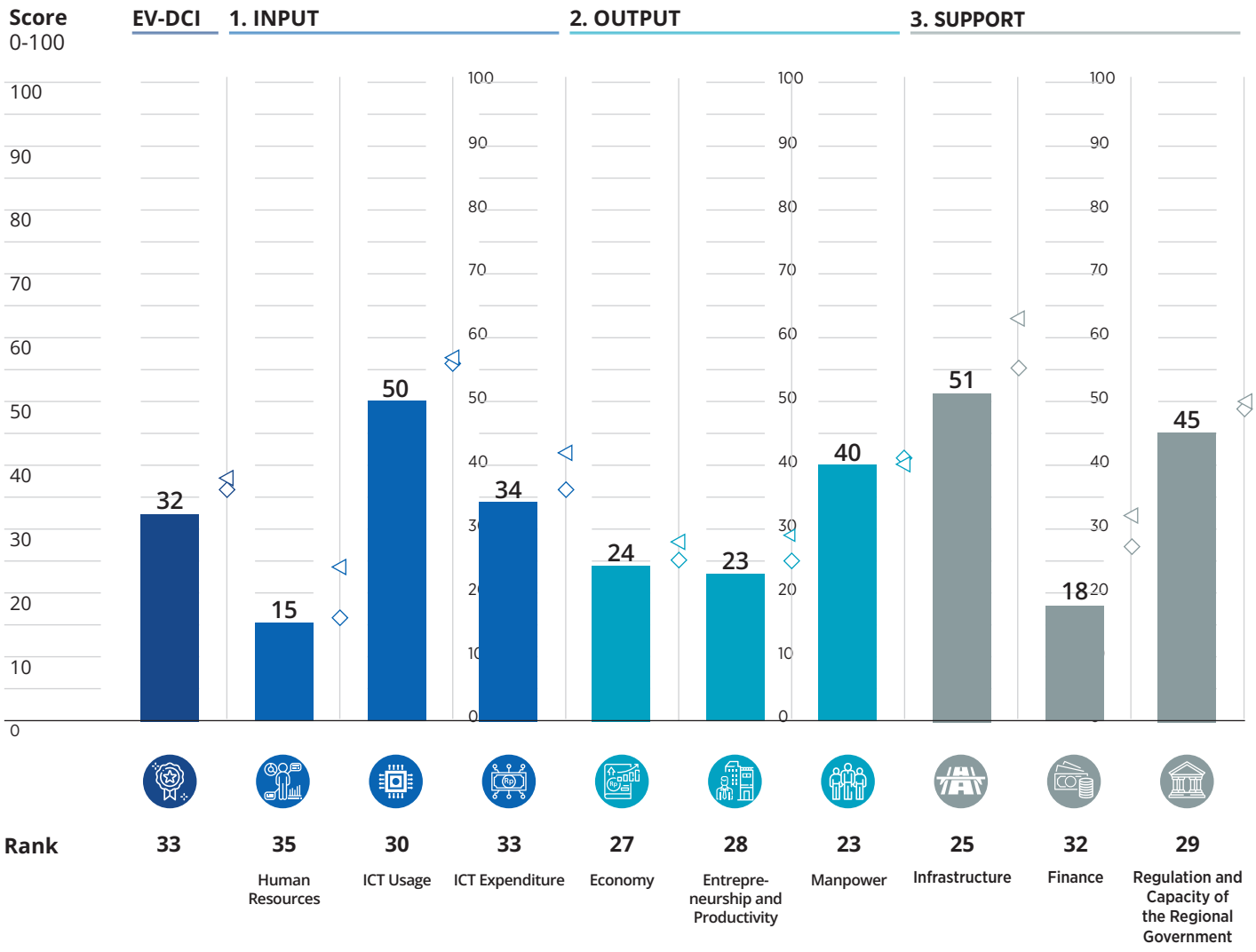
| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **45.9** | **11** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **34.0** | **8** | = | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 30.1 | 7 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 25.1 | 10 | = | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 21.7 | 8 | = | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 25.7 | 8 | ↓ | 7.7 |
| 1.1.05 | Digital Literacy Index | 67.4 | 23 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **61.8** | **12** | ↑ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 83.4 | 10 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 54.0 | 7 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 74.5 | 17 | ↓ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 88.7 | 19 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 29.0 | 25 | = | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 40.1 | 4 | ↑ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 38.8 | 11 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 85.6 | 30 | = | 91.2 |
| **1.3** | **ICT expenditure** | **41.9** | **19** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 94.9 | 7 | ↑ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 34.3 | 20 | ↑ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 3.4 | 9 | ↓ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 34.8 | 18 | ↓ | 34.1 |
| **2** | **OUTPUT** | **35.8** | **11** | ↑ | **31.2** |
| **2.1** | **Economy** | **30.7** | **12** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 10.9 | 5 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 47.8 | 6 | = | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 34.9 | 21 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 14.6 | 10 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 24.9 | 27 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 63.9 | 8 | ↑ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 6.1 | 7 | = | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 29.6 | 8 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 43.2 | 31 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **31.1** | **15** | = | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 43.5 | 20 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 42.4 | 20 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 36.8 | 15 | ↓ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 40.5 | 14 | ↑ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 17.9 | 12 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 5.2 | 8 | = | 1.9 |
| **2.3** | **Manpower** | **45.6** | **9** | ↑ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 14.5 | 7 | = | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 28.6 | 15 | = | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 44.2 | 7 | ↑ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 87.3 | 31 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 38.6 | 11 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 60.5 | 23 | ↑ | 64.6 |
| **3** | **SUPPORT** | **51.0** | **17** | ↓ | **50.7** |
| **3.1** | **Infrastructure** | **61.3** | **20** | ↓ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 44.6 | 33 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 77.6 | 15 | ↑ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 93.4 | 12 | = | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 82.1 | 11 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 9.0 | 15 | ↑ | 7.7 |
| **3.2** | **Finance** | **39.8** | **11** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 69.3 | 8 | = | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 15.0 | 7 | ↑ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 35.2 | 21 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **51.8** | **15** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 49.5 | 23 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 45.7 | 7 | = | 28.7 |
| 3.3.03 | Life Expectancy Growth | 74.8 | 18 | ↑ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 37.4 | 28 | ↓ | 55.3 |

# Central Sulawesi

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 29 | 23 | 22 | 33 |
| Score : | 25.3 | 30.7 | 33.4 | 32.3 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sulawesi




## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **3,066.1** |
| **Area** (km²) | **61,841.3** |
| **Economic Growth** (percent) | **11.7** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **246,987.0** |
| **GRDP per Capita** (IDR thousand) | **81,733.0** |
| **Human Development Index** | **69.8** |
| **Life Expectancy** (year) | **68.8** |
| **School Life Expectancy** (year) | **13.3** |
| **Average School Attendance** (year) | **8.9** |
| **Domestic Investment Realization** (IDR billion) | **3,012.3** |
| **Foreign Investment Realization** (USD million) | **2,718.1** |

# Central Sulawesi

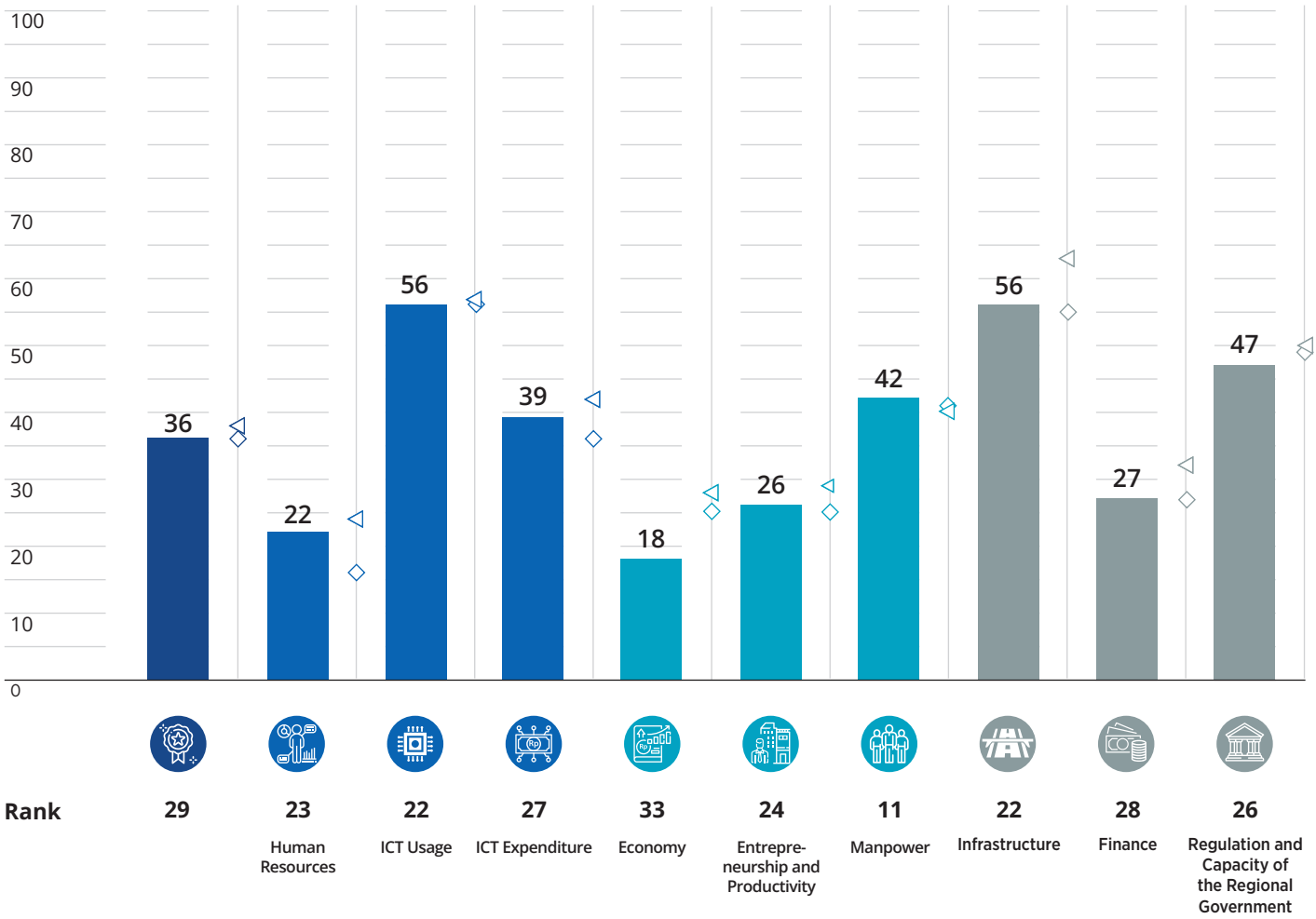
| | | Score (0-100) | Province Rank | 2022 to 2023 | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **32.9** | **35** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **15.2** | **35** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 3.5 | 27 | ↓ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 10.4 | 30 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 4.7 | 26 | ↑ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 3.8 | 28 | = | 7.7 |
| 1.1.05 | Digital Literacy Index | 53.5 | 31 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **49.7** | **30** | ↑ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 70.5 | 28 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 36.2 | 27 | ↓ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 62.6 | 29 | ↓ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 77.7 | 30 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 25.6 | 26 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 28.2 | 17 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 10.3 | 34 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 86.5 | 27 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **33.7** | **33** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 88.3 | 26 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 19.5 | 29 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.9 | 22 | ↓ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 26.0 | 32 | ↓ | 34.1 |
| **2** | **OUTPUT** | **28.8** | **29** | ↓ | **31.2** |
| **2.1** | **Economy** | **23.7** | **27** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 2.2 | 20 | ↑ | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 18.9 | 24 | ↓ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 46.5 | 7 | ↑ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 3.8 | 26 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 13.3 | 34 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 64.2 | 7 | ↑ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 1.3 | 22 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 11.8 | 29 | ↓ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 51.8 | 3 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **23.2** | **28** | ↑ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 34.8 | 29 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 33.7 | 29 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 25.7 | 27 | ↑ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 30.5 | 24 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 13.5 | 18 | ↑ | 13.4 |
| 2.2.06 | Loan Using Fintech | 1.0 | 23 | ↑ | 1.9 |
| **2.3** | **Manpower** | **39.6** | **23** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 2.9 | 25 | ↑ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 15.0 | 36 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 11.3 | 33 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 95.7 | 15 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 41.8 | 8 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 70.9 | 11 | ↓ | 64.6 |
| **3** | **SUPPORT** | **38.0** | **31** | ↓ | **50.7** |
| **3.1** | **Infrastructure** | **51.4** | **25** | ↓ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 43.5 | 34 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 59.0 | 25 | = | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 80.4 | 25 | ↓ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 71.0 | 24 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 3.3 | 31 | ↓ | 7.7 |
| **3.2** | **Finance** | **17.8** | **32** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 30.7 | 31 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 4.5 | 23 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 18.1 | 27 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **44.9** | **29** | ↓ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 56.3 | 15 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 40.5 | 10 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 23.2 | 33 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 59.6 | 17 | ↓ | 55.3 |

# South East Sulawesi

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 26 | 18 | 16 | 29 |
| Score : | 26.6 | 32.0 | 36.1 | 35.7 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sulawesi




| Rank | 29 | 23 | 22 | 27 | 33 | 24 | 11 | 22 | 28 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **2,701.7** |
| **Area** ($km^2$) | **38,067.7** |
| **Economic Growth** (percent) | **4.1** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **139,058.0** |
| **GRDP per Capita** (IDR thousand) | **52,294.0** |
| **Human Development Index** | **71.7** |
| **Life Expectancy** (year) | **71.3** |
| **School Life Expectancy** (year) | **13.7** |
| **Average School Attendance** (year) | **9.3** |
| **Domestic Investment Realization** (IDR billion) | **4,334.2** |
| **Foreign Investment Realization** (USD million) | **1,616.5** |

# South East Sulawesi

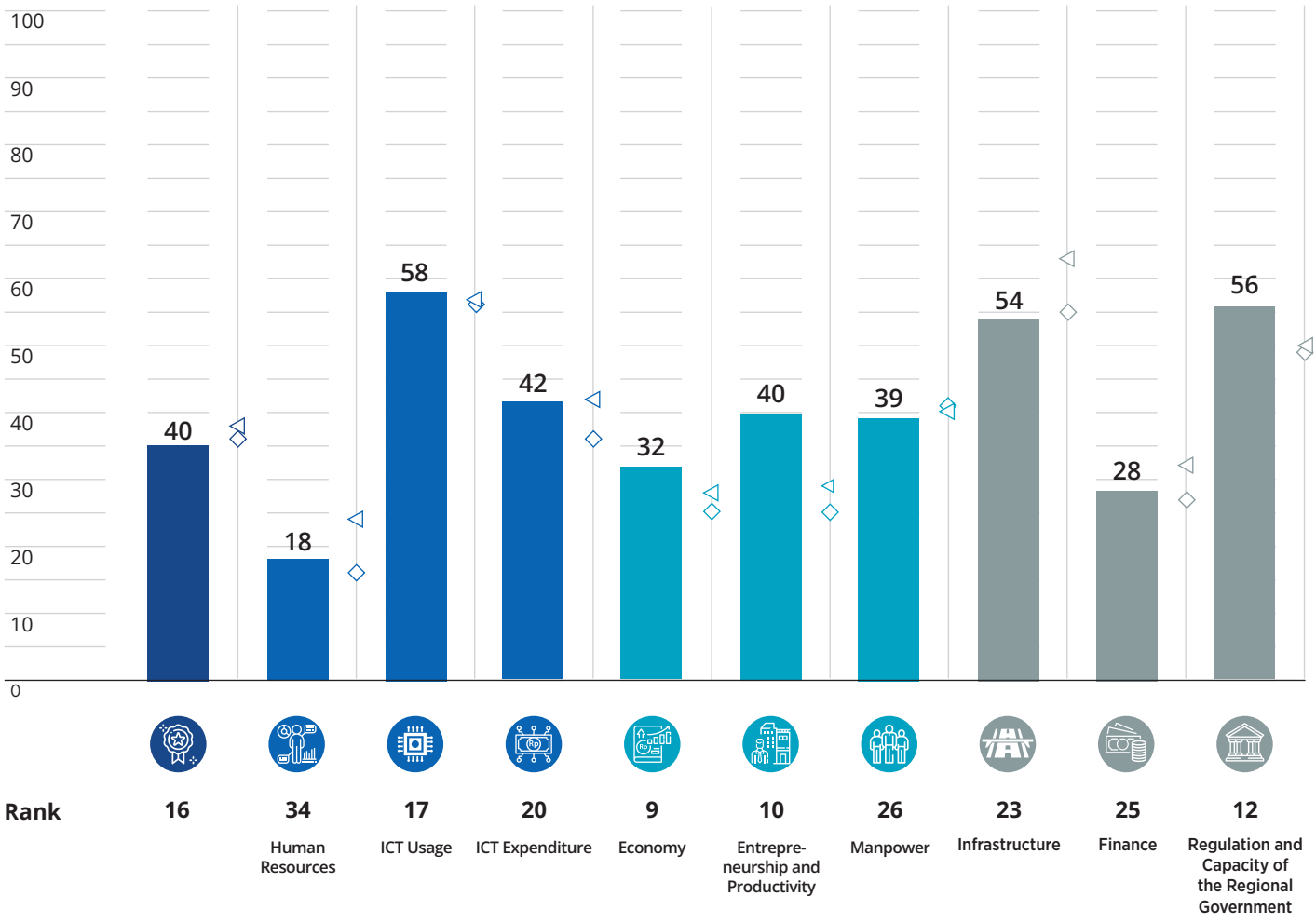
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **39.0** | **24** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **22.5** | **23** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 6.4 | 24 | ↓ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 7.4 | 35 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 7.7 | 22 | ↑ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 7.0 | 22 | ↓ | 7.7 |
| 1.1.05 | Digital Literacy Index | 83.7 | 12 | ↑ | 75.6 |
| **1.2** | **ICT Usage** | **55.6** | **22** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 81.8 | 15 | ↓ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 46.2 | 16 | ↓ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 71.7 | 23 | ↓ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 86.2 | 23 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 15.5 | 31 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 21.6 | 29 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 26.9 | 20 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 95.2 | 7 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **38.8** | **27** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 95.4 | 6 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 33.2 | 21 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.7 | 24 | ↓ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 25.9 | 33 | ↓ | 34.1 |
| **2** | **OUTPUT** | **28.8** | **30** | ↓ | **31.2** |
| **2.1** | **Economy** | **18.2** | **33** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.7 | 27 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 9.6 | 31 | = | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 0.0 | 38 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 4.2 | 24 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 32.8 | 20 | = | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 47.7 | 31 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 1.0 | 24 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 19.1 | 22 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 48.8 | 8 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **26.3** | **24** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 41.5 | 21 | = | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 40.4 | 21 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 32.0 | 21 | ↑ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 33.5 | 23 | ↑ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 9.6 | 26 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 0.8 | 26 | = | 1.9 |
| **2.3** | **Manpower** | **42.0** | **11** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 3.6 | 23 | ↑ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 24.3 | 18 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 23.0 | 23 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 96.0 | 14 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 35.1 | 13 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 70.0 | 12 | ↓ | 64.6 |
| **3** | **SUPPORT** | **43.1** | **28** | ↓ | **50.7** |
| **3.1** | **Infrastructure** | **55.8** | **22** | = | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 56.1 | 32 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 62.5 | 24 | ↓ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 87.6 | 23 | ↓ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 72.9 | 22 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 0.1 | 37 | ↓ | 7.7 |
| **3.2** | **Finance** | **26.6** | **28** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 53.5 | 21 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 3.7 | 25 | = | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 22.4 | 25 | ↑ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **46.8** | **26** | ↓ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 61.4 | 14 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 50.0 | 3 | = | 28.7 |
| 3.3.03 | Life Expectancy Growth | 22.3 | 34 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 53.5 | 21 | ↑ | 55.3 |

# North Sulawesi

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 15 | 11 | 11 | 16 |
| Score : | 30.2 | 35.9 | 39.8 | 39.5 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sulawesi




| Rank | 16 | 34 | 17 | 20 | 9 | 10 | 26 | 23 | 25 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **2,659.5** |
| **Area** ($km^2$) | **13,892.5** |
| **Economic Growth** (percent) | **4.2** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **142,600.0** |
| **GRDP per Capita** (IDR thousand) | **54,043.0** |
| **Human Development Index** | **73.3** |
| **Life Expectancy** (year) | **71.8** |
| **School Life Expectancy** (year) | **13.0** |
| **Average School Attendance** (year) | **9.7** |
| **Domestic Investment Realization** (IDR billion) | **3,480.0** |
| **Foreign Investment Realization** (USD million) | **169.1** |

# North Sulawesi

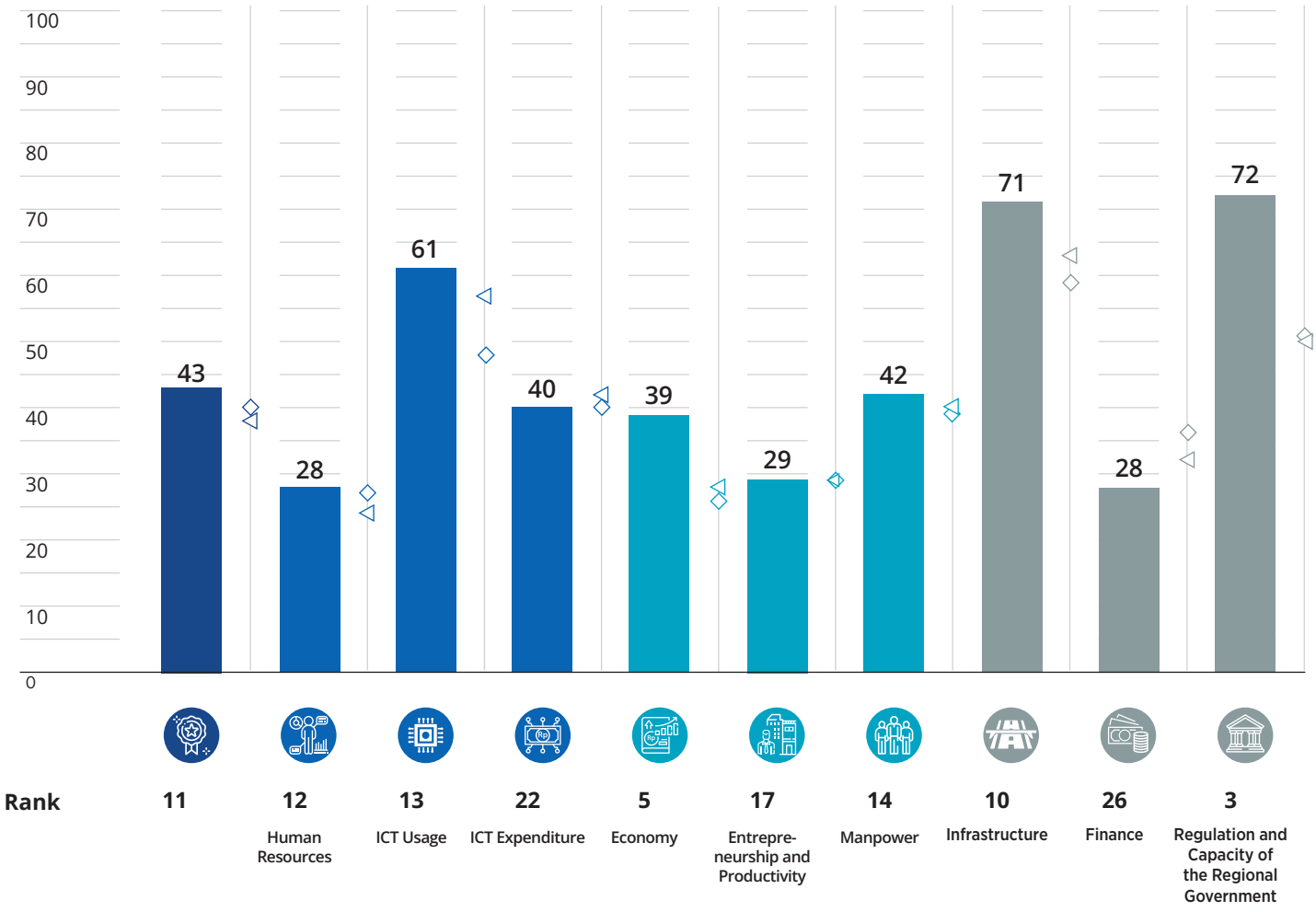
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **39.0** | **23** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **17.6** | **34** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 8.1 | 21 | = | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 16.2 | 19 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 11.0 | 17 | ↓ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 8.4 | 18 | ↓ | 7.7 |
| 1.1.05 | Digital Literacy Index | 44.2 | 33 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **57.7** | **17** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 83.4 | 9 | ↓ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 44.1 | 17 | ↓ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 71.4 | 24 | ↓ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 83.1 | 26 | = | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 31.0 | 22 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 38.0 | 7 | ↑ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 18.3 | 29 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 92.3 | 16 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **41.7** | **20** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 93.5 | 12 | ↑ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 40.3 | 15 | ↑ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.5 | 27 | ↓ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 32.4 | 23 | ↓ | 34.1 |
| **2** | **OUTPUT** | **36.8** | **9** | ↓ | **31.2** |
| **2.1** | **Economy** | **31.8** | **9** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 2.0 | 21 | ↑ | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 33.6 | 10 | = | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 16.2 | 36 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 11.1 | 11 | ↑ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 86.7 | 2 | = | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 54.3 | 22 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 1.7 | 20 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 33.3 | 6 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 47.6 | 14 | ↓ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **40.0** | **10** | ↑ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 52.7 | 11 | ↑ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 52.1 | 11 | ↑ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 50.4 | 8 | ↑ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 54.1 | 8 | ↑ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 28.3 | 7 | ↑ | 13.4 |
| 2.2.06 | Loan Using Fintech | 2.4 | 17 | ↓ | 1.9 |
| **2.3** | **Manpower** | **38.7** | **26** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 4.9 | 20 | ↓ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 40.5 | 6 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 17.6 | 28 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 95.6 | 16 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 16.1 | 32 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 57.3 | 27 | ↓ | 64.6 |
| **3** | **SUPPORT** | **46.0** | **25** | ↓ | **50.7** |
| **3.1** | **Infrastructure** | **54.3** | **23** | ↓ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 13.2 | 36 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 75.5 | 17 | = | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 91.7 | 18 | ↑ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 83.2 | 9 | = | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 7.8 | 19 | ↓ | 7.7 |
| **3.2** | **Finance** | **27.9** | **25** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 60.4 | 14 | ↑ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 4.1 | 24 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 19.3 | 26 | ↑ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **55.7** | **12** | ↓ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 47.4 | 25 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 32.1 | 17 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 76.0 | 16 | ↑ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 67.1 | 14 | ↓ | 55.3 |

# West Sumatera

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 13 | 12 | 9 | 11 |
| Score : | 31.0 | 34.5 | 39.8 | 43.1 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sumatera




| Rank | 11 | 12 | 13 | 22 | 5 | 17 | 14 | 10 | 26 | 3 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **5,640.6** |
| **Area** ($km^2$) | **42,012.9** |
| **Economic Growth** (percent) | **3.3** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **252,750.0** |
| **GRDP per Capita** (IDR thousand) | **45,294.0** |
| **Human Development Index** | **72.7** |
| **Life Expectancy** (year) | **69.6** |
| **School Life Expectancy** (year) | **14.1** |
| **Average School Attendance** (year) | **9.2** |
| **Domestic Investment Realization** (IDR billion) | **4,183.7** |
| **Foreign Investment Realization** (USD million) | **67.0** |

# West Sumatera

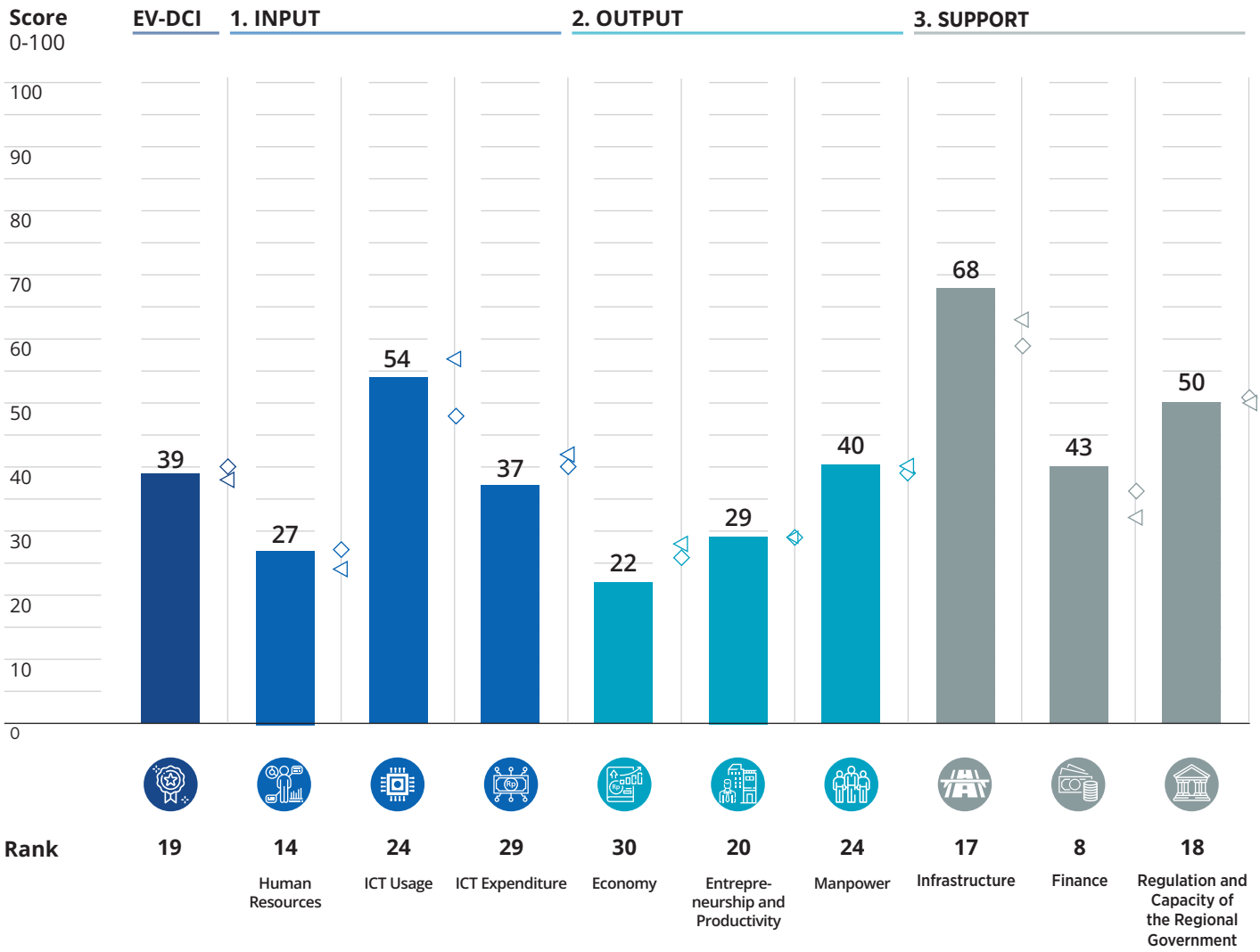
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **42.7** | **14** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **27.6** | **12** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 19.1 | 11 | = | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 8.0 | 33 | = | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 18.8 | 10 | = | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 17.8 | 10 | ↑ | 7.7 |
| 1.1.05 | Digital Literacy Index | 74.4 | 20 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **60.6** | **13** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 79.2 | 17 | ↑ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 52.7 | 8 | ↓ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 73.3 | 20 | ↓ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 95.2 | 7 | ↑ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 30.4 | 23 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 25.9 | 22 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 37.6 | 12 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 90.6 | 20 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **39.9** | **22** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 94.7 | 8 | = | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 31.5 | 23 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 1.6 | 15 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 31.6 | 24 | ↓ | 34.1 |
| **2** | **OUTPUT** | **36.7** | **10** | = | **31.2** |
| **2.1** | **Economy** | **39.4** | **5** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 5.9 | 8 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 58.5 | 5 | ↓ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 36.2 | 19 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 23.0 | 7 | = | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 100.0 | 1 | = | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 52.7 | 25 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 2.5 | 11 | ↑ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 26.3 | 14 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 49.3 | 6 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **29.3** | **17** | ↑ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 45.0 | 16 | ↑ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 43.7 | 18 | ↑ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 35.4 | 17 | ↑ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 34.6 | 22 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 14.5 | 16 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 2.7 | 14 | = | 1.9 |
| **2.3** | **Manpower** | **41.5** | **14** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 6.8 | 15 | = | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 21.1 | 21 | ↑ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 34.7 | 13 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 91.3 | 25 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 31.1 | 19 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 64.1 | 20 | ↓ | 64.6 |
| **3** | **SUPPORT** | **56.7** | **9** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **70.6** | **10** | = | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 85.5 | 21 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 80.3 | 11 | ↓ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 93.4 | 14 | = | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 82.9 | 10 | ↑ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 10.9 | 10 | ↑ | 7.7 |
| **3.2** | **Finance** | **27.6** | **26** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 24.7 | 32 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 12.1 | 10 | ↑ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 46.0 | 14 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **71.8** | **3** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 68.3 | 12 | = | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 47.6 | 6 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 75.9 | 17 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 95.5 | 2 | ↑ | 55.3 |

# South Sumatera

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 18 | 21 | 22 | 19 |
| Score : | 27.8 | 30.8 | 33.4 | 38.5 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sumatera




| Rank | 19 | 14 | 24 | 29 | 30 | 20 | 24 | 17 | 8 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **8,657.0** |
| **Area** ($km^2$) | **91,592.4** |
| **Economic Growth** (percent) | **3.6** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **491,566.0** |
| **GRDP per Capita** (IDR thousand) | **57,487.0** |
| **Human Development Index** | **70.2** |
| **Life Expectancy** (year) | **70.0** |
| **School Life Expectancy** (year) | **12.6** |
| **Average School Attendance** (year) | **8.4** |
| **Domestic Investment Realization** (IDR billion) | **16,266.9** |
| **Foreign Investment Realization** (USD million) | **1,259.7** |

# South Sumatera

| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **39.6** | **22** | ↑ | **40.1** |
| **1.1** | **Human Resources** | **27.3** | **14** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 21.8 | 8 | ↑ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 19.4 | 11 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 18.8 | 10 | ↑ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 18.1 | 9 | = | 7.7 |
| 1.1.05 | Digital Literacy Index | 58.1 | 28 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **54.4** | **24** | ↑ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 76.2 | 21 | = | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 36.5 | 26 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 72.6 | 21 | = | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 94.5 | 10 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 19.9 | 27 | ↑ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 24.1 | 24 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 15.1 | 31 | ↑ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 96.0 | 5 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **37.3** | **29** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 93.0 | 16 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 19.5 | 28 | = | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 3.3 | 11 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 33.4 | 20 | ↑ | 34.1 |
| **2** | **OUTPUT** | **29.9** | **26** | ↓ | **31.2** |
| **2.1** | **Economy** | **21.5** | **30** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 5.6 | 10 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 24.3 | 19 | ↑ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 30.7 | 24 | ↓ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 8.9 | 15 | = | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 15.2 | 32 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 41.8 | 35 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 3.6 | 8 | = | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 17.9 | 23 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 45.6 | 20 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **28.6** | **20** | ↑ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 40.1 | 23 | ↑ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 39.0 | 23 | ↑ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 32.3 | 20 | ↑ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 37.8 | 17 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 16.6 | 13 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 5.5 | 7 | = | 1.9 |
| **2.3** | **Manpower** | **39.5** | **24** | ↑ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 9.6 | 9 | ↓ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 17.6 | 31 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 6.6 | 37 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 87.5 | 30 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 38.6 | 10 | = | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 77.2 | 4 | ↑ | 64.6 |
| **3** | **SUPPORT** | **53.6** | **13** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **67.6** | **17** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 88.1 | 19 | ↑ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 71.7 | 20 | = | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 93.4 | 13 | ↑ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 74.4 | 19 | ↑ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 10.2 | 13 | = | 7.7 |
| **3.2** | **Finance** | **43.1** | **8** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 69.3 | 8 | ↑ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 13.4 | 9 | = | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 46.6 | 13 | ↑ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **50.2** | **18** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 25.3 | 30 | ↓ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 18.9 | 28 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 83.0 | 12 | ↑ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 73.6 | 10 | ↓ | 55.3 |

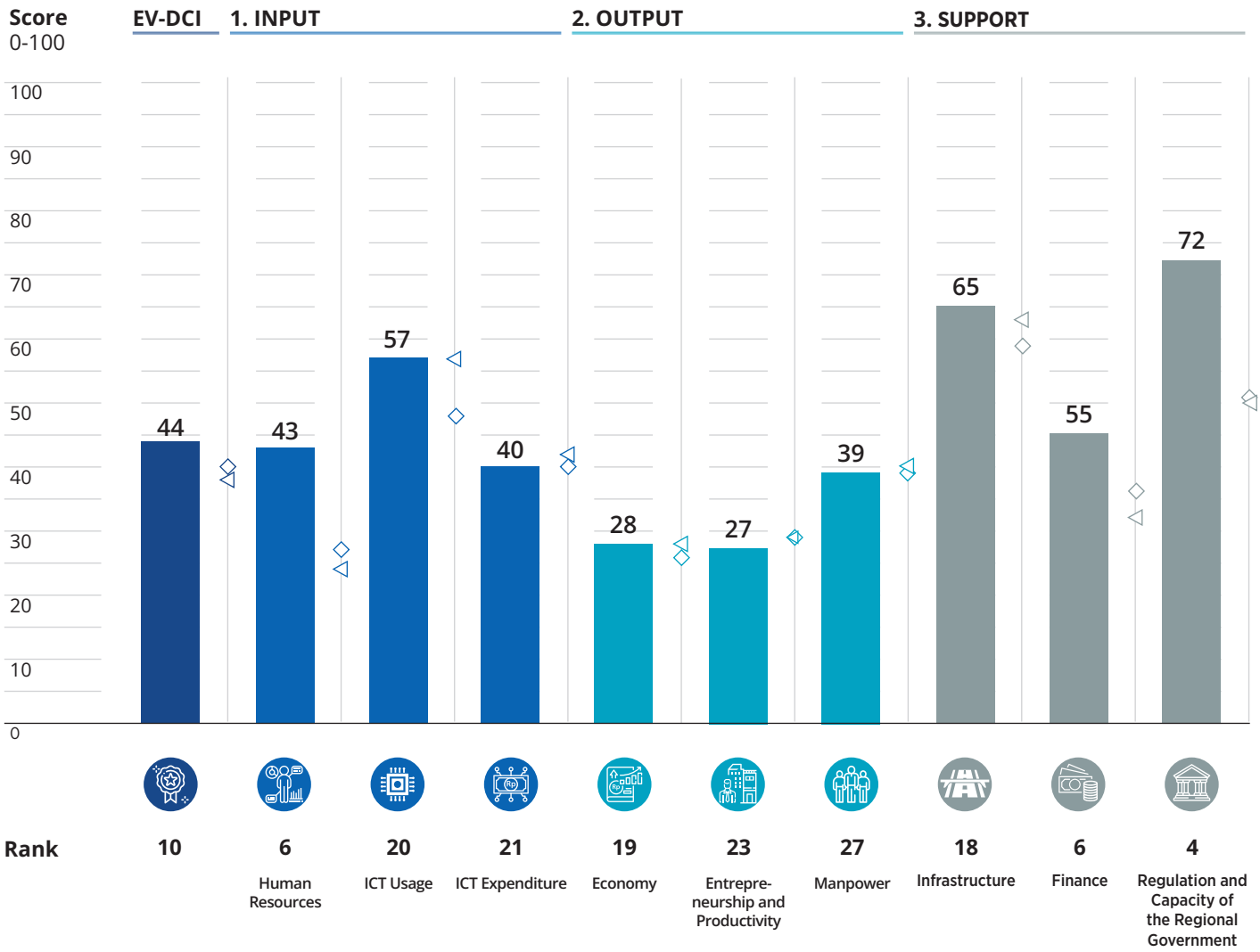
# North Sumatera

**Province Rank**

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 12 | 13 | 13 | 10 |
| Score : | 31.4 | 34.2 | 38.2 | 43.9 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Sumatera




## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **15,115.2** |
| **Area** ($km^2$) | **72,981.2** |
| **Economic Growth** (percent) | **2.6** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **859,871.0** |
| **GRDP per Capita** (IDR thousand) | **57,570.0** |
| **Human Development Index** | **72.0** |
| **Life Expectancy** (year) | **69.2** |
| **School Life Expectancy** (year) | **13.3** |
| **Average School Attendance** (year) | **9.7** |
| **Domestic Investment Realization** (IDR billion) | **18,484.5** |
| **Foreign Investment Realization** (USD million) | **580.4** |

# North Sumatera

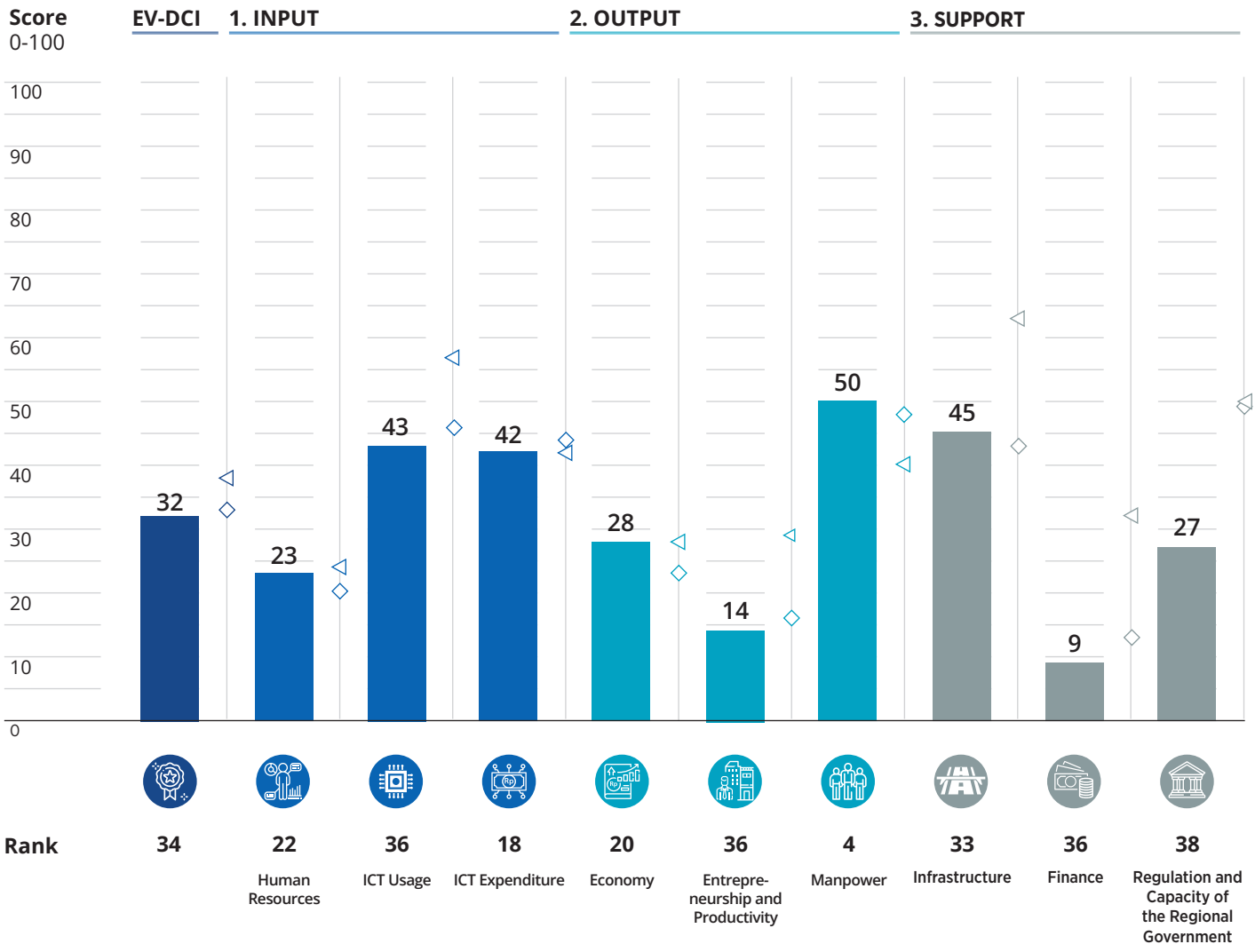
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **46.8** | **10** | ↑ | **40.1** |
| **1.1** | **Human Resources** | **43.5** | **6** | ↑ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 47.1 | 5 | = | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 18.1 | 13 | ↑ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 44.3 | 5 | = | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 49.7 | 5 | = | 7.7 |
| 1.1.05 | Digital Literacy Index | 58.1 | 28 | ↓ | 75.6 |
| **1.2** | **ICT Usage** | **56.9** | **20** | ↑ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 78.4 | 19 | = | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 39.3 | 21 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 76.5 | 14 | ↑ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 91.8 | 15 | ↑ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 35.4 | 19 | ↑ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 32.3 | 9 | = | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 18.7 | 28 | ↑ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 82.6 | 34 | = | 91.2 |
| **1.3** | **ICT expenditure** | **40.1** | **21** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 94.6 | 11 | ↑ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 19.0 | 30 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 6.7 | 7 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 40.3 | 11 | ↑ | 34.1 |
| **2** | **OUTPUT** | **31.1** | **20** | = | **31.2** |
| **2.1** | **Economy** | **28.3** | **19** | ↓ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 7.2 | 7 | = | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 15.3 | 28 | ↓ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 43.3 | 11 | ↑ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 31.9 | 5 | = | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 36.4 | 19 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 43.0 | 34 | ↓ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 7.8 | 5 | = | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 23.4 | 16 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 46.2 | 19 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **26.6** | **23** | ↑ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 39.3 | 24 | ↑ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 38.4 | 25 | = | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 28.5 | 25 | ↑ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 29.3 | 26 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 15.9 | 14 | ↑ | 13.4 |
| 2.2.06 | Loan Using Fintech | 8.0 | 6 | = | 1.9 |
| **2.3** | **Manpower** | **38.5** | **27** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 22.5 | 6 | = | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 26.3 | 16 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 20.2 | 25 | = | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 74.0 | 35 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 23.2 | 24 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 65.1 | 19 | ↓ | 64.6 |
| **3** | **SUPPORT** | **63.8** | **4** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **65.2** | **18** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 85.8 | 20 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 70.7 | 21 | = | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 88.5 | 22 | ↓ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 71.3 | 23 | ↓ | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 9.6 | 14 | ↑ | 7.7 |
| **3.2** | **Finance** | **54.5** | **6** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 96.0 | 2 | = | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 26.5 | 5 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 41.0 | 18 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **71.8** | **4** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 97.8 | 4 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 26.5 | 21 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 94.1 | 4 | ↑ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 68.6 | 13 | ↑ | 55.3 |

# Papua

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 34 | 34 | 34 | 34 |
| Score : | 17.7 | 22.0 | 24.9 | 31.9 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Maluku - Papua




## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **1,008.1** |
| **Area** ($km^2$) | **124,447.0** |
| **Economic Growth** (percent) | **2.7** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **9,637.0** |
| **GRDP per Capita** (IDR thousand) | **9,559.7** |
| **Human Development Index** | **67.0** |
| **Life Expectancy** (year) | **66.5** |
| **School Life Expectancy** (year) | **13.2** |
| **Average School Attendance** (year) | **9.4** |
| **Domestic Investment Realization** (IDR billion) | **550,721.0** |
| **Foreign Investment Realization** (USD million) | **5,155.4** |

# Papua

| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **35.9** | **30** | ↑ | **40.1** |
| **1.1** | **Human Resources** | **22.9** | **22** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 8.7 | 19 | ↓ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 17.1 | 15 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 4.9 | 25 | ↑ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 5.0 | 24 | ↓ | 7.7 |
| 1.1.05 | Digital Literacy Index | 79.1 | 13 | ↑ | 75.6 |
| **1.2** | **ICT Usage** | **42.9** | **36** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 56.3 | 34 | = | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 35.9 | 28 | ↑ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 45.9 | 35 | ↓ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 61.6 | 35 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 7.9 | 37 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 30.8 | 13 | ↑ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 19.9 | 25 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 84.8 | 32 | ↑ | 91.2 |
| **1.3** | **ICT expenditure** | **41.9** | **18** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 73.7 | 35 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 38.0 | 16 | ↓ | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.6 | 25 | ↑ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 55.5 | 6 | ↑ | 34.1 |
| **2** | **OUTPUT** | **30.3** | **24** | ↑ | **31.2** |
| **2.1** | **Economy** | **27.5** | **20** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 1.4 | 23 | ↓ | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 29.3 | 18 | ↓ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 46.9 | 6 | ↑ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 3.7 | 27 | ↓ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 45.0 | 11 | ↑ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 61.6 | 12 | ↑ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 0.7 | 27 | ↓ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 14.9 | 26 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 43.9 | 28 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **13.7** | **36** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 22.1 | 36 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 21.4 | 36 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 14.4 | 35 | ↓ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 17.0 | 36 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 7.4 | 30 | ↑ | 13.4 |
| 2.2.06 | Loan Using Fintech | 0.1 | 35 | ↓ | 1.9 |
| **2.3** | **Manpower** | **49.7** | **4** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 1.3 | 30 | ↓ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 37.2 | 9 | ↑ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 7.2 | 36 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 99.3 | 6 | ↑ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 53.4 | 4 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 100.0 | 1 | ↑ | 64.6 |
| **3** | **SUPPORT** | **27.0** | **35** | ↓ | **50.7** |
| **3.1** | **Infrastructure** | **44.8** | **33** | ↑ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 90.3 | 14 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 43.1 | 33 | ↑ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 43.0 | 35 | ↓ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 37.0 | 34 | = | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 10.3 | 12 | ↑ | 7.7 |
| **3.2** | **Finance** | **9.4** | **36** | ↓ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 22.8 | 33 | ↓ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 0.4 | 35 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 5.2 | 33 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **26.9** | **38** | ↓ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 7.1 | 33 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 8.6 | 34 | ↓ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 67.0 | 24 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 25.0 | 33 | ↓ | 55.3 |

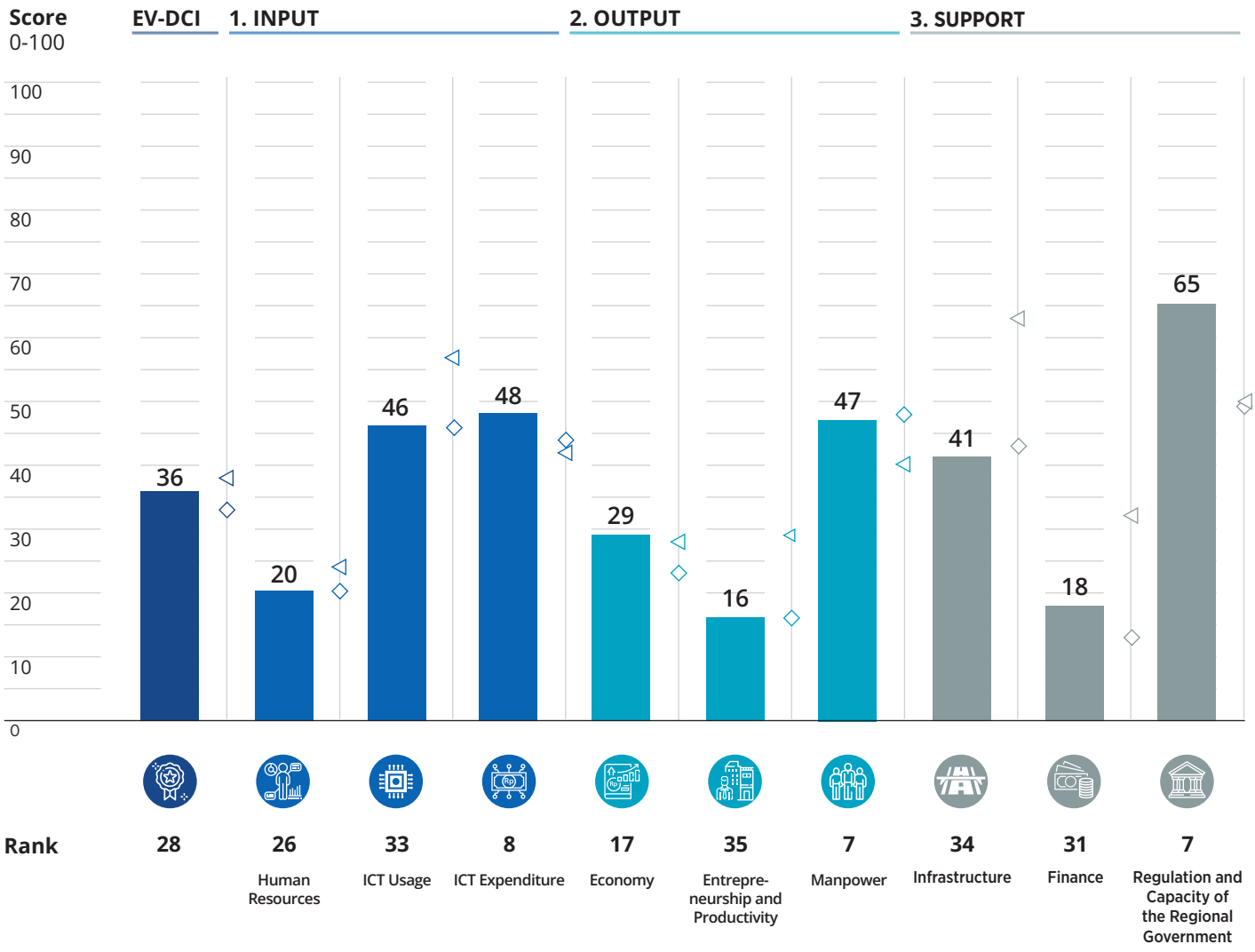
# West Papua

**Province Rank**

| | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | 28 | 30 | 19 | 28 |
| Score : | 26.2 | 27.6 | 34.3 | 35.8 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Maluku - Papua




| Rank | 28 | 26 | 33 | 8 | 17 | 35 | 7 | 34 | 31 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **543.0** |
| **Area** (km²) | **64,125.7** |
| **Economic Growth** (percent) | **0.9** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **34,051.0** |
| **GRDP per Capita** (IDR thousand) | **62,709.1** |
| **Human Development Index** | **63.8** |
| **Life Expectancy** (year) | **65.5** |
| **School Life Expectancy** (year) | **12.7** |
| **Average School Attendance** (year) | **7.7** |
| **Domestic Investment Realization** (IDR billion) | **821,089.1** |
| **Foreign Investment Realization** (USD million) | **23,811.5** |

# West Papua

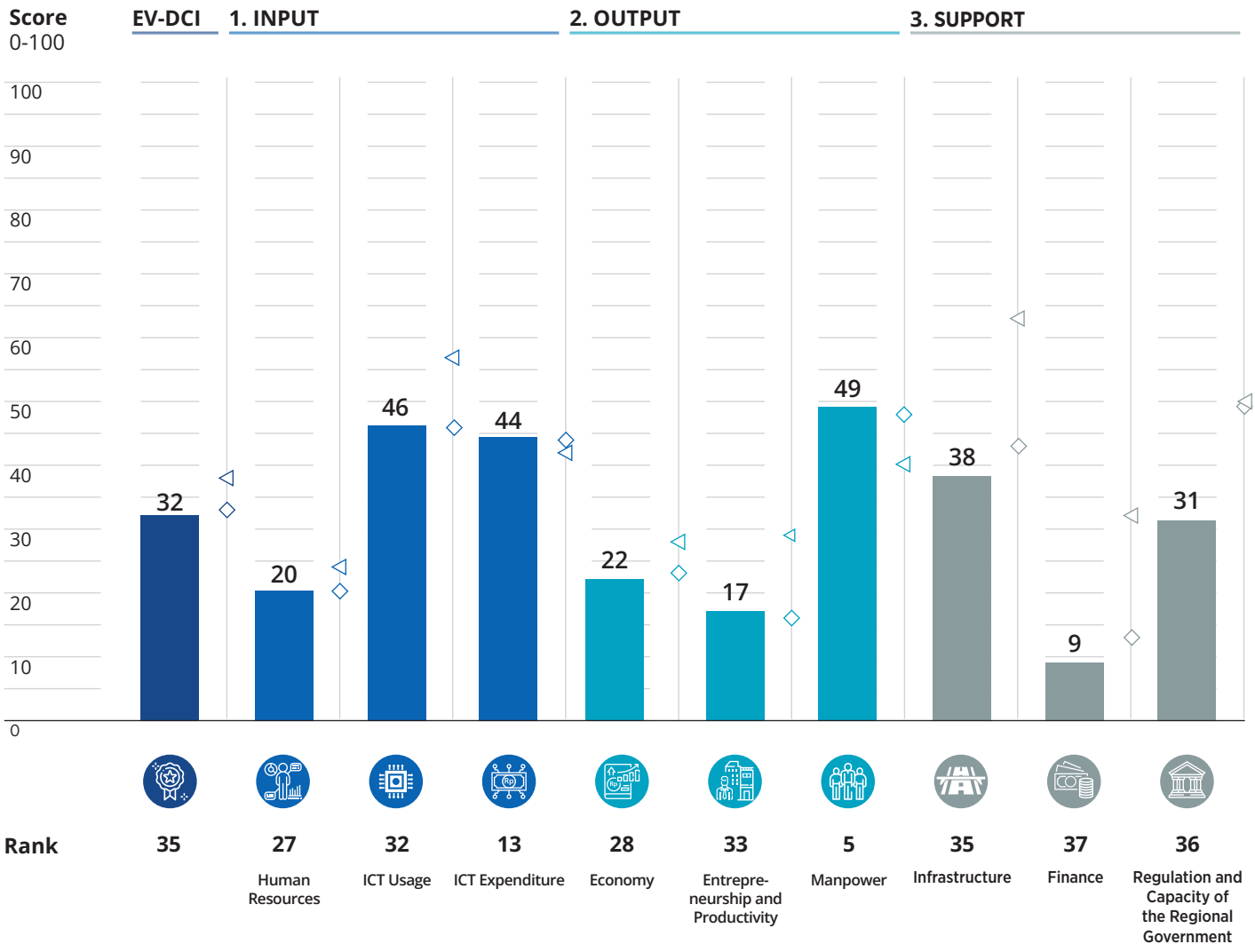
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **38.0** | **26** | ↓ | **40.1** |
| **1.1** | **Human Resources** | **20.1** | **26** | ↓ | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 1.7 | 34 | ↓ | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 0.0 | 38 | ↓ | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 1.5 | 36 | ↓ | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 2.1 | 32 | ↓ | 7.7 |
| 1.1.05 | Digital Literacy Index | 95.3 | 3 | ↑ | 75.6 |
| **1.2** | **ICT Usage** | **46.1** | **33** | ↓ | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 67.6 | 33 | ↓ | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 38.6 | 22 | ↓ | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 55.7 | 33 | ↓ | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 61.3 | 36 | ↓ | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 16.3 | 30 | ↓ | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 22.7 | 25 | ↓ | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 14.2 | 32 | ↓ | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 92.2 | 18 | ↓ | 91.2 |
| **1.3** | **ICT expenditure** | **47.9** | **8** | ↓ | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 83.4 | 34 | ↓ | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 77.4 | 3 | = | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.2 | 35 | ↓ | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 30.7 | 27 | ↓ | 34.1 |
| **2** | **OUTPUT** | **30.7** | **22** | ↓ | **31.2** |
| **2.1** | **Economy** | **29.1** | **17** | ↑ | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.0 | 37 | ↓ | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 6.6 | 33 | ↓ | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 100.0 | 1 | ↑ | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 0.3 | 37 | ↓ | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 21.8 | 29 | ↓ | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 63.9 | 9 | ↑ | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 0.2 | 35 | ↓ | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 11.4 | 30 | ↑ | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 57.8 | 2 | ↑ | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **15.7** | **35** | ↓ | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 30.4 | 32 | ↓ | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 29.5 | 32 | ↓ | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 12.8 | 36 | ↓ | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 17.4 | 35 | ↓ | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 4.2 | 36 | ↓ | 13.4 |
| 2.2.06 | Loan Using Fintech | 0.0 | 37 | ↓ | 1.9 |
| **2.3** | **Manpower** | **47.3** | **7** | ↓ | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 0.4 | 36 | ↓ | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 26.1 | 17 | ↓ | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 11.7 | 32 | ↓ | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 99.6 | 3 | ↓ | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 46.6 | 6 | ↓ | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 99.8 | 2 | ↑ | 64.6 |
| **3** | **SUPPORT** | **41.6** | **30** | ↑ | **50.7** |
| **3.1** | **Infrastructure** | **41.3** | **34** | ↓ | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 78.1 | 23 | ↓ | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 42.2 | 34 | ↓ | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 44.6 | 34 | ↓ | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 37.3 | 33 | = | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 4.4 | 26 | = | 7.7 |
| **3.2** | **Finance** | **18.1** | **31** | ↑ | **32.1** |
| 3.2.01 | Financial Inclusion Index | 41.6 | 25 | ↑ | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 0.3 | 37 | ↓ | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 12.3 | 29 | ↓ | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **65.5** | **7** | ↑ | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 100.0 | 1 | ↑ | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 35.0 | 14 | ↑ | 28.7 |
| 3.3.03 | Life Expectancy Growth | 80.4 | 14 | ↓ | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 46.5 | 26 | ↓ | 55.3 |

# South Papua

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | - | - | - | 35 |
| Score : | - | - | - | 31.5 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Maluku - Papua




| Rank | 35 | 27 | 32 | 13 | 28 | 33 | 5 | 35 | 37 | 36 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **513.6** |
| **Area** ($km^2$) | **85,885.0** |
| **Economic Growth** (percent) | **1.6** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **27,485.0** |
| **GRDP per Capita** (IDR thousand) | **53,512.6** |
| **Human Development Index** | **60.5** |
| **Life Expectancy** (year) | **62.8** |
| **School Life Expectancy** (year) | **11.5** |
| **Average School Attendance** (year) | **7.6** |
| **Domestic Investment Realization** (IDR billion) | **510,405.0** |
| **Foreign Investment Realization** (USD million) | **47,962.5** |

# South Papua

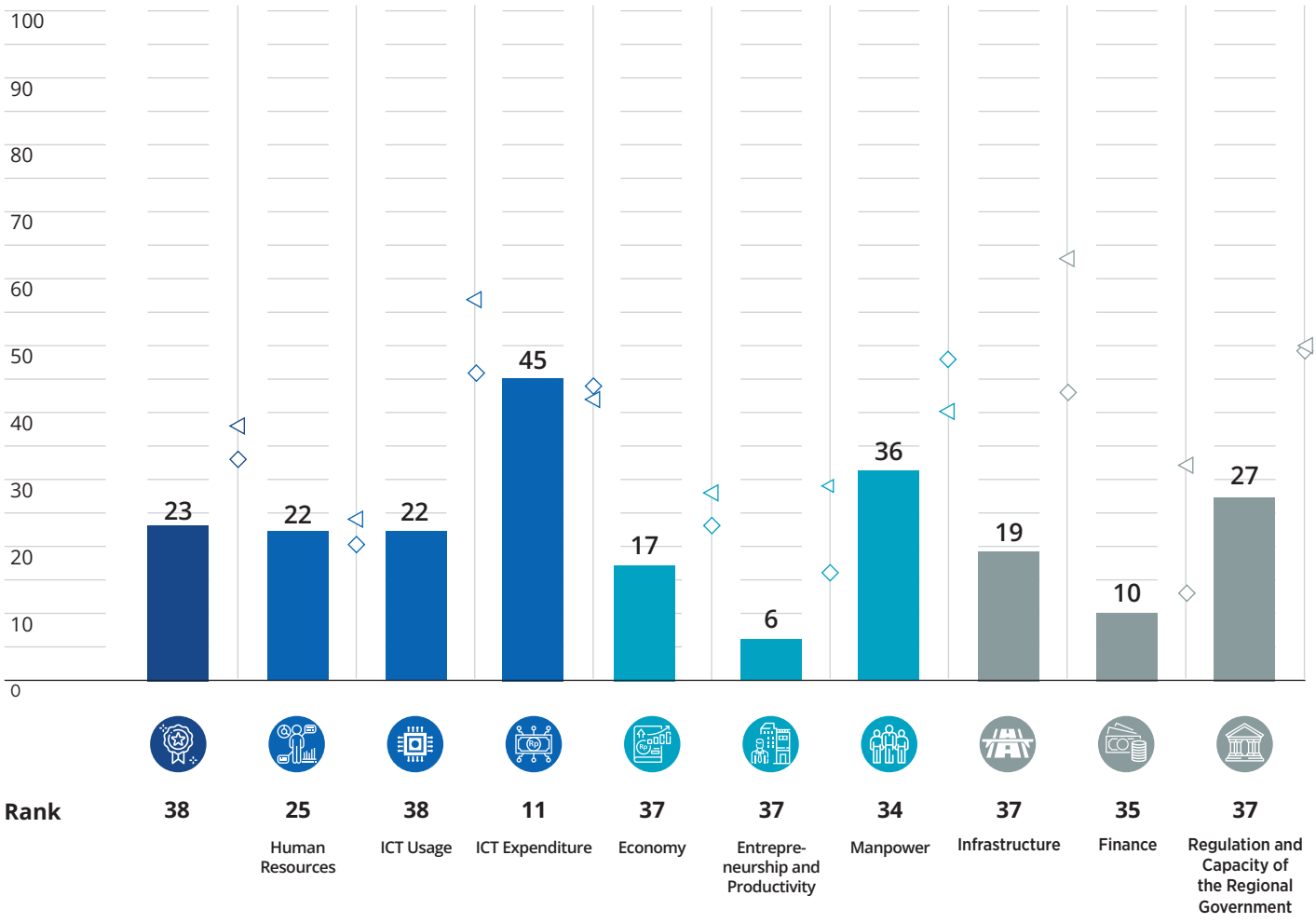
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **36.6** | **29** | - | **40.1** |
| **1.1** | **Human Resources** | **20.1** | **27** | - | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 1.8 | 33 | - | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 16.8 | 16 | - | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 1.8 | 34 | - | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 1.0 | 36 | - | 7.7 |
| 1.1.05 | Digital Literacy Index | 79.1 | 16 | - | 75.6 |
| **1.2** | **ICT Usage** | **46.1** | **32** | - | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 36.5 | 36 | - | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 35.8 | 29 | - | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 34.8 | 36 | - | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 65.2 | 33 | - | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 58.8 | 10 | - | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 31.6 | 11 | - | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 32.0 | 17 | - | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 74.5 | 35 | - | 91.2 |
| **1.3** | **ICT expenditure** | **43.6** | **13** | - | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 43.1 | 36 | - | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 68.5 | 6 | - | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.2 | 36 | - | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 62.8 | 5 | - | 34.1 |
| **2** | **OUTPUT** | **29.2** | **27** | - | **31.2** |
| **2.1** | **Economy** | **21.9** | **28** | - | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.3 | 34 | - | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 16.8 | 27 | - | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 33.1 | 22 | - | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 0.7 | 35 | - | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 26.7 | 26 | - | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 72.9 | 4 | - | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 0.1 | 37 | - | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 4.7 | 35 | - | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 42.3 | 34 | - | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **17.1** | **33** | - | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 27.1 | 34 | - | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 26.4 | 34 | - | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 19.5 | 32 | - | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 22.4 | 29 | - | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 7.4 | 31 | - | 13.4 |
| 2.2.06 | Loan Using Fintech | 0.0 | 38 | - | 1.9 |
| **2.3** | **Manpower** | **48.5** | **5** | - | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 0.2 | 37 | - | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 17.8 | 30 | - | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 42.1 | 8 | - | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 99.7 | 2 | - | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 57.4 | 3 | - | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 74.1 | 6 | - | 64.6 |
| **3** | **SUPPORT** | **26.0** | **36** | - | **50.7** |
| **3.1** | **Infrastructure** | **37.5** | **35** | - | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 90.3 | 14 | - | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 29.4 | 36 | - | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 29.4 | 36 | - | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 30.0 | 36 | - | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 8.5 | 18 | - | 7.7 |
| **3.2** | **Finance** | **9.3** | **37** | - | **32.1** |
| 3.2.01 | Financial Inclusion Index | 22.8 | 33 | - | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 0.0 | 38 | - | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 5.2 | 32 | - | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **31.3** | **36** | - | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 7.1 | 33 | - | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 8.6 | 34 | - | 28.7 |
| 3.3.03 | Life Expectancy Growth | 83.5 | 11 | - | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 25.9 | 32 | - | 55.3 |

# Central Papua

| Province Rank | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| | - | - | - | 38 |
| Score : | - | - | - | 23.3 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Maluku - Papua




| Rank | 38 | 25 | 38 | 11 | 37 | 37 | 34 | 37 | 35 | 37 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **1,391.1** |
| **Area** ($km^2$) | **61,012.2** |
| **Economic Growth** (percent) | **6.1** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **5,717.0** |
| **GRDP per Capita** (IDR thousand) | **4,109.6** |
| **Human Development Index** | **55.7** |
| **Life Expectancy** (year) | **66.9** |
| **School Life Expectancy** (year) | **9.6** |
| **Average School Attendance** (year) | **5.4** |
| **Domestic Investment Realization** (IDR billion) | **187,148.5** |
| **Foreign Investment Realization** (USD million) | **1,207,413.0** |

# Central Papua

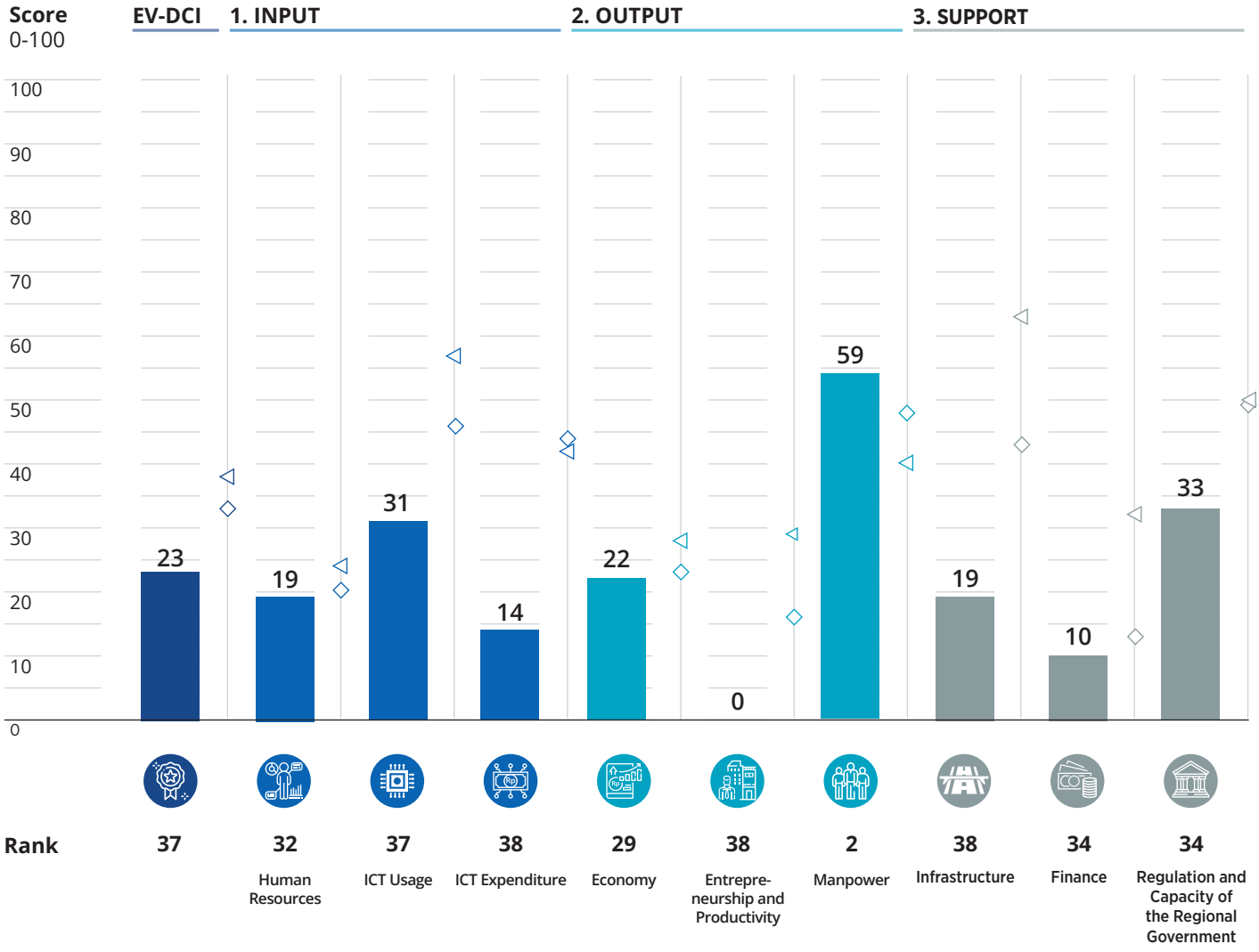
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **29.5** | **36** | - | **40.1** |
| **1.1** | **Human Resources** | **22.1** | **25** | - | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 0.1 | 37 | - | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 30.0 | 7 | - | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 0.6 | 37 | - | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 0.5 | 37 | - | 7.7 |
| 1.1.05 | Digital Literacy Index | 79.1 | 13 | - | 75.6 |
| **1.2** | **ICT Usage** | **21.7** | **38** | - | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 12.9 | 37 | - | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 18.4 | 37 | - | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 20.9 | 37 | - | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 0.0 | 38 | - | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 89.0 | 2 | - | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 0.0 | 38 | - | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 32.6 | 16 | - | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 0.0 | 38 | - | 91.2 |
| **1.3** | **ICT expenditure** | **44.7** | **11** | - | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 9.9 | 37 | - | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 100.0 | 1 | - | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.5 | 30 | - | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 68.4 | 4 | - | 34.1 |
| **2** | **OUTPUT** | **19.5** | **38** | - | **31.2** |
| **2.1** | **Economy** | **16.6** | **37** | - | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.6 | 28 | - | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 0.6 | 37 | - | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 28.0 | 27 | - | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 1.0 | 33 | - | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 10.7 | 35 | - | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 65.7 | 6 | - | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 0.2 | 36 | - | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 0.0 | 38 | - | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 42.8 | 32 | - | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **6.4** | **37** | - | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 10.2 | 37 | - | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 13.8 | 37 | - | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 7.2 | 37 | - | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 5.7 | 37 | - | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 1.3 | 37 | - | 13.4 |
| 2.2.06 | Loan Using Fintech | 0.2 | 34 | - | 1.9 |
| **2.3** | **Manpower** | **35.6** | **34** | - | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 1.0 | 33 | - | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 18.5 | 27 | - | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 25.3 | 19 | - | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 99.3 | 5 | - | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 69.6 | 2 | - | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 0.0 | 38 | - | 64.6 |
| **3** | **SUPPORT** | **18.6** | **38** | - | **50.7** |
| **3.1** | **Infrastructure** | **19.1** | **37** | - | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 90.3 | 14 | - | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 0.0 | 38 | - | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 0.5 | 37 | - | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 2.2 | 37 | - | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 2.6 | 34 | - | 7.7 |
| **3.2** | **Finance** | **9.5** | **35** | - | **32.1** |
| 3.2.01 | Financial Inclusion Index | 22.8 | 33 | - | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 0.6 | 34 | - | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 5.2 | 33 | - | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **27.2** | **37** | - | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 7.1 | 33 | - | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 8.6 | 34 | - | 28.7 |
| 3.3.03 | Life Expectancy Growth | 70.5 | 22 | - | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 22.7 | 34 | - | 55.3 |

# Mountains Papua

| | Province Rank | | | |
|---|---|---|---|---|
| | 2020 | 2021 | 2022 | 2023 |
| | - | - | - | 37 |
| Score : | - | - | - | 23.4 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Maluku - Papua




## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **1,390.9** |
| **Area** ($km^2$) | **47,691.9** |
| **Economic Growth** (percent) | **1.9** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **7,781.0** |
| **GRDP per Capita** (IDR thousand) | **5,594.3** |
| **Human Development Index** | **47.9** |
| **Life Expectancy** (year) | **63.4** |
| **School Life Expectancy** (year) | **8.5** |
| **Average School Attendance** (year) | **3.6** |
| **Domestic Investment Realization** (IDR billion) | **60,567.6** |
| **Foreign Investment Realization** (USD million) | **0.0** |

# Mountains Papua

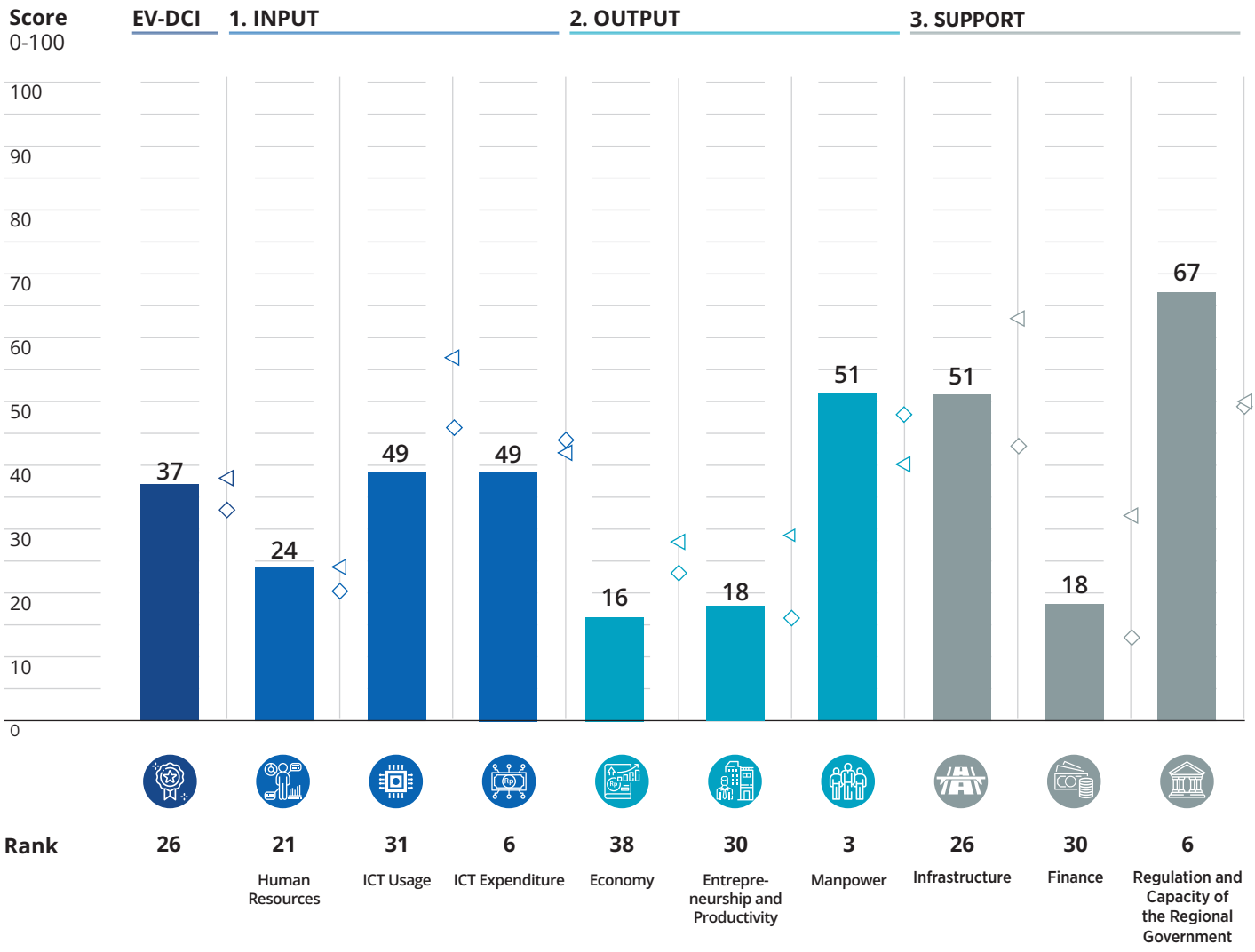
| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **21.2** | **38** | - | **40.1** |
| **1.1** | **Human Resources** | **18.5** | **32** | - | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 0.0 | 38 | - | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 13.6 | 25 | - | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 0.0 | 38 | - | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 0.0 | 38 | - | 7.7 |
| 1.1.05 | Digital Literacy Index | 79.1 | 13 | - | 75.6 |
| **1.2** | **ICT Usage** | **31.3** | **37** | - | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 0.0 | 38 | - | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 0.0 | 38 | - | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 0.0 | 38 | - | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 0.6 | 37 | - | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 62.3 | 7 | - | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 100.0 | 1 | - | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 54.6 | 5 | - | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 32.7 | 37 | - | 91.2 |
| **1.3** | **ICT expenditure** | **13.9** | **38** | - | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 0.0 | 38 | - | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 55.7 | 9 | - | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.0 | 38 | - | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 0.0 | 38 | - | 34.1 |
| **2** | **OUTPUT** | **27.0** | **36** | - | **31.2** |
| **2.1** | **Economy** | **21.8** | **29** | - | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.0 | 38 | - | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 3.9 | 35 | - | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 48.4 | 5 | - | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 0.8 | 34 | - | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 41.5 | 16 | - | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 56.7 | 15 | - | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 0.0 | 38 | - | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 0.9 | 37 | - | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 44.3 | 26 | - | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **0.0** | **38** | - | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 0.0 | 38 | - | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 0.0 | 38 | - | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 0.0 | 38 | - | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 0.0 | 38 | - | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 0.0 | 38 | - | 13.4 |
| 2.2.06 | Loan Using Fintech | 0.2 | 32 | - | 1.9 |
| **2.3** | **Manpower** | **59.1** | **2** | - | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 0.0 | 38 | - | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 0.0 | 38 | - | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 100.0 | 1 | - | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 100.0 | 1 | - | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 100.0 | 1 | - | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 54.4 | 31 | - | 64.6 |
| **3** | **SUPPORT** | **20.4** | **37** | - | **50.7** |
| **3.1** | **Infrastructure** | **18.8** | **38** | - | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 90.3 | 14 | - | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 3.8 | 37 | - | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 0.0 | 38 | - | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 0.0 | 38 | - | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 0.0 | 38 | - | 7.7 |
| **3.2** | **Finance** | **9.5** | **34** | - | **32.1** |
| 3.2.01 | Financial Inclusion Index | 22.8 | 33 | - | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 0.7 | 33 | - | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 5.2 | 33 | - | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **33.0** | **34** | - | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 7.1 | 33 | - | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 8.6 | 34 | - | 28.7 |
| 3.3.03 | Life Expectancy Growth | 71.8 | 21 | - | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 44.4 | 27 | - | 55.3 |

# South West Papua

| | Province Rank | | | |
|---|---|---|---|---|
| | 2020 | 2021 | 2022 | 2023 |
| | - | - | - | 26 |
| Score : | - | - | - | 36.7 |

## Performance 2023

◁ National Median Score
◇ Regional Median Score: Maluku - Papua




| Rank | 26 | 21 | 31 | 6 | 38 | 30 | 3 | 26 | 30 | 6 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Human Resources | ICT Usage | ICT Expenditure | Economy | Entrepre-neurship and Productivity | Manpower | Infrastructure | Finance | Regulation and Capacity of the Regional Government |

## Province Profile

| | |
|---|---|
| **Population** (Hundreds of Thousands) | **335.1** |
| **Area** ($km^2$) | **38,820.5** |
| **Economic Growth** (percent) | **3.2** |
| **Gross Regional Domestic Product** (GRDP) (IDR billion) | **28,864.0** |
| **GRDP per Capita** (IDR thousand) | **86,135.5** |
| **Human Development Index** | **64.0** |
| **Life Expectancy** (year) | **65.6** |
| **School Life Expectancy** (year) | **13.2** |
| **Average School Attendance** (year) | **8.1** |
| **Domestic Investment Realization** (IDR billion) | **1,320,944.5** |
| **Foreign Investment Realization** (USD million) | **48,019.1** |

# South West Papua

| | | Score (0-100) | Province Rank | Status | National Median Score |
|---|---|---|---|---|---|
| **1** | **INPUT** | **40.4** | **18** | - | **40.1** |
| **1.1** | **Human Resources** | **23.5** | **21** | - | **24.2** |
| 1.1.01 | Number of Students with Digital Capabilities | 1.6 | 35 | - | 8.5 |
| 1.1.02 | Growth of Students with Digital Capabilities | 16.6 | 17 | - | 15.9 |
| 1.1.03 | Number of Lecturers in Digitalization-Related Study Programs | 2.0 | 33 | - | 9.5 |
| 1.1.04 | Number of Digitalization-Related Study Programs | 2.1 | 32 | - | 7.7 |
| 1.1.05 | Digital Literacy Index | 95.3 | 3 | - | 75.6 |
| **1.2** | **ICT Usage** | **48.8** | **31** | - | **56.9** |
| 1.2.01 | Ratio of Citizens that Have Cellular Phone | 67.6 | 32 | - | 77.7 |
| 1.2.02 | Ratio of Households that Have Computer | 35.6 | 30 | - | 41.9 |
| 1.2.03 | Ratio of Citizens that Have Access to Internet | 55.7 | 32 | - | 73.3 |
| 1.2.04 | Ratio of Citizens that Have Access Internet from Home | 82.9 | 27 | - | 88.3 |
| 1.2.05 | Ratio of Citizens that Have Access Internet from Office | 11.6 | 34 | - | 35.2 |
| 1.2.06 | Ratio of Citizens that Have Access Internet from School | 33.3 | 8 | - | 26.8 |
| 1.2.07 | Ratio of Citizens that Access Internet with Laptop | 9.7 | 35 | - | 27.5 |
| 1.2.08 | Ratio of Citizens that Access Internet with Cellular Phone | 94.2 | 11 | - | 91.2 |
| **1.3** | **ICT expenditure** | **48.8** | **6** | - | **41.8** |
| 1.3.01 | Ratio of Households Who Have ICT Expenditure | 85.3 | 32 | - | 91.4 |
| 1.3.02 | Average of Expenditure of Households for ICT | 76.1 | 4 | - | 35.0 |
| 1.3.03 | Total Renumeration and Wage of Information and Communication Sector Workers | 0.5 | 28 | - | 1.1 |
| 1.3.04 | Average Renumeration and Wage of Information and Communication Sector Workers | 33.3 | 21 | - | 34.1 |
| **2** | **OUTPUT** | **28.7** | **32** | - | **31.2** |
| **2.1** | **Economy** | **16.5** | **38** | - | **27.9** |
| 2.1.01 | GRDP of the Information and Communication Sector | 0.2 | 36 | - | 2.3 |
| 2.1.02 | GRDP Contribution of the Information and Communication Sector | 6.8 | 32 | - | 24.0 |
| 2.1.03 | GRDP Growth of the Information and Communication Sector | 25.4 | 29 | - | 36.1 |
| 2.1.04 | GRDP of Warehousing, Transportation Support, Post & Courier Subsectors | 0.5 | 36 | - | 5.6 |
| 2.1.05 | GRDP Contribution of Warehousing, Transportation Support, Post & Courier Subsector | 14.8 | 33 | - | 34.6 |
| 2.1.06 | GRDP Growth of Warehousing, Transportation Supporter, Post & Courier Subsectors | 45.9 | 32 | - | 55.1 |
| 2.1.07 | GRDP of the Financial Services Sector | 0.2 | 34 | - | 1.7 |
| 2.1.08 | GRDP Contribution of the Financial Service Sector | 10.9 | 31 | - | 20.8 |
| 2.1.09 | GRDP Growth of the Financial Services Sector | 43.8 | 30 | - | 45.9 |
| **2.2** | **Entrepreneurship and Productivity** | **18.2** | **30** | - | **28.6** |
| 2.2.01 | Ratio of Workers Using the Internet in their Main Job | 32.6 | 30 | - | 43.6 |
| 2.2.02 | Ratio of Population Using the Internet in their Job for Communication | 31.9 | 30 | - | 42.7 |
| 2.2.03 | Ratio of Population Using the Internet in their Job for Marketing | 17.1 | 34 | - | 32.5 |
| 2.2.04 | Ratio of Population Using the Internet in their Job for Sales via Social Media | 20.7 | 31 | - | 36.1 |
| 2.2.05 | Ratio of Population Using the Internet in their Job for Sales via E-commerce | 6.6 | 33 | - | 13.4 |
| 2.2.06 | Loan Using Fintech | 0.0 | 36 | - | 1.9 |
| **2.3** | **Manpower** | **51.5** | **3** | - | **40.1** |
| 2.3.01 | Number of Workers in Digitalization-Related Sectors | 0.8 | 35 | - | 5.0 |
| 2.3.02 | Ratio of Workers in Digitalization-Related Sectors | 42.3 | 4 | - | 23.2 |
| 2.3.03 | Growth of Workers in Digitalization-Related Sectors | 57.5 | 2 | - | 25.2 |
| 2.3.04 | Number of Workers in Digitalization-Prone Categories (Reverse Indicator) | 99.5 | 4 | - | 93.8 |
| 2.3.05 | Ratio of Workers in Digitalization-Prone Categories | 42.6 | 7 | - | 29.3 |
| 2.3.06 | Growth of Workers in Digitalization-Prone Categories | 66.2 | 17 | - | 64.6 |
| **3** | **SUPPORT** | **45.4** | **27** | - | **50.7** |
| **3.1** | **Infrastructure** | **51.4** | **26** | - | **62.8** |
| 3.1.01 | Level of Electricity Disturbance (Reverse Indicator) | 78.1 | 23 | - | 87.0 |
| 3.1.02 | Ratio of Villages that Get Strong and Very Strong Signal | 53.8 | 28 | - | 72.9 |
| 3.1.03 | Ratio of Villages that Get 3G Signal | 59.5 | 31 | - | 91.0 |
| 3.1.04 | Ratio of Villages that Get 4G Signal | 56.8 | 27 | - | 73.8 |
| 3.1.05 | Ratio of Households with Fixed Phone Connection | 8.7 | 17 | - | 7.7 |
| **3.2** | **Finance** | **18.1** | **30** | - | **32.1** |
| 3.2.01 | Financial Inclusion Index | 41.6 | 25 | - | 56.4 |
| 3.2.02 | Number of Digital Finance Service Agent | 0.4 | 36 | - | 5.0 |
| 3.2.03 | E-wallet Adoption as Payment Method | 12.3 | 29 | - | 38.9 |
| **3.3** | **Regulation and Capacity of the Regional Government** | **66.7** | **6** | - | **49.6** |
| 3.3.01 | Gross Enrollment Rate of Senior High Shools/Vocational Schools | 100.0 | 2 | - | 52.8 |
| 3.3.02 | Gross Enrollment Rate of Higher Education (Diploma-Bachelor) | 35.0 | 14 | - | 28.7 |
| 3.3.03 | Life Expectancy Growth | 95.2 | 3 | - | 73.3 |
| 3.3.04 | Reduction of Poverty Rate (Reverse Indicator) | 36.7 | 29 | - | 55.3 |

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**This report was written in January 2023 – February 2023. Information was gathered at the same time. Difference in information at different times, is beyond our control.**


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# 05 Recommendation: Achieving Digital Equity Collectively


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**EAST VENTURES** is a pioneering and leading sector-agnostic venture capital firm in Indonesia and Southeast Asia (SEA). Founded in 2009, East Ventures has transformed into a holistic platform that provides multi-stage investment, including Seed and Growth for over 300 tech companies in SEA. East Ventures is one of the best performing venture capitals in the world, consistently delivers high internal rate of return (IRR), and listed as one of the top 4th investors globally and Asia's top investor based on CB Insights in Q4 2022, as well as the third most active venture capital firm globally in 2022 based on Pitchbook.

Indonesia is the world's largest archipelago consisting of more than 17,000 islands; and home to over 270 million people, ranking it as the most populous country in Southeast Asia and the 4th globally. Indonesia's growing young and middle class is the country's unparalleled growth engine. With an average growth target of 5.3% per year, Indonesia is aiming to become a high income country by 2036 and the world's fifth-largest economy by 2045. This high growth would gradually increase the middle-income class to about 70% of Indonesia's population by 2045.

East Ventures has been working alongside entrepreneurs to build Indonesia's digital ecosystem from the ground up since day one. Spotting opportunities early, the firm is the first venture capital to support Indonesia's two homegrown unicorns: Tokopedia and Traveloka. The firm has since then invested in other industry verticals, including supporting infrastructure to e-commerce such as Waresix (logistics), Xendit (payment), and Shopback (e-commerce enabler), and Sociolla (new retail beauty); fintech industry ALAMI (Sharia-compliant P2P lender), Komunal (P2P lending serving Neo-rural bank services) and Julo (digital lending); Ruangguru (education platform); and media such as IDN Media (millenials and gen-Z), and Katadata (business and economy audience), and Tech in Asia (technology news).

Other portfolios of East Ventures are startups that provide technology platforms for SMEs such as Praktis (supply chain), Aruna (fisheries supply chain); mental health and self-development platforms such as Mindtera, Intellect and Riliv; digital transformations such as Advotics (supply chain analysis) and Nodeflux (computer vision and AI); ESG-focus platforms such as Rekosistem (waste management), Xurya (renewable energy), ARIA (IoT based agritech); automobile such as Carro and Moladin; and bio-tech companies such as Etana (biopharmaceutical), Nalagenetics (personalized medications), and Nusantics (microbiome).

East Ventures officially merged with EV Growth and has become a holistic platform that provides multi-stage investments. The firm has delivered more than 30 exits, including Kudo's acquisition by Grab, Loket's acquisition by Gojek, Bridestory's acquisition by Tokopedia, Warung Pintar's acquisition by SIRCLO, and multiple exits to local and regional business groups. In 2022 alone, East Ventures closed a total of 105 deals, welcomed 85 new companies—double the amount from the preceding year, and disbursed US$ 211.59 million to our Seed and Growth portfolio companies.

In March 2020, in response to the COVID-19 pandemic, East Ventures formed the Indonesia PASTI BISA (IDPB) movement: a platform to mobilize all the strengths of the company's digital ecosystem to support government and private sectors' efforts in tackling the COVID-19 outbreak in Indonesia. The first IDPB movement managed to raise more than IDR 10 billion in one month, which was used to carry out research, produce and distribute 100,020 local PCR test kits made in Indonesia to all provinces. The second IDPB movement, Safeguards PPE, was initiated to distribute

personal protective equipment (PPE) to Indonesian health workers. Using e-commerce technology, we made the procurement of PPE units easier and more seamless. Health-workers could request PPEs from anywhere, while donors could provide PPEs to where it is most needed. The third IDPB movement is Safeguards Oxygen, which successfully raised US$ 1,213,354 from 790 individual and corporate donors to distribute 1,450 oxygen concentrators to hospitals in need across Indonesia. The fund raised exceeded the donation target (121.34% of US$ 1 million target) within 10 days.

The latest IDPB project is Maju Terus Pantang Mundur (Keep Moving Forward, Never Give Up), a platform for the talents impacted by the wave of layoffs over the past year. The initiative consists of a job board, where talents can navigate over 700 job opportunities available in the East Ventures ecosystem. We also held a coaching and hackathon program that drew a total of 270 submissions from 551 participants from 50 cities. There are 28 selected team champions who received a total funding of IDR 7.5 billion (around US$ 500,000).

In April 2022, East Ventures launched the first Sustainability Report, which outlined the Environment, Social, Government (ESG) frameworks and impacts of our firm and ecosystem. Recognizing the growing demand for ESG integration, we have started deploying the necessary resources to help the firm and our portfolio companies in their ESG efforts.

We also became the first venture capital firm in Indonesia to sign the Principles for Responsible Investment (PRI) supported by the United Nations. Moreover, in partnership with the Indonesian Chamber of Commerce and Industry (KADIN) and WRI Indonesia, we are committed to helping Indonesia achieve its Net Zero emission goal by 2060.
In addition, we introduced the Women with Impact program to address the challenges that women face in the workplace and provide a platform for them to connect with other professionals. In healthcare development, East Ventures participated in the launch of the Ministry of Health's Biomedical and Genome Science Initiative (BGSi) to support the advancement of the healthcare industry in Indonesia. Early this year, East Ventures continued its support by launching the first white paper "Genomics: Leapfrogging into the Indonesian healthcare future"; in collaboration with the Ministry of Health of the Republic of Indonesia and Redseer Strategy Consultants to provide a comprehensive understanding of how genomics can improve the healthcare system in Indonesia.

On a global scale, East Ventures and its ecosystem have participated in the G20 Digital Innovation Network (DIN) 2022, where some of our companies – Xurya, Nusantics, and Komunal – were crowned the Top Startups and represented Indonesia as part of the G20 Presidency of Indonesia.

In early this year, East Ventures and Temasek Foundation launched the Climate Impact Innovations Challenge (CIIC), the largest climate innovations tech platform of the year in Indonesia. This challenge provides opportunities for tech innovators to showcase their sustainable innovations in addressing ecological challenges and mitigating the impacts of climate change.

East Ventures continues to be committed to investing in potential young Indonesians, because we believe that every young person should have the opportunity to pursue their dreams and develop their skills for a sustainable Indonesia. Through our efforts, East Ventures' is not only realizing digital justice for all Indonesians, but we also want to be part of the journey to grow Indonesia's society and beyond. Because if not now, when? If not us, who?


**KATADATA INSIGHT CENTER** (KIC) is a business unit of Katadata, specializing in research and data analytics. KIC provides in-depth insights to understand market, customers, and business landscape to help client needs for a better decision making. The research is exclusively designed to fit the clients' specific needs.

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# Previous EV-DCI Reports


## EV-DCI 2022

**Towards Indonesia's Digital Golden Era**

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## EV-DCI 2021

**Indonesia's Accelerating Digital Economic Transformation**

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## EV-DCI 2020

**Opportunities and Challenges of the Digital Economy in Indonesia**

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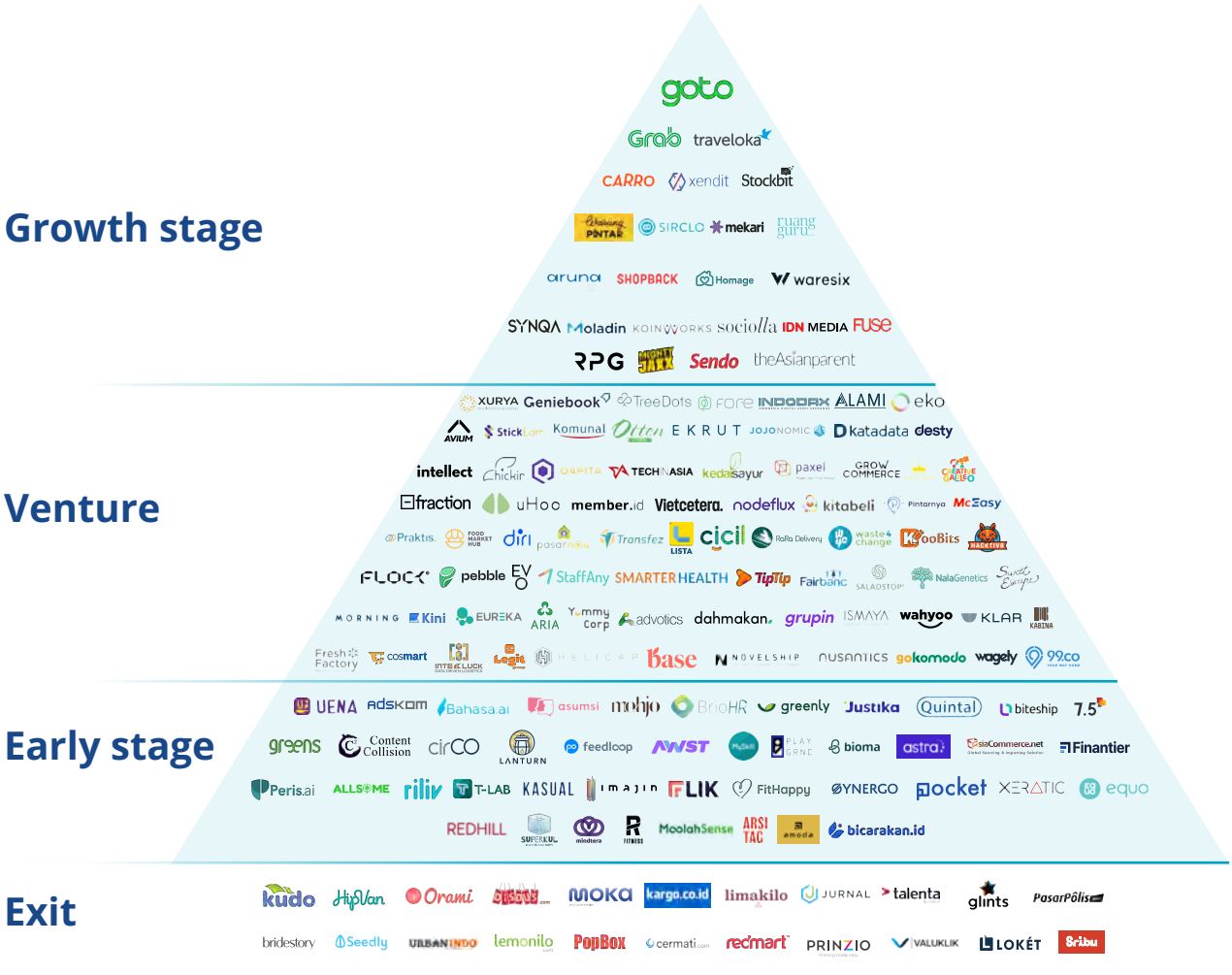
# Ecosystem

East Ventures




**300+** Companies (SEA)

**500+** Founders

**30+** Exits

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