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Digital Inclusion

The policy journey towards
greater opportunities



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About the report

Digital inclusion: The policy journey towards greater opportunities is a report from Economist Impact, commissioned by the Asia Internet Coalition (AIC), which examines the opportunities and challenges of digital inclusion across select Asia-Pacific countries.

Kim Andreasson is the author of the report and Charles Ross is the editor. To better understand the opportunities and challenges with regards to digital divides in the Asia-Pacific region, Economist Impact conducted wide-ranging desk research supplemented by a survey of 200 executives across India, Indonesia, Malaysia, Singapore, Thailand and Vietnam who were all familiar with the digital and data strategy of their organisations. All respondents were at the VP/Director level or above with six in 10 representing the board or C-suite. In addition, six in-depth interviews with senior executives and experts were conducted between July and September 2021. Our thanks are due to the following interviewees for their time and insights:

- Tiziana Bonapace, director, ESCAP's Information and Communications Technology and Disaster Risk Reduction Division, United Nations
- Grace Ng, director, Digital Readiness and Learning, Ministry of Communications and Information, Singapore
- Ryan Rahardjo, head of public affairs Southeast Asia, Google
- Quint Simon, head of public policy, Asia-Pacific, Amazon Web Services
- Craig Warren Smith, founder and chairman, Digital Divide Institute
- Tom C Varghese, head of connectivity and access policy, Asia-Pacific, Facebook
- Dave Woodward, vice-president, regional general counsel and head of public policy, APAC, LinkedIn

Economist Impact bears sole responsibility for the editorial content of this report. The findings do not necessarily reflect the views of the sponsor.

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Executive summary

Digital inclusion can stimulate economic growth and development. During the current covid-19 pandemic, countries are looking to seize on digital opportunities to maintain services and build for the future. An increase in online connectivity based on new technology infrastructure, such as 5G networks, is necessary from a supply-side perspective, while the demand-side, in terms of raising awareness and enhancing digital skills, is important to reap the full benefits of access.

However, many countries in the Asia-Pacific region are lagging in terms of bridging digital divides, such as in inadequate infrastructure and training. This can hinder the full realisation of digital development in socio-economic terms, especially during and after the pandemic.

This report looks at the opportunities and challenges facing digital inclusion in Asia-Pacific countries, in particular India, Indonesia, Malaysia, Singapore, Thailand and Vietnam. Research shows that some countries, such as Singapore, have largely overcome the “access divide” and established partnerships with multiple stakeholders to bridge the digital skills divide. Other countries in the region are in different points of their digital development journeys.

To provide insight into digital inclusion efforts in the Asia-Pacific region, Economist Impact conducted desk research, a survey of 200 executives and six in-depth interviews. The key findings of the research are as follows:

- **Raising awareness and covid-19:** Survey takers say the socio-economic opportunities from greater inclusion can serve as a key component for rapid economic recovery during and after the covid-19 pandemic, hence raising the need to create awareness of the importance of bridging digital divides.
- **The need for closer partnerships:** To capture the benefits of digital inclusion in terms of the number of people connected, the public and private sectors need to work in close collaboration with other stakeholders, such as non-governmental organisations (NGOs), to bridge digital divides.
- **Nobody left behind:** Digital inclusion must capture even the most vulnerable populations, including disabled people and rural communities, in order for all members of society to reap the maximum benefits.
- **Regulatory policies can be a boon:** The perception that the private sector is generally not in favour of regulation is untrue. In fact, survey respondents mostly welcome regulations in certain areas that can lead to greater digital inclusion, such as data privacy and cyber-security, in order to create trust to increase online usage.
- **Digital skills as the holy grail:** Education and continuing training remain fundamental to capture the full benefits of digital inclusion and are topics that permeate throughout the public and private sectors—who together need to collaborate to potentially seize the full benefits of the internet economy.

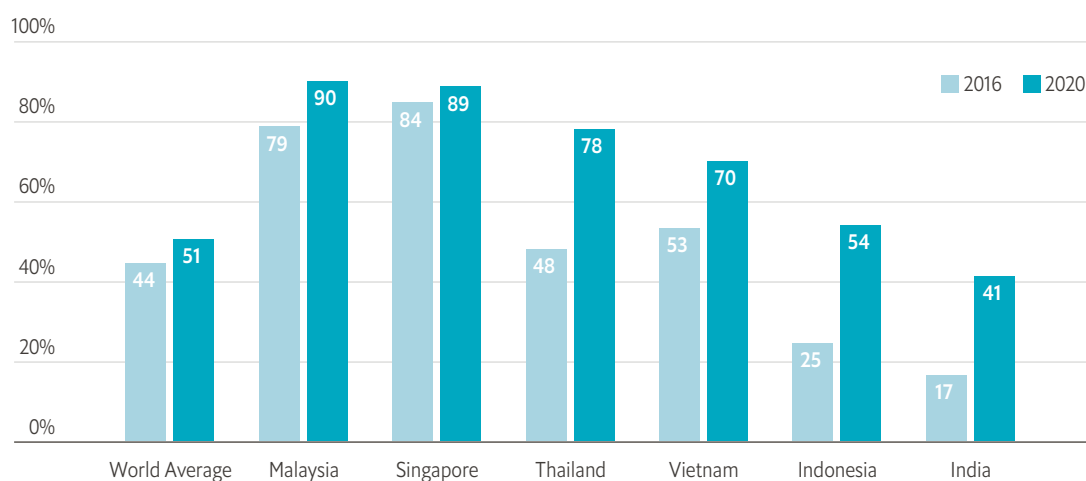


Introduction

Digital development marches on. More than half (51%) of the global population is now online, according to the International Telecommunication Union (ITU), the United Nations' specialised agency for information and communication technologies (ICTs). One reason is growing awareness of the importance of digital inclusion and its many benefits. A 10-percentage point increase in fixed broadband penetration can increase GDP growth by 1.21% in developed economies and 1.38% in developing ones, according to the World Bank.¹

In the survey conducted for this report, executives agree their own understanding of digital inclusion has improved in the past three years (90%) and that digital inclusion can serve as a key component for rapid economic recovery during and after the covid-19 pandemic (89%). "I think that reflects a broader trend," says Tom C Varghese, head of connectivity and access policy for Asia-Pacific at Facebook. "For people, small businesses and communities, internet access has become critical, signifying a new normal that will continue in the future."

Figure 1: More people online but many still excluded
Percentage of individuals using the internet in 2016 and 2020



Source: ITU: <https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>

¹ <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/178701467988875888/exploring-the-relationship-between-broadband-and-economic-growth>

At the same time, digital divides remain. They are multi-faceted and cross-cutting, ranging from a lack of access and connectivity to whether people can leverage them for useful purposes. Countries across the Asia-Pacific region must do more to bridge such gaps, especially in light of covid-19, which has highlighted the need of technology access and usage. Survey takers agree that not enough attention is given to digital inclusion today (67%) and that governments do not invest enough money and resources to bridge digital divides (65%). Addressing barriers towards greater availability, affordability, readiness and relevance is therefore of crucial importance to capitalise on the potential socio-economic impact of technology across the region.

“The lack of digital access and literacy in general are quite universal key barriers to digital inclusion,” says Grace Ng, director, Digital Readiness and Learning, Ministry of Communications and Information in Singapore, who noted that the city-state has been working hard to overcome the access divide. “We are

thinking about how the benefits of digital can extend to everyone, including the less digitally savvy”, elaborates Ms Ng. “We think that digitalisation is a means to an end for better lives and therefore, digital literacy is very, very important.”

“Asia-Pacific as a three-speed region has the widest digital divide in the world,” says Tiziana Bonapace, director of ESCAP’s Information and Communications Technology and Disaster Risk Reduction Division at the United Nations in Bangkok. The first group of countries are global innovation and technology leaders. The second are middle-income countries where there is technology innovation and adaptation. And then there is a group of countries where not much has happened for more than two decades. “Progress has been made in terms of mobile connectivity, but the really transformative and intensive use of broadband internet in these countries is really limited to a very, very small proportion of the population,” Ms Bonapace says about the regional variations.

Definition

For the purposes of this report and the survey it is based on, the digital divide refers to the unequal ability to access and use ICT. We consider fixed and mobile networks and devices with equal weight, but also attach importance to the applications and services that run over those networks. Current efforts to bridge the digital divide are primarily centred on improving access and enhancing speed, in part because these are easy to track and improvements can be measured. But today it is clear that the digital divide is closely intertwined with social divides, leading to uneven adoption and questions on whether access translates into benefits of useful usage. Digital inclusion is the set of strategies or policies designed to bridge digital divides, including enhancing digital literacy and skills to enable usage of ICTs.

The impact of covid-19

“What the pandemic showed us was the potential the internet has in bringing everyone online in a meaningful way, you know, the extent to which it can be transformative,” says Ms Bonapace, alluding to the benefits of connectivity during lockdowns and remote education and work environments. “The internet did wonderful things for a group of people during the pandemic, but it also accentuated digital and consequently socio-economic inequalities,” she cautions. “This has heightened the attention of governments and brought a sense of urgency with regards to digital connectivity and inclusion.”

Segments of the population in countries across the region with poor infrastructure and a lack of digital skills suffered more than those who seamlessly moved online. “Even before the pandemic, women business owners, micro-entrepreneurs and regional communities outside major cities were disproportionately affected by digital divides, with more limited access to training and opportunities,” says Ryan Rahardjo, head of public affairs Southeast Asia at Google. “We’re working closely with governments, the nonprofit sector and other partners to help those most at risk. For example, in partnership with the Asia Foundation, we launched the Go Digital ASEAN Program to help 200,000 SMEs from rural areas access relevant resources, pivot and continue their businesses online.”

“At LinkedIn, we have built tools and features to help job seekers impacted by covid to identify skills they have and articulate those skills, and for companies to identify talent based on those skills,” says Dave Woodward, vice-president, regional general counsel and

head of public policy, APAC at LinkedIn.

“One of these tools includes Skill Assessments, which are multiple-choice questions that LinkedIn members can complete on the platform. Candidates who score within the top 30% receive a skill badge they can add to their profile. This badge validates their skills and makes them more discoverable to opportunities on the platform.”

“In Singapore, we were very concerned about our digitally disconnected vulnerable segments when covid hit,” says Ms Ng. “It made us rethink what the most impactful and effective way of reaching out to these segments could look like.” In June 2020, Singapore established a Digital Office with Digital Ambassadors in order to reach out to those vulnerable segments, and a large proportion of them included seniors. “We deployed Digital Ambassadors on the ground, to conduct high touch one-to-one coaching and small group learning sessions, at locations that our elderly are very familiar with and comfortable with, such as public libraries and community centres. Our Ambassadors also supported our stall owners at hawker centres and wet markets to adopt contactless payment platforms.”

Forging ahead

In addition to building on the unique angle of “useful usage”, whether companies and users take full advantage of their connections and have the digital skills to do so, this report highlights existing and emerging threats to inclusion. Bridging digital divides requires raising awareness and greater understanding of existing and emerging barriers. (See case study)

Case study: Facebook raising awareness

Launched in 2017, the Economist Intelligence Unit Inclusive Internet Index, supported by Facebook, measures digital inclusion across four domains:

- Availability: quality and breadth of available infrastructure required for access and levels of internet usage.
- Affordability: cost of access relative to income and the level of competition in the internet marketplace.
- Relevance: existence and extent of local language content and relevant content.
- Readiness: capacity to access the internet, including skills, cultural acceptance and supporting policy.

According to survey takers, the biggest barriers in bridging digital divides are currently seen as fairly evenly distributed between the four domains. “These are interlinked barriers,” says Tom C Varghese, head of connectivity and access policy, Asia-Pacific, Facebook. “There’s a compound effect of people facing multiple barriers within each country and it just shows how multi-faceted the challenge of digital inclusion is.”

The Inclusive Internet Index illustrates that digital divides persist and have disproportionately negative impacts on low-income and lower-middle-income countries. While the overall scores for India, Indonesia, Malaysia, Singapore, Thailand and Vietnam have increased slightly in recent years (Figure 2), the movements are insufficient to conclude that digital inclusion has increased significantly.

Figure 2: Increase in useful usage of the internet
Overall scores in the Inclusive Internet Index in 2018 and 2021
Score 0-100 where 100=most inclusive internet environment

	2018	2021
India	62.4	73.4
Indonesia	59.0	67.8
Malaysia	75.8	76.0
Singapore	77.5	84.0
Thailand	66.8	73.4
Vietnam	64.5	71.4

Source: Economist Impact

“A big challenge is the usage gap, marked by people unable or unwilling or uninterested in using the internet, which requires us to make sure that people are able to utilise internet services in a way that’s beneficial for them,” explains Mr Varghese.

“This requires addressing digital skills, and people’s perception about trust and safety online, and ensuring that people actually derive value from the content available to them.”

Research from several countries also shows that users need an incentive to use the internet. “Solving these challenges requires industry stakeholders, policymakers and technology companies to work together to close the connectivity gap and improve equal access to the internet for all,” says Mr Varghese.



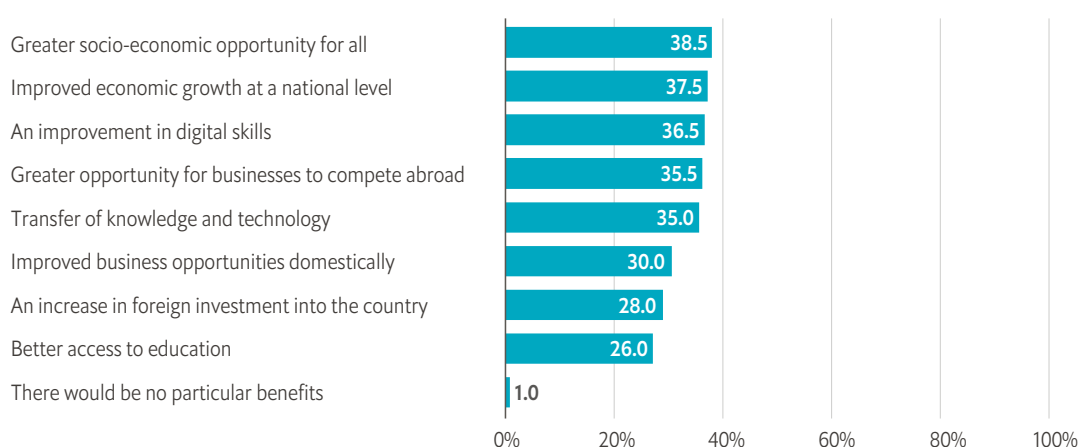
Seizing the opportunities of digital inclusion

Greater digital inclusion can lead to a wide variety of benefits. If the gap in access to the internet and ICTs is overcome, countries are perceived to be able to provide greater socio-economic opportunity for all (39%), followed by improved economic growth at a national level (38%), according to the survey conducted for this report. The region's internet economy is projected to reach \$360 billion by 2025, an upward revision from the previous \$300 billion forecast. It could also reach \$1 trillion by 2030, propelled by robust growth in e-commerce, according to a study from Google. "Technology will be crucial to the economic recovery. Skilling and job creation programmes need to go hand in hand with actions to increase digital inclusion so that

more people can benefit from opportunities in the internet economy," says Mr Rahardjo. "The internet is the ultimate tool for human empowerment if it's correctly distributed," adds Craig Warren Smith, founder and chairman of the Digital Divide Institute. "The challenge is how to bring inclusion to the internet. Making it accessible to low- and high-income populations sort of pushes the question of what it means to empower everyone and equitably." For instance, globally, research has shown not only a divide in income levels when it comes to connectivity but also a gender divide, amongst other factors. To improve digital inclusion, greater collaboration and measurement are warranted to take stock of remaining challenges to seize the socio-economic opportunities.²

Figure 3: Improved access benefits society and the economy

If the gap in access to the internet and ICTs in the country where you are located was overcome, what would be the primary benefits for the economy as a whole? Select up to three.



Source: Economist Impact

² <https://economysea.withgoogle.com/>

Case study: Google building a more inclusive internet

Between 2015 and 2020, over 1.5 billion people began using the internet for the first time. Another billion are set to join them online by 2025. Most of these new internet users come from Asia, Latin America and Africa, many of whom live with limited internet conditions and are not digitally literate. To address this challenge, Google started its Next Billion Users (NBU) initiative in 2015, an effort to build a more inclusive and equitable internet for everyone everywhere. To help narrow the gap, Google identified barriers to online inclusivity and worked on solutions, such as:

- **Access:** To support access despite NBUs' infrastructure limitations, Google designed offline capabilities in apps and developed visual search to provide the best possible online experience on entry-level devices.
- **Digital confidence:** Many NBUs are unable to use smartphones confidently and Google worked with an innovation design company to create the Digital Confidence Tool Kit, which helps developers build apps and features that are easier to use for people with low digital literacy.³
- **Vernacular and voice:** The majority of internet users, including the NBUs, are not English speakers, making the predominantly-English internet a struggle for them. To address this, Google added additional capabilities to its services, including more intuitive and helpful voice functions.
- **Gender equity online:** In many NBU countries, women find it harder than men to use the internet due to access issues, lack of privacy and security concerns. To help women use the internet safely and confidently, Google designed features that allow users to keep their search experience private to others.
- **Opportunities:** Many NBUs work in unorganised informal labour markets, making it difficult for them to find jobs. Google developed a job-matching app to help find entry-level employment easily and added features like remote interviews and virtual training as hiring processes moved online during the pandemic.

3 <https://digitalconfidence.design/tools>

Partnerships

“The government doesn’t have all the answers and it takes humility and courage to acknowledge that no single party has all the answers, and we are better off working together to address these complex issues,” says Ms Ng. “That’s why it is important to bring on board different types of partners, sometimes partners that we might not have thought of working with, and to actively engage them, to see how their resources, their expertise, and their networks might be tapped to solve the issues on the ground.”

As a result, Singapore launched a national initiative called the digital for life movement that includes the public, private and the people sectors.⁴ Survey takers overwhelmingly say it is ‘very important’ (81%) or ‘important’ (18%) that the private sector collaborates with the government in their country to address digital divides at a national level. When asked who is best placed to take the lead in increasing digital inclusion, most survey takers point to the private sector, supported by

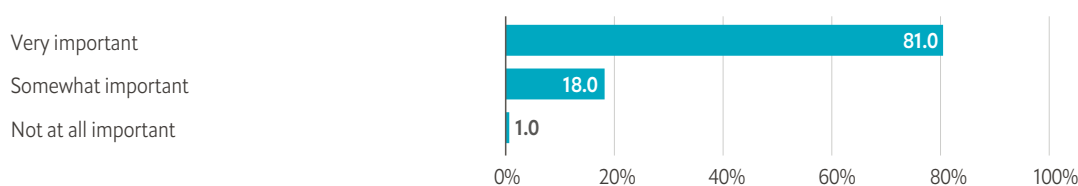
government subsidies (43%). This is followed by the central government (42%) and public-private partnerships (35%) as the primary options. “Bridging the digital divide is not the work of any one sector,” says Mr Woodward. “It takes all hands on deck to bring about an overall workforce transformation and requires effort from schools, governments, private sector, companies, non-profits and even individual workers.”

“Closing digital divides is all about the ecosystems, the interaction of supply and demand and the internet and how various public policy goals like poverty reduction, or sustainable development, education, health care, all of those things can be integrated into a plan to create sustainability,” says Mr Smith. “It puts more demand on the government to be able to understand and predict how the private sector will join forces with them to achieve multiple outcomes.”

4 <https://www.imda.gov.sg/digitalforlife>

Figure 4: Public-private collaboration is vital

In your view, how important is it for the private sector to collaborate with the government to address digital divides at a national level? Select one.



Source: Economist Impact

A need for greater understanding

The biggest issues of contention between government and industry in bridging digital divides are said to be leadership—for example, who is responsible for enhancing digital inclusion (35%), followed by regulation (30%) and measurement of digital inclusion (27%). “I do think having arenas for dialogue and coordination between the public and private sector, and having plans for prioritisation and implementation of initiatives is a very important topic, and I hope that’s going to be something that gets renewed emphasis going forward,” says Mr Varghese.

With regards to regulations, for example, executives view cyber-security (72%), e-commerce (71%) and data protection (68%) primarily as a benefit rather than a burden when it comes to digital inclusion, an area where the public and private sectors seem to be in agreement. “With technology

quickly evolving, there will be new threats that arise and helping people to understand what these are, and how to protect ourselves in order to navigate the digital world confidently and safely is important,” says Ms Ng.

Meaningful progress

The primary benefit of digital inclusion for businesses is seen to be greater opportunity to provide advanced ICT services and products (58%). This was followed by greater opportunity to compete abroad (47%), both answers that mimic the national benefits as they support inclusiveness and growth. “Meaningful broadband is an ethics-based transformation of the internet,” says Mr Smith, who is an adviser to the government of Indonesia about how the internet could be the basis for a more equitable distribution of wealth. “The criteria are usable, affordable and empowering. And each of those three

terms can be translated into metrics. And technologies can be rated by their meaningfulness. And whole ecosystems can be rated by their meaningfulness.”

The area of digital inclusion, which has the greatest potential economic impact on companies today, is the availability of ICTs (27%) and three years from now it is seen to be affordability (26%), supporting the point of getting people online in the first instance and keeping them using ICTs. LinkedIn, for example, has data to

know what skills are in demand and what jobs are out there. “Our platform helps connect workers to economic opportunity,” says Mr Woodward. “Even before covid, we saw that digital talent is in greater demand compared with non-digital talent.” Between January 2017 and February 2020, the digital hiring rate increased in Indonesia (22 percentage points), India (32 percentage points), Malaysia (54 percentage points), Philippines (36 percentage points) and Singapore (46 percentage points), according to LinkedIn data. (See case study on LinkedIn)

Case study: LinkedIn measuring progress

“During the pandemic we saw a positive impact in some industries where companies could transform and adapt their businesses to the digital world,” says Mr Woodward. E-commerce, for example, saw a boom as consumers in lockdown turned to digital channels for their daily needs. “In fact, many companies struggled to find talent, which is a bit ironic, but they needed the right skills for open roles and many jobs also required remote workers.” A lot of these new roles created during covid-19 required workers to work remotely. For example, the share of remote job posts is up 3.5 times year-over-year in Singapore and India, according to LinkedIn data as of May 2021.

“There are opportunities for workers but remote work requires connectivity to access and digital skills,” says Mr Woodward. According to LinkedIn data, the top remote roles in the Asia-Pacific region include technical support engineer, customer support representative and solutions architect. “This suggests that organisations are incorporating new technology into their operations and it is more critical than ever that workers have the right digital skills to access these opportunities.” Hence, covid-19 has shown that there is a pressing need to upskill and reskill workforces to promote digital inclusion and to make sure nobody gets left behind.

Employment opportunities are also shifting beyond traditional qualifications, according to Mr Woodward. “Networks are extremely important from our perspective and enabling greater digital inclusion,” he says. “Stronger networks lead to better opportunities for workers, that’s borne out in our data. And this, of course, ties back to digital inclusion, making sure everyone has access to economic opportunity.” As the world’s largest professional network with over 770 million members globally, LinkedIn finds that people with strong networks are generally more confident about the future than those with weaker or less diverse networks.

According to Mr Woodward, there are three primary factors that contribute to the strength of somebody’s network. The first is where you grow up or where you’re from. For example, people living in India’s metro areas are almost two times as likely to have strong networks, as compared to people in non-metro areas. The second strong factor is where you went to school. In the Philippines and India, for example, graduates are 1.5 times more likely to have a strong network than those who went to other schools. The last big factor is where you work. A LinkedIn member who works at a LinkedIn Top Company, an annual ranking by LinkedIn on best workplaces to grow one’s career, is almost 2x more likely to have a strong network. “This is really why we’re committed to closing what we termed the network gap in which some individuals have an advantage over others as a result of who they know, where they grew up, and where they went to school,” says Mr Woodward, and points out that a stronger network can give someone a 12x advantage in gaining access to opportunities.

“According to LinkedIn data, only one out of four people are actively seeking out networking and mentoring opportunities. This is where we see one of the biggest barriers towards digital divides,” says Mr Woodward. “Our vision is to create economic opportunity for every member of the global workforce and this is even more relevant today, especially for women who are equal contributors.”



Tackling digital divide barriers

Despite progress, hurdles remain to enhance digital inclusion. According to survey takers, the best way for the private sector to help the government in their country to address digital divides at a national level is through infrastructure development, such as by building physical networks or enhancing existing ones (46%). This is followed by innovation—for example, introducing new technologies and business models (40%), as well as in providing ICT training—such as by helping to elevate worker skills (33%), and ICT education more broadly (32%). “Building a more inclusive digital economy requires a spirit of collaboration. Strong partnerships between private sectors, governments and NGOs,

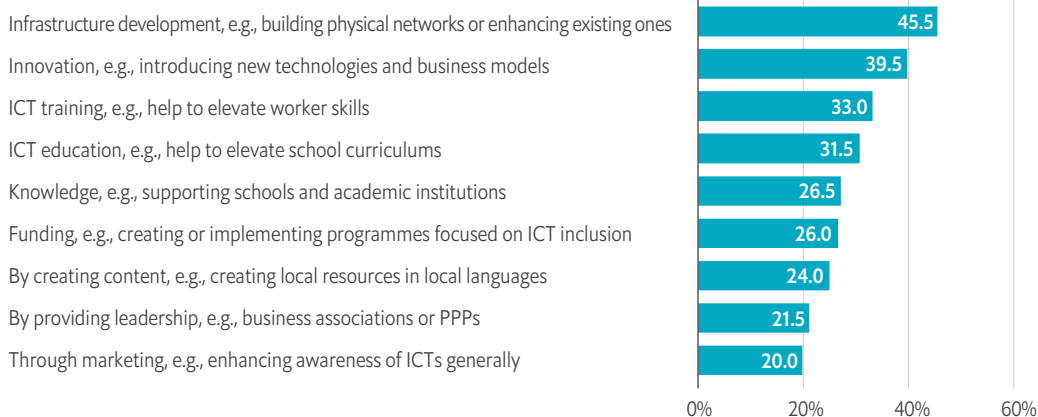
and working together toward shared goals, is essential to close skills gaps and expand opportunity,” says Mr Rahardjo.

Infrastructure anew

The rapid increase in internet usage rates may indicate that the infrastructure access divide has been overcome; however, rural populations and socio-economically disadvantaged groups may suffer from slow and unreliable connections while premeditated internet shutdowns can also create digital exclusion. This extends to high-speed mobile networks, such as 5G, that can create digital divides, thus exemplifying the continuing need for digital inclusion as new technologies emerge.

Figure 5: The private sector’s role in bridging the divide

In your view, how can the private sector help the government in your country to address digital divides at a national level? Select up to three.



Source: Economist Impact

“The supply side is really a story of infrastructure gaps in terms of investment that has been made in the deployment of hard infrastructure—such as fibre optic cables, internet exchange points, data centres, the entire ecosystem—for broadband internet to be made available in a reliable, safe and affordable way to everyone, all the time,” underlines Ms Bonapace. “I think Asia is much better connected with the rest of the world than it is with itself and I think there is a lot more that could be done in terms of connecting domestic fibre optic cables, cross border to other national domestic fibre optic cables.” As a result, ESCAP is supporting the Asia-Pacific information superhighway initiative, which is designed to promote cross-border infrastructure connectivity to improve universal access in the region, through a sustainable funding mechanism connecting the public and private sectors.⁵

Digital skills

The survey conducted for this report shows that attaining digital skills is a key step towards bridging digital divides. “If people don’t have the skills to use the internet in a productive way, they don’t have the incentive,” says Ms Bonapace. “They won’t have the income earning capacity to use the internet, and we need to bring everyone online in a meaningful way.” Surveys from Australia, the UK and the US all show that a key reason for low internet adoption is a lack of interest or a lack of perceived benefits of access. Providing local,

relevant and useful content, in addition to raising awareness about it, therefore requires far greater efforts. “Getting people online is the first step, but it’s equally important to teach them what they can do with that connectivity. Technology is not useful if people don’t know how to benefit from it. We need to ensure that everyone, including SMEs, have access to adequate digital skills and tools,” says Mr Rahardjo.

At LinkedIn, Mr Woodward breaks digital skills down into three categories. The first bucket is basic digital skills, such as understanding and using Microsoft Office products for productivity. The second is comprised of intermediate digital skills such as hardware- and software-related skills that are required to build tools, platforms and applications that can be easily used by workers with basic digital skills. Finally, the last bucket is comprised of advanced or disruptive skills associated with developing new technologies, such as artificial intelligence and robotics.

“What we’re seeing is that hiring for digital skills is higher than hiring for workers with non-digital skills,” says Mr Woodward. “And then comparing employability of workers with basic skills versus more intermediate or disruptive ones has increased even further.” Between 2017 and 2020, the digital hiring rate increased by an average of 36% across Asia-Pacific economies, according to LinkedIn.

5 <https://www.unescap.org/our-work/ict-and-disaster-risk-reduction/asia-pacific-information-superhighway-platform>

Case study: Amazon Web Services supporting digital skills development

“I think we’ve all gotten better at recognising that one-size-fits-all solutions are not going to get us where we need to go,” says Quint Simon, head of public policy for Asia-Pacific, Amazon Web Services. “In order to really reach that goal of having truly empowered digital societies, what is really needed is the ability to work backwards from the user and meet their needs.”

A study commissioned by Amazon Web Services, which looked at the need for digital skills in Australia, India, Indonesia, Japan, Singapore and South Korea, found that these six countries will need to increase the number of digital workers by more than five-fold from 149 million today to 819 million in 2025.⁶ In fact, that same study found that across these six countries, 48% of the digital workers who are not applying cloud skills today, believe that by 2025, they will need cloud skills to perform their jobs.

That’s one of the reasons why Amazon Web Services offers a suite of skilling initiatives and courses, depending on the needs of their customers. “We take a lot of pride in localising our content and making sure that we establish partnerships with governments, academia, and multilateral organisations to unlock digital potential and improve digital skills in Asia-Pacific based on local needs and policy approaches.”

“We think governments play a critical role in tackling some of these gaps and helping to invest in skills training, such as developing curriculums that focus on developing digital skills and incentivising companies and SMEs to invest in ongoing programmes,” says Ms Simon. “There’s just so much that governments can do in partnership with private companies to really close the skills gap and ensure that it does not become the barrier it is today towards greater digital inclusion in Asia.”

6 <https://alphabetacom/our-research/unlocking-apacs-digital-potential-changing-digital-skill-needs-and-policy-approaches/>

For its part, Amazon Web Services is committed to helping 29 million people globally to grow their technical skills with free cloud computing training. “We’re investing hundreds of millions of dollars to provide free cloud computing and technical skills, training people from all walks of life in more than 200 countries,” says Ms Simon. “That includes a library of more than 500 free on-demand online courses, interactive labs, virtual day long training and job-based learning paths in multiple languages.” For example, the company is working with the Ministry of Education and Culture in Indonesia as part of its Merdeka Belajar national initiative to integrate educational content into its computer science degree curriculum where students are given the opportunity to learn the fundamentals of cloud such as cybersecurity, data analytics, machine learning and the Internet of Things. “We’re there to support and make sure that what we’re doing from a skills perspective meets the unique needs of that particular country,” says Ms Simon.

Amazon Web Services also supports smaller businesses, including start-ups. “They are a big enabler of financial and digital inclusion, and really driving innovation in really unique ways across the Asia-Pacific region,” says Ms Simon. “In the past, only the biggest organisations had access to the most advanced technology but that’s a thing of the past and a big reason for that is specifically cloud computing, which has democratised access to technology for many start-ups and small and medium enterprises.” Technologies from big data analytics and the Internet of Things to artificial intelligence and machine learning are now all available on the cloud and they are offered to every customer who wants them.



Conclusion

Digital divides have always existed and are likely to continue as emerging technologies are introduced. “Having a 2G [mobile phone] network is going to get you in the statistics showing that progress has been made in rolling out mobile connectivity, but it is not going to really tell you, what type of connectivity in terms of speed, reliability and cost is being offered,” says Ms Bonapace. “The mobile miracle is real but it is not yet enough to enable the digital dividends to be equitably shared with the poorest.”

However, progress towards greater digital inclusion is being made. “Over the last year, we have learnt much by working extensively on the ground. We need to look at more than just measuring the fundamental outcomes of digital access and skill levels. We have to look beyond that, into the digitalisation journey,” says Ms Ng. “There are two key points: one is the importance of partnerships and the other is understanding what citizens need and the manner in which they are best able to pick up digital skills.”

“Each government will have their own industry 4.0 plan, and every government will have their own social development plan,” adds Quint Simon, head of public policy, Asia-Pacific, Amazon Web Services. “While we certainly hope the trend that we see is that those plans align around some common theme, for example, the Sustainable Development Goals, every country is and should be taking into account their local circumstances to develop visions for the future that ultimately reflect the needs of that individual country.”

Bridging digital divides while reaping the benefits of digital inclusion is the holy grail. “I’m sort of optimistic but there’s definitely more work to be done,” says Mr Woodward. “That’s why it’s important for governments and private sector companies to continually work together to upskill a country’s workforce and bring this full circle and get the entire economic ecosystem to pitch in to make sure that nobody gets left behind.” It’s an assessment shared by key stakeholders, and fodder for greater partnerships moving forward to reach the ultimate objective in a tailored manner. “We want people to be able to engage in the digital world confidently, safely and responsibly, so that they can better their lives and livelihoods,” says Ms Ng. “Our focus is on digital dividends benefiting all parts of society and the economy.”

Key takeaways

Public and private sector leaders in Asia-Pacific should consider a number of recommendations as they need to seize digital development opportunities and overcome digital divide barriers:

- **Raise awareness about the benefits of digital inclusion:** Covid-19 has shown the value of online communications, and the trend is likely to continue past the pandemic as users realise the benefits of connectivity.
- **Encourage government and private sector collaboration:** The public and private sectors must mutually discuss current—and emerging—technology barriers, such as the introduction of next-generation tools to enable greater digital inclusion.
- **Measure digital adoption among all population groups:** To reap the full benefits of the internet economy, all population segments should be online and socio-economic progress should be tracked accordingly.
- **Support appropriate regulatory policies:** Certain regulations are well-received when it comes to infrastructure and building online trust through data protection and cyber-security.
- **Support digital skills programmes:** All stakeholders should support the development of digital skills, whether in schools or at the workplace, in order to capitalise on the benefits of the internet economy.

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LONDON

20 Cabot Square
London, E14 4QW
United Kingdom
Tel: (44.20) 7576 8000
Fax: (44.20) 7576 8500
Email: london@eiu.com

GENEVA

Rue de l'Athénée 32
1206 Geneva
Switzerland
Tel: (41) 22 566 2470
Fax: (41) 22 346 93 47
Email: geneva@eiu.com

NEW YORK

750 Third Avenue
5th Floor
New York, NY 10017
United States
Tel: (1.212) 554 0600
Fax: (1.212) 586 1181/2
Email: americas@eiu.com

DUBAI

Office 1301a
Aurora Tower
Dubai Media City
Dubai
Tel: (971) 4 433 4202
Fax: (971) 4 438 0224
Email: dubai@eiu.com

HONG KONG

1301
12 Taikoo Wan Road
Taikoo Shing
Hong Kong
Tel: (852) 2585 3888
Fax: (852) 2802 7638
Email: asia@eiu.com

SINGAPORE

8 Cross Street
#23-01 Manulife Tower
Singapore
048424
Tel: (65) 6534 5177
Fax: (65) 6534 5077
Email: asia@eiu.com