AESCON

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DIGITAL CONNECTIVITY AND OPPORTUNITIES FOR DEVELOPMENT COOPERATION BETWEEN ASIA AND EUROPE

ABSTRACT

Digital connectivity and digital transformation are critical topics throughout all the world today, given the broad and growing influence that digital transformation has had, and will continue to have, on almost every sector and in people's everyday lives. Against this backdrop, tackling the digital divides including in digital connectivity itself – which often mirror offline divides and inequalities but can end up magnifying and entrenching them – takes on increasing importance and urgency. The Asia–Pacific region is a particularly interesting case in which to consider the importance and complexity of this issue, as on the one hand it is known to be one of the most digitally advanced markets in the world, with broad and distributed digital accessibility, while on the other hand, certain subsets such as South Asia have markedly lower indicators of digital connectivity, and in some countries certain digital gender-gap indicators are among the highest in the world. This AESCON Policy Brief outlines key areas and opportunities for policymakers and companies in Asia and Europe to work together for a human-centred digital transformation, thus helping to tackle head-on any digital divides in connectivity.

INTRODUCTION

Digital transformation and connectivity are key issues in most countries across Asia and Europe, from board rooms to ministerial chambers. Governments and institutions in Asia–Pacific are often leading the charge in digital transformation, with access in terms of mobile internet coverage in the Asia–Pacific region – along with the countries of the European Union (EU) – among the highest in the world.[1]

Access to mobile and broadband internet, digital skills and digital mindsets have been growing in the Asia–Pacific region considerably in recent years, but pronounced differences exist in some countries between mainland and islands, cities and the countryside, and also between genders. An overview of key information and communications technology (ICT) indicators for Asia–Pacific can be found in Figure 1 (see page 4) which indicates that the added value born from digital transformation is unevenly distributed. Approximately two-fifths of the residents of the Asia–Pacific region are still not using the internet and are thus structurally excluded from the opportunities and benefits of the digital transformation.[2]

While the pace of change has been quick and access is growing in many places, fighting digital connectivity divides – that is, inequalities in the ability to access and use digital technologies – remains a challenge. Whether someone uses and can use the internet depends strongly on regional and socio-economic factors such as where they live (urban or rural), income, education, gender and age. Knowledge of how to use digital technologies (ICT literacy) and the availability of appropriate content (depending on language, level and need) are also drivers of digital divides. As such, digital divides mainly affect developing economies in Asia, especially marginalized population groups such as women, inhabitants of rural areas and citizens in crisis areas.
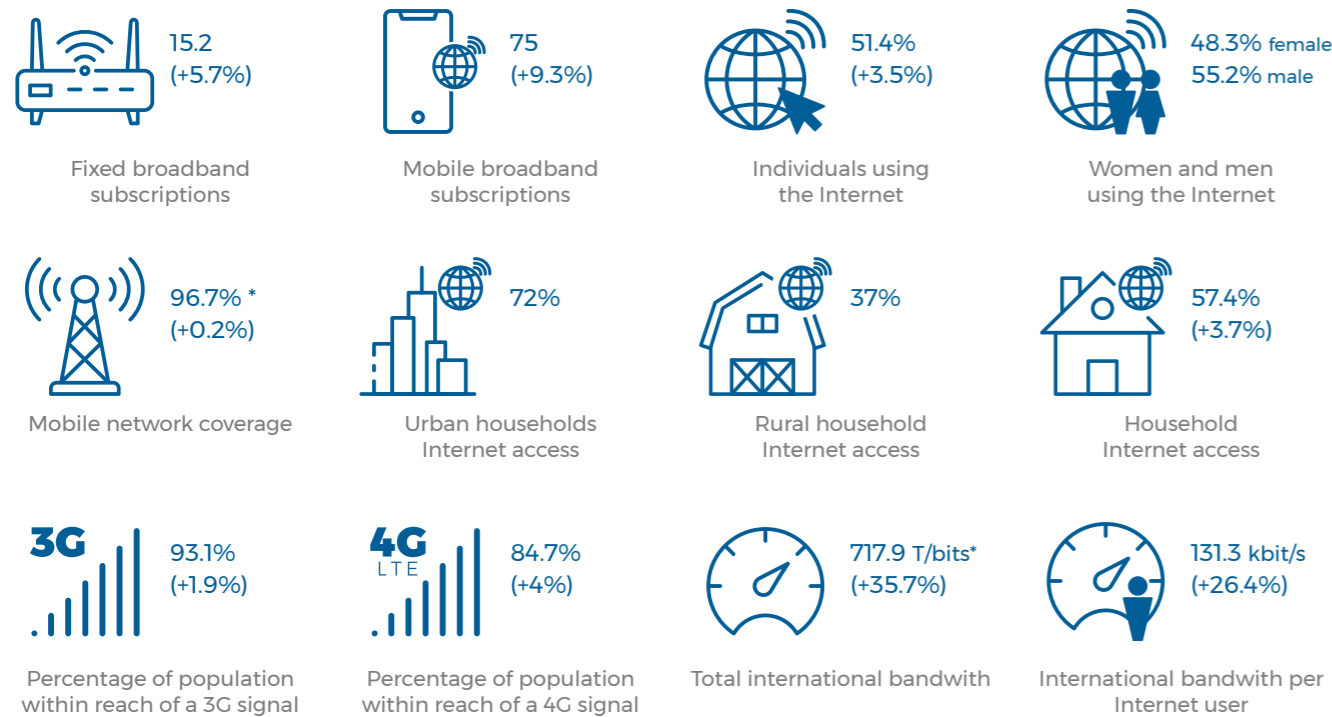
The Asia–Pacific region provides a particularly interesting case in which to consider the importance and complexity of the issue of digital divides. With a 95 per cent mobile phone ownership rate for women as well as only a 1 per cent gender gap in mobile phone ownership and a 3 per cent gender gap in mobile Internet use, East Asia & Pacific is the most connected market in the world for women. However, in neighbouring South Asia, statistics are considerably different, with women overall being 23 per cent less likely than men to own a mobile phone and 51 per cent less likely than men to use mobile in-

1   International Telecommunication Union (ITU), Digital trends in Asia and the Pacific, 2021: information and communication technology trends and developments in the Asia–Pacific region, 2017–2020, Geneva: ITU, 2021, https://www.itu.int/dms_pub/itu-d/opb/ind/D-IND-DIG_TRENDS_ASP.01-2021-PDF-E.pdf.

2   ITU, Measuring digital development: facts and figures, 2021, Geneva: ITU, 2021, https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2021.pdf.

15.2 (+5.7%) Fixed broadband subscriptions	75 (+9.3%) Mobile broadband subscriptions	51.4% (+3.5%) Individuals using the Internet	48.3% female 55.2% male Women and men using the Internet
96.7% * (+0.2%) Mobile network coverage	72% Urban households Internet access	37% Rural household Internet access	57.4% (+3.7%) Household Internet access
3G 93.1% (+1.9%) Percentage of population within reach of a 3G signal	4G LTE 84.7% (+4%) Percentage of population within reach of a 4G signal	717.9 T/bits* (+35.7%) Total international bandwith	131.3 kbit/s (+26.4%) International bandwith per Internet user

2020 estimate

Source: Based on the ITU World Telecommunications/ICT Indicators (WTI) Database, 2017, 2019 and 2020, where avaialble.

Figure 1: Global ICT indicators per 100 inhabitants/per cent (where available), 2019 and 2020, and compound annual average growth rate (CAGR) (where available), 2017-2019/2017-2020

ternet.[3] Furthermore, in societies that are increasingly using more digital media for representative purposes, digital divides endanger political, economic, and social participation. It is because of this that in the World Economic Forum report Global Risks 2021, 'digital inequality' is ranked 7th on the list of critical near-term threats.[4]

At the same time, however, digitally fuelled innovations and digital transformation are also necessary to achieve the seventeen Sustainable Development Goals (SDGs). Digital technologies are fundamental for education, health care, standards of living, personal safety and overall life satisfaction. Access to internet and digital technologies are drivers for economic progress,

with the potential to reduce inequality not only among states, but also between genders. Cooperation among Asian and European institutions and organizations can be a positive force in ensuring that digital divides are shaped into digital opportunities.

This AESCON Policy Brief outlines key areas and opportunities for policymakers and companies in Asia and Europe to work together for a human-centred digital transformation. The reflections and recommendations here stem from the 'Digital connectivity for development' panel held at the second edition of the Asia–Europe Sustainable Connectivity Scientific Conference (AESCON) in March 2022.[5]

POLICY RECOMMENDATIONS

Convergence between the public and private sectors in Asia and Europe on digital connectivity are evident, as key players from both sectors aim to foster cooperation on research and digital innovation and are interested in building rich links among countries and between regional stakeholders. Ultimately, this increases meaningful connectivity internationally, which can often be enabled in rural areas via mobile internet adoption. The public- and private-sector actors in Asia and Europe who are pursuing values-based international cooperation should adopt a 'Leave No One Behind' stance, while being especially attentive to the digital gender gap. To ensure this, robust, secure, affordable and resource-efficient access to the internet and digital connectivity are essential for digital transformation and sustainable development for everyone. More specifically, the following aspects should be key considerations for policymakers and companies in shaping policies for digital connectivity for development:

1. BRIDGING DIGITAL DIVIDES AND FOSTERING GENDER EQUALITY

People require both access to the internet and the skills needed to leverage the internet and its many opportunities in a way that is meaningful and useful to their lives. Only once this is achieved can they participate in digital societies and utilize the potential of digital transformation for their own good, and that of their communities.

Gender gaps in the offline world have already replicated themselves in the digital world, hampering access to meaningful digital connectivity for women and girls. Although the digital gender divide has narrowed worldwide and has been virtually eliminated in developed countries (89 per cent of men and 88 per cent of women are online), some countries in the Asia–Pacific region are struggling with ever-widening divides, particularly

in South Asia, as mentioned above. This presents a stark contrast to the nearby region of East Asia and the Pacific, where the mobile phone ownership gender gap is only 1 per cent and the mobile internet gender gap is 4 per cent. This digital gender divide could increase more and more in the upcoming years if governments, organizations, and institutions do not counteract this trend.

Regrettably, the Covid-19 pandemic worsened this gap in many ways, as women who were already living on the margins saw their core livelihoods affected. For example, women are much more likely than men to be smallholding farmers in India. The pandemic's contact and distancing restrictions, as well as the resulting supply chain and market disruptions, directly led to more lost profit and income opportunities for women. Furthermore, women were much more likely to be adversely affected by the loss of valuable information, resources and advice provided by agricultural extension services, which were largely suspended because of pandemic restrictions. Even where digital extension services were offered as substitutes for traditional extension work, women farmers often could not access them, partly because the proportion of women who own a smartphone and have access to the mobile internet is lower than for men, as can be seen in Figures 2[6] and 3[7] (see page 6 and 7).

Direct intervention and support, such as that provided by non-governmental organizations like India-based Digital Green, have been required to provide women with simple hardware to access these services.[8] In this case, it was important to build up connectivity so that women could access digital advisory services as well as value chains. This helps the farmers to access better information and make better choices, for example by planting under certain climatic conditions, incorporating up-to-date advisories or otherwise managing their farms more efficiently. Digital Green also provides women with comprehensive support, including skills-building measures, to ensure they are offered the same prospects as men. It is crucial for the public sector, private

3   GSMA Connected Women Team, The mobile gender gap report, 2020, London: GSMA, March 2020, p. 10, https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/05/GSMA-The-Mobile-Gender-Gap-Report-2020.pdf; and Matt Shanahan, 'The mobile gender gap in Asia: a region of rapid but unequal growth', GSMA Connected Women blog, 23 September 2019.

4   World Economic Forum, The Global Risks Report 2021, 16th Edition, 19 January 2021.

5   AESCON was funded by the European Union, supported by the Asia–Europe Meeting, and organized by a consortium of think tanks in Europe and Asia, consisting of the Clingendael Institute (The Hague), the Kosciuszko Institute (Kraków), Carnegie India (New Delhi), GIZ (Eschborn), and the Institute for South Asian Studies (ISAS/NUS, Singapore). For details about the conference and videos of the various panel discussions, see: www.aescon.org.

6   GSMA Connected Women Team, The mobile gender gap report, 2020, London: GSMA, March 2020, p. 16, https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/05/GSMA-The-Mobile-Gender-Gap-Report-2020.pdf.

7   GSMA Connected Women Team, The mobile gender gap report, 2020, p. 32, https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/05/GSMA-The-Mobile-Gender-Gap-Report-2020.pdf.

8   For more details, see the input of Krishnan Pallassana, Country Director, Digital Green, in AESCON's thematic session 3 on 'Digital connectivity for development', 21 March 2022.
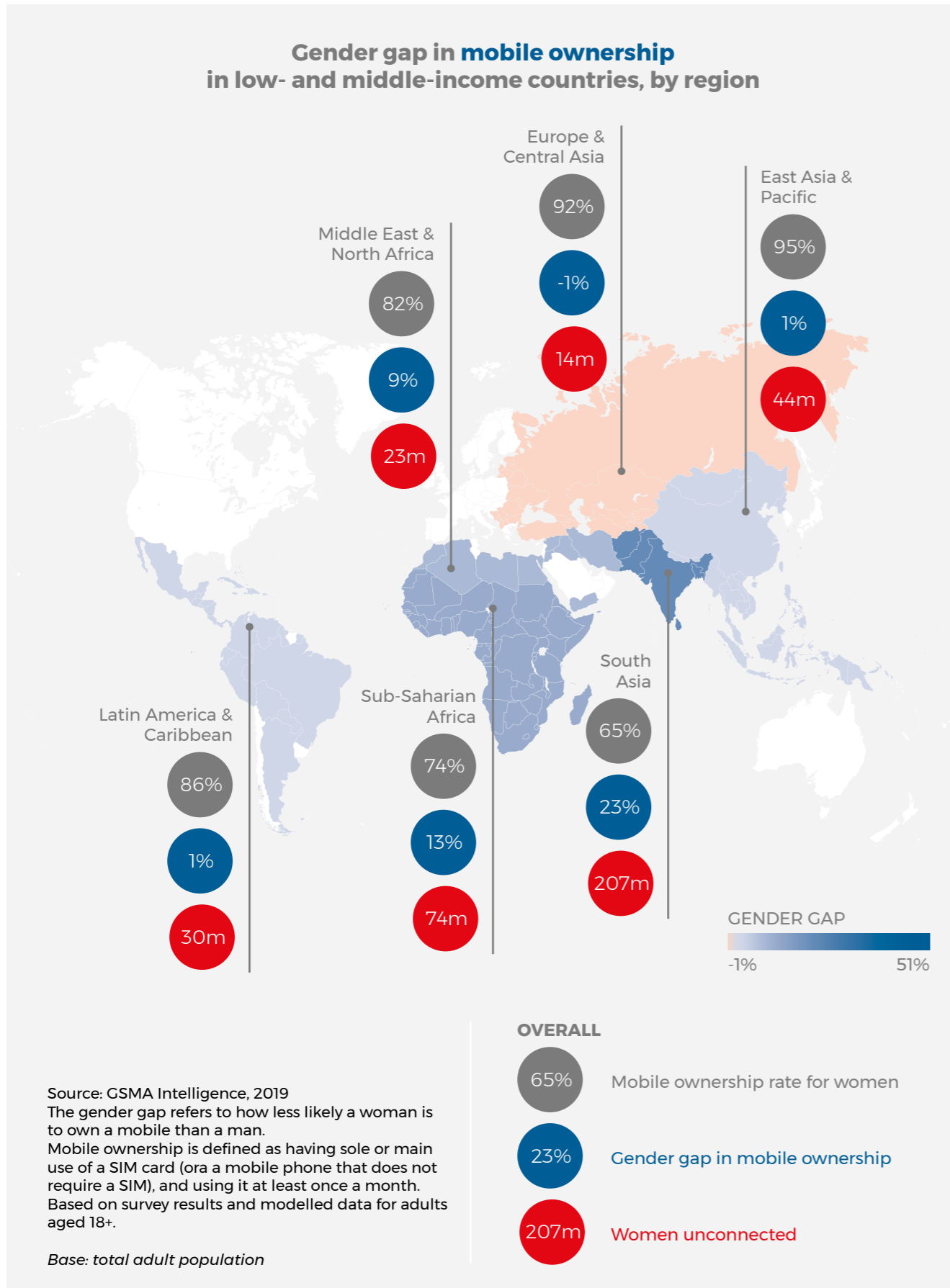
Gender gap in **mobile ownership** in low- and middle-income countries, by region

Europe & Central Asia
92%
-1%
14m

East Asia & Pacific
95%
1%
44m

Middle East & North Africa
82%
9%
23m

Latin America & Caribbean
86%
1%
30m

Sub-Saharan Africa
74%
13%
74m

South Asia
65%
23%
207m

GENDER GAP
-1%   51%

Source: GSMA Intelligence, 2019
The gender gap refers to how less likely a woman is to own a mobile than a man.
Mobile ownership is defined as having sole or main use of a SIM card (ora a mobile phone that does not require a SIM), and using it at least once a month.
Based on survey results and modelled data for adults aged 18+.

Base: total adult population

OVERALL

65%   Mobile ownership rate for women

23%   Gender gap in mobile ownership

207m Women unconnected

Figure 2: Gender gap in mobile ownership

Gender gap in **mobile internet use** in low- and middle-income countries, by region

Europe & Central Asia
64%
5%
61m

East Asia & Pacific
70%
3%
240m

Middle East & North Africa
47%
21%
66m

Latin America & Caribbean
69%
1%
70m

Sub-Saharan Africa
35%
37%
186m

South Asia
34%
51%
394m

GENDER GAP
-1%   51%

Source: GSMA Intelligence, 2019
The gender gap refers to how less likely a woman is to use mobile internet than a man.
Mobile ownership is defined as a person having used the internet on a mobile phone at least once in the last three months.
Mobile internet users do not have to personally own a mobile phone, so the above figures also include those who used mobile internet on someone else's phone.
Based on survey results and modelled data for adults aged 18+.

Base: total adult population

OVERALL

54%   Proportion of women who use mobile internet

20%   Gender gap in mobile internet use

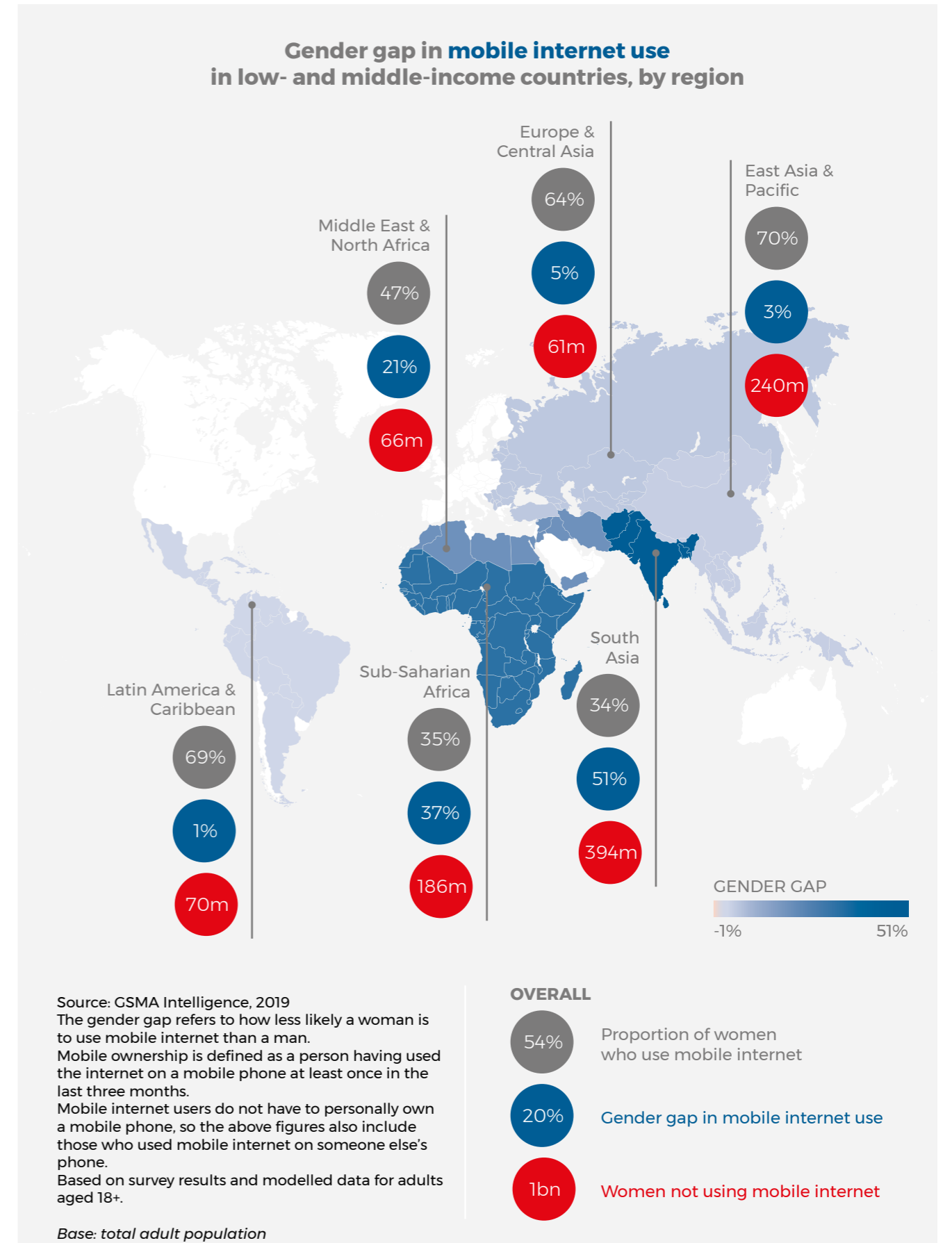1bn   Women not using mobile internet

Figure 3: Gender gap in mobile internet

actors and civil society to identify gender gaps across all sectors of the economy and to tailor locally appropriate interventions to support women in achieving meaningful connectivity. The integration and support of women should be elevated through incorporating digital solutions for livelihood support to increase the digital and financial independence of women and empower them as decision-makers. Educating and enabling people, especially women, to understand, own and control data are important for human-centred development, gender-equality efforts and harnessing the true potential of digital and data tools.

Furthermore, the root causes that underlie barriers to full digital participation must also be explicitly addressed to enable women to benefit from educational or technology-based interventions. Systematic barriers are often more nuanced than simple affordability or knowledge issues and may touch on elements such as online safety and harassment, family roles, discrimination in funding or job offerings, and gender norms and stereotypes that steer women away from technology. While this is a very complex topic that manifests differently in different contexts, resources such as the EU Gender Action Plan and the OECD Gender Report for the G20 Digital Economy Task Force offer additional detail and policy recommendations for change at this systematic level.[9]

2. BUILDING AND SCALING SUSTAINABLE PARTNERSHIPS FOR INVESTMENT

The topic of digital transformation increasingly underpins all areas of social and economic life. Investments in automation, digital platforms, digital offshoring, digital entrepreneurship and capacity-building are important ways for the public and private sectors to reduce inequalities, not only in developing but also in industrial countries. Fair contracts, equal representation and higher labour standards, as well as fair management and payment can help to create equal conditions for

people to adapt and thrive in the evolving digital economy. Furthermore, plans for major investments in the development of digital infrastructure after the Covid-19 pandemic and COP26 climate-change conference are needed more urgently than ever. Multistakeholder settings such as the AESCON 'Digital connectivity for development' panel afford us the opportunity to consider some positive examples of investments and cooperation between Asia and Europe.

The Global Gateway initiative and Digital for Development (D4D) Hub are two examples of frameworks to support such investments from the European side.[10] The European Commission underlined the importance of investments in digital connectivity in its strategy 'Global Gateway Partnerships' in 2021 and has operationalized this in the Global Gateway strategy. One example of a project under this heading is Europe's cooperation with India on technical standards, the 5G network expansion and the simplification of cross-border payment transactions.[11] With a total of up to 300 billion euros until 2027, five investment priorities will be supported, one of which is internet access and promotion of the digital economy. Two policy narratives run through the variety of measures: (1) closing digital divides; and (2) digital sovereignty. Implementation of the strategy at scale is to be undertaken by 'Team Europe' (that is, the EU institutions and EU member states) from regional development cooperation budgets.

The D4D Hub is another example of cross-regional collaboration to promote mutual digital advancement. The establishment of the D4D Hub as a multistakeholder platform marks a turning point for supporting human-centred digital transformation in partner countries. This is a platform that brings together the Team Europe governmental coalition with governmental partners around the world, the European Investment Bank, private sector and civil society to establish new international partnerships on digital transformation, leverage expertise and share resources and best practices. This approach bundles the multitude of digital

initiatives by European actors into one strategic and coordinated method of working on a global level on the topics of digital connectivity, digital skills, entrepreneurship and digital governance. Thus far, regional hubs have been established in Africa and Latin America, with intention expressed of expanding to Asia in the future.

Coalitions with a more specific geographical or sectoral focus can also make an impact on investment and partnerships. For example, the Mobile Innovation Hub, which was commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ) and is currently being implemented by GIZ together with the mobile-communications industry organization GSMA in Indonesia, is focusing on the twin green and digital transitions and bringing together a diverse suite of actors to achieve this goal.[12] Investments by governments and organizations should focus on the nexus of digitalization, climate and energy, as well as research and development geared to understanding the strong role that digitalization can play in achieving respective national climate targets. Above all, investments should be made on expanding digital connectivity opportunities, while simultaneously better regulating technology companies and the associated technology industry.

Initiatives such as these should be seen as a starting point and inspiration for further efforts. Significant investment has been and will continue to flow in the Asia–Pacific region, with significant investments and innovation from the private sector.[13] Policymakers can enrich such efforts by pushing for reflection of the values of sustainability and a 'leave no one behind' approach, as well as for the provision of both public and private services through gender-responsive digital channels, technologies and services. Collaboration by public, private and social sectors can be sources of investment and innovation in building meaningful digital connectivity, both on hard and soft levels, and thus contributing positively to the environment and digital inclusion.

3. FOSTERING MEANINGFUL CONNECTIVITY

Meaningful connectivity is about more than simply digital infrastructure and technologies. As noted above, people require both access to the internet and the skills needed to leverage its many opportunities in a way that is meaningful and useful to their lives. Only once this is achieved can they participate in digital societies and utilize the potential of digital transformation for their own good and that of their communities. Education and vocational training with digital systems and tools are a modern prerequisite to leverage the potentials of digital transformation. Digital skills and affordable access to technologies are essential and necessary to prepare people for future jobs. For this reason, institutions and organizations should work together to offer digital economy financial packages to support human-centred digital transformation that also explicitly includes measures to tackle the digital divides.

Digitalization and new technologies are accompanied by job creation (albeit also job loss, depending on sector and activity). Nevertheless, the four main trends of automation, digital platforms, digital offshoring and digital entrepreneurship create a variety of opportunities for new business and work models, with digitalization itself changing job profiles and requirements in almost every field. Promoting fair digital economies, including prioritizing increasing jobs, supporting local innovations, creating equal opportunities, as well as furthering good governance, human rights, and the collection and dissemination of data for development are main issues on the agenda.[14] The technology sector can open digital connectivity opportunities – especially for youth, women and marginalized groups – with the help of education, digital matching and job placement.

Atingi (which means "to succeed" in Esperanto) is one example of the kind of programme that can support capacity-building to open the door worldwide to meaningful connectivity. This open-source skills-training platform for young people – launched by the Deutsche

9   Bridging the digital gender divide: include, upskill, innovate, Paris: OECD, 2018; and EU Gender Action Plan III: together towards a gender equal world, Brussels: European Commission, 25 November 2020.

10 Miguel Rocha de Gouveia, Policy Officer for Digital Connectivity at the European Commission, during AESCON's thematic session 3 on 'Digital connectivity for development', 21 March 2022.

11 Sebastian Holz, "EU will Global Gateway gemeinsam mit Partnern umsetzen", Special Report, Germany Trade & Invest (GTAI), Bonn, 07.12.2021.

12 Dulip Tillekeratne, on GSMA Mobile for Development and Mobile Innovation Hub, in AESCON's thematic session 3 on 'Digital connectivity for development', 21 March 2022.

13 Thomas Jakob, 'Asia leads the world in digital transformation', Bosch Connected World Blog.

14 Tanja Rödiger-Vorwerk, Deputy Director, General Private Sector, Trade, Employment and Digital Technologies, German Federal Ministry for Economic Cooperation and Development, during AESCON's thematic session 3 on 'Digital connectivity for development', 21 March 2022.

Gesellschaft für Internationale Zusammenarbeit (GIZ) on behalf of the German Federal Ministry for Economic Cooperation and Development – provides forward-looking skills and training for young people around the world, as well as providing a platform for community organizations to add and customize their own content and skills-building for their local communities. Target groups are currently those who wish to improve their career opportunities, to develop personally, or to become entrepreneurs. The focus thus far has been on Africa, but the platform is available on a global basis and is seeking to expand its reach in Asia. Other models such as Digital Skills Accelerator Africa, a business consortium that offers job-relevant information technology (IT) training programmes with the goal to qualify trainees to work in the IT services sector, might be interesting inspiration for potential partners in other regions as well, including Asia.

Above all, investments and policy standards should expand digital connectivity opportunities, while simultaneously better regulating technology companies and the associated tech industry, as well as making an open, secure and free internet available to the whole of society. To operationalize this goal, policymakers should follow the Principles for Digital Development, which are nine active and concrete guidelines designed to integrate best practices into technology-based programmes. These principles continue to be developed on a collaborative and dynamic basis and are part of an ongoing effort among development practitioners to share knowledge and experience and support the continuous learning process.[15] They provide an excellent basis for helping organizations and policymakers to realize the full potential of the digital transformation and to incorporate many of the concepts mentioned here, such as inclusion and sustainability, in doing so.

CONCLUSION

Digital transformation and its foundation – digital connectivity – in Europe and Asia will continue to be a defining shift, both socially and economically, in the two regions. These transformations present a variety of opportunities – and challenges – which can be best tackled in multistakeholder, multilateral collaborations between active institutions in Europe and Asia–Pacific. Singaporean Prime Minister Lee Hsien Loong aptly captured the sentiment of many leaders in public and private organizations last year: 'The road ahead is promising and exciting, but it will not be easy. We must recognize and seize the opportunities that digital transformation brings, while also managing the disruptions that it brings. To do that, we will need strong leadership and global cooperation'.[16]

It is important to facilitate and support women in their access and meaningful use of relevant digital technologies in order to bolster efforts at gender equality and societal development, and to invest in ethical and sustainable digital development. By bridging gaps and building an inclusive and fair digital transformation, we can create the conditions where civil society and various other sectors can also benefit. The challenges of stark digital divides and the interconnected nature of the digital world provide opportunities for pan-regional collaboration and investment to increase meaningful digital connectivity for development.

Despite the new and complex challenges presented by digitalization, governments and policymakers must work together to establish the right incentives in capacity-building, standards and regulatory work, as well as partnerships. Structured, multistakeholder dialogues, like that of the AESCON conferences, can help us identify human-centred digital solutions, as they provide the building blocks and collaborative opportunities to develop digital solutions that can bring us together. The rise of digital technologies signals great possibilities, and with intentional and inclusion-oriented policy and action, we can look forward to celebrating what can be achieved with digital transformation around the world.

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15   Principles for Digital Development, https://digitalprinciples.org/.

16   Asian–Pacific Economic Cooperation (APEC), '16 quotes from the prime minister of Singapore at the APEC CEO Summit 2021', 11 November 2021.

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ABOUT THE AESCON POLICY BRIEF SERIES

This Policy Brief is one of a series that sprang from the Asia–Europe Sustainable Connectivity (AESCON) conference held from 22–24 March 2022. The five Policy Briefs present the main findings and policy recommendations from the various AESCON panels.

The series is edited by Maaike Okano-Heijmans and Brigitte Dekker of the Clingendael Institute, and includes the following pieces:

▸ *Multistakeholderism: the path to human-centred digital connectivity, by Maaike Okano-Heijmans and Vanshika Shah of the Clingendael Institute, The Hague*

▸ *Secure and resilient digital infrastructure: an agenda for Europe and Asia, by Michał Rekowski of the Kosciuszko Institute, Kraków*

▸ *Putting trust back in trusted connectivity: a call for more congruence in cross-border data transfers, by Priyadarshini D of Carnegie India, New Delhi*

▸ *Digital connectivity and opportunities for development cooperation between Asia and Europe, by Christina Stansell, Fabian Hohmann and Elisabeth Gager of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Bonn*

▸ *Linking digital trajectories: Asia and Europe's opportunities in the digital economy, by Karthik Nachiappan of the Institute of South Asian Studies, Singapore*