Towards an inclusive digital future

Note by the secretariat

Summary

The present document contains an overview of emerging policy options for steering the Asia-Pacific region towards an inclusive digital future, drawing on policies implemented by States members of the Economic and Social Commission for Asia and the Pacific on the five core foundations of digital economies and societies, namely Internet connectivity, digital skills, digital identification, digital finance and e-commerce. In addition, it contains information on government approaches to channelling investments into the digital economy and on how open data – the fuel for digital development – can promote digital inclusion and its measurement. The present document also contains recommendations for consideration by member States to promote inclusive digital economies and societies at the national level and facilitate digital cooperation at the regional level.

Member States may wish to consider taking action by sharing their national experiences with regard to promoting an inclusive digital future; indicating the types of support that may be required from the secretariat to promote an inclusive digital future both nationally and regionally; considering the recommendations, actions and initiatives highlighted in the present document to advance an inclusive digital future both nationally and regionally; and identifying new and priority policy issues for the secretariat to address in greater detail.

I. Introduction

1. A defining feature of the post-pandemic world is the digital transformation that has permeated every aspect of life. Digital technologies have allowed governments to implement social protection schemes rapidly and at scale and made possible e-health and online education, while digital finance and e-commerce have allowed businesses to continue to operate and trade.
2. However, this rapid digital transformation has not been without its challenges. Many have been left behind; more than 2 billion people in the Asia-Pacific region lack access to the digital world. Ensuring that the digital transformation does not become another driver of deep inequality is probably one of the greatest challenges countries in Asia and the Pacific face as they start to rebuild after the coronavirus disease (COVID-19) pandemic. In this context, inclusion must be at the heart of digital policies and strategies if the promise to leave no one behind is to be met.

3. The present document contains an overview of emerging policy options for steering the Asia-Pacific region towards an inclusive digital future. The core challenges to achieving an inclusive digital future are reviewed, with a focus on issues related to the five core foundations of digital economies and societies, namely Internet connectivity, digital skills, digital identification, digital finance and e-commerce. It also contains key recommendations for action in these five areas to promote inclusive digital economies and societies at the national level and facilitate digital cooperation at the regional level. It also contains information on government approaches to channelling investments into the digital economy and creating an enabling environment to develop these core foundations, including open data – the fuel for digital development – and how it can contribute to digital inclusion and its measurement. Finally, the present document concludes with a review of the role that the Economic and Social Commission for Asia and the Pacific (ESCAP) could play in supporting regional cooperation towards a digitally inclusive future.

II. Priority challenges for an inclusive digital future

A. Achieving digital connectivity for all

4. The COVID-19 pandemic accelerated digital transformation, thus further accentuating the digital divide. While digitally connected individuals are better equipped to cope with crises such as the pandemic, the less digitally connected and lowest income earners are the hardest hit. For instance, ESCAP analysis of the COVID-19 crisis and the digital divide showed that the most vulnerable groups — those who lack access to the Internet due to lack of investment in information and communications technology (ICT) infrastructure in their communities, such as so-called non-economically viable rural areas, as well as those who lack affordable access to the Internet due to their low income — are more likely to suffer socioeconomic losses.2

B. Increasing the digital literacy and skills of vulnerable groups

5. Digital literacy and digital skills are essential for people to participate in digital economies and societies. For example, digital literacy enables people to access and benefit from digital products, services and content. However, vulnerable groups often lack the opportunities to enhance their digital literacy

1 As defined by the General Assembly in its resolution 70/1 entitled “Transforming our world: the 2030 Agenda for Sustainable Development”: all children, youth, persons with disabilities (of whom more than 80 per cent live in poverty), people living with HIV/AIDS, older persons, indigenous peoples, refugees and internally displaced persons and migrants.

and skills. The digital divide is also gendered, preventing women’s access to and meaningful use of technology.

6. Additionally, as the fourth industrial revolution evolves, frontier technologies – such as artificial intelligence – are reshaping the future of work and require an ever-evolving array of digital skills. It is a challenge for policy formulation and reform to keep pace with the dynamics of fourth industrial revolution technologies. Additionally, with regard to the job market, governments and businesses alike need to forecast the demand for digital skills and then implement policies and initiatives to ensure people have the necessary skills. However, it is difficult to collect relevant data and information on the demand for and supply of digital skill training activities in a rapidly evolving technological landscape.

C. Implementing digital identity systems for all

7. Digital identity is a set of electronically captured and stored attributes and credentials that can uniquely identify a person when interacting with government, private services and the digital economy more broadly. Digital identity systems are underpinned by mechanisms which verify and authenticate an individual’s personal data, and strong legal frameworks are required to ensure data protection, security and privacy as well as consent. Historically, governments have operated primarily foundational identification systems which are created to provide identification for the general population for a wide variety of transactions, whether digitized or analogue. Civil registration is the foremost example of such a system and provides the basis for other identification systems.

8. Full inclusion in digital identity systems is essential to ensure that every person has a legal identity, which facilitates access to the benefits and protections of the State. As services increasingly become digital, disparities in coverage of hard-to-reach and marginalized populations can further compound disadvantages and exclusion and deepen the digital divide. In many countries, certain population groups or geographic areas have lower levels of civil registration, and their exclusion prevents people from fully accessing services and realizing their human rights, including to a legal identity. It is crucial that civil registration systems are first strengthened and improved to be truly universal as the foundation of legal identity. Digitization of these foundational systems can then support fully inclusive implementation of digital identity and help to ensure that no one is left behind and the digital divide is narrowed.

D. Enabling financial inclusion

9. Financial inclusion is critical for sustainable development in the Asia-Pacific region, and harnessing digital technologies is among the most promising avenues to bring unserved and underserved people into the formal financial sector. However, the introduction of digital financial services into financial inclusion strategies creates new challenges, which require policymakers and regulators to promote innovation while minimizing disruptions to financial stability, enhancing protections to consumers from fraud and regulating the use of private data.

10. While the diffusion of ICT and mobile phones has expanded digital finance, many challenges remain for marginalized segments of the population, including lack of financial and digital literacy.
11. Establishing real-time payment platforms that facilitate interoperability among financial institutions and universal access to payments is a significant technical challenge. The interconnection of payment systems between countries to facilitate cross-border payments would reduce the cost of workers’ remittances. While such interconnection is becoming a reality among some countries of the Association of Southeast Asian Nations, more cooperation is needed across the region. The expansion of digital finance also requires a modernization of regulations to prevent financial disruptions and enhance consumer protection, but this is challenging for many developing countries due to limited capacities of staff in regulatory agencies.

E. Providing e-commerce solutions to the base of the economic pyramid

12. During the COVID-19 pandemic, many governments in the region, in collaboration with private sector and other stakeholders, used digital technologies to generate new business and economic opportunities. For example, e-commerce enabled street vendors in the Lao People’s Democratic Republic to sell products through social media platforms during the pandemic.\(^3\)\(^4\) Despite such anecdotal evidence, data on the digital economy and e-commerce are scarce. Nevertheless, available data show that, for example, from the beginning of the pandemic in early 2020 to the first half of 2021, Thailand added nine million new digital users and e-commerce grew by 68 per cent.\(^5\)

13. Although e-commerce has been developing quickly in the Asia-Pacific region, some vulnerable groups – especially the poor and rural communities – have been excluded from participating in and benefiting from it. The main reason for such exclusion is that e-commerce depends on many elements, such as ICT infrastructure, logistics and trade facilitation, and touches on many other areas, including legal frameworks, e-payments and e-procurement, as well as awareness-raising and skills development. If vulnerable groups cannot access one or more factors (for example, access to Internet connectivity or to efficient transport and logistics solutions), these groups of people will be excluded from e-commerce activities.

III. Building the core foundations for an inclusive digital future: recommendations and actions

14. This section contains concrete and action-oriented policy recommendations aligned to the five core foundations of digital economies and societies, which members and associate members may wish to pursue at the national and regional levels, as appropriate and relevant, so as to achieve an inclusive digital future.

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A. Achieving digital connectivity for all

15. Multi-stakeholder collaborations among governments, and also between governments and the private sector, international organizations and other stakeholders, to identify digital gaps and solutions are critical to improving Internet connectivity and bridging the digital divide.

16. Beyond this, the establishment of Internet exchange points, as envisioned in the proposed action plan for implementing the Asia-Pacific Information Superhighway initiative, 2022–2026, can improve coordination of Internet traffic locally within a country and in turn reduce Internet transit costs and improve quality (speed and latency). Furthermore, regional cooperation can help countries to co-deploy digital, transport and energy infrastructure and accelerate investment in digital infrastructure.

17. Through regional cooperation, good practices and lessons learned with regard to low-cost solutions to connect users can be shared between countries in the region. For example, at the national level, Governments should consider enabling low-cost solutions to connect groups that cannot afford regular Internet, such as free public wireless networks and hotspot areas. Such solutions can also facilitate the establishment of community networks as low-cost community-driven solutions.

B. Increasing the digital literacy and skills of vulnerable groups

18. Regional cooperation can help Governments to facilitate the building of digital literacy and skills among their populations as it enables the sharing of effective national digital skills policies targeting vulnerable groups. For example, the Government of Indonesia has prioritized digital skills and literacy for the country’s Group of 20 Presidency in 2022, and Group of 20 members have been invited to share national experiences on how to support vulnerable groups of people to participate in and benefit from digital economy development.

19. Additionally, digital skill development should be underpinned by collaboration between different stakeholders. Skills development cannot be accomplished by the government alone. Governments should engage the private sector, particularly technology companies, as well as training providers from civil society, in providing capacity-building opportunities for vulnerable groups. For example, in Türkiye, the Connected Women project initiated by Vodafone Turkey Foundation and carried out in cooperation with the Ministry of National Education General Directorate for Lifelong Learning and the Turkish Employment Agency, aims to secure the inclusion of women over

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7 Defined as the deployment of ducts and/or fibre-optic cables during the construction of other infrastructure, such as new roads, highways, railways, power transmission lines and oil/gas pipelines. For more information, see ESCAP, “Infrastructure corridor development series part I: in-depth analysis of three promising infrastructure corridors”, Asia-Pacific Information Superhighway (AP-IS) Working Paper Series (Bangkok, 2021).

18 years of age in the digital community as well as the participation of women who are trained in information technology in the workforce.9

20. Digitalization is a fact of life in all countries in the region, including the least developed countries and other small economies, albeit at a different pace in each. This creates new opportunities for these countries to develop their digital economies and will profoundly influence the nature of work. Each least developed country and small economy needs to embrace such opportunities and should aim to develop a future workforce that is equipped with essential digital skills and knowledge. National policies on education, industry, science, technology and innovation must be geared towards achieving that goal.

C. Implementing digital identity systems for all

21. Providing access to documentation and registration for individuals to establish their legal identity is an important element of the 2030 Agenda for Sustainable Development, explicitly articulated in target 16.9. Governments in the Asia-Pacific region are implementing identity management systems to issue national identity cards and numbers as well as digital credentials with or without the use of biometric recognition for establishing uniqueness and enabling secure identity verification. Providing legal identity for all is a function of ongoing, universal civil registration of all vital events from birth to death.10

22. The accuracy and sustainability of an identity system is significantly enhanced when it is interoperable with a civil registration system. For example, a newborn child should have a legal identity from birth, and an identification system should know when someone has died so their identity cannot be misused. National identification or digital identity systems are often aimed predominantly at the adult population, potentially increasing the risk that children do not obtain a legal identity and that such individuals may be stateless as a result. While civil registration systems can provide accurate and timely data to produce vital statistics and population estimates, national identification systems do not.

23. Through a shared regional vision and action framework, countries are working together to ensure all people in Asia and the Pacific benefit from universal and responsive civil registration and vital statistics systems. ESCAP members and associate members recently endorsed the Ministerial Declaration on Building a More Resilient Future with Inclusive Civil Registration and Vital Statistics, in which they acknowledged the importance of digitized civil registration and vital statistics systems for inclusive development. Indeed, many countries have relied on registration data from digitized civil registration and vital statistics systems to accelerate digital governance and provide identity for all.11 Enhanced cooperation to implement the Ministerial Declaration is vital going forward.

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9 Vodafone, “Connected Women: How mobile can support women’s economic empowerment and social empowerment” (Berkshire, United Kingdom of Great Britain and Northern Ireland, 2014).
11 See ESCAP/78/26/Add.1.
D. Enabling financial inclusion

24. Regional and national campaigns to increase financial and digital literacy among the population can play a critical role in enhancing financial inclusion. Such campaigns could contain learning modules for inclusion in formal education curricula and on-line training programmes. Materials could be prepared in collaboration with private sector entities – such as chambers of commerce or banking associations – and implemented either jointly by governments or through regional cooperation platforms, such as those provided by ESCAP.

25. In addition to training programmes, regional cooperation to support dialogue on and implementation of national real-time payment platforms and their interconnection to other systems in the region is essential. To this end, bilateral and multilateral technical cooperation agreements can support the operationalization of such interconnected national payment platforms.

26. Finally, regional cooperation that facilitates multi-stakeholder dialogues on modernizing and upgrading financial regulatory capacity and consumer protection could go a long way in preventing future financial disruptions and increasing the financial inclusion of vulnerable groups.

E. Providing e-commerce solutions to the base of the economic pyramid

27. National policies can play an important role in helping those at the base of the economic pyramid to participate in and benefit from e-commerce. For example, since 2015, the Government of China has promoted e-commerce as an important tool to alleviate poverty and has promulgated a series of policies on the topic. In addition, various ministries have promoted e-commerce demonstration projects to alleviate poverty in the form of government-enterprise cooperation. For example, in China, the Ministry of Commerce, together with the Ministry of Finance and the Poverty Alleviation Office, coordinated with local governments and large e-commerce platforms to jointly set up an e-commerce channel for products from poor areas.

28. In least developed countries or small island developing States, the successful development and utilization of e-commerce requires reforms such as improving the infrastructure of ICT services, establishing secure online payment systems, adopting a sound regulatory framework, developing the necessary skills set and supporting incubation schemes, promoting a secure, efficient and reliable logistics and trade facilitation process, and leveraging access to finance. Least developed countries might consider working with regional platforms to sell their national products to overseas markets. Such cooperation would have spillover effects, including increasing understanding of domestic and cross-border e-commerce, building capacities in developing e-commerce and identifying business opportunities.

IV. Fuelling an inclusive digital future

29. Implementing the recommendations and actions highlighted in this document will require open data – the fuel for digital development – as well as investment in the digital economy. This section contains information on the importance of these two enabling digital policy agendas as well as recommendations and actions for consideration with the aim of building the core foundations of digital economies and societies.
A. Regional cooperation to facilitate open data

30. The availability of open data has the potential to unleash innovation for digital transformation. Governments can play a critical role in ensuring that stakeholders capture the full value of this information. Citizens’ open access to information generated with public resources must be at the heart of an inclusive digital future. The principles of the International Open Data Charter\(^\text{12}\) require that government data be freely available by default, timely and comprehensive, accessible and usable, and comparable and interoperable, with the goal of improving governance and citizen engagement and spurring innovation and inclusive development. Open data can help to close development gaps, including the digital divide, in the following ways: (a) the private sector can use data in various ways to stimulate economic activity and international trade as well as to develop innovative solutions to target real challenges the most disadvantaged population groups face; (b) governments can use data to improve programmes, policies and the targeting of scarce resources to marginalized people and areas; (c) research communities can apply advanced data science methods and technologies – including artificial intelligence – that require large amounts of data, and they can share their skills with other communities; and (d) individuals can use data to hold governments accountable, which increases transparency and enhances citizens’ engagement.

31. The successful implementation of open data principles in a statistical agency or across a national statistical system requires interventions at the institutional level, in data infrastructure and in demand for open data. Regional cooperation and multi-stakeholder dialogue can help to support implementation for each of these aspects. A key enabler for implementation of open data is technology transfer from high-income countries to low-income, small island and least developed countries.

B. Boosting investment in the digital economy

32. As highlighted, developing a robust digital infrastructure and improving access to digital education and training systems are the fundamental building blocks of an inclusive digital future. Putting in place these building blocks – especially in countries in special situations – requires extensive public and private sector investment. Revenue gained from taxing businesses and payments in the digital economy can be one source of financing (see box), while another untapped resource is foreign direct investment (FDI).

\(^{12}\) See https://opendatacharter.net/principles/.
Taxing the digital economy

Economic digitalization has challenged the core of traditional taxation rules and norms. For example, new business models such as online advertising, e-commerce and financial technology have enabled service provision and transactions without any physical presence as the basis (known as a nexus) for charging taxes. Meanwhile, digital intangibles such as intellectual property rights for digital products or user data are increasingly traded, creating new risks of transfer pricing and tax base erosion.

Within various frameworks, Governments have taken multilateral and unilateral policy actions to tap into the tax potential of the digital economy and ensure a fair sharing of the tax base across countries. The Organisation for Economic Co-operation and Development and the Group of 20 pioneered the two-pillar solution, aiming at creating a new nexus for taxing the digital economy and enforcing a global minimum effective corporate tax rate of 15 per cent. This reform is expected to generate an additional $250 billion in tax revenue worldwide but is considered complicated and not sufficiently responsive to developing countries’ needs. In parallel, the latest United Nations Model Double Taxation Convention between Developed and Developing Countries provided simpler and more administrable approaches for taxing the digital economy, which can be adopted more easily and unilaterally by developing countries, according to their own needs and pace.

Ensuring an inclusive norm-setting process in the above reforms would be indispensable for maximizing the potential benefits of taxing the digital economy and for contributing to an inclusive digital future.

33. Global FDI flows into the digital economy have been accelerating since 2010, with greenfield FDI in digital economy sectors reaching a record $64 billion in 2021. In the Asia-Pacific region, this trend has only just begun; greenfield FDI in the digital economy took off during the pandemic, and between 2019 and 2021, FDI in the region’s digital economy grew by almost 75 per cent (figure).

Greenfield foreign direct investment in the digital economy in Asia and the Pacific, 2003–2021
(Billions of United States dollars)

Source: ESCAP calculations based on data from fDi Intelligence. Available at www.fdiintelligence.com (accessed on 24 June 2022).
34. As FDI in the region’s digital economies is expected to continue to grow in the foreseeable future, policymakers and investment promotion agencies have a unique window of opportunity to target and channel these investment flows into building and improving upon the foundations of their digital economies. In particular, it is recommended that they focus on attracting FDI into the following three areas: (a) digital infrastructure development, (b) adoption of digital technology by businesses and in the wider digital economy, and (c) digital business ecosystem development.

35. Actively attracting FDI into these three areas will not only require a favourable and open business environment but also a carefully designed and appropriately incentivized digital investment strategy. It is imperative that such a strategy be based on an assessment of national digital FDI needs and also reflect the competitive strengths of the country in its development context.

36. Attracting digital FDI is especially important for countries in special situations that require significant investments in digital infrastructure to upgrade their economies and bridge digital divides. The support of international organizations will be critical to help countries in special situations to promote and attract digital FDI. To this end, ESCAP has been delivering capacity-building workshops to help its developing country member States, including countries in special situations, to develop digital FDI strategies. Furthermore, the forthcoming Digital FDI Policy Guidebook is geared towards helping guide and support developing countries and countries in special situations in Asia and the Pacific in designing and implementing a regulatory environment conducive to attracting digital FDI. The Digital FDI Policy Guidebook contains examples of countries that have successfully done this as well as information on the needs of businesses operating in the digital economy and on the context of developing countries and countries in special situations, with the aim of illustrating the types of policies and incentives that are needed to boost FDI in the digital economy.

V. Conclusions

37. The secretariat stands ready to support members and associate members in their efforts to enhance regional cooperation towards an inclusive digital future, taking into account the challenges, recommendations and actions outlined in the present document, to build the core foundations for and fuel an inclusive digital future through their efforts in the following areas:

(a) Realizing the commitments contained in the action plan for implementing the Asia-Pacific Information Superhighway initiative, 2022–2026, delivering evidence-based policy research and analysis, capacity-building, convening multi-stakeholder regional and subregional policy dialogues, and encouraging the active engagement and contributions of various stakeholders for concrete implementation of the action plan;

(b) Working directly with governments to promote digital skill development through the Asian and Pacific Training Centre for Information and Communication Technology for Development, as well as providing policy advice to review and develop national policies on digital skills development;

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13 These investments can lead to innovations in production and distribution systems and consequently in regional and global value chains.
(c) Supporting efforts related to the recently endorsed Ministerial Declaration on Building a More Resilient Future with Inclusive Civil Registration and Vital Statistics;

(d) Facilitating policy dialogues and exchanges of experiences among countries at different stages of digital development in the region on the establishment of real-time payment platforms and the modernization of regulations to support the development of the digital finance sector and also facilitating regional cooperation among developing countries in the region for the interconnection of national real-time payment platforms;

(e) Carrying out research and analysis, providing technical assistance and capacity-building to support other members and associate members in developing inclusive e-commerce systems. To support such efforts, the secretariat will issue a policy guidebook on leveraging e-commerce for inclusive development;\(^{14}\)

(f) Supporting the implementation of open data principles in statistical agencies or across national statistical systems;

(g) Supporting the design and implementation of national and regional digital investment policies, as well as conducting digital investment needs assessments. To support these efforts, ESCAP will release the Digital FDI Policy Guidebook (forthcoming 2022), in which the most important measures and tools for attracting and promoting digital FDI will be identified;

(h) Supporting the development of a regional cooperation platform on investment. Enhanced regional cooperation on this topic can play an important role in helping to channel FDI into efforts to build an inclusive digital future, as much of the digital FDI entering the region’s economies will be intraregional.\(^{15}\) A regional investment cooperation platform, as proposed in document ESCAP/MCREI/2022/2, as part of the Asia-Pacific Foreign Direct Investment Network for Least Developed and Landlocked Developing Countries could help to target regional private sector investors with opportunities to invest in key areas in the digital economy.

\(^{14}\) The guidebook is part of the project on building the capacity of Asia-Pacific countries to utilize science, technology and innovation policies to accelerate progress on the Sustainable Development Goals, funded by the Government of China.

\(^{15}\) Intraregional FDI has typically accounted for more than half of all FDI into Asia and the Pacific since 2009. New comprehensive trade and investment agreements, as well as the Digital Economy Partnership Agreement, support more intraregional FDI, as future agreements of this nature are likely to. ESCAP, “Foreign direct investment trends and outlook 2021/2022”, Asia Pacific Trade and Investment Trends 2021/2022 (Bangkok, 2021).
VI. Issues for consideration

38. Members and associate members may wish to take the following actions:

(a) Share national experiences – including effective practices and lessons learned – in promoting an inclusive digital future;

(b) Indicate the types of support, such as policy- and strategy-related services, capacity-building, research and analysis, and knowledge-sharing, that may be required from the secretariat to promote an inclusive digital future both nationally and regionally;

(c) Consider the recommendations, actions and initiatives highlighted in the present document to advance an inclusive digital future both nationally and regionally;

(d) Identify new and priority policy issues related to inclusive digital development that the secretariat should address in greater detail.