United Nations TD/B/EDE/6/2

United Nations Conference on Trade and Development

Distr.: General
28 February 2023

Original: English

Trade and Development Board
Intergovernmental Group of Experts on E-commerce and the Digital Economy
Sixth session
Geneva, 10–12 May 2023
Item 3 of the provisional agenda

How to make data work for the 2030 Agenda for Sustainable Development

Note by the UNCTAD secretariat

Summary

The role that data can play in the achievement of the 2030 Agenda for Sustainable Development is addressed in the present note. Data and digital technologies are becoming increasingly critical in monitoring and achieving sustainable development. Challenges faced in harnessing data and cross-border data flows are discussed in this note, in particular among developing countries, along with ways of capturing and sharing more equitably the benefits from the digital economy and the ways in which national, regional and international approaches can contribute to harnessing data for the 2030 Agenda and in order to make up lost ground due to recent crises. In this context, it is critical to strengthen international cooperation on global data governance and capacity-building aimed at bridging data and digital divides, to enable a better future for people and the planet.

Introduction

1. Members of the Trade and Development Board decided, through a silence procedure that ended on 13 July 2022, that the focus of the sixth session of the Intergovernmental Group of Experts on E-commerce and the Digital Economy should be on the topic, "How to make data work for the 2030 Agenda for Sustainable Development". [1]

2. Data have become a key strategic asset in solving many economic, social and environmental challenges and in creating both private and social value while ensuring human rights, peace, security and environmental sustainability. If well managed, the use of data can help address global development challenges, such as pandemics and climate change, while promoting prosperity.

3. Data and data flows can contribute in two main ways to achieving the economic, social and environmental objectives of the 2030 Agenda. First, novel methods of data collection can help generate greater insights into progress towards achieving the Sustainable Development Goals by complementing official statistics, and intelligence derived from data can increasingly be incorporated into effective and more resource-efficient policymaking that serves people and the planet in real time. Second, data and data flows can support the development of various technological solutions aimed at accelerating progress towards achieving the Goals. At the same time, negligent handling of data can contribute to highly unequal development outcomes, undermine the functioning of the Internet and hinder the achievement of the Goals.

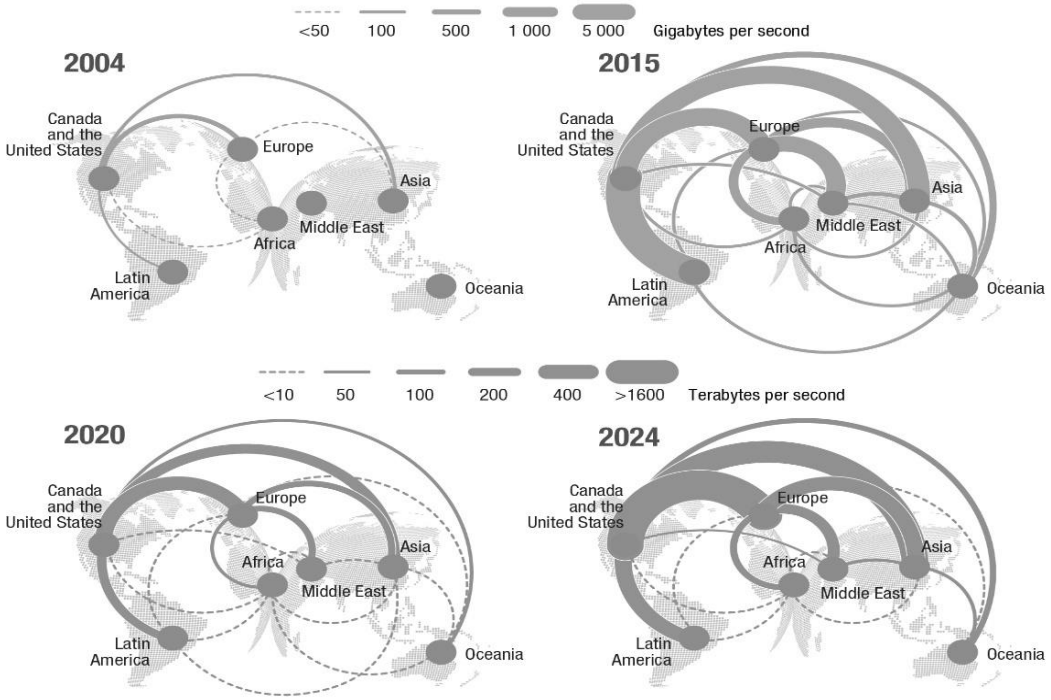
4. The topic of this session is timely for five main reasons. First, the upward trend in international data flows accelerated during the pandemic, when many activities moved online; with one estimate that, by 2022, more Internet protocol traffic would cross global networks than in all prior "Internet years" combined up to the end of 2016.[2] However, the increase in data traffic and the expansion of value capture from the digital economy are not equally distributed between and within countries. Many developing and middle-income countries are rich in data and are major data producers, yet data traffic is predominantly concentrated along two main routes, namely, between Canada and the United States of America and Asia and between Canada and the United States and Europe (see figure).[3] The digital transformation is in its early stages; with ever more people and businesses going online and with the increasing use of virtual and augmented reality, the Internet of things, the fifth-generation technology standard for broadband cellular networks, big data and artificial intelligence, data traffic is anticipated to continue to surge.

[1] This note draws heavily on UNCTAD, 2021, *Digital Economy Report 2021: Cross-Border Data Flows and Development: For Whom the Data Flow* (United Nations publication, Sales No. E.21.II.D.18, Geneva), which includes the corresponding sources of data and references, unless otherwise indicated.

[2] TD/B/EDE/5/2; Global News Wire, 2018, Cisco predicts more IP[Internet protocol] traffic in the next five years than in the history of the Internet, 27 November.

[3] UNCTAD, 2021, page 19.

Evolution of interregional international bandwidth, selected years



Source: UNCTAD, 2021.
Notes: One terabyte is equal to 1,000 gigabytes. Data for 2024 are forecasts.

5. Second, the human development index, which measures key dimensions of human development, declined for the first time since its creation, due to the pandemic and other crises. In over 90 per cent of countries in 2020 or 2021, the index value dropped, "taking the world back to the time just after the adoption of the 2030 Agenda for Sustainable Development".[4] The innovative potential provided by harnessing data and data flows offers an opportunity to make up lost ground in achieving the 2030 Agenda, through improved monitoring and accelerated progress.

6. Third, the planet is at a turning point with regard to climate change, which threatens to further impact livelihoods and biodiversity. In this context, data and digitalization can contribute to preventing environmental degradation through use in, for example, improved energy management and energy efficiency, the real-time monitoring of habitats and the development of new low-emission technologies. However, increasing demand for digital goods and services may also accelerate degradation through, among other things, higher levels of demand for raw materials and increased amounts of electronic waste.[5]

7. Fourth, as highlighted in *Digital Economy Report 2021*, the global landscape of the governance of data is fragmented, with countries adopting different approaches to regulating and safeguarding data and data flows across borders. There is a lack of globally agreed common definitions and understanding of basic concepts related to data and data flows. This may undermine the interoperability of data access and sharing, including across borders. To benefit from the development potential of data, policymakers in developed and developing countries need to develop data governance frameworks that work for national priorities, while not impeding opportunities to be gained from sharing data across borders. Capabilities and capacities for making data work for the 2030 Agenda are also unequally distributed, hindering progress towards ensuring equitable outcomes from the use of data.

[4] United Nations Development Programme, 2022, *Human Development Report 2021/2022* (Sales No. E.22.III.B.4, New York).

[5] See https://www.ipcc.ch/report/ar6/wg3/.
Note: All websites referred to in footnotes were accessed in February 2023.

8. Fifth, the digital economy remains characterized by a high level of dominance by global digital platforms that control large shares of global data and their capacity to create and capture the ensuing value. This dominance leads to a concentration of market power and can translate into a consolidation rather than a reduction of inequalities between and within countries. Therefore, it is important to consider both how to govern data at the global level and how to enable developing countries to strengthen domestic capabilities to create and capture value, instead of remaining predominantly users and consumers of digital platforms.[6]

9. Against this backdrop, in chapter I of this note, key issues among developing countries linked to cross-border data flows are outlined; in chapter II, ways of capturing and sharing more equitably the benefits from the data-driven digital economy are examined; in chapter III, national and international approaches to addressing challenges related to the digital economy among developing countries are highlighted; in chapter IV, the implications of cross-border data flows in relation to achieving the 2030 Agenda are discussed; and in chapter V, the best ways to contribute to the debate on data governance, to maximize development benefits, are addressed.

10. This note is based on the following guiding questions, as decided by members of the Trade and Development Board, through a silence procedure that ended on 13 July 2022:

(a) What are the key issues at stake for developing countries in relation to cross-border data flows?

(b) What would be needed to ensure that the benefits of digital economy are shared more equitably?

(c) What national and international policies and support measures can help address the challenges of developing countries in electronic commerce (e-commerce) and the digital economy?

(d) What are the implications of cross-border data flows at the regional and international levels in relation to the achievement of the 2030 Agenda?

(e) What is the best way to contribute to the debate on data governance to maximize the development potential of data?

I. Cross-border data flows: Key issues among developing countries

11. In recent decades, rapid digitalization has reshaped how people and businesses interact, work, shop and create and exchange value. Such data-driven digitalization creates global opportunities and challenges, both of which require global solutions, to harness the positive impacts and mitigate the negative impacts. Data and cross-border data flows are increasingly important for development.

12. In the context of the 2030 Agenda, data can serve two functions. First, aggregated data that are turned into data intelligence can be used to measure progress towards development goals, that is, data on the Sustainable Development Goals. This includes data from traditional statistical indicators but can also involve new data collection approaches based on, among others, big data and machine learning. For example, the Economic and Social Commission for Asia and the Pacific and the task team on using big data for the Sustainable Development Goals under the Global Working Group on Big Data for Official Statistics have compiled national examples of the use of big data to monitor progress on 64 indicators, under all but one of the Goals.[7]

13. Second, data can be used to create new data-driven innovations and technologies, employing sensors, the Internet of things, satellites and machine learning, which can be

[6] See TD/B/EDE/4/2.

[7] See https://www.unescap.org/kp/2021/big-data-sdgs-country-examples-compiling-sdg-indicators-using-non-traditional-data-sources.

used to create new solutions in addressing particular gaps in economic, social and environmental development, that is, data for the Sustainable Development Goals. For example, in Papua New Guinea, the United Nations Global Pulse, in collaboration with a local telecommunications provider, has developed a tool for mapping population displacements following earthquakes; and the Asian Development Bank is collaborating with national statistical offices to develop the use of innovative data sources for small area estimations that can be particularly useful in developing more fine-grained poverty mapping.[8] In future, insights from such new approaches could help in developing more targeted welfare programmes.

14. Given the structure of the Internet as a network of networks, much data flow across borders, to be stored, analysed and transformed into digital intelligence, and these global flows of data and information underlie value creation from data.[9] In addition, the particular characteristics of data imply that data flows can contribute to increased value, that is, raw data in themselves have relatively little value and value arises from the aggregation, analysis and transformation of data into insights and technology solutions. Therefore, aggregating data from various sources across borders can help progress towards achieving the Goals. For example, sharing health-related data during the pandemic, to study the coronavirus and in vaccine development, was key in helping to mitigate impacts.[10]

15. Data and data flows should be increasingly seen as a tool for advancing the 2030 Agenda and integrated into development policies, yet gains are not automatic. It is important to ensure that private or social value from data is distributed in an equitable fashion, particularly considering groups in vulnerable situations as beneficiaries, rather than value being captured predominantly by a few countries and large multinational companies. The current process of data use and digitalization is associated with power imbalances and inequalities, which need to be addressed through policymaking at different levels. Data are much more than an economic resource, as they are also linked to privacy and other aspects of human rights, as well as national security and the environment. This shows the need for an integrated, holistic approach to policymaking in relation to data.

16. In the context of harnessing cross-border data flows, a new data divide is emerging that is compounding the divides related to constrained digital access and connectivity between and within countries. In 2022, in high-income countries, 92 per cent of individuals used the Internet and, in the least developed countries, 36 per cent of individuals did so.[11] There are also significant gaps in terms of speed and prices, implying that users in developing countries access less data than users in developed countries. For example, the average Internet user in a high-income country uses 17 times more bandwidth than a user in a low-income country.[12]

17. In addition, the noted market concentration of data in a few multinational companies, predominantly located in China and the United States, means that some are better positioned to access and harness data than others, leading to a widening data divide between and within countries. The largest digital platform companies invest in all parts of the global data value chain, namely, data collection through user-facing platform services; data transmission through satellites and submarine cables; data storage; and data analysis, processing and use, for example through artificial intelligence. Such investments reinforce network effects and the tendency for global market concentration in the digital economy, leading to a high level of concentration in certain segments, such as search engines, social media, cloud storage, mobile applications and e-commerce. For example, in 2015–2022, the

[8] See https://www.unglobalpulse.org/project/population-displacement-estimates-from-mobile-network-data-in-papua-new-guinea/ and https://development.asia/insight/using-machine-learning-satellite-images-map-poverty.

[9] UNCTAD, 2019, *Digital Economy Report 2019: Value Creation and Capture – Implications for Developing Countries* (United Nations publication, Sales No. E.19.II.D.17, Geneva).

[10] TD/B/EDE/5/2.

[11] International Telecommunication Union, 2022, *Measuring Digital Development: Facts and Figures 2022* (Geneva).

[12] Ibid.

combined share of digital advertising spending among five platforms rose from 50 to over 70 per cent.[13]

18. As data-driven technologies rely on large amounts of data and data flows, countries with large populations are important sources of raw data for many businesses. In this context, many smaller developing countries may be at a disadvantage, as value capture from data is concentrated among a few global players. Developing countries risk becoming providers of raw data while having to pay for services based on digital intelligence derived from this data. This may lead to a tendency for national attempts to regulate data flows by limiting flows across borders. However, unilateral approaches can have adverse impacts on local economies and development and can constrain business opportunities, such as in access to larger international markets or more competitive inputs, particularly among microenterprises and small and medium-sized enterprises. Therefore, support for the adoption of widespread strict data localization policies or unrestricted data flows, without sufficient privacy and security safeguards and without paying due consideration to economic development concerns and the equitable distribution of gains, is of concern.

19. Most developing countries, particularly the least developed countries, face additional challenges at the national level in harnessing data, including with regard to weak data infrastructures, low levels of trust in the Internet among citizens, limited financial resources, gaps in legal and regulatory frameworks and the lack of government strategies on harnessing data. In parallel, most developing countries have limited capacities to digitalize and transform data into digital intelligence for value capture.

20. As cross-border data flows cannot be effectively regulated at only the national level, a global, balanced approach to data governance is desirable, for data to fully support the achievement of the 2030 Agenda, with people at the centre. Therefore, it is important for developing countries to be involved in global data governance discussions, which are currently dominated by developed countries and major emerging economies. The ultimate governance approach chosen at the national, regional and international levels will affect not only trade, innovation and economic progress but also a range of issues related to human rights, the distribution of gains from digitalization, law enforcement, national security and environmental sustainability. Overall, global data governance should help enable data-sharing for the development of public goods that could help address major global development challenges while also supporting national priorities, in particular those of developing countries.

II. Prerequisites for a more equitable distribution of gains from the digital economy

21. Data-driven solutions offer significant potential in achieving the 2030 Agenda, yet this potential must be harnessed effectively. Doing so requires addressing multiple issues, including with regard to data and digital divides; infrastructure investment; relevant skills and capacities in various sectors; legal and regulatory frameworks; questions of data rights and control; and competition and tax policies with regard to the current concentration of gains and market power in the digital economy.

22. Many of the gains from the digital economy are generated through the data value chain, whereby raw data are transformed (through data collection, analysis and processing into digital intelligence) into a product that can be monetized for commercial purposes or used for social objectives.[14] Access to data and digital technologies is the first step in the data value chain and towards a more equitable distribution of gains from the digital economy. To bridge the data and connectivity divides, infrastructure that enables digitalization needs to be strengthened at the national, regional and international levels. Digital infrastructure includes aspects such as access to broadband networks, high-speed mobile Internet coverage, secure data centres and increased numbers of Internet exchange points, to allow for improved connectivity in all countries. For example, in Germany, the

[13] UNCTAD, 2021, page 24.
[14] UNCTAD, 2019.

Data Economy Flagship project, in collaboration with Smart Africa, aims to develop standards for sustainable and secure data infrastructure.[15]

23. Beyond access to data, countries need the skills and capacities required to transform data into digital intelligence. Such skills and capacities are highly unevenly distributed across the world. In addition, even within countries, significant skills gaps exist between those generating data insights and the public sector regulating data-driven technologies. For example, increasing numbers of artificial intelligence researchers move from the public sector, including academia, to private sector firms; this trend may create a brain drain that reduces the available talent for public-interest artificial intelligence research or governance and regulatory oversight.[16] Moreover, capacities for understanding the role of data and the digital economy are necessary in shaping laws and regulations fit for digitalization and the achievement of the 2030 Agenda among increasing numbers of ministries and agencies, beyond ministries traditionally focused on information and communications technology.

24. In most countries, there may be opportunities in creating local or regional digital products and applications.[17] Consequently, more people need to be trained in applying data-driven tools and in developing new tools, to increase value capture and creation in developing countries. One major challenge in adopting e-commerce and the digital economy and ensuring their smooth functioning is with regard to addressing low levels of consumer trust and confidence in data protection and transactions that occur online. A recent survey in 20 countries suggests that trust online has declined since the beginning of the pandemic; for example, since 2019, the share of respondents that agreed with the statement "overall, I trust the Internet" fell by 18 percentage points (24 per cent) in Brazil, by 11 points (15 per cent) in Kenya and by 8 points (11 per cent) in Indonesia.[18]

25. Building trust in online transactions relies on well-functioning legal and regulatory frameworks. These remain an important area to be improved in many regions. According to the UNCTAD Cyberlaw Tracker, at present, 61 and 57 per cent of countries in Africa and Asia, respectively, have adopted legislation for the protection of personal data and privacy, and 33 of 54 countries in Africa have formal e-transaction legislation. In general, capacities for data governance, protection and security tend to be low.[19]

26. As the value of data depends ultimately on their use, the implications of how and by whom data can be accessed and used will greatly affect how the gains from data are distributed. There is no one-size-fits-all approach to data rights and control, and countries use various models. For example, Estonia has initiated a digital identity system linked to a national data exchange through which data can be securely exchanged between public and private entities, whereby citizens only need to provide information once, improving efficiency and trust, and can track who accesses their data and for which purpose.[20] India is basing digital public infrastructure on consent networks that will enable citizens to gain greater control over digital data that reside with entities such as government departments, banks and hospitals, enabling them to approve data requests or revoke access to data; at present, the system is being rolled out for financial institutions, with personal information hosted in account aggregators that connect to different financial institutions, thereby reducing transaction costs for financial services.[21] Switzerland is promoting trustworthy data spaces and digital self-determination, to improve access to data and strengthen

[15] See https://www.bmz-digital.global/en/overview-of-initiatives/data-economy/.

[16] R Jurowetzki, DS Hain, J Mateos-Garcia and K Stathoulopoulos, 2021, The privatization of AI[artificial intelligence] research(-ers): Causes and potential consequences, available at https://arxiv.org/abs/2102.01648.

[17] UNCTAD, 2019.

[18] See https://www.ipsos.com/en/trust-in-the-internet-2022.

[19] See https://www.cgdev.org/publication/why-data-protection-matters-development-case-strengthening-inclusion-and.

[20] See https://www.oecd-ilibrary.org/sites/510a82b5-en/index.html?itemId=/content/component/510a82b5-en.

[21] See https://dial.global/research/case-study-india-consent/.

individuals' control over personal data.[22] As shown in these examples, the aim is to enable the more effective sharing of data.

27. An equitable distribution of gains from the digital economy relies on data governance frameworks to enable data flows. As noted, the global landscape of data governance is fragmented, with countries adopting different approaches to regulating and safeguarding data flows across borders. A recent survey by UNCTAD serves to emphasize the diversity of approaches between countries and the lack of globally agreed common definitions and understanding of basic concepts related to data and data flows.[23] The various taxonomies used to classify types of data are sometimes based on different criteria. For example, data may be collected for governmental or commercial purposes; used by the public or private sector; real-time or historical; sensitive or non-sensitive; and personal or non-personal. Such different understandings of key terms and approaches may undermine discussions at the international level and, eventually, the interoperability of data access and sharing, including across borders. At the same time, commonalities are emerging with regard to certain definitions of, for example, personal and sensitive data, which can serve as a foundation for further discussion.

28. As noted, the frontrunners in terms of harnessing data are primarily platforms with significant market power, based in a few digitally advanced countries. Consequently, competition policy adapted to the digital economy represents an important prerequisite for a more equitable distribution of gains. Before the advent of the data-driven economy, antitrust regulations focused on measuring harm to consumers related to higher prices. In recent years, the views of competition experts and enforcers have evolved favourably towards competition law amendments and ex ante regulation, as well as the collection and analysis of data in investigations and the use of market studies and some new tools.[24] This approach could be broadened to include, for example, privacy, personal data protection, consumer choice, market structure, switching costs and lock-in effects. In addition, competition policy that addresses the market situation of dominant digital platforms reaching beyond national borders may need to be put in place and enforced within regional or global frameworks.

29. Finally, taxation is another area in which a more equitable distribution of gains between countries can be ensured, including through the consideration of how taxation rights should be allocated, to prevent the possibility of the undertaxation of major digital platforms. Currently, there is a mismatch between where value is extracted and where profits are taxed. Users in developing countries significantly contribute to the generation of value by global digital platforms and some state that, therefore, authorities in these countries should have the right to tax platforms accordingly. In 2021, 134 economies joined a new framework for international tax reform prepared in the context of the inclusive framework on base erosion and profit shifting of the Organisation for Economic Co-operation and Development and the Group of 20, which includes discussions on a global minimum corporate tax rate.[25] However, it remains to be seen whether the framework offers a viable option for the redistribution of gains from large multinational companies to developing countries, given relatively low agreed tax rates and the structure of taxation rules.[26] At the same time, as the tax landscape evolves, it is essential to ensure the broader and more inclusive participation of developing countries in international discussions on taxation of the digital economy, including by strengthening the United Nations Committee of Experts on International Cooperation in Tax Matters, to enable a more equitable distribution of gains from data harnessed globally.[27]

[22] See https://www.admin.ch/gov/en/start/documentation/media-releases.msg-id-87780.html.

[23] UNCTAD, 2023, *G[roup of] 20 Members' Regulations of Cross-Border Data Flows and Data Free Flow with Trust* (United Nations publication, Geneva).

[24] TD/B./C.I/CLP/57.

[25] See https://www.oecd.org/tax/beps/statement-on-a-two-pillar-solution-to-address-the-tax-challenges-arising-from-the-digitalisation-of-the-economy-july-2021.htm.

[26] See https://www.southcentre.int/tax-cooperation-policy-brief-27-21-december-2022/.

[27] UNCTAD, 2019.

III. Addressing digital economy challenges among developing countries: National and international policies and support measures

30. To harness data effectively for the digital economy and the 2030 Agenda, multiple areas need to be addressed through policymaking at the national, regional and international levels. This reflects the multidimensional nature of data. Comprehensive policymaking in countries at all levels of development needs to be used to develop strategies that rely on whole-of-government approaches, including multi-stakeholder inputs, to shape data governance, given the consideration that data have a role to play in all line ministries. However, there are limits to national policymaking, given the international network structure of the Internet, global market power concentration in a few multinational companies, questions of jurisdiction and levels of regulatory and enforcement capacity. International cooperation is critical in this regard, to ensure that data can flow as freely as possible and necessary, while ensuring a more equitable distribution of benefits between and within countries and addressing the risks associated with data flows. Policy options at the national and international levels, as well as support measures associated with addressing the prerequisites for a more equitable distribution of gains, are highlighted in this chapter.

A. Data-related national policies

31. New legislation in developing countries is aimed at addressing challenges related to the digital economy. For example, India introduced a draft digital personal data protection bill in November 2022, aimed at easing restrictions on cross-border data flows and introducing more important penalties for data breaches.[28] Indonesia enacted a personal data protection law in September 2022, and aims to address data breaches and online surveillance.[29] In addition, existing national laws, regulations and policies in areas including, but not limited to, consumer protection, cross-border data flows, cybercrime, data ownership and access, electronic transactions and taxation need to be revised to fit current circumstances. The least developed countries, in particular, need to adopt relevant laws and regulations in these key areas.

B. Strengthening national capacities

32. Turning data into insights and digital intelligence requires the appropriate skills to create value from collected data. Capacity-building in developing countries is therefore critical, to benefit from the digital economy. Capacity development among policymakers needs to be accelerated, in order for legal and regulatory frameworks to remain aligned with recent technological developments. This includes building an understanding of various technologies, related business models and the implications for public finances, as well as the implications for privacy, security, trust and other human rights. For example, in Germany, *Handbook for Implementing a Capacity-Building Programme for Policymakers on Artificial Intelligence* has been published under a programme on digital transformation for sustainable development.[30] In building domestic skills to apply data-driven tools and develop new tools for improved value capture and creation in developing countries, training opportunities need to be expanded. For example, in India, the Government flagship programme for digital transformation, Digital India, includes a pillar titled “information technology for jobs”, which focuses on training youth in the skills required in the

[28] See https://www.meity.gov.in/content/digital-personal-data-protection-bill-2022.

[29] See IGNP Widiatedja and N Mishra, 2022, Establishing an independent data protection authority in Indonesia: A future-forward perspective, *International Review of Law, Computers and Technology*.

[30] See https://www.bmz-digital.global/en/overview-of-initiatives/fair-forward/. For an example of a recent agreement on common approaches to safeguarding privacy and other human rights and freedoms when national security and law enforcement agencies access personal data, see https://www.oecd.org/newsroom/landmark-agreement-adopted-on-safeguarding-privacy-in-law-enforcement-and-national-security-data-access.htm.

information and communications technology-enabled services sector.[31] Various ways of building skills for the digital economy may be considered; for example, in expanding the workforce capable of applying data-driven tools, technical and vocational education and training programmes may offer good options. The development of new data-driven tools may benefit from expansions of high-quality tertiary education and specialized training possibilities, such as coding bootcamps. For example, in Rwanda, Carnegie Mellon University Africa offers postgraduate courses in information technology and developing artificial intelligence, and is targeted at students from across the continent.[32]

C. International support measures on the enabling environment, capacity-building and infrastructure

33. Another challenge with regard to the digital economy is related to developing additional elements of an enabling environment. In this context, multidimensional approaches to creating a broad enabling environment outside of ministries need to be emphasized. Various assessments and diagnostics of national policy environments in support of e-commerce and the digital economy serve to highlight the importance of interministerial coordination in removing barriers, as the competencies of many ministries and agencies are impacted by digitalization. In addition, in shaping government strategies, it is important to ensure multi-stakeholder involvement, including civil society, enterprises and entrepreneurs, particularly women. Assessments of national readiness with regard to e-commerce and the digital economy include those conducted under the following: International Trade Centre work on digital trade and e-commerce; joint Pacific Digital Economy Programme of UNCTAD, the United Nations Capital Development Fund and the United Nations Development Programme; UNCTAD eTrade Readiness Assessments programme and strategy development support, including the implementation support mechanism to follow up on initial assessments and monitor areas of progress and those in which further assistance may be required; and World Bank digital economy diagnostics.[33]

34. Beyond assessments of the status quo, multiple capacity-building initiatives aim to provide support in developing countries. For example, the Automated System for Customs Data programme supports countries in making customs fit for international e-commerce, particularly among smaller firms; the Enhanced Integrated Framework and the Economic and Social Commission for Asia and the Pacific jointly implement an e-commerce capacity-building programme for women entrepreneurs in South Asia;[34] and under the Pacific Digital Economy Programme, national statistical offices are provided training in improving data collection for official statistics on the digital economy. However, the need for further capacity-building is significant. Further capacity-building activities for public servants and citizens related to, for example, legal aspects of e-commerce, relevant skills for entrepreneurs and digital payments remain priority projects among many beneficiary countries of eTrade Readiness Assessments several years after the initial assessment.[35]

35. The lack of high-speed Internet connectivity remains an essential barrier to enhancing the digital economy in many developing countries. In particular, work on connecting the hardest-to-reach communities needs to be further expanded. For example, the International Telecommunication Union has launched the Partner 2 Connect Digital Coalition, aimed at enabling access, strengthening adoption and enhancing value creation in the digital economy. In addition, support measures to establish secure and efficient data infrastructure are required. For example, Senegal inaugurated a new data centre in 2021,

[31] See https://digitalindia.gov.in/content/programme-pillars.

[32] See https://www.africa.engineering.cmu.edu/about/index.html.

[33] See https://intracen.org/our-work/topics/goods-and-services/e-commerce-policy, https://unctad.org/topic/ecommerce-and-digital-economy/pacific-digital-economy-programme, https://unctad.org/topic/ecommerce-and-digital-economy/etrade-readiness-assessments-of-LDCs and https://www.worldbank.org/en/programs/all-africa-digital-transformation/country-diagnostics.

[34] See https://unctad.org/publication/fast-tracking-implementation-etrade-readiness-assessments-second-edition.

[35] Ibid.

supported by China, aimed at safely storing all government data and providing storage space for the private sector.[36]

IV. Achieving the 2030 Agenda: Implications of cross-border data flows at the regional and international levels

36. The increase in flows of cross-border data has accelerated in the past three years, spurred by the impacts of the pandemic. In this context, national policymaking on data flows is increasing, to achieve national policy objectives. However, there is a risk that national approaches to controlling data flows across borders may lead to the fragmentation of the Internet and that the potential benefits from data-sharing for development and achieving the 2030 Agenda may thereby be greatly reduced. A global approach to data governance could help in this context, and the need for broader consensus is shown in the increasing frequency of discussions on cross-border data flows in various regional and international forums.

37. Given the international nature of data flows, they are increasingly becoming a topic of discussion in the context of trade negotiations, particularly with regard to digital trade, in which data flows underpin trade in goods and services. In related regional and international discussions, the focus is predominantly on contributions to economic growth (related to Sustainable Development Goal 8). Examples of recent discussions on trade-related data flows include the Joint Initiative on E-commerce of the World Trade Organization, with 87 members taking part in discussions, as well as under various bilateral free trade and economic partnership agreements, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, the Pacific Alliance, the Plurilateral Trade in Services Agreement, the Regional Comprehensive Economic Partnership Agreement and the United States–Mexico–Canada Agreement.[37]

38. Data flows and trade are often discussed in the same context, yet they are not the same thing and cannot be equated for policy purposes; and the most recent laws and regulations linked to aspects of data and data flows are not confined to trade contexts. Respondents to a survey conducted by UNCTAD indicated that ministries of trade or commerce served as the lead on issues related to data governance.[38] However, at the international level, cross-border data flows are currently discussed predominantly in the context of trade agreements. Much global data are associated with trade, yet not all data are linked to commercial transactions. As noted, regulating data flows also involves aspects of privacy and other human rights, security and the environment.

39. Equity is at the centre of the 2030 Agenda, and equity should also be reflected in a governance framework for cross-border data flows. To date, developing countries have often faced challenges due to power asymmetries that shape the outcomes of trade negotiations. If data governance frameworks are negotiated in a trade context, there is a risk that such asymmetries may spill over into policy regimes on cross-border data flows, limiting scope, particularly for developing countries, to have national priorities or concerns adequately reflected.

40. In addition, the internationally distributed nature of data collection and storage in multiple locations by public and private entities, while being used simultaneously by users worldwide, implies that a multi-stakeholder approach is best suited to maximizing the benefits for all stakeholders involved in the various stages of the data value chain. Trade negotiations, however, remain predominantly Government-to-Government and are not multi-stakeholder in approach.

41. Beyond trade forums, discussions on cross-border data flows take place in multiple regional and international settings. Many discussions at the regional level aim to strengthen

[36] Ibid. See also http://apanews.net/en/news/senegal-opens-first-national-data-center.

[37] See https://www.wto.org/english/tratop_e/ecom_e/joint_statement_e.htm and UNCTAD, 2021, page 142.

[38] UNCTAD, 2023.

collaboration in the digital sector and to create tailored market opportunities, that may in part reduce the dependence on dominant companies from a few countries. Meaningful regional data governance could increase digital competitiveness among developing countries, contributing to achieving the 2030 Agenda.[39] Examples of initiatives in this regard include the following: African Union data policy framework and the Convention on Cybersecurity and Personal Data Protection; Asia-Pacific Economic Cooperation initiatives to facilitate data flows, such as the Internet and Digital Economy Road Map; Association of Southeast Asian Nations initiatives on topics such as e-commerce, personal data protection, digital data governance and model contractual clauses for cross-border data flows; European Union General Data Protection Regulation, Digital Services Act and Digital Markets Act; and Latin America and the Caribbean digital agenda, promoting the use of digital technologies as instruments for sustainable development.

42. At the international level, there are multiple initiatives related to cross-border data flows and their implications for the economy, society and the planet, targeting particular aspects, such as privacy and personal data. For example, the Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data and its protocols, the first legally binding international instrument in the data protection field, is a treaty under the Council of Europe that is open to all countries;[40] and the Organisation for Economic Co-operation and Development has adopted recommendations on privacy and ensuring compatibility between national data governance approaches. However, such initiatives often apply to only a subset of countries. Since the Presidency of Japan in 2019, the Group of 20 has been discussing data free flow with trust. In 2022, during the Presidency of Indonesia, the Digital Economy Working Group was established and has discussed data free flow with trust and cross-border data flows, including with the aim of supporting sustainable development. In 2023, during the Presidency of India, the Development Working Group will discuss data for development, focused on the 2030 Agenda; the Office of the Secretary-General's Envoy on Technology and UNCTAD have contributed to meetings of the group.[41]

43. Current frameworks for cross-border data flows at the regional and international levels are characterized by limitations in terms of geography and scope. This may imply that associated risks cannot be properly addressed and that benefits from such flows will not be shared equitably, with implications for achieving the 2030 Agenda. To make data work for the Sustainable Development Goals, discussions on new regulatory developments need to consider both economic and non-economic implications and involve the broadest membership possible, to help secure a balanced and inclusive global approach to data governance.

V. Shaping the data governance debate, to maximize development benefits

44. Given economic, political and cultural differences between countries, it is understandable that there are diverging views of how to deal with data. Conflicting interests can lead to tensions between and within countries and between actors, including Governments, communities, large and small private companies in the digital or other sectors, civil society and individuals. Global solutions are complex and difficult to achieve, yet it is important to seek such solutions, to harness the opportunities and mitigate the risks of fast-evolving data-driven economies and societies. Given the multiplicity of views and positions on data governance, international discussions have not yet led to consensus. However, as data and cross-border data flows become increasingly prominent in the global economy, there is an urgent need to properly regulate them at the international level, to achieve their development potential. For this to happen, it is necessary to consider data in all dimensions, both economic and non-economic. In this context, it is also important to

[39] See C Foster and S Azmeh, 2020, Latecomer economies and national digital policy: An industrial policy perspective, *Journal of Development Studies*, 56(7):1247–1262.

[40] See https://www.coe.int/en/web/data-protection/convention108-and-protocol.

[41] See https://www.g20.org/en/media-resources/press-releases/december-2022/first-working/.

consider the main barriers that remain to be addressed before the development potential of data and data flows can be maximized.

45. To advance regional and international discussions on data governance in support of development, it is important to build a deeper understanding of areas in which commonalities and differences in national definitions of concepts related to data governance may exist, with a view to finding common ground. Particular attention may be warranted to approaches that can help to fully factor in the multidimensional character of data and the perspectives of multiple stakeholders when designing and implementing different laws and regulations affecting data and data flows. In addition, policy discussions may need to address how to establish terms of access to data and data-related standards, in order that they may be leveraged for the achievement of sustainable development. In this regard, efforts to measure the value of data and cross-border data flows should be strengthened, to develop a better understanding of the nature of the digital economy and related changes, as well as of platformization and the need for platform governance.

46. To date, global debates on data have often not been fully inclusive. To expand the involvement of all countries and stakeholders, discussions under the auspices of the United Nations, to ensure the greatest inclusivity in terms of country membership, may be preferable. It is important to reflect in policy discussions the needs and cultural contexts of countries at different levels of development, with the aim of curbing the further widening of divides due to value capture from the data-driven digital economy.

47. There are multiple United Nations initiatives linked to data and digitalization, including the following:[42]

(a) Office of the High Commissioner for Human Rights: B-Tech project, which provides guidance and resources for implementing the United Nations guiding principles on business and human rights;

(b) United Nations Commission on International Trade Law: coordination across the United Nations system, which includes addressing legal issues related to digital trade and the digital economy, including on cloud computing services, cross-border data flows and data privacy;

(c) United Nations Development Programme: co-champion of the Coalition for Digital Environmental Sustainability, which is aimed at advancing digital sustainability, namely, the design, development, deployment and regulation of digital technologies to accelerate socially and environmentally sustainable development;

(d) United Nations Educational, Scientific and Cultural Organization: launch of a multi-stakeholder approach to guidance on regulating digital platforms, to further the Windhoek Plus 30 Declaration on information as a public good;

(e) United Nations Statistical Commission: establishment of the United Nations Committee of Experts on Big Data and Data Science for Official Statistics and convening of the World Data Forum on Sustainable Development Data;

(f) World Health Organization: technology task force includes representatives from 40 major technology companies, and digital platforms are encouraged to apply global principles for identifying credible sources of health information in their channels.

48. UNCTAD also contributes in several ways to discussions on data governance, including through *Digital Economy Report 2021* and the intergovernmental machinery. The topic has been discussed at sessions of the Trade and Development Board, at sessions of the Intergovernmental Group of Experts on E-commerce and the Digital Economy and at the twentieth session of the Intergovernmental Group of Experts on Competition Law and Policy.

49. There are already many United Nations initiatives focused on data governance-related matters, yet the rapidly increasing relevance of data and digital technologies in the global economy and society, as well as particular needs related to their governance, may

[42] UNCTAD, 2021.

necessitate the establishment of a dedicated international coordinating body focused on global data governance and development, with a mandate to coordinate data-related activities in the United Nations system in a holistic manner. The General Assembly, in resolution 77/150, noted that the digital economy was an important and growing part of the global economy and that the Commission on Science and Technology for Development could explore the connection between data and sustainable development. An advantage of such an approach would be that, while the Commission reports to the General Assembly through the Economic and Social Council, the discussions would be conducted in a setting not linked to any individual United Nations entity. Discussions on the possible need for new coordinating mechanisms are also under way at the High-Level Advisory Board on Effective Multilateralism formed following the issuance of *Our Common Agenda*, the report of the Secretary-General.

50. For the United Nations to be able to fulfil its role in this context, there need to be effective links to ongoing processes and initiatives, both within and beyond the United Nations. These may be multi-stakeholder initiatives, such as the Global Partnership for Sustainable Development Data, or may be led by member States; civil society, such as the Datasphere Initiative and the non-governmental organization Information Technology for Change; academia; or the private sector.

51. Discussions on data governance are expected to become more frequent and to increasingly address operationalization. One opportunity in this context is in leveraging existing processes, such as under the Internet Governance Forum and the World Summit for the Information Society Plus 20 Review. The Summit of the Future to be held in 2024 will offer an opportunity for discussions on digital and data governance among member States and with other stakeholders, and the preparations for the global digital compact by the Office of the Secretary-General's Envoy on Technology, with the intergovernmental process led by Rwanda and Sweden as co-facilitators, will allow member States and relevant stakeholders to develop a common vision of digital cooperation through an open and inclusive process.

52. Such initiatives should be fully harnessed, for multidimensional and multi-stakeholder discussions on how to shape the potential of data to contribute to the achievement of the 2030 Agenda for Sustainable Development, through effective governance and capacity development aimed at bridging data and digital divides.